

RESPONSIVENESS SUMMARY

Stream Use Designation Revisions

**Prepared by the
Iowa Department of Natural Resources
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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 the Notice of Intended Action **ARC 6351B** on October 24, 2007. This document provides a discussion of the issues raised by the comments as well as recommendations for final EPC action on the proposed changes.

Summary of Rule/Rule Changes:

1. Revise and list approximately 113 river and stream segments as Class A2 Secondary Contact Recreational Use designated waters in the rule-referenced document "Surface Water Classification."
2. Revise and list approximately 138 river and stream segments as both Class A2 Secondary Contact Recreational Use and Class B(WW-2) Warm Water-Type 2 designated waters in the rule-referenced document "Surface Water Classification."
3. Revise and list 4 stream segments as both Class A2 Secondary Contact Recreational Use and Class B(WW-3) Warm Water-Type 3 designated waters in the rule-referenced document "Surface Water Classification."
4. Revise and list 9 river and stream segments as both Class A3 Children's Recreational Use and Class B(WW-2) Warm Water-Type 2 designated waters in the rule-referenced document "Surface Water Classification."
5. Revise and list 13 river and stream segments as Class A3 Children's Recreational Use designated waters in the rule-referenced document "Surface Water Classification."
6. Revise and list 5 river and stream segments as Class B(WW-2) Warm Water-Type 2 designated waters in the rule-referenced document "Surface Water Classification."
7. Revise and list 9 stream segments as Class B(WW-2) Warm Water-Type 2 and no recreational use designated waters in the rule-referenced document "Surface Water Classification."
8. Revise and list 1 stream segment as Class B(WW-3) Warm Water-Type 3 and no recreational use designated waters in the rule-referenced document "Surface Water Classification."

Recent rule making and 2006 legislative action have brought the Department's water quality rules closer to compliance with federal Clean Water Act requirements and U.S. Environmental Protection Agency (EPA) regulations, establishing new levels of

protection for water quality. As an outcome of these efforts, all 26,000 miles of Iowa's perennial (flowing year-round) streams are initially protected at the highest levels for recreation and warm water aquatic life uses. These actions provide initial protection for many miles of perennial streams that were previously not designated for aquatic life and/or recreational uses.

Under the rules adopted in 2006, it is presumed that all perennial streams and rivers are attaining the highest level of recreation and aquatic life uses and should be protected for activities such as fishing and swimming. This concept of assigning all perennial streams the highest use designation, unless assessments show that the stream does not deserve that level of protection, is referred to as the "rebuttable presumption."

Included in the federal regulations are the provisions that allow for scientific analysis of these "presumed" recreational and aquatic life uses. An integral part of implementing the rules adopted in 2006 is verifying that a stream is capable of supporting the presumed uses.

The concept of Use Assessment and Use Attainability Analysis (UA/UAA) is being applied by the Department as a step-by-step process to gather site-specific field data on stream features and uses. The Department then assesses available information to determine if the "presumed" recreational and aquatic life uses are appropriate.

The Department elected to perform a UA/UAA on any newly designated stream that receives a continuous discharge from a facility with a National Pollutant Discharge Elimination System (NPDES) permit. Prior to issuing an NPDES permit for an affected facility, the Department will complete a UA/UAA for the receiving stream or stream network.

Six public hearings were held: Atlantic and Cherokee on November 15, 2007; Clear Lake on November 20, 2007; Des Moines on November 27, 2007; Iowa City on November 29, 2007, and Elkader on November 30, 2007. Notice of the hearings was sent to interest groups and statewide news network organizations. Written comments were originally received through December 11, 2007. The department extended the time in which we accepted comments through January 2, 2008 due to the public interest in the proposed rule.

Approximately 1,260 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.

Public Comment Breakdown:

Total amount of comments received = **2,149** (considers comments from one individual for multiple streams)

Number of stream specific comments = **1,907**

Number of general comments = **242**

Number of stream specific comments that apply to streams in this 1st batch = **1,295***

Number of streams these comments apply to in the rule proposal = **194 of 292**

*It should be noted the many of the 1,295 stream specific comments apply to stream segments proposed as Class A1 or B(WW-1) and therefore serve to support the department's stream use recommendations in the Notice of Intended Action. For example, we received 59 comments for the Iowa River while only 11 of those comments applied to the assessed segment in question.

Number of stream designations that are proposed to change as a result of the public comments = **47**

See Appendix 2 for stream specific public comment analyses.

The department apologizes if some individuals or their comments are not specifically listed 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. The department's response is written below each issue identified which has been organized into six different topic sections.

Recommendations

Based on comments from the public, DNR recommends 47 adjustments to the proposed stream use designation revisions for the creeks and rivers listed below. The adjustments apply primarily to recreational uses, specifically changes from the proposed Class A2 secondary contact recreational use to either Class A1 primary contact or Class A3 children's play recreational uses. Please refer to Appendix 2 – Stream Specific Public Comment Analyses for the details regarding the streams below.

- 1) Beaver Creek (Butler/Blackhawk)
- 2) Big Creek (Henry/Des Moines)
- 3) Bloody Run (Clayton)
- 4) Boyer River
- 5) Buffalo Creek (Jones/Buchanan)
- 6) Buttrick Creek (Greene)
- 7) Cedar Creek (Wapello/Jefferson)
- 8) Cedar Creek (Calhoun/Greene)
- 9) Cedar Creek (Sac/Pocahontas)
- 10) Clear Creek (Iowa/Johnson)
- 11) Cloie Branch (Dubuque)
- 12) Crow Creek (Scott)
- 13) Deer Creek (Tama)
- 14) Durion Creek (Dubuque/Delaware)
- 15) Eagle Creek (Wright/Hamilton)
- 16) East Boyer River
- 17) East Branch Iowa River
- 18) English River
- 19) Floyd River
- 20) Hardin Creek (Greene/Calhoun)
- 21) Iowa River
- 22) Little Rock River
- 23) Little Turkey River (Chickasaw/Fayette)
- 24) Long Branch (Guthrie)
- 25) Maple River
- 26) Maquoketa River
- 27) Middle Raccoon River
- 28) Middle River
- 29) Mill Creek (Cherokee/O'brien)
- 30) Nodaway River
- 31) North Fork Maquoketa River
- 32) North Raccoon River
- 33) North River
- 34) North Skunk River
- 35) Ocheyedan River
- 36) Odebolt Creek (Sac/Ida)
- 37) Rock Creek (Cedar)

- 38) South Fork Catfish Creek (Dubuque)
- 39) South Skunk River
- 40) Trout Run (Trout Creek)
- 41) Unnamed Creek (Davis)
- 42) Wapsipinicon River
- 43) West Branch Wapsinonoc Creek (Muscatine/Cedar)
- 44) West Buttrick Creek (Greene/Webster)
- 45) West Nishnabotna River
- 46) Whitewater Creek (Dubuque/Jones)
- 47) Willow Creek (Carroll/Greene/Guthrie)

Comments In Favor and Against this Rule Making

Comments in Favor of this Rule Making Effort:

-The DNR is doing a great job looking after our natural resources as far as the rivers and streams are concerned. And the wildlife and timbers too! Fair and balanced.

-I am only in favor of reclassifying streams if the net result is to strengthen water quality by reducing, not increasing, pollutant ppm's.

-I understand that ultimately the proposal's intent is to more accurately classify waterways based on their use, thereby assuring that regulations on specific waterways more accurately reflect the uses and reality of the waterways. Given this context, I would support such a measure.

-I would agree that if a given waterway were not capable of being used for swimming or fishing that the regulations for the waterway would not be the same as for those that are used for such activities. I would agree that reclassification of waterways could be one step in managing the water resources in the county more efficiently, wisely, and realistically.

-I would ask that those with authority to make decisions regarding this and other clean water issues would make those decisions based on logic, fact, and sound science, and not on pressure from one person or many groups.

-Thank you for deciding to extend the deadline for submitting public comments on this issue.

-I have personally reviewed approximately a third of the streams proposed to be designated. My observation is that the streams in this proposed rule were thoroughly evaluated and as a whole, the proposed designations erred on the side of a more "stringent" designation.

-I believe the DNR has tried its best to fairly implement the rule package it was given from the legislature.

Comments Against this Rule Making Effort:

-Please do your jobs – who will protect them if the DNR won't – the Farm Bureau???

-Hopefully we're not looking at changing the meaning of the DNR to Destroy Natural Resources.

-Do you want your children and grandchildren playing in unsafe water? I think even the thought of a downgrade for any purpose is absolutely insane! Use your head instead of your pocketbook (your heart might help too!)

-It is insanity for me to imagine you are even considering weakening the laws for our waterways. I would hope as your job you would be strengthening the laws to enforce more strict regulations as our waters are unfit enough as is.

-Don't even think of lowering standards for Iowa's streams!

Comments Organized by Topic

Topic 1: Clean Water in Iowa

Issue: Why shouldn't all water be clean?

DNR Response: The department agrees that all water should be clean. The water quality standards establish the goals that Iowans expect of their waters and reflect the realistic capabilities of this wide variety of waters to support these expectations.

Issue: Why has the DNR allowed the dumping of tons of salt into the Yellow River tributaries by Agriprocessors?

DNR Response: This question is not related to this stream use designation revision rule making effort. For additional information regarding Agriprocessors NPDES permit considerations, please contact Angela Chen (515.281.4736) or Steve Williams (515.281.8884) of the NPDES permitting section of the DNR.

Issue: The highest standards should apply to all waters of the state.

Public Comments

- If there is a creek you will find children playing in it.
- All streams in the state of Iowa, including intermittent streams, must be classified as "Class A1". No exceptions, no excuses.

DNR Response: The comments were made in reference to the universal application of Class A1 or A3. The department agrees that all water should be clean. The water quality standards establish the goals that Iowans expect of their waters and reflect the realistic capabilities of this wide variety of waters to support these expectations. (See "Issue: Class A2 criteria is not protective of public health" for more details)

Issue: Will waters be clean after these changes?

Public Comments

- The public should not be deluded into thinking the streams currently given the highest protection classification are not polluted. Even in the "high quality" cold-water trout streams that we monitor as IOWATER volunteers, sediment, chemical pollutants, and fecal bacteria spike dramatically after a major rainfall event.

DNR Response: Water Quality Standards are the goals for Iowa's water bodies. We are working to determine the highest attainable recreational goals for these waters given our current designated use structure. The department is not suggesting these waters are safe by applying these goal uses to these rivers and streams. Designated uses establish the expectations for these waters and can serve to establish the regulatory basis for the establishment of water-quality-based treatment controls and strategies beyond the technology-based levels of treatment requires by sections 301(b) and 306 of the Act.

Ideally, waters meeting the criteria to protect recreational uses should be safe for swimming; however the department recognized that elevated bacteria levels are possible in any water of the state after a major rainfall event.

Issue: Warning Signage

Public Comments:

-I would like to have the freedom and liberty to choose to spontaneously which water I can swim in at any time without having to read a posted warning.

-I have a right to dangle my foot in or walk in any stream without worrying if I have come in contact with some highly unsafe bacteria.

-Is there a plan in place to provide funding for warning signs along the banks of streams deemed not worth protecting?

DNR Response: Water Quality Standards are the goals for Iowa's water bodies. We are working to determine the highest attainable recreational goals for these waters given our current designated use structure. The department is not suggesting these waters are safe by applying these goal uses to these rivers and streams. Designated uses establish the expectations for these waters and can serve as the regulatory basis for the implementation of water-quality-based treatment controls and strategies beyond the technology-based levels of treatment required by sections 301(b) and 306 of the Act. Ideally, waters meeting the criteria to protect recreational uses should be safe for swimming; however, there always will be some level of risk associated with any type of water recreation whether in Iowa or any other state.

The department has no intention at this time to provide monitoring for all Class A streams in Iowa for the purposes of posting warning signs. This effort is focused currently at public bathing (beach) areas at lakes throughout the state.

Issue: Now we can dump truck load after truck load of dead pigs into these waters.

DNR Response: The dumping of animal carcasses into waters of the state is illegal. These revisions apply to the designated uses of Iowa's rivers and streams and are not related to the disposal of dead pigs.

Issue: Will A2 streams ever receive protection? The DNR will not require disinfection as a result of A2.

DNR Response: (See Issue: Class A2 criteria is not protective of public health) While this analysis shows some of the scientific imperfections of EPA's national criteria, it is not intended to serve as a justification to remove the criteria from Class A2. The department believes that the criteria established to protect secondary contact recreational use serves to help ensure that Iowa's waters will be of a sanitary quality to protect public health. Furthermore, Class A2 streams will likely require disinfection processes to be installed, especially wastewater treatment plants that handle municipal wastewater.

Issue: Class A2 criteria is not protective of public health

Public comments

- Adopting a standard *E. coli* bacteria level that is ten times the level considered safe for swimming by the EPA will significantly reduce recreational use of these streams and negatively impact the health and general welfare of Iowans using these streams.
- Children are not protected by Class A2
- The difference in the bacteria standards is 12 times greater from A1 to A2, that is too large a jump.
- The DNR is here to protect the public – or do I misunderstand the concept?
- This classification system is absurd.

DNR Response: These comments relate to the differing *E. coli* bacterial criteria for A1 (primary contact recreational use) and A3 (children’s recreational use) streams versus A2 (secondary contact streams). These criteria are provided below.

Table 1

Use	Geometric Mean (cfu/100mL)	Sample Maximum (cfu/100mL)
Class A1	126	235
Class A2	630	2880
Class A3	126	235

It is noted that the geometric mean criterion for A2 waters is five times the A1 and A3 criteria and the sample maximum criterion 12.25 times A1 and A3 criteria.

These water quality criteria were adopted by the Environmental Protection Commission on May 19, 2003 and were approved by the EPA on June 16, 2004. There was considerable public input and discussion when the Commission adopted these criteria and this rule making action is not proposing to change these criteria. In adopting these criteria, the Commission recognized that the pathogenic risk associated with aquatic recreation is dependent not only on the level of pathogens (which include viruses and parasites in addition to some strains of bacteria) present but also on the mode of exposure. A1 waters are those waters for which there is “*prolonged and direct contact with the water, involving considerable risk of ingesting water in quantities sufficient to pose a health hazard.*” [567-61.3(1)b(1)]. Typical activities associated with an A1 use include swimming, diving, water skiing, and water contact recreational canoeing. A2 waters, on the other hand, are those waters where contact is either incidental or accidental and “*the probability of ingesting appreciable quantities of water is minimal.*” [567-61.3(1)b(2)]. In approving these criteria, the Commission and the EPA have determined the criteria will, in fact, be protective of these uses.

The heart of the matter being considered in this rule making effort is whether a waterbody can be used for uses typical of the A1 use designation or if factors such as flow characteristics limit its uses to those associated with the A2 classification. Or, in some cases, whether any of the A1, A2 or A3 uses are physically possible. Therefore, the

comments provided regarding the appropriateness of the A2 bacteria criteria versus the A1 and A3 criteria are not directly relevant to the proposed action as the Commission has already decided this matter. However, given the considerable public interest in this matter, it is appropriate to recap the rationale behind these bacteria criteria.

The transmission of disease via water contaminated with feces from warm-blooded animals and humans is well documented. Feces contain a variety of microbes, many of which are either beneficial or cause no particular problem. Some estimates are that a human may have upwards of a trillion bacteria within their body at any given time, with most residing within the intestinal tract. Some of these fecal microbes, however, may be pathogenic and feces from infected persons and animals will contain some amount of the pathogenic microbes.. These include some strains of bacteria, viruses and parasites such as *Cryptosporidium parvum* and *Giardia lamblia*. Consumption of water contaminated with pathogenic microbes is the most direct route of infection although infection through contact with mucous membranes and open wounds is also possible. Because these pathogenic microbes differ considerably in their characteristics and humans have differing levels of immunity and resistance, it is very difficult to determine a “safe” level for drinking water given that a person might consume over several liters per day. This is why public drinking water standards are intended to provide a zero risk by insuring drinking water contains no pathogenic microbes.

People swimming in marine and fresh waters can also be exposed to fecal pathogens either by incidentally swallowing the water or by dermal contact. All natural waterbodies will contain some amount of fecal contamination, especially after runoff events. Attaining a zero risk of infection is not possible in these natural waterbodies; the question is what level of contamination presents an unacceptable level of risk to people who swim or recreate in those waters?

Due to the varied nature of the pathogenic microbes associated with fecal contamination, directly analyzing water for pathogenic microbes and establishing dose-response relationship with each pathogen is not possible. Instead, researchers have typically used an indicator organism, such as fecal coliform bacteria, in an attempt to characterize the level of fecal contamination in water and to correlate the level of indicator organisms with the incidence of disease associated with swimming or recreating in contaminated water.

The ideal indicator organism would be:

- non-pathogenic (minimizing risk to analysts);
- easily detected by simple laboratory tests in a very short time consistent with accurate results;
- indicative of the relative degree of fecal contamination;
- be pathogenically representative of all the potential pathogens that might be present; and
- have survival times equal to or that exceed other pathogenic microbes.

Scientists have not found the ideal indicator organism. A number of studies as documented in the EPA's guidance documents as well as other sources such as an European Union Directive have looked at a variety of indicator organisms such as total coliforms, fecal coliforms, *E. Coli*, streptococci, and enterococci, as these are all groups of relatively non-pathogenic bacteria that are present in the gut of humans and warm blooded animals. At one time, the EPA recommended the use of fecal coliforms as a measure of pathogenic risk but now recommends *E. coli* or enterococci. However, these recommendations are now under review once again because of significant issues that have been raised regarding the efficacy of these indicator organisms as a measure of pathogenic risk.

Numerous epidemiological studies have been conducted over the years that attempted to correlate the level of indicator organisms present in the water with the incidence of disease, primarily enteric diseases such as diarrhea. These studies have been reviewed in such documents as the EPA's 1986 Water Quality Criteria for Bacteria document and a later, as yet not finalized, implementation guidance document. Most of these studies were conducted at swimming beaches in marine waters with only a few being conducted at fresh water beaches such as the Great Lakes. In general, the studies found that the incidence of sickness increased with increasing levels of pollution, but establishing clear relationships as to what constitutes an acceptable level of fecal pollution and how to accurately measure the pathogenic risk has remained elusive.

The EPA has acknowledged that while the epidemiological data for swimming in freshwater lakes is very limited, there is essentially no such reliable information for freshwater streams, especially for secondary contact recreation like fishing or wading. The European Union has determined that one of the largest sources of human pathogens at a swimming beach originate from other bathers (fecal shedding) and, therefore, the epidemiological studies for those waters are not directly applicable to waters where human contact is limited and incidental. For that and other reasons the EU is only recommending a criterion of 1000 cfu's for actual bathing waters (i.e., public beaches).

The EPA recognized the difficulty in establishing secondary contact criteria in their 1986 criteria document:

Because of the different exposure scenarios and the different exposure routes that are likely to occur under the two different types of uses, EPA is unable to derive a national criterion for secondary contact recreation based upon existing data."

The Commission-adopted bacteria criteria closely follow the recommendations in the EPA's 1986 criteria document, which has not been updated or modified to date despite considerable discussion and controversy. The bacteria recommendations for secondary contact recreation in that 1986 document were based purely on "professional judgment" with relatively little rationale being provided to support that judgment nor was there epidemiological evidence to support those criteria.

It might also be useful to put these criteria in perspective. The “raw” sewage entering a domestic sewage treatment plant can have fecal coliform concentrations in the millions of colony-forming units per 100 milliliters of water. Levels in the tens or even hundreds of thousands are sometimes measured in streams where the only potential source of pathogens is wildlife. The adopted criteria for A1, A2 and A3 are extremely low in comparison and may not be reasonably attainable under any circumstances in natural waters like streams and rivers unless all wildlife, pets and livestock are eliminated from the watershed.

In summary:

- The EPA was unable to derive a national criterion for secondary contact recreation given the fact that no epidemiological studies for incidental contact for running water or even lakes have been conducted.
- The Class A2 criterion is different than Class A1 is due largely to EPA’s “professional judgment” of EPA that has little factual basis in the way of epidemiological support
- The 2006 European Union Directive is recommends an E.coli criterion of 1,000 cfu’s for “good” waters that are used for bathing; there are no recommendations for secondary contact type uses.
- In rural settings where the frequency of full body immersion is infrequent and not shared extensively with other bathers the criteria established to protect Class A2 Secondary Contact Recreational Use is quite likely to be very over protective of health. In natural waters, there will always be some level of risk from a variety of pathogenic microbes as well as other factors.
- The EPA is currently reevaluating bacteria criteria due to the scientific defensibility and implementation of existing 1986 criteria. EPA recognizes all previous epidemiological studies have been conducted at lake beaches and that lake environments can and do differ significantly from flowing waters. Therefore, EPA is currently evaluating different criteria/implementation methods for flowing waters.
- There is concern that non-disinfected discharges from wastewater treatment plants will be allowed and encouraged by the proposed rule. That is simply not the case. Non-disinfected wastewater typically contains hundreds of thousands if not millions of bacteria per 100 mL. The Class A2 designation (630 cfu/100 mL) would still force disinfection of proposed wastewater discharges prior to discharge.

Issue: Why is the dissolved oxygen (DO) criteria different from B(WW-1) and B(WW-2)?

DNR Response: The DO criteria in Chapter 61 – WQS were established before the EPA Ambient DO criteria published in 1986. According to the EPA’s 1976 “Quality Criteria for Water” (the Red Book), “for most fish, maintaining a minimum 5 mg/l in the water mass in the vicinity of the embryos and larvae should suffice”; “a dissolved oxygen concentration of 4 mg/l seems to be about the lowest that will support a varied fish population.” The early life stages, especially the larval stage, of warmwater fish are usually most sensitive to reduced dissolved oxygen stress. The EPA’s 1986 DO criteria listed the minimum one day DO when early life stages are present should be 5 mg/l. However, the minimum DO of 5 mg/l was derived mainly based on game fish such as small mouth bass. Class B(WW-2) streams usually do not support sustainable game fish population and reproduction. Both the EPA’s 1986 DO ambient criteria document and the 1976 Red Book indicate that a dissolved oxygen criterion protective of fish will be adequate to protect the food sources of fish such as invertebrates. The DO criteria do not represent assured no-effect levels. However, because the criteria represent worst case conditions (stream critical low flow, and summer high temperature), conditions will be better than the criteria nearly all the time at most sites. Also, even though the current IDNR DO criterion Minimum value at any time during every 24-hour period is 4 mg/l, and the Minimum value for at least 16 hours of every 24 hours is 5 mg/l, when water quality based limits are developed, the Department staff has been using the minimum DO level of 5 mg/l in the development of water quality based limits for DO consuming pollutants.

Since the current DO criteria were established before the current EPA 1986 Ambient DO criteria, the department will work to revise the DO criteria in the near future. The Department started the effort a few years ago. However, other urgent WQS issues took priority.

Issue: How and when will the department consider the application of Class HH for Iowa’s waters?

DNR Response: The Class HH use designation are for waters in which fish are routinely harvested for human consumption. The department has not currently developed a comprehensive strategy or protocol to address the site specific application of Class HH, but acknowledges future efforts will be needed in this regard. Also related is the reassessment of previous Class B(LR) – Limited Resource waters under the new assessment considerations. It is possible that some of these waters would now be considers a B(WW-1) and potentially warrant Class HH protection. Again, the department has not currently developed a comprehensive strategy and acknowledges that future efforts will be needed in this regard.

Issue: I heard that the streams and rivers involved in the proposal would be off limits to any and public or recreational use. Is this true?

DNR Response: Absolutely not. The designation of a stream does not change the nature of access to that stream. Any rumor started to the contrary is unfortunate and disappointing.

Topic 2: Implementation of Federal Regulations

Issue: Attainability

Public Comments

-Depth is not determinative of an A1 designation. There is no basis for using this metric to determine the attainability of “primary contact” activities. EPA has never approved UAAs based on depth.

-What factors is the department using when considering use attainability?

-If there is no way to recreate in an effluent created stream that’s fenced in, how do you accidentally recreate in that?

-Perhaps you should call it what it is: the environmental version of “ethnic cleansing” that is, awarding use of the stream to the noxious users who have driven out all other users of the once-public resource.

DNR Response: Water Quality Standards are the goals for Iowa’s water bodies. We are working to determine the highest attainable goals for these waters given our current designated use structure.

The secondary contact recreational use (Class A2) provides the department with a means of providing recreational use protection to waters where Primary Contact rec. use is not attainable. It is important to note that the department is working to answer the question “is Primary Contact Recreation (i.e. swimming) possible here?” The key component in these assessments is whether or not there is enough water present in rivers or streams in which recreational uses may result in prolonged and direct contact with the water, involving considerable risk of ingesting water in quantities sufficient to pose a health hazard.

The department used depth as a guideline to determine whether or not a water body could support Class A1 uses (i.e., 1 meter maximum or 0.5 meters maintained over 50% of the reach) to better address the issues regarding recreational activities. The concept here is that many Class A1 type activities require the presence of a significant amount water to support those activities. The implementation of these guidelines do a good job of addressing this issue as waters that possess enough flow or water present to support Class A1 typically are the waters deep enough for canoeing or swimming (e.g., the 1,300 miles verified as Class A1 in the original assessments). The EPA has approved this approach in other states.

This approach is rather conservative in that the department is able to protect rivers and streams where no known recreational use has ever taken place. The idea is that the activities are “possible” whether it is a Class A1 or Class A2 stream regardless of water quality. This is a reason why secondary contact is used in Iowa and many other states such as Kansas, Missouri, West Virginia, Kentucky, New Hampshire, Louisiana, Texas, New York, Idaho, and Ohio, to name a few. It provides protection to rivers and streams in which recreational uses may result in contact with the water that is either incidental or accidental where the probability of ingesting appreciable quantities of water is minimal.

It establishes a reasonable and practical goal use for smaller, shallow water systems where probability of ingestion is minimal due to the lack of flow.

Accessibility is not a factor by itself that can be used to determine attainability according to federal guidance.

Issue: Effluent Dominated Streams

Public Comments

-Many Unnamed Creeks would not exist as a flowing waterway under dry conditions if wastewater treatment plants were not discharging. We oppose the idea that effluent created streams requires more stringent levels of protection. We believe the stream could not support aquatic life under normal conditions without contributions from wastewater treatment plants

DNR 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.

Issue: Existing Uses

Public Comments

-The occurrence of an existing use is the proof that the use has been attained and is therefore an existing use and existing uses can never be removed.

DNR Response: The code of federal regulations defines existing uses as “those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards” (CFR 131.3(e)).

At first blush, the question “What is an Existing Use?” seems straightforward and easy to answer. Outside of the regulatory context, one might be inclined to equate the question with “Did a use actually occur?” If yes, then the use is an “existing use.” But the regulation does not define existing uses as “those uses that *actually occurred* in a water body on or after November 28, 1975.” Instead, the regulation uses the language “*actually attained*.” When considered in the context of federal water quality standards regulations, there is a distinct difference between “actually occurred” and “actually attained.”

Section 131.2 of the federal water quality standards regulations explains the purpose of water quality standards.

A water quality standard defines the *water quality goals* of a water body, or portion thereof, by designating the use or uses to be made of the water and by setting criteria necessary to protect the uses. States adopt water quality

standards to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act (the Act). “Serve the purposes of the Act” (as defined in sections 101(a)(2) and 303(c) of the Act) means that water quality standards should, *wherever attainable*, provide water quality for the protection and propagation of fish, shellfish and wildlife and for recreation in and on the water and take into consideration their use and value of public water supplies, propagation of fish, shellfish, and wildlife, recreation in an on the water, and agricultural, industrial, and other purposes including navigation.

Such standards serve the dual purposes of *establishing the water quality goals for a specific water body* and serve as the regulatory basis for the establishment of water-quality-based treatment controls and strategies beyond the technology-based levels of treatment requires by sections 301(b) and 306 of the Act. (40 CFR § 131.2 (emphasis added).)

In other words, uses are designated not because the uses actually are occurring in a water body, but because the uses reflect a *water quality goal to be attained* for a particular water body consistent with the purposes of the Clean Water Act. At the time a particular use is designated by a state, that use might not be occurring and the water quality to protect and support that use may not yet be attained. Protective water quality is attained through the “establishment of water-quality-based treatment controls and strategies” designed to meet the water quality standards criteria for specific pollutants.

Federal regulations recognize, however, that even after a state designates a particular use for a water body, attaining the water quality to support that use may not be feasible. Therefore, the regulations allow a state to remove a designated use if the state “can demonstrate that attaining the designated use is not feasible” because of one or more factors outlined in the regulation described at 40 CFR § 131.10 (g). The state makes this demonstration through a use *attainability* analysis (40 CFR § 131.10(j)(2)). However, this option is available only if attaining water quality to protect a use is not feasible. Once the water quality goal to protect a use, whether designated by a state or not, has been attained, the water quality standards regulations ensure that that level of water quality is maintained, first through an “antidegradation policy,” *see* 40 CFR § 131.12, and second, through the concept of “existing use” (*see* 40 CFR § 131.10 (g) and (h)).

When considered within this context, the meaning of the term “actually attained” in the existing use definition seems clear. “Actually attained” refers to the attainment of the water quality necessary to support a particular use, whether or not that use actually has occurred in the water body. It would be inconsistent with the purposes of the Clean Water Act to allow degradation of water quality once it has been attained on or after November 28, 1975. Conversely, if the water quality necessary to protect a particular use

has not been attained on or after November 28, 1975, then that use is not an existing use. This interpretation of the existing use regulation is supported by and consistent with relevant EPA guidance documents, federal law and other EPA materials, as shown below.

EPA Guidance Documents and Relevant Materials on Existing Use

Unfortunately, a clear and comprehensive analysis of the recreational existing use issue is not included in early EPA Guidance Documents on water quality standards review. The reason for this may be that most EPA guidance on conducting a UAA has addressed the aquatic life designated use. If water quality is not sufficient to protect aquatic life, then aquatic life will not be present, and therefore the issue of existing use does not arise. The recreational designated use poses a different situation. People may choose to recreate in a water body even if it has not attained the water quality necessary to support the recreational use.

Nevertheless, even though the term “actually attained” is not defined and the process for determining whether a use has actually been attained has not been explicitly specified, EPA guidance documents and other relevant materials support a water quality-based interpretation.

Likewise, in 1998, EPA issued an Advanced Notice of Proposed Rulemaking seeking comments from interested parties on possible revisions to the Water Quality Standard regulations. *See* Advanced Notice of Proposed Rule Making (ANPRM) to amend the national WQS regulations, 63 Fed. Reg. 36741-36806 (July 7, 1998). In the notice, EPA provided background information on “uses,” and stated that “[d]esignated uses focus on the *attainable condition* while existing uses focus on the *past or present condition*. Section 131.10 then links these two broad use categories in a manner which intends to ensure that States and Tribes designate appropriate water uses, reflecting *both the existing and attainable* uses of each water body. For this discussion it is important to consider both the distinction between and the linkage of designated and existing uses.” 63 Fed. Reg. at p. 36748 (emphasis added). It seems clear that the “condition” to which EPA refers is water quality and “existing” implies that the water quality standards are already attained – in contrast to attainable for a designated use.

EPA also provided specific information about making an existing use determination:

In making an existing use determination, there is a link between the use and water quality. To be considered an existing use, the use must have been actually attained in the past, is now attained or water quality is sufficient to support the use. However, for some sites, water quality, alone, may be an insufficient basis for making an existing use finding if there are other factors that would prohibit the use from taking place regardless of the quality of the water at a site. (63 Fed. Reg. at p. 36753.)

This makes clear that water quality is the threshold issue in making an existing use determination, but other factors can preclude water quality, such as lack or absence of flow, that would prohibit the use from taking place regardless of the quality of the water.

EPA expanded upon this in the context of determining a recreational existing use. According to EPA, a recreational use is not an existing use when the water body is not suitable for swimming because the water quality and physical characteristics do not support that use.

Obviously, any decision about whether or not a use is an “existing use” must be a water body-specific determination. The existing use determination is, therefore, site-specific, and decisions *should consider water quality* and other limiting factors such as the physical habitat specific to a particular water body. A few examples may help illustrate the issue. A somewhat common existing use question applies to primary contact recreation: if a few people on a few occasions ‘swim’ in a water body that does not have the quality or physical characteristics to support swimming, is this an existing use, even if the water body is posted ‘no swimming’ due to bacterial contamination and lacks the physical features to actually support swimming? *The straightforward answer to this question is that ‘swimming’ is not an existing use because the present (or past) condition does not support that use. This conclusion is based on the very limited actual ‘use’ and, more importantly, the lack of suitable water quality and physical characteristics that would support a recreational swimming use now or in the future (as determined by the water quality requirements and recreational swimming considerations, including safety considerations, in the State or Tribal classification system for primary contact recreation).*

A question has been raised as to how to interpret the regulation in the context of this example. One could determine that because the water body is not suitable for swimming, and has not been since 1975, primary contact recreation is not an existing use. Alternatively, one could determine primary contact recreation to be an existing use because the water body was actually used for swimming, even though the use was occasional and water quality and physical characteristics were not acceptable to support such a use. EPA believes the first alternative is the better interpretation of Agency regulations and guidance in this example, because the use is not established and the water quality and other factors would appear to prohibit actually

attaining a recreational swimming use. 63 Fed. Reg. at pp. 36752-53 (emphasis added).

The department conducted the stream use assessments in a fashion that determined whether or not Class A1 or swimming was possible for specific water bodies, regardless of the water quality condition in that water body. This was felt to be a conservative approach as it did not preclude the assignment of recreational uses to waters where the quality may not be supportive of any Class A use and potentially never will.

Issue: Inappropriate application of the “fishable/swimmable” presumption

Public Comments

-Intermittent streams are not perennial and therefore the “fishable/swimmable” presumption does not apply under Iowa Code 455B.176A(2) requirements for a designated stream.

DNR Response: The “fishable/swimmable” presumption applies to all perennial streams listed on the USGS 1:100,000 scale DLG data set and intermittent streams with perennial pools. Neither USGS nor any other group provides a coverage of intermittent streams with perennial pools. When an intermittent stream is observed on the map, the question of whether or not the presumption applies is an important question. The department has interpreted this to mean that it is unknown if an intermittent stream on a map falls under the rebuttable presumption until the stream in question is verified to be intermittent by a use assessment or UAA. If an intermittent stream according to USGS is visited during summer base flow conditions and is supporting aquatic life and appears to be perennial, then the department considers that stream to fall under the rebuttable presumption provisions and a UAA is needed. If the department verifies that the stream is truly intermittent then the presumption does not apply and a use assessment is written and rule-making is not required as the presumption did not apply.

Topic 3: Implementation of Rules in regard to Wastewater Treatment Plants

Issue: Implementation of the stream use revisions into NPDES permits

Public Comments

- It will take too long to implement these changes into NPDES permits once the UAAs are final.
- It'll be ten years before facilities implement disinfection.
- The department should reopen permits prior to the expiration date.
- Why not open existing permits to work on improving the water quality now rather than waiting?

DNR Response: The implementation of these new stream use designation revision are currently planned to coincide with the reissuance of any affected facility's NPDES permit. The legislature mandated that NPDES permits are not to be reissued for any facility affected by the rules passed in 2006 until the completion of the Use Attainability Analysis (UAA). There are hundreds of facilities that meet this provision of the law. This rule making effort comprises approximately 34-37% of the affected facilities that need UAAs. Once the stream use revisions become final in state administrative code and are formally approved by the EPA, then the NPDES permits can be reissued in accordance to Iowa law. The department expects this phase to be completed by late summer.

As the UAAs become final the NPDES permits will begin to be reissued. The majority of these affected facilities are currently operating on expired NPDES permits and can be renewed in relatively short fashion; so, reopening the permits is not expected to be an issue. The reissued NPDES permits will contain the new, and in most cases more stringent, water-quality-based permit limits accompanied with provisions for the facility to come into compliance with reissued permit that reflects the new water quality standards. Compliance schedules will be negotiated with affected facilities as each situation may be different and require more or less time to come into compliance depending on several factors including, but not limited to, the nature of the improvement, the exploration of alternatives, the magnitude of the project, funding of the project, etc. The department anticipates that compliance for many of these facilities will require the building of completely new or heavily modified wastewater treatment plants and understands that large capital infrastructure improvement projects cannot happen overnight. The department will continue to implement these changes in most reasonable and practical manner considering the hurdles the affected facilities will face while not losing sight that these facilities will need to comply with their new limits to ensure protection of the uses of these waters.

Issue: Wastewater treatment plants are not causing fish kills, why hold them to a higher standard?

Public Comments:

-Facilities are being told that the AMMONIA they discharge in cold weather is detrimental to the receiving waters aquatic life, however I cannot remember any fish kills or environmental problems associated with winter time aerated lagoon discharges with AMMONIA in the 15-30 mg/l range. Yet the day after they receive a new permit they will be harming the stream!

DNR Response: No studies have been conducted that the department is aware of that has attempted to determine if the discharge of ammonia from aerated lagoon wastewater treatment plants is a problem for aquatic life. In addition, the department acknowledges that aquatic life was surviving below nearly every wastewater treatment plant that was electro-fished as a part of this study, but should note that these studies were conducted at average summer flow conditions, not critical low flows. The department also recognizes the tremendous effort of Iowa's wastewater treatment plant operators to ensure the resources are protected to the best of their ability.

The change in ammonia limitations for wastewater treatment plants results from three primary causes: 1) The removal of the general use exemption passed in 2006, 2) the removal of protected flow provisions passed in 2006, and 3) these revised stream use designations. This rule addresses the stream use designation revisions. In many cases field assessments have determined that the effluent from continuous wastewater treatment plants result in the creation of perennial streams, these perennial streams are perennial aquatic life resources that requires additional levels of protection under the new rules.

It is important to note that while fish kills may not be occurring below wastewater treatment plants that the aquatic life criteria for ammonia serves to protect the entire aquatic life ecosystem and fish are just one aspect of that ecosystem. Macroinvertebrates, frogs, crayfish, salamanders, mussels, snails, etc. are all considered in the development of ammonia criteria. Also, the criteria considers not just acute toxicity (death) to aquatic life, but chronic toxicity (reproductive effects, growth, adverse behavioral reactions to prolonged exposure including death). Ammonia toxicity is a function of pH and temperature. The higher pH and temperature from the effluent of aerated lagoons results in more stringent limits for certain months than mechanical plants. Another key point is that the criteria is implemented at critical low flow conditions (i.e., the driest month in a ten year period - 30Q10, 1Q10, etc). This reflects conditions when wastewater treatment plant are more likely to contribute to a water quality problem. So while it may be generally true that there are not fish kills associated with aerated lagoon discharges there is no current way of knowing whether or not these discharges are causing other adverse affects to the ecosystem at critical low flows or even summer average flow conditions. The implementation of ammonia criteria serves to protect the resource and the recent implementation revisions serve to reflect the latest scientific and implementation guidance from the EPA.

Issue: Is E.coli really a problem from small wastewater treatment plants?

Public Comments:

-Has there been a problem in the receiving waters from the E.coli coming from the effluent of the small continuous discharging wastewater treatment plants?

DNR Response: No studies have been conducted that the department is aware of that has attempted to determine if the discharge of E. coli from small continuous wastewater treatment plants is a public health problem nor is the department aware of any reports of human illness caused by recreating in streams below these discharges.

However, the department is aware that the levels of E.coli from municipal wastewater treatment plants that do not disinfect can be as high as nearly 1,000,000 organisms/100 ml while our sample maximum criteria to protect Class A1 and Class A2 uses is 235 and 2,880 organisms/100 ml, respectively. This indicates that there is more risk to the public if they recreate in waters that receive wastewater discharges that do not currently disinfect.

Issue: Stream Order

Public Comments

-All small streams drain into larger streams on to rivers.

-Since lower order streams flow into higher order streams it does not seem logical to downgrade water quality of tributaries while maintaining high standards on the main stems of the stream systems.

-How can you manage the water quality of the lower reach of stream without managing the water quality of its headwaters and tributaries?

-The implementation of new water quality standards will require our ratepayers to provide additional revenue for disinfection of our wastewater, while consideration is being given to relax these very same standards upstream of our community. We question this approach and we feel any level of reduced protection of our community impacts our quality of life and recreational use of the Winnebago River.

DNR Response: This issue is addressed through the department's implementation procedures that can be found in the "Supporting Document For Iowa Water Quality Management Plans, Chapter IV". Water-quality-based limits are derived to protect all downstream uses. In essence, two water quality-based limits for E. coli are calculated in these situations. One limit to protect upstream recreational use and one limit to protect the downstream recreational use considering E. coli decay over that distance. Whichever limit is more stringent will be limit imposed for that facility and will ensure downstream uses are appropriately protected.

Topic 4: Economic Impact

Issue: These standards should have been enforced 30 years ago, but were not. Had your agency imposed these standards 10 or 20 years ago there would more likely have been more federal financial assistance available than there is now.

DNR Response: Iowa's WQS have been historically consistent with the CWA at the times new standards were adopted in the past. However, recent 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. It is unknown whether, if today's understanding of the CWA had been applied 30 years ago, more federal financial assistance would be available.

Issue: High Cost with No Impact on Water Quality

Public Comments

-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.

-This will be a lot of work for wastewater treatment plants for little benefit. The focus should be on non-point pollution.

-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.

DNR 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, CBOD, 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

In general, the Department agrees that the majority of water quality issues come from the watershed and not from wastewater treatment plant outfall pipes. 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.

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.

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.

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 has not established an enforceable program 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 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.

Issue: Catering to Agricultural and Wastewater Interests

Public Comments

- Agricultural interests are behind these stream downgrades.
- Stop approving factory farms.
- Keep hog lots away from streams.
- Let's not waste taxpayer money on public sewage plants while the CAFO industry gets another "by" to keep polluting.
- This is another incentive to construct more CAFO's.
- Stop catering to feedlot operators and agribusiness.
- If I have a complaint about an agricultural operation who do I contact in the DNR?
- Is the DNR solution to the cost to wastewater treatment plants polluting Iowa's streams to simply define deficiency downward by changing the criteria of what is pollution?
- Given the inadequately treated waste, a different DNR designation does not change its level of toxicity or pollution. It just changes cost to the polluters.
- Perhaps you should call it what it is: the environmental version of "ethnic cleansing" that is, awarding use of the stream to the noxious users who have driven out all other users of the once-public resource.

DNR Response: The establishment of Iowa's designated uses and associated criteria is scientifically based and is not adversely influenced by agricultural or wastewater interests. All stakeholders involved are working to ensure that Iowa's expectations of their water are realistic and reflect accurate science. This rule-making effort specifically will result in the construction of new wastewater treatment systems across the state at a cost of hundreds of millions of dollars. To say that these changes cater to these interests when it will cost Iowans a lot of money to comply with new standards to improve water quality is inaccurate.

Issue: Funds for Water Quality Improvement Projects

Public Comments

- It is unclear as to how downgrades of stream segments may adversely impact the ability to secure water quality grants.
- By downgrading streams the streams will be less likely to qualify for funds for watershed improvement projects.
- If you're designated A1 and you have the higher, more stringent standards, possibly your stream would be listed as impaired on the state's 303D list, the TMDL process, and would qualify for 319 funds to help do stream improvement for point and non-point

sources in the watershed. If you're designated A2, most likely, you won't pass the threshold and you won't be qualified for 319 funding.

DNR Response: Water quality grants or 319 eligibility cannot be a factor when assessing the highest attainable recreational uses for Iowa's rivers and streams. Any possible change in designation made under that assumption or concept is inappropriate. The department's goal is to improve the system of stream/river classification in Iowa, not help groups procure 319 dollars. The desire for money or projects simply shouldn't be a factor in the type of designation applied.

Issue: Rather than allow these point sources to continue to degrade our surface waters should we not be helping them improve their pollutant recovery methods?

DNR Response: The wastewater treatment industry is always working improve pollutant recovery methods. In regards to this effort, the department will continue to work with wastewater treatment plants to help find reasonable alternatives to meet the new standards and help improve instream water quality.

Topic 5: Processes and Protocol

Issue: What types of activities are considered for Class A1 and Class A2 recreational uses?

Public Comments

-Canoeing, kayaking, tubing and wading along streams and rivers is a form of recreation that requires primary contact with water as defined by the Code of Iowa and Iowa Administrative Code. The depth of the stream is not a factor in determining primary or secondary contact with the water in reference to these forms of recreation and as defined by the Code of Iowa and Iowa Administrative Code.

-What types of activities should be considered Class A1 use?

-Is canoeing or kayaking consistent with Class A1 or Class A2?

-Driving a four-wheeler in a creek bed or walking in or along the creek bed should not be an indication of an A2 use because an A2 use should involve contact with the water.

DNR Response: Iowa Administrative Code (IAC), Part 567, Chapters 60, and 61 note applicable definitions and provisions regarding Iowa's Water Quality Standards (WQS). The WQS establish specific use designations for waterbodies that support or are capable of supporting primary and secondary contact recreation and children's recreational activities, referred to as the group of Class A waters.

Waters designated as Primary contact recreational use (Class A1) are;

‘Waters in which recreational or other uses may result in prolonged and direct contact with the water, involving considerable risk of ingesting water in quantities sufficient to pose a health hazard. Such activities would include, but not limited to, swimming, diving, water skiing, and water contact recreational canoeing.’ [567-61.3(1)b(1)]

Waters designated as Secondary contact recreational use (Class A2) are;

‘Waters in which recreational or other uses may result in contact with the water that is either incidental or accidental. During the recreational use, the probability of ingesting appreciable quantities of water is minimal. Class A2 uses include fishing, commercial and recreational boating, any limited contact incidental to shoreline activities and activities in which users do not swim or float in the waterbody while on a boating activity.’ [567-61.3(1)b(2)]

In addition, 567-60.2 further defines Primary contact as

‘...any recreational or other water use in which there is direct human contact with the water involving considerable risk of ingestion of water or contact with sensitive body organs such as the eyes, ears, and nose, in quantities sufficient to pose a significant health hazard.’

Secondary contact is defined in Department rules (567-60.2) as

‘...any recreational or other water use in which contact with the water is either incidental or accidental and in which the probability of ingesting appreciable quantities of water is minimal, such as fishing, commercial and recreational boating and any limited contact incidental to shoreline activities. This would include users who do not swim or float in the water body while on a boating activity.’

Water contact recreational canoeing is defined in Department rules (567-60.2) as “means the type of activities associated with canoeing outings in which primary contact with the water does occur. This would include users who swim or float in the water body while on a canoeing outing.”

The department has attempted to be consistent with the historical intent of these rules at the time of their adoption by the Environmental Protection Commission (EPC). In general, waters where swimming (i.e., full body immersion) is reasonably possible are considered to be able to support activities “that may result in prolonged and direct contact with the water, involving considerable risk of ingesting water in quantities sufficient to pose a health hazard”. The definition further provides examples of what activities this can encompass such as “swimming, diving, water skiing, and water contact recreational canoeing”.

The EPC decided that a distinction should be made between the activities of canoeing versus water contact recreational canoeing with the understanding that some people who canoe do not want to get wet while others intend to get wet.

Looking at this distinction in regard to use attainability can pose implementation issues. The department’s understanding upon assessing these waters is that Class A2 and its associated criteria ensures that water will be of a sanitary quality to protect the public if contact with the water is incidental and infrequent. Canoeing was considered an activity consistent with Class A2 and Class A2 is protective of that type of activity. In addition, EPA’s draft “Implementation Guidance for Ambient Water Quality Criteria for Bacteria” from May of 2002 defines secondary contact activities as

“those activities where most participants would have very little contact with the water and where ingestion of water is unlikely. Secondary contact activities may include wading, canoeing, motor boating, fishing, etc.”

The department used depth guidelines to help in determining whether or not a water body could support Class A1 uses (i.e., 1 meter maximum or 0.5 meters maintained over 50% of the reach) to better address the issues regarding recreational activities. The concept here is that many Class A1 type activities require the presence of a significant amount water to support those activities. The implementation of these guidelines do a good job of addressing this issue as waters that possess enough flow or water present to support Class A1 typically are the waters deep enough for canoeing (e.g. the 1,300 stream/river miles verified as Class A1 in the original assessments). The EPA has approved this approach in other states.

The majority of public comments received were tied to a relatively small number of DNR's original recommendations that did not meet our depth guidelines; this is one of the main causes of the controversy regarding this rulemaking.. The rivers and streams identified are ones that we are 1) reinvestigating on our own accord, 2) reinvestigating based on recommendations from the EPC, and 3) soliciting and considering public comments to determine if the recommendation is accurate. If, upon re-evaluation, we discover activities that are consistent with water contact recreational canoeing or common kids play despite the marginal flow conditions, then adjustments will be made to the original recommendations (see Appendix 2).

Issue: Stream flow fluctuation during the recreation season

Public Comments

- Flows vary throughout the recreational season. How is this accounted for?
- All assessments were completed in early May and late October. This river segment is in northern Iowa. Can anyone honestly expect data gathered at those times of the year to accurately reflect the recreational use of that river?

DNR Response: DNR's "Recreational Use Assessment and Attainability Analysis Protocol" describes base flow conditions as follows:

Base Flow Conditions – Use Assessment and UAA field surveys are only “snapshots” of observations when conducted in accordance with this protocol. To acquire the best results from a single field survey, the survey for Use Assessments and UAAs should be conducted during base flow periods. Base flow is that portion of a stream's flow contributed by sources of water other than precipitation runoff. This refers to a fair weather flow sustained primarily by springs or groundwater seepage, wastewater discharges, irrigation return flows, releases from reservoirs, or some combination of these.

Even though flows vary throughout the recreational season, the department will continue to conduct recreational use assessments throughout the recreational season (March 15th to November 15th, as defined in Iowa Water Quality Standards) as long as the conditions are felt to provide for an accurate and adequate assessment of the data needed to make a use determination.

Data gathered near either end of the recreational use season can most definitely reflect accurate recreational use conditions. These period of “leaf off” conditions are times when the field staff tend to find the most evidence of use. The areas are not overgrown with vegetation and stream flows can be low. In the winters 2005 and 2006, there was not much in the way of high flows during the winter so a lot of the evidence of use remains along the stream banks and stream beds. It should also be noted that evidence of use is not necessarily the primary driver for use determinations, nor is having to be present at times when recreation is most likely to occur (i.e., July – September). The department is working to answer the question: “is Primary Contact Recreation possible

here?” and if the flow and water is present in amounts to reasonably support that activity then the question can be answered relatively easily without having to be present at times when recreation is most likely to occur.

Issue: There isn't enough information to make a determination

Public Comments

- The assessment process does not appear to be thorough.
- Not enough information has been gathered to make a well thought out scientifically based assessment of these water bodies.
- Many of the streams proposed for reclassification to an A2 level are used for recreational canoeing, kayaking, tubing and simply loafing and playing in the water by thousands of people each year. The process used to evaluate these streams for the types of outdoor recreation listed, was not nearly thorough enough to justify reclassification to an A2 level.
- A more thorough assessment of public lands is needed.
- A more thorough assessment of streams that flow through cities is needed

DNR Response: The department gathers data in accordance to DNR's "Recreational Use Assessment and Attainability Analysis Protocol" effective March 19, 2008 in state administrative code (IAC Ch. 61.3(8)). The data collection process requires more information and data than several other states in regards to recreational use attainability and exceeds the bar for information needed by the EPA for approval. The field procedures are available online for review at <http://www.iowadnr.com/water/standards/recuse.html>

Issue: The few big rivers to which you gave protection are too big for child play, and too remote for many citizens.

DNR Response: The department does understand the relevance of this comment in regard to Iowa's stream recreational uses and associated use attainability analyses. The recreational uses for Iowa's rivers are intended to be applied, in conjunction with attainability considerations, in situations consistent with the definition of Iowa's three recreational use designations. Big rivers can have child play, but it is understood that swimming is possible based on the amount water or flow present regardless of how remote the river the river may be. The children's play designation is intended to apply to "Waters in which recreational uses by children are common. Class A3 waters are water bodies having defined banks and bed with visible evidence of the flow or occurrence of water. This type of use would primarily occur in urban or residential areas".

Issue: Surveys Approach and Consideration of Surveys Received

Public Comments

- Taking a survey to determine how people are using the waterways is idiotic as well as pathetic in its inadequately simple approach.

- Your survey and your rulemaking makes no attempt to determine why the fishing is so poor in many of these streams.
- The instructions were unclear and asked for limited information.
- The DNR should not automatically assume that the layman public comments accurately reflect the stream's use, but should do an independent evaluation of the information.
- These designations should not be a numbers game with the designation being determined by how many people commented each way on a particular stream segment. The DNR must reconsider the proposed designation in light of conflicting comments and make its best professional judgment determination.
- When assessing the level of credibility of public comments, we ask the DNR to take a common sense approach and assess what stream use is reasonably attainable given the information available.

DNR Response: The department's procedures for assessing the recreational uses of Iowa's water were primarily derived in 2005 by working with the EPA to execute a contract with an outside environmental services company. The purpose of the contract was to address issues regarding a 2004 rule making submittal to EPA that designated hundreds of miles of rivers for Class A2 protection. These procedures are heavily based off the recreational use protocols of Missouri and Kansas. This gave EPA a comfort level that the work products would be acceptable and therefore the contract was approved and field work was conducted in Iowa as a result.

These procedures were primarily for the purposes of data collection in which the data was to be used to write Use Attainability Analyses for recreational uses. These procedures had minimal instruction regarding interviews of the public and no instruction or suggestion to conduct surveys because the primary driver for considering recreational use attainability in these protocols was whether or not there was adequate water present or flow for recreational uses to occur.

As the department began to conduct field work mandated by the legislature it became apparent that there was a need for additional efforts to better involve the public into the process. In addition to the field interviews conducted from across the state as field assessments were performed, the department created postage-paid interview cards to be dropped off at streamside homes in case nobody was around for an interview. Questions about how these waters are or are not used were developed to be useful in regards to the definitions of Iowa's three Class A uses: Primary Contact, Secondary Contact, and Children's Play recreation. The survey was intended to be concise, streamlined, and provides useful information related to this effort of determining the appropriate recreational uses of Iowa's waters.

In addition to the postcards, an online stream survey was developed that contained similar questions to the postcards. Also, following the DNR's example, the Sierra Club created their own forms that were very similar to the format originated by the department.

The surveys are felt to be adequate and have proved to be very useful in providing the department another line evidence to better ensure that an accurate recommendation is developed.

Consideration of the surveys/public comments regarding specific streams uses

The department has thoroughly analyzed these surveys to the best of our ability given the time frames provided by the Administrative Procedures Act. Some surveys were available at the time of the original UAA draft, while others were received after the UAA recommendation was complete. The department has analyzed all the surveys that were received for streams in the Notice of Intended Action (NOIA).

There has been concern that one comment can be enough to change a designation or that environmental groups will take pictures of themselves in every stream that received a UAA to change the department's recommendations. The department's approach has been to use a reasonable, practical, common sense approach to analyzing the public comments. The surveys received came in varying forms of completion: Some surveys were incomplete, some were not specific to an exact location, some did not provide frequency of use, some were completely blank, and some provided exact detail of activities, locations, and frequency with pictures. The department analyzed all of these comments made adjustments to UAAs based on these comments in relationship to what the department found in the field and the UAA recommendation provided for in the NOIA.

It should be noted that department is not required to conduct surveys as a part of the UAA and understands the UAA recommendations will be approvable on the federal level without this information. That being said, the department feels that the information obtained through the surveys proved to be very useful in providing the department another line evidence to better ensure that an accurate recommendation is developed and in providing an avenue for the public to participate in the process.

Issue: How is existing water pollution factored into recreational assessments?

Public Comments

- Is my response saying we do not use a river for swimming because it's polluted going to be used to downgrade the stream use designation?
- If public use is required to get protection, how can anything be protected when the quality is so bad that people are afraid to use the water ways.

DNR Response: No, when assessing whether a water body is "swimmable" the department is simply looking to see if the activity is possible regardless of the current water condition.

Topic 6: IDNR Rule Making Process

Issue: The “triennial review process” is broken and dead in Iowa.

DNR Response: 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 several phases to date, yet several controversial issues, including protected flow and general use segment provisions, use attainability analyses, TDS and chloride, antidegradation implementation, and more have prevented the department from getting back into the cycle of triennial review. The department is working to fall into the triennial review procedures once these issues are satisfactorily addressed. However, the department feels that water quality standard issues are being properly addressed in absence of the national format. The delay in beginning a new triennial review is evidence that neither EPA nor the department is willing to conclude a triennial review without addressing the issues identified in that review. To simply move on with further reviews without addressing the issues raised would turn these reviews into purely bureaucratic exercises.

Issue: Public Hearings

Public Comments

- 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.

DNR 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 six public hearings without any petitions being submitted. These six public hearings were held across the state: Atlantic and Cherokee on November 15, 2007; Clear Lake on November 20, 2007; Elkader on November 30, 2007; Des Moines on November 27, 2007; and Iowa City on November 29, 2007. In addition, written comments were accepted until January 2, 2008. 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 November, 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.

Issue: I do not recall seeing any press releases regarding this issue.

DNR Response: The department strives to be proactive and keep stakeholders informed and notified of possible and proposed WQS changes well beyond what is required in the Administrative Procedures Act (APA).

Chapter 17A.4 of the APA requires that proposed rule change be published in the Iowa Administrative Bulletin (IAB) as a Notice of Intended Action (NOIA). The NOIA shall

be published for at least 35 days in advance of the action. The NOIA shall include a statement of the substance of the intended action and the manner in which interested persons may present their views.

A press release was issued on May 17, 2007 announcing the department's new UA/UA stream assessment web page and database. The database, located on the DNR web site, www.iowadnr.gov/water/uaa.html, offers maps, proposed use designations and other information on selected streams and stream segments throughout the state. Streams are added to the database as fieldwork is completed and information becomes available. Two fact sheets were also posted on this web site, 1) What Recreational Stream Protections Mean? and 2) Assessing Iowa Stream Uses.

The department initially presented the Environmental Protection Commission (EPC) with the stream assessment updates for informational purposes at their June 5, July 2 and August 7, 2007 meetings. The notice of this meeting and issues involved was highlighted in the May 31, and June 21, 2007 versions of the EcoNews Wire and published online. Each issue of the EcoNews Wire is sent to 680 stakeholders, interested parties and news organizations.

The department presented the EPC the NOIA for a decision to initiate rule making at their October 1, 2007 meeting. The notice of this meeting and issues involved was highlighted in the September 27, 2007 version of the EcoNews Wire and published online. The EPC voted unanimously to initiate the rule making process. The NOIA was published on the WQS webpage throughout this process.

Subsequent articles regarding the stream use assessments were also published in the November 1, 2007 and November 29, 2007 versions of the EcoNews Wire and November 15, 2007 edition of the Water Quality Listserve and published online.

Outreach was also performed through 6 regional open meetings. These meetings were held across the state: Spencer, October 3, 2007; Mason City, October 8, 2007; Manchester, October 11, 2007; Atlantic, October 12, 2007; Des Moines, October 15, 2007; and Washington, October 18, 2007. Close to 150 individuals attended these meetings.

The NOIA was formally published in the IAB on October 24, 2007 as ARC 6351B. While 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 six (6) public hearings without any petitions being submitted. These six public hearings were held across the state: Atlantic and Cherokee on November 15, 2007; Clear Lake November 20, 2007; Des Moines on November 27, 2007; Iowa City on November 29, 2007; and Elkader on November 30, 2007. These hearings were at varying times of the day to attempt to accommodate as many special needs as possible.

In addition to the public hearings the department had 10 media contacts with various news organizations in the months of October 2007, November 2007 and January 2008.

All interested persons are afforded not less than 20 days to comment from the publication date of the NOIA. In this case, the 20 days would have resulted in the comment period closing on November 13, 2007. The department extended this deadline an additional 49 days in the NOIA to December 11, 2007. In addition, stakeholder demand resulted in the department extending the comment period one more week to January 2, 2008, to accommodate the needs of stakeholders.

In addition to the EPC meetings, press releases, and standard IAB publications, the department sent letters to potentially affected NPDES permit holders notifying them of the public hearings and encouraging attendance to learn more about how these facilities may be impacted by the proposed rule.

APPENDIX 1: COMMENTATORS

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

City/Community Officials

City of Calmar	City of West Burlington
City of Grinnell	City of Humeston
City of Moravia	City of Alta
City of Lenox	City of Dewitt
City of Scranton	City of Coggon
City of Knoxville	City of Clarion
City of Beacon	City of Spillville
City of Osceola	City of Montezuma
City of Ossian	City of Inwood
City of Tripoli	

County Conservation Boards

Adair County Conservation Board
Adams County Conservation Board
Audubon County Conservation Board
Benton County Conservation Board
Blackhawk County Conservation Board
Bremer County Conservation Board
Buchanan County Conservation Board
Buena Vista County Conservation Board
Butler County Conservation Board
Calhoun County Conservation Board
Calhoun County Conservation Board
Carroll County Conservation Board
Cass County Conservation Board
Cedar County Conservation Board
Cherokee County Conservation Board
Chickasaw County Conservation Board
Clarke County Conservation Board
Clay County Conservation Board
Clayton County Conservation Board
Crawford County Conservation Board
Dallas County Conservation Board
Davis County Conservation Board
Delaware County Conservation Board
Dubuque County Conservation Board
Fayette County Conservation Board

Floyd County Conservation Board
Greene County Conservation Board
Guthrie County Conservation Board
Hamilton County Conservation Board
Hancock County Conservation Board
Harrison County Conservation Board
Howard County Conservation Board
Jackson County Conservation Board
Jasper County Conservation Board
Jasper County Conservation Board
Jefferson County Conservation Board
Johnson County Conservation Board
Johnson County Conservation Board
Jones County Conservation Board
Linn County Conservation Board
Linn County Conservation Board
Lyon County Conservation Board
Mahaska County Conservation Board
Marion County Conservation Board
Mills County Conservation Board
Mitchell County Conservation Board
Monona County Conservation Board
Muscatine County Conservation Board
O'Brien County Conservation Board
Page County Conservation Board
Plymouth County Conservation Board
Pocahontas County Conservation Board
Polk County Conservation Board
Pottawattamie County Conservation Board
Poweshiek County Conservation Board
Sac County Conservation Board
Scott County Conservation Board
Shelby County Conservation Board
Story County Conservation Board
Sweet Marsh Wildlife Unit
Wapello County Conservation Board
Warren County Conservation Board
Washington County Conservation Board
Washington County Conservation Board
Wayne County Conservation Board
Webster County Conservation Board
Winnebago County Conservation Board
Winneshiek County Conservation Board
Worth County Conservation Board
Wright County Conservation Board

Organizations

Steve Veysey, Wally Taylor, Bill Hemmes – Sierra Club
Susan Heathcote, Nathan Lein - IEC
David Meyer - Cedar County SWCC
Dave Ratliff - JAICWC
John Roetlin - Twin County Dairy
Matt McAndre – OMI
Michelle Phillips – Anamosa Journal Eureka
Christina Gruenhagen – Iowa Farm Bureau
Michael Ralston – Association of Business and Industry
Walter Wittrock – Missouri & Mississippi Divide Resource Conservation & Development, Inc.

Private Citizens:

A Jay Winter	Andrea Pieper Askelson	Barrett Ericson
Aaron Robinson	Andrew Ransom	Barry Anonson
Aaron Staker	Andrew Schaefer	Barry Ehrig
Abby White	Andy Asell	Barry Taylor
Adam Asche	Andy Bartlett	Ben Gleason
Adam Bloom	Andy Con	Ben Petty
Adam D. Fuller	Andy Cow	Benita Carlson
Adam Shutt	Andy Foster	Benjamin Fay
Adam Suckow	Andy Mortensen	Benjamin W. Ross
Al Donaldson	Angela Franks	Bernard Kutseih
Al Schafbuch	Angela Hvitved	Beth Shields
Al Stroh	Angie Heikens	Beth Walling
Al Wagner	Angie Howell	Beth Wilson
Alan Lange	Anita Maher-Lewis	Bethany Land
Alan Pasker	Anita Miller	Betty Thomas
Alannah Hatley	Anita Schable	Bev Chiodo
Albert A. Mews	Ann Burns	Bev Rutter
Alden Vanden Brink	Ann Byers	Beverlee Matts
Alexander Campbell	Annabel Stonehocker	Bill Hamilton
Alicia Trout	Annette Rogers	Bill Hemmes
Alison Soelberg	Anthony Halverson	Bill Krahling
Allan Haynes	Arnold Christian	Bill Monroe
Allen Bonini	Barb Haynes	Bill Moreau
Allen Olderog	Barb Jacobson	Bill Oloff
Allison Dotseth	Barb Robengar	Bill Rickard
Allison Mitchell	Barb Stone	Birgitta Meade
Amy Johannsen	Barbara Capron	BJ Chambers
Amy Rydberg	Barbara Notz	Blaine Buenger
Anderw Bauman	Barbara Parker	Blake Gunderson
Andrea Chase	Barney Otting	Bo Geigley

Bob Bierer	C W Much	Chris Petersen
Bob Hartley	C. J. Klenske	Chris Rehmann
Bob Jones	C.S. Fraley	Chris Wilbeck
Bob Kellogg	Candy Mefferd	Christina Gruenhagen
Bob Kerksieck	Carl Betts	Christine Chafa
Bob Sewell	Carl Durkin	Christine Cowan
Bob Sheets	Carl Schadle	Chuck Lampros
Bobby Schleader	Carmin Blake	Chuck Lenze
Brad Cave	Carol Ann Weis	Chuck Schulte
Brad Fetters	Carol Balvanz	Chuck Ungs
Brad Freidhof	Carol Boyce	Cindi Bohnenkamp
Brad Johansen	Carol Leshner	Cindy Witt
Brad Lamping	Carol Miller	Claire Hruby
Brady Schlender	Carol Sadler	Clarice Baiotto
Brandon Bergquist	Carol Saldivar	Clay Dahlquist
Brandon C. Harland	Carole Reichardt	Clayton Arend
Brandon Timmerman	Carole Yates	Cletus Herrig
Bremer County	Caroline Dieterle	Clifford Carney
Brenda Van Roekel	Carrie Davison	Clifford Kaplan
Brent Bierbaum	Carrie Kriz	Colleen Clopton
Brent Miller	Carrie La Seur	Connie Goode
Brenton Tigner	Carter Woodruff	Connie Kofron
Brett Brauman	Catharine Fitzsimmons	Connie McCrary
Brett Jamison	Catherine Johnson	Connie Rozinek
Brett Stewart	Cathy Brown	Conrad Luecke
Brett Trout	Cathy Staake	Corey Meyer
Brian Henry	Chad Chapman	Cornelia Mutel
Brian James Garrett	Chad Graeve	Cory Behr
Brian Jones	Chad Mason	CR Barnett
Brian Kadera	Chad Newton	Craig Bacheldev
Brian Kent Sisson	Chantal Roberts	Craig Fitch
Brian Miller	Char Hanson	Craig Flack
Brian Mueggenberg	Charles Abarr	Craig Hemsah
Brian Ritter	Charles Campbell	Craig Hiatt
Brian Soenen	Charles Headler	Craig Monson
Brian Winkel	Charles Winterwood	Craig Rash
Brittney Anderson	Chelsea Schloesser	Craig Sandvig
Bruce Banister	Cheri Ure	Craig Van Otterloo
Bruce Cary	Cheryl Benson	Craug McWilliams
Bruce Ellison	Cheryl Haden	Curt Wiseman
Bruce Henningsen	Chester Challman	Curt Heisterkamp
Bruce Morrison	Chet Stambaugh	Curt Zingula
Bryan Beck	Chris D. Jones	Curtis Hayes
Bryan Olsen	Chris Jensen	Curtis Lundy
Bud Overton	Chris Jones	D. Kersey
Busenbarrick Fine Jewelry	Chris McNiel	Dale Gerdes

Dale Helgeland	David Kamm	Dion Brundage
Dale Lenz	David Manning	Dirk van der Linden
Dale Sanders	David McCann	Don Bartlett
Dale Struecker	David Merial	Don Beneke
Dale Todd	David Nehls	Don Combs
Dan Bailey	David Nissen	Don Dede
Dan Carl	David Osheim	Don Elbert
Dan Cohen	David Peters	Don Grandgeorge
Dan Currie	David Rosmann	Don Gulbrandsen
Dan Herberg	David Rydberg	Don Hines
Dan Jaynes	David Savage	Don Kauffman
Dana Dettmer	David Schultz	Don Kulisky
Dana Sturgill	David Stephenson	Don Propst
Danea Clark	David Struckman	Don Slycord
Darcy Lee Keil	David Sundstedt	Don Walsmith
Darrald Carr	David Thomas	Don Whalen
Darrel Brothersen	David Witcraft	Donald Rockwell
Darrin Dennis	David Witkowski	Donna Buell
Darrin Niday	Dean Boone	Dorothy Potthoff
Darryl Halling	Dean Hamblin	Dorothy Swain
Darsi Foss	Dean Lewis	Doug Carpenter
Daryl Andersen	Dean Zimmerman	Doug Chafa
Daryl Parker	Deb Everett	Doug Frey
Dave Brue	Deb Goettig	Doug Gumm
Dave Elias	Deke Gliem	Doug Harr
Dave Floden	Delray Bredehoeft	Doug Hawker
Dave Halbmaier	Dennis Dallege	Doug Kuhlmann
Dave Hurd	Dennis Ernst	Doug Lewin
Dave Larsen	Dennis Francis	Doug Morningstar
Dave Luther	Dennis Haller	Doug Van Dyck
Dave McCool	Dennis Hatcher	Douglas Apals
Dave Meeter	Dennis Schlicht	Douglas Grulkey
Dave Meyer	Dennis Weiss	Douglas Haefele
Dave Phillips	Denny Kingsley	Doxie Weber
Dave Ratliff	Denny Lautner	Margaret Sadegnpour-Kramer
Dave Sedivec	Denyce Rusch	Dray Walter
Davene Runyan	Derek Thompson	Drew Blocker
David Baldwin	Derry Wolford	Drew Vanwoert
David Brue	Dew Osborne	Drew Veysey
David C. Matthias	Diana Karlowski	Drinda Williams
David Dirks	Diana Karlowski	Duane Harris
David Furbush	Diane Easterday	Duane Massman
David Hansen	Diane Eberhart	Duke Dusheck
David Hellberg	Diane Foster	Dwight Hopson
David Heyden	Diane Lansink	Dwight Rutter
David J. Nolte	Dinah Kerksieck	Dwight W. Smith

Ed Brinton	Gary Gooder	Gregg Stark
Ed Fallon	Gary Hardy	Gretchen Ree-Robinson
Ed Sadler	Gary Hibben	Guy Richardson
Ed Sarsfield	Gary Morriss	H.L. Graves
Ed Simonin	Gary Orstad	Hannah Davison
Edward J. Gallagher III	Gary Phillips	Harlan Sande
Edward McPartland	Gary Sawin	Harley Urbatsch
Eileen M. Robb	Gary Schnieder	Harold Ladwig
Elaine Deluhery	Gary Weyers	Harold Puffer
Elizabeth Garst	Gary Wunder	Harold Smith
Ellen Flickinger	Gayla McCool	Harry Ross
Ellen Vanderloo	Gene Koschmeder	Harvey Johnson
Elliot Evenson	George Caggiano	Harvey Swartz
Elmer Huebbe	George D. Schrimper	Heath Petersen
Elwood Garlock	George Hebl	Heather Hix
Emily Dallege	George Milford	Heidi Anderson
Emily Vant Hul	George Millard	Henry Brueck
Eric Adam	George Schrimper	Herb Doudney
Eric Lamb	George W. Alton	Herbert Scott
Eric Rossmiller	George Wilson	Holly Kolbeck
Eric Schares	Gerald Miller	Howard Hadwig
Erica Munkel	Gerald Neff	Howard L. Ashlock
Erick Sorensen	Gerry Rowland	Hubert Hagemann
Erik Notz	Gilbert Jennings	Isabella Smith
Erin Bergquist	Gilbert Stanik	J. Kay Brown
Ernest Baiotto	Gina McAndrews	Jack Eastman
Ernest Ganzeveld	Ginny Elliott	Jack Shaffer
Erwin E. Klaas	Ginny Ricke	Jacki McClaflin
Erwin Felderman	Glenn Pollock	Jacob Clark
Erwin Klaas	Glenn Streich	Jacob Conner
Evan De Groot	Glenn Vondra	Jacob Kubik
Fan Libbey	Glenn Watt	Jacqueline Signori
Farr Jebens	Gloria Kearney	Jake Kjosa
Frank Bailey	Gordon Brand	James Peters
Frank Clark	Graig Van Otterlow	James Beck
Frank Goodenow	Greg Beisker	James Dodd
Fred Rasclak III	Greg Elin	James Foster
Gail Barels	Greg Hoversten	James Hentges
Gail Koobs	Greg Knoploh	James Kouba
Gale Bishop	Greg Kula	James L. Beeghly
Garry Brandenburg	Greg Lindsay	James Peters
Gary Arner	Greg Simmons	James Pritchard, Ph.D.
Gary Bennett	Greg Soenen	James Russell
Gary Biederman	Greg Stuck	James Strauss
Gary Cromer	Greg Wilson	James Thompson
Gary Engelken	Gregg Pattison	James Vestweber

James Weeks	Jerry Nachtman	Joel Davison
James Willey	Jerry Peckumn	Joel Haack
Jamey Smyth	Jerry Peoples	Joel Johnson
Jan A. Schmidt	Jerry Wessels	John A. Johnson
Jan Aiels	Jesse Cook	John Arenz
Jane Alexander	Jesse Klosterboer	John Asche
Jane Clark	Jesse Worth	John Baty
Jane Daufeldt	Jessica Davis	John Beard
Jane Gressang	Jessica Jackson	John Beary
Jane Weber	Jessica Sullivan	John Behrns
Janelle Bartels	Jill Colver	John D. Fredrickson
Janice Bendixen	Jill Lange	John Ernst
Jared Getler	Jill Watrous	John Fay
Jared Sommerfelt	Jim Batton	John Felderman
Jarrett Svestka	Jim England	John Fletcher
Jason Bryan	Jim Gonyier	John Hackett
Jason Larson	Jim Hentges	John Hanson
Jason Manfull	Jim Hubbell	John Jacobson
Jason Schable	Jim Huck	John Klein
Jason Thomson	Jim Klever	John Koch
Jason Tylee	Jim Liechty	John Lee
Jay Howe	Jim Mitchell	John Mason
Jay Swearingen	Jim Murphy	John McClaflin
Jay Wolfe	Jim Nedtwig	John McCurdy
Jean Gallmeyer	Jim Prochaska	John Metz
Jean Herman	Jim Quinn	John Orvis
Jeanette Carhill	Jim Redmond	John Porter
Jeanne Mae Baugous	Jim Reiser	John Rogers
Jeannie Dotterer	Jim Riggs	John Sander
Jeff Aten	Jim Rose	John Smith
Jeff Clausen	Jim Rubis	John TePaske
Jeff Fuller	Jim Spies	John Veach
Jeff Ulch	Jim Winterton	John Walters
Jeffrey Miller	Joan Lovewell	John Wenck
Jennifer Dammann	Joan Peterson	John Winter
Jennifer Groves	Joan Schoenig	Joleen Chiodo
Jennifer Herrington	Joan Voigts	Jon Cowan
Jenny Wessling	JoAnn Berry	Jon Ericson
Jeremy Cochran	Joann Sargent	Jon Fisher
Jeremy Eilers	Joann Shackelford	Jon Matz
Jeremy Jordahl	Joe Capesius	Jonathan Swain
Jeri Schelhaas	Joe Golden	Jonathan Tegerer
Jerry Cheevers	Joe Healy	Jordan Houdek
Jerry Cook	Joe Hoover	Joseph L. Murphy
Jerry Cross	Joe Johnson	Joseph Marroy
Jerry Jensen	Joe Ledger	Joseph Murray

Joseph Preton	Ken Norem	Larry Thompson
Joseph Reutter	Ken Pasker Jr.	Larry Turner
Joseph Skoda	Ken Thornhill	Larry Walthart
Josh Engelkins	Kendall Schrader	Laura Cruse
Josh Shullaw	Kenny Bentsen	Lauren Robinson
Joshua Smith	Kerry A. Magner	Lauri Niehaus
Joy Hanson	Kevin Burrs	LaVere Derry
Joyce Hackbart	Kevin Cole	Laverne Couch
Joyce Yates	Kevin Fitzpatrick	Lawrence Roesler
Judy Hass	Kevin Kirlin	Leland Searles
Judy Porter	Kevin Koch	Leo Russell
Judy Wessling	Kevin Krumwiede	Leonard Warford
Julie Blumer	Kevin Pape	Lew Olson
Julie Engelken	Kevin Wilbeck	Lillian Nichols
Julie Hugo	Kim Bierer	Linda Applegate
Justin Andrus	Kim Kuester	Linda Combs
Justin Young	Kip Ladage	Linda Narigon
Kaitlyn B. Byrnes	Kirby Dague	Lindsay Beaman
Karen Grimes	Kirk Henderson	Lindsey M. Calderwood
Karen Havens	Kirk Rosenow	Lisa Bean
Karen Theriault	KJ Rebarcak	Lisa Hurd
Karin Till	Kris McLane	Lisa Nagle
Karl Seifert	Kris Rash	Lloyd Mattoon
Karla Rubin	Krista Frazee	Logan Marr
Kathryn L. Gerber	Krista Moffitt	Lois Ostert
Kathryn Stroh	Kristi Peck	Lon Crosby
Kathy Baum	Kristin Gerdes	Lora P Conrad
Kathy Fletcher	Kurt Behrens	Loren Bates
Kathy Melby	Kyle Ament	Loren Hansen
Kathy Slycord	Kyle Thoms	Loren Southwick
Kathy Stevens	Laden Vanden Brink	Lori Beeuwsaert Moore
Kathy Sundstedt	Lamont Davidson	Lori Foresman-Kirpes
Kathy Wessels	Larry Jepsen	Lori Hubbard
Katy Hunt	Larry A. Goetsch	Lori Reams Parrish
Kay Curk	Larry Derganz	Lorie Bolinger
Kaylene Carney	Larry Gittins	Luara Kish
Kaylie Kraayenbrink	Larry Gullett	Lucas Dever
Kaytlin Massman	Larry Jacobson	Lucille Heuton
Keith Diltz	Larry Lovedy	Luke Domeyer
Keith Dohrman	Larry Lund	Luke Klaschen
Keith Gehring	Larry Osterkamp	Lyle Coder
Keith Sander	Larry Schlatter	Lyle Danielson
Keith Vernons	Larry Stone	Lyle Otte
Kelly McMahan	Larry Stott	Lynn Grobe
Kelsey Schlender	Larry T. Wilson	Lynn Robbins
Ken LaCoder	Larry Teeples	Lynn Sorum

M. Briggs	Mary Jo Wilson	Mike Jacobs
Madeline Meyer	Mary Koester	Mike Kepple
Madonna Hefel	Mary Magle	Mike Kilen
Maggie Burger	Mary McBee	Mike Lamair
Marc Millitzer	Mary Miller	Mike Lazere
Marcia Hibbard	Mary Samuelson	Mike Miller
Margaret Kemmerer	Mary Shineflew	Mike Modlin
Margaret L. Schirmer	Maryann Sinkler	Mike Mosman
Marie Boeckman	Matt Baumann	Mike Pace
Mark Anderson-Wilk	Matt McCutchan	Mike Schleisman
Mark Bequeaith	Matt Reiling	Mike Schrader
Mark Bohner	Matt Rueckert	Mike Simpson
Mark D. Wagner	Matt Stolley	Mike Thill
Mark Dirks	Matt Trotter	Mike Tripp
Mark Edwards	Matthew Crawford	Mike Van Zanten
Mark Elliot	Matthew Mayo	Mike Webster
Mark Halverson	Maurine Puffer	Miriam Patterson
Mark Hayner	Max Burkey	MJ Hatfield
Mark Heisdorffer	Max Mulvaney	MMS Consultants, Inc
Mark Heuer	Max Trimpe	Monica Gohlinghorst
Mark Hunt	Megan Hingtgen	Monita Engstler
Mark Miller	Melissa O'Rourke	Morey Hill
Mark Nie	Meryll Hicks	Morgan Elwood
Mark Rhodes	Michael Carter	Nan Dreher
Mark River	Michael Clark	Nancy Crowfoot
Mark Roberts	Michael Couch	Nancy Downing
Mark Schachtner	Michael Delaney	Nancy Henggeler
Mark Stenzel	Michael Glawe	Nancy Meier
Mark Thompson	Michael Honold	Nancy Schrader
Mark Ultis	Michael Ivory	Nate Trout
Mark Underberg	Michael Jacobs	Nathan Johnson
Mark Wagner	Michael Klimesh	Nathan Lein
Mark Wise	Michael Mendenhall	Nathan Wedeking
Marlin Marckmann	Michael Moats	Nathan Woodard
Marsha Wilfong	Michael Ott	Neil Baier
Marshall Sohm	Michael Praska	Neil Bartels
Martha Carswell	Michael Simpson	Neil Brandenburg
Martha Monroe	Michele Olson	Nick Bogenrief
Martha Steele	Michelle Turner	Nick Cummins
Marty Davison	Mike Anderson	Nick J. Gaeta
Marty Jacobs	Mike Birmingham	Nick Rundle
Marvin Edwards	Mike Booth	Nicole Timmons
Marvin Engelen	Mike Carr	Nyle Lienhard
Mary ann Miller	Mike Freiburger	Orlan Love
Mary Jane Hatfield	Mike Griggs	Orval Uden
Mary Jane Oiud	Mike Isebrand	Oscar Overton

P.J. Mills	Rachael Partridge	Rita Dudley
Pam Grow	Rachel Duncan	Rita Olesen
Pam Kaufman	Rachel Schmidt	Rita Talcott
Pam McEnany	Randy Chamberlin	Rob Baker
Pam Wingert	Randy Fawcett	Rob Halden
Pam Wolter	Randy Kopecky	Rob Middlemis-Brown
Pamela Thomson	Randy L Greenfield	Rob Poggenklass
Pamela Wingert	Randy Mack	Robert Ammann
Pat Dede	Randy Schnell	Robert Barta
Pat Hartley	Ray Conrad	Robert De Haan
Pat Oloff	Ray Knight	Robert Dickson
Pat Phillips	Raymond Hayes	Robert Etzel
Pat Ritter	Rebecca Abarr	Robert Evans
Pat Spears	Rebecca Couch	Robert Foster
Patrice Holmlund	Rebecca Kauten	Robert Holland
Patricia Little	Reece Peterson	Robert J. Berning
Patricia Malnee	Reg Yoder	Robert Jensen
Patrick Mescher	Reginald Clause	Robert Miller
Patrick Prevenas	Rein Vanderhill	Robert Morris
Patrick Yankaus	Rene O'Donnell-Hanlon	Robert Pekelder
Paul Ascheman	Rene Stroud	Robert Summerfelt
Paul Falconer	Renie Neuberger	Robert Wepel
Paul Frantsen	Rev. Carolyn Bittner	Robert Wessels
Paul Hunter	Ricardo Romero	Robin Fortney
Paul Juhl	Rich Bleakley	Rod Rumelhart
Paul Marshall	Rich Peddicord	Rod Scott
Paul Mears	Rich Petersen	Roger Burkman
Paul Miller	Richard Bird	Roger Erickson
Paul Muller	Richard C. Schultz	Roger Fry
Paul Silich	Richard Carlson	Roger Lunning
Paul Specht	Richard Davison	Ron Dunek
Paul Viers	Richard Dietz	Ron Erne
Paula Miller	Richard Jordan	Ron Kilburg
Peggy Stecklein	Richard Koster	Ron Scheuermann
Perry Thostenson	Richard McMahon	Ron Smith
Perry-O Sliwa	Richard Merrill	Ron Spears
Pete Eyheralde	Richard Meyer	Ron Spengler
Peter C. Lau	Richard Parker	Ron Warren
Phil Eilers	Richard Pauley	Ronald Balotto
Philip Brown	Richard Pint	Ronald Juergens
Philippe Grandgeorge	Richard R. Hutton	Ronald Tracy
Phyllis Goodman	Richard Schultz	Ronald Wilmot
Phyllis Wasta	Richard Smith	Rosemary Osheim
Piper Wall	Richard Thomas	Rosemary Partridge
R. W. Carmichael	Richard Traiff	Ross Abbott
Rachael Looney	Rick Robinson	Roxanne Meier

Roy Goodenow
Russ Euken
Russ Stammer
Russell Wagner
Ruth Cigledy
Ruth Sheets
Ryan Atwell
Ryan DeVore
Ryan Dittman
Ryan Maad
Ryan Maas
Ryan Rahmiller
Ryan Wambold
Rylee Rollins
S. Dean Willis
Sabrina Greiner
Sam Axmear
Sam Vanfleet
Sandra Hatcher
Sandra Kersey
Sandy Albers
Sandy Ly
Sara Ell
Sara Smith
Sarah Jespersen
Sarah Lande
Sarah Shores
Sarah Vargason
Scot Knudtson
Scott Bents
Scott Burkman
Scott Jepsen
Scott Lindgren
Scott Moats
Scott Newbury
Scott Osborn
Scott Rodberg
Scott Wilson
Seth Mosbrucker
Shanda Frana
Shane Buenzow
Shane Leslie
Shane Martin
Shannon Obert
Shannon Zobel
Sharon Baltes

Sharon Glasgow
Sharon Kirby
Sharon Matthes
Shelby Hollett
Shelley Segebart
Sherlyn Hazen
Sherri Proud
Sherry Johnson
Sherry Keeney
Sherry Pearson
Shirley McIntosh
Siri Hedstrom
Skott Gent
Skye Witherspoon
Spencer Veysey
Stacey Henderson
Stacey Riley
Stacie Johnson
Stacie Michel
Stan Hofbauer
Stan Peters
Stephen B. Jones
Stephen Friehlioh
Stephen Orcutt
Stephen Theriault
Steve Anderson
Steve Ballenger
Steve Burt
Steve C. Bengford
Steve Demoss
Steve Douglas
Steve Duke
Steve Edwards
Steve Elliott
Steve Flickinger
Steve Flynn
Steve Hanken
Steve Hanson
Steve Hoogestraat
Steve Horswell
Steve Hummel
Steve Leazer
Steve Meiners
Steve Melby
Steve Schmutde
Steve Scholten

Steve Veysey
Steven Anderson
Steven D. Lekwa
Steven Edwards
Steven J. Bosshart
Steven Lincoln
Steven Sinkler
Steven Stahl
Steven Thompson
Steven Witmer
Sue Albers
Sue Behrns
Sue Ekstrom
Sue Helgeland
Sue Johnson
Sue Langerud
Sue Ostert
Sunday Ford
Susan Burgess
Susan Carpenter
Susan Holderness
Susan Hughes
Susan Rubis
Susan Szczech
Susan Vance Hjelm
Susan West
Synda Jepsen
Tammi Kircher
Tammy Turner
Tawni Plath
Ted Petersen
Teresa Gnade
Terry Dooley
Terry Fox
Terry Heady
Terry Marker
Terry Murphy
Theresa Heidemann
Thomas Brown
Thomas Karlowski
Thomas Skadow
Tim Clark
Tim Dakken
Tim Hollett
Tim Kaldenberg
Tim Pickel

Tim Salven
Timothy Fay
Todd Reocker
Todd Robertson
Todd Tracy
Tom Comstock
Tom Griep
Tom Lane
Tom McCarthy
Tom McGreal
Tom McMurray
Tom Rodgers
Tom Roos
Tom Schueller
Tom Stinard
Tom Wind
Tonda Hadden
Tony D. Krukow
Tony Rothrock
Tracy Clausi
Travis Anderson
Travis Bebout
Zach Hingtgen

Travis Hoekstra
Travis Schluter
Trent Lambert
Trent Larson
Trent Michalski
Trisha Easton
Troy Kruse
Tyler Hill
Tyler John Buck
Tyler Ramstad
Tyler Uetz
Valerie Gerks
Vance Bauer
Vaughn Wassink
Verdell Johnson
Vern Fish
Vernon Nis Jr
Vicki Feldermn
Victoria Shamblen
Vincent Schmitz
Virginia Griesheimer
Virginia Soelberg

Walter Benson
Walter Maley
Wanda Engelby
Wayne Aukes
Wayne Hennessey
Wayne Rouse
Wayne Schneckloth
Wayne Wagoner
Wayne Wasta
Wayne Wickenkamp
WC Hamilton
Wes Gibbs
Will Emley
William Knight
William L. Brenny, O.D.
William Sutton
Willie Struss
Winding Creek
Wolfgang Oesterreich
Yolanda Bennett
Yvonne Krukow
Zac Wedemeyer