

RESPONSIVENESS SUMMARY

Group #1 Rule Making Effort

-Warm Water Protocol-

-General Use Segment and Use Designation Revisions-

-Protected Flow-

-Rebuttable Presumption Approach-

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RESPONSIVENESS SUMMARY

Introduction:

This is a summary of the comments received in response to proposed revisions to the Environmental Protection Commission's (EPC's) water quality standards (WQS). The proposed changes were published in two separate Notices of Intended Action **ARC 4504B and ARC 4505B** on September 14, 2005. This document applies to both Notices of Intended Action since the issues are heavily interrelated and also provides a discussion of the issues raised by the comments as well as recommendations for final EPC action on the proposed changes.

The amendments as proposed in the Notice would:

Summary of Rule/Rule Changes:

1. Change the current Class B(LR) use designation from Limited Resource Warm Water to Warm Water – Type 2 (Class B(WW-2)).
2. Change the current Class B(WW) use designation from Significant Resource Warm Water to Warm Water – Type 1 (Class B(WW-1)).
3. Add a new use designation titled Warm Water – Type 3 (Class B(WW-3)).
4. Add a new use designation titled Human Health (Class HH).
5. Incorporate by reference the document entitled “Warm Water Stream Use Assessment and Attainability Analysis Protocol,” which proposes an approach to be followed in assessing the warm water uses of streams.
6. Establish Dissolved Oxygen, chemical, and ammonia-nitrogen criteria for the new proposed use designation of Class B(WW-3) at the same level that is associated with the existing Class B(LR) use designation.
7. Transfer all existing Class B(WW) designated waters to the new Class B(WW-1) use designation.
8. Transfer all existing Class B(LR) designated waters to the new Class B(WW-2) use designation.
9. Incorporate the proposed use designation nomenclature into the text of the Water Quality Standards at numerous locations and into the applicable rule referenced documents.
10. Add Class HH to Table 1, Criteria for Chemical Constituents and transfer all Human Health – Fish criteria for Class B(WW), B(LW) and B(CW) designated waters and Human Health – F & W criteria from Class C waters to Class HH.
11. Eliminate the exceptions of the design low flow requirement (i.e. protected flow).
12. Revise the general use classification.
13. Designate as Class B(WW-1) Warm Water – Type 1 all of Iowa's perennial rivers and streams and intermittent streams with perennial pools that are not currently designated.
14. Designate as Class A1 – Primary Contact Recreational Use all of Iowa's perennial rivers and streams and intermittent streams with perennial pools.

Seven public hearings were held: Atlantic and Cherokee on October 4, 2005; Clear Lake on October 10, 2005; Manchester and Washington on October 12, 2005; Des Moines on October 14, 2005; and a hearing over Iowa Communications Network (ICN) that included the Cities of Spirit Lake, Fort Dodge, Waterloo, Davenport, and Des Moines on October 13, 2005. Notice of the hearings was sent to interest groups and statewide news network organizations. Written comments were received through October 28, 2005.

Approximately 381 persons or groups provided oral or written comments on the proposed WQS revisions (The commentators' names are listed in the Appendix). The responsiveness summary attempts to address all of the comments received. The comments received are addressed below in terms of the issues involved. The department did not list every comment received, but rather merged common comments into major issue areas. The department did attempt to address every technical and miscellaneous question or comment received.

The department apologizes if some individuals or their comments were missed in this responsiveness summary. However, it is felt that the content of all the comments has been included in this summary.

The questions and comments were sorted into common topics and the department's response is written below in italics under each topic section or individual question in the miscellaneous questions section.

In Table 1 below is a comment matrix for the purpose of recognizing all of the public comments received. This matrix is provided only for information purposes and did not have any bearing on the department's decisions (i.e. this was not used or should be interpreted as a vote). The comments are grouped into similar categories and are listed in no particular order. The department received 380 total comments via letter, e-mail, or at formal public hearings. Not all comments pertained to the general rule making efforts. Some comments were very specific to the technical detail of the rules that did not demonstrate whether or not the commenter was supportive or opposed to the rule making effort. This is one of the reasons why the general numbers do not add up. Some commentators simply attested on City resolutions and were not counted in specific comment categories. Specific issue comments, such as cost, were generally negative in nature and tallied as such. Please note that some comments covered several areas and were tallied as an individual comment for each area.

Table 1 - Comments Matrix	
<i>Comment Topic</i>	<i>Number of Commentators</i>
Support Rule-Making (General)	99
Oppose Rule Making (General)	243
Cost	213
Focus on Non-Point Pollution	69
Re-Classification	37
Believe Rule Making Will Have No Impact	58
Top Down Approach	65
Environmental Group Influence	17
Removal of Protected Flow	10
Should be discussed by the Legislature	23
City Resolutions	19

Comments in favor of the rulemaking (99 total comments):

- We as a state need to move toward compliance with the CWA so we have clean water for our recreation, for our wildlife, and for our drinking and public health.
- The Governor made it clear that cleaning up Iowa’s waters is a priority.
- We need to accept the presumption that our waters are to support recreation and aquatic life; the presumption of quality.
- We cannot afford polluted water.
- The cost estimates being thrown out there are scare tactics.
- How much greater is the cost to Iowa if our waters are not fit to swim in, fish in, to support aquatic creatures and to sustain life?
- “Fishable” does not mean game fish will inhabit all waters. Nor does “swimmable” mean that one can do the backstroke in all waters of the state. The terms mean that the waters should be clean enough to support aquatic life and people can make contact with the water without getting sick.
- The changes being proposed now are long overdue and will only bring Iowa into compliance with some of the minimum requirements of the CWA.
- What can keep our best and brightest from leaving Iowa? It’s the promise of things changing, of our waters getting better. We’re talking about a given area and let’s move forward with that.
- I’m in favor of these rules because I think the payback in the long run we’re going to have significant improvement in the state of Iowa.

- There are some significantly impacted areas from wastewater treatment systems, and the children play in these streams, I bet their life is worth one billion dollars to their parents.
- The waters in the state need to be protected, and this is a step towards protecting it.
- I fully support these changes.
- This is long overdue and is a step in the right direction toward cleaning up Iowa's stream and rivers.
- Money should be put into infrastructure to fix the problems, or quit pooping, the DNR would have a lot less problems.
- Some people say that all streams are going to be considering "guilty until proven innocent". As an IOWATER volunteer, I'll tell you that what this says to me is all streams are considered alive until proven dead.
- I don't want to live in a place where the water is dirty.
- We want clean waters, we want good tourism, we want our kids to be able to play in our rivers and streams even on farmlands, let's clean this up, let's take care of this.
- Many arguments can be made for requiring clean water in our rivers, lakes and streams, but no arguments can be made for allowing dirty water, only excuses.
- Fishable is shorthand for aquatic life and swimmable is not just swimming, or tubing, it's your grandkids, sitting in this low flow creek, with his diapers on and is making mud pies in the streams. He needs to be protected, he deserves that right.
- We can be an agricultural state and we can have clean water, they are not mutually exclusive.
- The neat thing about the CWA, it only costs what communities can afford.
- You can play this game of who's got the money, where's the money going to come from and how are we going to do this? But you have to have the will to want to clean water, and if you don't have the will, you're going to hold public hearings for another 30 years.
- I think it is imperative that we do all we can to make our water as clean as possible.
- As an Iowa citizen, I don't think that clean water is too much to ask for, and might go as far as to say that it's too bad we actually have to ask for it.

Response: No response is necessary.

ISSUE #1: Cost of the Proposed Rules (213 comments)

- Many small towns offer little in conveniences to our residents but they choose to live here due to low costs. Forcing unnecessary upgrades will cause them to reconsider and create migration to larger cities.
- We support the opinion that while there are situations where existing waste water treatment could or should be enhanced, the elimination of the concept of protected flow and the resulting changes to effluent limitations will most certainly place an unrealistic financial burden on many dischargers. Asking 334 communities to spend an estimated \$790-\$956 million dollars for additional treatment that will leave 85%-90% of Iowa's water shed pollution uncontrolled is not a rational decision.
- The taxpayers are weary under the current taxes already without adding approximately \$70 per household per month for something that isn't even close to cost effective. Since there has been some objection lately, the IDNR has indicated that it will take a couple years for the rules to effective and there may be financial aid available Does putting off or making financial aid available make a bad decision better?
- The proposed rule should provide the definition of economic hardship exclusion and criteria and process for obtaining.
- Imposing stricter regulations on treated wastewater point sources and spending upwards of \$1 billion dollars to achieve compliance with those regulations will have very little impact on

improving water quality when the majority of the agricultural industry and non-point source pollution remains completely unregulated.

- The cost estimates provided by the IDNR do not take into account the future rate of inflation.
- Upgrading to complex and specialized mechanical treatment processes is going to require more technically skilled and certified plant operators.
- We don't know the final fiscal impact. We are being asked to support a major change, but the true costs won't be known until the rules are approved, the waterway tested, and the new rules interpreted and applied. It's akin to buying a car without the chance for a thorough inspection – you have no way to know if you are getting a lemon.
- We need to be realistic about tradeoffs between the fishable/swimmable status and cost of affording to live here afterwards.
- What fund is the \$1 billion in financial assistance stored in so we know where to ask for it and are there grants available to the taxpayers to help them pay the bill, as you and I both know the taxpayer is the one who will really bear this burden.
- We should direct our attention and limited resources at the places where we can obtain the most environmental improvement per dollar expended.
- There will soon be a WQS for chloride and cost for controlling nitrate, phosphorus, and chloride in Iowa (in the billions of dollars) that are not discussed in the DNR projected costs.
- The cursory “office study” done by the IDNR is insufficient to give a true picture of the oppressive nature of the proposed rule.
- There has to be a serious cost benefit analysis conducted where the small increase in water quality is measured against the cost in other areas, not just financial, but the diversion of those resources from other community benefits.
- High energy cost are taking a toll on us Iowans, it's time that we do cut back on our spending.
- In reality, we're talking about cost values at least twice as big as the DNR is talking about.
- If the federal government can provide incentives for non-point source pollution, then perhaps there are some incentives to the rest of us (point sources).
- Is the EPA or DNR going to fund additional WQS, or will this be an unfunded mandate?
- We cannot afford an increase of \$35 to \$40 a month, we have no way of increasing our income to cover this additional expense.
- The state cannot afford to lose its more important resource, its people.

Response: The department's evaluation of fiscal impacts looked at the projected costs and potential benefits associated with the proposed rules changes. The department understood that the primary fiscal impact occurs with the implementation of revised NPDES permit limits for permitted point source dischargers. It is important to note that department staff did not evaluate the specific individual impacts or treatment needs for each wastewater treatment facility noted in the Fiscal Impact Statement (FIS). Basic assumptions and evaluations were made on the general impacts on all facilities predicted to be affected. The specific individual impacts and needs will be best evaluated by the facility's staff or retained consultant. Innovative or unique treatment methods may be available to some facilities thereby reducing specific costs.

The number of facilities expected to be impacted is an approximation based on the NPDES permitted facilities list that is periodically updated as NPDES permits are issued for new treatment systems or revoked for others. The impacted facilities list is based on the February 2004 List of NPDES permitted facilities that can be found on the department's website at <http://www.iowadnr.com/water/npdes/index.html>.

The general anticipated benefits from these proposed rule changes are associated with the potential improvements to: instream conditions for aquatic and semiaquatic life, wildlife and

livestock watering needs, and aesthetic conditions. With the interconnection between the proposed elimination of the wastewater exclusion and the proposed application of the rebuttable presumption, common anticipated benefits would not only be to the streams currently receiving wastewater treatment plant discharges, but also waters receiving any future discharge of wastewater. The benefits in the nature of projected improvements to instream water quality below wastewater treatment discharges would be derived from the construction of the treatment improvements to comply with the acute and chronic numerical criteria in the Water Quality Standards.

With the proposed designation of stream segments under the rebuttable presumption provision, it is anticipated that these designated streams will possess critical stream low flows ($1Q_{10}$, $7Q_{10}$, and $30Q_{10}$) of 0.0 cfs. Therefore, little assimilative capacity will be available in the stream for mixing that would provide for more relaxed ammonia-nitrogen effluent limitations.

Nitrification Costs: Achieving compliance for the affected facilities would require a nitrification treatment process similar to an extended aeration activated sludge wastewater treatment facility because conventional secondary wastewater treatment units will not be able to meet end-of-pipe ammonia-nitrogen water quality-based effluent limits. The nitrification units may include oxidation ditch-type and other various designs of extended aeration activated sludge wastewater treatment processes that are costly to build and operate. When the department's costs were estimated, it was assumed that aerated lagoon and trickling filter facilities will upgrade to these types of nitrification facilities to comply with anticipated ammonia limits. In addition, it was assumed that any activated sludge facility may need to upgrade or possibly change its current operation to provide for extended aeration to remove ammonia-nitrogen, resulting in higher operation and maintenance costs and possibly reduced design capacity.

The fiscal impact assessment has attempted to establish a range of costs that considers both higher cost and lower cost scenarios. The established range incorporates conservative approaches to estimating the potential fiscal impact. It is understood that a multitude of factors or variables may result in estimates that are either below the lower cost estimates or exceed the higher cost estimates and were not considered due to the difficulty of predicting which variables could apply to any facility, such as the appropriate stream use designation, flow available at critical low flows, existing treatment capabilities, etc. Some of these factors will not be known until fieldwork is completed through the Warm Water Use Assessment and Attainability Analysis Protocol.

The wastewater treatment costs were estimated using several methods. The capital cost of construction was estimated using a cost curve based on recent information available for wastewater treatment plant upgrades in Iowa from the department's wastewater construction section. The cost curve includes facilities that have recently performed a major upgrade through the State Revolving Fund (SRF) loan program. These facilities were typically lagoon-type systems that constructed extended aeration activated sludge facilities in order to meet stringent ammonia-nitrogen effluent limitations. Once the cost curve was developed, an estimated treatment cost was calculated using the average wet weather (AWW) flows of each potentially impacted facility and the cost curve. It should be noted that some of these estimates for individual dischargers may project higher or lower costs because of the lack of data to derive the cost curve for extremely large and extremely small design flows. However, it is anticipated that the overall costs are adequately representative.

The operation & maintenance (O&M) costs were estimated using the EPA's Innovative and Alternative Technology Assessment Manual (published in 1980 using cost information from

1976). The O&M cost used facilities that were upgrading from an aerated lagoon to an extended air activated sludge plant. A Consumer Price Index of 3.32 from the U.S. Department of Labor was used to bring the 1976 EPA cost estimates to today's cost. The current cost of operating an aerated lagoon was subtracted from the cost of operating an extended air activated sludge plant to determine a representative O&M cost increase. The resulting net difference of O&M cost was calculated to a present worth value by using a 3% interest rate to account for inflation and a 20-year wastewater treatment plant design life. The present worth for O&M was then plotted with AWW design flows to create a cost regression where the resulting formula was used to estimate O&M present worth for the impacted facilities. The capital cost and O&M cost were then calculated to an annual cost to estimate impact on a year-by-year basis using a capital recovery equation.

The department clearly recognizes that the implementation of these proposed rules and rule changes will have far-reaching economic impacts. Historically, compliance with the provisions of the federal Clean Water Act has carried a significant price tag and will continue to be costly as requirements and guidelines are reaffirmed. It is the goal of the department to implement these proposed rules in a reasonable, practicable, and responsible manner. Thus, the implementation will be linked to the reissuance of each facility's NPDES permit. All available NPDES provisions and consideration will be made to allow adequate time for each facility to comply with the adopted rules according to their time constraints, economic abilities, and source of financial aid. The State Revolving Fund (state administered low-interest loan program) will be available to assist in the eligible construction of the required facilities. If needed, additional fund monies will be sought to assure adequate loan funding.

There are several potentially lesser-cost nitrification approaches (or approaches to comply with stringent effluent ammonia limits) that may be available to facilities, but specific economic consideration of these alternatives could not be included in the Fiscal Impact Statement. None of these alternatives has universal application to all impacted facilities and each alternative should be assessed by the managing authority on an individual basis.

With past Water Quality Standards (WQS) rule making efforts and the adopted rules, several alternatives have developed to allow affected entities additional time, reduced construction costs, and operational flexibility when the rules are implemented. Some of these alternatives have been integrated into the rules, such as the stepped mixing zones percentages for ammonia, site-specific data collection, and the use of an instream effluent diffuser. While these alternatives are still within rule, some may not be as applicable because most of the facilities potentially affected by this rule making effort will be discharging to stream segments with very low or no flow. Thus, the water quality-based effluent limits will be equal to or nearly equal to the numerical WQS criteria. To potentially reduce some of the economic burden of meeting end-of-pipe limits equal to the WQS criteria (particularly for ammonia nitrogen), the following may be considered:

1. Potentially Lower Cost Treatment Techniques:

Land Application. One of the treatment alternatives to a mechanical nitrification facility is land application of the wastewater after pretreatment.

Aerated Lagoon Covers. A newer innovative modification to the traditional aerated lagoon wastewater treatment technique is the incorporation of a membrane cover over several of the aerated lagoon cells followed by polishing reactors for nitrification.

Combined Aerated Lagoon/Activated Sludge Unit Processes. A newer innovative modification to the traditional aerated lagoon wastewater treatment technique is the incorporation of an activated sludge unit process into the basic physical features of the lagoon system.

Other Innovative Treatment Techniques. The science of wastewater treatment continues to develop newer approaches and design concepts, such as artificial wetlands and various applications of bioremediation. Some of these concepts may have economic benefits or may be used in concert with established treatment techniques to achieve ammonia reduction capable of meeting the projected end of pipe ammonia nitrogen limits.

2. Potentially Lower Cost Operation/Treatment Technique:

Flow variable effluent limits. The basic principle of this concept would allow a discharger to release only the amount of a pollutant that the receiving stream can assimilate and not violate the WQS.

Some facilities that discharge into streams affected by this change will not have to spend any money to meet the more stringent discharge limits because their facilities already can meet those new limits. Many facilities, however, will have to upgrade their treatment facility and that can be expensive.

In developing our estimates for economic impact, the department made conservative assumptions about the appropriate level of protection for aquatic life uses and recreational uses in the receiving streams. These assumptions are based on projected or higher levels of protection than may be necessary to comply with the revised Water Quality Standards. A more precise estimate of the cost for a specific facility cannot be made until the new standards have been applied and the facility decides what they will do to meet the new discharge limits.

The cost of complying with these proposed changes may be further reduced through the documentation of the field based Use Assessment and associated Use Attainability Analysis (UAA). (Additional discussion on the use assessment and UAA efforts are noted in Issue 5, page 15, 'other use' comments, page 28, and in the General Discussion, page 44.) The UAA is a document that explains what level of protection (or use) is appropriate for that stream based on data collected by a field use assessment. Although federal law does not allow the state to use cost as a criteria for setting a standard, we can consider the impact to the local economy when preparing a UAA. EPA has written guidance on preparing a UAA and on considering economic impact. However, the guidance does not specifically state how much impact to the local economy is too much. EPA will review the technical merits of every UAA and either approve or disapprove any changes in designated uses associated with the UAA findings. Because of these uncertainties, the potential cost reduction from a UAA is not included in the DNR's estimate of the cost of implementing the proposed water quality standard changes.

Some commenters have criticized these changes by saying the money should be spent on controlling pollution from the watershed rather than from a pipe. The argument is that the majority of water pollutants come from the watershed and not the pipe. The department estimates 80-90% of the water pollution in Iowa comes from the watershed and not a city's or industry's discharge pipe. However, before we can start addressing pollution from the watersheds, we have to set the appropriate uses and levels of protection for Iowa streams. That is what we are proposing to do. This means some cities and industries will have to meet more stringent limits for their wastewater discharge to assure their effluent is not locally affecting the appropriate uses of the receiving stream.

ISSUE #2: No Impact on Water Quality (58 comments)

- The ruling is unconstitutional based on the Fourteenth Amendment, which states that “no state shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any state deprive any person of life, liberty, or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws”. These new rules would make each homeowner pay \$70 per month more for their sewer bills without any justification for better water in the streams. This would be property taking by the government.
- The cost of the proposed rules to Iowa communities and its citizens young and old is going to have a staggering and detrimental effect and minimal impact on water quality.
- I believe that the most elementary of science class projects would show that if you remove five gallons of water from 100 gallons of polluted water and replace those five polluted gallons by mixing five gallons of clean, clear, drinking water into the remaining 95 gallons of polluted water, you will still have 100 gallons of polluted water when you get through with the project.
- The rules are very costly and provide little, if any, benefit to the environment.
- With no significant environmental benefit, the logic and legality of the process is very questionable.
- How does disinfection of 6.597 MGD of Ames wastewater with total suspended solids (TSS) of 10 mg/L serve to reduce land runoff bacterial levels from animals when the TSS in the River it discharges to are at 95 mg/L and contain all the potential animal manure organisms washed into the river?
- Let’s say you had two arteries that needed to be fixed, one was 5% blocked and one was 95% blocked, and the doctor fixed the one was 5% blocked but ignored the 95% one. You probably would not be too happy, you’d probably go find another cardiologist.

Response: Locally, there could be significant improvements to the quality of the streams receiving a discharge, particularly during critical low stream flow conditions. Allowable levels of ammonia and bacteria will be reduced in most of the cases.

It is important to note that these rules establish appropriate water quality goals for the state of Iowa that are consistent with the minimum requirements of the federal Clean Water Act. It is also consistent with the policy of the EPC to protect and enhance the quality of all waters of the state by attempting to prevent and abate pollution of all waters to fullest extent possible consistent with statutory and technological limitations for all point and nonpoint sources of pollution.

The water quality standards defines the water quality goals for a water body by designating the use or uses to be made of the water, by setting criteria necessary to protect those uses, and by protecting water quality through antidegradation provisions. Iowa adopts water quality standards to protect public health or welfare, enhance the quality of the water, and serve the purposes of the Clean Water Act. The proposed rules do not affect the current approach for nonpoint source pollution or existing programs. Instead, it revises aspects of Iowa’s water quality standards. These standards apply to the waters in Iowa and not to a specific source of pollution. Water quality standards are applicable to nonpoint sources of pollution despite the fact that there may be few direct implementation mechanisms for nonpoint sources (See Non-Point Exclusion Discussion page 18).

The majority of water pollutants come from the watershed and not from wastewater treatment plant outfall pipes. The department has estimated approximately 80-90% of the water pollution in Iowa comes from the watershed. However, before the state can start addressing pollution from the watersheds, it is necessary to set the appropriate uses and levels of protection for Iowa streams that are consistent with the goals and intentions of the CWA. This means some cities and industries will have to meet more stringent limits for their wastewater discharge to protect the local beneficial uses of their receiving stream.

The fact that rivers and streams may already contain pollution from other sources does not obviate the responsibility or requirements for a regulated facility to treat wastewater to levels that are consistent with the Water Quality Standards.

ISSUE #3: Top Down Approach (65 comments)

- This rule assumes all Iowa rivers and streams must be fishable and swimmable, rather than first determining the true use of the water before applying the appropriate level of protection.
- Many of the Iowa streams and rivers are currently not fishable or swimmable, what is the point of re-classifying all of Iowa's streams and rivers?
- The Clean Water Act provides a goal that waters be fishable and swimmable, where attainable. This is a goal, not a requirement.
- The EPA Administrator does not have the discretion to deny standards that don't include the "rebuttable presumption" set up in the DNR's proposed rules or provisions that turn the CWA goals into mandates.
- You are setting the bar at the ceiling and we will have to find a way to meet it. I feel as though it would be better to first do your Use Attainability Analysis then set your standards according to the impact that each discharger will have on the receiving stream.
- The proposed rules take a top-down approach and immediately assume that all Iowa rivers and streams must be fishable and swimmable – requiring the highest level of protection. A better approach would be to first determine the true use of the river before applying an appropriate level of protection.
- It is illogical to create a process that takes every stream in the state to the highest standard and then later deploy the necessary resources to accurately classify each stream.
- IDNR staff originally proposed a "bottom-up" approach in which the streams would be placed into the proper use designation upon NPDES permit renewal. This is a much more rational approach to stream use classification that would utilize a separate use designation and separate water quality standards criteria for low flow "effluent dominated" streams.
- It unnecessarily creates additional work, expense and delay for IDNR by requiring re-classification of the water bodies that are not fishable and swimmable.
- It seems expensive, time consuming and very confusing to change all the classifications twice. Approaching the re-classification from the bottom up by doing the UAA when the permit expires and then changing the classification to the appropriate level would be a far better plan.
- It is possible that we would be required to expend dollars to change our operations to fit the highest classification and then discover that the stream classification was not accurate.
- The bottom-up approach is better since it does not create any additional workload or cost for IDNR and more importantly, it ensures that the water body receives the appropriate use designation.
- The CWA does not require the top-down approach.
- Reclassification of water bodies will subject IDNR to an additional layer of review from EPA and interested citizens.
- Top-down approach unnecessarily delays the NPDES permitting process.

- I feel the top down approach is wrong. Why set a standard that will be totally unattainable before you know what you're working with?
- The proposed blanket approach could result in anti-backsliding implications.
- Neither the federal CWA nor EPA rules and guidance require the state to classify all streams at the highest use category. The federal goal of "fishable/swimmable" is specifically qualified with the additional terms "where attainable". If the department feels compelled to provide specific use designations for all waters of the state, then the appropriate designations are Class B(WW-3) and Class A2 Recreational use. This establishes a minimum standard that all waters provide some aquatic resource and recreational benefit without imposing the highest protection automatically. It's much easier to raise the standard once the department completes the use-attainability analysis for these stream segments.
- The "top down" approach will dramatically alter the decision making process for new industries considering investment in Iowa.
- The problem is the top down "guilty until proven innocent" approach.
- It is an entirely reasonable interpretation from the plain language of the regulations for the state to proceed under its first proposal to first do the UAA, then the designation.
- Who has the burden of proving a change to a different category?
- Where is the logic in placing streams into classifications that don't meet our own Iowa definitions? This is the very reason that we must do use attainability analysis first, the properly designate our streams, then write and issue discharge permits.
- Once it's on the books folks, getting back to something reasonable and something attainable can be nearly impossible.
- This is just ridiculous, we're approaching this backwards and I think this shows that we have poor leadership in this state.

Response: (The following are paraphrased sections from the EPA's formal response to the same issue in Kansas) States have discretion in designating beneficial uses for the waters within their boundaries and in adopting water quality criteria to protect those uses. However, that discretion is not unlimited according to the CWA. While the CWA does indeed require States to establish use designations "taking into consideration" the waters' use and value for a variety of purposes, including agriculture, the CWA also specifically provides that "such standards shall be such as to protect the public health or welfare, enhance the quality of water and serve the purposes of this Act." The CWA also declares that "it is the national goal that wherever attainable, an interim goal of water quality which . . . provides for recreation in and on the water be achieved . . ." In 1983, EPA promulgated regulations to interpret and implement these statutory requirements. EPA interpreted the statutory phrase "serve the purposes of this Act" to include the goals of CWA 101(a)(2) (i.e. "fishable and swimmable" goals). Thus, it could be said that EPA filled a gap left in the CWA by Congress. (Contrary to some commenter's assertions, EPA is not converting "goal" language into an enforceable statutory mandate. Rather, EPA is using Section 101(a)(2) to interpret the mandatory statutory language that already exists in CWA 303(c)(2)(A), which provides that water quality standards "shall . . . serve the purposes of this Act.")

There are other examples of the limitations on States' discretion in designating uses. EPA requires States to specify "appropriate" uses to be achieved and protected, but prohibits States from designating waste transport or waste assimilation as a designated use. (Under the regulation, for example, it would be impermissible to designate a water for use as a receptacle for livestock waste even though that might be an "agricultural" use.)

While the 1994 Water Quality Standards Handbook on page 2-1 stated that there was no hierarchy among CWA uses, the Handbook also made it very clear that EPA reads its regulations

to require designation of “fishable and swimmable” uses unless the State conducted use attainability analyses (“UAA”) demonstrating that “fishable and swimmable” uses are not attainable. In other words, the Handbook makes it clear that “fishable and swimmable” uses need to be protected unless there is an affirmative demonstration that that use is not attainable. This is a rebuttable presumption in every respect except terminology.

With respect to the array of uses identified in the CWA, it is worth noting that States remain free to adopt any of those beneficial use designations in addition to the “fishable and swimmable” goal uses. However, designating a water for agricultural or other uses would not change the applicable water quality criterion if the water is also designated for swimming. EPA’s regulations provide: “For waters with multiple use designations, the criteria shall support the most sensitive use.” As noted above, a State may remove the swimming use designation (in an effort to “balance” agricultural and recreation uses), but it must be able to support that use change with a UAA as required by federal regulations. In other words, under the Clean Water Act, States should protect water quality sufficient to accommodate as many uses as possible. For example, water quality sufficient to protect primary contact recreation uses is also likely to be sufficient to protect agricultural uses as well. If primary contact recreation uses are not attainable, then consideration should be given to other uses.

EPA interpreted “fishable and swimmable” goal uses to require States to conduct a UAA whenever a State adopts or maintains use designations for a water, or removes a use designation, “such that the water body will not have all uses which are included in Section 101(a)(2) of the Act”. EPA’s regulations codify this interpretation. These requirements presume that the “fishable and swimmable” goal uses are indeed attainable until the State affirmatively demonstrates that they are not. The regulations define a use attainability analysis as a “structured scientific assessment of the factors affecting the attainment of the use which may include physical, chemical, biological, and economic factors as described in 131.10(g).”

Federal regulations specify six factors that a State is authorized to consider in evaluating the attainability of “fishable and swimmable” goal uses. One factor that may be used is, “Natural, ephemeral, or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating State water conservation requirements to enable uses to be met.” Kansas (as Iowa is proposing) has incorporated this factor into its Use Attainability Analyses Guidance Documents to determine whether “fishable and swimmable” goal uses are attainable. EPA believes this is an acceptable approach and has approved use designations based on analyses conducted consistent with the protocols in Kansas. In addition, the regulations authorize the removal of “fishable and swimmable” goal uses if imposing controls to achieve that use would “result in substantial and widespread economic and social impact”. (However, if the beneficial use is an “existing use,” these factors cannot be used to remove the use designation). Therefore, in deciding whether “fishable and swimmable” are attainable uses, the State can consider factors such as the flow or depth of the water body. Absent a showing using one of the regulatory factors that a Section 101(a)(2) goal use is not attainable, however, a State is required to adopt or maintain that use designation.

During the 1983 federal rulemaking, there was considerable comment regarding whether and, if so, when UAAs should be required. Some commenters asserted that EPA should require UAAs only when a State intends to designate a use specified in CWA 101(a)(2), so that recreation uses “in and on the water,” for example, could be designated only when the State had affirmatively demonstrated that such uses were attainable. EPA rejected this approach and opted for one which authorizes a State to not bother with a UAA if it includes the “fishable and swimmable”

goal uses in its designations. The CWA preserves the authority of a State to adopt – without impediment -- water quality standards that are more stringent than those required by the statute or implementing regulations. Thus, EPA interpreted CWA 101(a)(2) to create a presumption that could be rebutted upon a demonstration that those uses are not attainable.

Based on the EPA responses to the questions of rebuttable presumption or the ‘top down’ approach, it is clear that under current regulations and guidance, this is the only approvable approach for Iowa’s non-designated perennial waters. However, EPA does place considerable emphasis on the use of the Use Attainability Analysis to demonstrate the correct attainable use. The department is completely committed to actively applying this opportunity for any waterbody that is a potential candidate, particularly the rebuttable presumption waters.

It is the department’s intent that all NPDES permits will be written based on the appropriate (field documented) level of use protection rather than an assumed level of use protection. In other words, NPDES permits will not be issued for facilities potentially affected by these rule changes until a UAA is performed and the appropriate use designation is in place through rule making. This implementation approach prevents facilities from having to meet water quality based effluent limits that are based on presumptive uses.

ISSUE #4: Influence of Environmental Groups (17 comments)

- The DNR is responding to threats of lawsuits from the environmental community and threats from EPA of losing state jurisdiction over our water quality programs.
- This rule change is not something that should be decided by the IDNR or the Sierra Club; it should be thoroughly investigated by the Iowa Legislature, discussed and any necessary changes in the Water Quality Standards or any Re-classification of streams be approved by them.
- The DNR is responding to threats of lawsuits from the environmental community and threats from EPA of losing state jurisdiction over water quality programs.
- These new proposals are nothing more than passing the buck to someone else: The Iowa Environmental Council and the Sierra Club threaten unreasonable lawsuits, and in response, the DNR proposes to change Iowa’s stream classifications.
- The proposed rules let fringe groups (i.e. Sierra Club and their “friends”) dictate what happens in the state of Iowa.
- The proposed rules are for satisfying EPA, not improving water quality.
- It appears these standards have much more to do with threatened lawsuits by environmental groups than a relationship to a workable plan to improve water quality in the state.
- If the Sierra Club wants fishable/swimmable waters, may be they should put the money into remediation of the problem instead of litigation.

Response: States are required to conduct a comprehensive review of their WQS once every three years. This process is commonly referred to as the “Triennial Review”. Such reviews are necessary because new technical information may become available or specific environmental changes over time may occur that need to be addressed in the WQS.

The latest triennial review process for Iowa’s WQS officially began in 1999 and it is still in progress today. Many of the issues raised by the public and EPA have been addressed since the beginning of this triennial review through different “phases” of rule-making. There have been four phases to date, yet several controversial issues, including protected flow and general use segment provisions, remained to be addressed.

The IDNR conducted a meeting on June 24, 2004 with specific members of the Technical Advisory Committee (TAC) to determine the priorities of the remaining issues of triennial review and newer issues that have arisen since the triennial review began in 1999. This smaller group of TAC members is referred to as the Sub-TAC. Three major issues were identified as priorities by the Sub-TAC: 1) General Use definitions; 2) Protected Flow; and 3) Antidegradation Policy. As a result of that meeting, the IDNR committed to establishing time lines for WQS modifications. The time lines were finalized in October of 2004. The department has been committed to making these changes because it establishes sound environmental policy consistent with the congressional goals established in the CWA.

The environmental groups have sent letters to the Environmental Protection Agency (EPA) regarding the deficiencies in Iowa's WQS, which are included in the time lines. Through several meetings between the IDNR and EPA, it became apparent that if these WQS revisions were not completed by the State in accordance with the "Iowa DNR Time Lines for WQS Modifications", then the EPA would likely be forced to promulgate the WQS revisions for state.

The reason EPA would be forced to promulgate rules for the State is based on inconsistencies between the States' WQS and the CWA, and recent case law surrounding the implementation of the CWA. EPA has been sued successfully by environmental groups in other States', such as Missouri and Kansas, with strikingly similar WQS issues that Iowa is currently working with. This is not a position any State wishes to be in. When EPA promulgates rules for States there is very little public involvement and there is little, if any, economic consideration.

While the department is and has been committed to making these changes because it establishes sound environmental policy, the actions of the environmental groups have accelerated the department's efforts to address and complete these rule revisions in an aggressive, yet approvable manner.

ISSUE #5: Re-Classification of Streams (37 Comments)

- We are opposed to the lack of definition and unenforceability of the B(WW-3) classification for pooled condition on intermittent streams. This approach should be removed from the proposed rule. There is little difference between B(WW-2) and B(WW-3) the way the rule is currently proposed. We believe that pooled conditions should be addressed in the warm water assessment protocol.
- There are no differences in the numeric water quality standards for chemical constituents between B(WW-2) and B(WW-3) use designations in Table 1 of 61.3(3). What is the purpose for the two use designations if the level of aquatic life protection is the same for each use designation? It appears that the B(WW-3) criteria should be based on a level of aquatic life protection that is not as stringent as B(WW-2) criteria.
- There does not appear to be any basis to score or rank stream segments for any of the proposed classifications.
- Provide an intermediate water quality designation between general use and B(WW-2) that protects for acute toxicity. This intermediate water quality designation could also be protective of chronic toxicity for sensitive species appropriate for this designation and stream morphology.
- It appears that all criteria, numeric and narrative, are identical to the adopted criteria for the limited resource classification B(WW-2). Although the definition for the Class B(WW-3) indicates these aquatic resources are more limited in nature or diversity and include mostly species that are more readily adapted to survive in relatively harsh aquatic conditions, the

criteria are more applicable to species that are identified in the B(WW-2) classification. This classification appears to serve no useful purpose or meaningful implementation protocol.

- Is there a narrative or numeric basis to separate warm water designations?
- ARC 4505B, Items 1, 2, and 3, amendment to subrule 61.3(1), paragraphs (b)(8), (9), and (10) Class B(WW-1), Class B(WW-2) and Class B(WW-3) Waters. IDNR should consider developing objective criteria for flow in order to define the difference between “medium-size tributary streams” (Class B(WW-1), “small perennially flowing streams” (Class B(WW-2)) and “small streams of marginally perennial aquatic habitat” (Class B(WW-3)).
- It is understood that this will do away with the general use classification.
- Review the basis for numerical water quality criteria for Class B(WW-2) and Class B(WW-3) and provide lower level of protection for Class B(WW-3) or higher level of protection for Class B(WW-2).

Response: The following are the proposed warm water stream use designations intended to protect aquatic life.

b. Designated use segments. These are water bodies that maintain flow throughout the year, or contain sufficient pooled areas during intermittent flow periods to maintain a viable aquatic community. Designated use waters are to be protected for all uses of general use segments in addition to the specific uses assigned. Designated use segments include:

(8) Warm water – Type 1 (Class “B(WW-1)”). Waters in which temperature, flow and other habitat characteristics are suitable to maintain warm water game fish populations and a resident aquatic community that includes a variety of native fish and invertebrate species. These waters generally include border rivers, large interior rivers, and the lower segments of medium-size tributary streams.

(9) Warm water – Type 2 (Class “B(WW-2)”). Waters in which flow or other physical characteristics are capable of supporting a resident aquatic community that includes a variety of native non-game fish and invertebrate species. The flow and other physical characteristics limit the maintenance of warm water game fish populations. These waters generally consist of small perennially flowing streams.

(10) Warm water (Class “B(WW-3)”). Waters in which flow persists during periods when antecedent soil moisture and ground water discharge levels are adequate; however, aquatic habitat typically consists of non-flowing pools during dry periods of the year. These waters generally include small streams of marginally perennial aquatic habitat status. Such waters support a limited variety of native fish and invertebrate species that are adapted to survive in relatively harsh aquatic conditions.

EPA recommended that the designated use descriptions provided for Class B waters should include more specificity as to how these streams are biologically different.

While the proposed levels of protection may be proposed as identical for both B(WW-2) and B(WW-3) use designations, the basic purpose is to differentiate or provide more specifics to the type or nature of the aquatic habitat and possibly species between the two designations. It was felt that the Surface Water Classification listing specific use designation for individual water bodies should clearly identify the uses being made of the waterbody. When one sees that a waterbody reach is designated as Class B(WW-3), they can readily visualize that it is primarily a dry run stream with isolated perennial pools. While when one sees that a waterbody reach is designated as Class B(WW-2), they can readily visualize that it is characterized as a perennial flowing stream.

The numerical criteria for Class B(LR) Limited Resource streams, now proposed to be Class B(WW-2) – Type 2 streams, is being transferred to the new Class B(WW-3) – Type 3 use designation. It is not currently known if the aquatics present in B(WW-3) streams will be the same or similar to the aquatics in B(WW-2) streams statewide, but some preliminary field work is demonstrating similar fish communities in both types of streams which lends merit to the criteria transfer. However, the complete numeric criteria update, which scheduled to begin in 2006, will consider any available information to determine appropriate and protective numeric criteria. It is still important to note that different implementation considerations will be afforded each different designation, particularly when evaluating the assimilative capabilities of the waterbody.

The department has developed guidelines in order to define the difference between warm water stream use designations. Specific evaluation criteria were not used in order to provide the department flexibility when determining the appropriate stream use designation as a multitude of site or field specific issues may arise where specific criteria will not applicable or appropriate. The determination of designated uses will incorporate input from Fisheries and Water Quality Assessment staff as the department determines the best fit for streams that have the necessary field work completed. These determinations will be formalized into official UA/UAA documents that will be posted on the web and taken through the formal rule making process.

The department is not removing the general use segment provisions or general water quality criteria. These proposed rules provide more specificity to aquatic life uses that are made of Iowa's waters.

ISSUE #6: Protected Flow (10 comments)

- The proposed regulation removes the protected flow concept that is appropriate and reasonable for specific conditions. We would like to see the protected flow concept appropriately modified and retained to recognize the varied flow regimes present in small Iowa streams and the movement of aquatic life upstream and downstream as flows change.
- Use of appropriate, revamped protected flow concept and selection of appropriate sensitive species can be an effective means of providing adequate aquatic life protection for streams that are recognized as marginal quality streams.
- I support a revised protected flow system similar to other states where it has been used.

Response: The department has worked extensively with EPA exploring alternatives to protected flow implementation concept. According to the most recent EPA guidance, states may select a “flow cutoff” below which only narrative criteria apply. EPA views “flow cutoffs” authorizing provisions as part of states’ water quality criteria. EPA regulations at 40 CFR 131.5, 131.6 and 131.11 require criteria to be sufficient to protect designated uses.

The current critical low flow regimes are expressed as flow statistics (e.g. the lowest consecutive seven-day flow that occurs once every 10 years, also known as “7Q₁₀”) that are used in implementing water quality standards into National Pollutant Discharge Elimination System (NPDES) permits for point source discharges and for describing flow conditions below which the numerical aquatic life criteria do not apply, among other applications. These statistical low flow regimes can also be described as “low flow cutoffs”.

EPA recommended stream design flows in its 1991 Technical Support Document for Water Quality-based Toxics Control. These and other critical low flows have been adopted by states and approved by EPA. In general, most states have adopted and EPA has approved the 7Q₁₀ flow

as their critical low flow in their WQS to implement their aquatic life criteria. Iowa uses the EPA approved $1Q_{10}$ and $30Q_{10}$ stream design flows for the implementation of ammonia criteria while using the $1Q_{10}$ and $7Q_{10}$ stream design flows for the implementation for toxics according to IAC Ch. 61.2(5).

Iowa's protected flow concept is an alternative implementation flow and is used in lieu of $1Q_{10}$, $7Q_{10}$, and $30Q_{10}$. Protected flows are stream specific and were assigned based on best professional judgment of DNR staff. EPA has stated in several correspondences that the use of protected flows has not been scientifically demonstrated to protect the designated uses of Iowa's waters.

For example under current rules, the South Skunk River from Story City to Colfax, IA is assigned a protected flow of 2 cfs, which is used lieu of the critical low flows ($1Q_{10}$, $7Q_{10}$, & $30Q_{10}$). The critical low flows in the South Skunk River are expected to be 0.0 cfs. The protected flow of 2 cfs is then implemented in the calculation of a wasteload allocation (establishes water quality-based effluent limits) for a point-source discharge along that stream segment. This is allowing for more dilution or assimilative capacity in the South Skunk River than you may actually find during critical low flow thus allowing for less stringent permit limits and more pollutant loading in the stream than would be allowed when using the critical low flows. Put simply, the NPDES permit issued for that facility using the water quality-based effluent limits from the wasteload allocation using protected flow values may be allowing for toxic conditions to occur at an unacceptable frequency.

The department worked extensively with EPA discussing potential alternatives to the current protected flow concept, but couldn't reach consensus on a variety of alternatives (many of which are used in other states) because all alternatives reached the same conclusion: there was no way to scientifically justify using an alternative low flow that would be adequately protective of aquatic life uses other than the EPA approved critical low flow values. Some viable or EPA acceptable alternatives yielded flows that were essentially the same to the EPA approved critical low flows, thus rendering pursuit of those alternatives useless.

ISSUE #7: Non-Point-Source Exclusion (69 comments)

- Imposing stricter regulations on treated wastewater point sources and spending upwards of \$1 billion dollars to achieve compliance with those regulations will have very little impact on improving water quality when the majority of the agricultural industry and non-point source pollution remains completely unregulated.
- We need to schedule our environmental control regulations and the dollars we as citizens of Iowa and the US are willing to commit to achieve real observable, measurable progress in improving water quality. We should not confine our attention and efforts on point sources and stream reclassifications for that will not accomplish what we need done.
- I feel that non-point sources of pollution are a much larger problem and expending the funds to substantially lower them would be much more affective than expending the quantity of funds being estimated as necessary to accomplish the additional pollutant reduction presently being advocated.
- I strongly disagree with your statement that it makes no difference if the DNR takes a top-down or bottom-up approach in how you address this issue. It looks to me that you are going after the easiest target you have that that's the people you are already regulating without giving any consideration to the non-controlled polluters out there.
- Too much money is being spent for too little benefit – we can spend our money more wisely to obtain much better water quality improvement through addressing non-point sources.

- If indeed 90 percent of the water pollution in Iowa comes from the watershed and not City and industrial wastewater discharge, the source of 90 percent of the water pollution should be addressed prior to imposing more stringent limits for wastewater discharge on the group causing only 10 percent of the water pollution.
- The DNR's own statistics state 95% of water quality impairments are due to agricultural practices yet no regulatory authority is requiring any changes to that sector. It is time State officials stand up and propose regulations which will address the largest problem.
- No changes should be made until all contributors to water pollution are required to pay for the costs.
- The DNR admits that up to 95% of the pollution in our lakes and streams is due to agricultural run-off over which they have no control. That means that the remaining 5% subject to pollution from municipal waste water must bear the brunt of their regulatory efforts to affirm that they indeed are enforcing clean water standards.
- We are only a small percentage of the problem in Iowa, yet we are the easiest to find, so we become the receivers of the regulation even though our "clean" water may be running into a stream polluted by others, who are not regulated at all.
- The beneficial effects of minimizing the input of pollutants from one source cannot be realized if inputs from other sources are left uncontrolled (Based on 1988 study).
- The wasteload from our animal production alone is the equivalent of an organic load from a human population of over 100,000,000 people. Those loads enter our streams during and following periods of significant rainfall – from March – September – which is the same period our population seeks to enjoy our streams and lakes.
- Attention must be focused on the land runoff loads that occur during and after rainfalls that contribute most significantly to stream water quality in Iowa. Our land owners – farmers – need fiscal assistance and direction in how to spend the available funds to get the biggest "bang for our bucks." I repeat: CITIES got a minimum in grants of 80% from the federal government and 10% from the Iowa legislature to build municipal/industrial plants in the 70's, 80's, and 90's – they only paid 10% at most, of treatment plant construction costs. Iowans, if we truly want better stream water quality, must budget state (and federal) dollars in support of reducing land runoff pollution.
- Wastewater treatment plants are being unfairly targeted.
- The agricultural sector and its contribution to water pollution are being purposefully ignored.
- The focus need to be on a watershed-based approach to water quality improvements.
- Would it make more sense to concentrate on curtailing the major sources of water pollution by creating new rules and regulations for the agricultural sector? "YES!"
- I run a 50 head cow calf herd. My pastures are along a crick that the DNR would like to classify as a fishable – swimmable waterway. Do I have to fence it off from my cattle? Is the IDNR going to fence off all rivers and streams? I highly doubt it.
- EPA and USDA need to be coordinating more efforts. Until changes occur in the way the agricultural community is handled there won't be significant gains in water quality.
- Are you afraid to attack the corporate non-farmer producer?
- This state is corrupt. Physically and morally. This state is the handmaiden of Agri-business to the detriment of its citizens. It is the breeding place of zillions of flies and all manner of threat to the well being of a human being. Iowa State University is to me just as culpable as the DNR. It too needs Agri-business and it too feeds Agri-business, again to the everlasting harm to our ecosystem.

Response: Nonpoint source pollution remains a significant problem. The CWA's enforceable provisions are directed at discharges from point sources - regulating the discharge of pollutants to surface waters from pipes, outlets, and other discrete conveyances. In contrast to this

enforcement approach, nonpoint source water pollution - polluted runoff - is addressed primarily through non-regulatory means under the CWA.

Water pollution from nonpoint sources remains a substantial contributor to the impairment of waters across the nation, especially in Iowa. Various approaches have been used to control such pollution, including assistance to states from federal planning and grant programs under the Clean Water Act (e.g., 33 U.S.C. §§ 1288, 1329). Common strategies at the state level include watershed and land use planning, development of voluntary best management practices (BMPs), technical assistance programs, cost-sharing for implementation of prevention and control measures, and some enforceable mechanisms, including regulation in the absence of any direct federal requirement or mandate.

Put simply, EPA does not have enforceable authority for regulating nonpoint sources. The decision whether to control nonpoint source pollution and in what manner is left entirely up to the State under the Clean Water Act.

The water quality standards define the water quality goals for a water body by designating the use or uses to be made of the water, by setting criteria necessary to protect those uses, and by protecting water quality through antidegradation provisions. Iowa adopts water quality standards to protect public health or welfare, enhance the quality of the water, and serve the purposes of the Clean Water Act. The proposed rules do not affect the current approach for nonpoint source pollution or existing programs. Instead, it revises aspects of Iowa's water quality standards. These standards apply to the waters in Iowa and not to a specific source of pollution. Water quality standards are applicable to nonpoint sources of pollution despite the fact that there may be few direct implementation mechanisms for nonpoint sources.

The state is and has been working hard towards finding and implementing better ways to control nonpoint sources of pollution. The standards simply define and set the appropriate water quality goals and protections for Iowa's water resources independent of the current regulatory framework of water quality programs that implement the water quality standards.

It is important to note that these rules establish appropriate water quality goals for the state of Iowa that are consistent with the minimum requirements of the federal Clean Water Act. It is also consistent with the policy of the EPC to protect and enhance the quality of all waters of the state by attempting to prevent and abate pollution of all waters to fullest extent possible consistent with statutory and technological limitations for all point and nonpoint sources of pollution.

As stated previously, the majority of water pollutants come from the watershed and not from wastewater treatment plants outfall pipes. The department estimated that approximately 80-90% of the water pollution in Iowa comes from the watershed. However, before the state can start addressing pollution from the watersheds, it is necessary to set the appropriate uses and levels of protection for Iowa streams that are consistent with the goals and intentions of the CWA. This can mean some cities and industries will have to meet more stringent limits for their wastewater discharge to protect the local beneficial uses of their receiving stream.

The fact that rivers and streams may already contain pollution from other sources does not obviate the responsibility or requirements for a regulated facility to treat wastewater to levels that are consistent with the Water Quality Standards.

Issue #8: Legislature Issues (23 comments):

This should come from the legislature, not the DNR. The Iowa Legislature needs to debate appropriate water quality standards, not a small group of citizens appointed to the Environmental Protection Commission.

Response: Past legislative actions has established in the Code of Iowa the duties of the commission as related to Water Quality Standards and the criteria to be considered. (The two provisions of the Code are noted below.) These code provisions are broad providing the basic framework from which the commission establishes the details in rule form. Based on these Code provisions, the commission has exercised its duties and published the Notice of Intended Action for the proposed rules.

455B.173 Duties.

The commission shall:

2. Establish, modify, or repeal water quality standards, pretreatment standards and effluent standards. The effluent standards may provide for maintaining the existing quality of the water of the state where the quality thereof exceeds the requirements of the water quality standards.

455B.176 Criteria considered.

In establishing, modifying, or repealing water quality standards the commission shall base its decision upon data gathered from sources within the state regarding the following:

- 1. The protection of the public health;*
- 2. The size, depth, surface area covered, volume, direction and rate of flow, stream gradient, and temperature of the affected water of the state;*
- 3. The character and uses of the land area bordering the affected water of the state;*
- 4. The uses which have been made, are being made, or may be made of the affected water of the state for public, private, or domestic water supplies, irrigation; livestock watering; propagation of wildlife, fish, and other aquatic life; bathing, swimming, boating, or other recreational activity; transportation; and disposal of sewage and wastes;*
- 5. The extent of contamination resulting from natural causes including the mineral and chemical characteristics;*
- 6. The extent to which floatable or settleable solids may be permitted;*
- 7. The extent to which suspended solids, colloids, or a combination of solids with other suspended substances may be permitted;*
- 8. The extent to which bacteria and other biological organisms may be permitted;*
- 9. The amount of dissolved oxygen that is to be present and the extent of the oxygen demanding substances which may be permitted;*
- 10. The extent to which toxic substances, chemicals or deleterious conditions may be permitted.*
- 11. The economic costs and benefits. The goal shall be a reasonable balance between total costs to the people and to the economy, and the resultant benefits to the people of Iowa.*

ISSUE #9: Technical or Miscellaneous Comment & Questions:**BioCriteria Comments:**

- The only way to tell if a town's waste water is having an impact on a stream is to measure the aquatic life both above and below waste water treatment facilities

Response: Assessing aquatic life above and below wastewater treatment facilities is one way to determine whether a wastewater discharge is having an impact on a stream, especially for chronic toxicity effects, such as low reproduction or unhealthy aquatic communities. These effects do not necessarily suggest mortality. The department is in the process of developing

biocriteria, which may likely require these types of assessments to occur in the future as possibly a part of the NPDES permit.

Currently, numeric and narrative criteria apply to the specific designated uses of Iowa's waters. These criteria are in place to protect these uses of Iowa's waters. It is expected that if a discharger is in compliance with these criteria that the uses of the water body will be protected from both acute and chronic toxicity. The state has not experienced many known fish kills related to point source discharges (NPDES permitted) when complying with water quality-based effluent limits. This is an indicator that the water quality being discharged is generally protective of the aquatic life uses, primarily for acute toxicity effects (i.e. mortality).

- The water quality of the benthic macroinvertebrates indexing streams that have been studied here in Iowa would be a good indicator of the background levels for aquatic life protection as a baseline.

Response: This concept of integrating biological criteria, such as benthic macroinvertebrates indexing, into the Water Quality Standards is being developed by the department staff. It is unclear when a technically defensible criteria, numerical or narrative or a combination of both, will be proposed for rulemaking. Extensive implementation guidance will be needed as this new concept is developed for application to Iowa's water quality management programs.

Cost Specific Questions:

- If these rules are enacted, what will be the annual cost?

Response: The department did not include projections for the annual costs in the economic assessment prepared as part of this rulemaking package. The term 'annual cost' can be an all encompassing and vague term, and may not be applicable when associated with the concepts being considered in the proposed rules. However, the department did provide annualized costs associated with the construction and O&M of the projected wastewater treatment needs for affected facilities. This annual of type cost is noted at the end of Table 2 of the Fiscal Impact Statement.

- What increase in annual cost of living/family/person would this represent?

Response: The department did not include projections for increases in the annual costs of living in the economic assessment prepared as part of this rulemaking package. This concept of 'annual cost of living' also can be an all encompassing and vague term, and may not be applicable when associated with the concepts being considered in the proposed rules. It would not be feasible even to project what would be an increase in annual cost of living/family/person associated with annualized costs noted in Table 2 of the Fiscal Impact Statement. Numerous local and regional factors will affect the translation of the annualized construction and O&M costs for an individual wastewater treatment facility to its customers.

Warm Water Protocol Technical Comments:

- Creek chub are a common gamefish in Iowa and in other states, commonly fished for sport, and harvested for consumption, especially by younger anglers. DNR's own website contains detailed information about the prevalence of creek chub and their importance as a game fish. I presented this information at the August EPC meeting in Fairfield, and even handed out

copies of supporting documents. Therefore creek chub needs to be added to list of gamefish referenced in the warm water protocol that would trigger a human health protection designation.

Response: The department's program efforts to encourage responsible angling for aquatic species does not limit pursuit to only game species, but rather encourages responsible angling for any species allowed by rule. It is true that there are Iowans that pursue the common creek chub by hook and line and that younger anglers may resort to catching this species, particularly in the smaller streams where creek chubs are a predominate species. Angling for creek chubs or any other species found in smaller streams may be a very good method to learn the art of responsible angling. However, this type of angling effort does not logically imply that the creek chub be associated with the commonly held term of a 'game fish'. Moreover, EPA's technical development of the human health criteria associated with the consumption of aquatic species considered the long-term (70-year duration) consumption from the waterbody and established risk based criteria to protect long-term exposure. Clearly, it is not likely that the incidental consumption of this species as a youth will be carried on through one's lifetime. Thus, the department concludes for various reasons that it is unwarranted to apply the human health designation to streams where the creek chub and other minnow-type species are the predominate species.

- There appears to be some problems with the warm water protocol rules also, specifically with Appendix 1 Common Warm Water Game Fish. In the table it lists Walleye, Sauger, Yellow Perch and Northern Pike as warm water game fish. These fish actually belong in the category of cool water game fish. Need to have a definition of what warm water game fish are and another definition of what cool water game fish are. It would be appropriate to have a cool water protocol as well.

Response: The objective of the listing of warmwater game fish species was simply to note the non-cold water game species to be associated with the Protocol. Department staff members had briefly considered separate cool water species when developing the new use designations in the 1990's and found that neither separate use designations nor numerical criteria could be developed for this general grouping of fishes. However, in association with EPA's new ammonia criteria of 2000, the department did incorporate into the chronic numerical criterion for the Class B(WW) Significant Resource designation a unique consideration for some of these fishes. It was recognized that for the burbot and northern pike, the onset of spawning and the presence of early life stages occurred earlier than other fish species also present in these waters. Thus, for waters where either of these species occurred, the chronic criteria (early life stage) would apply earlier in the year. Currently, no other numerical criteria or other implementation provisions are known to differ for these cooler water species to warrant a different use designation.

Technical Advisory Committee Comments:

- The IDNR is not using the "Technical Advisory Committee" approach to the rules with input from professionals.
- I recommend that the proposed rules be revised to include a technical review of the stream use designation structure and levels of aquatic life protection for each designated use by a panel of expert aquatic toxicologists, biologists, limnologists, and environmental engineers prior to adopting any revisions to the designated uses or numeric and narrative standards for toxic parameters.

- We suggest that the Technical Advisory Committee be utilized to supply sound technical advice to IDNR staff for changes to improve water quality regulations that protect and improve the waters of the state.
- We recommend that the proposed rules be revised to include a technical review of the stream use designation structure and levels of aquatic life protection for each designated use by a panel of expert aquatic toxicologists, biologists, limnologists, and environmental engineers prior to adopting any revisions to the designated uses or numeric and narrative standards for toxic parameters.

The department has used and will continue to use advisory committees in the development of WQS modifications. It is believed that the proposed rules do meet the direction provided by a subcommittee of the Technical Advisory Committee. For upcoming timeline work elements, particularly reconsideration of the numerical criteria for toxics, input will be sought from an advisory committee. In addition, technical input will be sought during the development of the Total Dissolved Solids and Chloride numerical criteria.

The technical advice provided to the department by a subcommittee of the Technical Advisory Committee prior to developing the current NOIA was (paraphrased) ‘propose modifications that were approvable to EPA and they will be acceptable by the TAC’.

Public Hearings Issue:

- There needs to be more convenient meetings on the water quality issue.
- The hearings and comment period could have been scheduled with more consideration for rural Iowa.

Response: The Administrative Procedures Act requires only the “opportunity for oral presentation” which can be granted if a petition is signed by 25 persons. The department scheduled seven public hearings without any petitions being submitted. These seven public hearings were held across the state: Atlantic and Cherokee on October 4, 2005; Clear Lake on October 10, 2005; Manchester and Washington on October 12, 2005; Des Moines on October 14, 2005; and a hearing over Iowa Communications Network (ICN) that included the Cities of Spirit Lake, Fort Dodge, Waterloo, Davenport, and Des Moines on October 13, 2005. In addition, written comments were accepted until October 28, 2005. These hearings were at varying times of the day to attempt to accommodate as many special needs as the department could. The department realizes that rural Iowa is busy in October, but also realizes that rural Iowa is busy working all year long as well in addition to the rest of the citizens of the state. We will continue to be as accommodating as possible in future rule making efforts.

Credible Data Comments:

- ARC 4504B, Item 1, amendment to subrule 61.2(5), paragraph “e” – Use Assessment. The reference to the use of credible data at new paragraph “e” should be qualified to incorporate the definition set forth at Iowa Code 455B.193.

Response: The department believes the use of credible data must be consistent with the credible data provisions in Iowa Code and that the qualification is implied in the proposed rule.

- The warm water protocol could be strengthened by including more stringent requirements on the types of data that will be acceptable in compliance with Iowa’s credible data law.

Response: The department will only accept data that is consistent with the credible data provisions in Iowa Code.

- The protocol should specify that use designations may be made only upon the completion of the protocol by a qualified person. As it is now written, a qualified professional is required only when assessing aquatic habitat. This requirement should be extended to all aspects of the protocol.

Response: Field assessments must be conducted by DNR staff, a qualified aquatic biologist, or person trained in habitat evaluation and fish sampling by appropriate DNR staff. The only other aspect of the protocol not covered by this provision is for literature review. In this case, the data has to be consistent with the credible data law. Review of field data in consideration for designated use changes and preparation of UA/UAA documents will be conducted by the department.

Recreational Protocol Rulemaking Comments:

- The DNR notes in the proposed rulemaking that it intends to develop a similar protocol for the assessment of recreational uses of classified stream segments. We believe the both the warm water protocol and recreational use protocol are critically important to directing the state's limited financial resources toward addressing those streams which are truly in need of more stringent protections. We believe that both documents should be developed through rulemaking.
- Another document equally important to the warm water protocol is entitled the "Recreational Use Assessment and Attainability Analysis Protocol". The use of this document without going through the Chapter 17A rulemaking process will bring the resulting UAA and use designation into serious question. The recreation use protocol is a standard, procedure or practice requirements that the agency is applying to determine recreational designated uses. It should have been adopted through the rulemaking process to avoid invalidation of the protocol.
- IDNR should consider restricting the use designation for Class A waters to acknowledge the fact that body contact and ingestion is limited to warmer seasons.

Response: The Recreational Use Assessment and Attainability Analysis Protocol is a procedure or guidance document the department will follow when gathering data during recreational use field assessments. Chapter 17A.2(11)f. states that "...staff manuals, instructions, or other statements issued by an agency which set forth criteria or guidelines to be used by its staff in auditing, making inspections..." does not carry the weight of a rule and therefore does not require rule making. The data resulting from the field work will be used by the department to recommend and draft UA/UAA documents that will justify a specific recreational use designation. These recommendations for use designation change will then be proposed into the formal rule making process via a Notice of Intended Action. The recreational use protocol is simply the procedures the department will follow to gather the necessary data, which will then be used separately to make a recommendation.

The common retort to this response is why did the Cold Water Protocol (CWP) and Warm Water Protocol (WWP) go through formal rule making? The CWP proceeded through rule making at the recommendation of the legislature and this protocol contains detailed criteria that are intended to be used to determine whether or not cold water uses are attainable. Since CWP had proceeded through rule making, the department felt it was appropriate at the

time to take the WWP through rule making as well. However, as the department drafted the WWP it was realized that the protocol should simply be used to gather data that the department can later use to determine the appropriate warm water aquatic life uses. At this time, the department also learned that the EPA does not review and approve UAA protocols, but rather the formal UAA document itself, as it's this document that acts as the scientific justification for designated use changes. However, the department had already committed to introducing the WWP into the rule making process. This is why it is felt that the recreational use protocol are simply the procedures the department will follow to gather the necessary data that will then be used separately to make a recommendation for the appropriate recreational uses and therefore does not require formal rule making.

The department already has seasonal criteria in place for Class A waters. The general primary contact recreational season begins on March 15th through November 15th each year. Cold water fisheries secondary contact recreational season is year round as fishing can occur in those waters year-round.

Alternative Technology Comments:

- I think the DNR should conduct a feasibility study to find out all the facts about these irrigated wetlands and solutions because they could make this cost burden come down a lot if implemented.
- The rule should provide for the development of guidelines for the use of alternative technology.

Response: The department currently has guidelines for the use of alternative technology, that can include irrigated wetlands, in the Wastewater Facilities Design Standards which is a rule-referenced document in the IAC Chapter 64.2(9)a. The appropriate subsection of the Wastewater Facilities Design Standards is included below for informational purposes.

14.4.3 Required Engineering Data for New Process Evaluation

*The policy of the department is to **encourage** rather than obstruct the development of any new methods or equipment for treatment of wastewater. The lack of inclusion in the design standards of some types of wastewater treatment processes or equipment should not be construed as precluding their use. The department may approve other types of wastewater treatment processes and equipment under the condition that the operational reliability and effectiveness of the process or device shall have been demonstrated with a suitably-sized prototype unit operating at its design load conditions. The specific information required by the Department to demonstrate operational reliability and effectiveness will depend upon the process or device under consideration. Information which may be required includes:*

- a. Monitoring observations, including test results and engineering evaluations, demonstrating the efficiency of such processes.*
- b. Detailed description of the test methods.*
- c. Testing including appropriately-composited samples under various ranges of strength and flow rates (including diurnal variations) and waste temperatures over a sufficient length of time to demonstrate performance under climatic and other conditions which may be encountered in the area of the proposed installations.*
- d. Other appropriate information*

The department may require that appropriate testing be conducted and evaluations be made under the supervision of a competent process engineer other than the one employed by the manufacturer or patent holder.

Multi-Agency Coordination Comments:

- We need to look at the holistic approach of working with the department of Agriculture and trying to solve non-point problems.
- The DNR should lead and partner with other state agencies and other constituencies in order to prioritize and truly affect water quality parameters that can make a significant improvement in the waters of Iowa.

Response: The department is and has been working hard with other state and federal agencies towards improving water quality in the state.

Effluent Dominated Streams Comments

- I recommend that the rules be revised to include another stream use designation for low flow, effluent dominated streams along with numeric water quality standards that are based on protection of aquatic life that may be reasonably expected to survive, but not necessarily reproduce in these streams. Alternatively, the standards can be based on treatment technology based limits.
- Please develop a classification that appropriately deals with wastewater effluent dominated segments.
- It is apparent that the department has not considered an additional category for discharges that, were it not for the discharge point, are for all practical purposes a dry ditch during the majority of the year.
- Add another use designation for effluent dominated streams with a lower level of aquatic life protection than the current warm water use designations. Work with expert aquatic toxicologists, biologists, etc. Include controlled discharge lagoons in the new use designation for effluent dominated streams.
- The proposed rules do not include the concept of a different level of aquatic life protection for effluent dominated streams. This concept makes sense and is similar to the “free from acutely toxic” criteria previously applied to General Use streams. Add another use designation for effluent dominated streams with a lower level of aquatic life protection than the current warm water use designations. Include receiving streams for controlled discharge lagoons in the new use designation for effluent dominated streams.

Response: The Code of Federal Regulations 131.10(a) and WQS Handbook specifically detail that states are free to develop and adopt any use classification system they see as appropriate, EXCEPT that waste transport and assimilation is not an acceptable use in any case. If an aquatic life use is attainable in any stream, then it should be designated and protected for that use regardless of the source of water.

The concept of a different level of protection for effluent dominated streams does warrant additional discussion with EPA to determine if a different level of aquatic life protection for effluent dominated streams can be developed within EPA guidelines. Currently the department is not aware of the extent or degree of flexibility available from EPA in developing different numerical criteria. However, if a perennial aquatic life use is attainable in an effluent dominated stream then it must be protected as such, which includes protection from both acute and chronic toxic conditions. Chronic toxic conditions include impaired reproduction. In addition, if such acceptable criteria were available, they would need to be carried through formal rulemaking as it is felt to be a significant modification from the Notice of Intended Action.

Technology-based limits will not be adequate to protect the aquatic life and recreational uses for most of the discharge situations that may result from this rule change. Several key parameters to assure protection of the uses are not directly controlled through technology-based limits, such as bacteria and ammonia nitrogen.

Including types of wastewater treatment technology are not necessarily appropriate when describing the designated uses of waters.

“Other Uses” Comments

- We recommend that the proposed rules be revised to include additional use designations for “other uses” such as irrigation water supply and livestock water supply. The rules should also include numeric standards for those parameters that are critical to each specific “other use”. Streams that are expected to be used for any other uses would receive specific other use designations as appropriate in addition to the aquatic life and recreation use designations.
- There are no differences in the numeric water quality standards for “other uses” such as irrigation and livestock watering. This can lead to inconsistent application of the narrative criteria. Consider adding additional designated uses with numerical standards for specific uses.
- There are no numerical water quality standards for the “other uses” such as irrigation and livestock watering. This can lead to inconsistent application of the narrative criteria. Consider adding additional designated uses with numerical standards for specific other uses. Streams that are used as irrigation water supplies would then have two use designations; one designation such as B(WW-1) for aquatic life and another designation for the irrigation water use.
- I recommend that the proposed rules be revised to include additional use designations for “other uses” such as irrigation water supply and livestock water supply. The rules should also include numeric standards for those parameters that are critical to each specific “other use”. Streams that are expected to be used for any of the other uses would receive specific other use designations appropriate in addition to the aquatic life and recreation use designations.

Response: It is possible for the department to establish more specific designated uses. Currently, the department protects water quality for agricultural uses through general water quality criteria that is applicable to every water of the state at all places and all times. These agricultural uses include irrigation of crops, consumption by livestock, support of vegetation for range grazing, and other uses in support of farming and ranching and protect livestock and crops from injury due to irrigation and other exposures.

The department feels agricultural uses are adequately addressed and protected by the general water quality criteria. While specific numerical criteria have not been developed for agricultural uses, the criteria developed for human health and aquatic life are usually sufficiently stringent to protect these agricultural types of uses.

Miscellaneous Comments/Questions:

- How does the DNR propose to draw water samples from dry intermittent streams?

Response: Clearly, it is not practical to draw water samples from a dry stream. Any sampling of the water, whether for chemical analysis or for biological evaluation, will be performed only when water is present. As discussed in other responses, the department’s implementation of the proposed rules will involve field assessments of the recreational and

aquatic uses during normal stream flow regimes. The field assessments will be conducted only when water is present at these normal flows.

- Why are these new rules being proposed?

Response: Numerous reasons have prompted these proposed rules, including the need to bring many provisions in Iowa's Water Quality Standards consistent with the current provisions of EPA and the Clean Water Act, the need to protect uses of the Waters of the State, which were felt to be inadequately protected, and to avoid possible litigation.

- What contaminants are being indicated?

Response: No contaminants are being indicated with this proposed rule. With the nature and scope of the proposed rules, all parameters (over 80 toxic and non-toxic parameters) will be linked or associated. It is anticipated that two primary pollutants from wastewater discharges will require additional treatment, ammonia nitrogen, and bacteria. However, the discharge containing any of the numerical criteria noted in the standards may have limitations placed on the amount that could be introduced into Iowa's waters.

- Who are the predicted perpetrators?

Response: The department has not predicted perpetrators, but rather projected the needed additional wastewater treatment potentially required for permitted dischargers. Clearly, there are other sources of contaminants entering Iowa's waters that will require varying degrees of control or elimination. These sources have yet to be specifically identified and the control measure yet to be pursued.

- How many employees will be needed to enact the plan?

Response: The department did not include projections for the need for additional staff. It is anticipated that additional staff efforts, including possible contract assistance, will be necessary during the first several years of implementation efforts. Most of the initial implementation efforts will be associated with the Use Assessment and Use Attainability Analysis efforts and the calculation of applicable water quality-based effluent limitations.

- Why is the state leadership working hard to encourage new and increased business activity and then discouraging these and existing businesses by calling for profit robbing regulations?

Response: The department does not see that encouraging new and increased business activity while attempting to protect the various uses being made or capable of being made in or on Iowa's waters as in conflict nor robbing profits. These rules are projected to have very little impact on most business/industries as most are already controlling pollutants, in one manner or another.

- This appears to be another government program that falls in the jobs creation category at the taxpayers and citizens expense.

Response: Clearly, the reasons for this rule making effort are not related to creation of jobs, but rather to including the need to bring many provisions in Iowa's Water Quality Standards

consistent with the current provisions of EPA and the Clean Water Act and the need to protect uses of the Waters of the State.

- The present water quality programs are working. Let's continue.

Response: As noted in other responses, it is felt that some provisions in Iowa's Water Quality Standards are not consistent with the current provisions of EPA and the Clean Water Act and need modifications. In addition, it is felt that some of the uses made or that are attainable of Iowa water are inadequately protected. Thus, this rulemaking is one-step in achieving these corrections.

- This proposal appears to be just a starting point for other issues, such as phosphates and nitrates, which could potentially be as cost prohibitive, if not more so, than what we are addressing now.

Response: It is true that this rulemaking effort is one element in the long-term revisions that are proposed to bring many provisions in Iowa's Water Quality Standards consistent with the current provisions of EPA and the Clean Water Act. A timeline of work efforts has been developed by the department that indicates many of the anticipated revisions. In addition to the time line noted revisions, other department staff members are proceeding with the initial development of nutrient-type numerical and/or narrative criteria. Due to the unique nature and implementation aspects of nutrient-type criteria, it was felt that staff members more familiar with both the nonpoint and point source programs were appropriate to develop these new provisions. As with any new provision, formal rulemaking and public participation will be an integral part of the development of a nutrient program.

- EPA has not disapproved Iowa's WQS so there is no need for these changes.

Response: The department has received numerous correspondences from EPA (and Iowa citizens) that many of Iowa's WQS past provisions are not consistent with current EPA regulations and guidelines. While extensive modifications to the WQS have been made (and approved by EPA) over the past decades, additional corrections are needed. It was the intent of the department to establish a timeline to address these needed corrections. This set of proposed rules is part of the timeline work effort, with more proposed rules to be developed in the upcoming years. As noted above many additional proposed modifications will continue to be developed to address the changing technical implementation of the CWA.

- The future impacts include controlled discharge lagoon facilities as well as criteria for total dissolved solids, chloride, sulfate, and other parameters. Where does it stop?

Response: The department does not know if there will ever be an end to the ever-evolving provisions associated with WQS. Clearly, the burden of providing cleaner and cleaner waters will be upon society as our activities continue to affect surface and ground water quality and the uses we desire of the waters.

- The IDNR has more flexibility under the Clean Water Act. They are taking the least flexible approach to this issue.

Response: It is the department's intent to provide as much flexibility in these proposed rules as allowed by EPA and their regulations. In particular, it is the department's plan to apply

the provisions of the Use Attainability Analysis (UAA) prior to imposing additional water quality-based effluent limitations on affected point source discharges. While it is unknown what flexibility and latitude EPA will consider when reviewing the results of the UAAs, the use this tool to potentially reduce the unnecessary economic burden while protecting the representative uses made of the waterbody.

- The proposed rules violate the Administrative Procedures Act as the rules are unreasonable, arbitrary and capricious.

Response: Clearly, these rules do not meet the commonly held definitions of unreasonable, arbitrary, and capricious. As noted in many of the response to comments, these proposed rules have well founded reasons for their development and are not the result of any arbitrary or capricious decision by the staff or commission. The department is making every effort possible to arrive at a set of rules that are in fact reasonable as required in the Code 244B.176 item 11, noted above.

- Provide a watershed approach to address point and non-point pollution sources as the best solution to Iowa's water quality concerns.

Response: The department agrees that for many water quality related programs, both point and non-point, the watershed approach is technically advantageous. This approach is being followed or proposed to be followed in such areas as TMDL on impaired waters, implementation of nutrient criteria, etc. However, for the proposed rules, the standards, their use designations, and various implementation efforts have statewide application. Therefore, the department feels that use of both approaches is still in the best interest of the multitude of water-related programs within the department.

- Item 61.2(5)e. The department must perform use assessment and related use-attainability analysis on water bodies where the uses may not be known or adequately documented. Thus, the term "may" should be replaced with the term "shall" in the first line of the proposed language.

Response: The streams that will be assessed as a result of this rule making are currently classified as general use segments or intermittent streams. Approximately 14,000 miles of these smaller, headwater-type streams are proposed to be designated as "fishable/swimmable" or Class A1 Primary Contact Recreational Use and Class B(WW-1) – Type 1 for protection of aquatic life as they are expected to be perennial during average flow conditions. These streams typically receive regulatory attention when there is an NPDES point source facility discharging to them. The department estimates the a few thousand streams miles out of the 14,000 stream miles may receive effluent from an NPDES permitted facility. The other 10 to 13 thousand stream miles (estimation) do not receive effluent from point source discharges and therefore receive little to no regulatory attention (See non-point discussion above).

While the stream designations are changing for these streams, the new designation(s) will have little to no practical effect unless a new NPDES facility plans to discharge to a stream that has no current NPDES facilities discharging to it. A UA/UAA would be conducted on the stream segment if a new facility is planning to discharge to a stream that was not previously assessed. Since there are no expected regulatory effects for nonpoint sources of pollution in these watersheds, the designation will not have a regulatory purpose until

significant non-point regulations are in place or a new point source wishes to discharge there.

The term “may” allows the department flexibility when determining whether or not an assessment would be appropriate given the current regulatory framework of water quality protection in the State of Iowa.

- Even if these more stringent limitations are put in place, the desired goal of water quality enhancement will not be realized until all sources of water quality degradation are controlled.

Response: Water quality enhancement may be seen locally by the implementation of more stringent limitations and will be one step towards achieving water quality that is protective for human and aquatic life uses. (See nonpoint discussion)

- The EPC should defer the decision on WQS revisions until the federal courts firmly establish jurisdictional reach of the CWA or until Congress finally reauthorizes the CWA.

Response: The department cannot speak on behalf of the EPC. However, the department feels it would not be prudent to defer the decision on WQS based on actions on the federal level that may or may not happen in the future. Furthermore, the proposed revisions establish appropriate water quality goals for the State of Iowa that are consistent and current with the minimum requirements of the federal Clean Water Act. The revisions are also consistent with the policy of the EPC to protect and enhance the quality of all waters of the state by attempting to prevent and abate pollution of all waters to the fullest extent possible consistent with statutory and technological limitations for all point and nonpoint sources of pollution.

- Why are ethanol and biodiesel plants being asked to achieve a discharge level of iron well below that which ensures water is safe to drink?

Response: It is a general fact that pollutant levels have different effects in different ways. For example, drinking water out of our faucets contain low levels of residual chlorine that work to disinfect the water so it's safe to drink. These levels of chlorine do not pose a toxic threat to humans, however most fish will not be able to survive in a glass of tap water because the low chlorine levels are enough to kill most fish. Most aquarium owners know that the water out of the faucet needs to be stored for a day or two so chlorine can decay to a point where it does not cause a toxic threat to the aquatics in their aquariums. Iron is similar, however reducing iron in tap water is primarily for aesthetic reasons, specifically taste. Varying levels of iron in tap water can be tolerated by humans, however these levels could still pose a toxic threat to aquatic life.

- You need to ban atrazine for farm use and control the use of nitrogen.

Response: The WQS does contain chemical criteria for atrazine for protection of Class C surface drinking waters as it is one of the most widely used agricultural herbicides in the United States, especially in Iowa. EPA and the DNR are currently conducting monitoring studies for atrazine to determine possible impacts of this herbicide to humans and wildlife. See the non-point exclusion discussion above regarding the control of nitrogen.

- The “Adopt-a-Stream”, IOWATER, and “Save our Streams” programs, if implemented, will allow towns to take ownership of their stream, create many more volunteers, allow the IDNR to supervise the cleanup of waterways without additional manpower or money and launch a statewide grassroots movement that will bring attention to Iowa’s impaired waters.

Response: The department supports these efforts to improve the waters of the state.

- Compliance with the Clean Water Act is not a valid justification for the proposed rules.

Response: The department is proposing these rules for several reasons and compliance with Clean Water Act is a major reason because states are delegated authority by the EPA to administer the Water Quality Standards program. Congress originally set out in 1972 to protect and enhance our nation’s waters. Iowa needs to be and should be consistent with the original vision of the CWA. The bottom line with this rule making effort is to set sound environmental policy that begins to change how we view our water resources in an effort to provide the level of protection that is necessary to protect the beneficial uses of those water resources.

- ARC 4504B, Item 2, amendment to subrule 61.3(1), paragraph “a” – Insignificant Aquatic Community. The IDNR has unduly narrowed the applicability of the general use classification by redefining a general use segment to waters that “do not support a viable aquatic community of significance” to waters that “do not support a viable aquatic community”.

Response: Using the words “of significance” seemed to imply one aquatic community is better than another. The words are proposed to be removed to simplify the definition/description of general use waters. The department believes that when flow is present in general use streams, typically for short periods of time following precipitation, that there is potential for some aspects of aquatic life to temporarily inhabit these waters. Waters of this type are not proposed to be “fishable/swimmable” with this rule package and will remain as general use segments, however some form of assessment may be needed to determine whether these intermittent general use segments maintain perennially pooled conditions during periods of no flow.

- The proposed rules would amend the general use designation to protect aquatic life even though there cannot be any viable aquatic life under the proposed definition of a general use segment.

Response: Aquatic life can be present when flow is present in a general use stream for short times following certain precipitation events. General water quality criteria have been established to protect aquatic life when present in a general use stream segment.

- ARC 4504B, Item 3, amendment to subrule 61.3(1), paragraph “b” – Waters of the State. The IDNR should explicitly recognize that the term “water of the state” is not coterminous with the term “navigable waters” under the CWA, and the DNR should use the flexibility offered by that difference.
- ARC 4504B, Item 3, amendment to subrule 61.3(1), paragraph “b” – Waters of the State. There is nothing in the CWA that prevents the IDNR from including within the definition of general use segments, perennial rivers, streams or pools that are not “navigable waters” under the CWA.

Response: The proposed rule defines designated use waters as perennial rivers and streams (within defined parameters) and intermittent streams with perennial pools. The department believes such streams will, by definition, have sufficient hydrologic connectivity to “navigable waters” to be considered “navigable waters” pursuant to the Clean Water Act.

- ARC 4504B, Item 3, amendment to subrule 61.3(1), paragraph “b” – Fishable and Swimmable Goal. The IDNR’s interpretation of the CWA’s “fishable and swimmable” goal should not be extended to deprive citizens of their property rights.

Response: As noted in the comment, Iowa may not designate any stream as less than “fishable” and “swimmable” unless a use attainability analysis has established that such uses are unattainable. The commenter cites the case of Idaho Mining Assoc. v. Browner, 90 F.Supp.2d 1078 (D. Idaho 2000). Contrary to the assertions of the commenter, in this case the court specifically held that EPA had reasonably interpreted the federal regulations to require a rebuttable presumption in favor of fishable/swimmable uses (Id at 1092-1093). To the extent that prior designations have been made without the completion of a UAA, these designations are invalid. To the extent that some perennial streams lack current designations, the failure to designate results in a violation of the Clean Water Act.

Secondly, whether the actual designations are made at this time or not, the UAA must begin with the presumption that the stream segment is fishable and swimmable. The burden of proof does not shift, regardless of the sequence of events.

Downgrading or removing recreational uses solely because of physical conditions is inappropriate when it is otherwise feasible to meet water quality standards. However, when considered with other data collected for a use attainability analysis, there are a few instances where physical considerations may play an important role in informing a state or authorized tribe’s decision to refine a recreation use and, in particular, in determining whether or not primary contact recreation is an existing use. This may include a water body where access is prevented by fencing or in an urban water body that also serves as a shipping port or has close proximity to shipping lanes. In instances such as these, the physical attributes help to ensure primary recreation does not and will not occur in these water bodies.

Use designations help establish water quality goals for particular water bodies; they do not create or abridge property rights regarding access to such waters. The department nor EPA is not aware that any individual has interpreted that State use designation (made solely for CWA purposes) as permission or encouragement from the State government to enter private property for the purpose of wading in the streams so designated. Consequently, the department has no reason to believe that this situation will change as a result of the use designations changes.

- ARC 4504B, Item 2 amendment to subrule 61.3(1), paragraph “a” and ARC 4505B, Items 2 and 3, amendment to subrule 61.3(1) paragraph “b”, subparagraphs 8, 9 and 10. – Aquatic Life. The IDNR’s use of the term “aquatic life” is an unwarranted expansion of a national goal intended to protect fish, shellfish, and wildlife.

Response: The CWA and federal regulations allow states flexibility when designating the uses of the state’s water resources to include more specific subcategories. According to the WQS Handbook, a use may also even include protection of aquatic flora. Wildlife includes waterfowl, shorebirds, and other water-oriented wildlife. It is EPA’s policy that States

should designate aquatic life uses that appropriately address biological integrity and adopt biological criteria necessary to protect those uses to more fully protect aquatic habitats and provide more comprehensive assessments of aquatic life use attainment. This can be interpreted to include any and all types of aquatic life when designating uses, including invertebrate species.

- ARC 4505B, Items 1-4, amendments to subrule 61.3 – More Specific Use Classifications. The IDNR should consider additional uses that reflect the unique geography and uses of Iowa’s waters, specifically for agricultural uses.

Response: The department does consider additional uses that reflect unique geography and uses of Iowa’s waters. A good example is the state’s cold water stream specific to the geography of northeast Iowa. It is possible for the department to establish more specific designated uses. Currently, the department protects water quality for agricultural uses through general water quality criteria that is applicable to every water of the state at all places and all times. These agricultural uses include irrigation of crops, consumption by livestock, support of vegetation for range grazing, and other uses in support of farming and ranching and protect livestock and crops from injury due to irrigation and other exposures.

The department feels agricultural uses are adequately addressed and protected by the general water quality criteria. While specific numerical criteria have not been developed for agricultural uses, the criteria developed for human health and aquatic life are usually sufficiently stringent to protect these agricultural related uses.

- ARC 4505B, Items 1, 2, and 3, amendment to subrule 61.3(1), paragraphs (b)(8), (9), and (10) Class B(WW-1), Class B(WW-2) and Class B(WW-3) Waters. IDNR should consider developing objective criteria for flow in order to define the difference between “medium-size tributary streams” (Class B(WW-1), “small perennially flowing streams” (Class B(WW-2)) and “small streams of marginally perennial aquatic habitat” (Class B(WW-3)).

Response: The department has developed guidelines in order to define the difference between warm water stream use designations. Specific evaluation criteria were not used in order to provide the department flexibility when determining the appropriate stream use designation as a multitude of site or field specific issues may arise where specific criteria will not applicable or appropriate. The determination of designated uses will incorporate input from Fisheries and Water Quality Assessment staff as the department determines the best fit for streams that have the necessary field work completed. These determinations will be formalized into official UA/UAA documents that will be posted on the web and taken through the formal rule making process.

- ARC 4505B, Item 8, amendment to subrule 61.3(3), paragraph “d” – Class “HH” Waters. The IDNR’s imposition of a “taste” restriction on substances in concentrations which would make fish or shellfish inedible due to undesirable tastes is unenforceable and subject to abuse.

Response: The proposed Class HH use designation are for waters in which fish are routinely harvested for human consumption. This designation is generally intended to protect against long-term human health effects from consumption of fish. Fish can bioaccumulate toxic pollutants over time, such as mercury, which is a serious concern because contaminated fish tissue with the presence of even low ambient concentrations of bioaccumulative pollutants in surface waters can pose a human health risk. The designation is typically enforced through

the implementation of numerical criteria to protect this use. WQS staff is unaware of any complaints regarding the taste of fish for consumption due to bioaccumulative pollutants.

- ARC 4505B, Items 12 and 13, amendment to subrule 61.3(5) and (7), Classification and Protocol Documents. The proposed rules incorporate by reference, but do not recite the contents of, two documents that are available online. These documents are either rules which must be published by the administrative code editor or they are not rules, in which case the proposed rules and the two documents should explicitly state that they are not rules.

Response: The “Surface Water Classification” and “Warm Water Stream Use Assessment and Attainability Protocol” are being adopted by reference and have the full force and effect of an administrative rule. Iowa Code section 17A.6(4) specifically acknowledges the ability of an agency to adopt standards by reference. Section 17A.6(3) further provides for situations in which a rule may be omitted from publication if such publication would be unduly cumbersome, expensive, or otherwise inexpedient.

- We appreciate the reasonableness with which the DNR intends to proceed (in regards to implementation) but believe that this process should be clearly stated in the rule.

Response: Certain aspects of implementation are included in the WQS, specifically the rule-referenced Basin Plan Support Document. The document basically details how the department calculates water quality-based effluent limits for NPDES dischargers. These are implementation procedures that are essentially permanent. Implementation commitments in this case are NPDES permit specific and short-term. The department typically does not introduce implementation procedures such as this into formal rule making because it may limit flexibility in site-specific situations and is time sensitive (e.g., completion of field work). The department has every intention of continuing in a practical, responsible manner as stated orally at the public hearings and elsewhere.

- The proposed rule fails to indicate how the DNR will take potential negative economic impact into account. At a minimum, the proposed rule should clearly state the mechanism for “determining substantial and widespread economic and social impact”.

Response: The department is currently working with the EPA to establish the appropriate procedures to determine substantial and widespread economic impact. Currently, the EPA recommends the March 1995 Interim Economic Guidance for Water Quality Standards to use as guidance, though States may use other economically defensible approaches in lieu of those suggested by this interim guidance document. The concept of using economics as a means to justify a variance from meeting the WQS is a relatively new concept that not many states or EPA regional offices have extensive experience in. Thus, it is difficult at this point to state which mechanism should be used for determining economic impact and if it is even appropriate to include the guidance into administrative rules.

- It’s going to cost what we can afford and not a penny more, cause that’s all the CWA will require communities to pay, what they can afford.

Response: Based on initial research, if a discharger can demonstrate that complying with more stringent permit limits to meet water quality standards will cause significant and widespread social and economic impact, then the discharger will not have to meet WQS. The discharger will likely be expected to undertake some additional pollution control that would

not impose a substantial impact on the discharger. (See previous comments for additional discussion on EPA's economic guidance.)

- Governor Vilsack wants to earmark one-third of the multi-state tobacco settlement to help offset the cost of meeting these new stringent standards.

Response: The department is unaware of the details of the multi-state tobacco settlement.

- Is it wise to create more regulations when in fact there are programs that assist us that address our conservational concerns and water quality concerns? Do we have to create more programs and place more rules? The answer is easy – NO. We should fund programs properly and sufficiently that actively address and put solutions on the ground in Iowa.

Response: The department is not proposing any new programs with these rule changes.

- I recommend that the rule be revised to require that the IDNR conduct evaluations of uses on all perennial rivers and streams and intermittent streams with perennial pools and to prepare draft rules for revisions to appropriate stream use designations for all these streams by December 31, 2010.

Response: The department has created a UA/UAA Field Work Plan where the fundamental objective is to obtain field information on the existing and attainable aquatic life and recreational uses in selected stream reaches proposed to be designated as fishable – swimmable. Initially the UA/UAA efforts will be considered for affected waterbodies receiving NPDES treated wastewater discharges. The field information will be used to verify the applicability of the recent assumed designations or to augment documentation prepared as part of a Use Attainability Analysis (UAA). In addition, high priority field assessment will be provided to any proposed discharger or upgrading facility applying for a construction permit. Department staff is currently preparing an initial priority list for stream reaches receiving treated wastewater from these groups of facilities. Most stream reaches will require both aquatic life and recreational UA/UAA's while a few will only require a simpler recreational UA/UAA. The basic goal will be to address as many priority stream reaches in calendar year 2006 as possible. Modifications to the priority list of streams will be performed as program needs are changed or as stream reaches have been assessed.

- I recommend that the rules be revised to include the requirement that the water quality standards be applied fully to controlled discharge lagoon facilities. I further recommend the Fiscal Impact Statement include the evaluation of the impact of the proposed rules on controlled discharge lagoon facilities.

Response: Currently, the department is not implementing water quality-based effluent limits for controlled discharge lagoons. This is primarily based on this type of wastewater treatment technology and mode of operation. Controlled discharge lagoons are designed to store wastewater for set amount of time, typically 180 days, where wastewater receives treatment through natural processes. These lagoons will then discharge this treated effluent at times of elevated stream flows. The department has study information from 1981 provided by the University of Iowa Hygienic Laboratory that demonstrates controlled discharge lagoon technology can achieve compliance with WQS. The department has created a controlled discharge lagoon committee that is discussing whether this technology is still viable and whether it can still comply with today's WQS, among other issues. The

department has no current plans to change how WQS are implemented for controlled discharge lagoons, therefore revision of the Fiscal Impact Statement is not necessary at this time.

- I recommend that the Fiscal Impact Statement be revised to include evaluation of the impact of the current numeric standards in addition to ammonia and bacteriological standards as well as the expected future standards such as total nitrogen, phosphorus, chloride, and total dissolved solids on the dischargers to low-flow, effluent dominated streams.

Response: The department has no way of knowing what the impact of future standards for total nitrogen, phosphorus, chloride, and TDS will be to facilities that discharge to low flow streams and no way knowing what those standards will be and how they will be implemented, especially for nutrient standards. Thus, it is not practical to include any consideration in the Fiscal Impact Statement..

- I recommend that the proposed rules be expanded to include provisions for adjusted water quality standards that would provide permanent, adjusted site-specific standards based on adequate technical justification via a petition for adjusted standard.

Response: Adjusted, site-specific water quality standards are possible under current provisions in the WQS and would be considered, if requested with adequate technical support.

- Effluents will contain higher levels of Nitrate which will raise concerns for Class C and Class HH waters.

Response: The department understands the rationale behind this comment and it is theoretically possible. However, the overall impact of this possibility is likely to be minimal since there are only a small amount of water bodies designated as Class C currently and even fewer NPDES point source facilities that discharge elevated nitrate effluents to these waters. Current wasteload allocation procedures do evaluate the potential for exceedence of any numerical criteria and will establish effluent limits to assure protection of the designated uses.

- I would like a do-it-yourself handbook on how to build a septic system. Septic systems works.

Response: The department has not prepared handbooks on how to build a septic system, but there are plenty of guidance documents available regarding on-site septic tank systems particularly from state and county health departments. Septic tank systems do work as long as they are designed, located, sized properly, and receive regular maintenance. However, septic tank systems are not likely to be a suitable option for many communities as these systems will likely have difficulty complying with stringent ammonia-nitrogen limits and some towns are too big to utilize septic technology.

- I recommend that all of you cities read the Iowa Policy Project paper.

Response: This is a paper discussing economical, alternative wastewater treatment technology. The department has received this document and it has been distributed to our wastewater construction section for their information.

- It is my understanding that there is going to be 2 sets of ammonia limits; one for continuous discharge aerated lagoons and a separate set of limits for mechanical plants. The limits for mechanical plants are not going to be as strict as it is for aerated lagoons. I don't understand this because the mechanical plant is more efficient at ammonia removal.

Response: True. A mechanical plant is generally more efficient at ammonia removal. However, ammonia toxicity can change depending on the instream temperature and pH values, which is influenced by how we apply the acute and chronic criteria to calculate the acute and chronic wasteload allocation (WLA).

Chronic WLAs are calculated to assure compliance with the chronic criteria at the boundary of the mixing zone (MZ). Since mixing zones can be as long as 2,000 feet, it is expected that the pH & temperature of the stream will be at background conditions by the time the effluent travels that distance. Therefore, effluent pH & temperature of a mechanical or lagoon facility have no bearing on the chronic criteria, resulting in the same chronic criteria for both types of treatment facilities. Acute WLAs are calculated to assure compliance with the acute criteria at the boundary of the Zone of Initial Dilution (ZID). Since the zone of initial dilution can be as long as 200 feet, it is expected that the pH & temperature of the stream will be influenced by the effluent. Therefore, effluent pH & temperature of a mechanical or lagoon facility (which are very different) have bearing on the acute, resulting in different acute criteria for each type of treatment facilities

Following calculation of the WLAs, the average effluent concentration limit will be either the chronic or acute WLA, whichever is more stringent. The maximum effluent concentration limit will only be the acute WLA.

Table 2 below highlights the slight differences between the average concentrations for a mechanical and lagoon facility for specific months. This is caused when the acute WLA is governing the average concentration. The acute WLA (which can apply to either average or maximum concentration limits) uses the acute WLA at the ZID for its calculation and since this distance is much shorter (approximately 10% of MZ distance) it is expected that the effluent pH & temperature will have an impact on the acute WLA. This explains the slight difference in average concentration limits and the big difference in maximum concentration limits between mechanical and aerated lagoon facilities.

Table 2 - Example End-of-Pipe Ammonia-Nitrogen Concentration Limits

Month	Mechanical				Aerated Lagoon			
	Effluent Values		End of Pipe Limits		Effluent Values		End of Pipe Limits	
	pH	Temp °C	Avg. (mg/L)	Max. (mg/L)	pH	Temp °C	Avg. (mg/L)	Max. (mg/L)
January	7.67	12.4	5.2	15.2	7.5	4.5	5.2	19.9
February	7.71	11.3	5.8	14.2	8	8.1	5.8	8.4
March	7.69	13.1	4.5	14.7	8.4	8.7	3.9	3.9
April	7.65	16.2	2.1	15.7	8.3	14.6	2.1	4.7
May	7.67	19.3	1.8	15.2	8.5	18.8	1.8	3.2
June	7.7	22.1	1.3	14.4	8.5	22.8	1.3	3.2
July	7.58	24.1	1.1	17.6	8.5	25.3	1.1	3.2
August	7.63	24.4	1.0	16.2	8.6	25.3	1.0	2.7
September	7.62	22.8	1.5	16.5	8.6	22.2	1.5	2.7
October	7.65	20.2	2.8	15.7	8.6	16.6	2.7	2.7
November	7.69	17.1	3.4	14.7	8.6	12.4	2.7	2.7
December	7.64	14.1	4.0	16.0	8.4	8.4	3.9	3.9

- If the highest water quality standards are required, more watersheds would be declared impaired. If they are declared impaired then the law requires a TMDL watershed plan to be put in place.

Response: This is theoretically true, however the department’s water quality assessment report (i.e. 305b Report) is only as extensive as the monitoring that is conducted. Typically, only the larger rivers and streams are monitored and the impaired waters are identified from that group of assessed water bodies. This implies the current demand to monitor smaller headwater streams has been historically low, but the proposed rule change may result in more monitoring and assessments conducted in these smaller headwater streams. If they are assessed as “impaired”, it is anticipated a UA/UAA will be conducted on the assessed stream segment to determine the appropriate use prior to any chance of the stream segment being listed as impaired in the 303d. report.

- I’m sorry that Mr. Gieselman or Mr. Farrand or some of our environmental commissioners couldn’t be here tonight, because those are the people that I really wanted to address. And I think when they come and propose these magnitude of changes, I want to hear them, I want to see them here and I want them to hear my comments.

Response: The purpose of public hearings is to gather public comments regarding proposed rulemaking action by the department, which may or may not change the course of the action. The department then prepares a formal responsiveness summary per the Administrative Procedures Act, which is the official response to public comments. All the public comments have been made available for management’s review.

- Consider flexibility of the proposed rules and to allow exemptions and to honestly look at the current court ruling that allowed for specific exemptions.

Response: The department is not sure which court ruling the commenter is referring to, but the department will pursue specific exemptions where applicable, such as the criteria cited in 40 CFR 131.10 used to remove designated uses.

- The federal CWA was passed over 30 years ago and it has water quality standards in it that we're talking about here today. For thirty some years Iowa's been doing it wrong and as a result 83% of our waters have not been protected.

Response: Iowa's WQS have been historically consistent with the CWA at the times new standards were adopted in the past. However, new interpretations of the CWA based on case law throughout the country have dictated new policies and guidance from the EPA. The department has been working with EPA and stakeholders throughout Iowa to update the WQS to meet the understood goals and intentions of the CWA.

- We discharge to a stream that is classified as a Class B(LR) stream, however, with the new classification of Class B(LR-C) we would not meet the proposed disinfection requirements.

Response: There is no proposed Class B(LR-C) and nor does it imply disinfection requirements. The current Class B(LR) stream is proposed to be changed to Class B(WW-2), which is the same definition, but a different name. All Class B(WW-2) streams are also proposed to be designated as Class A1 Primary Contact Recreational Use with this rule making effort. The outcome of a use attainability analyses and subsequent rulemaking for recreational uses for the stream segment the facility discharges will establish whether or not the disinfection requirements will be necessary.

- 61.3(1), paragraph a. General Use Segments.
In the first paragraph of this section it is stated that *"These waters do not support a viable aquatic community during low flow, and do not maintain pooled conditions during periods of no flow."* We object to the use of the phrase "viable aquatic community" in this definition because it suggests that aquatic life in intermittent or ephemeral waters is not viable. Many types of aquatic life are adapted to intermittent or ephemeral waters. In fact, many aquatic species require these conditions to thrive because of lack of predatory species. These aquatic communities are viable even though they are not present year-round. We suggest that this phrase be replaced with: *"These waters support aquatic communities that are adapted to highly variable flow conditions including dry periods."*

Response: At low flow conditions, general use segments are expected to be dry, thus aquatic communities are not present. A viable aquatic community can occur in general use segments when these stream segments are flowing, typically during short periods of time following precipitation events.

- 61.3(1), paragraph b. Designated use segments
In this section it is stated that *"These are water bodies which maintain flow throughout the year, or contain sufficient pooled areas during intermittent flow periods to maintain a viable aquatic community."* We object to the use of the phrase "viable aquatic community" in this definition because it suggests that only aquatic life in designated streams is viable. Many types of aquatic life are adapted to intermittent or ephemeral waters. In fact, many aquatic species require these conditions to thrive because of lack of predatory species. We suggest that this phrase be replaced with: *"These are water bodies which maintain flow throughout the*

year, or contain sufficient pooled areas during intermittent flow periods to maintain a diverse, year-round aquatic community.”

Response: The department feels that the terms “viable” and “diverse, year-round” basically mean the same thing. See previous response.

- In the second paragraph of this section it is stated that, “*The general use segments are to be protected for livestock and wildlife watering, aquatic life, noncontact recreation, crop irrigation, and industrial, agricultural, domestic and other incidental water withdrawal uses.*” We object to the use of the term “noncontact” recreation as a general use. We believe the existing recreation use for most general use streams is “secondary contact” recreation, which would include wading as you might do while hiking through the woods or walking through a pasture. Noncontact recreation as it is applied currently carries with it no limits on bacteria or other pathogens and this is simply not protective enough considering many of these general use streams flow through urban areas, parks, back yards, etc. Hopefully many of these “high recreation use” general streams will eventually get designated as A3, but this may take a long time and some level of protection is needed now.

Response: The term “noncontact recreation” has existed in this definition for some time and is believed to have come from EPA guidance. The commenter is correct to state the term carries no criteria for bacteria or other pathogens as contact with the water is not expected. The term is included in the definition to protect for recreational activities along or around the banks of the stream such as hunting. Though contact with the water is not expected, protection is applied through the general water quality criteria that apply to all the waters of the state to keep them free from objectionable water quality conditions that may prevent noncontact recreation from occurring.

- 61.3(1), paragraph b, subparagraph (10). Warm Water – Type 3 Class B (WW-3)
In this section it is stated that “*Such waters support a limited variety of native fish and invertebrate species that are adapted to survive in relatively harsh aquatic conditions.*” We object to this language because it implies that B(WW3) streams do not have much diversity and do not support pollution sensitive species. Many small perennial streams have very diverse communities of invertebrate species, amphibians and reptiles, including many pollution intolerant species. We suggest that this sentence be changed to, “*Such waters support native fish and invertebrate species that are adapted to survive in variable flow conditions, including periods of low or no flow.*”

Response: The department feels that both descriptions generally mean the same thing. The department prefers the definition for Class B(WW-3) waters that used the input from WQS, Water Quality Assessment, and Fisheries staff to accurately describe the basic type of aquatics and habitat that are expected in Iowa’s warm water streams.

- **Background Section:** In the 6th paragraph of this section, 3rd & 4th sentence, it is stated that, “*The department will make recommendations for stream use designations on a case-by-case basis considering any and all relevant factors and procedures. The information, observations, and findings obtained from the field assessment may be used by the department in the preparation of a formal Use Attainability Analysis document.*”

We would suggest that this protocol include what other relevant factors and procedures are anticipated to be considered by DNR in determining use designations. We would not support consideration of factors other than those specified in Appendix 5 “Evaluation Consideration

for Use Attainability Analyses”. If economic considerations are one of the factors being considered, it is important that all available wastewater treatment options be evaluated to determine if compliance can be achieved. Also, it is our understanding from EPA guidance that a UAA would need to be done to justify any designation other than B(WW1) [B(WW2), B(WW3) or general]. This UAA would also need to determine what aquatic life uses could be attained if physical and chemical factors impairing a use were corrected.

Response: Any and all relevant factors to remove a designated use must be linked back to the federal criteria listed in 40 CFR 131.10(g). This sentence is also intended to provide flexibility when collecting data in the field to handle or document unusual situations that may be encountered in an effort to provide complete and accurate assessments for the purposes recommending appropriate use designation changes, if applicable.

- Surface Water Classification: *b. Designated use segments* in this section it is stated that “These are water bodies which maintain flow throughout the year, or contain sufficient pooled areas during intermittent flow periods to maintain a viable aquatic community of significance.” The Council objects to the phrase “viable aquatic community of significance” (see comments on 61.3(1), paragraph *b.* above). This wording needs to be changed to be consistent with the wording in Chapter 61

*Response: The department will revise the warm water protocol to be consistent the proposed rule change in Chapter 61.3(1), paragraph *b.**

- (10) Warm water (Class “B(WW-3)”), in the last sentence of this section it is stated that “Such waters support a limited variety of native fish and invertebrate species that are adapted to survive in relatively harsh aquatic conditions.” The Council objects to this language because it implies that B(WW3) streams do not have much diversity and do not support pollution sensitive species (see comments on 61.3(1), paragraph *b.*, subparagraph (10). above).

Response: The definition for Class B(WW-3) waters used the input from WQS, Water Quality Assessment, and Fisheries staff to accurately describe the basic type of aquatics and habitat that are expected in Iowa’s warm water streams, but not imply or prejudge the supportability of certain species.

- Preparation for Warm Water Stream Use Assessments: It is unclear to us what the purpose of the specific mention in this section of the need to “consult county drainage district files to determine if the assessed reach is part of an established district and the nature of maintenance activities.” While we do not object to the gathering of all relevant data including information about established drainage districts, it is important to make sure that the assessments are completed without prejudice concerning the use by a drainage district.

Response: The department realizes that many of the drainage ditches throughout the state receive regular maintenance. These activities can disrupt aquatic communities present in these water bodies. It is important to know whether or not a drainage ditch that is being assessed has been recently maintained to provide as much information as possible for the determination of appropriate attainable aquatic life uses. The department may delay use assessments if recent maintenance activities have occurred in drainage ditches for the purposes of obtaining representative data for what is occurring most of the time in that stream segment.

- Use Assessment Guidelines: In the second sentence of this section it is stated that “The department will make recommendations for stream use designations on a case-by-case basis considering any and all relevant factors and procedures. As stated in our comments on Section I Background, we suggest that this protocol include any other relevant factors that are anticipated to be considered by DNR in determining use designations.

Response: Any and all relevant factors to remove a designated use must be linked back to the federal criteria listed in 40 CFR 131.10(g). This sentence is also intended to provide flexibility when collecting data in the field to handle or document unusual situations that may be encountered in an effort to provide complete and accurate assessments for the purposes recommending appropriate use designation changes, if applicable.

- Guidelines for Class B(HH) Human Health stream: We suggest that the list of documentation for fish harvest should also include documented presence of game fish of harvestable size.

Response: The department agrees with this comment. The warm water protocol will be modified to include documented presence of game fish of harvestable sizes an additional guideline for Class HH.

- The DNR needs to look somewhere else to find money to pay for the additional cost of keeping our rivers and streams clean. Maybe you need to look at cutting some of the waste in your agency.

Response: See Issue #1 about Cost above.

General Discussion of Rulemaking:

Iowa’s current warm water aquatic life stream use designations, Class B(WW) & B(LR), include most designated warm water bodies (nearly all lakes and wetlands are designated Class B(LW)) in these two categories of water bodies. The Class B(WW) significant resource warm water designation is assigned to waters in which temperature, flow, and other habitat characteristics are suitable for the maintenance of a wide variety of reproducing warm water fish and associated aquatic communities, including sensitive species. The Class B(LR) limited resource warm water designation is assigned to waters in which flow or other physical characteristics limit the ability of the water body to maintain a balanced warm water community. Such waters support only populations composed of species able to survive and reproduce in a wide range of physical and chemical conditions, and are not generally harvested for human consumption.

These proposed amendments will rename and redefine the current Class B(WW) and B(LR) use designations to: Class B(WW-1) - Type 1, and Class B(WW-2) - Type 2, respectively. The Class B(WW-1) use designation will be defined similarly to the current significant resource warm water use designation. The Class B(WW-2) use designation will be defined similarly to the current limited resource warm water use designation.

A new Class B(WW-3) use designation will be added and defined as waters in which flow persists during periods when antecedent soil moisture and ground water discharge levels are adequate; however, aquatic habitat typically consists of non-flowing pools during dry periods of the year. These waters generally include small streams of marginally perennial aquatic habitat status. Such waters support a limited variety of native fish and invertebrate species that are adapted to survive in relatively harsh aquatic conditions.

The existing Class B(WW) waters will be transferred to the new Class B(WW-1) use designation and the existing Class B(LR) waters will be transferred to the new Class B(WW-2) use designation. It is the department's intent that any river or stream designated as Class B(WW-1) under the "rebuttable presumption" provisions will be field assessed and redesignated, if applicable, to the appropriate designation (Class B(WW-2) or Class B(WW-3)) when adequate use assessment documentation is obtained. It will be only after completion of the use assessment and use attainability analysis efforts that a waterbody's appropriate use designation will be listed in the Surface Water Classification.

The header for Table 1, Criteria for Chemical Constituents, currently displays the Class B(WW) and B(LR) use designations. The header is being changed to incorporate the proposed Class B(WW-1), B(WW-2), and B(WW-3) use designations. In addition, chemical criteria for Class B(WW-3) are being established in Table 1 equivalent to the Class B(LR) values.

A new Class HH use designation will be added and defined as waters in which fish are routinely harvested for human consumption. The current Human Health – Fish numerical criteria for Class B(WW), B(LW), and B(CW) designated waters will transfer to Class HH. The current Human Health – F & W numerical criteria for Class C waters will transfer to Class HH with a special notation that the criteria apply to all Class C designated waterbodies, that is, at the location of Class C designation. Thus, any waters currently designated as Class B(WW), B(LW), B(CW) or Class C will also be designated as Class HH waters.

The header for Table 3a, Acute Criterion for Ammonia in Iowa Streams, currently displays the Class B(WW) and B(LR) use designations, along with Class B(LW). The header is being changed to incorporate the proposed Class B(WW-1), Class B(WW-2), and Class B(WW-3) use designations, along with Class B(LW). Thus, the current acute numerical criteria will apply to all warm water use designations.

With the basic principle of protecting warm water fish populations and associated warm water aquatics, the current Class B(WW) Dissolved Oxygen criteria are proposed to apply for the new Class B(WW-1) use designation. It is proposed that the current Dissolved Oxygen criteria for Class B(LR) be retained for the new Class B(WW-2) and Class B(WW-3) use designations.

Iowa's current general use classification applies to all waters of the state. The current definition of general use segments allows stream flows resulting from wastewater treatment plants to be considered as general use segments. This implies general use streams can be classified solely on their origin of flow, which is inconsistent with federal regulations. In addition, protection of aquatic life against acutely toxic conditions within general use waters only during periods of elevated flow is also inconsistent with federal regulations. Protection from acutely toxic conditions should occur in all waters and at all times.

The proposed amendments will strike the language that allows discharges from wastewater treatment plants to be considered as general use segments and the language that provides protection in general use segments only at elevated flows.

The current use of the exceptions to the design low flow regime, known commonly as the protected flow concept, in conjunction with the implementation of Iowa's Water Quality Standards for Iowa's streams has not been demonstrated to protect aquatic life uses under critical low stream flow conditions and is thus considered inconsistent with EPA guidelines. The removal of the protected flow concept will more adequately protect aquatic life because the standard design low stream flow regimes ($1Q_{10}$, $7Q_{10}$, & $30Q_{10}$) will be associated with the

implementation of the numerical criteria. These proposed amendments will eliminate the language that allows exceptions to the design low flow provisions.

Many perennial-type streams in the State of Iowa are classified as general use. This is in contrast to the definition of general use segments that implies these streams are only intermittent watercourses. There is a gap between how general use segments are defined and how the waterbodies in Iowa are actually classified. The proposed amendments will designate as Class B(WW-1) waters all perennial rivers and streams or intermittent streams with perennial pools in Iowa not specifically listed in the Surface Water Classification. The amendments will also designate as Class A1 waters all perennial rivers and streams or intermittent streams with perennial pools. This is consistent with the national goal in the Clean Water Act that waters should be “fishable and swimmable” wherever attainable, commonly referred to as the “rebuttable presumption” provision. As noted above, the department will only list applicable use designations in the Surface Water Classification after completion of the use assessment and use attainability analysis efforts (include formal rulemaking) for each waterbody designated under the “rebuttable presumption” provision.

Recommendation:

The proposed rule-referenced Warm Water Stream Use Designation Assessment Protocol document is recommended to include two minor changes. These changes were recommended after all comments from the public hearings were assessed and are as follows:

- 1) Correct the cross referenced use designations in the Protocol to be consistent with the use designations in IAC Chapter 61.3(1)b.
- 2) The second recommended change is a modification to the Class HH guidelines in the Protocol to include presence of fish of harvestable size as an additional guideline.

It is recommended that the EPC adopt a final rule reflecting these above noted changes to the NOIA.

APPENDIX: COMMENTATORS

The following is a list of the individuals and organizations that commented or assisted in preparation of responses to comments on the proposed rule changes during the public comment period. The commentators are grouped into similar categories and are listed in no particular order.

Government Agencies:

Chuck Corell – Iowa Department of Natural Resources (Water Quality Bureau)
Adam Schnieders – Iowa Department of Natural Resources (Water Resources)
Jon Tack – Iowa Department of Natural Resources (Legal)
Ralph Turkle – Iowa Department of Natural Resources (Water Resources)
Annie Hartman – Iowa Department of Natural Resources (Water Resources)
Connie Dou – Iowa Department of Natural Resources (Water Resources)
Lori McDaniel – Iowa Department of Natural Resources (Water Resources)

City/Community Officials

Robert E. Studer – Mayor, Plover, Iowa
Patricia Schulz – City Clerk of City of Calamus
Brent Schleisman – City Administrator, City of Mount Pleasant
Mike Wentzein – Councilman, City of Gladbrook
Carl Erickson, Jr. – Mayor, City of Albert City
Angie Nielson – City Clerk, City of Albert City
Darrell D. Dobernecker – Mayor, City of Pella
Guy Brace – Mayor, City of Corning
William B. Dohrmann – Mayor, City of Fayette
Gary R. Walter – City Manager, City of Clarinda
Dick Phillips – Mayor, City of Gowrie
Greg Fritz – City Administrator, City of Pocahontas
Kent Eknes – Mayor, City of Rock Valley
Don Fischer – Mayor, City of Neola
Mary Merring – City Clerk, City of Neola
Don Ring – City of Neola
Deb Schierbrock – City of Neola
Mark Pogge – Council, City of Neola
Herb Brich – Council, City of Neola
Peter Sorenson – Council, City of Neola
Bill Schierbrock – Council, City of Neola
Aaron Wellman – Council, City of Neola
Mark Priebe – Mayor, City of Garnavillo
Patti Moore – City Clerk, City of Storm Lake
Chester Crouse – Mayor, City of Milo
Edwin E. Buckendahl – Mayor, City of Alta
Molly Elston – Council, City of Alta
Bruce Frederick – Council, City of Alta
Mike Holton – Council, City of Alta
Bruce McGowan – Council, City of Alta
Brian Walsh – Council, City of Alta
Thomas M. Huseman – City Clerk, City of Alta

Jerry Groshens – Council Member, City of Plymouth
Larry Murphy – Mayor, City of Oelwein
Charles M. Killion – Mayor, City of Treynor
Jody Frain – City Council, City of Treynor
Bryce Poland – City Council, City of Treynor
Michael Nielsen – City Council, City of Treynor
Allen Hadfield – City Council, City of Treynor
Brian Kalstrup – City Council, City of Treynor
Julie Sealock – City Clerk/Treasurer, City of Treynor
Linda Coppess – City Clerk, City of Mechanicsville
Joe McCasland – Mayor, City of Calmar
Michael J. Dixon – Mayor, City of Laurel
Craig Muench – City of State Center
Taurino Delgado – Mayor, City of Crescent
Barb Eckstein – City Council Member, City of Crescent
James Campin – Mayor Pro-tem, City of Crescent
Chuck Stokes – City Council Member, City of Crescent
Robert Anderson – City Council Member, City of Crescent
Shawn Shea – City Council Member, City of Crescent
John Kooima – Mayor, City of Hull
Randy Feenstra – City Administrator, City of Hull
Anita Brandt – City Clerk, City of Galva
John C. Williams – Mayor, City of Centerville
Loren Rickard – Mayor, City of Brooklyn
Dennis Walstra – Mayor, City of Sioux Center
Ron Sanderman – City Clerk, City of Schaller
Mark Fink – Mayor, City of Gladbrook
Mike Wentzien – City Councilman, City of Gladbrook
Don Saxton – Mayor, City of Oxford
Dawn Pettingill – Iowa State Representative
Tony Chancellor – Mayor, City of Kiota
David Plyman – City Administrator, City of Washington
Roger Thomas – Iowa State Representative, House District 24
Mike Nuss – City Administrator and Development Director, City of Ackley
Marty Kunkel – City of Baxter
Dennis Henrich – Mayor, City of Cherokee
Debra Taylor – City Clerk, City of Cherokee
Frank Snyder – Mayor, City of Clarinda
Gary McClarnon – City Clerk, City of Clarinda
Neil Sherman – Mayor, City of Edgewood
Cindy Vorwald – City Clerk, City of Edgewood
Raymond DeVries – Mayor, City of Greene
Layne Knapp – City Clerk, City of Greene
Gregory Caldwell – Mayor, City of Lohrville
Melissa Monahan – City Clerk, City of Lohrville
Rodney L. Johnson – Mayor, City of Newell
Melinda Buchholz – City Clerk, City of Newell
Gary C. Mahannah – City Administrator, City of Polk City
Steven T. Ritenour – Mayor, City of Preston
Brenda L. Tebbe – City Clerk/Treasurer, City of Preston
Blake Fonnesbeck – Director, City of Spencer

Reynold L. Peterson – Mayor, City of Spencer
Donna M. Fisher – City Clerk, City of Spencer
William K. Squier – Mayor, City of St. Ansgar
Diane Collier – City Clerk, City of St. Ansgar
Gary D. Walke – Mayor, City of Sumner
Melissa Wandro – City Clerk, City of Sumner
Bradley Roth – Mayor, City of Wayland
Karole Miller – City Clerk, City of Wayland
Hans K. Trousil – Mayor, City of West Burlington
Kelly D. Fry – City Clerk, City of West Burlington
John Rigter – Mayor, City of Williams
Lori Wille – City Clerk, City of Williams
Chuck Angstrom – Public Works Director, Gowrie Municipal Utilities
Lyle D. Krueger – Manager, Water Reclamation Division, City of Cedar Falls
Fred E. Doggett – Superintendent, Washington, IA WWTP
Ronald L. Stark – Superintendent, Water Pollution Control Plant, City of Osceola
Michael Tripp – Utility Superintendent, City of Treynor
Jeff Blum – Water/Wastewater/Linesman Superintendent, City of Neola
Ronald Chapman – Superintendent of Utilities, Alta Municipal Utilities
Alden Vanden Brink – Rural Water System No. 1
Donald L. Nemitz – Manager Denison Wastewater Services
Linda Kinman – Des Moines Water Works, Iowa Association of Water Agencies
Gary Simmons – Director of Public Works, City of Postville
Jack Pershy – Sewer and Water Superintendent, City of Corydon
Thomas W. Neumann – Director, Water and Pollution Control Department, City of Ames
Don Freel – Director, Water Pollution Control Plant
Harold Schiebout – City/Utilities Manager, City of Sioux Center
Brian Kline – Wastewater Operator
Dave Elias – Wastewater Division, City of Iowa City
Wallace C. Mook – Director of Public Works, City of Bettendorf
Larry Smidt – Wastewater/water Superintendent, City of Waukee
Ron Lohman – President of Southdale Homeowner’s Association
George Reinhart – Vice President of Southdale Homeowner’s Association
Tony Seebecker – Treasurer of Southdale Homeowner’s Association
Sue Seebecker – Secretary of Southdale Homeowner’s Association
Jerry Larsen – Board Member of Southdale Homeowner’s Association
Brian Klein – Board Member of Southdale Homeowner’s Association
Otto Schipull – Board Member of Southdale Homeowner’s Association
Rhonda Guy – Wastewater Operator
Kevin Jacobson – Water/Wastewater Superintendent, City of Story City
Charles G. Stevens – Wastewater Division Superintendent, City of Knoxville

City Resolutions opposing water quality standards rule making were received from the following:

City of Albert City
City of Alta
City of Cherokee
City of Clarinda
City of Edgewood
City of Greene
City of Lohrville
City of Newell
City of Polk City
City of Albion

City of Preston
City of Schaller
City of Spencer
City of St. Ansgar
City of Sumner
City of Treynor
City of Wayland
City of West Burlington
City of Williams

Consulting Engineers

Edward H. Brinton – MMS Consultants, Inc.
Cary Solberg – MMS Consultants, Inc.
Dennis J. Keitel – Hall & Hall Engineers, Inc.
David M. Fox – Fox Engineering
Thomas E. Wall – DeWild Grant Reckert and Associates Company
Donald D. Etler – President, Kuehl and Payer, Ltd.
Curtis R. Wiseman – Vice President, Kuehl and Payer, Ltd.
Neal R. Kuehl – Vice President, Kuehl and Payer, Ltd.
Ivan D. Droessler – Treasurer, Kuehl and Payer, Ltd.
E. Robert Baumann – Bolton and Menk, Inc.
Greg Sindt – Bolton and Menk, Inc.
Dave Stolaska – Snyder and Associates
Morris Preston – Preston Engineering
Gerald M. Weiland – Chairman of the Board, WHKS & Company
Tom D. Grafft – Grad II Wastewater Operator, Kuehl and Payer, Ltd.

Industry/Company Officials

Control System Specialists
Robert Behrens – Vice President of Direct Safety and Tech Support, PeopleService, Inc.
Dennis White – Region Manager, Eastern Iowa, PeopleService, Inc.
Tim Snyder – Region Manager, PeopleService, Inc.
Mark A. Skibinski – Environmental, Health & Safety Manager, GELITA USA, Inc.
Ray Rusek – Senior Manufacturing Engineer, Maytag Appliances – Newton Laundry Products
Steve Taylor – Taylor Farms.
Bernhard Opitz – Vice President Engineer, Blue Bunny
John R. Gilliland – Interim President, ABI
Nicholas B. Hunt – Clan Farms, Inc.
Christina L. Gruenhagen – Iowa Farm Bureau
Mike Jerke – Quad County Corn Processors
Jane E. Magers – Spokesperson, Earth Care, Inc.
Steven J. Pace – Attorney, Shuttleworth & Ingersoll, P.L.C.
Emily Piper – Piper Consulting Services
Donna Buell – Buell Law Office

Organizations

John DeLashmit – Chief, Water Quality Management Branch, EPA
Madeline Meyer – State Soil Conservation Committee
Mindy Larsen Poldberg – Director of Government Relations, Iowa Corn Growers Association
Kevin S. Vinchattle – Chief Executive Officer, Iowa Poultry Association
Iowa League of Cities
Iowa Rural Water Association
Iowa Association of Water Agencies
Iowa Association of Municipal Utilities
Iowa Section – American Waterworks Association
Bill Scheitler – President, Iowa Cattlemen’s Association
Evan Vermeir – Iowa Cattleman’s Association
Dave Rotschafer – President, Iowa Water Pollution Control Association
Monte Shaw – Executive Director, Iowa Renewable Fuels Association
Barbara Tagami – Dickinson County Conservation Board
James T. Colbert – Chair, Squaw Creek Watershed Coalition
Steven D. Lekwa – Director, Story County Conservation
Roy Overton – Isaac Walton League of Iowa
Albert Ettinger – Senior Staff Attorney, Environmental Law & Policy Center
Chris Petersen – President, Iowa Farmers Union
Pam Mackey-Taylor – Chair, Sierra Club
Richard Leopold – Executive Director, Iowa Environmental Council
Neila Seaman – Sierra Club
Randy Cram – Board Member, Association for the Preservation of Clear Lake
Steve Veysey – Hawkeye Fly Fishing Association
John Roadcap – Iowa State University
Ted Payseur – IWPCA
Mike Schrader – Hawkeye Fly Fishing Association
Rich Leopold – Iowa Environmental Council
Susan Heathcote – Iowa Environmental Council

Private Citizens:

Barbara J. Gregg	David Lydell	John Fluit, Jr.
Helen Johnson	Florence Dodd	Joyce A. Sandine
Van Parker	Mrs. Manning	Paul Braunschus
Ellen Parker	Carl Manning	Robert McDonald
Jody Braunschus	Lorraine Booth	Chris Ledoux
John Grinfre	Meaghan Lewis	Michael Culbert
Clarence Staneart	Mary Staneart	Clay Ledoux
Patricia Patten	JoAnn Johnson	J. H. Jones
Dan Bleuf	Kim Walsh	Bob Jehl
Sheldon Weinut	Bob Pender	Karen Pender
Marjorie Pender	Deb Struthers	Janet Peterson
Joyce Peterson	Joyce Erickson	Kim Piercy
Lorna Schroder	Patt Mussman	Dean Ohlendorf
Burnell Schroder	Kevin Walsh	Mike Schonboom
Angie Wadsley	Julie Fast	Jon R.
Martin A. Payne	Janet Meyer	Rick A. Meyer
Barb Nehring	Richard Booth	Tisty Petersen
Leland Bylsh	Velma Zylastra	Tony Kristerson
Roger Reker	Paul Rohrer	April Hemmes

William J. Smith
Darwin Hamann
Larry Anton
Bob Venner
Thomas Keuning
Gene Mussman
Kayla Dreeszen
Mary Ann Dorsett
Jim Murdock
John Hanson
James McCoy
Mary McBee
Betty Yunek
Sherry Dragula
Alison Soelberg
Don Propst
Richard L. Howard
Todd Von Ehwegen
Paul Readhead
Patrick Bosold
Greg Soenen
Heidi Anderson
Barbara Beaumont
Tricia Lyman
Janet Dukes
Maxine Schrader
Neil Bernstein
Evan De Groot
John Christensen
Sydney H. Dengle
Steve Clayton
Mel Barryhill
Blake Fonzbeck
Kim Johnson
Manard Devor
Nola Jenson
Jim Urbact
Blair Rediness
Mike Lansing
Duane Brant
Charles Winterwood
Duane Eldred
Bill Einwalter
Dave Ratla
Carla Schumacher
Trent Stowater
Marsha Readhead

Keith Moe
Craig Utesch
Todd Stowater
Gerald Neff
Steve Ballenger
Denyce Rusch
Whitney K. Kilts
Brian Soenen
Virginia H. Soelberg
Jean Hagert Dow
Randy Poole
Bobby Wolfram
Julie Sisco
Pamela Wingert
John Shillinglaw
Bradley H. Friedhof
Richard Dietz
David Hansen
Mike Tiller
Brent Hoover
Dennis Goemaat
Jim Farnsworth
Todd Boldt
Teresa Shiflett
Mike Dukes
Kendall Schrader
Mary Gillaspey
Teresa Galluzzo
G. David Hurd
Eileen Lundberg
Marge Harmsen
Steve Casey
Vern Hilmer
Dan Dagget
Jim Meyer
Hank Pangelina
Todd Stillwater
Nora Hardy
Tim Wrecker
Duane Sand
Carl Wrecker
Jerry Rattenborg
Lee Bossom
Patti Hansen
Dick Schrader
Kathleen Schuery

Jay Brady
Jason Heisler
Greg Westwater
Elaine Utesch
Eric Nordschow
Thomas H. Skadow
Larry Thompson
Nick Frost
Lawrence J. Pisarik
Gerald L. Von Ehwegen
Thomas R. Hoff
Barbara F. Orzechowski
Cinda Yates
Sarah Jespersen
Larry T. Wilson
Eldon A. Falk
Scott Pajer
Donald Lund
David E. Drake
Judy Porter
Tex A. Sordahl
Jim A. McCoy
Jon Krieg
Keith Summerville
Shane Dukes
Nancy Schrader
Patricia Hansen
Brian Walshire
Sandy Farnsworth
Steve Laforey
Brian Hannah
Jim Redman
Wesley Shubert
Jim Zootenhorst
Craig White
Jeff Flan
Kevin Muller
Gary Anderson
Vic Cane
Harold Cranbeer
Ron Donald
Wally Taylor
Rick Nugent
Steve Douglas
Darrell Stowater
Liz Soenen