

**MINUTES
OF THE
ENVIRONMENTAL PROTECTION COMMISSION
MEETING**

July 18, 2017

**DNR Air Quality
7900 Hickman Road, Windsor Heights**

Approved by the Commission 9-18-17

RECORD COPY

File Name ADM1-1-1

Sender's Initials JZS

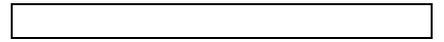


Table of Contents

Call to Order	1
Commissioners Present	1
Commissioners Absent	1
Adoption of Agenda.....	1
Approved as Presented.....	1
Oath of Office for New Commissioner	1
Monthly Reports.....	1
Information	1
Approval of Minutes.....	1
Approved as Presented.....	2
Public Comment	2
Directors Remarks	6
Information	6
eMMP Status Update and Demo of Online System	6
Information	6
Notice of Intended Action – Chapter 65 – Proposed Rule Amendment for Animal Feeding Operations.....	7
Approved as Presented.....	7
Contract Amendment with IDALS for Iowa Great Lakes Watershed Project	7
Approved as Presented.....	7
Derelict Building Grant Program – Grant Recommendations	7
Approved as Presented.....	7
Amended Notice of Intended Action: Ease of Application Rules - Chapter 22	7
Approved as Presented.....	7
The State of Iowa Public Drinking Water Program 2016 Annual Compliance Report.....	7
Information	7
General Discussion	8

Meeting Minutes

CALL TO ORDER

The meeting of the Environmental Protection Commission was called to order by Chairperson Chad Ingels at 10:00 a.m. on July 18, 2017 at the DNR Air Quality offices in Windsor Heights.

COMMISSIONERS PRESENT

- Mary Boote
- Nancy Couser
- Howard Hill
- Barbara Hovland
- Chad Ingels, Chair
- Ralph Lents, Vice Chair
- Joe Riding, Secretary
- Bob Sinclair

COMMISSIONERS ABSENT

- Rebecca Guinn

ADOPTION OF AGENDA

Motion was made by Bob Sinclair to approve the agenda as presented. Seconded by Joe Riding. Motion passes.

APPROVED AS PRESENTED

OATH OF OFFICE FOR NEW COMMISSIONER

Director Chuck Gipp swore in Barbara Hovland to the commission.

MONTHLY REPORTS

- Bill Ehm shared with the Commission the Department has had a reduction in work force. Previous cuts to the General Fund have been absorbed by vacancies and process efficiencies but this cut required reducing the number of staff. At this time, the Department does not anticipate a disruption of services to our customers.
- Bill Ehm shared with the Commission a recent press release promoting the SRF loan program with the impact of improving water quality through agriculture and urban storm water best management practices and improvements to wastewater facilities. Over time, the program has distributed almost \$2.5 billion around the state.

The monthly report(s) has been posted on the DNR website under the appropriate meeting month:

<http://www.iowadnr.gov/About-DNR/Boards-Commissions>

INFORMATION

APPROVAL OF MINUTES

Motion was made by Bob Sinclair to approve the June 20, 2017 EPC meeting minutes. Seconded by Ralph Lents. Motion passes.

APPROVED AS PRESENTED

PUBLIC COMMENT**Barb Kalbach – Iowa Citizens for Community Improvement**

Barb Kalbach presented to the Commission a formal petition for rulemaking to strengthen the master matrix which is 15 years old. The master matrix is little more than a rubber stamp. To pass the master matrix, only 50% of the points are required which in her standard is an F. Since the master matrix has been used, only 2% of master matrix applications have been denied while 98% have been approved. In 2007, the DNR analyzed the master matrix and found some items were always used and others never used. The master matrix is not working. Factory farmers are degrading the quality of life in Iowa. Rules let factory farms game the system to ruin the land, air, and water. Annually 22 billion gallons of manure are produced which go onto the ground and then into the water. Half of the waters in Iowa are impaired with E.coli which leads back to manure. We hear from DNR that the DNR's hands are tied and we need to go to the legislature. We have gone to the legislature and year after year the legislature does nothing but cut your budget. The legislature only acts to defund the DNR. We are giving the Commission an opportunity to give Iowans protection from factory farms. Changing the master matrix is something you can do without the legislature.

Debbie Bunka – Iowa Citizens for Community Improvement

Debbie Bunka shared with the Commission there are many reasons to rethink and redraw the master matrix with just a few being the lack of leadership, degradation of Iowa's natural resources, and lack of local control. ICCI has been listening to people and have submitted a petition for rulemaking for the following requests: (1) Higher minimum passing score to receive a construction permit; (2) One time enrollment of the Construction Evaluation Resolution instead of the current burdensome annual submission; (3) Revisions to the matrix to incentivize, prevent, or minimize pollution; (4) Add in factors undressed by master matrix like karst land; (5) Elimination of criteria that do not have meaningful community or environmental impact; (6) Increase separation distances. Corporate food structures don't align with our beliefs. Understanding our values and beliefs will transform Ag and food production systems to achieve change but we must be an engaged and passionate citizenry. We submit this rulemaking petition and empower you to listen to the voice of the people.

Nick Schutt – Iowa Citizens for Community Improvement

Nick Schutt believes Iowa used to be a great place to raise a family with fresh air, crisp water, and peace and quiet. We had clean clothes on the line and open windows in our home. But now the quality of life stinks with factory farms. He is unable to open his bedroom window for he hears and smells cows. Corporate greed has stolen our life in Iowa. Over 10,000 factory farms produce 22 billion gallons of manure each year that gets applied to the land and runs into water. There have been a record number of impaired waters and closed beaches. Big Ag is doing just fine meanwhile the DNR is eliminating staff that could oversee factory farms and closing state parks. Iowa can't handle more factory farms. We allow factory farms to expand without protection to Iowans. He asked the Commission to strengthen the master matrix.

Judy Lenniss – Iowa Citizens for Community Improvement

Judy Lenniss believes the role of the DNR is to lead Iowans to care for the natural resources. She used to go to Okoboji but now her family goes to Minnesota to fish. Minnesota does a great job with water quality protection and Iowa does not. Dickinson County has been spending money to protect the lake and waterways from invasive species which also improves the recreation and local economy. Strengthening the master matrix would also benefit the economy.

Paula Egen – Iowa Citizens for Community Improvement

Paula Egan thanked the Commission for listening and considering our opinions. She shared she is a transplant from California to Iowa. She comes from a community with a land trust organization that holds the sacred duty to preserve the land. The land trust promotes Ag practices that are organic and sustainable in which people want to feed their families. Californians pride themselves on their happy cows and happy pigs on the hillsides. When she moved to Iowa, the master matrix seemed like a science fiction novel. It is up to you to assist us as citizens being poisoned by big Ag.

Jan McGinns – Iowa Citizens for Community Improvement

Jan McGinns wouldn't have believed a few years ago she would have read so many books on agriculture. We are not doing good for Iowa. She teaches adolescents and they are reading about a dystopian culture after the dissolving of the United States. They don't believe their government works for them. What they see in Iowa is row after row of corn and topsoil being washed down the river to the dead zone in the Gulf of Mexico. Iowa was the greatest natural resource in the world 250 years ago. We need to move towards more diverse crops, fewer pesticides, keeping our rivers clean and aquifers replenished - not a future of oppressive government and starvation.

Tyler Bettin – Iowa Pork Association

Tyler Bettin thanked the Commissioners for their service. Iowa Pork Producers support agenda item #6, proposed rules providing options for a producer to submit a Manure Management Plan (MMP) in both paper format and electronically. The electronic option provides additional efficiencies for farmers, DNR, and county staff. The electronic option will provide accurate fee calculations and secure payment along with streamlined information provided directly to counties. The master matrix increases the standards for larger farms in Iowa. The master matrix is an effective tool for county input and consistency across Iowa.

Shari Hawk – Iowa Citizens for Community Improvement

Shari Hawk read in the paper an article by Ray Esser, past Soybean Association President, in which he talked about Iowa farmers being sustainable providers of food. She thought about it and believes Iowa's farms are far from sustainable. With over 750 polluted waterways, over 10,000 factory farms, 22 billion gallons of manure created each year, 800 manure spills, record breaking beach advisories, and 430 new confinements approved each year, that is not sustainable. Iowa's agricultural system is not sustainable. She asked the Commission to do this little thing within their power to strengthen the master matrix.

Mike Carberry – Iowa Citizens for Community Improvement

Mike Carberry thanked the Commissioners for their service and shared he is a County Supervisor for Johnson County. He grew up in small Benton County where his dad was a large animal vet. He has castrated thousands of pigs in his lifetime and used to go skinny dipping in local creeks, lakes, and ponds. But he can't do that anymore because of how we raise meat. He has been an environmental advocate for 15 years before he became a County Supervisor where he fought for clean water and clean agriculture. He has been on a number of river cleanup events and a day or so after the event, he would be sick because of the unclean water. The way we are raising animals just is not right. Johnson County Supervisors sent a letter last year requesting the master matrix be fixed and counties have more local control. Only 2.2% of confinement applications don't pass and the producer gets to score the master matrix themselves which just isn't right. He is tasked with protecting the citizens of his county and DNR's mission is to protect and conserve. He asked the Commission to help the DNR do their job so he can do his.

Mary Ann Koch – Iowa Citizens for Community Improvement

Mary Ann Koch shared with the Commission the water crisis we are in because water is life. We may have water in Iowa but it is polluted and dangerous. It is not the life giving water we need. We ask for you to live up to your slogan to lead Iowans in caring for its natural resources. Even though there is all this money

going to help water, she believes a stitch in time saves nine. She believes in preventing the pollution rather than repairing water that has been polluted. Water is life and we need quality water to be safe for drinking.

Ana Garst – Iowa Citizens for Community Improvement

Ana Garst shared with the Commission her neighbors tried to establish a CAFO near their home. Her family scared them away but her family always lives in fear they will try to build a CAFO next to their home. She asked the Commission to support the petition being presented.

Kelli Mennen – Iowa Citizens for Community Improvement

Kelli Mennen shared with the Commission her parents live on a small farm in northeast Iowa which looks very different now compared to when she grew up. All the small towns are surrounded by factory farms. She has to worry about her daughter when she visits nana and papa because factory farms have been built all around their home. She wants the master matrix to consider local topography like karst soils when manure is applied to this soil. With karst, there is limited filtration to the water supply. Her family can no longer drink the water from the family well. She asked the Commission to protect the natural resources for future generations. As a teacher, if she passed her students with a 50% score, they wouldn't be able to read or write.

Sharon Johnson – Iowa Citizens for Community Improvement

Sharon Johnson shared with the Commission she was born and lived her entire life in Iowa. She used to be proud to be an Iowan but now she is not because Iowa is number one in the country for polluted waterways. The master matrix was created 15 years ago and it has done nothing to stop factory farms from polluting communities and the environment. Environmental knowledge and efforts have been cast aside and ignored by our legislators to a point that now we are in crisis. We have a water crisis and can't wait any longer. She asked for the factory farm application process to be changed.

Chris Gruenhagen – Iowa Farm Bureau

Chris Gruenhagen shared with the Commission how she grew up on a livestock and crop farm which will receive the Century Farm designation this year. Farm Bureau supports the proposed AFO rulemaking which will provide options to file manure management plans (mmp) and fees annually. She thanked the DNR for their time developing the project and web application. The master matrix was developed in a public process by a diverse group of hard working people from the universities, government, and associations and was overseen by a federal mediator. The master matrix also went through the rulemaking process which included public comments. Farm Bureau didn't support everything in the master matrix but that is the nature of compromise. Commissioners have heard one perspective of issues which were also raised during the creation of the master matrix.

Maggie Rawland – Iowa Citizens for Community Improvement

Maggie Rawland believes environmentalists have been discounted for years which has resulted in degradation to our air, land, and water. The master matrix was supposed to protect communities from factory farm polluters but instead it rubber stamps approval with no regard to the impact. Iowans deserve better. It is up to the DNR to take their role seriously to protect the environment.

Dianne Siasoco – Iowa Citizens for Community Improvement

Diane Siasoco stated factory farm pollution is affecting her and Iowans. Her pregnant friends don't trust to drink the water. They are paying for and installing personal filtration systems. She asked the Commission to support the ICCI petition to strengthen the master matrix because water is life.

Joe Fagan – Iowa Citizens for Community Improvement

Joe Fagan shared with the Commission the master matrix was set up so locals can have a voice but that is a facade. The master matrix is set up to do little for locals to have any say at all. He used to live in Allamakee County where the streams used to be clean and clear and you could see to the bottom. He is sure if he would go back now, he would not be able to see the bottom of the stream because factory farms have been built. He asked the Commission to take the petition seriously for locals to have some say. He asked the Commission to take clean water seriously because everyone in the world is saying it.

Vern Tigges – Iowa Citizens for Community Improvement

Vern Tigges shared with the Commission he lives in Adel County along the Raccoon River. Bill Ehm mentioned the efficiencies developed to get permits out quicker and now Iowa is saturated with livestock confinements. He believes Iowa doesn't have a whole lot more hogs than we used to but now they are just more concentrated. Just got back from Europe where their agriculture is pristine. The confinements don't pump manure straight out of the pit and apply it to the land. They process the manure and then spread it as fertilizer year round. He asked the Commission to not make his granddaughter have to fight for clean water.

Jess Mazour – Iowa Citizens for Community Improvement

Jess Mazour listened to the Pork Producers and Farm Bureau but she wanted to talk to the Commission about reality. Farm Bureau and the Pork Producers don't want to change the master matrix because they are making money the way it is. They don't want to change because they will have to fix it at the source. Iowans are sick of the smell, water quality crisis, dead hog in dumpsters, higher water bills, and roads being destroyed from factory farm operations. We came to the EPC protesting the construction of a factory farm next to a resident with COPD. The Commission approved the construction and then he died. Allamakee County fought back and denied the construction of a factory farm next to a trout stream but the EPC approved it. A family with a child who has muscular dystrophy now can't do his exercises in the pool because of a factory farm the EPC approved. The EPC has approved rules to allow manure to be spread on snow covered and frozen ground. The EPC approved rules to allow manure to be applied to soybeans which don't need manure because they produce their own nitrogen. All these examples show how the EPC works for the factory farm industry. She asked the Commission to work with ICCI rather than against them for clean water.

Brenda Brink – Iowa Citizens for Community Improvement

Brenda Brink proposed to get rid of our labels. Democrat or Republican, life-long Iowan or new citizen, or urban or rural, it doesn't matter because we all need clean water and a healthy environment. But instead, we are suffering. The master matrix was supposed to protect us and the water but it has not. We need more local control of factory farms. The only protection is the master matrix but it is 15 years old and doesn't address property values, quality of life, and livelihoods. The EPC is to protect the people and environment but it has been catering to the industry with out of state owners who benefit. You call them stakeholders and they have the ear of the DNR. They get the first shot at writing the rules they are supposed to follow. She has to put up with the smell next to her home during manure application but also dead hogs rotting and attracting flies. She feels the stakeholders have been misidentified.

Jane Lee – Iowa Cattlemen's Association

Jane Lee on behalf of the members of the Cattlemen's Association thanked the Commissioners for their work. The association supports the proposed AFO rules allowing electronic submission of the MMP updates and fees. The proposal makes sense to streamline the process for the Iowa DNR and producers. The association also supports the master matrix. The current state of the master matrix raises the standards for counties to work with producers and communities.

Erica Blair – Iowa Citizens for Community Improvement

Erica Blair stated that ICCI has officially filed the master matrix petition. The DNR and EPC no longer are able to tell us their hands are tied. The ball is now in your court. Iowans are suffering as heard through the stories shared. ICCI went around the state to talk with the real stakeholders, Iowans living next to factory farms. They asked if the master matrix was working for them and they heard a consistent answer of no. ICCI wants the master matrix to hold factory farms to higher standards. Every single application is rubber stamped approved and doesn't consider water contaminated or karst soils. It also doesn't work for county supervisors as evidenced by thirteen counties who have rallied together calling for strengthening the master matrix. The industry doesn't want the master matrix to change because it benefits the industry. Factory farms are an industry and need regulated like any other industry. The legislature hasn't done anything except cut the DNR's budget. Iowans deserve more by changing the master matrix, more local control, and a moratorium on new or expanding facilities until we have clean water.

- No written comments were submitted.

END OF PUBLIC COMMENT

DIRECTORS REMARKS

Director Gipp shared with the Commission the Iowa Finance Authority partners with the DNR to run the State Revolving Loan Fund. Over the years, 78 million dollars has been distributed to assist communities with upgrading their wastewater facilities. Many of these facilities were built when Eisenhower was President and need to be improved to properly treat wastewater before it reaches a stream.

Director Gipp acknowledged the ICCI petition has been delivered to the DNR. The Department will review the petition and determine what can be done through administrative rule or the legislature. The Department will have 60 days to provide a recommendation to the EPC for a decision.

Director Gipp distributed a handout regarding the Department budget. Team members were laid off because a lack of funds and not based on their performance. The Department uses general fund money for state parks, federal match, and forestry. Federal match money allows for the state to obtain funds to run the environmental programs. The Department has reduced the number of employees over the past few years by not filling approximately 90 vacancies. The Department is fortunate to have quality employees who are still able to issue permits timely. The Department's loss of funds was not due to lack of funds but rather a shift of funds from the DNR to other agencies along with the DNR absorbing the annual employee salary increase for 8 years in a row which is about a 20% reduction in funds. Services will be diminished because one cannot keep eliminating positions without an impact.

INFORMATION

EMMP STATUS UPDATE AND DEMO OF ONLINE SYSTEM

Ted Petersen from the DNR Field Office provided the Commissioners with a summary of the project of adding an option for producers to submit the annual Manure Management Plan (MMP) update electronically. Kim Breese from the DNR Information Technology team provided a live demonstration of the draft test website. She demonstrated how the system would work for the producer with a secure log in, electronic payments, and adding additional authorized users. She answered questions of the Commission related to security of the website and how information would be displayed for the public. Currently, testing of the system is being conducted by producers. From their feedback, improvements will be made. Through the fall, communication and training will be provided with an anticipated roll out for producer use by the end of the calendar year.

INFORMATION

NOTICE OF INTENDED ACTION – CHAPTER 65 – PROPOSED RULE AMENDMENT FOR ANIMAL FEEDING OPERATIONS

Kelli Book presented to the Commission a proposed rulemaking to begin the process of collecting formal comments for accepting electronic submissions of Manure Management Plans and the electronic fees associated with them.

Motion was made by Joe Riding to approve the agenda item as presented. Seconded by Howard Hill. Motion passes.

APPROVED AS PRESENTED

CONTRACT AMENDMENT WITH IDALS FOR IOWA GREAT LAKES WATERSHED PROJECT

Steven Konrady presented for the Commission’s approval a contract for watershed improvement projects in the Iowa Great Lakes.

Motion was made by Ralph Lents to approve the agenda item as presented. Seconded by Nancy Couser. Motion passes.

APPROVED AS PRESENTED

DERELICT BUILDING GRANT PROGRAM – GRANT RECOMMENDATIONS

Scott Flagg presented for the Commission's approval grant recommendations for the Derelict Building program. He also summarized the program’s funding mechanism, selection process, and provided photos of the projects.

Motion was made by Howard Hill to approve the agenda item as presented. Seconded by Joe Riding. Motion passes.

APPROVED AS PRESENTED

AMENDED NOTICE OF INTENDED ACTION: EASE OF APPLICATION RULES - CHAPTER 22

Christine Paulson presented to the Commission proposed rules to amend Air Quality applications.

Motion was made by Bob Sinclair to approve the agenda item as presented. Seconded by Nancy Couser. Motion passes.

APPROVED AS PRESENTED

THE STATE OF IOWA PUBLIC DRINKING WATER PROGRAM 2016 ANNUAL COMPLIANCE REPORT

Diane Moles presented to the Commission a summary of the annual report. She was honored to continue to say that Iowa has not had any deaths occur from drinking public water. Not all states can say the same. Compliance is the highest goal of this program.

INFORMATION

GENERAL DISCUSSION

- Jerah Sheets provided an update to the Commission meeting schedule. The August EPC tour and meeting have been moved to September 18 and 19 in Adams County. The August business meeting will be held in Windsor Heights.
- Nancy Couser shared her experience when working with properly applied manure and the benefits to soil health and plants.
- The Department summarized the process for reviewing a petition for rulemaking. Unless an extension is granted by the petitioner, a decision by the Commission is required within 60 days.
- Joe Riding shared he was approached by Perry Windle of Twin Valley Lakes water supply to make a formal presentation to the Commission. The Commission directed the DNR to continue working with the association regarding their concerns.

Chairperson Ingels adjourned the Environmental Protection Commission meeting at 12:50 p.m., Tuesday, July 18, 2017.

IOWA DEPARTMENT OF NATURAL RESOURCES

Petition by Iowa Citizens for Community Improvement and Food & Water Watch for the amendment of rules relating to the master matrix for confinement feeding operations and amendment of the master matrix.	PETITION FOR RULE MAKING
--	-----------------------------

Iowa Citizens for Community Improvement and Food & Water Watch (Petitioners) present this petition for rulemaking pursuant to Iowa Code section 17A.3, 567 IAC 5.1, and the Uniform Rules on Agency Procedure. The petition requests that the Department of Natural Resources (Department or DNR) promulgate revised regulations for the so-called “master matrix” that will create a more effective process for involving county boards of supervisors in the permitting of new and expanding confinement feeding operations (CFOs). The standards requested in this petition are largely based on data demonstrating that the current master matrix regime has failed to accomplish what the legislature intended. It utterly fails to provide either local control by assuring a meaningful degree of county involvement in the approval of new or expanded CFOs, or adequate protection of communities and natural resources from the adverse impacts of these facilities. The petition thus requests that the Department revise its master matrix regulations and the master matrix itself, as described herein, to better address existing needs and to reflect the original intent of the Iowa Legislature when it enacted the master matrix legislation, Senate Bill 2293, in 2002.

I. Relevant Law

The Iowa Legislature has tasked DNR with adopting regulations, pursuant to Iowa Code chapter 17A,¹ for the development and use of a master matrix tool for county boards of supervisors to use to evaluate applications for new and expanding CFOs. Iowa Code section 459.305(1) states:

The department shall adopt rules for the development and use of a master matrix. The purpose of the master matrix is to provide a comprehensive assessment mechanism in order to produce a statistically verifiable basis for determining whether to approve or disapprove an application for the

¹ 2002 Iowa Legis. Serv. Ch. 1137 § 62(3) (West).

construction, including expansion, of a confinement feeding operation structure requiring a permit pursuant to section 459.303.

Iowa Code section 459.305(1)(a) requires that the master matrix be used to determine the appropriate location for and design concerning a proposed CFO structure. Iowa Code section 459.305(1)(b) requires DNR to design the master matrix as follows:

The master matrix shall be designed to produce quantifiable results based on the scoring of objective criteria according to an established value scale. Each criterion shall be assigned points corresponding to the value scale. The master matrix shall consider risks and factors mitigating risks if the confinement feeding operation structure were constructed according to the application.

Iowa Code section 459.305(1)(c) states that the master matrix “must be a practical tool” including “criteria presented in the form of questions that may be readily scored according to ascertainable data and upon which reasonable persons familiar with the location of a proposed construction site would not ordinarily disagree.”

Iowa Code section 459.305(2) specifies that the master matrix must “include criteria valuing environmental and community impacts for use by county boards of supervisors and the department.” Further, “[c]riteria valuing environmental impacts shall account for animal agriculture’s relationship to quality of the environment and the conservation of natural resources.” Factors DNR may consider in establishing these criteria include: topography, surface water drainage characteristics, suitability of the soils and hydrology or hydrogeology of the site, proximity to public use areas and critical public areas, and proximity to water sources, including high-quality water resources. *Id.*

Iowa Code section 459.304 sets out a framework for county use of the master matrix, in pertinent part, as follows:

A county board of supervisors may adopt a construction evaluation resolution relating to the construction of a confinement feeding operation structure. The board must submit such resolution to the department for filing. If the board has submitted such resolution to the department, the board may evaluate the construction permit application and submit an adopted recommendation to the department to approve or disapprove a construction permit application as provided in this subsection. The board must make its decision to recommend approval or disapproval of the permit application as provided in this subsection.

Iowa Code § 459.304(3). When conducting an evaluation, a board must “us[e] the master matrix as provided in section 459.305.” Iowa Code § 459.304(3)(b). The board must score all master matrix criteria and provide a recommendation on the application to the DNR, with an explanation for the recommendation and any supporting documentation. Iowa Code § 459.304(3)(c)–(d).

II. Summary of Argument in Support of the Proposed Rule

Pollutants emitted from CFOs are responsible for significant adverse environmental and community impacts throughout Iowa, and, as the number of CFOs in the state has skyrocketed since the promulgation of the original master matrix regime, the scale of these impacts has also increased. When the General Assembly passed the Master matrix legislation in 2002, DNR’s database indicates that, in Iowa, there were approximately 1,000 CFOs with more than 1000 animal units. Today, only fifteen years later, there are more than 3,000 CFOs of that size in the state, not including more than 5,000 operations of unknown size that are completely unaccounted for in the state’s database. There are also more than 800 identified water quality impairments in the state, and the vast majority of which impairments are caused by pollutants and conditions associated with animal waste, such as *E. coli* bacteria, excessive algal growth, and diminished aquatic life.

In passing the original Master matrix legislation, the General Assembly intended to facilitate local government involvement in the permitting of new and expanded CFOs, and to ensure that CFOs would only receive construction permits if they could demonstrate that they would not adversely affect the local community or water quality. The master matrix and DNR’s regulations to implement the statute have failed to meet these legislative goals.

Rather, the DNR’s administrative regulations have imposed unnecessary burdens on county boards of supervisors by requiring them to enroll in the master matrix process every year, rather than only once. The master matrix regulations are so lax that they have amounted to little more than a rubber stamp and paper-pushing administrative burden on county boards. CFOs must only obtain fifty percent of possible points in the master matrix, and many of those points are awarded for practices that are nearly universal and are not significantly protective of local water quality, air quality, or other specific community concerns. As a result, the master matrix provides little or no protection for the very assets that were the focus of the original legislation: passage rates for CFO applicants are nearly one hundred percent.

The proposed rules are written to achieve intended goals of the original master matrix legislation of fifteen years ago. Its provisions are drafted in alignment with the results of DNR surveys of master matrix implementation and input provided by elected county boards of supervisors who have experience in implementing the existing DNR regulations. The proposed rules take carefully into account input from citizens who have experienced how the master matrix has been implemented in their communities and who have participated in a series of eight meetings on the topic in early 2017. The anecdotal county and citizen input often mirrored the findings derived from DNR's analysis of past master matrix applications, lending further support to the priority changes proposed in this Petition. The Petition proposes that the DNR revise its master matrix regulations to require only a one-time county adoption of a construction evaluation resolution, rather than an annual adoption resolution. It also proposes to reduce other burdens on county boards of supervisors and to revise the master matrix appeal process. The Petition further proposes that the DNR adopt a new master matrix scoring system that requires higher total points for passage and a higher percentage of points in each point category. It further proposes to combine certain master matrix criteria that are duplicative, revise or clarify certain criteria, eliminate certain criteria, and add criteria that address factors not addressed in the existing master matrix. The Petitioners believe that these changes will allow the public to achieve the original intended purposes of the master matrix legislation.

A brief in support of the proposed rules is attached.

III. Summary of Data in Support of the Proposed Rule

In 2007–2008, DNR conducted an analysis of more than 200 master matrices submitted to the agency since the master matrix regime was established in 2002. In a report issued concerning its analysis, the DNR described a breakdown of the points claimed, by criterion. The reported analysis provides one underlying basis for the proposed rules, and it is attached as Enclosure B. The DNR has also provided analysis and review of the state's CFO inventory and regulatory status through the annual Work Plan Reports created pursuant to its Work Plan Agreement with U.S. Environmental Protection Agency (EPA). The most recent Annual Report provides an additional basis for the proposed rules, and is attached as Enclosure C. DNR has issued its proposed 2016 303(d) list of Iowa's impaired waters, which lists waters impaired due to pollutants and conditions that are often associated with animal waste. The draft 303(d) list has also informed the proposed rules, and is attached as Enclosure D. Thirteen county boards of supervisors have recently adopted resolutions or sent letters to the legislature, seeking policy changes such as greater local control of CFOs, a stronger master matrix, and a moratorium on approvals of the construction of new confinement operations. These

resolutions and letters are attached as Enclosure E. Animal waste includes nitrates. The state's most recent rural well groundwater quality survey and two most recent public water supply well groundwater summaries show widespread nitrate contamination throughout Iowa's public and private wells, and are attached as Enclosures F, G, and H. The DNR maintains a spreadsheet of manure spills from livestock operations that reach waterways, and the most recent version as of July 2017 is attached as Enclosure I. In 2008, the Iowa Policy Project analyzed problems with the state's CFO approval process in its report "Permitting Pigs," which provides additional data in support of the proposed rules and is attached as Enclosure J. Finally, DNR maintains two databases that informed this Petition: the Animal Feeding Operations Database and the Hazardous Materials Release Database. Both are available via the DNR website and are not enclosed.

IV. Text of the Proposed Rule

Revise as following subrule 567 IAC 65.10(3) "a":

(a) Enrollment periods.

(1) The county board of supervisors must file an adopted construction evaluation resolution with the department ~~between January 1 and January 31 of each year to evaluate construction permit applications received by the department between February 1 of that year and January 31 of the following year.~~

(2) Filed construction evaluation resolutions shall remain in effect ~~until the applicable enrollment period expires or~~ until such time as the county board of supervisors files with the department a resolution rescinding the construction evaluation resolution, ~~whichever is earlier.~~

(3) Filing of an adopted construction evaluation resolution requires a county board of supervisors to conduct an evaluation of a construction permit application using the master matrix. ~~However, if the board fails to submit an adopted recommendation to the department or fails to comply with the evaluation requirements in paragraph 65.10(3) "b,"~~ the department shall send the board a warning letter explaining the board's obligations to conduct a master matrix evaluation of every construction permit application and to comply with the evaluation requirements in paragraph 65.10(3) "b," and offering to provide the board with a department training on how to conduct an evaluation using the master matrix. If the board fails to submit an adopted recommendation to the department or fails to comply with the evaluation requirements a second time, the department shall send the board a second warning letter explaining the board's obligations and offering a master matrix training. If the board fails to submit an adopted recommendation to the department or fails to comply with the evaluation requirements a third time, the department shall disregard any adopted recommendation from that board until the board ~~timely~~ submits a new construction evaluation resolution.

Revise as following subrule 567 IAC 65.10(3) “b”:

(b) Use of the master matrix. If a county board of supervisors has adopted and filed with the department a construction evaluation resolution, as provided in paragraph 65.10(3) “a,” the board shall evaluate all construction permit applications ~~filed during the applicable period~~ using the master matrix as follows:

Revise as following subrule 567 IAC 65.10(4):

(4) Inspection of proposed construction site. The department may conduct an inspection of the site on which construction of the confinement feeding operation is proposed after providing a minimum of 24 hours’ notice to the construction permit applicant or sooner with the consent of the applicant. If the county in which the proposed facility is located has adopted and submitted a construction evaluation resolution pursuant to subrule 65.10(3) ~~and has not failed subsequently to submit an adopted recommendation,~~ the county may designate a county employee to accompany a department official during the site inspection. In such cases, the department shall notify the county board of supervisors or county designee at least three days prior to conducting an inspection of the site where construction of the confinement feeding operation is proposed. The county designee shall have the same right to access to the site’s real estate on which construction of the confinement feeding operation is proposed as the departmental official conducting the inspection during the period that the county designee accompanies the department official. The departmental official and the county designee shall comply with standard biosecurity requirements customarily required by the owner of the confinement feeding operation that are necessary in order to control the spread of disease among an animal population.

Revise as following the master matrix:

1. Revise the 1st criterion as follows:

Additional separation distance, above minimum requirements, from proposed confinement structure to the closest:

- Residence not owned by the owner of the confinement feeding operation,
- Hospital,
- Nursing home, or
- Licensed or registered child care facility,
- Educational institution,
- Religion institution, or

- Commercial enterprise.

	Score	Air	Water	Community
250 feet to 500 feet	25	16.25		8.75
501 feet to 750 feet	45	29.25		17.50
751,001 feet to 1,000,250 feet	65 <u>20</u>	42.25 <u>12</u>		22.75 <u>8</u>
1,001,251 feet to 1,250,500 feet	85 <u>25</u>	55.25 <u>15</u>		29.75 <u>10</u>
1,251,501 feet or more	100 <u>30</u>	65.00 <u>18</u>		35.00 <u>12</u>

2. Revise the 2nd criterion as follows:

Additional separation distance, above minimum requirements, from proposed confinement structure to the closest public use area.

Replace existing separation distances with new, increased separation distances to be established by the Department. The Department will analyze a statistically significant and geographically representative sample of past Matrix applications and establish three new separation distance ranges that would each have been achieved by approximately 15% of past applicants.

	Score	Air	Water	Community
250 feet to 500 feet	5	2.00		3.00
501 feet to 750 feet	10	4.00		6.00
751 feet to 1,000 feet	15	6.00		9.00
1,001 feet to 1,250 feet	20	8.00		12.00
1,251 feet to 1,500 feet	25	10.00		15.00
1,501 feet or more	30	12.00		18.00
<u>Increased separation distance to be determined by the Department</u>	<u>5</u>	<u>2</u>		<u>3</u>
<u>Increased separation distance to be determined by the Department</u>	<u>10</u>	<u>4</u>		<u>6</u>
<u>Increased separation distance to be determined by the Department</u>	<u>15</u>	<u>7</u>		<u>8</u>

3. Eliminate the 3rd criterion.
4. Eliminate the 4th criterion.
5. Revise the 5th criterion as follows:

Separation distance of ~~300~~500 feet or more from the proposed confinement structure to the nearest thoroughfare.

	Score	Air	Water	Community
300 <u>500</u> feet or more	30 <u>5</u>	9.00 <u>2</u>		21.00 <u>3</u>

6. Eliminate the 6th criterion.

7. Revise the 7th criterion as follows:

Applicant has taken measures to protect private and public water wells from the proposed confinement structure.

	Score	Air	Water	Community
Two <u>Three</u> times the minimum separation distance from all private and public water wells and documentation that the confinement structure is not on karst terrain.	30 <u>10</u>		24.00 <u>8</u>	6.00 <u>2</u>

8. Revise the 8th criterion as follows:

Additional separation distance, above the minimum applicable requirement of ~~1,000~~ feet, from proposed confinement structure to the closest designated area, karst terrain, surface tile inlet, terrace tile inlet, or wetlands.:

- ~~Agricultural drainage well,~~
- ~~Known sinkhole, or~~
- ~~Major water source.~~

Replace existing separation distances with new, increased separation distances to be established by the Department. The Department will analyze a statistically significant and geographically representative sample of past Matrix applications and establish three new separation distance ranges that would each have been achieved by approximately 15% of past applicants.

	Score	Air	Water	Community
250 feet to 500 feet	5	0.50	2.50	2.00
501 feet to 750 feet	10	1.00	5.00	4.00
751 feet to 1,000 feet	15	1.50	7.50	6.00
1,001 feet to 1,250 feet	20	2.00	10.00	8.00

1,251 feet to 1,500 feet	25	2.50	12.50	10.00
1,501 feet to 1,750 feet	30	3.00	15.00	12.00
1,751 feet to 2,000 feet	35	3.50	17.50	14.00
2,001 feet to 2,250 feet	40	4.00	20.00	16.00
2,251 feet to 2,500 feet	45	4.50	22.50	18.00
2,501 feet or more	50	5.00	25.00	20.00
<u>Increased separation distance to be determined by the Department</u>	<u>10</u>		<u>8</u>	<u>2</u>
<u>Increased separation distance to be determined by the Department</u>	<u>15</u>		<u>11</u>	<u>4</u>
<u>Increased separation distance to be determined by the Department</u>	<u>20</u>		<u>14</u>	<u>6</u>

(A) The department will award points only for the single item, of the three listed above, that is closest to the proposed confinement feeding operation.

(B) ~~“Agricultural drainage wells” include surface intakes, cisterns and wellheads of agricultural drainage wells.~~ “Designated area” means a known sinkhole, abandoned well, unplugged agricultural drainage well, agricultural drainage well cistern, agricultural drainage well surface tile inlet, drinking water well, designated wetland, or water source. “Designated area” does not include a terrace tile inlet or surface tile inlet other than an agricultural drainage well surface tile inlet.

(C) ~~“Major water source” a lake, reservoir, river or stream located within the territorial limits of the state, or any marginal river area adjacent to the state which can support a floating vessel capable of carrying one or more persons during a total of a six-month period in one out of ten years, excluding periods of flooding. Major water sources in the state are listed in Tables 1 and 2 in 567—Chapter 65.~~ “Karst terrain” means land having karst formations that exhibit surface and subterranean features of a type produced by the dissolution of limestone, dolomite, or other soluble rock and characterized by closed depressions, sinkholes, or caves. If a 25-foot vertical separation distance can be maintained between the bottom of an unformed manure storage structure and limestone, dolomite, or other soluble rock, then the structure is not considered to be in karst terrain.

(D) “Wetlands” means an area of two or more acres in a natural condition that is mostly under water or waterlogged during the spring growing season and is characterized by vegetation of hydric soils.

9. Revise the 9th criterion as follows:

Distance between the proposed confinement structure and the nearest confinement facility that has a submitted department manure management plan.

	Score	Air	Water	Community
Three-quarter of a mile or more (3,960 feet) <u>More than one mile</u>	25 <u>10</u>	7.5 <u>03</u>	7.5 <u>02</u>	10.0 <u>05</u>

10. Revise the 10th criterion as follows:

Separation distance from proposed confinement structure to closest:

- High quality (HQ) waters,
- High quality resource (HQR) waters, ~~or~~
- Protected water areas (PWA), or
- Waters listed on Iowa's most current final 303(d) list due to impairment by pollutants or conditions that may be associated with animal waste

~~is at least two times the minimum required separation distance.~~

	Score	Air	Water	Community
Two times the minimum separation distance <u>Increased separation distance to be determined by the Department</u>	30 <u>15</u>		22.5 <u>012</u>	7.5 <u>03</u>

Replace existing separation distance with new, increased separation distance to be established by the Department. The Department will analyze a statistically significant and geographically representative sample of past Matrix applications and establish a new separation distance that would have been achieved by approximately 45% of past applicants, considering only HQ waters, HQR waters, and PWAs.

11. No change proposed to the 11th criterion.

12. Revise the 12th criterion as follows:

Liquid manure storage structure is covered.

	Score	Air	Water	Community
Covered liquid manure storage	30 <u>5</u>	27.0 <u>04</u>		3.0 <u>01</u>

13. No change proposed to the 13th criterion.

14. Revise the 14th criterion as follows:

Installation and use of a biofilter(s) designed to reduce odors from confinement building(s) exhaust fan(s).

	Score	Air	Water	Community
Installation and use of biofilter(s)	<u>1020</u>	<u>8.0015</u>		<u>2.005</u>

15. Revise the 15th criterion as follows:

Utilization of landscaping around confinement structure.

	Score	Air	Water	Community
Utilization of landscaping	<u>2010</u>	<u>10.005</u>		<u>10.005</u>

16. Revise the 16th criterion as follows:

Enhancement, above minimum requirements, of structures used in stockpiling and composting activities, ~~such as including~~ an impermeable pad and cover.

<u>Stockpile and compost facility enhancements</u>	Score	Air	Water	Community
Stockpile and compost facility enhancements	30	9.00	18.00	3.00
<u>Use of impermeable pad and roof or cover for all stockpiles and compost piles</u>	<u>15</u>	<u>2</u>	<u>10</u>	<u>3</u>

(A) The design, operation and maintenance plan for the stockpile ~~or~~ and compost structure enhancements must be in the construction permit application and made a condition in the approved construction permit.

(B) The stockpile ~~or~~ and compost structures must be located on land adjacent or contiguous to the confinement building.

17. Revise the 17th criterion as follows:

Proposed manure storage structure is formed.

	Score	Air	Water	Community
Formed manure storage structure	<u>305</u>		<u>27.004</u>	<u>3.001</u>

18. No change proposed to the 18th criterion.

19. Eliminate the 19th criterion.

20. Revise the 20th criterion as follows:

Construction permit applicant's and their contractor's animal feeding operation environmental and worker protection violation history for the last five ten years at all facilities in which the applicant has an interest, facilities with which the applicant has a relationship via membership in a Limited Liability Company, or facilities in which the contractor has a relationship via a production contract.

	Score	Air	Water	Community
No history of Administrative Orders <u>or</u> <u>Notices of Violation in last fiveten</u> years	<u>30</u> 10			<u>30.00</u> 10

(A) "Interest" – means ownership of a confinement feeding operation as a sole proprietor or a 10 percent or more ownership interest held by a person in a confinement feeding operation as a joint tenant, tenant in common, shareholder, partner, member, beneficiary or other equity interest holder. Ownership interest is an interest when it is held either directly, indirectly through a spouse or dependant child, or both.

(B) "Contractor" means a person who owns a commodity at the time that the commodity is under the authority of the contract producer as provided in Iowa Code chapter 579B.3 pursuant to a production contract executed pursuant to Iowa Code chapter 579B.2.

(C) "Production contract" means an oral or written agreement executed pursuant to Iowa Code chapter 579B.2 that provides for the production of a commodity by a contract producer.

(D) "Limited Liability Company" means an entity formed under Iowa Code chapter 489.

(E) "Member" means a person that has become a member of a limited liability company under Iowa Code § 489.401 and has not dissociated under Iowa Code § 489.602.

(F) An environmental violation is a Notice of Violation (NOV) or a final Administrative Order (AO) from the department of natural resources or final court ruling against the construction permit applicant or other interest holder for environmental violations related to an animal feeding operation. A Notice of Violation (NOV) does not constitute a violation.

21. Revise the 21st criterion as follows:

Construction permit applicant waives the right to claim a Pollution Control Tax Exemption for the life of the proposed confinement feeding operation structure.

	Score	Air	Water	Community
Permanent waiver of Pollution Control	<u>5</u> 15			<u>5.00</u> 15

Tax Exemption				
---------------	--	--	--	--

22. Revise the 22nd criterion as follows:

Construction permit applicant can lawfully claim a Homestead Tax Exemption on the site where the proposed confinement structure is to be constructed

- OR -

the construction permit applicant is the closest resident to the proposed confinement structure.

	Score	Air	Water	Community
Site qualifies for Homestead Tax Exemption or permit applicant is closest resident to proposed structure, <u>and applicant is not in a production contract with a contractor</u>	<u>2515</u>			<u>25.0015</u>

(A) Proof of Homestead Tax Exemption is required as part of the construction permit application.

(B) Applicant includes persons who have ownership interests. "Interests" – means ownership of a confinement feeding operation as a sole proprietor or a 10 percent or more ownership interest held by a person in a confinement feeding operation as a joint tenant, tenant in common, shareholder, partner, member, beneficiary or other equity interest holder. Ownership interest is an interest when it is held either directly, indirectly through a spouse or dependant child, or both.

(C) "Contractor" means a person who owns a commodity at the time that the commodity is under the authority of the contract producer as provided in Iowa Code chapter 579B.3 pursuant to a production contract executed pursuant to Iowa Code chapter 579B.2.

(D) "Production contract" means an oral or written agreement executed pursuant to Iowa Code chapter 579B.2 that provides for the production of a commodity by a contract producer.

23. Revise the 23rd criterion as follows:

Construction permit applicant can lawfully claim a Family Farm Tax Credit for agricultural land where the proposed confinement feeding operation is to be located pursuant to Iowa Code chapter 425A and is not in a production contract with a contractor.

	Score	Air	Water	Community
Family Farm Tax Credit qualification	<u>2515</u>			<u>25.0015</u>

Applicant includes persons who have ownership interests. “Interest,” “contractor,” and “production contract” have the same meanings as in criteria 20 and 22.

24. Eliminate the 24th criterion.

25. Revise the 25th criterion as follows:

Construction permit application includes livestock feeding and watering systems ~~that significantly reduce~~ shown to reduce manure volume by at least 25%, as well as documentation demonstrating the system’s effectiveness.

	Score	Air	Water	Community
Wet/dry feeders or other feeding and watering systems that significantly reduce <u>shown to reduce manure volume by at least 25%, and documentation demonstrating the system’s effectiveness</u>	25 <u>15</u>		12.50 <u>10</u>	12.50 <u>5</u>

26. Revise the 26th criterion as follows:

Liquid or dry manure (choose only one subsection from subsections “a” – “e” and mark one score in that subsection).

		Score	Air	Water	Community
a.	Bulk dry manure is sold under Iowa Code Chapter 200A and surface-applied	15 <u>5</u>		15.00 <u>5</u>	
	Bulk dry manure is sold under Iowa Code Chapter 200A and incorporated on the same date it is land-applied	30 <u>15</u>	12.00 <u>4</u>	12.00 <u>8</u>	6.00 <u>3</u>
b.	Dry manure is composted and land-applied under the requirements of an approved department manure management plan	10	4	4	2
	Dry manure is composted and sold so that no manure is applied under the requirements of an approved department manure management plan	30 <u>15</u>	12.00 <u>6</u>	12.00 <u>6</u>	6.00 <u>3</u>

c.	Methane digester is used to generate energy from manure and remaining manure is surface applied under the requirements of an approved department manure management plan	10	3.00	3.00	4.00
	Methane digester is used, and Aafter methane digestion is complete, manure is injected or incorporated on the same date it is land-applied under the requirements of an approved department manure management plan	<u>3010</u>	<u>12.004</u>	<u>12.004</u>	<u>6.002</u>
d.	Dry manure is completely burned to generate energy and no remaining manure is applied under the requirements of an approved department manure management plan	308	9.00	9.008	12.00
	Some dry manure is burned to generate energy, but remaining manure is land-applied and incorporated on the same date it is land-applied	<u>3010</u>	<u>12.004</u>	<u>12.004</u>	<u>6.002</u>
e.	Injection or incorporation of manure on the same date it is land-applied	3015	12.006	12.006	6.003

27. Revise the 27th criterion as follows:

Land application of manure is based on a two-year crop rotation phosphorus uptake level.

	Score	Air	Water	Community
Two-year phosphorus crop uptake application rate	<u>1020</u>		<u>10.0020</u>	

28. Revise the 28th criterion as follows:

Land application of manure to farmland that has USDA Natural Resources Conservation Service (NRCS) approved buffer strips contiguous to all water sources traversing or adjacent to the fields listed in the manure management plan.

	Score	Air	Water	Community
Manure application on farmland with buffer strips	<u>1015</u>		<u>8.0013</u>	2

29. Revise the 29th criterion as follows:

Land application of manure does not occur on highly erodible land (HEL), as classified by the USDA NRCS.

	Score	Air	Water	Community
No manure application on HEL farmland	<u>4015</u>		<u>10.0015</u>	

30. Revise the 30th criterion as follows:

Additional separation distance, above minimum requirements (0 or 750 feet, see below), for the land application of manure to the closest:

- Residence not owned by the owner of the confinement feeding operation,
- Hospital,
- Nursing home, or
- Licensed child care center or registered child care facility development home,
- Educational institution,
- Religious institution, or
- Commercial enterprise.

	Score	Air	Water	Community
Additional separation distance of 200 <u>500</u> feet	<u>510</u>	<u>3.257</u>		<u>1.753</u>
Additional separation distance of 500 <u>1000</u> feet	<u>4015</u>	<u>6.5010</u>		<u>3.505</u>

(A) The department will award points only for the single building, of the ~~four~~seven listed above, closest to the proposed confinement feeding operation.

(B) Minimum separation distance for land application of manure injected or incorporated on the same date as application: 0 feet.

(C) Minimum separation distance for land application of manure broadcast on soil surface: 750 feet.

(D) The additional separation distances must be in the construction permit application and made a condition in the approved construction permit.

(E) “Licensed child care center” – a facility licensed by the department of human services providing child care or preschool services for seven or more children, except when the facility is registered as a child care home.

(F) “Registered child development homes” – child care providers certify that they comply with rules adopted by the department of human services. This process is voluntary for

providers caring for five or fewer children and mandatory for providers caring for six or more children.

(G) A full listing of licensed and registered child care facilities is available at county offices of the Department of Human Services

(H) “Educational institution” – a building in which an organized course of study or training is offered to students enrolled in kindergarten through grade 12 and served by local school districts, accredited or approved nonpublic schools, area educational agencies, community colleges, institutions of higher education under the control of the state board of regents, and accredited independent colleges and universities.

(I) “Religious institution” – a building in which an active congregation is devoted to worship.

(J) “Commercial enterprise” – a building which is used as a part of a business that manufactures goods, delivers services, or sells goods and services, which is customarily and regularly used by the general public during the entire calendar year and which is connected to electric, water, and sewer systems. A commercial enterprise does not include a farm operation.

31. Revise the 31st criterion as follows:

Additional separation distance, above minimum requirements (0 to 750 feet, see below), for land application of manure to closest public use area.

	Score	Air	Water	Community
Additional separation distance of 200 <u>500</u> feet	5 <u>10</u>	2.00 <u>5</u>		3.00 <u>5</u>

32. Eliminate the 32nd criterion.

33. Revise the 33rd criterion as follows:

Additional separation of ~~50~~100 feet, above minimum requirements (0 or 200 feet, see below), for the land application of manure to the closest private drinking water well or public drinking water well – OR well is properly closed under supervision of county health officials.

	Score	Air	Water	Community
Additional separation distance of 50 <u>100</u> feet or well is properly closed	10		8	2

34. Revise the 34th criterion as follows:

Additional separation distance, above minimum requirements, for the land application of manure to the closest: designated area, karst terrain, surface tile inlet, terrace tile inlet, or wetlands.

- ~~Agricultural drainage well,~~
- ~~Known sinkhole,~~
- ~~Major water source, or~~
- ~~Water source~~

	Score	Air	Water	Community
Additional separation distance of 200 feet	5	0.50	2.50	2.00
Additional separation distance of 400 feet	10	1.00	5.00	4.00

(A) “Designated area” means a known sinkhole, abandoned well, unplugged agricultural drainage well, agricultural drainage well cistern, agricultural drainage well surface tile inlet, drinking water well, designated wetland, or water source. “Designated area” does not include a terrace tile inlet or surface tile inlet other than an agricultural drainage well surface tile inlet.

(B) “Karst terrain” means land having karst formations that exhibit surface and subterranean features of a type produced by the dissolution of limestone, dolomite, or other soluble rock and characterized by closed depressions, sinkholes, or caves. If a 25-foot vertical separation distance can be maintained between the bottom of an unformed manure storage structure and limestone, dolomite, or other soluble rock, then the structure is not considered to be in karst terrain.

(C) “Wetlands” means an area of two or more acres in a natural condition that is mostly under water or waterlogged during the spring growing season and is characterized by vegetation of hydric soils.

35. Revise the 35th criterion as follows:

Additional separation distance above the minimum requirements for high quality waters, for the land application of manure, to the closest:

- High quality (HQ) waters,
- High quality resource (HQR) waters, or
- Protected water areas (PWA), or
- Waters listed on Iowa’s 303(d) list due to impairment by pollutants or conditions that may be associated with animal waste

	Score	Air	Water	Community
Additional separation distance of 200 feet	5		3.75	1.25

Additional separation distance of 400 feet	10		7.508	2.502
--	----	--	------------------	------------------

36. No change proposed to the 36th criterion.

37. Revise the 37th criterion as follows:

Worker safety and protection plan is submitted with the construction permit application.

	Score	Air	Water	Community
Submission of worker safety and protection plan	1015			1015

38. Revise the 38th criterion as follows:

Applicant signs a waiver of confidentiality allowing public to view confidential manure management plan land application records and provides the county with an up-to-date manure management plan. Applicant provides any and all plan updates to the county, to be made available to the public, if changes are made during the plan year.

	Score	Air	Water	Community
Manure management plan confidentiality waiver	510			510

39. Revise the 39th criterion as follows:

Added economic value based on quality job development (number of full time equivalent (FTE) positions), and salary equal to or above Iowa department of workforce development median (45-2093)

~~GRAND-~~

the proposed structure increases commercial property tax base in the county.

	Score	Air	Water	Community
Economic value to local community	1015			1015

40. No change proposed to the 40th criterion.

41. No change proposed to the 41st criterion.

42. No change proposed to the 42nd criterion.

43. No change proposed to the 43rd criterion.

44. Revise the 44th criterion as follows:

Groundwater monitoring wells installed near manure storage structure, and applicant agrees to conduct representative up-gradient and down-gradient monitoring at least quarterly for the duration the waste storage structure is in use and provide data to the department and the public.

	Score	Air	Water	Community
Groundwater monitoring	15		10.50 10	4.50 5

(A) Monitoring well location, sampling and data submission must meet department requirements.

(B) The design, operation and maintenance plan for the groundwater monitoring wells, and data transfer to the department, must be in the construction permit application and made a condition in the approved construction permit.

(C) Sampling results will be reported to the department at least quarterly and within 5 business days of obtaining the sample analysis results.

45. Add a criterion as follows:

Applicant offers by mailed notification to provide funding for baseline residential well quality testing for CFO pollutants of concern to any residents within a one mile radius of the confinement feeding operation structure prior to beginning operation.

	Score	Air	Water	Community
Baseline well monitoring	10		5	5

46. Add a criterion as follows:

Applicant will conduct representative, quarterly surface water monitoring at all points of potential discharge from the production area, as determined by a certified nutrient management planner, and provide the data to the department and the public.

	Score	Air	Water	Community
Surface water monitoring	15		10	5

(A) Monitoring locations, sampling and data submission must meet department requirements.

(B) The monitoring locations and plan, and the plan for data transfer to the department, must be in the construction permit application and made a condition in the approved construction permit.

(C) Sampling results will be reported to the department at least quarterly and within 5 business days of obtaining the sample analysis results.

47. Add a criterion as follows:

Applicant will not apply manure in winter or on frozen or snow-covered ground.

	<u>Score</u>	<u>Air</u>	<u>Water</u>	<u>Community</u>
<u>No manure application, including by incorporation or injection, between December 21 and April 1 or on snow-covered or frozen ground.</u>	<u>15</u>		<u>15</u>	

48. Add a criterion as follows:

Applicant is in compliance with, or has applied for, a national pollutant discharge elimination system (NPDES) permit for the facility.

	<u>Score</u>	<u>Air</u>	<u>Water</u>	<u>Community</u>
<u>Facility will have and comply with a NPDES permit</u>	<u>15</u>		<u>15</u>	

49. Add a criterion as follows:

Applicant will post a bond sufficient to remediate a manure spill of full waste storage capacity or other contamination event and to ensure proper closure of the CFO facilities, as determined by the board of supervisors.

	<u>Score</u>	<u>Air</u>	<u>Water</u>	<u>Community</u>
<u>Applicant posts a bond</u>	<u>15</u>			<u>15</u>

50. Add a criterion as follows:

Applicant uses no federal or state funds or loan guarantees in the construction, maintenance, or operation of the confinement structure.

	<u>Score</u>	<u>Air</u>	<u>Water</u>	<u>Community</u>

<u>Applicant uses no federal or state funds</u>	<u>15</u>			<u>15</u>
---	-----------	--	--	-----------

51. Add a criterion as follows:

Applicant mails notification to residents within a 3-mile radius prior to submitting construction permit application to the department.

	<u>Score</u>	<u>Air</u>	<u>Water</u>	<u>Community</u>
<u>Applicant mails notification to neighbors</u>	<u>10</u>			<u>10</u>

Notification must include: a description of the proposed CFO or expansion, including the size, animal unit capacity, location of CFO structures by street address or latitude and longitude, proposed waste management practices and technologies, and all owner(s) and operator(s) name(s) and contact information, including phone number and email address; contact information for all county supervisors, including phone number and email address; and a statement detailing the option for a public hearing on the permit application.

52. Add a criterion as follows:

Applicant's manure management plan contains no fields with "soil loss for conservation plan" RUSLE2 output values that exceed 75% of the USDA "T" erosion loss value for the applicable soil type.

	<u>Score</u>	<u>Air</u>	<u>Water</u>	<u>Community</u>
<u>Manure management plan fields have low calculated erosion loss</u>	<u>15</u>		<u>15</u>	

53. Revise the introductory paragraph of the Appendix C master matrix document to read:

The following scoring criteria apply to the site of the proposed confinement feeding operation. Mark one score under each criterion selected by the applicant. The proposed site must obtain a minimum overall score of 440522 and a score of 53.3874 in the "air" subcategory, a score of 67.75180 in the "water" subcategory and a score of 401.13206 in the "community impacts" subcategory.

54. Revise summary of total score and score to pass as follows:

	Total Score	Air	Water	Community
	<u>880614</u>	<u>213.5098.5</u>	<u>271.00240.5</u>	<u>404.50275</u>
Score to pass	<u>440522</u>	<u>53.3874</u>	<u>67.75180</u>	<u>101.13206</u>

V. Affected Class of Persons

All Iowans who are interested in or rely on Iowa’s water resources and air quality will be affected by the proposed rules. All Iowans who live in, visit, travel through, and recreate near agricultural areas with CFOs will also be affected by the proposed rules.

VI. Enclosures

- Enclosure A: Brief in Support of Petition for Rule Making
- Enclosure B: DNR Master Matrix Analyses
- Enclosure C: Iowa Work Plan 2016 Annual Report
- Enclosure D: Iowa’s 2016 draft 303(d) list
- Enclosure E: Letters from County Boards of Supervisors
- Enclosure F: Iowa Statewide Rural Well Water Survey
- Enclosure G: 2015 Groundwater Quality Monitoring Summary
- Enclosure H: 2016 Groundwater Quality Monitoring Summary
- Enclosure I: DNR Manure Discharge Chart
- Enclosure J: Permitting Pigs, Iowa Policy Project

The Petitioners respectfully request a meeting with the Department regarding this petition as provided in Iowa Admin. Code 11-5.4(1) (incorporated by reference in Iowa Admin. Code 561-5 and 567-5.1. At this meeting Petitioners are willing to discuss an extension of time for DNR’s consideration of the Petition, pursuant to Iowa Admin. Code 11-5.4(2) (incorporated by reference in Iowa Admin. Code 561-5 and 567-5.1).

Communication regarding this petition should be directed to Erica Blair of Iowa Citizens for Community Improvement at (515) 282-0484 or ericab@iowacci.org, or Tarah Heinzen of Food & Water Watch at (202) 683-2457 or theinzen@fwwatch.org.

Submitted by:

James Larew
Larew Law Office
504 E. Bloomington St., Iowa City, IA 52245

(319) 337-7079

james.larew@larewlawoffice.com

Tarah Heinzen

Staff Attorney

Food & Water Watch

Hugh Espey

Executive Director

Iowa Citizens for Community Improvement

Enclosure

A

IOWA DEPARTMENT OF NATURAL RESOURCES

Brief in support of Petition by Iowa
Citizens for Community Improvement and
Food & Water Watch for the amendment of
rules relating to the master matrix for
confinement feeding operations and
amendment of the master matrix.

**BRIEF IN SUPPORT
OF PETITION FOR
RULE MAKING**

TABLE OF CONTENTS

I.	The Master Matrix Framework.....	1
II.	Standard of Review.....	3
III.	Argument.....	3
	a. The Master Matrix and Related Regulations Do Not Effectively Implement the Animal Agriculture Compliance Act.....	3
	i. The Master Matrix Has Not Resulted in Increased County Authority or Increased Protections for Resources and Communities.....	4
	ii. The Need for Stronger County Authority Has Grown Significantly Since DNR Adopted the Master Matrix.....	6
	iii. County Boards of Supervisors Support a Stronger Master Matrix.....	8
	b. Available Data and Analysis Support the Proposed Revisions to the Master Matrix Regulations and Criteria.....	10
	i. Revisions to Construction Evaluation Resolution Requirements.....	10
	ii. Revisions to Specific Matrix Criteria.....	11
	c. Iowa DNR Has Authority to Revise the Master Matrix and Related Regulations as Proposed.....	21
	d. Iowa DNR Has a Duty to Comprehensively Review the Master Matrix and Related Regulations.....	23
IV.	Conclusion.....	24

I. The Master Matrix Framework

In 2002, the Iowa General Assembly enacted the Animal Agriculture Compliance Act,¹ which, among other things, tasked the Iowa Department of Natural Resources (DNR or Department) with establishing a “master matrix” for the proposed construction or expansion of confinement feeding operations (CFOs) whose animal capacities would equal or exceed 1,000 Animal Units. The master matrix was to be a tool to “provide a comprehensive assessment mechanism . . . for determining whether to approve or disapprove an application for the construction, including expansion, of a confinement feeding operation”² based on a determination whether a proposed CFO location and its structures are “appropriate.”³ The Act provided for a degree of local input by directing that DNR’s regulations allow county boards of supervisors to evaluate CFO applications for construction permits under the matrix if they choose to adopt a “construction evaluation resolution” (CER).⁴ Counties that adopt a CER can submit their recommendations to the DNR to approve or deny such applications, and they have the right to appeal contrary DNR decisions on applications.⁵

To determine the appropriateness of CFO locations and structures, the legislature specified that the matrix establish “objective criteria” for valuing a facility’s “environmental and community impacts.”⁶ The Act did not provide a comprehensive list of factors that the DNR was required to consider. Instead, it mandated that the factors in the matrix “shall account for animal agriculture’s relationship to quality of the environment and the conservation of natural resources,” and provided several examples of criteria DNR could include.⁷ The legislature listed various stakeholders who would form a Technical Advisory Committee (TAC) to recommend specific criteria and valuation methods to the DNR, which the Agency would consider before proposing a matrix and related regulations through an Iowa Administrative Procedure Act (IAPA) rulemaking.

Following a series of TAC meetings that resulted in regulatory recommendations, the DNR adopted master matrix regulations and the master matrix itself.⁸ The regulations require that Iowa counties seeking to use the matrix adopt a CER annually during a specified enrollment period, rather than a one-time adoption.⁹ If a county adopts the CER in a given year, applicants

¹ 2002 Iowa Legis. Serv. ch. 1137 (West).

² IOWA CODE § 459.305(1) (2016).

³ *Id.* § 459.305(1)(a).

⁴ *Id.* § 459.304.

⁵ *Id.*

⁶ *Id.* §§ 459.305(1)(b), (2).

⁷ *Id.* § 459.305(2).

⁸ IOWA ADMIN. CODE r. 567-65.10(3) (2016).

⁹ *Id.* § 65.10(3)(a).

seeking to construct or expand a CFO over 1,000 Animal Units must achieve a passing master matrix score to obtain a construction permit. Counties that do not adopt a CER may submit comments to the DNR on CFO applications, but the CFO applicant does not need to pass the master matrix and the county board cannot appeal the DNR's decision.¹⁰

The master matrix created by the DNR contains forty-four scoring criteria that assign points based on mitigation of a proposed CFO's adverse air quality, water quality, and community impacts.¹¹ Applicants earn points for adopting more protective practices than required under state law,¹² but, as dictated by the statute, a proposed new or expanded CFO cannot be assigned negative points for any problematic siting factors.¹³ The criteria offer a total of 880 potential points,¹⁴ but an applicant needs only 440 total points with at least 25% of the available points earned in each of the respective air, water, and community categories to pass.¹⁵ Applicants complete the master matrix themselves and submit the evaluations to the DNR and local county board of supervisors, along with documents such as design or maintenance plans that support their calculation and their construction permit applications.¹⁶

In each instance, a county board of supervisors then scores the master matrix itself and makes a recommendation to the DNR as to whether the DNR should grant or deny the operator's permit request.¹⁷ If the board of supervisors submits a recommendation to disapprove of an application, the DNR must "conduct an independent evaluation" of the application, using the matrix, and will approve a permit if DNR's review concludes that the application complies with state regulations and achieves a passing matrix score.¹⁸ The master matrix took effect on March 1, 2003, and each year the majority of Iowa's ninety-nine counties adopt a CER to use it. DNR has not revised the matrix or substantively revised its governing regulations since.

¹⁰ *Id.*; see also Letter from Kristi Harshbarger, General Counsel for Iowa State Ass'n of Counties, to Des Moines Board of Supervisors (Oct. 9, 2015), <http://www.iowacounties.org/legislative/helpful-resources/master-matrix/>.

¹¹ *Master Matrix*, IOWA DNR, <http://www.iowadnr.gov/Environmental-Protection/Land-Quality/Animal-Feeding-Operations/Confinements/Construction-Requirements/Permitted/Master-Matrix> (last visited June 12, 2017).

¹² Teresa Galluzzo & David Osterberg, *Permitting Pigs: Fixing Faults in Iowa's CAFO Approval Process*, IOWA POLICY PROJECT 3 (2008), www.iowapolicyproject.org/2008docs/081119-CAFO.pdf.

¹³ IOWA CODE § 459.305; Galluzzo & Osterberg, *supra* note 12, at 4.

¹⁴ *Master Matrix*, *supra* note 11.

¹⁵ *Id.*

¹⁶ IOWA CODE § 459.304; IOWA ADMIN. CODE r. 567-65.9.

¹⁷ IOWA CODE § 459.304(5)(b); IOWA ADMIN. CODE r. 567-65.10(5).

¹⁸ *Id.*

II. Standard of Review

The Iowa Administrative Procedure Act (IAPA) sets out procedures for citizen petitions, agency consideration of petitions, and judicial review of agency decisions.¹⁹ Any interested person may petition an agency to adopt, amend, or repeal a rule.²⁰ The IAPA defines “person” to include any “public or private organization,” including Petitioners Iowa CCI and FWW.²¹ Pursuant to the IAPA, any person “aggrieved or adversely affected” by the DNR’s response to the petition may seek judicial review.²² The reviewing court shall reverse or modify an agency decision that, among other things, is unreasonable, illogical, not based on substantial evidence, or an abuse of discretion.²³

III. Argument

The master matrix established in 2002 has proven ineffective to implement the Animal Agriculture Compliance Act and has failed to provide adequate county participation in CFO siting or adequate protection of natural resources and community interests. DNR data demonstrate the need for revisions to the process, and county supervisors and impacted citizens have increasingly advocated for a stronger and more effective siting process. DNR has the authority to take the proposed actions, and should grant the petition in whole or part.

a. **The Master Matrix and Related Regulations Do Not Effectively Implement the Animal Agriculture Compliance Act**

The plain language of the Animal Agriculture Compliance Act makes it clear that the master matrix must provide for legitimate engagement in CFO siting and expansions by interested county boards of supervisors, and that the matrix process itself should not be a rubber stamp approving all applications. The program created by DNR has not achieved the mandates of the statute, however, as the master matrix does not provide for adequate county involvement or effectively ensure that only appropriate CFO applications can obtain construction permits. There is a clear need for a more rigorous master matrix that assures that applicants whose CFOs would pose unreasonable risks to the environment and rural communities cannot obtain construction permits. As the number and concentration of CFOs and the resulting number of impaired waterways in Iowa continue to increase, the need for an updated approach has also grown.

¹⁹ IOWA CODE § 17A.

²⁰ *Id.* § 17A.7.

²¹ *Id.* § 17A.2.

²² *Id.* § 17A.19(1).

²³ *Id.* § 17A.19(10); *Filippone ex rel. Filippone v. Iowa Dep’t of Nat. Res.*, 829 N.W.2d 589 (Iowa Ct. App. 2013).

i. The Master Matrix Has Not Resulted in Sufficient County Authority or Increased Protections for Resources and Commuities

The master matrix was intended to increase county control over CFOs but has fallen short. Legislators have characterized the master matrix as the General Assembly's response to a "social outcry" from rural citizens who felt that they did not have a say in siting of new livestock confinements in their communities,²⁴ and who expressed concerns over air pollution and other public health issues associated with industrial-scale livestock confinements.²⁵ For example, shortly prior to passage of the Animal Agriculture Compliance Act, public health officials in Cerro Gordo County had responded to this growing citizen concern by passing a moratorium on any new construction and expansion on land used for the production, care, feeding, or housing of animals. The moratorium was intended to fill a vacuum in state action to address CFO impacts, by giving local public health official the opportunity to better assess health and environmental concerns related to these operations.²⁶ Within one year of Cerro Gordo County passing its moratorium, the legislature responded to public demand by passing the master matrix legislation.²⁷

In passing the master matrix legislation, the General Assembly made clear that counties and the DNR must be able to use the matrix as a "comprehensive assessment mechanism" that can provide a "basis for determining whether to approve or disapprove an application"²⁸ for CFO construction or expansion. This reflects the legislature's recognition that some proposed CFOs may be inappropriate as a result of their potential adverse effects on human health and the environment, and should be denied construction or expansion permits on that basis. In other words, the matrix was supposed to provide real limitations on further CFO expansion and construction in places and under circumstances where to do so would pose too great a risk. After nearly fifteen years of implementation, it has become clear that the current master matrix and accompanying regulations are not adequately addressing the needs identified by the legislature. The Iowa General Assembly provided counties with a role in the siting and permitting of CFOs, but the scheme created by the DNR has allowed for only token participation.

²⁴ Jacqui Becker, *Master Matrix Scores Permit Applications*, NAT'L HOG FARMER (Mar. 15, 2003) (quoting Jeff Angelo, the senator who served as floor manager for Senate File 2293), http://nationalhogfarmer.com/mag/farming_master_matrix_scores.

²⁵ See Carrie Hribar, *Understanding Concentrated Animal Feeding Operations and Their Impact on Communities*, NAT'L ASSOC. OF LOCAL BOARDS OF HEALTH 14–15 (Mark Schultz ed., 2010), https://www.cdc.gov/nceh/ehs/docs/understanding_cafos_nalboh.pdf.

²⁶ *Id.*

²⁷ IOWA CODE § 459.304.

²⁸ *Id.* § 459.305.

DNR's Animal Feeding Operations Database (AFO Database)²⁹ contains information related to the number of CFOs in Iowa that have been subject to and have passed the master matrix process since it was enacted. The AFO Database clearly illustrates that the master matrix has primarily amounted to simply an additional procedural step for applicants and counties to undertake, rather than a meaningful regulatory process assuring that new and expanding CFOs have adopted practices that will adequately protect resources and residents. According to DNR's Construction Review Activity database, 1,351 CFOs have been required to go through the master matrix process or are currently in the process, and only 30, or 2.2%, of these have been denied construction permits.³⁰ Although some additional applicants likely withdrew their applications after realizing that DNR would deny their permits, only 103, or 7.6%, of applicants withdrew their applications, and it is not clear from the database whether a significant portion of these withdrawals had been prompted by failing master matrix scores.³¹

DNR staff have acknowledged that passing the matrix is more a function of knowing how to complete it as a paperwork exercise than as a result of careful, appropriate siting and the adoption of pollution mitigation practices. Gene Tinker, DNR AFO Coordinator, recently explained as follows:

We actually have very few, or very low, number of applications that are denied . . . Most applications are submitted by companies in the state that—this is their business, they know what the minimum requirements are, they know how to submit the applications, and so, for the most part, the minimum requirements are gonna be met.³²

As a result of this industry expertise in navigating the process, in conjunction with withdrawals of some applications prior to a likely DNR denial, DNR estimates that the matrix passage rate is higher than 95%.³³

The matrix's point system is so lax that many CFO applicants can simply ignore various criteria altogether. For example, an applicant can obtain *all* required "air" points with a single question, relating to distance from residences and other buildings.³⁴ Such an applicant could have

²⁹ *Animal Feeding Operations Database*, IOWA DNR, <https://programs.iowadnr.gov/animalfeedingoperations/> (last visited June 5, 2017).

³⁰ *Id.* (Select "Reports," then "Construction Review Activity," and sort the "Matrix Required" column to remove facilities categorized as "No" or "Not Assigned (default)").

³¹ *Id.*

³² Gene Tinker, *ISAC Educational Webinar: Counties and the Master Matrix*, YOUTUBE (Dec. 7, 2016), <https://www.youtube.com/watch?v=0i7FzC0US4Q> (beginning at 17:53).

³³ *Id.*

³⁴ Master Matrix Criterion 1, allowing for a maximum of 65 "Air" points. The Matrix requires only 53.38 total "Air" points for passage if the applicant reaches other point thresholds.

zero setback from public use areas, schools, thoroughfares, critical public areas, or other CFOs, above baseline requirements, and would not have to adopt any air pollution mitigation practices, such as waste incorporation, manure structure aeration, stockpile and compost enhancements, biofilters, or landscaping. In fact, more than one third of applicants in the first several years of matrix implementation obtained all of their required “air” points with this question.³⁵ This status quo point system has not provided for meaningful county participation or the required “comprehensive assessment” of a CFO’s potential impacts.

By contrast, the plain language of the statute provides a legislative mandate for the master matrix to provide a credible basis for determining when a CFO would have inappropriate impacts on resources or communities and to create a framework for preventing the approval of construction permits in such cases. This state data on the implementation of the master matrix process to date indicates that the matrix is falling short of achieving the statute’s core objectives. The nearly universal passage rate for hundreds of applicants across the state is a strong indication that the master matrix criteria and passage requirements are not calibrated to allow for the required “comprehensive assessment” of a CFO’s impacts.

ii. The Need for Stronger County Authority Has Grown Significantly Since DNR Adopted the Master Matrix

The pressing need for greater scrutiny of new and expanding CFOs has only increased throughout Iowa since the passage of the master matrix legislation. In 2002, before counties began to adopt the matrix, Iowa had approximately 1,000 CFOs large enough to require a construction permit (1,000 animal units or larger).³⁶ As of June 7, 2017, Iowa DNR’s database lists 3,498 CFOs large enough to require a construction permit.³⁷ Moreover, this is a significant underestimate of the actual number of large CFOs in the state, because DNR’s database is currently missing numerous facilities. As part of an agreement with the U.S. Environmental Protection Agency, Iowa DNR recently completed a comprehensive search to identify livestock operations that are not in the state database. Through this process, DNR identified an additional 5,063 animal feeding operations throughout the state.³⁸ DNR estimates that as many as a quarter

³⁵ Rick Sutter, Iowa DNR, Master Matrix Analysis (2007–08) 2 (attached as Enclosure B) [hereinafter DNR Matrix Analysis].

³⁶ *AFO Database*, *supra* note 29 (select “Reports,” then select “Construction Review Activity” from the menu). The resulting spreadsheet contains AFO construction permit records, including the construction permit date. Although this database may not be entirely complete or accurate, it provides sufficient data to demonstrate rapid industry growth since 2002.

³⁷ *AFO Database*, *supra* note 29 (select “Search” and enter “1000” in the first “Animal Unit Range” field). This produces a fairly similar result as the Database’s Construction Review Activity Report, which contains 3,740 total entries.

³⁸ See *2016 Annual Report for Work Plan Agreement Between the Iowa Department of Natural Resources and the Environmental Protection Agency Region 7*, IOWA DNR 5 (Aug. 1, 2016),

of these, or 1,266 facilities, are “Medium” or larger. An unknown number of these are large enough to require construction permits and should have been subject to the master matrix in counties that have adopted a CER—but, for whatever reasons, were not.³⁹

The fact that these unregulated and unidentified operations have been adding to Iowa’s CFO concentration and pollution problems to an unknown degree only compounds the fact that counties have been faced with an increasing number of CFOs imposing cumulatively larger adverse impacts on communities, waterways, and air quality. The resulting pollution and public health impacts from livestock confinements in rural Iowa are significant. The state has documented more than 800 manure releases to surface waters, groundwater, and land due to improper waste handling, excessive waste application, mechanical failures, and other problems associated with CFOs, since 2000.⁴⁰ Dozens of these CFO manure spills have reached waterways in the past two years alone.⁴¹ Unsurprisingly, the number of impaired waterways across the state also continues to climb, and most of these impairments are due to pollutants or conditions associated with and emanating from animal waste.⁴²

In Iowa, where hogs dramatically outnumber humans, the continued expansion of these facilities degrades air and water quality, which, in turn, threatens public health. Not only has the master matrix failed to limit this industry expansion, it also has not been updated to reflect the growth and changes in the CFO industry and to assure that best practices are implemented. The time is ripe for DNR to update the matrix to make it more rigorous and site-specific, because a CFO’s potential impacts and the appropriateness of its siting and approval depend in part on the baseline conditions where the applicant proposes to construct, such as the density of existing operations, and their existing impacts on water, air, and quality of life.⁴³

http://www.iowadnr.gov/Portals/idnr/uploads/afo/IDNR_AFO_Workplan_Annual_Report_Aug_2016.pdf?ver=2016-08-01-095819-957.

³⁹ *Id.*

⁴⁰ *Hazardous Material Release Database*, IOWA DNR, <https://programs.iowadnr.gov/hazardousspills/Reports/FacilitySpillHistRMP.aspx> (select “Hazardous Spill Summary Report,” enter dates, filter “mode” results for manure and filter to remove “air” releases) (last visited July 11, 2017).

⁴¹ *Manure Discharge Chart*, IOWA DNR (July 3, 2017), <http://www.iowadnr.gov/Portals/idnr/uploads/afo/manuredischargechart.pdf?ver=2017-05-01-123253-047>.

⁴² *Draft 2016 303(d) list*, IOWA DNR, <http://www.iowadnr.gov/Environmental-Protection/Water-Quality/Water-Monitoring/Impaired-Waters> (last visited July 13, 2017). The significant majority of the 816 waterways or segments listed as impaired are impaired due to conditions or pollutants often associated with CFO pollution, such as fish kill caused by animal waste, *E. coli* indicator bacteria, algal growth, low dissolved oxygen due to biological enrichment, and biological impairments.

⁴³ In fact, as discussed *infra*, DNR is obligated to comprehensively review the regulations pursuant to a state five-year review requirement imposed in 2012. It is not clear whether DNR

iii. County Boards of Supervisors Support a Stronger Master Matrix

There has been a groundswell of demand for revisions to the master matrix by county supervisors over the past several months. At least thirteen county boards of supervisors have adopted resolutions or sent letters expressly requesting that the legislature strengthen local control over CFOs, revisit the master matrix, impose a moratorium on construction permits until it strengthens the matrix legislation, or a combination of those remedies.⁴⁴ These requests for a stronger master matrix from the local officials tasked with reviewing applications and implementing the program underscore the DNR data indicating that the matrix is not effective as currently written, and demonstrate that there is a genuine and widely felt need for DNR action.

In seeking legislative action, these counties cite various problems with the matrix that could also be addressed by the DNR in the absence of action by the General Assembly. These findings include that the current matrix: has “failed to adequately differentiate” between environmental concerns and features that vary across the state; has failed “to properly take into consideration information within the knowledge of local sources;” and has failed “to protect the air, water, health, ‘quality of life’ and economic interests that [supervisors] were elected to represent.”⁴⁵ Several resolutions note that CFOs in Iowa “. . . have proliferated at a rate and number likely unanticipated by the authors of the 2002 matrix,”⁴⁶ with the result that the matrix has failed to stem the influx of facilities into the state. They observe, further, that the current scale of the industry calls for an updated matrix to reflect changed conditions and local needs. Though thirteen of the state’s counties have recently expressed formal support for stronger environmental protections and local control over CFO approvals, and have articulated frustration with the inadequacy of the current master matrix, they and other counties continue to adopt the matrix for the small amount of local involvement it provides.⁴⁷ In 2017, 88 counties, including

intended a 2016 animal feeding operation rulemaking to complete this requirement for the Master Matrix and all of its associated regulations.

⁴⁴ See Petition Enclosure C, resolutions and letters from Adair, Allamakee, Buchanan, Cedar, Cerro Gordo, Dickinson, Floyd, Hardin, Howard, Johnson, Pocahontas, Webster, and Winneshiek counties. Although legislation was proposed (House File 456 would have authorized counties to adopt CFO siting ordinances with restrictions on CFO siting, operations, and waste management, and House File 346 would have added new water quality criteria to the Master Matrix) the state legislature failed to modify the Master Matrix or otherwise increase local control over livestock operations in the 2016–17 legislative session.

⁴⁵ *Id.*

⁴⁶ *Id.*

⁴⁷ *Master Matrix*, *supra* note 11 (compare maps of county CER adoption from 2003 through 2017, showing that the thirteen counties that have requested legislative action routinely adopt annual CERs).

all thirteen that have called for improvements to the matrix to date, adopted a CER.⁴⁸ Counties clearly want to exercise as much local control as possible, and many feel the master matrix has fallen short of what the legislature envisioned.

Counties have also recently expressed frustration with the fact that they cannot successfully deny a construction permit or appeal a DNR approval if an applicant passes the master matrix, even if the facility nonetheless poses significant environmental risks or is poorly sited. For example, Cerro Gordo County's recent resolution followed an unsuccessful appeal of a construction permit issued to a CFO applicant in 2016. The County sought to deny a permit to a CFO applicant that passed the matrix, based on concerns that the facility would nonetheless adversely impact nearby wildlife areas and residents. But because the applicant passed the matrix, and the master matrix statute prevents counties and DNR⁴⁹ from overriding a passing matrix score to deny a proposed facility, the DNR approved the permit over the County's objections; the state Environmental Protection Commission (EPC), thereafter, denied the County's appeal.⁵⁰ In 2014, Adair County supervisors voted to deny a construction permit to a CFO applicant after finding that the facility did not earn enough points on the matrix.⁵¹ The DNR came to a contrary conclusion, and the EPC subsequently agreed with DNR and allowed the facility to expand.⁵² Yet another dispute is currently underway between DNR and Humboldt County, where the county gave a CFO applicant a failing matrix score of 410 (with 440 required to pass). The DNR reviewed the proposal and determined that the applicant's score was 445, and issued the construction permit. The County subsequently requested an EPC hearing.⁵³ DNR lacks

⁴⁸ *Id.* (See Map of Counties that adopted the CER in 2017).

⁴⁹ The Environmental Protection Commission adopted a "director's discretion rule" in 2006 to allow the DNR Director to consider factors beyond the Master Matrix and state regulations to deny a CFO permit. However, the Administrative Rules Review Committee objected to the rule as exceeding the DNR's authority. The resulting ambiguity over DNR's authority and its burden of proof in exercising such discretion has rendered the rule essentially unusable. Galluzzo & Osterberg, *supra* note 12, at 4-5.

⁵⁰ John Skipper, *Cerro Gordo supervisors seek changes in state hog confinement matrix*, GLOBE GAZETTE (Apr. 18, 2017), http://globegazette.com/news/local/cerro-gordo-supervisors-seek-changes-in-state-hog-confinement-matrix/article_ccfc7ebf-1f63-5ee4-ba56-570dd766a760.html.

⁵¹ Jake Waddingham, *Supervisors approve expanding hog facility*, CRESTON NEWS ADVERTISER (Apr. 16, 2014, 1:57 PM), <http://www.crestonnews.com/2014/04/15/supervisors-approve-expanding-hog-facility/avk67yx/?page=1>.

⁵² Donnelle Eller, *Despite local opposition, hog facilities to expand*, THE DES MOINES REGISTER (Sept. 17, 2014, 12:14 AM), <http://www.desmoinesregister.com/story/money/agriculture/2014/09/17/hog-facilities-expand-despite-opposition/15757567/>.

⁵³ Environmental Protection Commission, *Meeting Materials Packet for June 20, 2017 Meeting*, IOWA DNR, <http://www.iowadnr.gov/Portals/idnr/uploads/epc/20170620epc.pdf?ver=2017-05-31-083722-413>. This case also underscores the industry's expertise in obtaining just enough matrix points to receive a passing score, discussed *supra*.

authority to remove restrictions on counties' ability to deny permits that pass the matrix; however, it has the authority to make the matrix stronger and more responsive to local environmental threats and concerns. This is the most viable course of action available to DNR to address the documented deficiencies in the master matrix process.

b. Available Data and Analysis Support the Proposed Revisions to the Master Matrix Regulations and Criteria

i. Revisions to Construction Evaluation Resolution Requirements

The proposed changes to DNR's regulations for county CERs will further the legislature's intent to give county boards of supervisors a meaningful role in reviewing applications for new and expanded CFOs, in part by lessening barriers to participation. While the master matrix statute only requires that counties adopt a CER to use the matrix process,⁵⁴ the regulations currently require counties to adopt a CER every single year to continue using the matrix, providing only the month of January to enroll.⁵⁵ This results in a needless administrative burden that has resulted in counties dropping in and out of the master matrix process from year to year.⁵⁶ It is unlikely that these annual inconsistencies are simply a reflection of changing county priorities; more likely, some or most are the result of inadvertently missed deadlines by busy county supervisors or other administrative errors in the process.⁵⁷ DNR has clear authority to revise this requirement and adopt the proposed regulatory language, which would allow counties to adopt a one-time CER that would last until the county either chose to rescind the CER or failed to properly implement the master matrix. It should do so to reduce the administrative burden both on counties DNR alike, and ensure that counties intending to continue using the matrix can do so without interruption.

The petition also proposes that the DNR adopt a more reasonable rule to address problems resulting from counties' errors in implementing the master matrix. The current regulations essentially impose a "one strike" rule, stating that if a county fails to submit a single recommendation or fails to comply with a single evaluation requirement, the DNR will disregard any subsequent recommendations from the county until the county is able to adopt another CER during the next enrollment period.⁵⁸ This strict position is directly contrary to the legislature's

⁵⁴ IOWA CODE § 459.304(3) (repeatedly referring to a county CER in the singular, rather than plural).

⁵⁵ IOWA ADMIN. CODE r. 567-65.10(3).

⁵⁶ *Master Matrix*, *supra* note 11 (compare maps of county CER adoption from 2003 through 2017).

⁵⁷ For example, there was a conspicuous spike in counties that failed to adopt a CER in 2010, as compared to 2009, 2011, and other years since the Matrix was enacted. *Master Matrix*, *supra* note 11 (contrast map of county CER adoption in 2010 with maps from other years).

⁵⁸ IOWA ADMIN. CODE r. 567-65.10(3)(a).

intent to foster county engagement in the CFO siting and approval process. The petition therefore requests that the DNR revise the regulation to better give effect to the statutory goal of county participation by providing basic support to county boards of supervisors while retaining the strong incentive for counties to learn and comply with the master matrix process and requirements. Specifically, the revised rule would require the DNR to offer training to counties that do not consistently implement the master matrix process correctly, and would only require a county to submit a new CER after three failures by the board to submit a recommendation or comply with evaluation requirements.

ii. Revisions to Specific Matrix Criteria

The petition also requests numerous specific changes to the master matrix criteria and point system. As discussed *supra*, the overall matrix passage rate approaches one hundred percent—thereby depriving communities of the protections intended by Iowa General Assembly. The Petition proposes increasing the percentage of total possible points required to pass from just 50% (currently 440 points) to 85%, increasing the total percentage of points in each category from just 25% to 75%, and concurrently making it more difficult to obtain points for various criteria. The purpose of these changes is not to ensure that more applicants fail the matrix, but, rather, to require applicants to adopt more protective practices while continuing to ensure that passage is feasible for the most appropriately sited and designed operations. In general, the proposed revisions reflect the Petitioners' position that compliance with all of the criteria in the matrix are feasible to achieve; the CFO applicant dictates the facility location, planning and design, as well as manure application methods and locations. The applicant can elect to meet increased separation distances, to adopt protective and available technologies, to monitor pollution, and to provide information to DNR and the public. Raising standards as proposed will not prevent responsible applicants from feasibly achieving a passing score under the revised master matrix criteria.

In 2007–08, the DNR conducted an analysis of the 208 available master matrix applications submitted since the matrix was adopted in 2003, out of a total of 292 master matrix files. This analysis reviews how many facilities claimed points under each of the 44 matrix criteria. The results show that it is overwhelmingly easy for applicants to score points for meeting certain matrix criteria, while other criteria are almost never used by a facility to obtain a passing score. The available data forms much of the basis for the proposed re-calibration of the master matrix criteria and point requirements.

The DNR analysis shows that some criteria and the associated points are claimed by virtually all matrix applicants; this reflects the fact that some practices, such as the use of formed manure storage structures, are now the industry standard though they are not required under state law. The Petition proposes significant changes to these criteria; near-universal practices should

not result in the award of significant points under the matrix, because the matrix is premised on awarding points where an applicant has taken actions that will *decrease* environmental and community impacts. A facility that is merely using industry standard, or baseline, practices should generally not achieve a passing matrix score.

Other criteria and their points are essentially unused after years of matrix implementation; this reflects the fact that many facilities pass the matrix with such ease that the applicants need not even consider adoption of non-standard pollution control technologies or best practices. Decreasing or eliminating points available for status-quo practices will play a role in increasing the incentive to seek points via these criteria. To further address this problem, the Petition proposes increasing the available points for certain criteria to create a stronger incentive for applicants to adopt practices that will meaningfully reduce environmental and community harms.

For some criteria, the DNR data provides a good indication of what changes to the criterion or its point distribution would be adequate to strengthen it without making the points infeasible to obtain. In other instances the available information does not provide a complete picture of how best to recalibrate a criterion effectively. For example, where almost all past applications have obtained the maximum available points from five possible point categories that are assigned to various separation distances, the DNR's analysis does not provide enough information to determine how much the distance would need to be increased to reduce the percent of applicants receiving points by a particular amount. As a result, in some cases, the Petitioners request the DNR to conduct further analysis and establish new point and criteria requirements calculated to result in applications falling in a less lopsided distribution.

The Petition proposes no change to criteria 11, 18, 36, 40, 41, 42, and 43.

The Petition proposes deleting criteria 3, 4, 6, 19, 24, and 32. Criteria 3 and 32 are addressed by combining them with criteria 1 and 30, respectively, as discussed below. Criterion 4 provides for points for setbacks from water sources. The Petition proposes amending criterion 8 to add designated areas. Designated areas include water sources, rendering criterion 4 redundant. Criterion 6 allows for points based on a separation distance from critical public areas. However, the definition of public use area includes all critical public areas, rendering this criterion redundant with criterion 2. Applicants should not be able to obtain points twice for the same separation distance. Criterion 19 provides 20 points for applicants with a truck turnaround area. The vast majority of operations meet this qualification, rendering it unnecessary to incentivize this status quo facility design. More importantly, this provides little to no actual community benefit; it does nothing to limit truck traffic, road damage, noise, or other significant community impacts associated with CFOs. Criterion 24 provides up to 20 points to CFOs simply for being smaller in scale than some other operations. This criterion is illogical on its face, as it

allots 20 points for facilities from 1 to 2,000 animal units, though the matrix only applies to facilities that are 1,000 animal units or larger (the size threshold for a construction permit requirement). But just as illogical, it provides community points for facilities that are up to three times this threshold size—7,500 hogs—despite the fact that the main premise of the matrix is that CFOs generally impose negative community and pollution impacts where they are sited. There is no justification for, in effect, providing a facility with points simply for constructing in the first place.

The Petition proposes adding several criteria to address CFO siting and operational factors not currently addressed in the master matrix. The proposed additions would offer points for additional beneficial practices or actions: obtaining Clean Water Act permits, agreeing not to apply any manure in winter or on fields with high risk of soil loss, conducting surface water monitoring, building and operating without federal or state funding, providing neighbor notification, paying for neighbors' baseline well testing, and posting a bond to pay for any potential waste releases from the facility. The proposed new criteria address important environmental and community factors and further shift the matrix's focus away from isolating pollution and other harms through separation distances, and towards preventing adverse impacts at the facility through adoption of pollution control technologies and increased transparency.

Basis for Specific Criteria Changes⁵⁹

Criterion 1: Reduce points, add locations of concern, increase separation distances

The matrix allots excessive points for separation from homes and other structures, which significantly decreases the incentive for an applicant to adopt pollution reduction practices. More than one third of past applications reviewed by the DNR obtained all of their needed "air" points through this criterion alone.⁶⁰ The Petition proposes reducing the points and increasing the separation distances to further protect nearby citizens. The DNR's analysis indicates that the proposed distances are readily achievable. The Petition further proposes combining criteria 1 and 3 by deleting criterion 3 and adding the locations of concern in criterion 3 to this criterion. These two criteria allot points for a confinement structure's separation distance from buildings where people reside or spend significant amounts of time, such as homes, hospitals, and schools. There is no rational basis for treating the two categories of structures differently.

Criterion 2: Reduce points, DNR analysis to determine increased separation distances

The Petition proposes increasing separation distances from public use areas, based on further DNR analysis, and reducing available points. Virtually all of past applications reviewed by DNR

⁵⁹ Criteria numbers correspond to DNR's current Master Matrix.

⁶⁰ DNR Matrix Analysis at 2.

claimed the maximum points for this criterion, falling into the maximum listed separation distance of 1,501 feet or more. Available information does not indicate by how much these applicants exceeded 1,500 feet separation, necessitating further DNR analysis to determine new distance categories that will result in applications falling in a relatively even distribution. Because it is apparent that almost all applicants are at least 1,500 feet from public use areas, the minimum separation distance to receive any points should be set at 1,500 feet or larger, based on DNR findings. The points allotted should also be significantly decreased, because the matrix's over-emphasis on separation distances renders criteria focused on actual mitigation practices nearly irrelevant.

Criterion 5: Reduce points, increase separation distance

The matrix allots a disproportionately high 30 points – approximately 20% of required air and community points – for a small separation distance from thoroughfares. This separation distance will only provide a sporadic and temporary benefit to those using the thoroughfare to pass near the facility. To incentivize practices with more important air pollution and community benefits, the Petition proposes halving the points while increasing the separation distance from 300 to 500 feet.

Criterion 7: Reduce points, increase separation distance

Again, the matrix allots excessive points for inadequate separation between a confinement structure and public and private wells. Iowa has well-documented problems with nitrate contamination of both private and public wells, and research conducted since the matrix was enacted underscores the need to increase groundwater protections from CFO pollution. DNR conducted a rural water well survey between 2006 and 2008, which showed that approximately half of private wells tested contained nitrate, and 12% exceeded the federal nitrate drinking water standard.⁶¹ DNR also conducted studies of public water systems throughout the state in 2015 and 2016, finding nitrate in the majority of public wells both years, and noting that nitrate contamination is an “ongoing concern” in the state.⁶² To reflect the scope and importance of this public health problem, the Petition proposes increasing separation distances and reducing allotted points, to incentivize practices that will actually reduce the risk of CFO contaminants reaching groundwater resources. Moreover, because separation distances alone will not adequately address the threat of well contamination in locations with karst terrain, which is characterized by fractured bedrock that allows for rapid movement of contaminants, the Petition further proposes

⁶¹ Fact Sheet: Iowa Statewide Rural Well Water Survey Phase 2, CTR. FOR HEALTH EFFECTS OF ENVTL. CONTAMINATION, <https://cheec.uiowa.edu/swr12> (attached as Enclosure F).

⁶² *Groundwater Monitoring, Fiscal Year 2016 Report 2–3; Fiscal Year 2015 Report 2–3*, IOWA DNR, <http://www.iowadnr.gov/Environmental-Protection/Water-Quality/Water-Monitoring/Groundwater> (attached as Enclosures G and H).

requiring applicants to document the absence of karst to obtain points for separation distance from wells.

Criterion 8: Reduce points, DNR analysis to determine increased separation distances, add karst, designated areas, tile inlets, and wetlands

Similar to criterion 2, the vast majority of past applicants in DNR's analysis obtained the maximum available points for separation from the nearest agricultural drainage well, known sinkhole, or major water source. For the reason explained *supra*, the separation distances should be increased based on further DNR analysis. And as with other separation distance-based criteria, the Petition proposes significantly reducing the available points to incentivize actions that promote pollution prevention from the facility itself. Further, this criterion should include karst, designated areas, and wetlands in its list of protected features, because these pose similar risks of contamination as the features listed. Designated areas include agricultural drainage wells, known sinkholes, and major water sources, but also include water sources and designated wetlands. Because the fixed list of designated wetlands does not include many of the state's wetlands that warrant consideration, wetlands are also added. None of the matrix criteria currently address risks to wetlands, which is a significant oversight. Because designated areas only include certain tile inlets, additional tile inlets that are connected to surface waters are added.

Criterion 9: Reduce points, increase separation distance

The matrix provides 25 points for facilities three-quarters of a mile or more from the nearest confinement with a manure management plan. The significant majority of facilities obtain these points, indicating that increasing the distance to one mile as proposed is feasible. The Petition further proposes reducing the available points because any benefits from this separation distance are highly site-specific and will depend on third party facilities' practices and the locations of both facilities' manure application fields.

Criterion 10: Reduce points, add impaired waters, DNR analysis to determine increased separation distance

Similar to criterion 2, the vast majority of past applicants in DNR's analysis obtained the 30 available points for distance from protected water features. For the reason explained *supra*, DNR this separation distance should be increased based on further DNR analysis. As with other separation distance-based criteria, the Petition proposes reducing the available points to prioritize pollution mitigation, rather than pollution isolation. To further protect waterways at the highest risk from CFOs, the Petition also proposes adding waterways impaired by pollutants associated

with animal waste to the list of waters in this criterion. Preventing siting of new or expanding CFOs near these impaired waters is critical to successfully addressing these impairments.

Criterion 12: Reduce points

The matrix allots 30 points for use of covered liquid manure storage, and DNR's analysis shows that the substantial majority of applicants obtain these points. The matrix should not provide large numbers of points for use of practices and technologies that have become the industry standard, such as covered manure storage, and the Petition proposes substantially reducing the available points. The practice is not yet universal, and should be incentivized for the minority of applicants not yet covering their waste storage, so the Petition does not propose eliminating the criterion entirely.

Criterion 14: Increase points, limit to biofilters

The current matrix provides 10 points for the use of filters to reduce odors, and DNR's analysis shows this criterion is not used by applicants. This criterion is also far too vague as written. The matrix should provide a stronger incentive to use proven technologies to reduce air pollution, so the Petition proposes doubling the points and specifying that applicants must use biofilters.

Criterion 15: Reduce points

The matrix allots 20 points for the use of landscaping with trees and shrubs to reduce air pollution. Such windbreaks are thought to reduce ammonia exposure, because under the right conditions, plants can absorb some ammonia gas and reduce airborne particulates. However, this will not address the hydrogen sulfide emissions and other odor-causing chemicals emitted by hog confinements and other CFOs. Even with regard to ammonia, the efficacy of this practice is highly uncertain,⁶³ and it does not actually reduce emissions from the facility, so the Petition proposes reducing the available points for the practice. Installing technology that reduces emissions at the source, such as biofilters, warrants significantly more points than planting shrubs and trees that may not have a notable effect.

Criterion 16: Reduce points, clarify requirements

⁶³ Studies have emphasized broiler chicken operations and ammonia gas, and have shown significant variability in effectiveness. See, e.g., *Windbreak Plant Species for Odor Management*, USDA-NRCS (Mar. 2007), https://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/mdpmetn7166.pdf; Marife B. Anunciado et al., *Examination of the Effectiveness of Selected Plant Species for Removing Atmospheric Ammonia*, STEPHEN F. AUSTIN STATE U., <http://environmental.sfasu.edu/images/files/Graduate%20projects/MarifeAnunciado.pdf>.

The matrix provides an excessive 30 points for the use of stockpile and compost facility “enhancements” but lacks detail on what an applicant must do to qualify. The Petition proposes reducing the points and clarifying that the applicant must use both impermeable pads and a roof or cover for all stockpiles of waste and compost. Points should not be available if an applicant will leave one of these pollution pathways unaddressed.

Criterion 17: Reduce points

For the same reasons in criterion 12, the Petition proposes significantly reducing the points allotted for use of formed manure storage structures.

Criterion 20: Add notices of violation, additional points for longer compliance period, include consideration of violations at facilities in contract with the same integrator

The matrix provides 30 points for applicants without a history of administrative orders in the past 5 years. This criterion omits critical compliance considerations, including, nonsensically, expressly defining “violations” to exclude notices of violations. Recent notices of violation should preclude an applicant from earning compliance points. The Petition also proposes reducing available points, because an absence of violations only indicates compliance with baseline requirements, and the matrix is intended to award points for practices that exceed baseline requirements. Because integrator companies control many aspects of CFOs’ operations, the compliance history of operations in contract with the same integrator should also be considered. This will incentivize applicants to operate independently or to only contract with integrators whose records show high levels of compliance.

Criterion 21: Increase points

The matrix provides only 5 points for applicants who waive the right to claim a Pollution Control Tax Exemption, with the result that only a few applicants have done so. The Petition proposes increasing the available points to incentivize applicants to waive this tax exemption, thereby providing counties with additional resources needed to offset expenses incurred as a result of CFOs, such as infrastructure maintenance.

Criterion 22: Reduce points, require independent applicants

The matrix provides 25 points for applicants who are eligible for a Homestead Tax Exemption or are the closest resident to the proposed CFO structure, which is likely intended to incentivize applicants to use best practices because they will themselves experience any adverse local impacts. The Petition proposes reducing these points because the criterion does not mandate any

best practices or ensure that communities will tangibly benefit from the applicant's proximity to the facility. The Petition also proposes to limit these points to applicants who will operate independently, rather than in contract with an integrator that is not based in the community impacted by the operation.

Criterion 23: Reduce points, require independent applicants

The matrix also provides 25 points for applicants who qualify for the Family Farm Tax Credit. As with criterion 22, this does not mandate any best practices or ensure any community benefit, so the Petition proposes reducing the points. As with criterion 22, an integrator relationship could also undermine any assumed community benefit and only applicants operating independently should be eligible for these points.

Criterion 25: Reduce points, require supporting documentation

The matrix provides 25 points for the use of feeding and watering systems that reduce manure volume but does not impose particular requirements for the reduction in volume or any verification that the system used is effective. The Petition proposes reducing the points, because reductions in volume may have benefits related to precise application and decreasing the risk or runoff, but will not reduce overall nutrients or the quantity of other pollutants reduced. It also proposes requiring that systems used to obtain the points be shown to reduce manure volume by at least 25%, because studies have demonstrated that certain available wet-dry feeders are capable of such reductions.⁶⁴ The applicant should provide supporting documentation with their application, confirming both the system they will use and its effectiveness.

Criterion 26: Reduce points, eliminate methane digester provision

The matrix provides an array of points for various manure management practices, and the vast majority of applicants receive 30 points for same-day incorporation or injection of manure. As with covered waste storage, this practice is the industry standard and warrants fewer points. The Petition also proposes eliminating the points for use of methane digestion, which does not reduce the quantity of manure nutrients and in fact makes nutrients more water soluble, and therefore more susceptible to leaching and runoff once land applied.⁶⁵ For the same reason, the Petition proposes reducing the points for incorporation or injection following digestion, because this

⁶⁴ See, e.g., Mike Brumm & Jim Dahlquist, *Impact of Feeder and Drinker Designs on Pig Performance, Water Use and Manure Production*, NEBRASKA SWINE REPORTS (1997), http://digitalcommons.unl.edu/coopext_swine/193/.

⁶⁵ *Conservation Practice Standard 366*, USDA-NRCS (June 2017), https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs143_026149.pdf.

management method will be less protective than incorporation or injection of non-digested manure.

Criteria 27–29: Increase points

The matrix offers only 10 points each for application based on a two-year crop rotation phosphorus uptake level, use of buffer strips, and avoiding application on highly erodible land, and DNR’s analysis shows that this has proven an inadequate incentive for applicants to adopt these protective practices. When manure is applied based on crop nitrogen need, “up to 3 times the needed amount of phosphorus is applied,”⁶⁶ and phosphorus can build up in the soil, increasing the risk of phosphorus loss and water pollution. Limiting phosphorus application is a critical way to reduce phosphorous pollution from land application fields. Installing vegetative buffers and avoiding highly erodible land (HEL) are also important practices to prevent land application runoff. Buffers effectively capture and slow nutrient-laden runoff and eroded soil particles that are being carried off of an application field, and can also prevent nutrients in shallow groundwater from seeping below the root zone and into aquifers.⁶⁷ Avoiding HEL when applying manure helps reduce erosion that would carry manure nutrients and other pollutants into waterways. The Petition proposes increasing the points allotted for these criteria to better incentivize the adoption of land application practices proven to effectively prevent nutrient loss and protect water quality.

Criterion 30: Increase points, add locations of concern, increase separation distances

As with criteria 1 and 3, criteria 30 and 32 separately allot points for land application separation distances from two categories of buildings where people reside or spend significant amounts of time, such as homes, hospitals, and schools. There is no rational basis for treating the two categories of structures differently. The Petition proposes combining criteria 30 and 32 by deleting criterion 32 and adding the locations of concern in criterion 32 to this criterion. The Petition also proposes increasing the separation distances and the points available to discourage land application near locations of concern.

Criterion 31: Increase separation distance

⁶⁶ *NPDES Permit Writers' Manual for Concentrated Animal Feeding Operations*, EPA 176 (Feb. 2012), https://www.epa.gov/sites/production/files/2015-10/documents/cafo_permitmanual_entire.pdf (Chapter 6, page 7 within the manual).

⁶⁷ Matthew Helmers et al., *Buffers and Vegetative Filter Strips*, EPA (Aug. 8, 2006), https://www.epa.gov/sites/production/files/2015-07/documents/2006_8_24_msbasin_symposia_ia_session4-2.pdf.

The matrix provides 5 points for separation distance between manure application and public use areas, and more than half of the applicants in DNR's analysis obtained these points. Increasing the separation distance to 500 feet is feasible and will further mitigate negative air pollution and community impacts on users of these areas.

Criterion 33: Increase separation distance

The matrix provides 10 points for a 50-foot separation between land application and drinking water wells. As established, Iowa has widespread groundwater contamination, necessitating a more protective approach. Doubling this distance to 100 feet is feasible, because applicants control their choice of land application fields and can choose to limit application near sensitive areas.

Criterion 34: Revise points, increase separation distance, add designated areas, karst terrain, additional tile inlets, and wetlands

As discussed *supra*, Iowa has widespread groundwater contamination, and the matrix should emphasize groundwater protection to a greater degree, as well as protecting a broader set of surface waters. To promote this, the Petition proposes listing all designated areas, rather than a subset, and adding tile inlets, karst terrain, and wetlands to this criterion's list of features subject to land application setbacks, and only providing points for a separation distance of 400 feet above minimum requirements. The Petition further proposes removing the air points from this criterion, which only relates to water quality and groundwater impacts that affect community welfare.

Criterion 35: Add impaired waters, increase separation distances

The matrix provides up to 10 points for setbacks between land application and protected waterways, and DNR's analysis shows that the majority of applicants adopt such setbacks. For the reasons explained *supra* (criterion 10), the Petition proposes increasing surface water protections by adding waters impaired by pollutants in animal waste to the list of protected waterways, and increasing the setback distances.

Criteria 37–39: Increase points

The matrix offers points for submission of a worker safety and protection plan, waiver of manure management plan confidentiality, and creating local economic value, but DNR's analysis shows that almost no applicants choose to use any of these criteria. To fill gaps in state law requirements and incentivize better worker protections, transparency over waste management, and better worker pay in the CFO industry, the Petition proposes increasing the available points

for each of these criteria. Criterion 38 should also be strengthened to provide for ongoing availability of the most current version of a CFO's manure management plan, with documents and any plan amendments provided directly to the county.

Criterion 44: Add specificity to monitoring requirements

The matrix provides points for applicants who monitor the groundwater near their manure storage structure, but this criterion lacks adequate specificity. To ensure that monitoring conducted is representative, transparent, and capable of identifying pollution from storage structures to groundwater, the Petition proposes specifying that monitoring must occur both up-gradient and down-gradient of structures, must occur on a representative basis and at least quarterly, and that data must be provided to the public as well as the department.

c. Iowa DNR Has Authority to Revise the Master Matrix and Related Regulations as Proposed

The Iowa General Assembly imposed certain parameters on DNR's master matrix regulations, but nothing in the statute precludes the agency from revising them as proposed. The primary procedural requirements for establishing the matrix were that DNR had to convene a technical advisory committee, or TAC, for the purpose of making recommendations to create the master matrix and related regulations, and that DNR must then use those recommendations to propose and adopt regulations in accordance with the Iowa Administrative Procedure Act (IAPA).⁶⁸ The statute only imposed a one-time duty to convene a TAC and gather recommendations, and these recommendations were not and are not binding on the agency. Moreover, the IAPA rulemaking procedures require DNR to provide for and consider public input, and therefore preclude the agency from committing itself to any particular TAC recommendation. As a result, DNR is free to revise the matrix and related regulations as proposed.

Senate File 2293 required that "the [DNR] shall adopt rules establishing a master matrix as required [by statute] according to recommendations made to the department by a technical advisory committee pursuant to this section."⁶⁹ It goes on to require that "[b]ased on the committee's recommendations to establish a master matrix, the department shall provide a draft of a notice of intended action to the environmental protection commission."⁷⁰ The language of the Senate File is unambiguous in limiting the role of the TAC to providing "recommendations" to "establish" a master matrix. Because the TAC's role was limited to advising on the "establishment," of the matrix, DNR has no obligation to continue to rely on the TAC's

⁶⁸ IOWA CODE § 17 (2016).

⁶⁹ 2002 Iowa Legis. Serv. ch. 1137 (West).

⁷⁰ *Id.*

recommendations in any future *amendment* of the already-established matrix and regulations or any obligation to convene a new TAC prior to any future rulemakings.⁷¹ DNR has indicated that it must convene another TAC before initiating a master matrix rulemaking,⁷² but Petitioners have found no basis for this position in the statute or the legislative history.

Regardless, the TAC's recommendations have not been binding on DNR at any point. While Senate File 2293 says DNR was required to establish the matrix "according to" the TAC's recommendations, the matrix statute is clear that the agency was required to conduct its rulemaking according to the IAPA, stating "[t]he [environmental protection] commission shall establish by rule adopted pursuant to the [IAPA], requirements relating to the construction, including expansion, or operation of animal feeding operations, including related animal feeding operation structures."⁷³ The IAPA is "intended to provide a minimum procedural code for the operation of all state agencies when they take action affecting the rights and duties of the public,"⁷⁴ and its purposes include "increas[ing] public participation in the formulation of administrative rules."⁷⁵ Accordingly, IAPA rulemaking procedures mandate that "prior to the adoption . . . of any rule, an agency shall . . . [a]fford all interested persons not less than twenty days to submit data, views, or arguments in writing."⁷⁶ Further, "[t]he agency shall consider fully" all public comment submitted.⁷⁷ This requirement to fully consider all public input on a proposed rule means that DNR cannot predetermine the outcome of the rulemaking by committing itself to the TAC's recommendations.⁷⁸

⁷¹ See *Establish (2)*, BLACK'S LAW DICTIONARY (10th ed. 2014) ("[t]o make or form; to bring about or into existence").

⁷² Gene Tinker, *ISAC Educational Webinar: Counties and the Master Matrix*, YOUTUBE (Dec. 7, 2016), <https://www.youtube.com/watch?v=0i7FzC0US4Q> (beginning at 2:15).

⁷³ IOWA CODE § 459.103

⁷⁴ *Id.* § 17A.1.

⁷⁵ *Id.*

⁷⁶ *Id.* § 17A.4(1)(b).

⁷⁷ *Id.* Further, the IAPA "shall take precedence" over "any other statute . . . that . . . diminishes a right conferred upon a person by [the IAPA] . . . unless the other statute expressly provides that it shall take precedence over all or some specified portion of [the IAPA]. *Id.* § 17A.23. The Animal Agriculture Compliance Act expressly requires DNR's rulemaking process to *comply with* the IAPA. Thus, even if Senate File 2293 could be read to require DNR to adopt the TAC's recommendations without consideration of public input or the agency's own expertise, the IAPA and its notice and comment requirements control.

⁷⁸ DNR has indicated that it may not have followed IAPA requirements when it adopted the current master matrix regulations, stating that the reason the final rules mirrored the TAC recommendations was that the TAC was the group that was supposed to establish the matrix. Gene Tinker, *ISAC Educational Webinar: Counties and the Master Matrix*, YOUTUBE (Dec. 7, 2016), <https://www.youtube.com/watch?v=0i7FzC0US4Q> (beginning at 2:06). As discussed, this misconstrues the role and authority of the TAC and should have no bearing on future rulemakings. Any improper ceding of regulatory authority to the TAC or failure to fully consider

Moreover, even if the IAPA did not prohibit a predetermined outcome by mandating that DNR engage in a rulemaking process with the opportunity for genuine public participation, the TAC's recommendations have never been binding on DNR because the TAC was a purely advisory body. The "recommendations" the TAC was tasked with providing, by definition, are suggestions, rather than mandates.⁷⁹ And the Iowa Supreme Court has consistently confirmed that advisory committees of various types do not dictate agency decisions or obligate agencies to adopt their recommendations.⁸⁰ In short, none of the requests in the petition exceed the authority granted to DNR in the master matrix statute, and the agency can act to revise the master matrix and related regulations at any point without convening a new TAC, reconvening the old TAC, or relying on the old TAC's outdated and failed 2002 recommendations.

d. Iowa DNR Has a Duty to Comprehensively Review the Master Matrix and Related Regulations

Not only does DNR have the authority to initiate a rulemaking and adopt the proposed changes to the matrix, it has a statutory obligation to comprehensively review all of its regulations, including the matrix and related regulations, every five years. In 2012, the Iowa legislature amended the IAPA to require that "[b]eginning July 1, 2012, over each five-year period of time, and agency shall conduct an ongoing and comprehensive review of all of the agency's rules. The goal of the review is the identification and elimination of all rules of the agency that are outdated . . . or inconsistent or incompatible with statute"⁸¹ DNR did conduct a limited animal feeding operation rulemaking in 2016 to amend Chapter 65, with the purpose of "implement[ing] a portion of the five-year rules review plan" required by the legislature.⁸² However, this rulemaking did not make any substantive revisions to the matrix or related regulations, and there is no indication from the rulemaking process that DNR comprehensively reviewed whether the elements of the matrix are outdated or need to be

public input in the 2002 rulemaking would provide additional grounds for revisiting the matrix through a new IAPA rulemaking.

⁷⁹ See *Little v. Winborn*, 518 N.W.2d 384, 387 (Iowa 1994) ("a 'recommendation' is 'an action which is advisory in nature rather than one having any binding effect.'") (quoting BLACK'S LAW DICTIONARY 1272 (6th. ed. 1990)).

⁸⁰ See, e.g., *id.*; *Mason v. Iowa Vision Board*, 700 N.W.2d 349, 356 (Iowa 2005) ("[U]ltimate authority to accept or reject the development agreement was reserved to the board; the committee's duty was advisory only Once again, the *board* made the ultimate decision on the course of action to be taken on the [disputed] project."); *Donahue v. State*, 474 N.W.2d 537, 539 (Iowa 1991) ("It is clear that the panel exists essentially as an advisory board. It exercises no policy-making power. Its findings are in no way binding on the board of regents.").

⁸¹ IOWA CODE § 17A.7(2).

⁸² Environmental Protection Commission, *Notice of Intended Action*, 21 IOWA ADMIN. BULL. 1926 (Apr. 13, 2016), <https://www.legis.iowa.gov/docs/aco/bulletin/04-13-2016.pdf>.

otherwise revised.⁸³ As discussed *supra*, the matrix is significantly outdated, has never proven effective, and is fundamentally incompatible with the goals and language of the Animal Agriculture Compliance Act. DNR must complete a review of the regulations to comply with the rule review provisions of the Iowa Code.

IV. Conclusion

Since the master matrix went into effect 15 years ago, DNR has amassed sufficient evidence to determine that it is not adequately protecting communities and the environment, and to determine how it should be modified to better meet existing needs while acting within the agency's authority. The Petitioners urge DNR to initiate rulemaking to strengthen the master matrix, consistent with the intent of the Iowa General Assembly, creating pathways to make it easier for counties to participate in the matrix process, as proposed. The Petitioners believe that the proposed revisions will lead CFOs to implement best practices and result in improved air and water quality across the State of Iowa.

⁸³ *Id.* See also *Iowa DNR 5-Year Rule Review Plan*, IOWA DNR (Jan. 23, 2013), www.iowadnr.gov/Portals/idnr/uploads/files/201301_5yrplan.pdf, which does not include information specific to the review plan for animal feeding operation or master matrix regulations.

Enclosure

B

Master Matrix Analysis

2007-2008

By Rick Rutter

Iowa DNR Environment Services Division
Research Analyst Intern

Master Matrix Goals

1. Show the number of each item along with the amount and percentage that the item was answered. This will display which items are being answered and which are not being answered.
2. Show variable choices for each item that is answered along with the amount and percentage each variable was selected. This will tell us which variables are being selected and which are not.
3. Show points system based upon total, Air, Water, and Community. Also, compute each applications minimum, maximum, and average for points. Relate data to the criteria set forth by the DNR. This will display data for point system interpretation.

CAFO Project Process

1. Converted available Master Matrix files into PDF format.
2. File names and numbers were entered into Excel Spreadsheet.
3. After Each Master Matrix file was reviewed. The data from the 44 items along with variables that pertain to some of the 44 items were entered into the spreadsheet. The points accrued for the total, air, water, and community categories were also entered per file in the spreadsheet.
4. Upon completion of data, an accumulation of data was constructed resulting in each of the 44 items on the Master Matrix being totaled and averaged. The variables that pertain to some of the 44 items were also totaled and averaged. The point accrued for the total, air, water, and community categories were also totaled and averaged.
5. After gathering these results, charts and graphs were constructed to be displayed with the Master Matrix.
6. Completion of Master Matrix Analysis

Final Analysis

Conversion to digital format will result in a more proficient manner to analyze Master Matrix information. By making the Master Matrix an important priority, it will result in a greater amount of files being reviewed. Master Matrix points system is very subjective and should continuously be evaluated with the changes in laws and regulations. The empirical and quantitative data shows all aspects of the Master Matrix and the interpretation of this data can be used for future implementation strategies to the Master Matrix.

APPENDIX C MASTER MATRIX

-The colored graph positioned on the left side per item number represents the percent the item was selected or not selected.
 -The colored bar graphs positioned on the right represent those item numbers that contain variables. This bar graph shows the amount as well as the percentage each variable was selected.

1 Additional separation distance, above minimum requirements, from proposed confinement structure to the closest:

- * Residence not owned by the owner of the confinement feeding operation,
- * Hospital,
- * Nursing home, or
- * Licensed or registered child care facility.

Variable
1
2
3
4
5

	Score	Air	Water	Community
250 feet to 500 feet	25	16.25		8.75
501 feet to 750 feet	45	29.25		17.50
751 feet to 1,000 feet	65	42.25		22.75
1,001 feet to 1,250 feet	85	55.25		29.75
1,251 feet or more	100	65.00		35.00

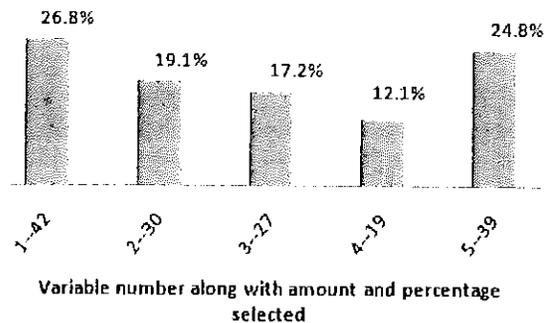
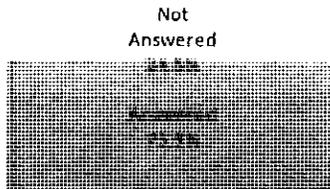
(A) Refer to the construction permit application package to determine the animal unit capacity (or animal weight capacity if an expansion) of the proposed confinement feeding operation. Then refer to Table 6 of 567--Chapter 65 to determine minimum required separation distances.

(B) The department will award points only for the single building, of the four listed above, closest to the proposed confinement feeding operation.

(C) "Licensed child care center" – a facility licensed by the department of human services providing child care or preschool services for seven or more children, except when the facility is registered as a child care home.

(D) "Registered child development homes" - child care providers certify that they comply with rules adopted by the department of human services. This process is voluntary for providers caring for five or fewer children and mandatory for providers caring for six or more children.

(E) A full listing of licensed and registered child care facilities is available at county offices of the department of human services.

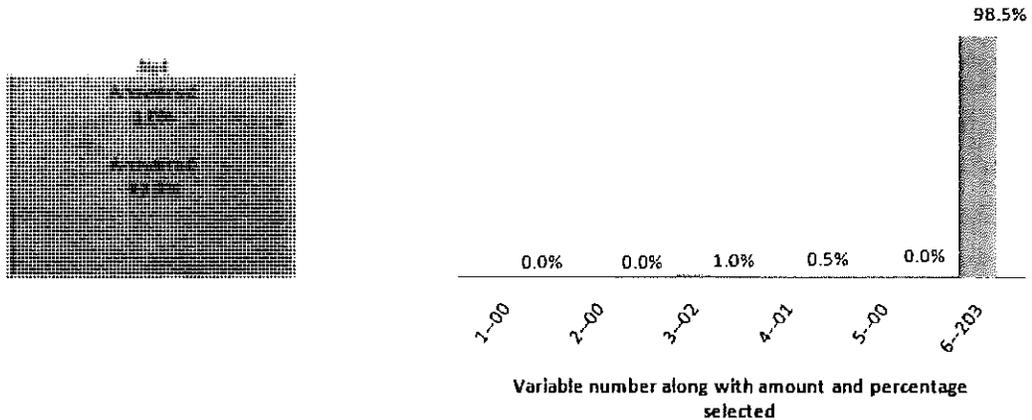


2 Additional separation distance, above minimum requirements, from proposed confinement structure to the closest public use area.

Variable		Score	Air	Water	Community
1	250 feet to 500 feet	5	2.00		3.00
2	501 feet to 750 feet	10	4.00		6.00
3	751 feet to 1,000 feet	15	6.00		9.00
4	1,001 feet to 1,250 feet	20	8.00		12.00
5	1,251 feet to 1,500 feet	25	10.00		15.00
6	1,501 feet or more	30	12.00		18.00

A) Refer to the construction permit application package to determine the animal unit capacity (or animal weight capacity if an expansion) of the proposed confinement feeding operation. Then refer to Table 6 of 567--Chapter 65 to determine minimum required separation distances.

(B) "Public use area" - a portion of land owned by the United States, the state, or a political subdivision with facilities which attract the public to congregate and remain in the area for significant periods of time. Facilities include, but are not limited to, picnic grounds, campgrounds, cemeteries, lodges, shelter houses, playground equipment, lakes as listed in Table 2 of 567--Chapter 65, and swimming beaches. It does not include a highway, road right-of-way, parking areas, recreational trails or other areas where the public passes through, but does not congregate or remain in the area for significant periods of time.



- 3 Additional separation distance, above minimum requirements, from proposed confinement structure to the closest:
- * Educational institution,
 - * Religious institution, or
 - * Commercial enterprise.

Variable		Score	Air	Water	Community
1	250 feet to 500 feet	5	2.00		3.00
2	501 feet to 750 feet	10	4.00		6.00
3	751 feet to 1,000 feet	15	6.00		9.00
4	1,001 feet to 1,250 feet	20	8.00		12.00
5	1,251 feet to 1,500 feet	25	10.00		15.00
6	1,501 feet or more	30	12.00		18.00

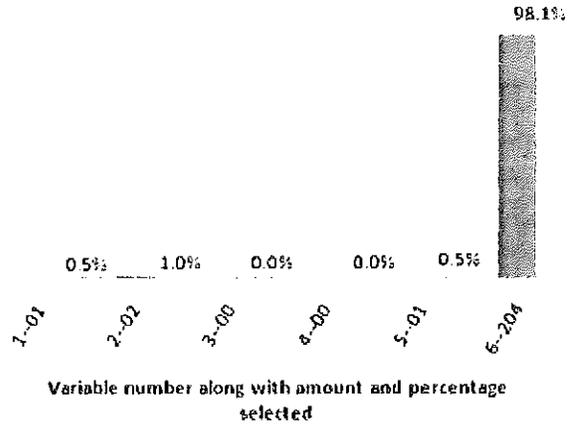
(A) Refer to the construction permit application package to determine the animal unit capacity (or animal weight capacity if an expansion) of the proposed confinement feeding operation. Then refer to Table 6 of 567--Chapter 65 to determine minimum required separation distances.

(B) The department will award points only for the single building, of the three listed above, closest to the proposed confinement feeding operation.

(C) "Educational institution" - a building in which an organized course of study or training is offered to students enrolled in kindergarten through grade 12 and served by local school districts, accredited or approved nonpublic schools, area educational agencies, community colleges, institutions of higher education under the control of the state board of regents, and accredited independent colleges and universities.

(D) "Religious institution" - a building in which an active congregation is devoted to worship.

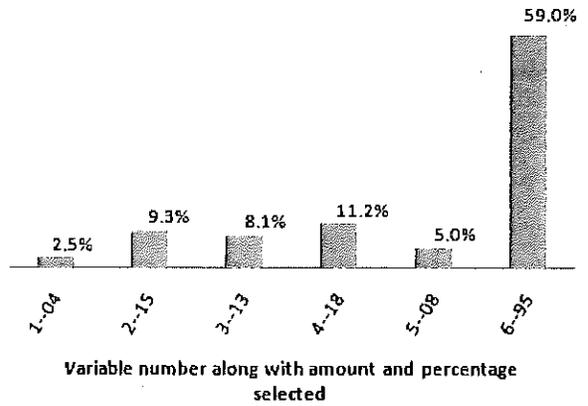
(E) "Commercial enterprise" - a building which is used as a part of a business that manufactures goods, delivers services, or sells goods or services, which is customarily and regularly used by the general public during the entire calendar year and which is connected to electric, water, and sewer systems. A commercial enterprise does not include a farm operation.



- 4 Additional separation distance, above minimum requirement of 500 feet, from proposed confinement structure to the closest water source.

Variable		Score	Air	Water	Community
1	250 feet to 500 feet	5		5.00	
2	501 feet to 750 feet	10		10.00	
3	751 feet to 1,000 feet	15		15.00	
4	1,001 feet to 1,250 feet	20		20.00	
5	1,251 feet to 1,500 feet	25		25.00	
6	1,501 feet or more	30		30.00	

Water source" - a lake, river, reservoir, creek, stream, ditch, or other body of water or channel having definite banks and a bed with water flow, except lakes or ponds without an outlet to which only one landowner is riparian.



- 5 Separation distance of 300 feet or more from the proposed confinement structure to the nearest thoroughfare.

	Score	Air	Water	Community
300 feet or more	30	9.00		21.00

(A) "Thoroughfare" - a road, street, bridge, or highway open to the public and constructed or maintained by the state or a political subdivision.

(B) The 300-foot distance includes the 100-foot minimum setback plus additional 200 feet.

"Water source" - a lake, river, reservoir, creek, stream, ditch, or other body of water or channel having definite banks and a bed with water flow, except lakes or ponds without an outlet to which only one landowner is riparian.

Not
Answered
66.8%

Answered
33.2%

- 6 Additional separation distance, above minimum requirements, from proposed confinement structure to the closest critical public area.

	Score	Air	Water	Community
500 feet or more	10	4.00		6.00

(A) All critical public areas as defined in 567--65.1(455B), are public use areas, and therefore subject to public use area minimum separation distances.

(B) Refer to the construction permit application package to determine the animal unit capacity (or animal weight capacity if an expansion) of the proposed confinement feeding operation. Then refer to Table 6 of 567--Chapter 65 to determine minimum required separation distances.

Not
Answered
100%

Answered
0%

- 7 Proposed confinement structure is at least two times the minimum required separation distance from all private and public water wells.

	Score	Air	Water	Community
Two times the minimum separation distance	30		24.00	6.00

Refer to Table 6 of 567--Chapter 65 for minimum required separation distances to wells.

Not
Answered
45.7%



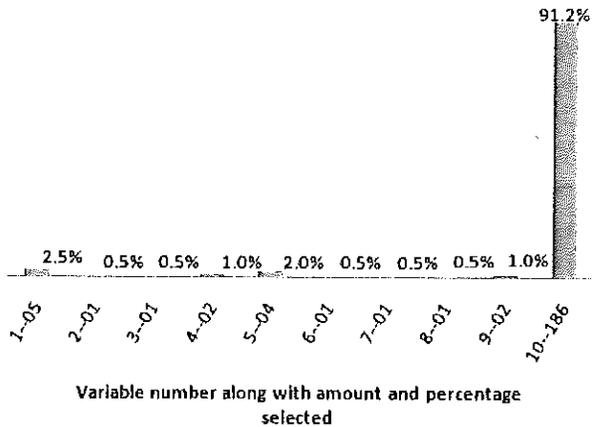
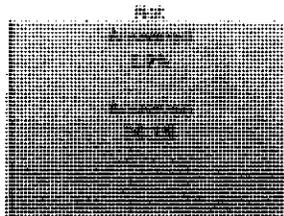
- 8 Additional separation distance, above the minimum requirement of 1,000 feet, from proposed confinement structure to the closest:
- * Agricultural drainage well,
 - * Known sinkhole, or
 - * Major water source.

Variable		Score	Air	Water	Community
1	250 feet to 500 feet	5	0.50	2.50	2.00
2	501 feet to 750 feet	10	1.00	5.00	4.00
3	751 feet to 1,000 feet	15	1.50	7.50	6.00
4	1,001 feet to 1,250 feet	20	2.00	10.00	8.00
5	1,251 feet to 1,500 feet	25	2.50	12.50	10.00
6	1,501 feet to 1,750 feet	30	3.00	15.00	12.00
7	1,751 feet to 2,000 feet	35	3.50	17.50	14.00
8	2,001 feet to 2,250 feet	40	4.00	20.00	16.00
9	2,251 feet to 2,500 feet	45	4.50	22.50	18.00
10	2,501 feet or more	50	5.00	25.00	20.00

(A) The department will award points only for the single item, of the three listed above, that is closest to the proposed confinement feeding operation.

(B) "Agricultural drainage wells" - include surface intakes, cisterns and wellheads of agricultural drainage wells.

(C) "Major water source" - a lake, reservoir, river or stream located within the territorial limits of the state, or any marginal river area adjacent to the state which can support a floating vessel capable of carrying one or more persons during a total of a six-month period in one out of ten years, excluding periods of flooding. Major water sources in the state are listed in Tables 1 and 2 in 567--Chapter 65.

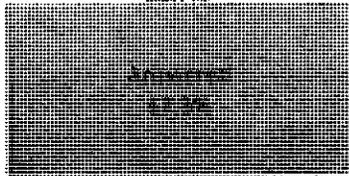


- 9 Distance between the proposed confinement structure and the nearest confinement facility that has a submitted department manure management plan.

	Score	Air	Water	Community
Three-quarter of a mile or more (3,960 feet)	25	7.50	7.50	10.00

Confinement facilities include swine, poultry, and dairy and beef cattle.

Not
Answered
31.7%



- 10 Separation distance from proposed confinement structure to closest:
 *High quality (HQ) waters,
 * High quality resource (HQR) waters, or
 * Protected water areas (PWA)
 is at least two times the minimum required separation distance

	Score	Air	Water	Community
Two times the minimum separation distance	30		22.50	7.50

(A) The department will award points only for the single item, of the three listed above, closest to the proposed confinement feeding operation.

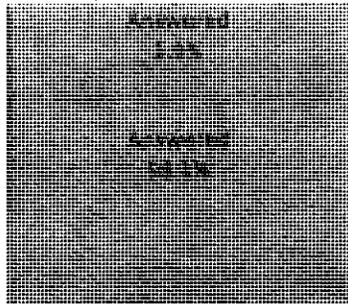
(B) HQ waters are identified in 567--Chapter 61.

(C) HQR waters are identified in 567--Chapter 61.

(D) A listing of PWAs is available at

<http://www.state.ia.us/government/dnr/organize/ppd/prowater.htm#Location%20of%20PWA's%20in>.

Not



- 11 Air quality modeling results demonstrating an annoyance level less than 2 percent of the time for residences within two times the minimum separation distance.

	Score	Air	Water	Community
University of Minnesota OFFSET model results demonstrating an annoyance level less than 2 percent of the time	10	6.00		4.00

(A) OFFSET can be found at <http://www.extension.umn.edu/distribution/livestocksystems/DI7680.html>. For more information, contact Dr. Larry Jacobson, University of Minnesota, (612) 625-8288, jacob007@tc.umn.edu.

(B) A residence that has a signed waiver for the minimum separation distance cannot be included in the model.

(C) Only the OFFSET model is acceptable until the department recognizes other air quality models.

Not
Answered
98.1%

Answered

1.9%

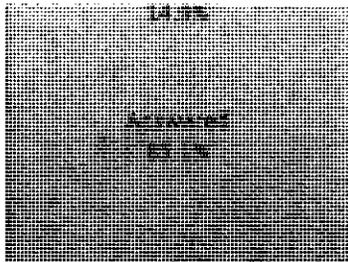
- 12 Liquid manure storage structure is covered.

	Score	Air	Water	Community
Covered liquid manure storage	30	27.00		3.00

(A) "Covered" - organic or inorganic material, placed upon an animal feeding operation structure used to store manure, which significantly reduces the exchange of gases between the stored manure and the outside air. Organic materials include, but are not limited to, a layer of chopped straw, other crop residue, or a naturally occurring crust on the surface of the stored manure. Inorganic materials include, but are not limited to, wood, steel, aluminum, rubber, plastic, or Styrofoam. The materials shall shield at least 90 percent of the surface area of the stored manure from the outside air. Cover shall include an organic or inorganic material which current scientific research shows reduces detectable odor by at least 75 percent. A formed manure storage structure directly beneath a floor where animals are housed in a confinement feeding operation is deemed to be covered.

(B) The design, operation and maintenance plan for the manure cover must be in the construction permit application and made a condition in the approved construction permit.

Not
Answered



- 13 Construction permit application contains design, construction, operation and maintenance plan for emergency containment area at manure storage structure pump-out area.

	Score	Air	Water	Community
Emergency containment	20		18.00	2.00

- (A) The emergency containment area must be able to contain at least 5 percent of the total volume capacity of the manure storage structure.
 (B) The emergency containment area must be constructed on soils that are fine-grained and have low permeability.
 (C) If manure is spilled into the emergency containment area, the spill must be reported to the department within six hours of onset or discovery.
 (D) The design, construction, operation and maintenance plan for the emergency containment area must be in the construction permit application and made a condition in the approved construction permit.

Not
 Answered
 98.6%

Answered
 1.4%

- 14 Installation of a filter(s) designed to reduce odors from confinement building(s) exhaust fan(s).

	Score	Air	Water	Community
Installation of filter(s)	10	8.00		2.00

The design, operation and maintenance plan for the filter(s) must be in the construction permit application and made a condition in the approved construction permit.

Not
 Answered
 100.0%

15 Utilization of landscaping around confinement structure.

	Score	Air	Water	Community
Utilization of landscaping	20	10.00		10.00

The design, operation and maintenance plan for the landscaping must be in the construction permit application and made a condition in the approved construction permit. The design should contain at least three rows of trees and shrubs, of both fast and slow-growing species that are well suited for the site.

Not
Answered
82.2%

Answered
17.8%

16 Enhancement, above minimum requirements, of structures used in stockpiling and composting activities, such as an impermeable pad and a roof or cover.

	Score	Air	Water	Community
Stockpile and compost facility enhancements	30	9.00	18.00	3.00

(A) The design, operation and maintenance plan for the stockpile or compost structure enhancements must be in the construction permit application and made a condition in the approved construction permit.

(B) The stockpile or compost structures must be located on land adjacent or contiguous to the confinement building.

Not
Answered
75.5%

Answered
24.5%

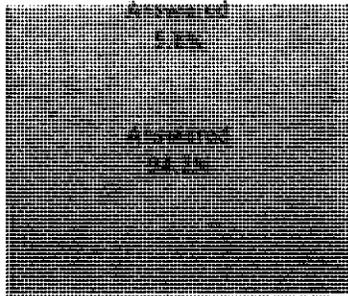
17 Proposed manure storage structure is formed

	Score	Air	Water	Community
Formed manure storage structure	30		27.00	3.00

(A) "Formed manure storage structure" - a covered or uncovered impoundment used to store manure from an animal feeding operation, which has walls and a floor constructed of concrete, concrete block, wood, steel, or similar materials. Similar materials may include, but are not limited to, plastic, rubber, fiberglass, or other synthetic materials. Materials used in a formed manure storage structure shall have the structural integrity to withstand expected internal and external load pressures.

(B) The design, operation and maintenance plan for the formed manure storage structure must be in the construction permit application and made a condition in the approved construction permit.

Not



18 Manure storage structure is aerated to meet departmental standards as an aerobic structure, if aeration is not already required by the department.

	Score	Air	Water	Community
Aerated manure storage structure(s)	10	8.00		2.00

(A) Aerobic structure - an animal feeding operation structure other than an egg washwater storage structure which relies on aerobic bacterial action which is maintained by the utilization of air or oxygen and which includes aeration equipment to digest organic matter. Aeration equipment shall be used and shall be capable of providing oxygen at a rate sufficient to maintain an average of 2 milligrams per liter dissolved oxygen concentration in the upper 30 percent of the depth of manure in the structure at all times.

(B) The design, operation and maintenance plan for the aeration equipment must be in the construction permit application and made a condition in the approved construction permit.

Not
Answered
99.5%

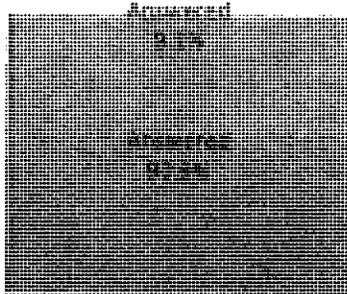
Answered
0.5%

- 19 Proposed confinement site has a suitable truck turnaround area so that semitrailers do not have to back into the facility from the road

	Score	Air	Water	Community
Truck turnaround	20			20.00

- (A) The design, operation and maintenance plan for the truck turn around area must be in the construction permit application and made a condition in the approved construction permit.
 (B) The turnaround area should be at least 120 feet in diameter and be adequately surfaced for traffic in inclement weather.

Not

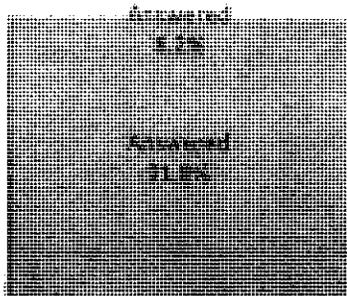


- 20 Construction permit applicant's animal feeding operation environmental and worker protection violation history for the last five years at all facilities in which the applicant has an interest.

	Score	Air	Water	Community
No history of Administrative Orders in last five years	30			30.00

- (A) "Interest" - means ownership of a confinement feeding operation as a sole proprietor or a 10 percent or more ownership interest held by a person in a confinement feeding operation as a joint tenant, tenant in common, shareholder, partner, member, beneficiary or other equity interest holder. Ownership interest is an interest when it is held either directly, indirectly through a spouse or dependent child, or both.
 (B) An environmental violation is a final Administrative Order (AO) from the department of natural resources or final court ruling against the construction permit applicant for environmental violations related to an animal feeding operation. A Notice of Violation (NOV) does not constitute a violation.

Not



21 Construction permit applicant waives the right to claim a Pollution Control Tax Exemption for the life of the proposed confinement feeding operation structure.

	Score	Air	Water	Community
Permanent waiver of Pollution Control Tax Exemption	5			5.00

(A) Waiver of Pollution Control Tax Exemption is limited to the proposed structure(s) in the construction permit application.

(B) The department and county assessor will maintain a record of this waiver, and it must be in the construction permit application and made a condition in the approved construction permit.

Not
Answered
97.1%

Answered
2.9%

22 Construction permit applicant can lawfully claim a Homestead Tax Exemption on the site where the proposed confinement structure is to be constructed
- OR -
the construction permit applicant is the closest resident to the proposed confinement structure.

	Score	Air	Water	Community
Site qualifies for Homestead Tax Exemption or permit applicant is closest resident to proposed structure	25			25.00

Proof of Homestead Tax Exemption is required as part of the construction permit application.

(A) Applicant include persons who have ownership interests. "Interest" - means ownership of a confinement feeding operation as a sole proprietor or a 10 percent or more ownership interest held by a person in a confinement feeding operation as a joint tenant, tenant in common, shareholder, partner, member, beneficiary or other equity interest holder. Ownership interest is an interest when it is held either directly, indirectly through a spouse or dependent child, or both.

Not
Answered
77.9%

Answered
22.1%

- 23 Construction permit applicant can lawfully claim a Family Farm Tax Credit for agricultural land where the proposed confinement feeding operation is to be located pursuant to Iowa Code chapter 425A.

	Score	Air	Water	Community
Family Farm Tax Credit qualification	25			25.00

(A) Applicant include persons who have ownership interests. "Interest" - means ownership of a confinement feeding operation as a sole proprietor or a 10 percent or more ownership interest held by a person in a confinement feeding operation as a joint tenant, tenant in common, shareholder, partner, member, beneficiary or other equity interest holder. Ownership Interest is an interest when it is held either directly, indirectly through a spouse or dependent child, or both.

Not
Answered
68.3%

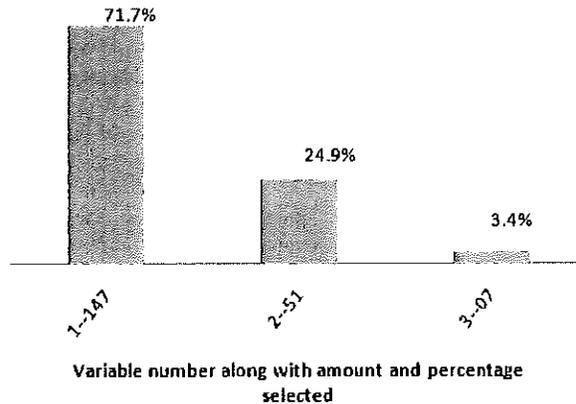
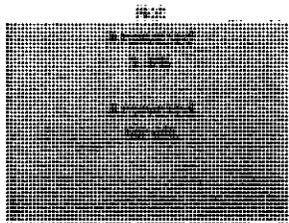


24 Facility size.

Variable
1
2
3

	Score	Air	Water	Community
1 to 2,000 animal unit capacity	20			20.00
2,001 to 3,000 animal unit capacity	10			10.00
3,001 animal unit capacity or more	0			0.00

- (A) Refer to the construction permit application package to determine the animal unit capacity of the proposed confinement structure at the completion of construction.
- (B) If the proposed structure is part of an expansion, animal unit capacity (or animal weight capacity) must include all animals confined in adjacent confinement structures.
- (C) Two or more animal feeding operations under common ownership or management are deemed to be a single animal feeding operation if they are adjacent or utilize a common area or system for manure disposal. In addition, for purposes of determining whether two or more confinement feeding operations are adjacent, all of the following must apply:
- (a) At least one confinement feeding operation structure must be constructed on and after May 21, 1998.
 - (b) A confinement feeding operation structure which is part of one confinement feeding operation is separated by less than a minimum required distance from a confinement feeding operation structure which is part of the other confinement feeding operation. The minimum required distance shall be as follows:
 - (1) 1,250 feet for confinement feeding operations having a combined animal unit capacity of less than 1,000 animal units.
 - (2) 2,500 feet for confinement feeding operations having a combined animal unit capacity of 1,000 animal units or more.

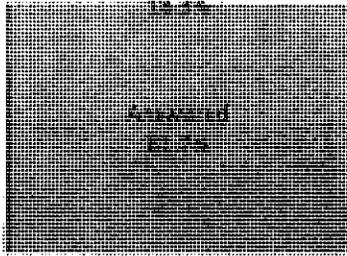


25 Construction permit application includes livestock feeding and watering systems that significantly reduce manure volume.

	Score	Air	Water	Community
Wet/dry feeders or other feeding and watering systems that significantly reduce manure volume	25		12.50	12.50

The design, operation and maintenance plan for the feeding system must be in the construction permit application and made a condition in the approved construction permit.

Not
Answered

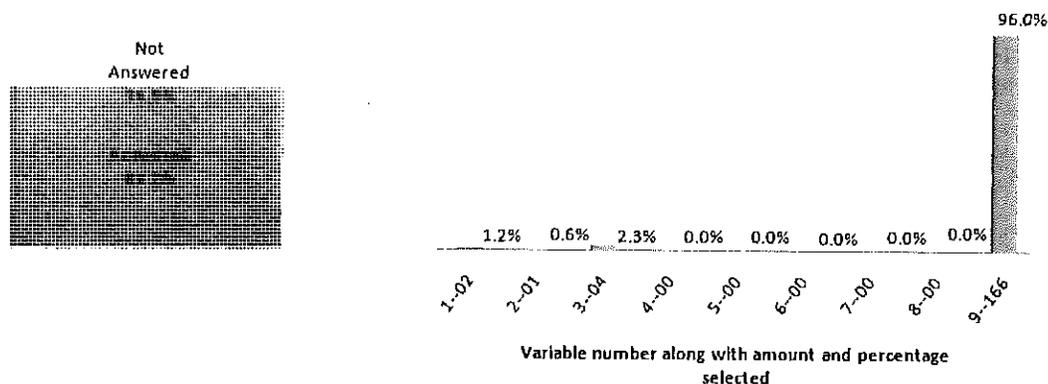


Proposed Site Operation and Manure Management Practices

The following scoring criteria apply to the operation and manure management characteristics of the proposed confinement feeding operation. Mark one score under each criterion that best reflects the characteristics of the submitted manure management plan.

Variable	26 Liquid or dry manure (choose only one subsection from subsections "a" - "e" and mark one					
		Score	Air	Water	Community	
1	a.	Bulk dry manure is sold under Iowa Code chapter 200A and surface-applied	15		15.00	
2		Bulk dry manure is sold under Iowa Code chapter 200A and incorporated on the same date it is land-applied	30	12.00	12.00	6.00
3	b.	Dry manure is composted and land-applied under the requirements of a department manure management plan	10	4.00	4.00	2.00
4		Dry manure is composted and sold so that no manure is applied under the requirements of a department manure management plan	30	12.00	12.00	6.00
5	c.	Methane digester is used to generate energy from manure and remaining manure is surface-applied under the requirements of an approved department manure management plan	10	3.00	3.00	4.00
6		After methane digestion is complete, manure is injected or incorporated on the same date it is land-applied under the requirements of an approved department manure management plan	30	12.00	12.00	6.00
7	d.	Dry manure is completely burned to generate energy and no remaining manure is applied under the requirements of a manure management plan	30	9.00	9.00	12.00
8		Some dry manure is burned to generate energy, but remaining manure is land-applied and incorporated on the same date it is land-applied	30	12.00	12.00	6.00
9	e.	Injection or incorporation of manure on the same date it is land-applied	30	12.00	12.00	6.00

- (A) Choose only ONE line from subsection "a", "b," "c," "d," or "e" above and mark only one score in that subsection.
- (B) The injection or incorporation of manure must be in the construction permit application and made a condition in the approved construction permit.
- (C) If an emergency arises and injection or incorporation is not feasible, prior to land application of manure the applicant must receive a written approval for an emergency waiver from a department field office to surface-apply manure.
- (D) Requirements pertaining to the sale of bulk dry manure under pursuant to Iowa Code chapter 200A must be incorporated into the construction permit application and made a condition of the approved construction permit.
- (E) The design, operation and maintenance plan for utilization of manure as an energy source must be in the construction permit application and made a condition in the approved construction permit.
- (F) The design, operation and maintenance plan for composting facilities must be in the construction permit application and made a condition in the approved construction permit.



27 Land application of manure is based on a two-year crop rotation phosphorus uptake level.

	Score	Air	Water	Community
Two-year phosphorus crop uptake application rate	10		10.00	

- (A) Land application of manure cannot exceed phosphorus crop usage levels for a two-year crop rotation cycle.
- (B) The phosphorus uptake application rates must be in the construction permit application and made a condition in the approved construction permit.

Not Answered
93.3%

Answered
6.7%

- 28 Land application of manure to farmland that has USDA Natural Resources Conservation Service (NRCS) approved buffer strips contiguous to all water sources traversing or adjacent to the fields listed in the manure management plan.

	Score	Air	Water	Community
Manure application on farmland with buffer strips	10		8.00	2.00

(A) The department may request NRCS maintenance agreements to ensure proper design, installation and maintenance of filter strips. If a filter strip is present but not designed by NRCS, it must meet NRCS standard specifications.

(B) The application field does not need to be owned by the confinement facility owner to receive points.

(C) On current and future manure management plans, the requirement for buffer strips on all land application areas must be in the construction permit application and made a condition in the approved construction permit.

Not
Answered
97.1%

Answered
2.9%

- 29 Land application of manure does not occur on highly erodible land (HEL), as classified by the USDA NRCS.

	Score	Air	Water	Community
No manure application on HEL farmland	10		10.00	

Manure application on non-HEL farmland must be in the construction permit application and made a condition in the approved construction permit.

Not
Answered
73.1%

Answered
26.9%

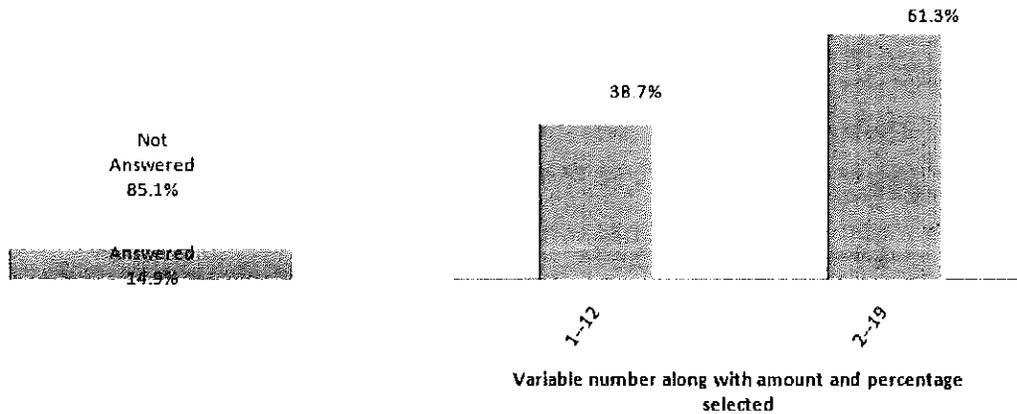
30 Additional separation distance, above minimum requirements (0 or 750 feet, see below), for the land application of manure to the closest:

- *Residence not owned by the owner of the confinement feeding operation,
- * Hospital,
- * Nursing home, or
- *Licensed or registered child care facility.

Variable
1
2

	Score	Air	Water	Community
Additional separation distance of 200 feet	5	3.25		1.75
Additional separation distance of 500 feet	10	6.50		3.50

- (A) The department will award points only for the single building, of the four listed above, closest to the proposed confinement feeding operation.
- (B) Minimum separation distance for land application of manure injected or incorporated on the same date as application: 0 feet.
- (C) Minimum separation distance for land application of manure broadcast on soil surface: 750 feet.
- (D) The additional separation distances must be in the construction permit application and made a condition in the approved construction permit.
- (E) "Licensed child care center" – a facility licensed by the department of human services providing child care or preschool services for seven or more children, except when the facility is registered as a child care home.
- (F) "Registered child development homes" - child care providers certify that they comply with rules adopted by the department of human services. This process is voluntary for providers caring for five or fewer children and mandatory for providers caring for six or more children.
- (G) A full listing of licensed and registered child care facilities is available at county offices of the department of human services.



31 Additional separation distance, above minimum requirements (0 or 750 feet, see below), for land application of manure to closest public use area.

	Score	Air	Water	Community
Additional separation distance of 200 feet	5	2.00		3.00

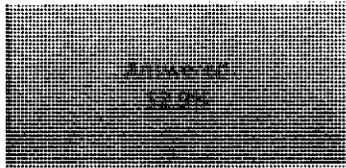
(A) "Public use area" - a portion of land owned by the United States, the state, or a political subdivision with facilities which attract the public to congregate and remain in the area for significant periods of time. Facilities include, but are not limited to, picnic grounds, campgrounds, cemeteries, lodges, shelter houses, playground equipment, lakes as listed in Table 2 in 567--Chapter 65, and swimming beaches. It does not include a highway, road right-of-way, parking areas, recreational trails or other areas where the public passes through, but does not congregate or remain in the area for significant periods of time.

(B) Minimum separation distance for land application of manure injected or incorporated on the same date as application: 0 feet.

(C) Minimum separation distance for land application of manure broadcast on soil surface: 750 feet.

(D) The additional separation distances must be in the construction permit application and made a condition in the approved construction permit.

Not
Answered
47.1%



32 Additional separation distance, above minimum requirements (0 or 750 feet, see below), for the land application of manure to the closest:

- * Educational institution,
- * Religious institution, or
- * Commercial enterprise.

	Score	Air	Water	Community
Additional separation distance of 200 feet	5	2.00		3.00

(A) Minimum separation distance for land application of manure broadcast on soil surface: 750 feet.

(B) Minimum separation distance for land application of manure injected or incorporated on same date as application: 0 feet.

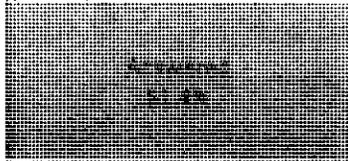
(C) The additional separation distances must be in the construction permit application and made a condition in the approved construction permit.

(D) "Educational institution" - a building in which an organized course of study or training is offered to students enrolled in kindergarten through grade 12 and served by local school districts, accredited or approved nonpublic schools, area educational agencies, community colleges, institutions of higher education under the control of the state board of regents, and accredited independent colleges and universities.

(E) "Religious institution" - a building in which an active congregation is devoted to worship.

(F) "Commercial enterprise" - a building which is used as a part of a business that manufactures goods, delivers services, or sells goods or services, which is customarily and regularly used by the general public during the entire calendar year and which is connected to electric, water, and sewer systems. A commercial enterprise does not include a farm operation.

Not
Answered
48.6%



33 Additional separation distance of 50 feet, above minimum requirements (0 or 200 feet, see below), for the land application of manure to the closest private drinking water well or public drinking water well

- OR -

well is properly closed under supervision of county health officials.

	Score	Air	Water	Community
Additional separation distance of 50 feet or well is properly closed	10		8.00	2.00

(A) Minimum separation distance for land application of manure injected or incorporated on the same date as application or 50-foot vegetation buffer exists around well and manure is not applied to the buffer: 0 feet.

(B) Minimum separation distance for land application of manure broadcast on soil surface: 200 feet.

(C) If applicant chooses to close the well, the well closure must be incorporated into the construction permit application and made a condition in the approved construction permit.

Not
Answered
60.1%



34 Additional separation distance, above minimum requirements, for the land application of manure to the closest:

- * Agricultural drainage well,
- * Known sinkhole,
- * Major water source, or
- * Water source.

Variable
1
2

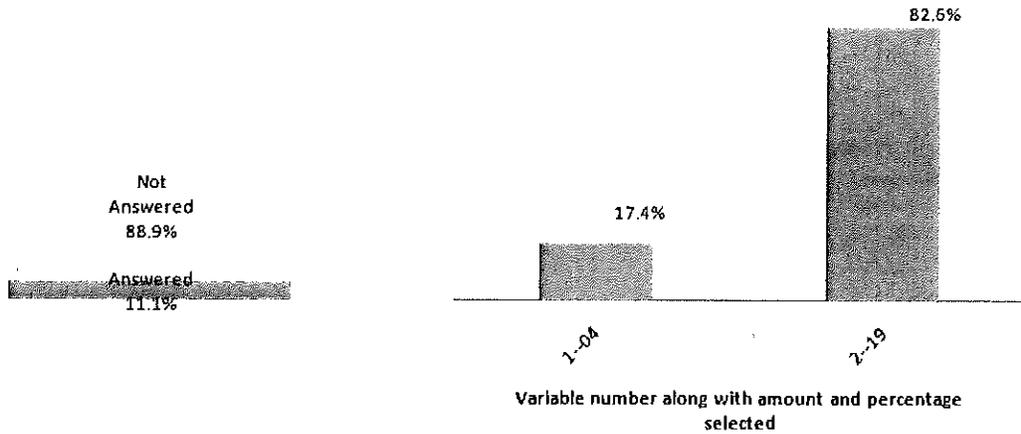
	Score	Air	Water	Community
Additional separation distance of 200 feet	5	0.50	2.50	2.00
Additional separation distance of 400 feet	10	1.00	5.00	4.00

(A) "Agricultural drainage wells" - include surface intakes, cisterns and wellheads of agricultural drainage wells.

(B) "Major water source" - a lake, reservoir, river or stream located within the territorial limits of the state, or any marginal river area adjacent to the state, which can support a floating vessel capable of carrying one or more persons during a total of a six-month period in one out of ten years, excluding periods of flooding. Major water sources in the state are listed in Tables 1 and 2 in 567--Chapter 65.

(C) "Water source" - a lake, river, reservoir, creek, stream, ditch, or other body of water or channel having definite banks and a bed with water flow, except lakes or ponds without an outlet to which only one landowner is riparian.

(D) The additional separation distances must be in the construction permit application and made a condition in the approved construction permit.



35 Additional separation distance above minimum requirements, for the land application of manure, to the closest:

- * High quality (HQ) water,
- * High quality resource (HQR) water, or
- * Protected water area (PWA).

Variable
1
2

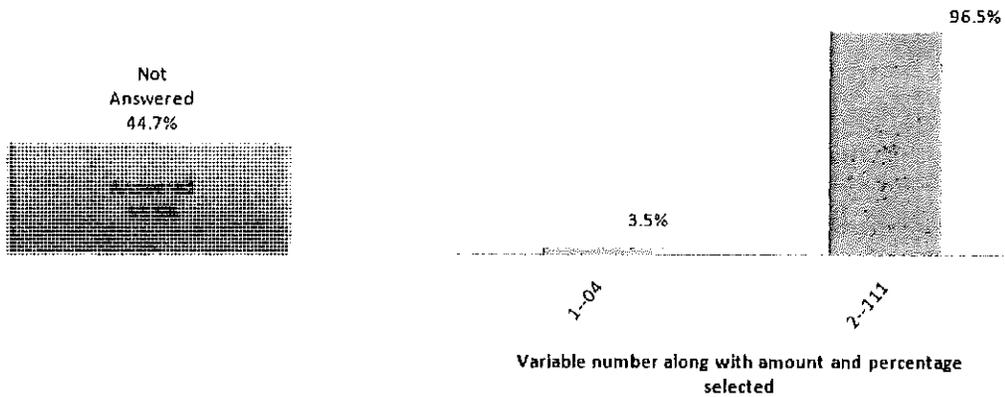
	Score	Air	Water	Community
Additional separation distance of 200 feet	5		3.75	1.25
Additional separation distance of 400 feet	10		7.50	2.50

(A) HQ waters are identified in 567--Chapter 61.

(B) HQR waters are identified in 567--Chapter 61.

(C) A listing of PWAs is available at

<http://www.state.ia.us/government/dnr/organiza/ppd/prowater.htm#Location%20of%20PWA's%20in>



36 Demonstrated community support.

	Score	Air	Water	Community
Written approval of 100% of the property owners within a one mile radius.	20			20.00

Not
Answered
99.5%

Answered
0.5%

37 Worker safety and protection plan is submitted with the construction permit application.

	Score	Air	Water	Community
Submission of worker safety and protection plan	10			10.00

(A) The worker safety and protection plan must be in the construction permit application and made a condition in the approved construction permit.

(B) The worker safety and protection plan and subsequent records must be kept on site with the manure management plan records.

Not
Answered
96.6%

Answered
3.4%

38 Applicant signs a waiver of confidentiality allowing public to view confidential manure management plan land application records

	Score	Air	Water	Community
Manure management plan confidentiality waiver	5			5.00

The waiver of confidentiality must be in the construction permit application and made a condition in the approved construction permit. The applicant may limit public inspection to reasonable times and places.

Not
Answered
93.3%

Answered
6.7%

39 Added economic value based on quality job development (number of full time equivalent (FTE) positions), and salary equal to or above Iowa department of workforce development median (45-2093)

- OR -

the proposed structure increases commercial property tax base in the county.

	Score	Air	Water	Community
Economic value to local community	10			10.00

The Iowa department of workforce development regional profiles are available at <http://www.iowaworkforce.org/centers/regional/sites.htm>. Select the appropriate region and then select "Regional Profile."

Not
Answered
89.4%

Answered
10.6%

40 Construction permit application contains an emergency action plan.

	Score	Air	Water	Community
Emergency action plan	5		2.50	2.50

(A) Iowa State University Extension publication PM 1859 lists the components of an emergency action plan. The emergency action plan submitted should parallel the components listed in the publication.

(B) The posting and implementation of an emergency action plan must be in the construction permit application and made a condition in the approved construction permit.

(C) The emergency action plan and subsequent records must be kept on site with the manure management plan records.

Not
Answered
82.2%

Answered
17.8%

41 Construction permit application contains a closure plan.

	Score	Air	Water	Community
Closure plan	5		2.50	2.50

(A) The closure plan must be in the construction permit application and made a condition in the approved construction permit.

(B) The closure plan must be kept on site with the manure management plan records.

Not
Answered
68.3%

Answered
31.7%

42 Adoption and implementation of an environmental management system (EMS) recognized by the department.

	Score	Air	Water	Community
EMS	15	4.50	4.50	6.00

(A) The EMS must be in the construction permit application and made a condition in the approved construction permit.

(B) The EMS must be recognized by the department as an acceptable EMS for use with confinement operations.

Not
Answered
99.5%

Answered
0.5%

43 Adoption and implementation of NRCS approved Comprehensive Nutrient Management Plan (CNMP).

	Score	Air	Water	Community
CNMP	10	3.00	3.00	4.00

The implementation and continuation of a CNMP must be in the construction permit application and made a condition in the approved construction permit.

Not
Answered
98.6%

Answered
1.4%

44 Groundwater monitoring wells installed near manure storage structure), and applicant agrees to provide data to the department.

	Score	Air	Water	Community
Groundwater monitoring	15		10.50	4.50

- (A) Monitoring well location, sampling and data submission must meet department requirements.
 (B) The design, operation and maintenance plan for the groundwater monitoring wells, and data transfer to the department, must be in the construction permit application and made a condition in the approved construction permit.

Not
 Answered
 96.6%

~~Answered
 3.4%~~

Master Matrix Summary

Item #	1		2		3		4		5 6 7			8	
# of Times Chosen Out of 208	157		206		208		161		69 205 113			204	
% of Times Chosen	75.5%		99.0%		100.0%		77.4%		33.2% 98.6% 54.3%			98.1%	
Variables # and % of Times Chosen	1-42	26.8%	1-00	0.0%	1-01	0.5%	1-04	2.5%				1-05	2.5%
	2-30	19.1%	2-00	0.0%	2-02	1.0%	2-15	9.3%				2-01	0.5%
	3-27	17.2%	3-02	1.0%	3-00	0.0%	3-13	8.1%				3-01	0.5%
	4-19	12.1%	4-01	0.5%	4-00	0.0%	4-18	11.2%				4-02	1.0%
	5-39	24.8%	5-00	0.0%	5-01	0.5%	5-08	5.0%				5-04	2.0%
			6-203	98.5%	6-204	98.1%	6-95	59.0%				6-01	0.5%
												7-01	0.5%
												8-01	0.5%
												9-02	1.0%

Item #	9	10	11	12	13	14	15	16	17	18	19	20	21
# of Times Chosen Out of 208	140	204	4	177	3	0	37	51	196	1	189	191	6
% of Times Chosen	67.3%	98.1%	1.9%	85.1%	1.4%	0.0%	17.8%	24.5%	94.2%	0.5%	90.9%	91.8%	2.9%
Variables # and % of Times Chosen													

Item #	22	23	24	25	26	27	28	29	30	31	32
# of Times Chosen Out of 208	46	66	205	170	173	14	6	56	31	110	107
% of Times Chosen	22.1%	31.7%	98.6%	81.7%	83.2%	6.7%	2.9%	26.9%	14.9%	52.9%	51.4%
Variables # and % of Times Chosen			1-147	71.7%	1-02	1.2%				1-12	38.7%
			2-51	24.9%	2-01	0.6%				2-19	61.3%
			3-07	3.4%	3-04	2.3%					
					4-00	0.0%					
					5-00	0.0%					
					6-00	0.0%					
					7-00	0.0%					
					8-00	0.0%					
					9-166	96.0%					

Item #	33	34	35	36	37	38	39	40	41	42	43	44
# of Times Chosen Out of 208	83	23	115	1	7	14	22	37	66	1	3	7
% of Times Chosen	39.9%	11.1%	55.3%	0.5%	3.4%	6.7%	10.6%	17.8%	31.7%	0.5%	1.4%	3.4%
Variables # and % of Times Chosen			1-04	17.4%	1-04	3.5%						
			2-19	82.6%	2-111	96.5%						

*This data is collected from the available 208 out of the 292 Master Matrix files.

Ranking of Master Matrix Categories by Use

MM Item	# of Times Used	% of Time Used
3	269	99.63
6	266	98.52
2	265	98.52
17	263	97.41
8	257	95.19
10	256	94.81
24	254	94.07
19	251	92.96
12	239	88.52
26	237	87.78
20	228	84.44
4	226	83.7
25	226	83.7
1	212	99.63
9	205	75.93
35	188	69.63
32	187	69.26
31	179	66.3
7	152	56.3
33	127	47.04
29	93	34.44
5	88	32.59
23	78	28.89
34	63	23.33
15	58	21.48
30	54	20
39	49	18.15
16	39	14.44
22	39	14.44
41	33	12.22
40	30	11.11
27	29	10.74
37	23	8.52
38	17	6.3
28	16	5.93
11	10	3.7
14	5	0.74
44	5	1.85
21	4	1.48
36	4	1.48
43	4	1.48
18	2	0.74
42	2	0.74
13	0	0

- Above items have been ranked by the frequency of use.
- There have been 272 Master Matrices submitted to the department, since the program began in 2002.

Enclosure

C



STATE OF IOWA

TERRY E. BRANSTAD, GOVERNOR
KIM REYNOLDS, LT. GOVERNOR

DEPARTMENT OF NATURAL RESOURCES
CHUCK GIPP, DIRECTOR

Work Plan Agreement 9/11/13

Between

The Iowa Department of Natural Resources and the Environmental Protection Agency Region 7

Attached to this correspondence is the IDNR report. 2016 Annual Report for WORK PLAN AGREEMENT Between the Iowa Department of Natural Resources and the Environmental Protection Agency Region 7.

This report satisfies Objective 7, Item 2, of the Work Plan for 2016. Objective 7, Item 2, commits IDNR to keeping the EPA and the public up-to-date on DNR's progress towards implementation of this Work Plan.

Item 2. Beginning in 2014 and ending in FFY 2019, DNR agrees to submit an annual report by August 1 of each year that summarizes all the relevant results associated with DNR's implementation of this Work Plan

This annual report demonstrates that DNR has met the 65.5% (cumulative) evaluation goal for inspections.

This report will be posted on the DNR's website.

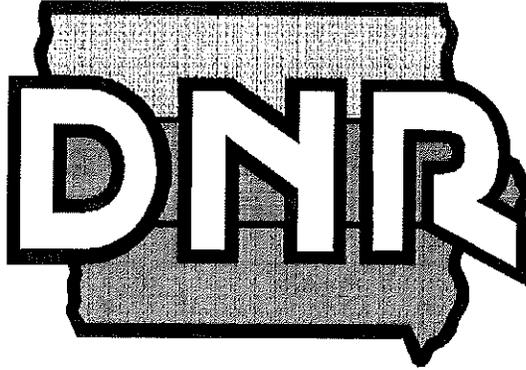
Respectfully submitted to Region 7 on August 1, 2016.

A handwritten signature in cursive script that reads "William A. Ehm".

William A. Ehm, Division Administrator

Iowa Department of Natural Resources

Environmental Services Division



2016 Annual Report

For

WORK PLAN AGREEMENT

Between

**The Iowa Department of Natural Resources and the
Environmental Protection Agency Region 7**

August 1, 2016

Introduction

The Work Plan Agreement between the Iowa Department of Natural Resources (IDNR) and the Environmental Protection Agency Region 7 was created as a means to strengthen IDNR's implementation of the federally authorized National Pollutant Discharge Elimination System (NPDES) program. A petition for withdrawal of the NPDES program authorization was submitted to the EPA on September 20, 2007 by Iowa Citizens for Community Improvement, the Sierra Club, and the Environmental Integrity Project. As a result of the petition, EPA conducted a formal investigation of the petitioners' allegations. The investigation found deficiencies in Iowa's NPDES program for concentrated animal feeding operations (CAFOs). The Work Plan was negotiated to address those deficiencies over a five-year period and covers seven specific objectives as described in this report, the third of five scheduled annual reports.

Significant progress has been made toward implementation of all stated objectives and commitments in the Work Plan. IDNR believes these objectives have been implemented through a variety of means including development of Standard Operating Procedures (SOPs), standardized forms, checklists, tracking using existing databases, inspections including on-site and desktop evaluations, and an effective enforcement program. Several additional Animal Feeding Operation (AFO) staff, funded and authorized by the State of Iowa, were hired and received extensive training to perform inspections. Existing AFO staff and supervisors also received training regarding implementation of the Work Plan. As a result, producers across the state of Iowa can expect consistent inspections to determine their regulatory status.

Adoption of the federal regulations necessary to fully implement the NPDES permitting program for confinement CAFOs that discharge to waters of the U.S. provides an additional layer of accountability for confinement operations that choose to apply, or are required to apply, for an NPDES permit. The combination of state requirements and the full complement of federal regulations puts Iowa in a strong regulatory position in regard to AFOs.

The progress with implementation of Objectives 1-6 of the Work Plan will be discussed in detail in the remainder of this report.

Objective 1: Recommend promulgation of NPDES permitting regulations for confinement CAFOs that discharge to water of the U.S.

- 1. DNR intends to recommend to the Environmental Protection Commission (Commission) that the Commission incorporate by reference the federal regulations necessary to fully implement the NPDES permitting program for confinement CAFOs that discharge to waters of the U.S. Within 180 days of execution of this Work Plan or within 180 days of notification from Region 7 that the previously submitted list of regulations to be incorporated is correct, whichever occurs last, DNR will recommend action to promulgate the proposed rules in the Iowa Administrative Bulletin pursuant to Iowa Code Chapter 17A.*

- 2. DNR will recommend that the Commission adopt by reference the revised rules within one year of execution of this Work Plan.*

The language and rule reference was submitted to Region 7 on November 21, 2013 for approval.

At the Commission's meeting on March 18, 2014, the IDNR recommended that the Commission approve publication of a Notice of Intended Action (NOIA) to adopt by reference the federal regulations necessary to fully implement the NPDES permitting program for confinement CAFOs that discharge to waters of the U.S. By unanimous vote the Commission approved the NOIA. The NOIA was published in the Iowa Administrative Bulletin on April 16, 2014.

At the Commission's meeting on August 19, 2014, the IDNR recommended that the Commission adopt by reference the federal regulations necessary to fully implement the NPDES permitting program for confinement CAFOs that discharge to waters of the U.S. By unanimous vote the Commission adopted the amendments as proposed by the IDNR. The adopted amendments were published in the Iowa Administrative Bulletin on September 17, 2014, and became effective on October 22, 2014.

Objective 2: Recommend promulgation of Iowa regulations related to setback and separation distances so that they are equivalent to federal requirements.

- 1. DNR intends to recommend to the Commission that the Commission adopt by reference federal regulations that fully implement the NPDES permitting program with respect to land application setback and separation distances for open feedlot CAFOs. Within one year of execution of this Work Plan, DNR agrees to recommend adoption by reference of applicable regulations related to setback and separation distances for open feedlot CAFOs. DNR will recommend rulemaking as set forth in Paragraph 1 of Objective 1 above.*

At the Commission's meeting on March 18, 2014, the IDNR recommended that the Commission approve publication of a NOIA to adopt by reference the federal regulations necessary to fully implement the NPDES permitting program with respect to land application setback and separation distances for open feedlot CAFOs. By unanimous vote the Commission approved the NOIA. The NOIA was published in the Iowa Administrative Bulletin on April 16, 2014.

At the Commission's meeting on August 19, 2014, the IDNR recommended that the Commission adopt by reference the federal regulations necessary to fully implement the NPDES permitting program with respect to land application setback and separation distances for open feedlot CAFOs. By unanimous vote the Commission adopted the amendments as proposed by the IDNR. The adopted amendments were published in the Iowa Administrative Bulletin on September 17, 2014, and became effective on October 22, 2014.

Objectives #1 and #2 have been met. Dates are listed and rules became effective on October 22, 2014.

Objective 3: To revise DNR application forms and templates to meet the minimum federal requirements.

1. *Within 60 days of execution of this Work Plan, DNR agrees to revise its construction permit application to include the predictive modeling requirement associated with alternative technologies and to require the additional information needed to determine whether the CAFO discharges. The revised application will include a provision stating that alternative technologies require extensive monitoring and reporting conditions in any permit; in addition, an application for a permit does not guarantee that a permit will be granted or that any permit granted will be renewed.*

The construction permit application was revised to include the predictive modeling requirement on October 23, 2013. A provision was added to the construction permit application form, stating that alternative technologies systems require extensive monitoring and reporting in the NPDES permit. In addition, the form includes a statement that an application for a permit does not guarantee that a construction or NPDES permit will be granted or that any NPDES permit will be renewed.

2. *Within 60 days of execution of this Work Plan, DNR agrees to revise its nutrient management plan template to include manure application setback requirements.*

The nutrient management plan template was revised to include manure application setback requirements on October 21, 2013. Page 1 of the Nutrient Management Plan Form (under supporting information) states "For an animal feeding operation that is required to have an NPDES permit, these restrictions include setback requirements for land application of manure, litter and process wastewater as set forth in endnote 'cc' on page 9 of this form." Those requirements are detailed on page 9 of the Nutrient Management Plan form.

Objective #3 was completed before the 2014 annual report and no changes were made to this item.

Objective 4: Compliance Evaluation and Inspections

A. To implement a comprehensive survey to identify AFOs that are CAFOs that discharge to waters of the U.S. and have failed to apply for NPDES permits.

1. *Within 30 days of execution of this Work Plan, DNR will establish a baseline inventory of all known large CAFOs and medium-sized AFOs in Iowa based upon up-to-date information contained in DNR's AFO database and provide this number to Region 7. Within 90 days of execution of this Work Plan, DNR will provide Region 7 a written plan to systematically locate and/or identify any unknown large CAFOs and medium-sized AFOs to supplement the baseline inventory. Private or personally identifiable information will not be included as part of these submittals.*

A baseline inventory from the IDNR's AFO database was established on September 19, 2013. This inventory was submitted to EPA Region 7 on October 10, 2013.

A written plan to systematically locate and/or identify unknown large CAFOs and medium-sized AFOs was developed by IDNR and submitted to EPA Region 7 on December 10, 2013. The plan is being implemented and the map search is essentially complete as of July 31, 2016. Additional investigation will be needed to determine if the unknown facilities meet the medium AFO or large CAFO thresholds.

As of July 31, 2016, 135 AFOs have been identified as medium or large AFOs or CAFOs and have been added to the database and IDNR inventory.

IDNR has identified 5063 additional AFOs that need further investigation to determine their regulatory status. After a preliminary search of several townships in NW Iowa, it is estimated that of the 5063 facilities identified, approximately 25% will be medium sized or larger AFOs. This would be an additional 1266 facilities added to IDNR inventory. Furthermore, it has been calculated that of these 1266 facilities, approximately 633 will require on-site inspections.

Since this is beyond the scope of the Work Plan agreement between IDNR and EPA, further vetting of these facilities will primarily be conducted after completion of the objectives of the Work Plan. It is further estimated that, with current staffing levels, the work required to accomplish determination of unknown AFO status will require about 2 years to complete. This estimate was based on the vetting process used by FO#3 staff.

The process to determine unknown AFO status was outlined at the IDNR AFO training in February, 2016. A trial run was completed to better understand the scope of the work needed to complete identification of the unknown AFOs. Although the final SOP to complete this task has not yet been developed, it will most likely be similar to the methods used by FO#3 IDNR staff members.

2. *Within 5 years of the execution of this Work Plan, DNR shall perform a Comprehensive Survey of all large CAFOs and medium-sized AFOs that currently do not have NPDES permits to identify, independent of information supplied by regulated persons, CAFOs that discharge to a water of the U.S. and have failed to comply with NPDES permit application or other permit requirements. The Comprehensive Survey shall be performed pursuant to and consistent with the CWA CAFO portions of the IDNR Comprehensive Survey Standard Operating Procedure (SOP) which is attached to this Work Plan.*

The Comprehensive Survey Standard Operating Procedure (SOP), dated July 3, 2013, is being utilized. Comprehensive Surveys are being conducted at large CAFOs and medium-sized AFOs in all regions of the state of Iowa. Further discussion of the inspections and evaluations of AFOs and CAFOs occurs in A.3. and A.4. below.

3. *DNR shall document for each facility the basis for its decision regarding the type of evaluation (on-site inspection or desktop evaluation) to be conducted.*

The IDNR AFO Desktop Assessment Form was developed as a means of documentation regarding the type of evaluation to be conducted at all large CAFOs and medium-sized AFOs. The types of evaluations include on-site inspections, desktop assessments and equivalent on-site inspections previously conducted since November 1, 2011.

Documentation is provided on the Desktop Assessment Form for all large CAFOS and medium-sized AFOs regardless of the type of evaluation that is conducted. On-site inspections are required for all large CAFOs and some medium-sized AFOs depending on housing type (open lot or confinement), manure storage (covered or uncovered), and distance to watercourses. Additional factors include compliance history factors which consider spills to waters of the U.S., releases of manure and legitimate, documented complaints against the facility.

Desktop and on-site inspections of confinement (totally roofed) facilities have confirmed that most of the confinements do not discharge. Iowa law requires that all manure from confinement facilities be contained between periods of manure application.

4. *DNR agrees to perform approximately 20% of these evaluations annually.*

AFO WORKPLAN REPORT 7-1-13 to 6-30-16	Total
Baseline Inventory as of 2012	8582
Total confinements inventory	7943
Total open lots inventory	1454
NPDES permit inventory	169
Combined facilities (open lot and confinement)	720
Desktop assessments performed	5620
On-site inspections performed	2284
Return on-site visits performed	111
Unknown lots identified	135
NPDES permits issued	9
Equivalent inspection (since 11/1/2011)	75

Total Confinements Inventory = actual recorded in database at or above medium-sized AFO status

Total Open Lots Inventory = actual recorded in database at or above medium-sized AFO status

Combined Facilities Inventory = actual recorded in database at or above medium-sized AFO status with a combination of open lots and confinement facilities

NPDES Permit Inventory = actual AFOs with NPDES permits in database, including newly issued permits

Desktop Assessments Performed = in office determination using publically available mapping services

On-site Inspections Performed = at the facility inspection

Return On-site Visits Performed = follow up inspection to verify status or updates

Unknown lots Identified = verified that they are a medium-sized or larger open lot which was not in the AFO database

NPDES Permits Issued = number of NPDES operation permits issued since July 1, 2013

Equivalent Inspection = a substantially equivalent on-site inspection conducted since 11/1/11

All facilities, whether or not on-site inspections are conducted, receive desktop evaluations, except NPDES permitted facilities. As of June 30, 2016, a total of 5,620 desktop assessments were completed. In addition, 75 facilities were determined to have had an equivalent on-site inspection since November 1, 2011. Therefore, of the total of 8,582 facilities in the baseline inventory, evaluations were conducted (desktop and/or on-site) at 5,620 facilities, or 65.5% of the baseline inventory.

IDNR agreed to conduct approximately 20% of these evaluations annually. IDNR has exceeded that goal.

The pace of inspections has continued to increase during the past year. It is important to note that state funding for AFO staff was reauthorized for SFY17. It appears that there is adequate staffing to meet the goals of the Work Plan.

B. To perform appropriate CWA NPDES compliance evaluation inspections at NPDES permitted CAFOs.

1. *DNR agrees to perform CWA/NPDES inspections at all NPDES permitted CAFOs in Iowa within 5 years of execution of this Work Plan, and to complete approximately 20% of these inspections annually, in accordance with the prioritization established in Paragraph 2 below. The CWA/NPDES inspections shall be conducted pursuant to and*

consistent with the CWA CAFO portions of the IDNR Concentrated Animal Feeding Operation NPDES On-Site Inspection SOP attached to this Work Plan.

The IDNR Concentrated Animal Feeding Operation NPDES On-Site Inspection SOP was developed in conjunction with development of other inspection procedures as a result of the Work Plan. Components of the inspection procedure were in place prior to the development of the Work Plan. The NPDES inspection procedure established uniform statewide procedures for inspections of permitted CAFOs. In addition, a statewide inspection form template was also developed and implemented on a statewide basis. As of July 23, 2016, IDNR had 169 active NPDES permits. IDNR is on schedule to complete all NPDES CAFO inspections within a 5 year period.

Current IDNR protocol is to inspect NPDES permitted open feedlots just prior to their permit expiration date. If any compliance issues are noted during the inspection, those items need to be resolved prior to reissuance of the permit. Also, inspections will be prioritized according to item #2, below, as those events occur.

- 2. DNR and Region 7 agree that it is appropriate to prioritize inspections of NPDES permitted facilities with spills or legally sufficient complaints as set forth in Iowa Code 459.601 or 567 IAC 65.113 (459A) that involve a water of the U.S.*

As spill reports or legally sufficient complaints are received by IDNR, those facilities will be scheduled for inspection. All NPDES permitted CAFOs will be inspected within 5 years from September 11, 2013 in accordance with this objective. IDNR is on pace to achieve that objective.

C. Resources and Training

- 1. Pursuant to Senate File 435 (2013), DNR received an increase of \$700,000 for its animal feeding operation program. This will result in approximately 7 additional full-time staff from the previous fiscal year in order to conduct the evaluation and inspections required by this Work Plan. In the annual reports required pursuant to Section 7.2 of this Work Plan, DNR will provide an assessment as to whether it has sufficient resources to meet the requirements of this Work Plan, and if not, what additional resources are needed.*

The Iowa legislature re-appropriated the funding for SFY17.

The adequacy of staffing resources will be discussed in further detail (Objective 7.2) later in the report.

- 2. Within 180 days of execution of this Work Plan, DNR will develop a CAFO/NPDES training curriculum for all staff conducting NPDES evaluations and inspections at AFO/CAFOs. The curriculum will be completed by all existing AFO/CAFO inspectors and their field office supervisors within 270 days of execution of this Work Plan. New AFO/CAFO staff/inspectors will complete the curriculum within 3 months of their start date. The curriculum will cover state and federal CWA-related matters, including CAFO inspector*

training requirements for DNR inspectors. DNR shall develop and provide the training curriculum to Region 7 for review and comment within 180 days of execution of this Work Plan.

The training curriculum was developed by a team of IDNR staff and management with guidance from EPA Region 7. The training team began meeting in October, 2013, and met approximately every other week. The final training plan was developed and submitted to EPA Region 7 on December 17, 2013.

The CAFO NPDES Training Curriculum has been implemented for all AFO field staff and field office supervisors. In addition to the core training, new AFO staff must complete on-the-job (OJT) training before conducting independent inspections. Several of the courses were video-taped for utilization by other IDNR staff, now and in the future.

All AFO staff and supervisors have been fully trained using the CAFO NPDES Training Curriculum. New AFO staff will receive the same training prior to conducting independent AFO inspections. In addition, each year, all AFO staff receive ongoing training for conducting inspections required by the Work Plan agreement to ensure statewide consistency.

Statewide training for AFO staff was held in Mason City on February 23rd and 24th, 2016. AFO staff received training for relevant issues regarding inspections, rules, data entry and maintaining consistency in AFO inspections. Supervisors and support staff also attended the training sessions.

Additional training was held at each field office location for AFO staff in the spring and early summer of 2016.

Objective 5: Timely issue NPDES permits that meet federal requirements to all CAFOs that DNR determines discharge to waters of the U.S. and take timely and appropriate enforcement action if necessary.

- 1. In accordance with Objective 4, DNR agrees that upon completion of an evaluation of a CAFO operating without an NPDES permit, where DNR determines the CAFO is required to obtain an NPDES permit because it discharges to a water of the U.S., DNR will notify the CAFO within 60 days after completion of its evaluation and require the CAFO to either: submit an application for an NPDES permit to DNR within 90 days from the date of DNR's notification or longer if additional time is necessary; or immediately put in place interim remedial measures that eliminate the discharge to waters of the U.S. followed by permanent measures that eliminate the cause of the discharge to waters of the U.S. DNR may provide these notifications through commencement of an informal or formal action, depending on DNR's best judgment about what will bring the CAFO into compliance with the CWA. DNR agrees to track the CAFO's response and ensure that a*

permit application is submitted or discharge cause is clearly eliminated, relying on enforcement (or further enforcement) if necessary.

From 8-1-2015 to 7-31-2016, IDNR issued 36 NPDES permits. Of those, 34 are renewals and two are new. Of the 34 renewals, 27 are for conventional operations and 7 are for Alternative Technologies (AT). Several large CAFO facilities have chosen to initiate remedial measures to eliminate discharges, followed by permanent measures to remediate the cause of the discharge (see columns W & X in the attached spreadsheet). These cases are being tracked by IDNR environmental specialists in the field offices.

Also, many of the facilities with reported discharges (column V in the attached spreadsheet), are medium AFOs or medium CAFOs as identified during the inspection. These are also being tracked and given several options, including obtaining NPDES permit coverage. Most are eliminating the discharge or removing man-made conveyances.

- 2. Within 180 days after receipt of each application for an NPDES permit submitted according to this Objective, DNR will complete a draft permit that contains facility-appropriate provisions designed to control all discharges from the CAFO in a manner consistent with federal effluent limitations for CAFOs. At the termination of the public comment period for each draft permit, and after consideration of all public comments received, DNR agrees to expeditiously issue a final permit for each such CAFO.*

It should be noted that several facilities may have chosen to voluntarily apply for, and receive, an NPDES permit in anticipation of the need to do so, either because of an impending inspection or recognition by the facility of the need to comply with NPDES discharge requirements. There are currently 169 total active NPDES permits.

Objective 6: To implement enforcement program that ensures penalties are sought in accordance with DNR's EMS and creates a stronger deterrent to noncompliance.

- 1. DNR agrees to carry out enforcement against CAFOs with illegal discharges to waters of the U.S. or NPDES permit violations in accord with its Enforcement Management Systems (EMS) manual. DNR will document the basis for enforcement response decisions. When seeking administrative penalties, DNR agrees to assess the actual or reasonably estimated economic benefit in accordance with 567 IAC 10.3(2) and the EMS manual, including both delayed and avoided cost of compliance. In specific cases where DNR does not seek or recover full economic benefit, DNR will document the case-specific rationale and/or mitigating factors supporting DNR's decision to not seek full economic benefit. DNR will also document mitigating factors used for the non-economic benefit component of assessed penalties.*
- 2.*

From July 1, 2013 to July 18, 2016 IDNR has finalized 37 administrative actions against producers with unauthorized discharges (20 between July 24, 2015 and July 18, 2016), and 7 administrative orders against producers with NPDES permit violations (one between July 24,

2015 and July 18, 2016) and two Attorney General actions (one between July 24, 2015 and July 18, 2016).

In an effort to assist the field office personnel in determining the appropriate enforcement action, an Enforcement Checklist was created and is being utilized. This checklist has been implemented in each AFO inspection or complaint. The checklist provides a list of possible DNR compliance options including but not limited to Notice of Violation letters and Administrative Orders, and it documents IDNR's decision in each case. The checklist helps ensure that enforcement is consistent with IDNR's EMS manual.

If violations are referred for administrative penalty, IDNR includes the delayed and avoided cost of compliance in the referral document as well as in the administrative action. If DNR does not seek or collect the full amount of the economic benefit, the IDNR documents the determination in the Penalty Calculation and Settlement Forms which are placed in the file.

- 3. DNR agrees to develop checklists necessary to ensure consistent and appropriate enforcement responses by enforcement staff within 60 days of execution of this Work Plan.*

As stated above, the IDNR developed an Enforcement Checklist for field inspectors to use when conducting inspections or visits. This checklist is used by all field offices in the state and assists in ensuring consistent and appropriate enforcement. The Enforcement Checklist was submitted to the EPA on November 8, 2013.

- 4. DNR agrees to complete any required staff training on its revised EMS and penalty calculations within 120 days of execution of this Work Plan.*

On January 6, 2014, the IDNR Legal Services Bureau conducted a six-hour training course for all field office inspectors and supervisors. The class explored federal and state regulations, court decisions and the enforcement process, including but not limited to the EMS and penalty calculations. The class was recorded and disks of the training are in each of the field offices for staff who were unable to attend the training or for new staff. Documentation of the training, including the training agenda was submitted to the EPA on January 7, 2014.

This training also satisfies a portion of Objective 4, Item C.2. Compliance Evaluation and Inspections – Resources and Training.

Objective 7: To keep the EPA and the public up-to-date on DNR's progress towards implementation of the Work Plan.

- 1. DNR agrees to provide progress reports on its progress with implementing Objectives 1-6 of the Work Plan within 90 days, 210 days and one year from the date of execution of this Work Plan. Progress reports will be posted on the DNR's website.*

90-day and 210-day progress reports were submitted to the EPA and posted on the IDNR's website within the required time frames. The 2014 annual report was submitted September

11, 2014, one year from the signed agreement, per discussion with EPA Region 7. Subsequent reports have been submitted by August 1 of each year. The annual reports are posted on the IDNR's website.

2. *Beginning in 2014 and ending in FFY 2019, DNR agrees to submit an annual report by August 1 of each year that summarizes all relevant results associated with DNR's implementation of this Work Plan. In the annual report, if DNR has not met the 20% annual evaluation requirement discussed above, DNR agrees to reassess available resources and progress towards meeting the Work Plan's requirements. The annual report will be posted on DNR's website.*

This submittal satisfies the 2016 annual report requirement. The 20% annual evaluation requirement is discussed at length in Objective 4, Item A.4., above. It appears, at this time, current staffing levels will be sufficient to carry out the responsibilities of the Work Plan. Funding was re-allocated by the 2016 Iowa legislative session to maintain the staffing level originally proposed.

Summary

The Work Plan Agreement between IDNR and EPA Region 7 was signed on September 11, 2013. Since then, significant progress has been made to strengthen Iowa's implementation of the federally authorized NPDES program. Work Plan objectives 1 through 7 were implemented in a timely manner and summarized below:

- Work Plan objectives #1 and #2, regarding permitting and setback regulations were completed as the Commission adopted the amendments as proposed by the IDNR at its August 19, 2014 meeting. The adopted amendments were published in the Iowa Administrative Bulletin on September 17, 2014, and became effective on October 22, 2014.
- Work Plan objective #3 required the construction permit application form and nutrient management plan form be modified to include a predictive modeling requirement and federal setback requirements for manure application. These were completed on October 23, 2013, and October 21, 2013, respectively.
- Objective #4 requires comprehensive surveys and evaluations at all large CAFOs and medium-sized AFOs in Iowa along with staff training and development. Portions of this objective were completed and evaluations are ongoing.
- Objective #5 requires the IDNR to timely issue NPDES permits to all CAFOs that IDNR determines to discharge. This objective is ongoing.
- Objective #6 requires IDNR to implement an enforcement program consistent with IDNR's EMS. This objective has been met with enforcement being an ongoing process.
- Objective #7 requires IDNR to keep the EPA and the public up-to-date on IDNR's progress toward implementation of the Work Plan. Progress reports and the 2014

and 2015 annual reports were posted on IDNR's website as required. This annual report will be posted on the IDNR website in the near future.

Conclusion

All major objectives and requirements of the Work Plan have been completed on time and as agreed in the Work Plan. In the third year of the Work Plan, IDNR exceeded the 20% per year goal by achieving a three-year total of 65.5% of the total evaluations completed (desktop and/or on-site).

This is the second year using the spreadsheet that more fully explains and documents completed AFO evaluations (see Appendix A). Details include, but are not limited to, facility ID number, type of inspection, size of facility, documented discharges and enforcement action (if any).

Also included with this year's report is a power point presentation that explains the preliminary process IDNR utilized to identify and document unknown AFOs. Objective 4.A.1 provides further details regarding unknown AFO facilities in Iowa.

Enclosure

D

2016

303d List

AssessID	SegID	cycle	name	adbCode	type	size	status	use
117	1702	2016	Arrowhead	06-WED-17	Lake	14	Pending	A1
121	1790	2016	Avenue Of	02-SHL-17	Lake	30	Pending	B(LW)
149	818	2016	Beeds Lake	02-WFC-81	Lake	100	Pending	A1
159	6496	2016	Big Hollow	02-ICD-649	Lake	178	Pending	A1
172	1338	2016	Bob White	05-CHA-13	Lake	89	Pending	A1
176	1735	2016	Browns Lak	06-WEM-1	Lake	219	Pending	A1
190	1663	2016	Center Lak	06-LSR-166	Lake	272	Pending	A1
194	38	2016	Central Par	01-MAQ-3	Lake	25	Pending	A1
210	1716	2016	Desoto Ber	06-WEM-1	Lake	811	Pending	A1
266	1089	2016	Meadow L	04-LDM-10	Lake	42	Pending	A1
276	1472	2016	Green Vall	05-PLA-147	Lake	393	Pending	A1
284	862	2016	Hawthorn	103-NSK-86	Lake	186	Pending	A1
285	950	2016	Hickory Gr	03-SSK-95	Lake	88	Pending	A1
304	1080	2016	Lake Ahqu	04-LDM-10	Lake	108	Pending	A1
313	356	2016	Lake Hendr	01-WPS-35	Lake	40	Pending	A1
317	629	2016	Lake Macbr	02-IOW-62	Lake	812	Pending	A1
319	1711	2016	Lake Mana	06-WEM-1	Lake	714	Pending	A1
323	68	2016	Lake Of Thr	01-NEM-6	Lake	56	Pending	A1
369	463	2016	Meyers Lak	02-CED-46	Lake	26	Pending	A1
393	1396	2016	Orient Lak	05-NOD-13	Lake	15	Pending	A1
410	1462	2016	Prairie Ros	05-NSH-14	Lake	219	Pending	A1
442	1734	2016	Snyder Ben	06-WEM-1	Wetland	375	Pending	A1
483	929	2016	White Oak	03-SSK-92	Lake	21	Pending	A1
490	1477	2016	Wilson Parl	05-PLA-147	Lake	17	Pending	A1
492	1482	2016	Windmill L	05-PLA-14	Lake	24	Pending	A1
1572	1775	2016	Bluewing N	06-LSR-177	Wetland	130	Pending	B(LW)
1592	1629	2016	Elk Lake	06-LSR-162	Wetland	261	Pending	B(LW)
1593	657	2016	Elm Lake	02-IOW-65	Wetland	463	Pending	B(LW)
1595	1304	2016	High Lake	04-UDM-1	Wetland	467	Pending	B(LW)
1597	1281	2016	Lizard Lake	04-UDM-1	Wetland	268	Pending	B(LW)
1598	1656	2016	Marble Lak	06-LSR-165	Wetland	184	Pending	B(LW)
1599	658	2016	Morse Lak	02-IOW-65	Wetland	108	Pending	B(LW)
1604	1649	2016	Pleasant La	06-LSR-164	Wetland	77	Pending	B(LW)
1606	832	2016	Rice Lake	02-WIN-83	Wetland	702	Pending	A1
1606	832	2016	Rice Lake	02-WIN-83	Wetland	702	Pending	B(LW)
1607	1168	2016	South Twin	04-RAC-11	Wetland	600	Pending	B(LW)
1608	1231	2016	Twelve-mil	04-UDM-1	Wetland	290	Pending	B(LW)
1611	1754	2016	West Swan	04-UDM-1	Wetland	379	Pending	B(LW)
1612	778	2016	West Twin	02-IOW-77	Wetland	109	Pending	B(LW)
1625	1630	2016	Virgin Lake	06-LSR-163	Wetland	200	Pending	B(LW)
1724	1180	2016	Pickerele	04-RAC-11	Wetland	35	Pending	A1
1724	1180	2016	Pickerele	04-RAC-11	Wetland	35	Pending	B(LW)
2553	1	2016	Shrickers Sl	01-MAQ-1	Wetland	140	Pending	B(WW-1)
305	1435	2016	Lake Anita	05-NSH-14	Lake	182	Pending	A1
4	13	2016	Maquoket	01-MAQ-1	River	19.5	Pending	A1
6	15	2016	Maquoket	01-MAQ-1	River	37.7	Pending	A1

support	impCode	impairmen	listingRatio	dataSource	tmdlPriorit	legacyAdbC	cycleListed	impairmen
PS	5a	Algal Grow Narrative c Ambient m Tier I				IA 06-WED-	2008	Continuing
NS	5a	Algal Grow Adverse im Ambient m Tier I				IA 02-SHL-C	2004	Continuing
PS	5a	Algal Grow Narrative c Ambient m Tier I				IA 02-WFC-	2008	Continuing
NS	5a	Algal Grow Narrative c Ambient m Tier I				IA 02-ICD-C	2016	New
NS	5a	Algal Grow Narrative c Ambient m Tier I				IA 05-CHA-	2008	Continuing
NS	5a	Algal Grow Narrative c Ambient m Tier IV				IA 06-WEM	2016	New
PS	5a	Algal Grow Narrative c Ambient m Tier I				IA 06-LSR-C	2016	New
NS	5a	Algal Grow Narrative c Ambient m Tier I				IA 01-MAQ	2008	Continuing
NS	5a	Algal Grow Narrative c Ambient m Tier IV				IA 06-WEM	2016	New
NS	5a	Algal Grow Narrative c Ambient m Tier I				IA 04-LDM-	2004	Continuing
NS	5a	Algal Grow Narrative c Ambient m Tier I				IA 05-PLA-C	2004	Continuing
PS	5a	Algal Grow Narrative c Ambient m Tier I				IA 03-NSK-I	2010	Continuing
PS	5a	Algal Grow Narrative c Ambient m Tier I				IA 03-SSK-C	2016	New
PS	5*	Algal Grow Narrative c Ambient m Tier I				IA 04-LDM-	2008	Continuing
NS	5a	Algal Grow Narrative c Ambient m Tier I				IA 01-WPS-	2004	Continuing
PS	5a	Algal Grow Narrative c Ambient m Tier I				IA 02-IOW-	2010	Continuing
NS	5a	Algal Grow Narrative c Ambient m Tier IV				IA 06-WEM	2004	Continuing
NS	5a	Algal Grow Narrative c Ambient m Tier I				IA 01-NEM-	2010	Continuing
PS	5a	Algal Grow Narrative c Ambient m Tier I				IA 02-CED-I	2008	Continuing
NS	5a	Algal Grow Narrative c Ambient m Tier I				IA 05-NOD-	2008	Continuing
PS	5a	Algal Grow Narrative c Ambient m Tier I				IA 05-NSH-I	2004	Continuing
NS	5a	Algal Grow Narrative c Ambient m Tier IV				IA 06-WEM	2016	New
PS	5a	Algal Grow Narrative c Ambient m Tier I				IA 03-SSK-C	2004	Continuing
PS	5a	Algal Grow Narrative c Ambient m Tier I				IA 05-PLA-C	2006	Continuing
NS	5a	Algal Grow Narrative c Ambient m Tier I				IA 05-PLA-C	2004	Continuing
PS	5a	Algal Grow Adverse im Ambient m Tier IV				IA 06-LSR-C	2012	Continuing
NS	5a	Algal Grow Adverse im Ambient m Tier IV				IA 06-LSR-C	2014	Continuing
NS	5a	Algal Grow Adverse im Ambient m Tier IV				IA 02-IOW-	2012	Continuing
NS	5a	Algal Grow Adverse im Ambient m Tier IV				IA 04-UDM	2014	Continuing
NS	5a	Algal Grow Adverse im Ambient m Tier IV				IA 04-UDM	2010	Continuing
NS	5a	Algal Grow Adverse im Ambient m Tier IV				IA 06-LSR-C	2014	Continuing
NS	5a	Algal Grow Adverse im Ambient m Tier IV				IA 02-IOW-	2014	Continuing
PS	5a	Algal Grow Adverse im Ambient m Tier IV				IA 06-LSR-C	2016	New
NS	5a	Algal Grow Narrative c Ambient m Tier IV				IA 02-WIN-	2014	Continuing
NS	5a	Algal Grow Adverse im Ambient m Tier IV				IA 02-WIN-	2016	New
NS	5a	Algal Grow Adverse im Ambient m Tier IV				IA 04-RAC-I	2010	Continuing
NS	5a	Algal Grow Adverse im Ambient m Tier IV				IA 04-UDM	2016	New
NS	5a	Algal Grow Adverse im Ambient m Tier IV				IA 04-UDM	2012	Continuing
NS	5a	Algal Grow Adverse im Ambient m Tier IV				IA 02-IOW-	2012	Continuing
NS	5a	Algal Grow Adverse im Ambient m Tier IV				IA 06-LSR-C	2010	Continuing
NS	5a	Algal Grow Narrative c Ambient m Tier IV				IA 04-RAC-I	2010	Continuing
NS	5a	Algal Grow Adverse im Ambient m Tier IV				IA 04-RAC-I	2010	Continuing
PS	5a	Algal Grow Adverse im Ambient m Tier IV				IA 01-MAQ	2004	Continuing
PS	5a	Algal Grow Narrative c Ambient m Tier I				IA 05-NSH-I	2010	Continuing
PS	5a	Bacteria: Ir Geometric Ambient m Tier III				IA 01-MAQ	2012	Continuing
NS	5a	Bacteria: Ir Geometric TMDL mon Tier IV				IA 01-MAQ	2008	Continuing

7	16	2016 Maquoketa 01-MAQ-1f River	22.1 Pending	A1
9	19	2016 Maquoketa 01-MAQ-1f River	8.8 Pending	A1
10	51	2016 Coffins Cre 01-MAQ-5f River	7 Pending	A1
11	53	2016 Honey Cre 01-MAQ-5f River	8.5 Pending	A1
12	6560	2016 Honey Cre 01-MAQ-6f River	6.9 Pending	A1
13	6561	2016 Rutherford 01-MAQ-6f River	5.4 Pending	A1
14	54	2016 Lindsey Cre 01-MAQ-5f River	6.9 Pending	A1
32	81	2016 Mad Creek 01-NEM-8f River	3.4 Pending	A3
35	6370	2016 Stafford Cr 01-NEM-6f River	2.9 Pending	A1
38	6372	2016 Candlelight 01-NEM-6f River	2.2 Pending	A1
39	6373	2016 Robin Cree 01-NEM-6f River	2.1 Pending	A1
42	86	2016 Crow Creel 01-NEM-8f River	8.2 Pending	A1
44	88	2016 North Fork 01-NMQ-8f River	15.9 Pending	A1
45	90	2016 North Fork 01-NMQ-9f River	33.7 Pending	A1
50	103	2016 Whitewate 01-NMQ-1f River	12.9 Pending	A1
61	121	2016 Tetes Des f 01-TRK-12f River	5.2 Pending	A1
61	121	2016 Tetes Des f 01-TRK-12f River	5.2 Pending	A2
62	122	2016 Tetes Des f 01-TRK-12f River	9.9 Pending	A1
63	6580	2016 Unnamed f 01-TRK-65f River	2.6 Pending	A1
64	6589	2016 Unnamed f 01-TRK-65f River	2.2 Pending	A1
65	123	2016 Lux Creek 01-TRK-12f River	3.1 Pending	A1
66	124	2016 Catfish Cre 01-TRK-12f River	3.4 Pending	A1
67	125	2016 Catfish Cre 01-TRK-12f River	5.3 Pending	A1
70	127	2016 Granger Cr 01-TRK-12f River	6.3 Pending	A2
71	128	2016 Middle For 01-TRK-12f River	9.3 Pending	A1
72	6487	2016 Middle For 01-TRK-64f River	3.9 Pending	A1
73	129	2016 North Fork 01-TRK-12f River	0.7 Pending	A1
74	6486	2016 North Fork 01-TRK-64f River	3 Pending	A1
75	130	2016 South Fork 01-TRK-13f River	11.4 Pending	A1
76	148	2016 Turkey Riv 01-TRK-14f River	20.9 Pending	A1
77	149	2016 Turkey Riv 01-TRK-14f River	22.7 Pending	A1
78	152	2016 Turkey Riv 01-TRK-15f River	27.9 Pending	A1
79	153	2016 Turkey Riv 01-TRK-15f River	27.7 Pending	A1
80	154	2016 Turkey Riv 01-TRK-15f River	17.1 Pending	A1
81	156	2016 Turkey Riv 01-TRK-15f River	3.7 Pending	A1
83	160	2016 Little Turke 01-TRK-16f River	6.7 Pending	A1
84	162	2016 Little Turke 01-TRK-16f River	2.8 Pending	A1
84	162	2016 Little Turke 01-TRK-16f River	2.8 Pending	A2
85	163	2016 Little Turke 01-TRK-16f River	1.1 Pending	A1
86	165	2016 Point Hollo 01-TRK-16f River	6.4 Pending	A1
86	165	2016 Point Hollo 01-TRK-16f River	6.4 Pending	A2
88	168	2016 Pecks Cree 01-TRK-16f River	4.1 Pending	A1
89	171	2016 South Ced 01-TRK-17f River	6.7 Pending	A1
90	20	2016 Backbone l 01-MAQ-2f Lake	2.5 Pending	A1
93	175	2016 Elk Creek 01-TRK-17f River	6.6 Pending	A1
94	178	2016 Steeles Bra 01-TRK-17f River	5.9 Pending	A1
94	178	2016 Steeles Bra 01-TRK-17f River	5.9 Pending	A2

95	6568	2016 Steeles Bra	01-TRK-656	River	3.4	Pending	A1
96	179	2016 Pine Creek	01-TRK-179	River	1.7	Pending	A1
96	179	2016 Pine Creek	01-TRK-179	River	1.7	Pending	A2
99	186	2016 Roberts Cr	01-TRK-186	River	10	Pending	A1
100	188	2016 Roberts Cr	01-TRK-188	River	15.3	Pending	A1
102	189	2016 Dry Mill Cr	01-TRK-189	River	4.7	Pending	A1
103	191	2016 Howard Cr	01-TRK-191	River	4.1	Pending	A1
104	192	2016 Silver Creel	01-TRK-192	River	4.9	Pending	A1
105	2058	2016 Unnamed	01-TRK-205	River	3.9	Pending	A1
106	2057	2016 Silver Creel	01-TRK-205	River	6.2	Pending	A1
107	198	2016 Otter Creel	01-TRK-198	River	10.9	Pending	A1
107	198	2016 Otter Creel	01-TRK-198	River	10.9	Pending	A2
115	202	2016 Dibble Cre	01-TRK-202	River	1.4	Pending	A1
119	205	2016 Nutting Cr	01-TRK-205	River	6.2	Pending	A1
120	2002	2016 Dry Branch	01-TRK-200	River	8.9	Pending	A1
122	207	2016 Little Turke	01-TRK-207	River	11.7	Pending	A1
123	208	2016 Little Turke	01-TRK-208	River	16.8	Pending	A1
124	209	2016 Little Turke	01-TRK-209	River	13	Pending	A1
126	210	2016 Crane Cree	01-TRK-210	River	17.9	Pending	A1
128	212	2016 Crane Cree	01-TRK-212	River	15.7	Pending	A1
129	211	2016 Crane Cree	01-TRK-211	River	16.1	Pending	A1
131	215	2016 Bass Creek	01-TRK-215	River	1.1	Pending	A1
131	215	2016 Bass Creek	01-TRK-215	River	1.1	Pending	A2
133	217	2016 Brockamp	01-TRK-217	River	6.1	Pending	A1
134	218	2016 Rogers Cre	01-TRK-218	River	1.9	Pending	A1
135	219	2016 Wonder Cr	01-TRK-219	River	2.6	Pending	A1
136	221	2016 Bohemian	01-TRK-221	River	12.5	Pending	A1
136	221	2016 Bohemian	01-TRK-221	River	12.5	Pending	A2
138	223	2016 North Bran	01-TRK-223	River	5.1	Pending	A1
143	236	2016 Upper low	01-UIA-236	River	8.5	Pending	A1
146	237	2016 Upper low	01-UIA-237	River	27.4	Pending	A1
154	239	2016 Upper low	01-UIA-239	River	19.8	Pending	A1
156	241	2016 Upper low	01-UIA-241	River	13.1	Pending	A1
161	1655	2016 Big Spirit L	06-LSR-165	Lake	4169	Pending	A1
165	1134	2016 Black Hawk	04-RAC-113	Lake	925	Pending	A1
171	248	2016 French Cre	01-UIA-248	River	5	Pending	A1
171	248	2016 French Cre	01-UIA-248	River	5	Pending	A2
172	1338	2016 Bob White	05-CHA-133	Lake	89	Pending	A1
173	249	2016 Clear Cree	01-UIA-249	River	4.7	Pending	A1
173	249	2016 Clear Cree	01-UIA-249	River	4.7	Pending	A2
174	1255	2016 Briggs Woc	04-UDM-125	Lake	59	Pending	A1
175	250	2016 Silver Creel	01-UIA-250	River	8.3	Pending	A1
175	250	2016 Silver Creel	01-UIA-250	River	8.3	Pending	A2
176	1735	2016 Browns Lak	06-WEM-173	Lake	219	Pending	A1
178	1276	2016 Brushy Cre	04-UDM-127	Lake	690	Pending	A1
179	251	2016 Bear Creek	01-UIA-251	River	9	Pending	A1
181	252	2016 Bear Creek	01-UIA-252	River	7.4	Pending	A1

184	253	2016 Waterloo C 01-UIA-253 River	9.3 Pending	A1
184	253	2016 Waterloo C 01-UIA-253 River	9.3 Pending	A2
186	6570	2016 Unnamed 101-UIA-657 River	3.4 Pending	A1
187	254	2016 Duck Creek 01-UIA-254 River	2 Pending	A1
188	255	2016 North Bear 01-UIA-255 River	6.3 Pending	A1
227	773	2016 Eldred Shei 02-IOW-77 Lake	21 Pending	A1
231	257	2016 Paint Creel 01-UIA-257 River	4.6 Pending	A1
232	259	2016 Patterson C 01-UIA-259 River	4.8 Pending	A1
232	259	2016 Patterson C 01-UIA-259 River	4.8 Pending	A2
233	260	2016 Canoe Creel 01-UIA-260 River	12.6 Pending	A1
235	265	2016 Coon Creel 01-UIA-265 River	3.2 Pending	A1
235	265	2016 Coon Creel 01-UIA-265 River	3.2 Pending	A2
236	266	2016 Trout Creel 01-UIA-266 River	2.4 Pending	A1
236	266	2016 Trout Creel 01-UIA-266 River	2.4 Pending	A2
237	269	2016 Trout Creel 01-UIA-269 River	1.6 Pending	A2
237	269	2016 Trout Creel 01-UIA-269 River	1.6 Pending	A3
238	1361	2016 Nine Eagle 05-GRA-13 Lake	63 Pending	A1
239	6596	2016 Siewers Spr 01-UIA-659 River	0.2 Pending	A1
243	272	2016 Dry Run 01-UIA-272 River	4.9 Pending	A1
243	272	2016 Dry Run 01-UIA-272 River	4.9 Pending	A2
268	6552	2016 Dry Run Cr 01-UIA-655 River	5.8 Pending	A1
269	6600	2016 Unnamed 101-UIA-660 River	4.6 Pending	A1
270	6554	2016 Unnamed 101-UIA-655 River	3.1 Pending	A1
271	6555	2016 Unnamed 101-UIA-655 River	2 Pending	A1
272	6556	2016 Unnamed 101-UIA-655 River	1.2 Pending	A1
273	6557	2016 Unnamed 101-UIA-655 River	9.5 Pending	A1
274	6558	2016 Unnamed 101-UIA-655 River	2.1 Pending	A1
275	273	2016 Twin Spring 01-UIA-273 River	0.7 Pending	A1
280	1625	2016 Gustafson 106-LSR-162 Lake	10 Pending	A1
285	950	2016 Hickory Gr 03-SSK-950 Lake	88 Pending	A1
296	677	2016 Iowa Lake 02-IOW-67 Lake	86 Pending	A1
301	694	2016 Kent Park 1 02-IOW-69 Lake	26 Pending	A1
303	1008	2016 Lacey Keos 04-LDM-10 Lake	22 Pending	A1
304	1080	2016 Lake Ahqu 04-LDM-10 Lake	108 Pending	A1
305	1435	2016 Lake Anita 05-NSH-14 Lake	182 Pending	A1
315	930	2016 Lake Keom 03-SSK-930 Lake	84 Pending	A1
317	629	2016 Lake Macb 02-IOW-62 Lake	812 Pending	A1
325	274	2016 Ten Mile Cr 01-UIA-274 River	10.7 Pending	A1
326	1532	2016 Lake Pahoj 06-BSR-153 Lake	63 Pending	A1
333	1035	2016 Lake Wape 04-LDM-10 Lake	289 Pending	A1
341	275	2016 Unnamed C 01-UIA-275 River	2.8 Pending	A1
342	278	2016 Pine Creek 01-UIA-278 River	14.3 Pending	A1
342	278	2016 Pine Creek 01-UIA-278 River	14.3 Pending	A2
343	1358	2016 Little River 05-GRA-13 Lake	799 Pending	A1
344	280	2016 Unnamed C 01-UIA-280 River	2.5 Pending	A1
344	280	2016 Unnamed C 01-UIA-280 River	2.5 Pending	A2
354	282	2016 Silver Creel 01-UIA-282 River	8.2 Pending	A1

355	6569	2016 Unnamed 101-UIA-656 River	2.4 Pending	A1
357	758	2016 Lower Pine 02-IOW-75 Lake	50 Pending	A1
387	1167	2016 North Twin 04-RAC-116 Lake	454 Pending	A1
405	459	2016 Pleasant Cr 02-CED-459 Lake	407 Pending	A1
410	1462	2016 Prairie Ros 05-NSH-146 Lake	219 Pending	A1
416	865	2016 Rock Creek 03-NSK-865 Lake	602 Pending	A1
453	1196	2016 Springbroo 04-RAC-119 Lake	14 Pending	A1
458	1143	2016 Storm Lake 04-RAC-114 Lake	3147 Pending	A1
475	1407	2016 Viking Lake 05-NOD-140 Lake	137 Pending	A1
497	1653	2016 West Okob 06-LSR-165 Lake	1885 Pending	A1
498	2066	2016 West Okob 06-LSR-206 Lake	370 Pending	A1
503	841	2016 Clear Lake 02-WIN-841 Lake	3684 Pending	A1
504	283	2016 Minor Cree 01-UIA-283 River	4.5 Pending	A1
505	284	2016 Nichols Cre 01-UIA-284 River	4.2 Pending	A1
505	284	2016 Nichols Cre 01-UIA-284 River	4.2 Pending	A2
506	286	2016 Beaver Cre 01-UIA-286 River	8.4 Pending	A1
506	286	2016 Beaver Cre 01-UIA-286 River	8.4 Pending	A2
507	288	2016 Staff Creek 01-UIA-288 River	6.5 Pending	A1
507	288	2016 Staff Creek 01-UIA-288 River	6.5 Pending	A2
508	6597	2016 Unnamed 101-UIA-659 River	2.9 Pending	A1
518	296	2016 Volga River 01-VOL-296 River	6.4 Pending	A1
519	297	2016 Bear Creek 01-VOL-297 River	6.7 Pending	A1
1515	303	2016 Cox Creek 01-VOL-303 River	5.6 Pending	A1
1517	307	2016 Hewett Cre 01-VOL-307 River	6 Pending	A1
1517	307	2016 Hewett Cre 01-VOL-307 River	6 Pending	A2
1519	314	2016 Mink Creek 01-VOL-314 River	5.9 Pending	A1
1519	314	2016 Mink Creek 01-VOL-314 River	5.9 Pending	A2
1520	317	2016 Brush Cree 01-VOL-317 River	4.6 Pending	A1
1521	322	2016 Grannis Cr 01-VOL-322 River	3.5 Pending	A1
1522	325	2016 Unnamed 01-VOL-325 River	2.8 Pending	A1
1523	328	2016 Little Volga 01-VOL-328 River	3.8 Pending	A1
1524	330	2016 North Bran 01-VOL-330 River	4.5 Pending	A1
1526	1017	2016 Red Rock R 04-LDM-10 Reservoir	19000 Pending	A1
1527	1213	2016 Saylorville 04-UDM-121 Reservoir	5950 Pending	A1
1528	332	2016 Wapsipinic 01-WPS-332 River	25.9 Pending	A1
1529	333	2016 Wapsipinic 01-WPS-333 River	20.7 Pending	A1
1530	335	2016 Wapsipinic 01-WPS-335 River	22 Pending	A1
1531	336	2016 Wapsipinic 01-WPS-336 River	16.8 Pending	A1
1532	340	2016 Wapsipinic 01-WPS-340 River	26.5 Pending	A1
1535	343	2016 Wapsipinic 01-WPS-343 River	9.7 Pending	A1
1541	354	2016 Wapsipinic 01-WPS-354 River	5.3 Pending	A1
1541	354	2016 Wapsipinic 01-WPS-354 River	5.3 Pending	A2
1558	6457	2016 unnamed t 01-WPS-645 River	2 Pending	A1
1564	433	2016 Bloody Rur 01-YEL-433 River	11.5 Pending	A1
1576	6574	2016 Unnamed 101-YEL-657 River	3.9 Pending	A1
1586	2005	2016 North Fork 01-YEL-200 River	8.6 Pending	A1
1587	2059	2016 Unnamed 101-YEL-205 River	2.8 Pending	A1

NS	5p	Bacteria: Ir Geometric Watershed Tier III	IA 01-UIA-C	2014 Continuing
NS	5*	Bacteria: Ir Geometric Beach mon Tier II	IA 02-IOW-	2006 Continuing
NS	5a	Bacteria: Ir Single-sam Beach mon Tier II	IA 04-RAC-I	2012 Continuing
PS	5*	Bacteria: Ir Narrative c Ambient m Tier II	IA 02-CED-I	2012 Continuing
PS	5a	Bacteria: Ir Single-sam Beach mon Tier II	IA 05-NSH-I	2012 Continuing
PS	5*	Bacteria: Ir Geometric Beach mon Tier II	IA 03-NSK-I	2006 Continuing
NS	5*	Bacteria: Ir Geometric Beach mon Tier II	IA 04-RAC-I	2012 Continuing
NS	5a	Bacteria: Ir Geometric Beach mon Tier II	IA 04-RAC-I	2010 Continuing
PS	5a	Bacteria: Ir Geometric Beach mon Tier II	IA 05-NOD-	2006 Continuing
PS	5*	Bacteria: Ir Single-sam Beach mon Tier II	IA 06-LSR-C	2014 Continuing
PS	5*	Bacteria: Ir Geometric Beach mon Tier II	IA 06-LSR-C	2006 Continuing
PS	5a	Bacteria: Ir Geometric Beach mon Tier II	IA 02-WIN-	2004 Continuing
PS	5p	Bacteria: Ir Geometric Watershed Tier III	IA 01-UIA-C	2014 Continuing
NS	5p	Bacteria: Ir Geometric Watershed Tier III	IA 01-UIA-C	2008 Continuing
NS	5p	Bacteria: Ir Geometric Watershed Tier III	IA 01-UIA-C	2012 Continuing
PS	5p	Bacteria: Ir Geometric Watershed Tier III	IA 01-UIA-C	2008 Continuing
PS	5p	Bacteria: Ir Geometric Watershed Tier III	IA 01-UIA-C	2012 Continuing
NS	5p	Bacteria: Ir Geometric Watershed Tier III	IA 01-UIA-C	2010 Continuing
NS	5p	Bacteria: Ir Geometric Watershed Tier III	IA 01-UIA-C	2012 Continuing
NS	5p	Bacteria: Ir Geometric Watershed Tier III	IA 01-UIA-C	2014 Continuing
PS	5p	Bacteria: Ir Geometric Watershed Tier III	IA 01-VOL-I	2014 Continuing
PS	5p	Bacteria: Ir Geometric Watershed Tier III	IA 01-VOL-I	2014 Continuing
NS	5p	Bacteria: Ir Geometric Watershed Tier III	IA 01-VOL-I	2014 Continuing
NS	5p	Bacteria: Ir Geometric Watershed Tier III	IA 01-VOL-I	2014 Continuing
NS	5p	Bacteria: Ir Geometric Watershed Tier III	IA 01-VOL-I	2014 Continuing
NS	5p	Bacteria: Ir Geometric Watershed Tier III	IA 01-VOL-I	2014 Continuing
PS	5p	Bacteria: Ir Geometric Watershed Tier III	IA 01-VOL-I	2016 New
PS	5p	Bacteria: Ir Geometric Watershed Tier III	IA 01-VOL-I	2014 Continuing
PS	5p	Bacteria: Ir Geometric Watershed Tier III	IA 01-VOL-I	2014 Continuing
NS	5p	Bacteria: Ir Geometric Watershed Tier III	IA 01-VOL-I	2014 Continuing
PS	5p	Bacteria: Ir Geometric Watershed Tier III	IA 01-VOL-I	2014 Continuing
PS	5a	Bacteria: Ir Geometric Ambient m Tier II	IA 04-LDM-	2014 Continuing
NS	5a	Bacteria: Ir Geometric Ambient m Tier II	IA 04-UDM	2006 Continuing
PS	5a	Bacteria: Ir Single-sam Ambient m Tier III	IA 01-WPS-	2004 Continuing
PS	5a	Bacteria: Ir Single-sam Ambient m Tier III	IA 01-WPS-	2004 Continuing
PS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 01-WPS-	2006 Continuing
PS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 01-WPS-	2006 Continuing
PS	5a	Bacteria: Ir Geometric Beach mon Tier III	IA 01-WPS-	2010 Continuing
PS	5a	Bacteria: Ir Single-sam Ambient m Tier III	IA 01-WPS-	2004 Continuing
NS	5a	Bacteria: Ir Geometric TMDL mon Tier III	IA 01-WPS-	2014 Continuing
NS	5a	Bacteria: Ir Geometric TMDL mon Tier III	IA 01-WPS-	2014 Continuing
PS	5p	Bacteria: Ir Geometric Special pro Tier III	IA 01-WPS-	2010 Continuing
PS	5p	Bacteria: Ir Geometric Special pro Tier III	IA 01-YEL-C	2010 Continuing
NS	5p	Bacteria: Ir Geometric Special pro Tier III	IA 01-YEL-C	2014 Continuing
NS	5p	Bacteria: Ir Geometric Watershed N/A	IA 01-YEL-C	2016 New
NS	5p	Bacteria: Ir Geometric Watershed Tier III	IA 01-YEL-C	2014 Continuing

1588	6575	2016 Unnamed 101-YEL-657 River	2.2 Pending	A1
1590	6582	2016 Unnamed 101-YEL-658 River	2.2 Pending	A1
1600	449	2016 Cedar River 02-CED-449 River	28.6 Pending	A1
1634	462	2016 Cedar River 02-CED-462 River	27 Pending	A1
1636	469	2016 Cedar River 02-CED-469 River	0.8 Pending	A1
1637	470	2016 Cedar River 02-CED-470 River	4.8 Pending	A1
1638	472	2016 Cedar River 02-CED-472 River	13.8 Pending	A1
1641	477	2016 Cedar River 02-CED-477 River	10.9 Pending	A1
1644	6593	2016 Willow Cree 02-CED-6593 River	6.6 Pending	A1
1645	6262	2016 Unnamed 102-CED-6262 River	3.5 Pending	A1
1651	504	2016 Indian Cree 02-CED-504 River	10.9 Pending	A1
1652	505	2016 Indian Cree 02-CED-505 River	4.6 Pending	A1
1653	507	2016 Dry Creek 02-CED-507 River	10.9 Pending	A1
1654	508	2016 McLoud Ru 02-CED-508 River	4.1 Pending	A1
1657	513	2016 Morgan Cr 02-CED-513 River	2.5 Pending	A1
1658	517	2016 Bear Creek 02-CED-517 River	9.9 Pending	A1
1667	518	2016 Blue Creek 02-CED-518 River	1.3 Pending	A1
1669	519	2016 Mud Creek 02-CED-519 River	11.6 Pending	A1
1670	523	2016 Bear Creek 02-CED-523 River	17.5 Pending	A1
1671	524	2016 Lime Creek 02-CED-524 River	8.8 Pending	A1
1672	525	2016 Lime Creek 02-CED-525 River	7.3 Pending	A1
1673	6432	2016 Unnamed 102-CED-6432 River	3.8 Pending	A1
1674	530	2016 Wolf Creek 02-CED-530 River	20.8 Pending	A1
1676	546	2016 Black Hawk 02-CED-546 River	6.6 Pending	A1
1677	550	2016 Black Hawk 02-CED-550 River	20.3 Pending	A1
1678	551	2016 North Black 02-CED-551 River	11.5 Pending	A1
1679	6489	2016 Mosquito C 02-CED-6489 River	10 Pending	A1
1680	6490	2016 Minnehaha 02-CED-6490 River	5.7 Pending	A1
1681	552	2016 Holland Cr 02-CED-552 River	4.9 Pending	A1
1682	6491	2016 Holland Cr 02-CED-6491 River	3.9 Pending	A1
1683	554	2016 Dry Run 02-CED-554 River	2.8 Pending	A1
1684	2062	2016 Dry Run (S 02-CED-2062 River	6.3 Pending	A1
1685	2063	2016 Dry Run (N 02-CED-2063 River	3.4 Pending	A1
1686	6293	2016 Dry Run 02-CED-6293 River	5.4 Pending	A1
1687	6294	2016 Unnamed 102-CED-6294 River	3.6 Pending	A1
1690	555	2016 Beaver Cree 02-CED-555 River	21.5 Pending	A3
1694	574	2016 Little Cedar 02-CED-574 River	12.9 Pending	A1
1695	585	2016 Rock Creek 02-CED-585 River	5.6 Pending	A1
1696	586	2016 Rock Creek 02-CED-586 River	6.9 Pending	A1
1697	587	2016 Rock Creek 02-CED-587 River	1.8 Pending	A1
1698	588	2016 Rock Creek 02-CED-588 River	1.9 Pending	A1
1699	589	2016 Spring Cree 02-CED-589 River	3.8 Pending	A1
1699	589	2016 Spring Cree 02-CED-589 River	3.8 Pending	A2
1700	6566	2016 Spring Cree 02-CED-6566 River	10.2 Pending	A1
1701	6567	2016 Unnamed 102-CED-6567 River	6 Pending	A1
1702	6565	2016 Slough Cree 02-CED-6565 River	5.3 Pending	A1
1711	590	2016 Turtle Cree 02-CED-590 River	3.4 Pending	A1

1712	591	2016 Deer Creek 02-CED-59 River	8.1 Pending	A1
1746	594	2016 Otter Creel 02-CED-59 River	4.6 Pending	A1
1747	6594	2016 Unnamed 102-CED-65 River	2.5 Pending	A1
1821	621	2016 Iowa River 02-IOW-62 River	14.8 Pending	A1
1841	622	2016 Iowa River 02-IOW-62 River	8.5 Pending	A1
1842	623	2016 Iowa River 02-IOW-62 River	5.4 Pending	A1
1845	624	2016 Iowa River 02-IOW-62 River	17.7 Pending	A1
1849	627	2016 Iowa River 02-IOW-62 River	19.5 Pending	A1
1853	633	2016 Iowa River 02-IOW-63 River	16.4 Pending	A1
1866	640	2016 Iowa River 02-IOW-64 River	18.5 Pending	A1
1874	641	2016 Iowa River 02-IOW-64 River	13.7 Pending	A1
1875	642	2016 Iowa River 02-IOW-64 River	8 Pending	A1
1878	646	2016 Iowa River 02-IOW-64 River	6.2 Pending	A1
1882	651	2016 Iowa River 02-IOW-65 River	16.1 Pending	A1
1895	671	2016 English Riv 02-IOW-67 River	18.9 Pending	A1
1918	686	2016 Old Mans C 02-IOW-68 River	11.5 Pending	A1
1940	2043	2016 Muddy Cre 02-IOW-20 River	6.5 Pending	A1
1945	6588	2016 Unnamed 102-IOW-65 River	0.5 Pending	A1
1952	6317	2016 Unnamed 102-IOW-63 River	3.9 Pending	A1
1961	699	2016 Price Creek 02-IOW-69 River	5.5 Pending	A1
1962	6377	2016 Price Creek 02-IOW-63 River	8.1 Pending	A1
1971	6586	2016 Willow Cre 02-IOW-65 River	2.9 Pending	A1
1972	6587	2016 Unnamed 102-IOW-65 River	2.9 Pending	A1
1982	705	2016 Little Bear 02-IOW-70 River	8.4 Pending	A1
1988	2007	2016 Long Dick C 03-SSK-20C River	14 Pending	A1
1998	706	2016 Little Bear 02-IOW-70 River	9.1 Pending	A1
2004	709	2016 Walnut Cre 02-IOW-70 River	7.9 Pending	A1
2007	1916	2016 Walnut Cre 02-IOW-19 River	10 Pending	A1
2010	6318	2016 Unnamed 102-IOW-63 River	3.4 Pending	A1
2014	1534	2016 Rock River 06-BSR-15 River	26.9 Pending	A1
2016	1552	2016 Floyd River 06-FLO-15 River	21.6 Pending	A1
2017	6508	2016 Montgome 03-SSK-65C River	14.4 Pending	A1
2019	1564	2016 Little Sioux 06-LSR-156 River	15.7 Pending	A1
2020	1565	2016 Little Sioux 06-LSR-156 River	30.5 Pending	A1
2021	1570	2016 Little Sioux 06-LSR-157 River	22 Pending	A1
2031	1573	2016 Little Sioux 06-LSR-157 River	23.4 Pending	A1
2033	1577	2016 Little Sioux 06-LSR-157 River	27.5 Pending	A1
2035	1578	2016 Little Sioux 06-LSR-157 River	16.9 Pending	A1
2036	1581	2016 Maple Rive 06-LSR-158 River	25.8 Pending	A1
2040	1531	2016 Indian Cree 06-BSR-15 River	9.9 Pending	A1
2042	1533	2016 Sixmile Cre 06-BSR-15 River	20.6 Pending	A1
2045	1537	2016 Rock River 06-BSR-15 River	20.5 Pending	A1
2046	1538	2016 Rock River 06-BSR-15 River	6.2 Pending	A1
2047	1798	2016 Little Rock 06-BSR-17 River	16.4 Pending	A1
2048	1800	2016 Little Rock 06-BSR-18 River	14.8 Pending	A1
2054	1546	2016 Mud Creek 06-BSR-15 River	23.3 Pending	A1
2055	6263	2016 Bennett Cr 02-IOW-62 River	5.4 Pending	A1

PS	5p	Bacteria: Ir Geometric Special pro Tier III	IA 02-CED-I	2008 Continuing
PS	5p	Bacteria: Ir Geometric Special pro Tier III	IA 02-CED-I	2008 Continuing
PS	5p	Bacteria: Ir Geometric Special pro N/A	IA 02-CED-I	2014 Continuing
PS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 02-IOW-	2012 Continuing
PS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 02-IOW-	2012 Continuing
PS	5a	Bacteria: Ir Single-sam Ambient m Tier III	IA 02-IOW-	2008 Continuing
PS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 02-IOW-	2008 Continuing
PS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 02-IOW-	2010 Continuing
PS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 02-IOW-	2004 Continuing
PS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 02-IOW-	2016 New
PS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 02-IOW-	2004 Continuing
PS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 02-IOW-	2004 Continuing
PS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 02-IOW-	2004 Continuing
PS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 02-IOW-	2006 Continuing
PS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 02-IOW-	2008 Continuing
NS	5p	Bacteria: Ir Geometric Ambient m Tier III	IA 02-IOW-	2008 Continuing
NS	5p	Bacteria: Ir Geometric Special pro Tier III	IA 02-IOW-	2008 Continuing
NS	5p	Bacteria: Ir Geometric Special pro Tier III	IA 02-IOW-	2016 New
PS	5p	Bacteria: Ir Geometric Special pro Tier III	IA 02-IOW-	2012 Continuing
NS	5p	Bacteria: Ir Geometric Special pro Tier III	IA 02-IOW-	2010 Continuing
PS	5p	Bacteria: Ir Geometric Special pro Tier III	IA 02-IOW-	2010 Continuing
NS	5p	Bacteria: Ir Geometric Special pro Tier III	IA 02-IOW-	2014 Continuing
PS	5p	Bacteria: Ir Geometric Special pro Tier III	IA 02-IOW-	2014 Continuing
NS	5p	Bacteria: Ir Geometric Special pro Tier III	IA 02-IOW-	2014 Continuing
PS	5p	Bacteria: Ir Single-sam TMDL mon Tier IV	IA 03-SSK-C	2010 Continuing
NS	5p	Bacteria: Ir Geometric Special pro Tier III	IA 02-IOW-	2014 Continuing
NS	5p	Bacteria: Ir Geometric Special pro Tier III	IA 02-IOW-	2012 Continuing
PS	5p	Bacteria: Ir Geometric Special pro Tier III	IA 02-IOW-	2012 Continuing
PS	5p	Bacteria: Ir Geometric Special pro Tier III	IA 02-IOW-	2012 Continuing
PS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 06-BSR-C	2008 Continuing
PS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 06-FLO-C	2008 Continuing
PS	5p	Bacteria: Ir Geometric Volunteer I Tier III	IA 03-SSK-C	2014 Continuing
NS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 06-LSR-C	2012 Continuing
PS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 06-LSR-C	2008 Continuing
PS	5a	Bacteria: Ir Single-sam Ambient m Tier III	IA 06-LSR-C	2004 Continuing
NS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 06-LSR-C	2008 Continuing
PS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 06-LSR-C	2008 Continuing
PS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 06-LSR-C	2008 Continuing
PS	5a	Bacteria: Ir Geometric Ambient m N/A	IA 06-LSR-C	2008 Continuing
NS	5p	Bacteria: Ir Geometric TMDL mon Tier III	IA 06-BSR-C	2008 Continuing
NS	5a	Bacteria: Ir Geometric TMDL mon Tier III	IA 06-BSR-C	2008 Continuing
NS	5a	Bacteria: Ir Geometric TMDL mon Tier III	IA 06-BSR-C	2008 Continuing
PS	5p	Bacteria: Ir Geometric TMDL mon Tier III	IA 06-BSR-C	2008 Continuing
PS	5a	Bacteria: Ir Geometric TMDL mon Tier III	IA 06-BSR-C	2008 Continuing
NS	5a	Bacteria: Ir Geometric TMDL mon Tier III	IA 06-BSR-C	2008 Continuing
NS	5a	Bacteria: Ir Geometric TMDL mon Tier III	IA 06-BSR-C	2008 Continuing
NS	5p	Bacteria: Ir Geometric Special pro Tier III	IA 02-IOW-	2010 Continuing

2057	723	2016 Raven Cree	02-IOW-72 River	2	Pending	A1
2066	6538	2016 Deer Creek	02-IOW-65 River	4.2	Pending	A1
2068	1598	2016 West Fork	06-LSR-159 River	19.2	Pending	A1
2069	6539	2016 East Tribut	02-IOW-65 River	2.5	Pending	A1
2070	1638	2016 Ochededan	06-LSR-163 River	24.4	Pending	A1
2096	1626	2016 Willow Cre	06-LSR-162 River	14	Pending	A1
2097	6299	2016 Willow Cre	06-LSR-629 River	15.5	Pending	A1
2132	1673	2016 Soldier Riv	06-SOL-167 River	22.5	Pending	A1
2143	1707	2016 Missouri Ri	06-WEM-1 River	41	Pending	A1
2144	753	2016 Beaver Cre	02-IOW-75 River	8.8	Pending	A1
2145	1708	2016 Missouri Ri	06-WEM-1 River	23.3	Pending	A1
2147	1502	2016 Boyer River	06-BOY-151 River	29.4	Pending	A1
2148	6362	2016 Beaver Cre	02-IOW-63 River	12.5	Pending	A1
2151	746	2016 South Fork	02-IOW-74 River	7.8	Pending	A1
2155	749	2016 South Fork	02-IOW-74 River	4.5	Pending	A1
2156	750	2016 South Fork	02-IOW-75 River	8.3	Pending	A1
2157	751	2016 South Fork	02-IOW-75 River	9	Pending	A1
2158	752	2016 South Fork	02-IOW-75 River	10.3	Pending	A1
2161	6363	2016 South Beav	02-IOW-63 River	10.2	Pending	A1
2162	754	2016 Tipton Cre	02-IOW-75 River	11.4	Pending	A1
2166	755	2016 Tipton Cre	02-IOW-75 River	7.9	Pending	A1
2168	6364	2016 Unnamed	02-IOW-63 River	2.3	Pending	A1
2172	769	2016 East Brancl	02-IOW-76 River	10.6	Pending	A1
2173	771	2016 East Brancl	02-IOW-77 River	9.7	Pending	A1
2174	6550	2016 Drainage D	02-IOW-65 River	5.9	Pending	A1
2175	6551	2016 Drainage D	02-IOW-65 River	6.4	Pending	A1
2176	774	2016 Galls Creek	02-IOW-77 River	7.9	Pending	A1
2177	6559	2016 Unnamed	02-IOW-65 River	4.4	Pending	A1
2180	6563	2016 Little Bear	02-IOW-65 River	3.3	Pending	A1
2184	6590	2016 Unnamed	02-IOW-65 River	0.4	Pending	A1
2186	1311	2016 Chariton Ri	05-CHA-13 River	22.7	Pending	A1
2187	1312	2016 Chariton Ri	05-CHA-13 River	10	Pending	A1
2193	1313	2016 Chariton Cr	05-CHA-13 River	14	Pending	A1
2194	2019	2016 Honey Cre	05-CHA-20 River	5.4	Pending	A1
2200	1327	2016 South Fork	05-CHA-13 River	31.9	Pending	A1
2207	1328	2016 South Fork	05-CHA-13 River	8.1	Pending	A1
2208	1329	2016 Walker Bra	05-CHA-13 River	1.5	Pending	A1
2209	787	2016 Shell Rock	02-SHL-787 River	24.3	Pending	A1
2216	1330	2016 Jordan Cre	05-CHA-13 River	3.5	Pending	A1
2233	1332	2016 Jackson Cr	05-CHA-13 River	10.2	Pending	A1
2235	1335	2016 Ninemile C	05-CHA-13 River	2.3	Pending	A1
2242	1337	2016 Honey Cre	05-CHA-13 River	4.2	Pending	A2
2259	1339	2016 Wolf Creek	05-CHA-13 River	14.6	Pending	A1
2265	1341	2016 Fivemile Cr	05-CHA-13 River	3.5	Pending	A1
2266	1351	2016 Thompson	05-GRA-13 River	30.3	Pending	A1
2354	827	2016 Winnebago	02-WIN-82 River	18.1	Pending	A1
2356	788	2016 Flood Cree	02-SHL-788 River	16.6	Pending	A1

2372	801	2016 West Fork 02-WFC-80 River	30.3 Pending	A1
2377	826	2016 Winnebago 02-WIN-82 River	20.1 Pending	A1
2379	1310	2016 Chariton Ri 05-CHA-13 River	18.8 Pending	A1
2380	854	2016 North Skun 03-NSK-85 River	22.1 Pending	A1
2383	889	2016 Skunk River 03-SKU-88 River	25.9 Pending	A1
2386	853	2016 North Skun 03-NSK-85 River	20.6 Pending	A1
2387	1308	2016 Chariton Ri 05-CHA-13 River	12.7 Pending	A1
2388	1307	2016 Chariton Ri 05-CHA-13 River	22.2 Pending	A1
2390	1389	2016 Nodaway R 05-NOD-13 River	19.9 Pending	A1
2395	1378	2016 Middle For 05-GRA-13 River	11.4 Pending	A1
2396	1391	2016 East Nodav 05-NOD-13 River	18.6 Pending	A1
2401	995	2016 Fox River 04-FOX-99 River	21.9 Pending	A1
2420	6549	2016 Cedar Cree 03-SKU-65 River	7.5 Pending	A1
2421	6573	2016 Unnamed 103-SKU-65 River	2.9 Pending	A1
2422	6581	2016 Unnamed 103-SKU-65 River	1.4 Pending	A1
2423	6585	2016 Unnamed 103-SKU-65 River	0.8 Pending	A1
2424	6591	2016 Unnamed 103-SKU-65 River	1.4 Pending	A1
2427	934	2016 South Skun 03-SSK-934 River	19.9 Pending	A1
2428	943	2016 Indian Cree 03-SSK-943 River	23.2 Pending	A1
2429	1097	2016 North River 04-LDM-10 River	14.7 Pending	A1
2430	1053	2016 Cedar Cree 04-LDM-10 River	9.4 Pending	A1
2431	1059	2016 White Brea 04-LDM-10 River	30.5 Pending	A1
2432	1083	2016 Middle Riv 04-LDM-10 River	26.2 Pending	A1
2434	1233	2016 Beaver Cre 04-UDM-1 River	16.2 Pending	A1
2435	1278	2016 Lizard Cree 04-UDM-1 River	24.5 Pending	A1
2436	1216	2016 Des Moine: 04-UDM-1 River	21.5 Pending	A1
2437	1214	2016 Des Moine: 04-UDM-1 River	37.2 Pending	A1
2439	931	2016 South Skun 03-SSK-931 River	29.4 Pending	A1
2441	905	2016 Cedar Cree 03-SKU-90 River	11.8 Pending	A1
2442	927	2016 South Skun 03-SSK-927 River	14 Pending	A1
2447	1441	2016 West Nishr 05-NSH-14 River	17.9 Pending	A1
2448	1415	2016 East Nishn 05-NSH-14 River	15 Pending	A1
2450	1412	2016 Nishnabotr 05-NSH-14 River	5.4 Pending	A1
2451	1252	2016 Boone Rive 04-UDM-1 River	21.2 Pending	A1
2452	1220	2016 Des Moine: 04-UDM-1 River	4.5 Pending	A1
2454	926	2016 South Skun 03-SSK-926 River	20.6 Pending	A1
2455	1219	2016 Des Moine: 04-UDM-1 River	13 Pending	A1
2456	1217	2016 Des Moine: 04-UDM-1 River	10.2 Pending	A1
2458	1181	2016 South Racc 04-RAC-11 River	17.6 Pending	A1
2464	1002	2016 Des Moine: 04-LDM-10 River	8.2 Pending	A1
2465	1003	2016 Des Moine: 04-LDM-10 River	25.3 Pending	A1
2466	1010	2016 Des Moine: 04-LDM-10 River	18.4 Pending	A1
2470	6599	2016 Unnamed 103-SSK-659 River	5.6 Pending	A1
2471	6598	2016 Prairie Cre 03-SSK-659 River	14.4 Pending	A1
2475	1414	2016 East Nishn 05-NSH-14 River	13.3 Pending	A1
2477	1004	2016 Des Moine: 04-LDM-10 River	21.5 Pending	A1
2478	1005	2016 Des Moine: 04-LDM-10 River	20.6 Pending	A1

PS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 02-WFC-	2008 Continuing
PS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 02-WIN-	2008 Continuing
NS	5p	Bacteria: Ir Geometric Ambient m Tier III	IA 05-CHA-	2008 Continuing
NS	5a	Bacteria: Ir Geometric Ambient m Tier IV	IA 03-NSK-(	2008 Continuing
NS	5a	Bacteria: Ir Geometric Ambient m N/A	IA 03-SKU-(	2012 Continuing
PS	5a	Bacteria: Ir Geometric Ambient m Tier IV	IA 03-NSK-(	2008 Continuing
PS	5a	Bacteria: Ir Significant Ambient m Tier III	IA 05-CHA-	2008 Continuing
PS	5p	Bacteria: Ir Geometric Ambient m N/A	IA 05-CHA-	2016 New
NS	5p	Bacteria: Ir Geometric Ambient m Tier III	IA 05-NOD-	2008 Continuing
NS	5p	Bacteria: Ir Geometric TMDL mon Tier III	IA 05-GRA-	2014 Continuing
PS	5p	Bacteria: Ir Geometric Ambient m Tier III	IA 05-NOD-	2008 Continuing
PS	5p	Bacteria: Ir Geometric Ambient m Tier III	IA 04-FOX-(	2012 Continuing
NS	5p	Bacteria: Ir Geometric Special pro Tier III	IA 03-SKU-(	2014 Continuing
PS	5p	Bacteria: Ir Geometric Special pro Tier III	IA 03-SKU-(	2014 Continuing
PS	5p	Bacteria: Ir Geometric Special pro Tier III	IA 03-SKU-(	2014 Continuing
PS	5p	Bacteria: Ir Geometric Special pro Tier III	IA 03-SKU-(	2014 Continuing
PS	5p	Bacteria: Ir Geometric Special pro Tier III	IA 03-SKU-(	2014 Continuing
PS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 03-SSK-C	2004 Continuing
PS	5p	Bacteria: Ir Geometric Ambient m Tier III	IA 03-SSK-C	2008 Continuing
PS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 04-LDM-	2008 Continuing
PS	5p	Bacteria: Ir Geometric Ambient m Tier III	IA 04-LDM-	2008 Continuing
PS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 04-LDM-	2008 Continuing
PS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 04-LDM-	2008 Continuing
PS	5p	Bacteria: Ir Geometric Ambient m Tier III	IA 04-UDM	2008 Continuing
PS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 04-UDM	2008 Continuing
PS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 04-UDM	2008 Continuing
PS	5a	Bacteria: Ir Single-sam Ambient m Tier III	IA 04-UDM	2008 Continuing
NS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 03-SSK-C	2008 Continuing
NS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 03-SKU-(	2008 Continuing
PS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 03-SSK-C	2008 Continuing
PS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 05-NSH-	2008 Continuing
PS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 05-NSH-	2008 Continuing
NS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 05-NSH-	2012 Continuing
PS	5a	Bacteria: Ir Significant Ambient m Tier III	IA 04-UDM	2014 Continuing
PS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 04-UDM	2008 Continuing
PS	5p	Bacteria: Ir Geometric Ambient m Tier III	IA 03-SSK-C	2008 Continuing
PS	5p	Bacteria: Ir Geometric Ambient m Tier III	IA 04-UDM	2010 Continuing
PS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 04-UDM	2008 Continuing
PS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 04-RAC-(	2008 Continuing
PS	5a	Bacteria: Ir Single-sam Ambient m Tier III	IA 04-LDM-	2008 Continuing
PS	5a	Bacteria: Ir Single-sam Ambient m Tier III	IA 04-LDM-	2008 Continuing
PS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 04-LDM-	2004 Continuing
PS	5p	Bacteria: Ir Geometric Volunteer i Tier III	IA 03-SSK-C	2014 Continuing
NS	5p	Bacteria: Ir Geometric Volunteer i Tier III	IA 03-SSK-C	2014 Continuing
NS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 05-NSH-	2008 Continuing
PS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 04-LDM-	2012 Continuing
PS	5a	Bacteria: Ir Geometric Ambient m Tier III	IA 04-LDM-	2012 Continuing

2489	6545	2016 Prairie Cree 04-UDM-6! River	5.7 Pending	A1
2490	6544	2016 Unnamed 104-UDM-6! River	3.4 Pending	A1
2491	6542	2016 Little Creek 04-UDM-6! River	10.2 Pending	A1
2492	6543	2016 Turkey Cree 04-UDM-6! River	3 Pending	A1
2496	1826	2016 Buttermilk 04-UDM-1! River	1.2 Pending	A1
2498	1260	2016 Lyons Cree 04-UDM-1! River	7.7 Pending	A1
2503	6541	2016 Unnamed 104-UDM-6! River	3 Pending	A1
2504	6540	2016 Big Creek 04-UDM-6! River	12.5 Pending	A1
2505	1243	2016 Big Creek 04-UDM-1! River	10.6 Pending	A1
2506	1215	2016 Des Moine 04-UDM-1! River	18.5 Pending	A1
2512	1074	2016 South River 04-LDM-10 River	23.5 Pending	A1
2515	1709	2016 Missouri Ri 06-WEM-1! River	15.4 Pending	A1
2552	6638	2016 Pine Creek 01-TRK-66! River	0 Pending	A2
2555	514	2016 Otter Creel 02-CED-51! River	5.5 Pending	A1
2564	1715	2016 Missouri Ri 06-WEM-1! River	33.3 Pending	A1
2565	1720	2016 Missouri Ri 06-WEM-1! River	20.8 Pending	A1
2566	1721	2016 Missouri Ri 06-WEM-1! River	25 Pending	A1
2571	1722	2016 Missouri Ri 06-WEM-1! River	17.6 Pending	A1
15	61	2016 Mississippi 01-NEM-61 River	49.3 Pending	A1
16	63	2016 Mississippi 01-NEM-63 River	13.1 Pending	A1
24	62	2016 Mississippi 01-NEM-62 River	10.7 Pending	A1
5	14	2016 Maquoket 01-MAQ-1! River	26.9 Pending	B(WW-1)
6	15	2016 Maquoket 01-MAQ-1! River	37.7 Pending	B(WW-1)
19	44	2016 Silver Creel 01-MAQ-4! River	7.9 Pending	B(WW-2)
20	45	2016 Buck Creek 01-MAQ-4! River	10.1 Pending	B(WW-2)
21	46	2016 Plum Creek 01-MAQ-4! River	18.7 Pending	B(WW-1)
45	90	2016 North Fork 01-NMQ-9! River	33.7 Pending	B(WW-1)
50	103	2016 Whitewate 01-NMQ-1! River	12.9 Pending	B(WW-1)
51	105	2016 Johns Cree 01-NMQ-1! River	10.8 Pending	B(WW-2)
154	239	2016 Upper low 01-UIA-23! River	19.8 Pending	B(WW-1)
156	241	2016 Upper low 01-UIA-24! River	13.1 Pending	B(WW-1)
1602	451	2016 Cedar River 02-CED-45! River	30.3 Pending	B(WW-1)
1845	624	2016 Iowa River 02-IOW-62 River	17.7 Pending	B(WW-1)
7	16	2016 Maquoket 01-MAQ-1! River	22.1 Pending	B(WW-1)
20	45	2016 Buck Creek 01-MAQ-4! River	10.1 Pending	B(WW-2)
21	46	2016 Plum Creek 01-MAQ-4! River	18.7 Pending	B(WW-1)
61	121	2016 Tetes Des 01-TRK-12! River	5.2 Pending	B(WW-1)
84	162	2016 Little Turke 01-TRK-16! River	2.8 Pending	B(CW1)
86	165	2016 Point Hollo 01-TRK-16! River	6.4 Pending	B(CW1)
88	168	2016 Pecks Cree 01-TRK-16! River	4.1 Pending	B(CW1)
237	269	2016 Trout Creel 01-UIA-26! River	1.6 Pending	B(CW1)
325	274	2016 Ten Mile Ci 01-UIA-27! River	10.7 Pending	B(CW1)
1517	307	2016 Hewett Cre 01-VOL-30! River	6 Pending	B(CW1)
1578	439	2016 Suttle Cree 01-YEL-43! River	4 Pending	B(CW1)
1648	489	2016 Sugar Cree 02-CED-48! River	4.4 Pending	B(WW-1)
1651	504	2016 Indian Cree 02-CED-50! River	10.9 Pending	B(WW-2)
1676	546	2016 Black Hawk 02-CED-54! River	6.6 Pending	B(WW-1)

PS	5p	Bacteria: Ir Geometric Special pro Tier III	IA 04-UDM	2014 Continuing
PS	5p	Bacteria: Ir Geometric Special pro Tier III	IA 04-UDM	2016 New
PS	5p	Bacteria: Ir Geometric Special pro Tier III	IA 04-UDM	2014 Continuing
PS	5p	Bacteria: Ir Geometric Special pro Tier III	IA 04-UDM	2014 Continuing
NS	5p	Bacteria: Ir Geometric TMDL mon Tier III	IA 04-UDM	2008 Continuing
NS	5p	Bacteria: Ir Geometric TMDL mon Tier III	IA 04-UDM	2008 Continuing
PS	5p	Bacteria: Ir Geometric Special pro Tier III	IA 04-UDM	2014 Continuing
NS	5p	Bacteria: Ir Geometric Special pro Tier III	IA 04-UDM	2014 Continuing
NS	5p	Bacteria: Ir Geometric Special pro Tier III	IA 04-UDM	2016 New
PS	5a	Bacteria: Ir Single-sam Ambient m Tier III	IA 04-UDM	2008 Continuing
PS	5p	Bacteria: Ir Geometric Ambient m Tier III	IA 04-LDM-	2008 Continuing
PS	5a	Bacteria: Ir Geometric Ambient m Tier IV	IA 06-WEM	2016 New
NS	5a	Bacteria: Ir Geometric Watershed Tier III		2016 New
NS	5p	Bacteria: Ir Geometric Special pro Tier III	IA 02-CED-I	2014 Continuing
PS	5a	Bacteria: Ir Listing by a Ambient m N/A	IA 06-WEM	2016 New
PS	5a	Bacteria: Ir Listing by a Ambient m N/A	IA 06-WEM	2016 New
PS	5a	Bacteria: Ir Listing by a Ambient m N/A	IA 06-WEM	2016 New
PS	5a	Bacteria: Ir Listing by a Ambient m N/A	IA 06-WEM	2016 New
PS	5a	Bacteria: Ir Listing by a Ambient m Tier IV	IA 01-NEM-	2016 New
PS	5a	Bacteria: Ir Geometric Ambient m Tier IV	IA 01-NEM-	2016 New
PS	5a	Bacteria: Ir Geometric Ambient m Tier IV	IA 01-NEM-	2016 New
NS	5b	Biological: Loss of >50 Biological r Tier IV	IA 01-MAQ	2004 Continuing
NS	5b	Biological: Loss of >50 Special pro Tier IV	IA 01-MAQ	2004 Continuing
NS	5b-v	Biological: Loss of >50 Special pro Tier IV	IA 01-MAQ	2004 Continuing
PS	5b-v	Biological: Loss of >50 Special pro Tier IV	IA 01-MAQ	2004 Continuing
NS	5b-v	Biological: Loss of >50 Special pro Tier IV	IA 01-MAQ	2004 Continuing
PS	5b	Biological: Loss of >50 Biological r Tier IV	IA 01-NMQ	2010 Continuing
NS	5b	Biological: Loss of >50 Special pro Tier IV	IA 01-NMQ	2004 Continuing
NS	5b	Biological: Loss of >50 Special pro Tier IV	IA 01-NMQ	2004 Continuing
NS	5b	Biological: Loss of >50 Special pro Tier IV	IA 01-UIA-C	2004 Continuing
NS	5b	Biological: Loss of >50 Special pro Tier IV	IA 01-UIA-C	2004 Continuing
NS	5b	Biological: Loss of >50 Special pro Tier IV	IA 02-CED-I	2004 Continuing
NS	5b	Biological: Loss of >50 Special pro Tier IV	IA 02-IOW-	2004 Continuing
PS	5b-t	Biological: Low Biotic Biological r Tier IV	IA 01-MAQ	2006 Continuing
PS	5b-t	Biological: Low Biotic Biological r Tier IV	IA 01-MAQ	2004 Continuing
NS	5b-t	Biological: Low Biotic Biological r Tier IV	IA 01-MAQ	2008 Continuing
PS	5b-v	Biological: Low Biotic Biological r Tier IV	IA 01-TRK-C	2004 Continuing
PS	5b-t	Biological: Low Biotic Special pro Tier IV	IA 01-TRK-C	2008 Continuing
PS	5b-v	Biological: Low Biotic Biological r Tier IV	IA 01-TRK-C	2006 Continuing
PS	5b-t	Biological: Low Biotic Biological r Tier IV	IA 01-TRK-C	2004 Continuing
PS	5b-v	Biological: Low Biotic Biological r Tier IV	IA 01-UIA-C	2016 New
PS	5b-v	Biological: Low Biotic Biological r Tier IV	IA 01-UIA-C	2008 Continuing
PS	5b-v	Biological: Low Biotic Biological r Tier IV	IA 01-VOL-I	2014 Continuing
NS	5b-v	Biological: Low Biotic Biological r Tier IV	IA 01-YEL-C	2016 New
PS	5b-t	Biological: Low Biotic Biological r Tier IV	IA 02-CED-I	2004 Continuing
PS	5b-v	Biological: Low Biotic Biological r Tier IV	IA 02-CED-I	2004 Continuing
PS	5b-t	Biological: Low Biotic Biological r Tier IV	IA 02-CED-I	2006 Continuing

1691	557	2016 Beaver Cre 02-CED-55	River	13.6	Pending	B(WW-2)
1768	134	2016 Cloie Branc 01-TRK-13	River	1	Pending	B(CW1)
1769	138	2016 Middle For 01-TRK-13	River	5	Pending	B(CW1)
1800	247	2016 Irish Hollov 01-UIA-247	River	2.3	Pending	B(CW1)
1832	279	2016 East Pine C 01-UIA-279	River	5.7	Pending	B(CW1)
1839	582	2016 Beaver Cre 02-CED-58	River	5.2	Pending	B(CW1)
1844	427	2016 Miners Cre 01-YEL-427	River	5.1	Pending	B(CW1)
1846	318	2016 Brush Cree 01-VOL-31	River	2.8	Pending	B(CW1)
1847	304	2016 Cox Creek 01-VOL-30	River	3.6	Pending	B(CW1)
1852	581	2016 Burr Oak C 02-CED-58	River	3.1	Pending	B(CW1)
1914	485	2016 Pike Run 02-CED-48	River	4.8	Pending	B(WW-1)
1947	668	2016 Honey Cre 02-IOW-66	River	2.8	Pending	B(WW-2)
2096	1626	2016 Willow Cre 06-LSR-162	River	14	Pending	B(WW-2)
2118	1667	2016 Milford Cre 06-LSR-166	River	3.3	Pending	B(WW-1)
2153	748	2016 South Fork 02-IOW-74	River	8.9	Pending	B(WW-1)
2165	94	2016 Farmers Cr 01-NMQ-9	River	17.5	Pending	B(WW-2)
2172	769	2016 East Branc 02-IOW-76	River	10.6	Pending	B(WW-2)
2181	213	2016 Crane Cree 01-TRK-21	River	4.7	Pending	B(WW-2)
2191	358	2016 Brophy Cre 01-WPS-35	River	4.8	Pending	B(WW-1)
2205	580	2016 Burr Oak C 02-CED-58	River	3.8	Pending	B(WW-2)
2214	708	2016 Walnut Cre 02-IOW-70	River	7.3	Pending	B(WW-2)
2231	960	2016 Long Dick C 03-SSK-96	River	6.9	Pending	B(WW-2)
2253	1057	2016 English Cre 04-LDM-10	River	34.4	Pending	B(WW-2)
2307	1579	2016 Little Sioux 06-LSR-157	River	8.3	Pending	B(WW-2)
2320	1611	2016 Willow Cre 06-LSR-161	River	8.3	Pending	B(WW-2)
2343	1799	2016 Little Rock 06-BSR-17	River	15.2	Pending	B(WW-2)
2397	935	2016 South Skun 03-SSK-935	River	6.1	Pending	B(WW-2)
2402	1160	2016 Marrowboi 04-RAC-11	River	1	Pending	B(WW-2)
2428	943	2016 Indian Cree 03-SSK-943	River	23.2	Pending	B(WW-2)
2434	1233	2016 Beaver Cre 04-UDM-1	River	16.2	Pending	B(WW-2)
2435	1278	2016 Lizard Cree 04-UDM-1	River	24.5	Pending	B(WW-1)
1541	354	2016 Wapsipinic 01-WPS-35	River	5.3	Pending	B(CW1)
2073	1250	2016 Skillet Cree 04-UDM-1	River	6.9	Pending	B(WW-2)
2432	1083	2016 Middle Riv 04-LDM-10	River	26.2	Pending	B(WW-1)
45	90	2016 North Fork 01-NMQ-9	River	33.7	Pending	B(WW-1)
1583	446	2016 Unnamed C 01-YEL-446	River	2	Pending	B(WW-2)
1683	554	2016 Dry Run 02-CED-55	River	2.8	Pending	B(WW-2)
1867	110	2016 Hickory Cre 01-NMQ-1	River	4.4	Pending	B(WW-2)
1915	486	2016 Pike Run 02-CED-48	River	2.5	Pending	B(WW-2)
1943	605	2016 Cottonwoo 02-ICD-605	River	4.2	Pending	B(WW-1)
1982	705	2016 Little Bear 02-IOW-70	River	8.4	Pending	B(WW-2)
2035	1578	2016 Little Sioux 06-LSR-157	River	16.9	Pending	B(WW-1)
2042	1533	2016 Sixmile Cre 06-BSR-15	River	20.6	Pending	B(WW-2)
2054	1546	2016 Mud Creek 06-BSR-15	River	23.3	Pending	B(WW-2)
2059	1554	2016 Floyd River 06-FLO-15	River	38.1	Pending	B(WW-2)
2083	1683	2016 Plum Cree 06-WED-1	River	3.4	Pending	B(WW-2)
2113	1644	2016 Stony Cree 06-LSR-164	River	12	Pending	B(WW-2)

PS	5b-v	Biological: Low Biotic	Biological r Tier IV	IA 02-CED-I	2008 Continuing
PS	5b-v	Biological: Low Biotic	Biological r Tier IV	IA 01-TRK-C	2016 New
PS	5b-t	Biological: Low Biotic	Biological r Tier IV	IA 01-TRK-C	2006 Continuing
PS	5b-t	Biological: Low Biotic	Biological r Tier IV	IA 01-UIA-C	2008 Continuing
PS	5b-v	Biological: Low Biotic	Biological r Tier IV	IA 01-UIA-C	2006 Continuing
PS	5b-v	Biological: Low Biotic	Biological r Tier IV	IA 02-CED-I	2014 Continuing
PS	5b-t	Biological: Low Biotic	Biological r Tier IV	IA 01-YEL-C	2006 Continuing
PS	5b-v	Biological: Low Biotic	Biological r Tier IV	IA 01-VOL-I	2006 Continuing
PS	5b-v	Biological: Low Biotic	Biological r Tier IV	IA 01-VOL-I	2014 Continuing
PS	5b-v	Biological: Low Biotic	Biological r Tier IV	IA 02-CED-I	2016 New
PS	5b-t	Biological: Low Biotic	Biological r Tier IV	IA 02-CED-I	2006 Continuing
PS	5b-t	Biological: Low Biotic	Biological r Tier IV	IA 02-IOW-	2006 Continuing
PS	5b-t	Biological: Low Biotic	Biological r Tier IV	IA 06-LSR-C	2004 Continuing
PS	5b-t	Biological: Low Biotic	Biological r Tier IV	IA 06-LSR-C	2004 Continuing
PS	5b-v	Biological: Low Biotic	Biological r N/A	IA 02-IOW-	2016 New
PS	5b-t	Biological: Low Biotic	Biological r Tier IV	IA 01-NMQ	2004 Continuing
PS	5b-v	Biological: Low Biotic	Biological r Tier IV	IA 02-IOW-	2004 Continuing
PS	5b-t	Biological: Low Biotic	Biological r Tier IV	IA 01-TRK-C	2008 Continuing
PS	5b-v	Biological: Low Biotic	Biological r Tier IV	IA 01-WPS-	2006 Continuing
PS	5b-v	Biological: Low Biotic	Biological r Tier IV	IA 02-CED-I	2006 Continuing
PS	5b-t	Biological: Low Biotic	Biological r Tier IV	IA 02-IOW-	2006 Continuing
PS	5b-t	Biological: Low Biotic	Biological r Tier IV	IA 03-SSK-C	2004 Continuing
NS	5b-v	Biological: Low Biotic	Biological r Tier IV	IA 04-LDM-	2016 New
PS	5b-t	Biological: Low Biotic	Biological r Tier IV	IA 06-LSR-C	2006 Continuing
PS	5b-t	Biological: Low Biotic	Biological r Tier IV	IA 06-LSR-C	2008 Continuing
PS	5b-v	Biological: Low Biotic	Biological r Tier IV	IA 06-BSR-C	2014 Continuing
PS	5b-t	Biological: Low Biotic	Biological r Tier IV	IA 03-SSK-C	2006 Continuing
PS	5b-t	Biological: Low Biotic	Biological r Tier IV	IA 04-RAC-I	2004 Continuing
PS	5b-v	Biological: Low Biotic	Biological r Tier IV	IA 03-SSK-C	2016 New
PS	5b-v	Biological: Low Biotic	Biological r Tier IV	IA 04-UDM	2016 New
PS	5b-v	Biological: Low Biotic	Biological r Tier IV	IA 04-UDM	2006 Continuing
PS	5b-v	Biological: Low Biotic	Biological r Tier IV	IA 01-WPS-	2004 Continuing
PS	5b-t	Biological: Low Biotic	Biological r Tier IV	IA 04-UDM	2004 Continuing
PS	5b-t	Biological: Low Biotic	Biological r Tier IV	IA 04-LDM-	2004 Continuing
PS	5b-t	Biological: Low Biotic	Biological r Tier IV	IA 01-NMQ	2008 Continuing
PS	5b-t	Biological: Low Biotic	Biological r Tier IV	IA 01-YEL-C	2010 Continuing
PS	5b-v	Biological: Low Biotic	Biological r Tier IV	IA 02-CED-I	2004 Continuing
PS	5b-t	Biological: Low Biotic	Biological r Tier IV	IA 01-NMQ	2004 Continuing
PS	5b-t	Biological: Low Biotic	Biological r Tier IV	IA 02-CED-I	2008 Continuing
NS	5b-t	Biological: Low Biotic	Biological r Tier IV	IA 02-ICD-C	2006 Continuing
PS	5b-t	Biological: Low Biotic	Biological r Tier IV	IA 02-IOW-	2008 Continuing
PS	5b-v	Biological: Low Biotic	Biological r Tier IV	IA 06-LSR-C	2016 New
PS	5b-t	Biological: Low Biotic	Biological r Tier IV	IA 06-BSR-C	2006 Continuing
PS	5b-t	Biological: Low Biotic	Biological r Tier IV	IA 06-BSR-C	2006 Continuing
PS	5b-t	Biological: Low Biotic	Biological r Tier IV	IA 06-FLO-C	2004 Continuing
PS	5b-t	Biological: Low Biotic	Biological r Tier IV	IA 06-WED-	2008 Continuing
PS	5b-t	Biological: Low Biotic	Biological r Tier IV	IA 06-LSR-C	2008 Continuing

2116	1336	2016 Dick Creek 05-CHA-13 River	1.4 Pending	B(WW-2)
2119	1350	2016 East Fork M 05-GRA-13 River	8.2 Pending	B(WW-2)
2186	1311	2016 Chariton Ri 05-CHA-13 River	22.7 Pending	B(WW-2)
2201	408	2016 East Fork V 01-WPS-40 River	7.1 Pending	B(WW-2)
2207	1328	2016 South Fork 05-CHA-13 River	8.1 Pending	B(WW-2)
2212	685	2016 Old Mans C 02-IOW-68 River	7.8 Pending	B(WW-2)
2213	702	2016 Bear Creek 02-IOW-70 River	6.6 Pending	B(WW-2)
2216	1330	2016 Jordan Crei 05-CHA-13 River	3.5 Pending	B(WW-2)
2219	820	2016 Bailey Cree 02-WFC-82 River	23.5 Pending	B(WW-2)
2220	831	2016 Winnebagc 02-WIN-83 River	14.7 Pending	B(WW-2)
2223	845	2016 Calmus Cre 02-WIN-84 River	5 Pending	B(WW-2)
2225	859	2016 North Skun 03-NSK-85 River	7.3 Pending	B(WW-2)
2249	1048	2016 Muchakino 04-LDM-10 River	10.5 Pending	B(WW-2)
2251	1054	2016 Cedar Cree 04-LDM-10 River	30.6 Pending	B(WW-2)
2259	1339	2016 Wolf Creek 05-CHA-13 River	14.6 Pending	B(WW-2)
2279	1333	2016 West Jacks 05-CHA-13 River	8.4 Pending	B(WW-2)
2281	1356	2016 Weldon Riv 05-GRA-13 River	20.7 Pending	B(WW-2)
2285	1400	2016 Middle Nox 05-NOD-14 River	18.2 Pending	B(WW-2)
2290	1446	2016 West Nishr 05-NSH-14 River	10.5 Pending	B(WW-2)
2296	1480	2016 West Branx 05-PLA-14 River	7.6 Pending	B(WW-1)
2298	1497	2016 West Tarki 05-TAR-14 River	18.2 Pending	B(WW-2)
2303	1527	2016 Perry Creel 06-BSR-15 River	14.7 Pending	B(WW-2)
2318	1599	2016 West Fork 06-LSR-159 River	13.3 Pending	B(WW-2)
2322	1615	2016 Mill Creek 06-LSR-161 River	26.9 Pending	B(WW-2)
2337	1687	2016 Keg Creek 06-WED-16 River	21.2 Pending	B(WW-2)
2338	1699	2016 Mosquito C 06-WED-16 River	3 Pending	B(WW-1)
2339	1701	2016 Mosquito C 06-WED-17 River	27.7 Pending	B(WW-2)
2348	1825	2016 White Brea 04-LDM-18 River	9.6 Pending	B(WW-2)
2392	1562	2016 Deep Creel 06-FLO-15 River	20.1 Pending	B(WW-2)
2394	1529	2016 Broken Ket 06-BSR-15 River	12.4 Pending	B(WW-2)
2395	1378	2016 Middle For 05-GRA-13 River	11.4 Pending	B(WW-2)
2427	934	2016 South Skun 03-SSK-934 River	19.9 Pending	B(WW-1)
2431	1059	2016 White Brea 04-LDM-10 River	30.5 Pending	B(WW-1)
2433	1139	2016 North Racc 04-RAC-11 River	25.6 Pending	B(WW-1)
2495	1878	2016 Dry Creek 06-BSR-18 River	32.4 Pending	B(WW-1)
1567	437	2016 Yellow Rivε 01-YEL-437 River	5.8 Pending	B(WW-2)
1584	447	2016 Unnamed C 01-YEL-447 River	4.1 Pending	B(WW-1)
1918	686	2016 Old Mans C 02-IOW-68 River	11.5 Pending	B(WW-2)
1983	953	2016 Walnut Cre 03-SSK-953 River	5.5 Pending	B(WW-2)
2004	709	2016 Walnut Cre 02-IOW-70 River	7.9 Pending	B(WW-2)
2196	435	2016 Yellow Rivε 01-YEL-435 River	10 Pending	B(WW-1)
2200	1327	2016 South Fork 05-CHA-13 River	31.9 Pending	B(WW-2)
2233	1332	2016 Jackson Crε 05-CHA-13 River	10.2 Pending	B(WW-2)
2235	1335	2016 Ninemile C 05-CHA-13 River	2.3 Pending	B(WW-2)
2238	985	2016 Buffalo Cre 04-EDM-98 River	13.2 Pending	B(WW-2)
2239	986	2016 Buffalo Cre 04-EDM-98 River	9.2 Pending	B(WW-2)
2243	992	2016 North Fabii 04-FAB-99 River	9.2 Pending	B(WW-2)

2244	994	2016 Fox River 04-FOX-99 River	22 Pending	B(WW-2)
2247	1033	2016 Soap Creek 04-LDM-10 River	35.8 Pending	B(WW-2)
2250	1049	2016 Muchakino 04-LDM-10 River	11.2 Pending	B(WW-2)
2278	1323	2016 Cooper Cre 05-CHA-13 River	20.6 Pending	B(WW-2)
2282	1357	2016 Little River 05-GRA-13 River	16.1 Pending	B(WW-2)
2283	1376	2016 Lotts Creek 05-GRA-13 River	4.5 Pending	B(WW-2)
2284	1392	2016 East Nodav 05-NOD-13 River	10.6 Pending	B(WW-2)
2289	1436	2016 Troubleson 05-NSH-14 River	20.8 Pending	B(WW-2)
2293	1457	2016 Mud Creek 05-NSH-14 River	5.5 Pending	B(WW-2)
2304	1553	2016 Floyd River 06-FLO-15 River	31.1 Pending	B(WW-2)
2319	1605	2016 Johns Cree 06-LSR-16C River	6.4 Pending	B(WW-2)
2336	1686	2016 Keg Creek 06-WED-16 River	23 Pending	B(WW-2)
2359	1454	2016 Silver Creel 05-NSH-14 River	28.6 Pending	B(WW-2)
2379	1310	2016 Chariton Ri 05-CHA-13 River	18.8 Pending	B(WW-2)
2393	1558	2016 West Bran 06-FLO-15 River	26.9 Pending	B(WW-2)
2400	952	2016 Ballard Cre 03-SSK-952 River	7.1 Pending	B(WW-2)
2401	995	2016 Fox River 04-FOX-99 River	21.9 Pending	B(WW-2)
2429	1097	2016 North River 04-LDM-10 River	14.7 Pending	B(WW-1)
1584	447	2016 Unnamed C 01-YEL-447 River	4.1 Pending	B(WW-1)
76	148	2016 Turkey River 01-TRK-148 River	20.9 Pending	HH
143	236	2016 Upper low 01-UIA-236 River	8.5 Pending	HH
146	237	2016 Upper low 01-UIA-237 River	27.4 Pending	HH
192	1318	2016 Centerville 05-CHA-13 Lake	200 Pending	HH
238	1361	2016 Nine Eagle 05-GRA-13 Lake	63 Pending	HH
257	896	2016 Geode Lake 03-SKU-896 Lake	189 Pending	HH
260	6311	2016 Grade Lake 04-LDM-63 Lake	23.5 Pending	HH
296	677	2016 Iowa Lake 02-IOW-67 Lake	86 Pending	HH
315	930	2016 Lake Keom 03-SSK-930 Lake	84 Pending	HH
321	1016	2016 Lake Miam 04-LDM-10 Lake	140 Pending	HH
333	1035	2016 Lake Wape 04-LDM-10 Lake	289 Pending	HH
376	1404	2016 Mormon Tr 05-NOD-14 Lake	35 Pending	HH
385	1988	2016 North Banr 04-LDM-19 Lake	19 Pending	HH
406	888	2016 Pollmiller P 03-SKM-88 Lake	18 Pending	HH
412	1073	2016 Red Haw L 04-LDM-10 Lake	64 Pending	HH
444	1085	2016 South Banr 04-LDM-10 Lake	12 Pending	HH
515	291	2016 Volga River 01-VOL-29 River	9.5 Pending	HH
516	294	2016 Volga River 01-VOL-29 River	17.9 Pending	HH
517	295	2016 Volga River 01-VOL-29 River	9.3 Pending	HH
1523	328	2016 Little Volga 01-VOL-32 River	3.8 Pending	HH
1524	330	2016 North Bran 01-VOL-33 River	4.5 Pending	HH
1641	477	2016 Cedar River 02-CED-47 River	10.9 Pending	HH
1642	478	2016 Cedar River 02-CED-47 River	19 Pending	HH
1643	479	2016 Cedar River 02-CED-47 River	30.2 Pending	HH
1853	633	2016 Iowa River 02-IOW-63 River	16.4 Pending	HH
1855	634	2016 Iowa River 02-IOW-63 River	19.8 Pending	HH
1856	635	2016 Iowa River 02-IOW-63 River	22.8 Pending	HH
1858	638	2016 Iowa River 02-IOW-63 River	12.7 Pending	HH

PS	5b-t	Biological: Low Biotic Biological r Tier IV	IA 04-FOX-I	2008 Continuing
PS	5b-t	Biological: Low Biotic Biological r Tier IV	IA 04-LDM-	2006 Continuing
NS	5b-t	Biological: Low Biotic Biological r Tier IV	IA 04-LDM-	2004 Continuing
PS	5b-t	Biological: Low Biotic Biological r Tier IV	IA 05-CHA-	2008 Continuing
NS	5b-t	Biological: Low Biotic Biological r Tier IV	IA 05-GRA-	2004 Continuing
PS	5b-t	Biological: Low Biotic Biological r Tier IV	IA 05-GRA-	2006 Continuing
PS	5b-t	Biological: Low Biotic Biological r Tier IV	IA 05-NOD-	2006 Continuing
PS	5b-t	Biological: Low Biotic Biological r Tier IV	IA 05-NSH-I	2008 Continuing
PS	5b-t	Biological: Low Biotic Biological r Tier IV	IA 05-NSH-I	2008 Continuing
PS	5b-t	Biological: Low Biotic Biological r Tier IV	IA 06-FLO-C	2006 Continuing
PS	5b-t	Biological: Low Biotic Biological r Tier IV	IA 06-LSR-C	2006 Continuing
PS	5b-t	Biological: Low Biotic Biological r Tier IV	IA 06-WED-	2004 Continuing
NS	5b-t	Biological: Low Biotic Biological r Tier IV	IA 05-NSH-I	2004 Continuing
PS	5b-t	Biological: Low Biotic Biological r Tier IV	IA 05-CHA-	2014 Continuing
PS	5b-t	Biological: Low Biotic Biological r Tier IV	IA 06-FLO-C	2004 Continuing
PS	5b-t	Biological: Low Biotic Biological r Tier IV	IA 03-SSK-C	2016 New
PS	5b-v	Biological: Low Biotic Biological r Tier IV	IA 04-FOX-I	2004 Continuing
PS	5b-t	Biological: Low Biotic Biological r Tier IV	IA 04-LDM-	2004 Continuing
NS	5p	Dissolved S Violations Watershed Tier IV	IA 01-YEL-C	2012 Continuing
PS	5a	Fish Consum Fish consum Fish contar Tier IV	IA 01-TRK-C	2014 Continuing
PS	5a	Fish Consum Fish consum Fish contar Tier IV	IA 01-UIA-C	2006 Continuing
PS	5a	Fish Consum Fish consum Fish contar Tier IV	IA 01-UIA-C	2006 Continuing
PS	5a	Fish Consum Fish consum Fish contar Tier IV	IA 05-CHA-	2010 Continuing
PS	5a	Fish Consum Fish consum Fish contar N/A	IA 05-GRA-	2006 Continuing
PS	5a	Fish Consum Fish consum Fish contar Tier IV	IA 03-SKU-I	2010 Continuing
PS	5a	Fish Consum Fish consum Fish contar Tier IV	IA 04-LDM-	2010 Continuing
PS	5a	Fish Consum Fish consum Fish contar Tier IV	IA 02-IOW-	2014 Continuing
PS	5a	Fish Consum Fish consum Fish contar Tier IV	IA 03-SSK-C	2012 Continuing
PS	5a	Fish Consum Fish consum Fish contar Tier IV	IA 04-LDM-	2012 Continuing
PS	5a	Fish Consum Fish consum Fish contar N/A	IA 04-LDM-	2014 Continuing
PS	5a	Fish Consum Fish consum Fish contar Tier IV	IA 05-NOD-	2008 Continuing
PS	5a	Fish Consum Fish consum Fish contar Tier IV	IA 04-LDM-	2008 Continuing
PS	5a	Fish Consum Fish consum Fish contar Tier IV	IA 03-SKM-	2014 Continuing
PS	5a	Fish Consum Fish consum Fish contar Tier IV	IA 04-LDM-	2008 Continuing
PS	5a	Fish Consum Fish consum Fish contar Tier IV	IA 04-LDM-	2008 Continuing
PS	5a	Fish Consum Fish consum Fish contar Tier IV	IA 01-VOL-I	2008 Continuing
PS	5a	Fish Consum Fish consum Fish contar Tier IV	IA 01-VOL-I	2008 Continuing
PS	5a	Fish Consum Fish consum Fish contar Tier IV	IA 01-VOL-I	2008 Continuing
PS	5a	Fish Consum Fish consum Fish contar Tier IV	IA 01-VOL-I	2008 Continuing
PS	5a	Fish Consum Fish consum Fish contar Tier IV	IA 01-VOL-I	2014 Continuing
PS	5a	Fish Consum Potential fi Fish contar Tier IV	IA 02-CED-I	2014 Continuing
PS	5a	Fish Consum Fish consum Fish contar Tier IV	IA 02-CED-I	2006 Continuing
PS	5a	Fish Consum Fish consum Fish contar Tier IV	IA 02-CED-I	2006 Continuing
PS	5a	Fish Consum Fish consum Fish contar Tier IV	IA 02-IOW-	2014 Continuing
PS	5a	Fish Consum Fish consum Fish contar Tier IV	IA 02-IOW-	2014 Continuing
PS	5a	Fish Consum Fish consum Fish contar Tier IV	IA 02-IOW-	2014 Continuing
PS	5a	Fish Consum Fish consum Fish contar Tier IV	IA 02-IOW-	2014 Continuing

1859	639	2016 Iowa River 02-IOW-63 River	15.8 Pending	HH
1866	640	2016 Iowa River 02-IOW-64 River	18.5 Pending	HH
1874	641	2016 Iowa River 02-IOW-64 River	13.7 Pending	HH
1875	642	2016 Iowa River 02-IOW-64 River	8 Pending	HH
1876	644	2016 Iowa River 02-IOW-64 River	6.9 Pending	HH
1877	645	2016 Iowa River 02-IOW-64 River	8.5 Pending	HH
1878	646	2016 Iowa River 02-IOW-64 River	6.2 Pending	HH
1879	647	2016 Iowa River 02-IOW-64 River	16.1 Pending	HH
1880	648	2016 Iowa River 02-IOW-64 River	12.6 Pending	HH
2185	782	2016 Shell Rock 102-SHL-782 River	10 Pending	HH
2188	783	2016 Shell Rock 102-SHL-783 River	18.1 Pending	HH
2190	784	2016 Shell Rock 102-SHL-784 River	25.3 Pending	HH
2409	1222	2016 Des Moines 04-UDM-11 River	14.6 Pending	HH
2412	1223	2016 Des Moines 04-UDM-11 River	14.7 Pending	HH
2452	1220	2016 Des Moines 04-UDM-11 River	4.5 Pending	HH
2519	1221	2016 Des Moines 04-UDM-11 River	1.7 Pending	HH
180	1714	2016 Carter Lake 06-WEM-11 Lake	315 Pending	HH
367	1470	2016 McKinley L 05-PLA-147 Lake	50 Pending	HH
54	1886	2016 Bear Creek 01-NMQ-11 River	7 Pending	B(WW-1)
132	1885	2016 Unnamed 101-TRK-188 River	1.7 Pending	B(WW-1)
1542	372	2016 Walnut Cre 01-WPS-37 River	9.6 Pending	B(WW-2)
1551	394	2016 Unnamed 01-WPS-39 River	2.7 Pending	B(WW-1)
1889	6437	2016 Clark Creek 01-UIA-643 River	5.7 Pending	B(WW-1)
1988	2007	2016 Long Dick 03-SSK-200 River	14 Pending	B(WW-1)
2014	1534	2016 Rock River 06-BSR-153 River	26.9 Pending	B(WW-1)
2041	1209	2016 Brushy Cre 04-RAC-121 River	15 Pending	B(WW-1)
2052	1545	2016 Otter Creel 06-BSR-154 River	13.6 Pending	B(WW-1)
2054	1546	2016 Mud Creek 06-BSR-154 River	23.3 Pending	B(WW-2)
2059	1554	2016 Floyd River 06-FLO-155 River	38.1 Pending	B(WW-2)
2095	6342	2016 Unnamed 106-LSR-634 River	4.3 Pending	B(WW-1)
2096	1626	2016 Willow Cre 06-LSR-162 River	14 Pending	B(WW-2)
2097	6299	2016 Willow Cre 06-LSR-629 River	15.5 Pending	B(WW-1)
2357	790	2016 Palmer Cre 02-SHL-790 River	9.2 Pending	B(WW-1)
2400	952	2016 Ballard Cre 03-SSK-952 River	7.1 Pending	B(WW-2)
2403	1161	2016 Elk Run 04-RAC-116 River	7.1 Pending	B(WW-2)
2486	1447	2016 West Nishr 05-NSH-144 River	8.6 Pending	B(WW-2)
2539	1818	2016 Brushy Cre 04-RAC-181 River	9 Pending	B(WW-2)
2584	6621	2016 Sewer Cree 06-LSR-662 River	11.7 Pending	B(WW-1)
2589	6618	2016 West Branch 01-WPS-66 River	6.66 Pending	B(WW-1)
328	1918	2016 Lake Petoc 03-SSK-191 Lake	50 Pending	B(LW)
1654	508	2016 McCloud Ru 02-CED-508 River	4.1 Pending	B(WW-1)
1668	1880	2016 East Branch 02-CED-188 River	11.3 Pending	B(WW-1)
2041	1209	2016 Brushy Cre 04-RAC-121 River	15 Pending	B(WW-1)
2059	1554	2016 Floyd River 06-FLO-155 River	38.1 Pending	B(WW-2)
2268	1183	2016 South Racc 04-RAC-118 River	25.2 Pending	B(WW-1)
2523	6494	2016 Drainage D 04-UDM-64 River	5.7 Pending	B(WW-1)
2575	1208	2016 Brushy Cre 04-RAC-121 River	24.7 Pending	B(WW-1)

PS	5a	Fish Consum Fish consum Fish contar Tier IV	IA 02-IOW-	2014 Continuing
PS	5a	Fish Consum Fish consum Fish contar Tier IV	IA 02-IOW-	2014 Continuing
PS	5a	Fish Consum Fish consum Fish contar Tier IV	IA 02-IOW-	2014 Continuing
PS	5a	Fish Consum Fish consum Fish contar Tier IV	IA 02-IOW-	2014 Continuing
PS	5a	Fish Consum Fish consum Fish contar Tier IV	IA 02-IOW-	2014 Continuing
PS	5a	Fish Consum Fish consum Fish contar Tier IV	IA 02-IOW-	2014 Continuing
PS	5p	Fish Consum Fish consum Fish contar Tier IV	IA 02-IOW-	2014 Continuing
PS	5a	Fish Consum Fish consum Fish contar Tier IV	IA 02-IOW-	2012 Continuing
P5	5a	Fish Consum Fish consum Fish contar N/A	IA 02-SHL-C	2012 Continuing
PS	5a	Fish Consum Fish consum Fish contar Tier IV	IA 02-SHL-C	2012 Continuing
PS	5a	Fish Consum Fish consum Fish contar Tier IV	IA 02-SHL-C	2012 Continuing
PS	5a	Fish Consum Fish consum Fish contar Tier IV	IA 04-UDM	2012 Continuing
PS	5a	Fish Consum Fish consum Fish contar Tier IV	IA 04-UDM	2014 Continuing
PS	5a	Fish Consum Fish consum Fish contar Tier IV	IA 04-UDM	2014 Continuing
PS	5a	Fish Consum Fish consum Fish contar N/A	IA 04-UDM	2014 Continuing
PS	5a	Fish Consum Listing by a Fish contar Tier IV	IA 06-WEM	2002 Continuing
PS	5a	Fish Consum Fish consum Fish contar Tier IV	IA 05-PLA-C	2012 Continuing
PS	5b	Fish Kill: Ca Pollutant-c Fish kill inv Tier IV	IA 01-NMQ	2006 Continuing
PS	5p	Fish Kill: Ca Pollutant-c Fish kill inv Tier IV	IA 01-TRK-C	2006 Continuing
PS	5b	Fish Kill: Ca Pollutant-c Fish kill inv Tier IV	IA 01-WPS-	2004 Continuing
PS	5b	Fish Kill: Ca Pollutant-c Fish kill inv Tier IV	IA 01-WPS-	2010 Continuing
PS	5b	Fish Kill: Ca Pollutant-c Fish kill inv Tier IV	IA 01-UIA-C	2016 New
PS	5b	Fish Kill: Ca Pollutant-c Fish kill inv Tier III	IA 03-SSK-C	2006 Continuing
NS	5b	Fish Kill: Ca Pollutant-c Fish kill inv Tier IV	IA 06-BSR-C	2004 Continuing
PS	5b	Fish Kill: Ca Pollutant-c Fish kill inv Tier IV	IA 04-RAC-I	2008 Continuing
NS	5b	Fish Kill: Ca Pollutant-c Fish kill inv Tier IV	IA 06-BSR-C	2004 Continuing
PS	5b	Fish Kill: Ca Pollutant-c Fish kill inv Tier IV	IA 06-BSR-C	2006 Continuing
PS	5b	Fish Kill: Ca Pollutant-c Fish kill inv Tier IV	IA 06-FLO-C	2004 Continuing
PS	5b	Fish Kill: Ca Pollutant-c Fish kill inv Tier IV	IA 06-LSR-C	2014 Continuing
PS	5b	Fish Kill: Ca Pollutant-c Fish kill inv Tier IV	IA 06-LSR-C	2004 Continuing
PS	5b	Fish Kill: Ca Pollutant-c Fish kill inv Tier IV	IA 06-LSR-C	2008 Continuing
PS	5b	Fish Kill: Ca Pollutant-c Fish kill inv Tier IV	IA 02-SHL-C	2004 Continuing
PS	5b	Fish Kill: Ca Pollutant-c Fish kill inv Tier IV	IA 03-SSK-C	2004 Continuing
PS	5b	Fish Kill: Ca Pollutant-c Fish kill inv Tier IV	IA 04-RAC-I	2010 Continuing
PS	5b	Fish Kill: Ca Pollutant-c Fish kill inv Tier IV	IA 05-NSH-I	2010 Continuing
PS	5b	Fish Kill: Ca Pollutant-c Fish kill inv Tier IV	IA 04-RAC-I	2006 Continuing
PS	5b	Fish Kill: Ca Pollutant-c Fish kill inv Tier IV		2016 New
PS	5b	Fish Kill: Ca Pollutant-c Fish kill inv Tier IV		2016 New
PS	5a	Fish Kill: Ca Pollutant-c Fish kill inv Tier IV	IA 03-SSK-C	2006 Continuing
NS	5b	Fish Kill: Ca Adverse im Fish kill inv N/A	IA 02-CED-I	2014 Continuing
PS	5b	Fish Kill: Ca Pollutant-c Fish kill inv Tier IV	IA 02-CED-I	2006 Continuing
PS	5b	Fish Kill: Ca Pollutant-c Fish kill inv Tier IV	IA 04-RAC-I	2016 New
PS	5b	Fish Kill: Ca Pollutant-c Fish kill inv N/A	IA 06-FLO-C	2004 Continuing
PS	5b	Fish Kill: Ca Pollutant-c Fish kill inv Tier IV	IA 04-RAC-I	2016 New
PS	5b	Fish Kill: Ca Pollutant-c Fish kill inv Tier IV	IA 04-UDM	2014 Continuing
PS	5b	Fish Kill: Ca Pollutant-c Fish kill inv Tier IV	IA 04-RAC-I	2016 New

2576	6537	2016 Unnamed 104-RAC-65: River	5.6 Pending	B(WW-1)
2583	1963	2016 Unnamed 101-MAQ-1: River	2.4 Pending	B(WW-1)
2198	1915	2016 Unnamed 105-CHA-19 River	1.2 Pending	B(WW-1)
2534	1883	2016 Poor Farm 04-RAC-18: River	10.2 Pending	B(WW-1)
2009	1522	2016 Big Sioux R 06-BSR-15: River	22.8 Pending	B(WW-1)
2582	602	2016 Big Hollow 02-ICD-602 River	1.1 Pending	B(WW-2)
1924	6412	2016 Rhine Cree 02-IOW-64 River	4.1 Pending	B(WW-1)
1988	2007	2016 Long Dick C 03-SSK-20C River	14 Pending	B(WW-1)
2060	6266	2016 Floyd River 06-FLO-62: River	12.8 Pending	B(WW-1)
2577	6609	2016 West Rat C 06-BSR-66: River	9.76 Pending	B(WW-1)
2586	1159	2016 Purgatory C 04-RAC-11: River	17.8 Pending	B(WW-2)
2587	6620	2016 Unnamed 101-TRK-66: River	3.35 Pending	B(WW-1)
396	1014	2016 Ottumwa L 04-LDM-10 Lake	59 Pending	B(LW)
2156	750	2016 South Fork 02-IOW-75 River	8.3 Pending	B(WW-2)
2157	751	2016 South Fork 02-IOW-75 River	9 Pending	B(WW-2)
2052	1545	2016 Otter Creel 06-BSR-15: River	13.6 Pending	B(WW-1)
2495	1878	2016 Dry Creek 06-BSR-18: River	32.4 Pending	B(WW-1)
61	121	2016 Tetes Des F 01-TRK-12: River	5.2 Pending	B(WW-1)
67	125	2016 Catfish Cre 01-TRK-12: River	5.3 Pending	B(WW-2)
1541	354	2016 Wapsipinic 01-WPS-35 River	5.3 Pending	B(CW1)
1566	436	2016 Yellow Rive 01-YEL-436 River	8.9 Pending	B(CW1)
1584	447	2016 Unnamed C 01-YEL-447 River	4.1 Pending	B(WW-1)
1654	508	2016 McCloud Ru 02-CED-50: River	4.1 Pending	B(WW-1)
1923	6300	2016 Unnamed 102-IOW-63 River	4.6 Pending	B(WW-1)
2050	1934	2016 Unnamed 106-BSR-19: River	8.1 Pending	B(WW-1)
2061	1829	2016 Willow Cre 06-FLO-18: River	4.7 Pending	B(WW-1)
2072	1834	2016 West Fork 06-LSR-183 River	15.8 Pending	B(WW-1)
2374	2079	2016 Unnamed 102-WFC-20 River	3.9 Pending	B(WW-1)
2466	1010	2016 Des Moine: 04-LDM-10 River	18.4 Pending	B(WW-1)
2477	1004	2016 Des Moine: 04-LDM-10 River	21.5 Pending	B(WW-1)
2478	1005	2016 Des Moine: 04-LDM-10 River	20.6 Pending	B(WW-1)
2480	1045	2016 Miller Cree 04-LDM-10 River	8.4 Pending	B(WW-2)
2498	1260	2016 Lyons Cree 04-UDM-1: River	7.7 Pending	B(WW-1)
2502	1270	2016 West Otter 04-UDM-1: River	6.6 Pending	B(WW-1)
2557	1256	2016 Boone Rive 04-UDM-1: River	38.8 Pending	B(WW-1)
24	62	2016 Mississippi 01-NEM-62 River	10.7 Pending	B(WW-1)
25	64	2016 Mississippi 01-NEM-64 River	16.1 Pending	B(WW-1)
28	75	2016 Mississippi 01-NEM-75 River	30.9 Pending	B(WW-1)
1748	619	2016 Mississippi 02-ICM-61: River	29.2 Pending	B(WW-1)
2237	884	2016 Mississippi 03-SKM-88 River	17.3 Pending	B(WW-1)
2380	854	2016 North Skun 03-NSK-85: River	22.1 Pending	B(WW-2)
2386	853	2016 North Skun 03-NSK-85: River	20.6 Pending	B(WW-1)
2	2	2016 Rock Creek 01-MAQ-2 River	3.4 Pending	B(WW-2)
104	192	2016 Silver Creel 01-TRK-19: River	4.9 Pending	B(WW-2)
172	1338	2016 Bob White 05-CHA-13 Lake	89 Pending	B(LW)
241	1367	2016 Twelve Mil 05-GRA-13 Lake	660 Pending	B(LW)
267	1476	2016 Lake Of Thi 05-PLA-14: Lake	97 Pending	B(LW)

PS	5b	Fish Kill: Ca Pollutant-c Fish kill inv. Tier IV	IA 04-RAC-I	2016 New
PS	5b	Fish Kill: Ca Pollutant-c Fish kill inv. Tier IV	IA 01-MAQ	2016 New
PS	5b	Fish Kill: Ca Pollutant-c Fish kill inv. Tier IV	IA 05-CHA-	2006 Continuing
PS	5b	Fish Kill: Ca Pollutant-c Fish kill inv. Tier IV	IA 04-RAC-I	2006 Continuing
PS	5b	Fish Kill: Ca Pollutant-c Fish kill inv. Tier IV	IA 06-BSR-C	2004 Continuing
PS	5b	Fish Kill: Ca Pollutant-c Fish kill inv. Tier IV	IA 02-ICD-C	2016 New
PS	5b	Fish Kill: Ca Pollutant-c Fish kill inv. N/A	IA 02-IOW-	2014 Continuing
PS	5b	Fish Kill: Ca Pollutant-c Fish kill inv. Tier IV	IA 03-SSK-C	2014 Continuing
PS	5b	Fish Kill: Ca Pollutant-c Fish kill inv. Tier IV	IA 06-FLO-C	2010 Continuing
PS	5b	Fish Kill: Ca Pollutant-c Fish kill inv. Tier IV		2016 New
PS	5b	Fish Kill: Ca Pollutant-c Fish kill inv. Tier IV	IA 04-RAC-I	2016 New
PS	5b	Fish Kill: Ca Pollutant-c Fish kill inv. Tier IV		2016 New
NS	5a	Fish Kill: Ca Pollutant-c Fish kill inv. Tier IV	IA 04-LDM-	2008 Continuing
PS	5b	Fish Kill: Ca Pollutant-c Fish kill inv. Tier IV	IA 02-IOW-	2014 Continuing
PS	5b	Fish Kill: Ca Pollutant-c Fish kill inv. Tier IV	IA 02-IOW-	2014 Continuing
NS	5b	Fish Kill: Ca Pollutant-c Fish kill inv. Tier IV	IA 06-BSR-C	2004 Continuing
PS	5b	Fish Kill: Dc Non Pollut: Fish kill inv. Tier IV	IA 06-BSR-C	2006 Continuing
PS	5b	Fish Kill: Dc Pollutant-c Fish kill inv. Tier IV	IA 01-TRK-C	2006 Continuing
PS	5b	Fish Kill: Dc Pollutant-c Fish kill inv. Tier IV	IA 01-TRK-C	2016 New
PS	5b	Fish Kill: Dc Pollutant-c Fish kill inv. Tier IV	IA 01-WPS-	2004 Continuing
NS	5b	Fish Kill: Dc Pollutant-c Fish kill inv. Tier IV	IA 01-YEL-C	2016 New
NS	5b	Fish Kill: Dc Pollutant-c Fish kill inv. Tier IV	IA 01-YEL-C	2004 Continuing
NS	5b	Fish Kill: Dc Pollutant-c Fish kill inv. Tier IV	IA 02-CED-I	2006 Continuing
PS	5p	Fish Kill: Dc Pollutant-c Fish kill inv. Tier IV	IA 02-IOW-	2012 Continuing
PS	5b	Fish Kill: Dc Pollutant-c Fish kill inv. Tier IV	IA 06-BSR-C	2006 Continuing
PS	5b	Fish Kill: Dc Pollutant-c Fish kill inv. Tier IV	IA 06-FLO-C	2006 Continuing
PS	5b	Fish Kill: Dc Pollutant-c Fish kill inv. Tier IV	IA 06-LSR-C	2006 Continuing
PS	5b	Fish Kill: Dc Pollutant-c Fish kill inv. Tier IV	IA 02-WFC-	2012 Continuing
PS	5b	Fish Kill: Dc Pollutant-c Fish kill inv. Tier IV	IA 04-LDM-	2006 Continuing
PS	5b	Fish Kill: Dc Pollutant-c Fish kill inv. Tier IV	IA 04-LDM-	2008 Continuing
PS	5b	Fish Kill: Dc Pollutant-c Fish kill inv. Tier IV	IA 04-LDM-	2006 Continuing
PS	5b	Fish Kill: Dc Pollutant-c Fish kill inv. Tier IV	IA 04-LDM-	2006 Continuing
PS	5b	Fish Kill: Dc Pollutant-c Fish kill inv. Tier IV	IA 04-UDM	2004 Continuing
PS	5b	Fish Kill: Dc Pollutant-c Fish kill inv. Tier IV	IA 04-UDM	2004 Continuing
PS	5b	Fish Kill: Dc Pollutant-c Fish kill inv. Tier IV	IA 04-UDM	2016 New
NS	5a	Metals: Alc Violations c Ambient m Tier IV	IA 01-NEM-	2006 Continuing
NS	5a	Metals: Alc Violations c Ambient m Tier IV	IA 01-NEM-	2006 Continuing
NS	5a	Metals: Alc Violations c Ambient m Tier IV	IA 01-NEM-	2006 Continuing
NS	5a	Metals: Alc Violations c Ambient m Tier IV	IA 02-ICM-I	2006 Continuing
NS	5a	Metals: Alc Violations c Ambient m Tier IV	IA 03-SKM-	2006 Continuing
NS	5a	Metals: Chl Violations c Ambient m Tier III	IA 03-NSK-C	2010 Continuing
NS	5a	Metals: Chl Violations c Ambient m Tier III	IA 03-NSK-C	2010 Continuing
PS	5a	Organic Enl Significantl Ambient m Tier IV	IA 01-MAQ	2014 Continuing
NS	5a	Organic Enl Significantl TMDL mon Tier IV	IA 01-TRK-C	2014 Continuing
PS	5a	Organic Enl Significantl Ambient m Tier IV	IA 05-CHA-	2014 Continuing
NS	5a	Organic Enl Significantl Ambient m Tier IV	IA 05-GRA-	2016 New
NS	5a	Organic Enl Significantl Ambient m Tier IV	IA 05-PLA-C	2016 New

276	1472	2016 Green Vall	05-PLA-147	Lake	393	Pending	B(LW)
315	930	2016 Lake Keom	03-SSK-930	Lake	84	Pending	B(LW)
466	1371	2016 Three Mile	05-GRA-137	Lake	880	Pending	B(LW)
1549	380	2016 East Branch	01-WPS-380	River	10.9	Pending	B(WW-2)
1577	438	2016 Dousman C	01-YEL-438	River	3.5	Pending	B(CW1)
1578	439	2016 Suttle Cree	01-YEL-439	River	4	Pending	B(CW1)
1579	440	2016 Unnamed C	01-YEL-440	River	2	Pending	B(CW1)
1580	441	2016 Hickory Cre	01-YEL-441	River	3.3	Pending	B(CW1)
1582	444	2016 Norfolk Cre	01-YEL-444	River	5	Pending	B(CW1)
1585	448	2016 North Fork	01-YEL-448	River	3.7	Pending	B(WW-2)
1701	6567	2016 Unnamed T	02-CED-656	River	6	Pending	B(WW-1)
1768	134	2016 Cloie Branch	01-TRK-134	River	1	Pending	B(CW1)
1945	6588	2016 Unnamed T	02-IOW-658	River	0.5	Pending	B(WW-1)
1975	902	2016 Saunders B	03-SKU-902	River	2	Pending	B(WW-1)
2015	1837	2016 Beaver Cre	02-WIN-183	River	12	Pending	B(WW-1)
2022	1947	2016 Bear Creek	04-LDM-194	River	14.7	Pending	B(WW-1)
2102	2048	2016 Ashton Cre	06-LSR-204	River	9.9	Pending	B(WW-1)
2144	753	2016 Beaver Cre	02-IOW-753	River	8.8	Pending	B(WW-2)
2151	746	2016 South Fork	02-IOW-746	River	7.8	Pending	B(WW-1)
2175	6551	2016 Drainage D	02-IOW-655	River	6.4	Pending	B(WW-1)
2209	787	2016 Shell Rock	102-SHL-787	River	24.3	Pending	B(WW-1)
2402	1160	2016 Marrowboi	04-RAC-116	River	1	Pending	B(WW-2)
2219	820	2016 Bailey Cree	02-WFC-820	River	23.5	Pending	B(WW-2)
121	1790	2016 Avenue Of	02-SHL-179	Lake	30	Pending	B(LW)
159	6496	2016 Big Hollow	02-ICD-649	Lake	178	Pending	A1
159	6496	2016 Big Hollow	02-ICD-649	Lake	178	Pending	B(LW)
174	1255	2016 Briggs Woc	04-UDM-125	Lake	59	Pending	A1
174	1255	2016 Briggs Woc	04-UDM-125	Lake	59	Pending	B(LW)
220	1065	2016 East Lake (	04-LDM-106	Lake	14	Pending	A1
220	1065	2016 East Lake (	04-LDM-106	Lake	14	Pending	B(LW)
313	356	2016 Lake Hendl	01-WPS-356	Lake	40	Pending	A1
313	356	2016 Lake Hendl	01-WPS-356	Lake	40	Pending	B(LW)
393	1396	2016 Orient Lak	05-NOD-139	Lake	15	Pending	A1
393	1396	2016 Orient Lak	05-NOD-139	Lake	15	Pending	B(LW)
439	796	2016 Silver Lake	02-SHL-796	Lake	316	Pending	A1
439	796	2016 Silver Lake	02-SHL-796	Lake	316	Pending	B(LW)
490	1477	2016 Wilson Parl	05-PLA-147	Lake	17	Pending	A1
490	1477	2016 Wilson Parl	05-PLA-147	Lake	17	Pending	B(LW)
1567	437	2016 Yellow Rive	01-YEL-437	River	5.8	Pending	A1
1567	437	2016 Yellow Rive	01-YEL-437	River	5.8	Pending	B(WW-2)
1575	2060	2016 Yellow Rive	01-YEL-206	River	5	Pending	A1
1575	2060	2016 Yellow Rive	01-YEL-206	River	5	Pending	B(WW-1)
1576	6574	2016 Unnamed T	01-YEL-657	River	3.9	Pending	A1
1576	6574	2016 Unnamed T	01-YEL-657	River	3.9	Pending	B(WW-1)
1587	2059	2016 Unnamed T	01-YEL-205	River	2.8	Pending	A1
1587	2059	2016 Unnamed T	01-YEL-205	River	2.8	Pending	B(WW-1)
1588	6575	2016 Unnamed T	01-YEL-657	River	2.2	Pending	A1

NS	5a	Organic En Significantl Ambient m Tier I	IA 05-PLA-C	2016 New
NS	5a	Organic En Significantl Ambient m Tier IV	IA 03-SSK-C	2014 Continuing
PS	5*	Organic En Significantl Ambient m Tier IV	IA 05-GRA-	2014 Continuing
PS	5a	Organic En Significantl Watershed Tier IV	IA 01-WPS-	2012 Continuing
PS	5a	Organic En Significantl Watershed Tier IV	IA 01-YEL-C	2008 Continuing
NS	5a	Organic En Significantl Special pro Tier IV	IA 01-YEL-C	2006 Continuing
NS	5a	Organic En Significantl Watershed Tier IV	IA 01-YEL-C	2006 Continuing
NS	5a	Organic En Significantl Watershed Tier IV	IA 01-YEL-C	2008 Continuing
PS	5a	Organic En Significantl Watershed Tier IV	IA 01-YEL-C	2006 Continuing
PS	5a	Organic En Significantl Watershed Tier IV	IA 01-YEL-C	2008 Continuing
NS	5p	Organic En Significantl Special pro Tier IV	IA 02-CED-I	2014 Continuing
PS	5a	Organic En Violations (Biological r N/A	IA 01-TRK-C	2016 New
NS	5p	Organic En Significantl Special pro Tier IV	IA 02-IOW-	2014 Continuing
PS	5b-t	Organic En Low Biotic Biological r N/A	IA 03-SKU-I	2004 Continuing
NS	5p	Organic En Violations (Ambient m Tier IV	IA 02-WIN-	2010 Continuing
PS	5p	Organic En Violations (Special pro Tier IV	IA 04-LDM-	2010 Continuing
NS	5p	Organic En Violations (Biological r Tier IV	IA 06-LSR-C	2010 Continuing
PS	5a	Organic En Significantl Ambient m Tier IV	IA 02-IOW-	2016 New
PS	5a	Organic En Significantl Ambient m Tier IV	IA 02-IOW-	2016 New
PS	5p	Organic En Significantl Special pro Tier IV	IA 02-IOW-	2014 Continuing
PS	5a	Organic En Significantl Ambient m Tier IV	IA 02-SHL-C	2012 Continuing
PS	5a	Organic En Significantl TMDL mon Tier IV	IA 04-RAC-I	2008 Continuing
PS	5b	Pesticides Pollutant-c Fish kill inv Tier IV	IA 02-WFC-	2010 Continuing
NS	5a	pH Adverse im Ambient m Tier I	IA 02-SHL-C	2016 New
NS	5a	pH Significantl Ambient m Tier I	IA 02-ICD-C	2016 New
NS	5a	pH Significantl Ambient m Tier I	IA 02-ICD-C	2016 New
NS	5a	pH Significantl Ambient m Tier I	IA 04-UDM	2012 Continuing
NS	5a	pH Significantl Ambient m Tier I	IA 04-UDM	2012 Continuing
NS	5a	pH Significantl Ambient m Tier IV	IA 04-LDM-	2016 New
NS	5a	pH Significantl Ambient m Tier IV	IA 04-LDM-	2016 New
NS	5a	pH Significantl Ambient m Tier I	IA 01-WPS-	2006 Continuing
NS	5a	pH Significantl Ambient m Tier I	IA 01-WPS-	2006 Continuing
NS	5a	pH Significantl Ambient m Tier I	IA 05-NOD-	2008 Continuing
NS	5a	pH Significantl Ambient m Tier I	IA 05-NOD-	2008 Continuing
NS	5a	pH Significantl Ambient m Tier I	IA 02-SHL-C	2016 New
NS	5a	pH Significantl Ambient m Tier I	IA 02-SHL-C	2016 New
PS	5*	pH Significantl Ambient m Tier I	IA 05-PLA-C	2014 Continuing
PS	5*	pH Significantl Ambient m Tier I	IA 05-PLA-C	2014 Continuing
NS	5a	pH Significantl Special pro Tier IV	IA 01-YEL-C	2016 New
PS	5a	pH Significantl Special pro Tier III	IA 01-YEL-C	2014 Continuing
NS	5p	pH Significantl Special pro Tier IV	IA 01-YEL-C	2016 New
PS	5p	pH Significantl Special pro Tier III	IA 01-YEL-C	2014 Continuing
NS	5p	pH Significantl Special pro Tier IV	IA 01-YEL-C	2014 Continuing
PS	5p	pH Significantl Special pro Tier IV	IA 01-YEL-C	2014 Continuing
NS	5p	pH Significantl Watershed Tier IV	IA 01-YEL-C	2016 New
PS	5p	pH Significantl Watershed Tier IV	IA 01-YEL-C	2014 Continuing
PS	5p	pH Significantl Watershed Tier IV	IA 01-YEL-C	2014 Continuing

1588	6575	2016 Unnamed 101-YEL-657 River	2.2 Pending	B(WW-1)
1590	6582	2016 Unnamed 101-YEL-658 River	2.2 Pending	A1
1590	6582	2016 Unnamed 101-YEL-658 River	2.2 Pending	B(WW-1)
1600	449	2016 Cedar River 02-CED-44 River	28.6 Pending	A1
1600	449	2016 Cedar River 02-CED-44 River	28.6 Pending	B(WW-1)
1622	456	2016 Cedar River 02-CED-45 River	11.6 Pending	A1
1622	456	2016 Cedar River 02-CED-45 River	11.6 Pending	B(WW-1)
1632	457	2016 Cedar River 02-CED-45 River	23 Pending	A1
1632	457	2016 Cedar River 02-CED-45 River	23 Pending	B(WW-1)
82	6562	2016 Unnamed 101-TRK-65 River	2.7 Pending	A1
82	6562	2016 Unnamed 101-TRK-65 River	2.7 Pending	B(WW-1)
107	198	2016 Otter Creel 01-TRK-19 River	10.9 Pending	B(CW1)
131	215	2016 Bass Creek 01-TRK-21 River	1.1 Pending	B(CW1)
136	221	2016 Bohemian 01-TRK-22 River	12.5 Pending	B(CW1)
243	272	2016 Dry Run 01-UIA-272 River	4.9 Pending	B(CW1)
505	284	2016 Nichols Cre 01-UIA-284 River	4.2 Pending	B(CW1)
506	286	2016 Beaver Cre 01-UIA-286 River	8.4 Pending	B(CW1)
1517	307	2016 Hewett Cre 01-VOL-30 River	6 Pending	B(CW1)
1768	134	2016 Cloie Branc 01-TRK-134 River	1 Pending	B(CW1)
105	2058	2016 Unnamed 101-TRK-20 River	3.9 Pending	B(WW-1)
1701	6567	2016 Unnamed 102-CED-65 River	6 Pending	B(WW-1)
1975	902	2016 Saunders B 03-SKU-90 River	2 Pending	B(WW-1)
1975	902	2016 Saunders B 03-SKU-90 River	2 Pending	B(WW-1)
24	62	2016 Mississippi 01-NEM-62 River	10.7 Pending	HH
1922	1899	2016 Ralston Cre 02-IOW-18 River	1.8 Pending	A1
1922	1899	2016 Ralston Cre 02-IOW-18 River	1.8 Pending	B(WW-1)
1922	1899	2016 Ralston Cre 02-IOW-18 River	1.8 Pending	GenUse
121	1790	2016 Avenue Of 02-SHL-179 Lake	30 Pending	B(LW)
176	1735	2016 Browns La 06-WEM-1 Lake	219 Pending	A1
210	1716	2016 Desoto Ber 06-WEM-1 Lake	811 Pending	A1
319	1711	2016 Lake Mana 06-WEM-1 Lake	714 Pending	A1
410	1462	2016 Prairie Ros 05-NSH-14 Lake	219 Pending	A1
414	1019	2016 Roberts Cr 04-LDM-10 Lake	300 Pending	A1
424	2064	2016 Sands Tim 05-PLA-20 Lake	60 Pending	B(LW)
442	1734	2016 Snyder Ben 06-WEM-1 Wetland	375 Pending	A1
464	1369	2016 Thayer Lak 05-GRA-13 Lake	14 Pending	A1
492	1482	2016 Windmill L 05-PLA-14 Lake	24 Pending	A1
510	2030	2016 Rathbun R 05-CHA-20 Reservoir	700 Pending	A1
511	2028	2016 Rathbun R 05-CHA-20 Reservoir	1860 Pending	A1
511	2028	2016 Rathbun R 05-CHA-20 Reservoir	1860 Pending	B(WW-1)
512	2027	2016 Rathbun R 05-CHA-20 Reservoir	1660 Pending	A1
512	2027	2016 Rathbun R 05-CHA-20 Reservoir	1660 Pending	B(WW-1)
1525	630	2016 Coralville R 02-IOW-63 Reservoir	4900 Pending	A1
1526	1017	2016 Red Rock R 04-LDM-10 Reservoir	19000 Pending	A1
1533	1309	2016 Rathbun R 05-CHA-13 Reservoir	6330 Pending	A1
1606	832	2016 Rice Lake 02-WIN-83 Wetland	702 Pending	B(LW)
1607	1168	2016 South Twin 04-RAC-11 Wetland	600 Pending	B(LW)

PS	5p	pH	Significantl Watershed Tier IV	IA 01-YEL-C	2014 Continuing
PS	5p	pH	Significantl Watershed Tier IV	IA 01-YEL-C	2014 Continuing
PS	5p	pH	Significantl Watershed Tier IV	IA 01-YEL-C	2014 Continuing
PS	5a	pH	Significantl Ambient m Tier IV	IA 02-CED-I	2014 Continuing
PS	5a	pH	Significantl Ambient m Tier IV	IA 02-CED-I	2014 Continuing
PS	5a	pH	Significantl Ambient m Tier IV	IA 02-CED-I	2014 Continuing
PS	5a	pH	Significantl Ambient m Tier IV	IA 02-CED-I	2014 Continuing
PS	5a	pH	Significantl Ambient m Tier IV	IA 02-CED-I	2014 Continuing
PS	5a	pH	Significantl Ambient m Tier IV	IA 02-CED-I	2014 Continuing
PS	5p	pH, High	Significantl Watershed N/A	IA 01-TRK-C	2014 Continuing
PS	5p	pH, High	Significantl Watershed Tier IV	IA 01-TRK-C	2014 Continuing
PS	5a	Temperatu	Significantl Watershed Tier IV	IA 01-TRK-C	2014 Continuing
PS	5a	Temperatu	Significantl Watershed Tier IV	IA 01-TRK-C	2014 Continuing
PS	5a	Temperatu	Significantl Watershed Tier IV	IA 01-TRK-C	2014 Continuing
PS	5a	Temperatu	Significantl Watershed Tier IV	IA 01-UIA-C	2014 Continuing
PS	5a	Temperatu	Significantl Watershed Tier IV	IA 01-UIA-C	2014 Continuing
PS	5a	Temperatu	Significantl Watershed Tier IV	IA 01-UIA-C	2014 Continuing
PS	5a	Temperatu	Significantl Watershed Tier IV	IA 01-VOL-I	2014 Continuing
PS	5a	Temperatu	Significantl Biological r N/A	IA 01-TRK-C	2016 New
NS	5p	Toxic Inorg	Significantl TMDL mon Tier IV	IA 01-TRK-C	2008 Continuing
NS	5p	Toxic Inorg	Significantl Special pro Tier IV	IA 02-CED-I	2014 Continuing
PS	5b-t	Toxic Inorg Low Biotic	Biological r N/A	IA 03-SKU-I	2004 Continuing
PS	5b-t	Toxic Orgai Low Biotic	Biological r N/A	IA 03-SKU-I	2004 Continuing
PS	5a	Toxic Orgai Fish consur	Fish contar Tier IV	IA 01-NEM-	2016 New
NS	5p	Toxic Orgai Narrative c	Special pro Tier IV	IA 02-IOW-	2008 Continuing
NS	5p	Toxic Orgai Overwhelr	Special pro Tier IV	IA 02-IOW-	2008 Continuing
NS	5a	Toxic Orgai Narrative c	Special pro Tier IV	IA 02-IOW-	2008 Continuing
NS	5a	Turbidity	Adverse im Ambient m Tier I	IA 02-SHL-C	2004 Continuing
NS	5a	Turbidity	Narrative c Ambient m Tier IV	IA 06-WEM	2004 Continuing
NS	5a	Turbidity	Narrative c Ambient m Tier IV	IA 06-WEM	2004 Continuing
NS	5a	Turbidity	Narrative c Ambient m Tier IV	IA 06-WEM	2004 Continuing
PS	5a	Turbidity	Narrative c Ambient m Tier I	IA 05-NSH-I	2004 Continuing
NS	5a	Turbidity	Narrative c Ambient m Tier I	IA 04-LDM-	2004 Continuing
PS	5a	Turbidity	Adverse im Biological r Tier I	IA 05-PLA-C	2006 Continuing
NS	5a	Turbidity	Narrative c Ambient m Tier IV	IA 06-WEM	2016 New
NS	5*	Turbidity	Narrative c Ambient m Tier I	IA 05-GRA-	2004 Continuing
NS	5a	Turbidity	Narrative c Ambient m Tier I	IA 05-PLA-C	2006 Continuing
NS	5a	Turbidity	Narrative c Ambient m Tier II	IA 05-CHA-	2010 Continuing
NS	5a	Turbidity	Narrative c Ambient m Tier II	IA 05-CHA-	2006 Continuing
PS	5a	Turbidity	Adverse im Ambient m Tier II	IA 05-CHA-	2006 Continuing
NS	5a	Turbidity	Narrative c Ambient m Tier II	IA 05-CHA-	2006 Continuing
PS	5a	Turbidity	Adverse im Ambient m Tier II	IA 05-CHA-	2006 Continuing
PS	5a	Turbidity	Narrative c Ambient m Tier II	IA 02-IOW-	2006 Continuing
PS	5a	Turbidity	Narrative c Ambient m Tier II	IA 04-LDM-	2010 Continuing
NS	5a	Turbidity	Narrative c Ambient m Tier II	IA 05-CHA-	2012 Continuing
NS	5a	Turbidity	Adverse im Ambient m Tier IV	IA 02-WIN-	2014 Continuing
NS	5a	Turbidity	Adverse im Ambient m Tier IV	IA 04-RAC-I	2010 Continuing

276	1472	2016 Green Vall	05-PLA-147	Lake	393	Pending	A1
333	1035	2016 Lake Wape	04-LDM-10	Lake	289	Pending	A1
1527	1213	2016 Saylorville	04-UDM-11	Reservoir	5950	Pending	A1
2553	1	2016 Shrickers Sl	01-MAQ-1	Wetland	140	Pending	B(WW-1)
1724	1180	2016 Pickerel La	04-RAC-11	Wetland	35	Pending	A1
1724	1180	2016 Pickerel La	04-RAC-11	Wetland	35	Pending	B(LW)
1592	1629	2016 Elk Lake	06-LSR-162	Wetland	261	Pending	B(LW)
1593	657	2016 Elm Lake	02-IOW-65	Wetland	463	Pending	B(LW)
1595	1304	2016 High Lake	04-UDM-11	Wetland	467	Pending	B(LW)
1597	1281	2016 Lizard Lake	04-UDM-11	Wetland	268	Pending	B(LW)
1599	658	2016 Morse Lak	02-IOW-65	Wetland	108	Pending	B(LW)
1608	1231	2016 Twelve-mil	04-UDM-11	Wetland	290	Pending	B(LW)
1611	1754	2016 West Swan	04-UDM-11	Wetland	379	Pending	B(LW)
1612	778	2016 West Twin	02-IOW-77	Wetland	109	Pending	B(LW)
1625	1630	2016 Virgin Lake	06-LSR-163	Wetland	200	Pending	B(LW)
69	6408	2016 Unnamed t	01-TRK-64	River	0.4	Pending	GenUse
1884	6403	2016 Roff Creek	02-IOW-64	River	1	Pending	GenUse
1892	6396	2016 Prairie Cre	02-IOW-63	River	5.8	Pending	GenUse
1898	6401	2016 Unnamed t	02-IOW-64	River	4.5	Pending	GenUse
2443	6410	2016 unnamed t	03-SKU-64	River	3.2	Pending	GenUse

NS	5a	Turbidity: S Narrative c Ambient m Tier I	IA 05-PLA-C	2016 New
PS	5a	Turbidity: S Narrative c Ambient m Tier I	IA 04-LDM-	2016 New
NS	5a	Turbidity: S Narrative c Ambient m Tier II	IA 04-UDM	2016 New
PS	5a	Turbidity: S Adverse im Ambient m Tier IV	IA 01-MAQ	2004 Continuing
NS	5a	Turbidity: S Single-sam Ambient m Tier IV	IA 04-RAC-I	2010 Continuing
NS	5a	Turbidity: S Adverse im Ambient m N/A	IA 04-RAC-I	2010 Continuing
NS	5a	Turbidity: S Adverse im Ambient m Tier IV	IA 06-LSR-C	2014 Continuing
NS	5a	Turbidity: S Adverse im Ambient m Tier IV	IA 02-IOW-	2012 Continuing
NS	5a	Turbidity: S Adverse im Ambient m Tier IV	IA 04-UDM	2014 Continuing
NS	5a	Turbidity: S Adverse im Ambient m Tier IV	IA 04-UDM	2010 Continuing
NS	5a	Turbidity: S Adverse im Ambient m Tier IV	IA 02-IOW-	2016 New
NS	5a	Turbidity: S Adverse im Ambient m Tier IV	IA 04-UDM	2016 New
NS	5a	Turbidity: S Adverse im Ambient m Tier IV	IA 04-UDM	2012 Continuing
NS	5a	Turbidity: S Adverse im Ambient m Tier IV	IA 02-IOW-	2016 New
NS	5a	Turbidity: S Adverse im Ambient m Tier IV	IA 06-LSR-C	2010 Continuing
NS	5a	Wastewater Narrative c UAA survey Tier IV	IA 01-TRK-C	2016 New
NS	5a	Wastewater Narrative c UAA survey Tier IV	IA 02-IOW-	2010 Continuing
NS	5a	Wastewater Narrative c UAA survey Tier IV	IA 02-IOW-	2010 Continuing
NS	5a	Wastewater Narrative c UAA survey Tier IV	IA 02-IOW-	2010 Continuing
PS	5a	Wastewater Narrative c UAA survey Tier IV	IA 03-SKU-I	2010 Continuing

Enclosure

E

Adair County Resolution

February 8, 2017

MASTER MATRIX REVIEW PETITION RESOLUTION: The Board reviewed the sample resolution from Winneshiek County and discussed the Master Matrix process to determine if Adair County should do a similar resolution. Moved by Twombly and seconded by Hoadley to approve **Resolution #2017-16** – A Resolution Petitioning The Governor Of Iowa And The State Legislature To Address The Failings Of The Master Matrix. Whereas, the Adair County Board of Supervisors, has been presented with several applications for permits to construct concentrated animal feeding operation (CAFO) in Adair County, Iowa; and, Whereas, CAFOs in Iowa have proliferated at a rate and number likely unanticipated by the authors of the 2002 Matrix; and, Whereas, the Adair County Board of Supervisors, has attempted to provide pertinent information regarding the siting of CAFO's in Adair County, Iowa; and, Whereas, the current legislation and regulation applies the use of a Master Matrix that has failed to adequately differentiate between the geography, water sources and other critical considerations throughout different regions within the State; and, Whereas, the failure to properly take into consideration information within the knowledge of local sources, has highlighted the failings of the Master Matrix to protect the air, water, health, "quality of life" and economic interests of the citizens we were elected to represent; and, Whereas, the inadequacies of the Master Matrix in its present form have been scientifically documented and legislative remedies are needed. Now, Therefore, Be It Resolved By The Adair County Board Of Supervisors:

1. The Adair County Board of Supervisors do hereby petition the Governor of Iowa and the State Legislature to address the failings of the Master Matrix to protect the air, water, health, "quality of life" and economic interests of the citizens we were elected to represent.
2. The Adair County Board of Supervisors formally requests that the IDNR be directed to suspend any issuance of any additional CAFO construction permits until such time as corrective new legislation regarding the Master Matrix can be adopted.

Roll call vote: Shelley, aye; Hoadley, aye; Homan, aye; Twombly, aye; and Wedemeyer, nay.
Approved.

<http://www.adaircountyiowa.org/wp-content/uploads/2017/02/02-08-2017.pdf>

RESOLUTION # 17.026

RESOLUTION TO REQUEST THE IOWA DEPARTMENT OF NATURAL RESOURCES TO SUSPEND ISSUANCE OF CAFO CONSTRUCTION PERMITS UNTIL SUCH TIME AS NEW LEGISLATION REGARDING THE MASTER MATRIX SYSTEM CAN BE ADOPTED

WHEREAS, the County Board of Supervisors in each county throughout Iowa is tasked with processing construction permit applications for confinement feeding operations in that county and making a recommendation to the DNR; and

WHEREAS, although county supervisors review CAFO applications to ensure the matrix has been scored correctly and must submit to the DNR a recommendation to approve or disapprove construction permit applications, they have no say in approving or denying an application and the DNR makes the final decision; and

WHEREAS, the Allamakee County Board of Supervisors utilizes the master matrix and recognizes the need to update the master matrix to increase regulation and control and recognizes a need for greater regulation of the CAFO industry in general; and

WHEREAS, the Allamakee County Board of Supervisors is aware that there has been an increase in new CAFO applications throughout the state and that Iowa has more CAFOs than any other state; and

WHEREAS, the Allamakee County Board of Supervisors would like to see the issuance of CAFO construction permits suspended statewide until such time as new legislation regarding the master matrix system can be adopted.

NOW, THEREFORE, BE IT RESOLVED BY THE ALLAMAKEE COUNTY BOARD OF SUPERVISORS:

The Allamakee County Board of Supervisors shall formally request that the Iowa Department of Natural Resources to suspend issuance of any additional CAFO construction permits until such time as new legislation regarding the master matrix system can be adopted.

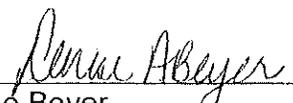
PASSED AND ADOPTED this 9th day of January, 2017.

**ALLAMAKEE COUNTY BOARD
OF SUPERVISORS**



Larry Schellhammer
Chairman

Attest:



Denise Beyer
Allamakee County Auditor

From the February 21, 2017 Buchanan County Board of Supervisor Minutes

RESOLUTION 17-11

A RESOLUTION PETITIONING THE GOVERNOR OF IOWA AND THE STATE LEGISLATURE TO ADDRESS THE FAILINGS OF THE MASTER MATRIX

WHEREAS, the Buchanan County Board of Supervisors, has been presented with several applications for permits to construct concentrated animal feeding operation (CAFO) in Buchanan County, Iowa; and

WHEREAS, CAFO's in Iowa have proliferated at a rate and number likely unanticipated by the authors of the 2002 Matrix; and,

WHEREAS, the Buchanan County Board of Supervisors, has attempted to provide pertinent information regarding the siting of CAFO's in Buchanan County, Iowa; and,

WHEREAS, the information offered by the Buchanan County Board of Supervisors has often directed the IDNR to the hazards posed by the location of the proposed CAFO's due to the karst topography in Northeast Iowa; and,

WHEREAS, the current legislation and regulation applies the use of a Master Matrix that has failed to adequately differentiate between the geography, water sources and other critical considerations throughout different regions within the State; and,

WHEREAS, the failure to properly take into consideration information within the knowledge of local sources, has highlighted the failings of the Master Matrix to protect the air, water, health, "quality of life" and economic interests of the citizens we are elected to represent; and,

WHEREAS, the inadequacies of the Master Matrix in its present form have been scientifically documented and legislative remedies are needed.

NOW, THEREFORE, BE IT RESOLVED BY THE BUCHANAN COUNTY BOARD OF SUPERVISORS:

1. The Buchanan County Board of Supervisors do hereby petition the Governor of Iowa and the State Legislature to address the failings of the Master Matrix to protect the air, water, health, "quality of life" and economic interest of the citizens we were elected to represent.
2. The Buchanan County Board of Supervisors formally requests that the IDNR be directed to suspend any issuance of any additional CAFO construction permits until such time as corrective new legislation regarding the Master Matrix can be adopted.

Passed and adopted this 21 day of February 2017.

Motion by Gissel second by Ohrt to adjourn at 9:04 am. All in favor, motion carried.

Don Shonka, Chairman Pro-tem

ATTEST: Vanessa Tisl, Administrative Assistant

Cedar County

RESOLUTION

A RESOLUTION PETITIONING THE GOVERNOR OF IOWA AND THE STATE LEGISLATURE TO ADDRESS THE FAILINGS OF THE MASTER MATRIX

WHEREAS, the Cedar County Board of Supervisors, has been presented with several applications for permits to construct concentrated animal feeding operations (CAFO) in Cedar County, Iowa; and, WHEREAS, CAFOs in Iowa have proliferated at a rate and number likely unanticipated by the authors of the 2002 Matrix; and,

WHEREAS, the Cedar County Board of Supervisors, has attempted to provide pertinent information regarding the siting of CAFO's in Cedar County, Iowa; and,

WHEREAS, the information offered by the Cedar County Board of Supervisors has often directed the IDNR to the hazards posed by the location of the proposed CAFO's due to the topography in Northwest Iowa; and,

WHEREAS, the current legislation and regulation applies the use of a Master matrix that has failed to adequately differentiate between the geography, water sources, and other critical considerations throughout different regions within the State; and,

WHEREAS, the failure to properly take into consideration information within the knowledge of local sources , has highlighted the failings of the Master Matrix to protect the air, water, health, "quality of life" and economic interests of the citizens we were elected to represent; and, WHEREAS, the inadequacies of the Master Matrix in its present form have been scientifically documented and legislative remedies are needed.

NOW, THEREFORE, BE IT RESOLVED BY THE CEDAR COUNTY BOARD OF SUPERVISORS:

1. The Cedar County Board of Supervisors do hereby petition the Governor of Iowa and the State Legislature to address the failings of the Master Matrix to protect the air, water, health, "quality of life" and economic interests of the citizens we were elected to represent.
2. The Cedar County Board of Supervisors formally requests that the IDNR be directed to suspend any issuance of any additional CAFO Construction Permits until such time as corrective new legislation regarding the Master Matrix can be adopted.

Passed and adopted this 7, day of March 2017. Ayes: All

PROCEEDINGS OF THE BOARD OF SUPERVISORS
April 18, 2017

The Board of Supervisors of Cerro Gordo County, Iowa, met in regular session pursuant to adjournment. Present: Chairman Casey Callanan, Supervisor Chris Watts, Supervisor Tim Latham and various members of the public.

Callanan convened the meeting at 10:00 a.m. Latham made a motion, with Watts seconding, to approve the minutes from the April 13, 2017 special session and April 11, 2017 regular session and today's agenda. Motion passed unanimously.

Watts made a motion, with Latham seconding, to approve claims. Motion passed unanimously.

Latham made a motion, with Watts seconding, to authorize Rod McKinney to investigate a problem in Drainage District 56 as reported by Norma Salter. Motion passed unanimously.

Latham made a motion, with Watts seconding, to encourage the Conservation Board to act on having some beavers relocated from Drainage District 38 and Drainage District 59 as they are causing drainage issues. Motion passed unanimously.

Watts made a motion, with Latham seconding, adopt Resolution 2017-49, RESOLUTION TO LEVY ASSESSMENTS FOR DRAINAGE DISTRICTS.

The Board of Supervisors of Cerro Gordo County acting for and on behalf of the drainage districts below FINDS:

1. There are insufficient funds in the drainage district accounts to pay for necessary repairs and maintenance and to provide for a sinking fund to pay future maintenance and repair costs in accordance with \$468.61.

2. The drainage districts have incurred or shortly will incur costs for repair and maintenance.

NOW, THEREFORE, BE IT RESOLVED as follows:

1. Assessments in the following amounts shall be and are assessed against each individual tract of land and highway within the following Drainage Districts and Laterals in accordance with the classification schedules on file in the drainage district records in the office of the County Auditor. In accordance with §468.57, if the owner of any land against which a levy exceeding \$100.00 is made shall within thirty (30) days from the effective date of this Resolution agree in writing that in consideration of having a right to pay his assessment in ten (10) equal installments, he will not make any objection to the legality of his assessment or the levy of taxes against his property, such owner shall have the right to pay the assessment in ten (10) equal installments. Interest shall accrue on the unpaid assessment at the rate of 6% per annum as provided by law.

Drainage District 29 - \$2,000.00

Drainage District 35 - \$17,000.00

2. The effective date of these assessments is the 18th day of April, 2017. Motion passed unanimously.

Watts made a motion, with Latham seconding, to approve an access request for River Edge Farms, LLC. Motion passed unanimously.

Latham made a motion, with Watts seconding, to adopt Resolution 2017-50, A RESOLUTION PETITIONING THE GOVERNOR OF IOWA AND THE STATE LEGISLATURE TO REVISIT THE MASTER MATRIX. WHEREAS, the Cerro Gordo County Board of Supervisors, has been presented with several applications for permits to construct concentrated animal feeding operations (CAFO) in Cerro Gordo County, Iowa; and, WHEREAS, CAFOs in Iowa have expanded at a rate potentially unanticipated by the bipartisan authors of the 2002 Matrix; and, WHEREAS, the Cerro Gordo County Board of Supervisors has attempted to provide pertinent information to the Iowa Department of Natural Resources (IDNR) regarding the siting of CAFOs in Cerro Gordo County, Iowa; and, WHEREAS, the reports submitted by the Cerro Gordo County Board of Supervisors and County Board of Health have raised concerns about CAFO construction, including impacts on drainage district facilities, road infrastructure, small communities and rural residential development, state and county conservation areas, floodplains, Clear Lake, rivers, creeks, and waterways; and, WHEREAS, the Cerro Gordo County Board of Supervisors believe it is time to revisit the master matrix to assure that current environmental concerns are

being met. NOW, THEREFORE, BE IT RESOLVED BY THE CERRO GORDO COUNTY BOARD OF SUPERVISORS: That the Cerro Gordo County Board of Supervisors do hereby petition the Governor of Iowa and the State Legislature to revisit the Master Matrix. Motion passed unanimously.

Latham made a motion, with Watts seconding, to approve dock permits 59P and 61P. Motion passed unanimously.

Watts made a motion, with Latham seconding, to close the public portion of the hearing on change of zone for Deardeuff. Motion passed unanimously.

Watts made a motion, with Latham seconding, to adopt Resolution 2017-51, AMENDMENT NO. 363 TO ORDINANCE NO. 15, ARTICLE 5.2. WHEREAS, the Cerro Gordo County Planning & Zoning Commission, after study, has recommended that the change of zoning classification of a certain area hereinafter described, upon the application of Michael Deardeuff, be made, and, WHEREAS, the final public hearing has been held with notice as required by law. NOW, THEREFORE, BE IT RESOLVED by the Cerro Gordo County Board of Supervisors that Ordinance No. 15, Article 5.2, of the Zoning Ordinance of Cerro Gordo County, Iowa, is hereby amended by changing the district boundaries thereof so as to change the classification of the following described property from A-1 Agricultural District to A-2 Agricultural Residence District on the following described real estate, to-wit: That part of the Southwest Quarter of Section 32, Township 95 North, Range 19 West of the 5th P.M., Cerro Gordo County, Iowa, described as follows: Commencing at the Northwest Corner of said Southwest Quarter; thence S 00°13'09" W, 1298.00 feet along the Westerly line of said Southwest Quarter to the Point of Beginning; thence continuing S 00°13'09" W, 304.62 feet along said Westerly line; thence S 89°46'51" E, 429.00 feet along a line at a right angle to said Westerly line; thence N 00°13'09" E, 304.62 feet along a line parallel with said Westerly line; thence N 89°46'51" W, 429.00 feet along a line at a right angle to said Westerly line to the Point of Beginning, said Parcel A containing 3.00 acres subject to an existing public road right of way across the Westerly 60.00 feet and also subject to any other easements of record. This Resolution shall be in full force and effect from and after its passage. Motion passed unanimously.

Latham made a motion, with Watts seconding, to adjourn at 10:13 a.m.

Various tabulations, reports, correspondence and other documents that were presented at today's meeting are placed on file with the supplemental minutes.

Chairman Casey Callanan
Board of Supervisors

Kenneth W. Kline, County Auditor
Cerro Gordo County

From the 2-12-17 Dickinson County Board of Supervisor Minutes

Supervisor Johnson voiced his concerns regarding the shortcomings of the current Master Matrix System, and urged the board to follow suit with Winneshiek County and sign Resolution 2017-2, and forward to the Governor of the State of Iowa.

Moved by Johnson, seconded by Fairchild, to approve and adopt **RESOLUTION 2017-2-A RESOLUTION PETITIONING THE GOVERNOR OF IOWA AND THE STATE LEGISLATURE TO ADDRESS THE FAILINGS OF THE MASTER MATRIX**, and to instruct the County Auditor to submit a copy of the signed resolution and an attached letter urging for the remaining 98 counties to support this effort as well.

The resolution and letter will be forwarded to ISAC for County Auditor disbursement. Resolution reads as follows:

WHEREAS, the Dickinson County Board of Supervisors, has been presented with several applications for permits to construct concentrated animal feeding operations (CAFO) in Dickinson County, Iowa; **and**,

WHEREAS, CAFOs in Iowa have proliferated at a rate and number likely unanticipated by the authors of the 2002 Matrix; **and**,

WHEREAS, the Dickinson County Board of Supervisors, has attempted to provide pertinent information regarding the siting of CAFO's in Dickinson County, Iowa; **and**,

WHEREAS, the information offered by the Dickinson County Board of Supervisors has often directed the IDNR to the hazards posed by the location of the proposed CAFO's due to the topography in Northwest Iowa; **and**,

WHEREAS, the current legislation and regulation applies the use of a Master matrix that has failed to adequately differentiate between the geography, water sources, and other critical considerations throughout different regions within the State; **and**,

WHEREAS, the failure to properly take into consideration information within the knowledge of local sources, has highlighted the failings of the Master Matrix to protect the air, water, health, "quality of life" and economic interests of the citizens we were elected to represent; **and**,

WHEREAS, the inadequacies of the Master matrix in its present form have been scientifically documented and legislative remedies are needed.

NOW, THEREFORE, BE IT RESOLVED BY THE DICKINSON COUNTY BOARD OF SUPERVISORS: 1. The Dickinson County Board of Supervisors do hereby petition the Governor of Iowa and the State Legislature to address the failings of the Master matrix to protect the air, water, health, "quality of life" and economic interests of the citizens we were elected to represent. 2. The Dickinson County Board of Supervisors formally requests that the IDNR be directed to suspend any issuance of any additional CAFO Construction Permits until such time as corrective new legislation regarding the Master Matrix can be adopted.

Roll call vote: Johnson-aye, Fairchild-aye, Jordan-aye, Leupold-aye. **PASSED AND ADOPTED** this 14th day of February, 2017.

Res #12-17

**A Resolution Petitioning the Governor of Iowa and the State
Legislature to Address the Failings of the Master Matrix**

Whereas, the Floyd County Board of Supervisors (Board) has been presented with several applications for permits to construct concentrated animal feeding operations (CAFOs) in Floyd County, Iowa; and

Whereas, CAFOs in Iowa have proliferated at a rate higher than anticipated by the authors of Senate File 2294 signed into law in 2002, which created the Master Matrix; and

Whereas, the Board has attempted to provide pertinent information regarding the siting of CAFOs in Floyd County, Iowa; and

Whereas, information offered by the Board has often directed the Iowa Department of Natural Resources to the hazards posed by the location of the proposed CAFOs due to the Karst topography in Northeast Iowa, and the hazards posed by unprotected water well heads at CAFO sites; and

Whereas, the Master Matrix has failed to adequately differentiate between the geography, water sources and other critical considerations throughout different regions within the State; and

Whereas, the failure to properly take into consideration information within the knowledge of local sources, has highlighted the failings of the Master Matrix to protect the air, water, health, quality of life and economic interests of the citizens we were elected to represent; and

Whereas, the inadequacies of the Master Matrix in its present form have been documented and legislative remedies are needed.

Now, therefore be it resolved by the Floyd County Board of Supervisors:

1. The Floyd County Board of Supervisors do hereby petition the Governor of Iowa and the State Legislature to address the failings of the Master Matrix to protect the air, water, health, quality of life and economic interests of the citizens we were elected to represent.

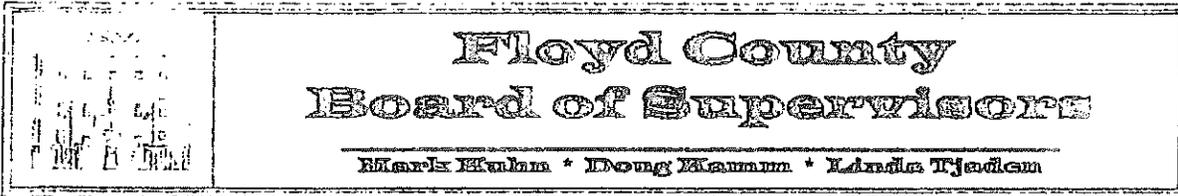
2. ~~Floyd County Board of Supervisors formally request that the Iowa Department of Natural Resources, and any other agency, to address the failings of the Master Matrix to protect the air, water, health, quality of life and economic interests of the citizens we were elected to represent.~~

Passed and approved this 14th day of February, 2017.

ATTEST:

Gloria A. Carr, Auditor

Douglas A. Kamm, Chair
Board of Supervisors



February 14, 2017

The Honorable Terry Branstad
Governor of Iowa
1007 East Grand Ave
Des Moines, IA 50319

RE: Failings of the Master Matrix

Dear Governor Brandstad,

By resolution (#12-17), the Floyd County Board of Supervisors petition the Governor of Iowa and the State Legislature to address the failings of the Master Matrix to protect the air, water, health, quality of life and economic interests of the citizens we were elected to represent.

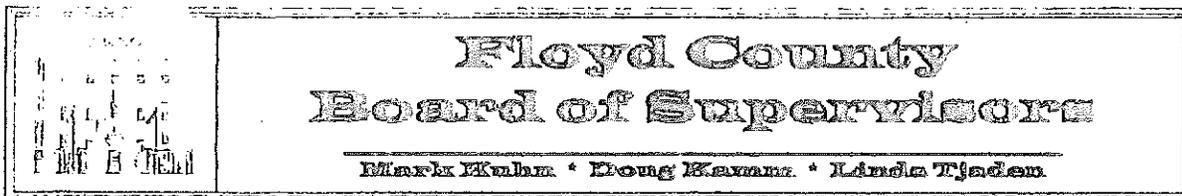
The Floyd County Board of Supervisors formally requests that the Iowa Department of Transportation be directed to suspend all state funding for the construction of the [redacted] by construction permits until such time as [redacted]

Sincerely,

Douglas A. Kamm, Chair
Floyd County Board of Supervisors

- cc: The Honorable Kim Reynolds, Lieutenant Governor of Iowa
- The Honorable Jack Whitver, President of the Iowa Senate
- The Honorable Bill Dix, Majority Leader of the Iowa Senate
- The Honorable Robert Hogg, Minority Leader of the Iowa Senate
- The Honorable Linda Upmeyer, Speaker of the Iowa House of Representatives
- The Honorable Chris Hagenow, Majority Leader of the Iowa House of Representatives
- The Honorable Mark Smith, Minority Leader of the Iowa House of Representatives
- The Honorable Waylon Brown, District 26, Iowa Senate
- The Honorable Todd Prichard, District 52, Iowa House of Representatives

(Attachment: Floyd County Board of Supervisors Resolution #12-17.)



February 14, 2017

The Honorable Terry Branstad
Governor of Iowa
1007 East Grand Ave
Des Moines, IA 50319

RE: Failings of the Master Matrix

Dear Governor Brandstad,

By resolution (#12-17), the Floyd County Board of Supervisors petition the Governor of Iowa and the State Legislature to address the failings of the Master Matrix to protect the air, water, health, quality of life and economic interests of the citizens we were elected to represent.

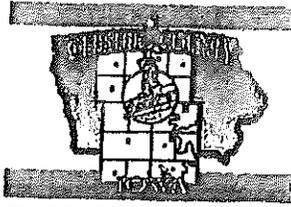
The Floyd County Board of Supervisors formally requests that the Iowa Department of Natural Resources be directed to suspend any issuance of any additional concentrated animal feeding confinement (CAFO) construction permits until such time as corrective new legislation regarding the Master matrix can be adopted.

Sincerely,

Douglas A. Kamm, Chair
Floyd County Board of Supervisors

cc: The Honorable Kim Reynolds, Lieutenant Governor of Iowa
The Honorable Jack Whitver, President of the Iowa Senate
The Honorable Bill Dix, Majority Leader of the Iowa Senate
The Honorable Robert Hogg, Minority Leader of the Iowa Senate
The Honorable Linda Upmeyer, Speaker of the Iowa House of Representatives
The Honorable Chris Hagenow, Majority Leader of the Iowa House of Representatives
The Honorable Mark Smith, Minority Leader of the Iowa House of Representatives
The Honorable Waylon Brown, District 26, Iowa Senate
The Honorable Todd Prichard, District 52, Iowa House of Representatives

(Attachment: Floyd County Board of Supervisors Resolution #12-17.)



Webster County Board of Supervisors

701 Central Ave., 2nd Floor
Fort Dodge, Iowa 50501

Email: supervisors@webstercountyia.org

Phone # (515) 573-7175
Fax # (515) 574-3714

November 28, 2016

Webster County's proposals for changes to the CAFO and Matrix.

Webster County is very supportive of agriculture. We understand that we are agriculture based. We have had a great expansion of high value bio based industries. We do however feel the CAFO industry is getting out of control. There are very few regulations and no local control over them. We feel as a county that if the number of units built is not controlled, the overall environment, economic development and quality of life will be greatly affected.

The State should put a moratorium on new projects until the Legislature looks at the matter.

All CAFO of any head number should have to do the Matrix. The process is skewed to benefit putting up a less than 2500 unit first then just adding to it.

Increase the total points more than the 440 to pass the Matrix. At 440 there is very little required to protect the people and environment.

Must have 40 acres to build a CAFO.

Require trees and bio filters.

Increase distance requirement to residential properties and water ways. These distances are way to close for property rights and environmental protections.

Have a 3 mile distance from city's or sub divisions.

Have points taken away if community does not want CAFO.

The County's should have more control. The state should not have control over what the citizens of a county want.

CAFO need to be set back at least 300 feet from roads right of ways.

Production records need to be given to the DNR yearly. This is to confirm there are not more than the allotted number of animals in the units.

The measurement to residential properties needs to be to the property lines not the structure.

The overall agriculture exemptions need to be looked at. These are not small farmers that need to have the ability to make a living on their farm. The system is being abused by large corporations. Remove Matrix items that are already covered by the manure management plans.

Manure management plans need to have distance requirements from residential properties and water ways.

Keith Dencklau
District 1

Mark Campbell
District 2

Robert Singer
District 3

Merrill Leffler
District 4

Clark Fletcher
District 5

ATTN: DAK



The Floyd County Farm Bureau would like to ask each of you not to join with Winneshiek County in supporting a moratorium on construction of new livestock facilities. Floyd County has a rich history as an agricultural county; from the site of the Hart-Parr company to the home of Zoetis, Mitas Tires, the Iowa State Extension service that is in its 101st year of helping farmers, and our new chicken processing facility, Simply Essentials. It is a history we want the county to continue. The resolution from Winneshiek County does not support that heritage!

We understand siting of CAFO facilities can be a very personal and emotional issue. We want to point to the fact that the current master matrix system was created to help the producers desire to invest in a building location which will be based on criteria from the master matrix evaluation instrument. It is a fact Floyd County livestock have not significantly contributed to water quality issues in the county. We asked the Iowa Department of Natural Resources about any incidents that would have affected water quality in Floyd County. The attachment to this letter shows that since 2001 there has been only one incident that the DNR has flagged as having impacted the water quality in our county. The Floyd County Environmental Health Administrator identified the same incident.

A new employer to Charles City, Simple Essentials, is currently seeking producers within and beyond the county's borders to construct poultry buildings to house chickens to be harvested in their facility. A decision to join with Winneshiek County's resolution would send a message to them of our county's desires not to help bring success to their company. Charles City companies such as Simply Essentials, Hog Slat, and Zoetis, just to name a few, rely on a thriving livestock industry to survive. This proposal would send a signal to them that our county does not want the industry they support (agriculture) in our county.

Floyd County Farm Bureau asks for your support not to approve the Winneshiek County resolution in their effort to put a moratorium on construction of new livestock facilities in Iowa. These facilities and the business they support provide many jobs for Floyd County with an estimated 1 out of 4 jobs directly tied to agriculture.

Please support the Floyd County producers, ag businesses and industries, and their workers who support agriculture by rejecting this resolution!


President

HARDIN COUNTY
RESOLUTION #2017-_____

Whereas the Hardin County Supervisors recognize the importance of the agricultural growth and agricultural capitalism we also believe that the D.N.R.'s master matrix is in need of review by the Governor, Lt. Governor, Iowa House and Senate, along with the D.N.R. and the general public. While confined animal feeding operations are vital in terms of a food source, jobs, and property tax base, the Hardin County Supervisors acknowledge that it is our responsibility to represent all taxpayers in regards to personal health and well-being, environmental stewardship, ability to recreate, create healthy social events, maintain taxpayer infrastructure, and good farm neighbors while being a strong link in feeding the world. Today, we call on said elected officials to bring the master matrix back for review as they do in all other professional fields and occupations as times and technology change, so do those in the confined animal feeding operations industry. Until the State lawmakers at the State level act upon this master matrix the Hardin County Supervisors will take no further action.

Bill Dix:

Legislative E-mail: bill.dix@legis.iowa.gov

Home Phone: (319)885-6790

Home Address: 317 S Walnut St, PO Box 220, Shell Rock, IA 50670

Occupation: Farmer

Dave Deyoe:

Legislative E-mail: dave.deyoe@legis.iowa.gov

Home Address: 66272 220th St, Nevada, IA 50201

Capitol Phone: (515)281-3221

Pat Grassley:

pat.grassley@legis.iowa.gov

Home Phone: (319)983-9019

Home Address: 30601 Deer Trail Dr., New Hartford, IA 50660

Capitol Phone: (515)281-3221

Occupation: Farmer

Whereupon, the Chair of the Board of Supervisors declared said Resolution duly passed and adopted this 31st day of May, 2017.

HARDIN COUNTY BOARD OF SUPERVISORS

Lance Granzow, Chair

Reneé McClellan, Member

BJ Hoffman, Member

Attest:

Jessica Lara
Hardin County Auditor

RESOLUTION NO. ~~177~~ 1017-2017

A RESOLUTION PETITIONING THE GOVERNOR OF IOWA AND THE STATE
LEGISLATURE TO ADDRESS THE FAILING OF THE MASTER MATRIX

WHEREAS, the Howard County Board of Supervisors, had been presented with several applications for permits to construct concentrated animal feeding operation (CAFO) in Howard County, Iowa; and,

WHEREAS, CAFOs in Iowa have proliferated at a rate and number likely unanticipated by authors of the 2002 Matrix; and,

WHEREAS, the current legislation and regulation applies to use of a Master Matrix that has failed to adequately differentiate between the geography, water sources and other critical considerations throughout different regions with the State; and,

WHEREAS, the inadequacies of the number of animal units (AU) needed to determine the use of the Master Matrix.

NOW, THEREFORE, BE IT RESOLVED BY THE HOWARD COUNTY BOARD OF SUPERVISORS:

1. The Howard County Board of Supervisors do hereby petition the Governor of Iowa and the State Legislature to address the failings of the Master Matrix to protect the air, water, health, "quality of life" and economic interests of the citizens we were elected to represent.

BE IT FURTHER RESLOVED, that,

2. Any application permit for constructing a CAFO would consider the following:
 - a) Will the proposed site be an unreasonable hazard to the health and welfare of surrounding neighbors?
 - b) Will the proposed site be locally owned or novice producer?
 - c) Require written notification to residents within a three mile radius.

PASSED AND ADOPTED this 27 day of February, 2017

Don Brunickel
Chairman of Board

[Signature]

Jan M. Darn

Attest: [Signature]
Howard County Auditor

RESOLUTION 04-13-17-04
**SUPPORT FOR A MORATORIUM ON CONCENTRATED ANIMAL
FEEDING OPERATIONS**

WHEREAS, at any given time the state of Iowa has over 20 million pigs, more than 40 million egg-laying hens and 1.9 million broiler chickens that are predominantly confined on over 9000 CAFOs in a state of just 3 million people; and

WHEREAS, decades of scientific research have shown that concentrated animal feeding operations cause harm including:

Environmental Harm:

- Iowa has over 750 water impairments.
- There have been over 800 documented manure spills since 1996.
- Iowa's water quality degradation continues to grow.
- There have been a record number of public beach advisories in 2015 and once again in 2016.

Public Health Harm:

- Hydrogen sulfide, ammonia, and particulates emitted by CAFOs can contribute to debilitating respiratory and digestive ailments.
- Low dose antibiotic use in CAFOs contributes to the development of antibiotic-resistant bacteria.

Rural Economy Degradation:

- CAFOs are offered preferential tax assessments, tax credits and other economic incentives even though studies show they diminish economic vitality.
- Property values can decrease near CAFOs
- Communities sometimes must pick up the tab for road damages caused by increased heavy truck traffic and risk.

Quality of Life Degradation:

- CAFOs can emit noxious odors that can ruin one's peaceful enjoyment of home and property.
- Their controversial nature can divide and destroy rural lifestyles and relationships between neighbors and families.

Harm to Traditional independent Livestock Farming:

- CAFOs employ fewer people than the number of traditional, independent family farmers they displace.
- Between 1980 and 2008, USDA statistics show hog farms decreased by 90%, beef cattle operations fell by 41% and dairy farms fell by 80%; and

WHEREAS, it is deemed to be in the best interest of Johnson County that the Iowa State Legislature impose a moratorium on new and expanding concentrated animal feeding operations until there are less than 100 water impairments in Iowa.

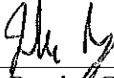
NOW, THEREFORE, BE IT RESOLVED that the Johnson County Board of Supervisors hereby asks the Governor of Iowa and the State Legislature to impose a moratorium on new or expanding concentrated animal feeding operations.

It was moved by Friese and seconded by Carberry the Resolution
be adopted this 13th day of April 2017.

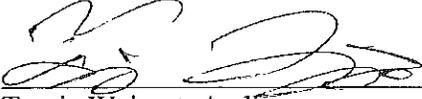
Roll Call

Carberry Aye Friese Aye Green-Douglass Aye Rettig Aye Sullivan Aye

ATTEST:



Janelle Rettig, Chairperson
Board of Supervisors



Travis Weipert, Auditor
Johnson County, Iowa

Board of Supervisors Pocahontas County

Phone: 712-335-3361

Courthouse - 99 Court Square
Pocahontas, IA 50574

Fax: 712-335-4502

December 6, 2016

Re: Pocahontas County's Recommendations - CAFO and Master Matrix

Pocahontas County recognizes that Iowa is an agricultural state and we are very supportive of agriculture. We are experiencing a growth in CAFO construction whether it be expansion of existing sites or new sites being established in Pocahontas County. There is concern that the overall environment, economic development and the quality of life will be negatively affected. The Board of Supervisors have very little control except for the Master Matrix which takes time to assess and confirm the documentation presented. The DNR site inspections are only approximate and in one half hour of time cannot possibly complete an inspection of reliability. The state wanted the control, the state not the Board of Supervisors should be accountable for accuracy of the documentation in the CAFO permit application.

Pocahontas County is requesting the State consider a moratorium on new sites and expansions of existing sites until the Legislature convenes to address the concerns.

- All CAFO construction applications should have to complete the Master Matrix regardless of the number of head. The number of head currently of record for construction are skewed to benefit the producer and do not provide an accurate accounting of the actual head number processed through this facility in a year.
- Production/marketing records required by DNR annually to confirm production does not exceed the number of head in the construction permit.
- As a result the actual gallons of manure produced is underestimated, the acres needed for the application of the manure are insufficient, and multiple applications may be applied to the same acres.
- Increase the total points necessary for the Master Matrix to greater than 440 points to pass
- Require a 40 acre tract of land required to construct a CAFO
- CAFO construction needs to be set back at least 300 feet from the road right-of-way
- Require a bond to cover the demolition cost when the facility becomes dilapidated and or abandoned to cover the cost - for nonlocal owners.
- Currently insufficient taxes of the site/capacity of the pit to cover costs of road damages, etc. the county incurs.

Ed Dewey

Jeffrey K. Ives

JoAnn Peters

Clarence Siepker

Louis Stauter

- Increase the distance requirements to residential properties – ½ mile minimum
- The measurement to a residence needs to be to the property lines not the structure
- Increase the distance to tile lines, drainage systems, water ways; current distances are insufficient to protect the water sources. Minimum distance to tile line should be 75 feet from pit.
- The current distance minimums are insufficiently checked by the DNR site inspections. All water quality should matter!
- Designate a minimum 3 mile distance from a city or subdivision; avoid housing developments, public use, Cemeteries, etc.
- Manure application - Applicator license renewed only with equipment inspection. No applications to frozen ground or without being injected. Several applicators choose to work at night and the bright lights as well as the putrid odor is disturbing while trying to sleep. Yes the odor does permeate throughout a home.
- The overall agriculture exemptions for these CAFOs must be reassessed. The majority are not the Local farmer; the entire process for CAFOs has been created for the large corporations.
- Some companies feed the animals a feed mixture or add products to the pit that greatly reduce the odor of the manure of the facility and during land application.

Respectfully submitted by Pocahontas County Board of Supervisors,

Jeffrey K. Ives, Chairman

Clarence Siepker, Supervisor

—

JoAnn Peters, Supervisor

Louis Stauter, Supervisor

Ed Dewey, Supervisor

Letter to the State Legislature, November 28, 2016, from the Webster County Supervisors

WEBSTER COUNTY'S PROPOSALS FOR CHANGES TO THE CAFO AND MATRIX.

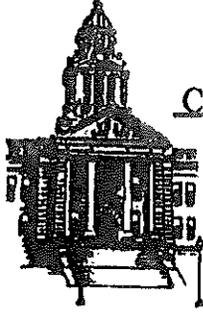
Webster County is very supportive of agriculture. We understand that we are agriculture based. We have had a great expansion of high value bio-based industries.

We do however feel the CAFO industry is getting out of control. There are very few regulations and no local control over them.

We feel as a county that if the number of units built is not controlled, the overall environment, economic development and quality of life will be greatly affected.

- The state should put a moratorium on new projects until the legislature looks at the matter.
- All CAFO of any head number should have to do the matrix. The process is skewed to benefit putting up a less than 2,500 unit first, then just adding to it.
- Increase the total points more than the 440 to pass the matrix. At 440, there is very little required to protect the people and environment.
- Must have 40 acres to build a CAFO.
- Require trees and bio filters.
- Increase distance requirement to residential properties and waterways. These distances are way too close for property rights and environmental protections.
- Have a three-mile distance from cities or subdivisions.
- Have points taken away if community does not want CAFO.
- The county should have more control. The state should not have control over what the citizens of a county want.
- CAFO need to be set back at least 300 feet from road right of ways.
- Production records need to be given to the DNR yearly. This is to confirm there are not more than the allotted number of animals in the units.
- The measurement to residential properties needs to be to the property lines, not the structure.
- The overall agriculture exemptions need to be looked at. These are not small farmers that need to have the ability to make a living on their farm. The system is being abused by large corporations.
- Remove matrix items that are already covered by the manure management plans.
- Manure management plans need to have distance requirements from residential properties and waterways.

Keith Dencklau
Mark Campbell
Robert Singer
Merrill Lerffler
Clark Fletcher
Webster County Supervisors



COUNTY SUPERVISORS OFFICE

WINNESHIK COUNTY

201 WEST MAIN STREET DECORAH, IOWA 52101 (563) 382-2370
supervisors@co.winneshiek.ia.us

January 30, 2017

The Honorable Terry Branstad
Governor of Iowa
1007 East Grand Ave.
Des Moines, Iowa 50319

Dear Governor Branstad,

By unanimous resolution (17/32) the Winneshiek County Board of Supervisors petition the Governor of Iowa and the State Legislature to address the failings of the Master Matrix to protect the air, water, health, quality of life and economic interests of the citizens we were elected to represent.

The Winneshiek County Board of Supervisors formally requests that the Iowa Department of Natural Resources be directed to suspend any issuance of any additional CAFO construction permits until such time as corrective new legislation regarding the Master Matrix can be adopted.

Sincerely,

John Logsdon, Chair
Winneshiek County Board of Supervisors

Cc:

The Honorable Kim Reynolds, Lieutenant Governor of Iowa
The Honorable Jack Whitver, President of the Iowa Senate
The Honorable Bill Dix, Majority Leader of the Iowa Senate
The Honorable Robert Hogg, Minority Leader of the Iowa Senate
The Honorable Linda Upmeyer, Speaker of the Iowa House of Representatives
The Honorable Chris Hagenow, Majority Leader of the Iowa House of Representatives
The Honorable Mark Smith, Minority Leader of the Iowa House of Representatives
The Honorable Michael Breitbach, District 28, Iowa Senate
The Honorable Waylon Brown, District 26, Iowa Senate
The Honorable Michael Bergan, District 55, Iowa House of Representatives
The Honorable Jane Bloomingdale, District 51, Iowa House of Representatives

(Attachment: Winneshiek County Board of Supervisors Resolution 17/32).

District 1 John Beard

District 2 Floyd Ashbacher

District 3 Dean Thompson

District 4 John Logsdon

District 5 Mark Kuhn

RESOLUTION NO. 171 32

**A RESOLUTION PETITIONING THE GOVERNOR OF IOWA AND THE STATE
LEGISLATURE TO ADDRESS THE FAILINGS OF THE MASTER MATRIX**

WHEREAS, the Winneshiek County Board of Supervisors, has been presented with several applications for permits to construct concentrated animal feeding operation (CAFO) in Winneshiek County, Iowa; and,

WHEREAS, CAFOs in Iowa have proliferated at a rate and number likely unanticipated by the authors of the 2002 Matrix; and,

WHEREAS, the Winneshiek County Board of Supervisors, has attempted to provide pertinent information regarding the siting of CAFO's in Winneshiek County, Iowa; and,

WHEREAS, the information offered by the Winneshiek County Board of Supervisors has often directed the IDNR to the hazards posed by the location of the proposed CAFOs due to the karst topography in Northeast Iowa; and,

WHEREAS, the current legislation and regulation applies the use of a Master Matrix that has failed to adequately differentiate between the geography, water sources and other critical considerations throughout different regions within the State; and,

WHEREAS, the failure to properly take into consideration information within the knowledge of local sources, has highlighted the failings of the Master Matrix to protect the air, water, health, "quality of life" and economic interests of the citizens we were elected to represent; and,

WHEREAS, the inadequacies of the Master Matrix in its present form have been scientifically documented and legislative remedies are needed.

NOW, THEREFORE, BE IT RESOLVED BY THE WINNESHIEK COUNTY BOARD OF SUPERVISORS:

1. The Winneshiek County Board of Supervisors do hereby petition the Governor of Iowa and the State Legislature to address the failings of the Master Matrix to protect the air, water, health, "quality of life" and economic interests of the citizens we were elected to represent.

2. The Winneshiek County Board of Supervisors formally requests that the IDNR be directed to suspend any issuance of any additional CAFO construction permits until such time as corrective new legislation regarding the Master Matrix can be adopted.

PASSED AND ADOPTED this 30th day of January, 2017.

**WINNESHIEK COUNTY BOARD
OF SUPERVISORS**

John Logsdon
Chairman

Attest: Benjamin Staines
Benjamin Staines
Winneshiek County Auditor

Enclosure

F

Iowa Statewide Rural Well Water Survey Phase 2 (SWRL2)

SWRL2 was conducted from May 2006 through December 2008. A total of 473 private drinking water wells were sampled in 89 Iowa counties; 87% of the well owners responded to a well construction and site survey. SWRL2 objectives were to 1) estimate the status of drinking water quality in a sample of Iowa private rural wells, 2) look for trends in water quality since 1988–89 (original SWRL study), and 3) collect data on emerging contaminants in private well water. Water samples were analyzed at the University Hygienic Laboratory.

Statewide results on contaminants of public health interest (% of total 473 wells):

- Bacteria: 43% had total coliform bacteria, 19% had enterococci, 11% had *E. coli*
- Nitrate: 49% had nitrate; 12% had ≥ 10 mg/L (parts per million) nitrate-N, EPA's drinking water standard for public water supplies
- Arsenic: 48% had arsenic; 8% had arsenic ≥ 0.01 mg/L, EPA's drinking water standard for public water supplies
- Pesticides (parent compounds): 8% had atrazine at very low concentrations; 2% had metolachlor; acetochlor, alachlor and trifluralin were detected in <1% of wells
- Herbicide degradates (breakdown products of the parent compound): 11% had desethyl-atrazine, 11% had acetochlor ESA (ethane sulfonic acid), 27% had alachlor ESA, 33% had metolachlor ESA, and 8% had metolachlor OXA (oxanilic acid)

Statewide results on associations between contaminants and well survey variables:

- Shallower wells (<100 feet deep) had more total coliform bacteria detections and herbicide degradate detections than deeper wells
- Shallower wells (<100 feet deep) had higher nitrate concentrations than deeper wells
- Older wells (constructed before 1991) had more total coliform bacteria detections and herbicide degradate detections than newer wells
- Total coliform bacteria, enterococci and *E. coli* detections were more common in the northwest, southwest and south-central regions of the state
- Higher nitrate concentrations (≥ 10 mg/L nitrate-N) were more common in the northwest and southwest regions of the state

Water quality trends (from 116 wells which were sampled in 1988–89 and in 2006):

- Total coliform bacteria detections were comparable (1988-89: 41%, 2006: 44%)
- Nitrate detections were more common in 1988–89 (58%) than in 2006 (47%)
- High nitrate concentrations (≥ 10 mg/L nitrate-N) were more common in 1988–89 (18%) than in 2006 (12%)

Recommendations:

- Utilize Grants to Counties Program funds to test well water samples for arsenic and herbicide degradates (in addition to testing for bacteria and nitrate)
- Develop a public information program (possible health effects, water treatment options, etc.) on arsenic, herbicide degradates and other drinking water contaminants for use by County Public/Environmental Health Departments

Enclosure

G

FY2015 Ambient Groundwater Quality Monitoring Summary

Iowa DNR's Ambient Groundwater Quality Monitoring program was suspended in 2006 due to the high costs of outsourcing the program. Since then, efforts to collect groundwater quality data have been sporadic. In 2012, reassessment of the program began. Lessons learned from the 2013 survey of emerging contaminants in Iowa's groundwater¹, review of past data, and input from stakeholders, pointed towards a need to further assess groundwater contaminants that are not regularly monitored by public or private water supplies, such as herbicides and pharmaceuticals. In Iowa, occurrence of herbicides is significantly greater in wells with little or no protection from confining materials¹, and it is reasonable to expect pharmaceuticals originating from human waste and other sources near the ground surface are also more likely to occur in these wells. Thus, the primary objective of FY2015's ambient groundwater monitoring was to evaluate the occurrence and distribution of selected herbicide and pharmaceutical compounds in Iowa's vulnerable aquifers.

Fifty vulnerable municipal water supply wells were selected to be sampled in the Fall/Winter of 2014-2015. Forty-five municipal water operators submitted raw (untreated) groundwater samples, while the other five were unable to sample due to cold conditions and other operational limitations. Of the wells sampled, 30 tapped alluvial aquifers, 11 drew water from Silurian-Devonian aquifers, 1 from the Dakota aquifer, 1 from the Mississippian aquifer, and 2 from the Cambrian-Ordovician aquifer in northeastern Iowa (Figure 1). All samples were analyzed by the State Hygienic Laboratory for basic water quality parameters, nutrients, atrazine and two of its breakdown products, chloroacetanilide herbicides and their ethanesulfonic acid (ESA) and oxanilic acid (OXA) degradates, and a suite of 16 pharmaceuticals.

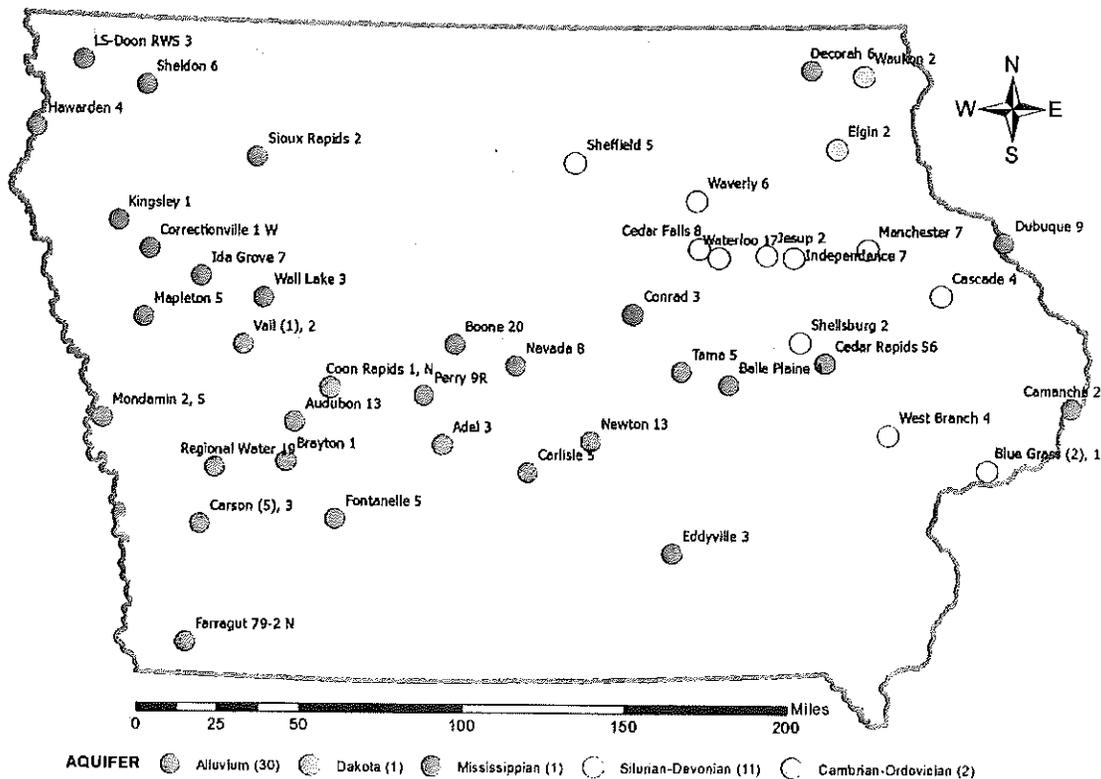


Figure 1. Locations of ambient groundwater samples for FY2015 colored by aquifer.

A basic summary of the results of nutrient, herbicide, and pharmaceutical analyses are presented in Table 1. All results will be entered into the Iowa DNR's EQiS database and made available in GIS format via the Groundwater Quality geodatabase.

Table 1. Summary of results for nutrients, herbicide compounds, and pharmaceuticals.
Values below the limit of detection are denoted by ND.

Group	Analyte	Limit of Detection	N	Number of Detections	Percent Detections	Mean of Detections	Median of all values	Maximum
Nutrients	Nitrate + Nitrite nitrogen as N	0.1 mg/L	45	33	73	4.8	2	17
	Ammonia Nitrogen as N	0.05 mg/L	45	21	47	0.38	ND	1.60
	Total Kjeldahl Nitrogen as N	0.1 mg/L	45	19	42	0.4	ND	1.6
	Total Phosphorus as P	0.02 mg/L	45	45	100	0.14	0.10	0.81
	Ortho-Phosphate as P	0.02 mg/L	45	25	56	0.067	0.027	0.140
Herbicides and Degradates	Atrazine	0.020 µg/L	44	12	27	0.065	ND	0.240
	Desethyl Atrazine	0.020 µg/L	44	16	36	0.061	ND	0.200
	Desisopropyl Atrazine	0.020 µg/L	44	2	5	0.022	ND	0.023
	Acetochlor	0.025 µg/L	44	0	0	ND	ND	ND
	Acetochlor ESA	0.025 µg/L	44	24	55	0.211	0.030	0.770
	Acetochlor OXA	0.025 µg/L	44	13	30	0.271	ND	1.300
	Alachlor	0.025 µg/L	44	0	0	ND	ND	ND
	Alachlor ESA	0.025 µg/L	44	25	57	0.284	0.058	0.750
	Alachlor OXA	0.025 µg/L	44	8	18	0.395	ND	1.600
	Dimethenamid	0.025 µg/L	44	0	0	ND	ND	ND
	Dimethenamid ESA	0.025 µg/L	44	3	7	0.048	ND	0.057
	Dimethenamid OXA	0.025 µg/L	44	3	7	0.049	ND	0.092
	Metolachlor	0.025 µg/L	44	5	11	0.275	ND	0.600
	Metolachlor ESA	0.025 µg/L	44	38	86	0.483	0.310	1.900
Metolachlor OXA	0.025 µg/L	44	21	48	0.247	ND	1.600	
Pharmaceuticals	Acetaminophen	0.025 µg/L	45	0	0	ND	ND	ND
	Caffeine	0.025 µg/L	45	8	18	0.077	ND	0.200
	Carbamazepine	0.01 µg/L	45	0	0	ND	ND	ND
	Cotinine	0.01 µg/L	45	0	0	ND	ND	ND
	DEET	0.025 µg/L	45	0	0	ND	ND	ND
	Diclofenac	0.025 µg/L	45	0	0	ND	ND	ND
	Gemfibrozil	0.025 µg/L	45	1	2	0.057	ND	0.057
	Ibuprofen	0.010 µg/L	45	0	0	ND	ND	ND
	Lincomycin	0.010 µg/L	45	0	0	ND	ND	ND
	Metoprolol	0.010 µg/L	45	0	0	ND	ND	ND
	Sulfadimethoxine	0.010 µg/L	45	0	0	ND	ND	ND
	Sulfamethazine	0.010 µg/L	45	1	2	0.020	ND	0.020
	Sulfamethoxazole	0.010 µg/L	45	3	7	0.029	ND	0.036
	Sulfathiazole	0.010 µg/L	45	0	0	ND	ND	ND
	Triclosan	0.025 µg/L	45	0	0	ND	ND	ND
Trimethoprim	0.025 µg/L	45	0	0	ND	ND	ND	

Nitrate + nitrite as nitrogen (N) was detected in 73 percent of the vulnerable wells with a mean concentration of the detections at 4.8 mg/L, and a maximum concentration of 17 mg/L. Conversion of ammonia to nitrate only occurs when oxygen is present in soils, and denitrification often occurs in low-oxygen conditions. Thus, the lack of nitrate does not necessarily indicate a lack of nitrogen sources. In fact, all 12 samples that did not contain nitrate, contained detectable levels of ammonia nitrogen,

ranging from 0.07 – 1.6 mg/L as N. The highest nitrate concentrations were found in alluvial aquifers in western Iowa (Figure 2).

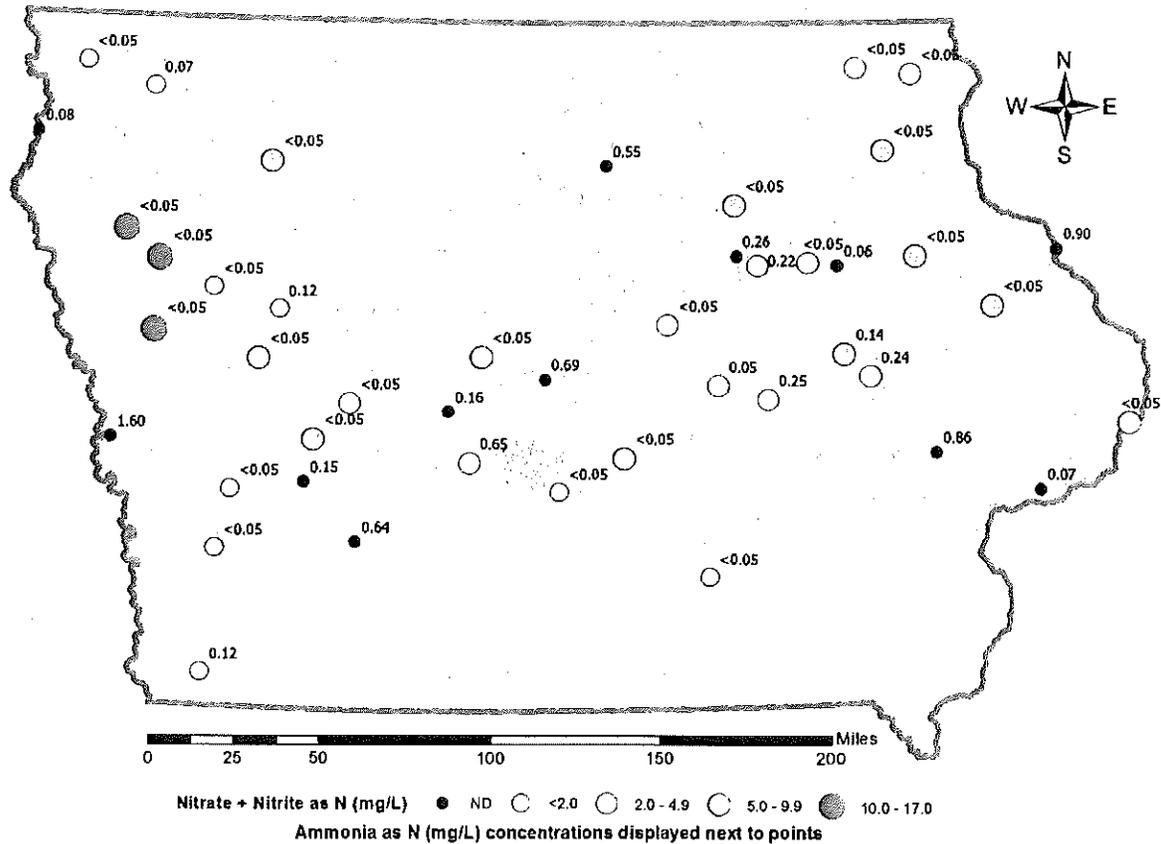


Figure 2. Nitrate + nitrite as nitrogen (N) concentrations in ambient groundwater samples from FY2015. Measured concentrations of ammonia nitrogen as N are shown next to the symbol.

In past years the reporting limit for atrazine for ambient groundwater samples was 0.1 µg/L. Improvements to the method by SHL in 2014 lowered the detection limit to 0.02 µg/L. While only one sample exceeded the pre-2014 reporting limit, 12 (27%) of the samples collected had detectable levels of atrazine at the lower detection limit. This improvement allows us to see the distribution of low levels of atrazine in vulnerable aquifers. Atrazine detections occurred more frequently in the eastern portion of the state, while samples from alluvial aquifers in western Iowa showed no atrazine detections with the exception of the far northwest corner of the state (Figure 3).

The occurrence of pesticides (including herbicides) have been widely studied^{2,3}, but drinking-water standards have not been established for many of these compounds. All measured concentrations of atrazine and alachlor in FY2015 samples were below the maximum contaminant levels of 3 µg/L and 2 µg/L, respectively. For many other pesticide compounds, potential health risks from drinking-water exposures are a concern, but more data on health effects are needed to determine appropriate standards. Acetochlor and its ESA and OXA degradates, alachlor ESA and OXA, and metolachlor and its ESA and OXA degradates are listed on the Environmental Protection Agency's Contaminant Candidate List 3.⁴

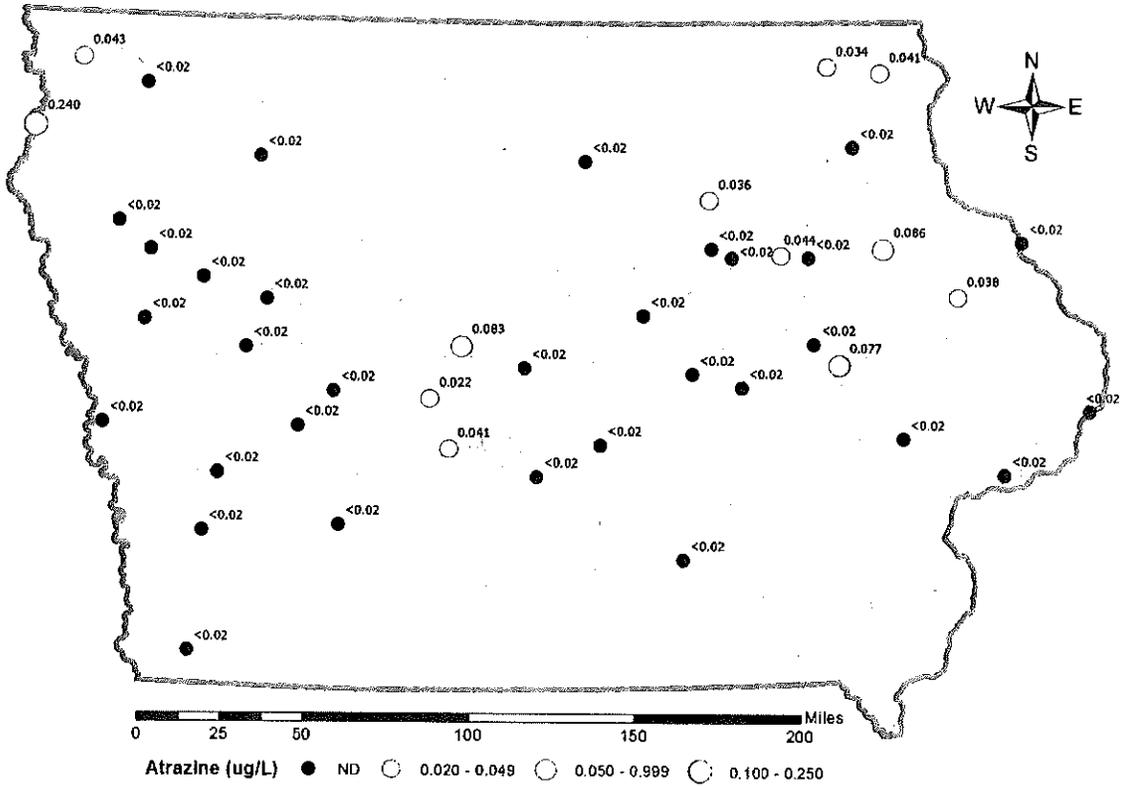


Figure 3. Map of atrazine results for FY2015. Numbers above locations indicate measured concentrations.

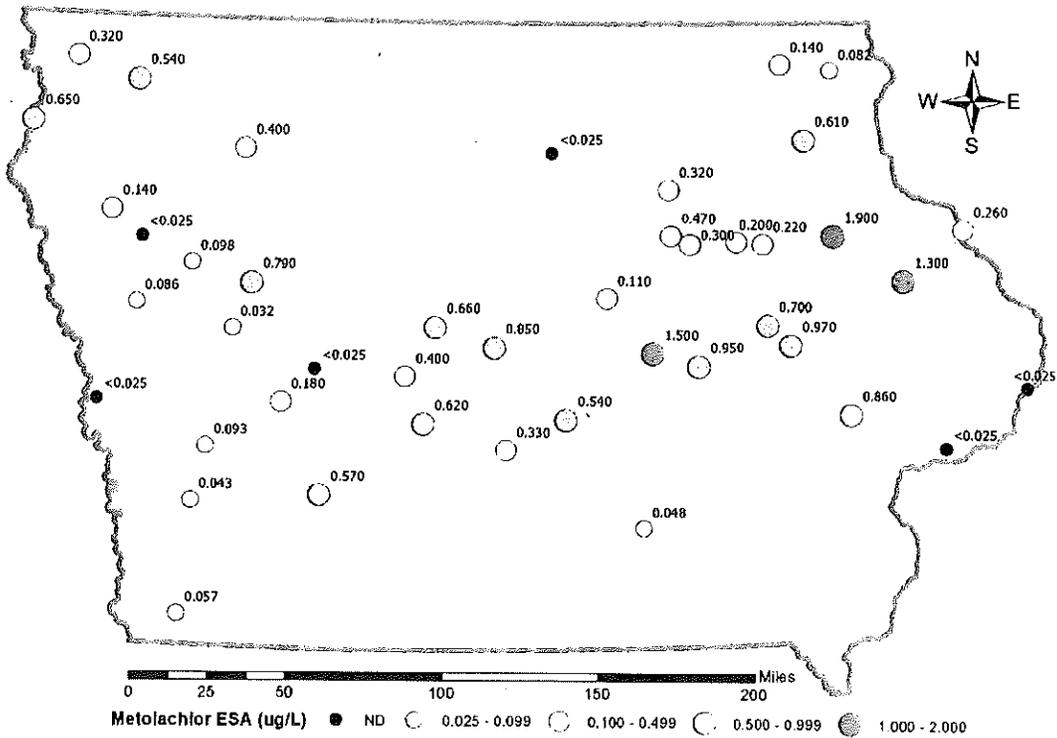


Figure 4. Map of metolachlor ESA results from FY2015. Numbers above locations indicate measured concentrations.

As with past groundwater studies in Iowa^{5,6,7}, results of FY2015 analyses showed that chloroacetanilide herbicide degradates were more prevalent than their parent compounds (metolachlor, alachlor, acetochlor, and dimethanamid). The most common herbicide compound was metolachlor ESA, with a maximum concentration of 1.9 µg/L. Although more widespread than atrazine, the distribution of metolachlor ESA in groundwater is similar to atrazine, with the lowest concentrations generally occurring in western Iowa's alluvial aquifer systems (Figure 4). Mixtures of up to 12 different herbicides compounds were found in individual wells samples, with a maximum cumulative herbicide concentration of 5.090 µg/L (Figure 5).

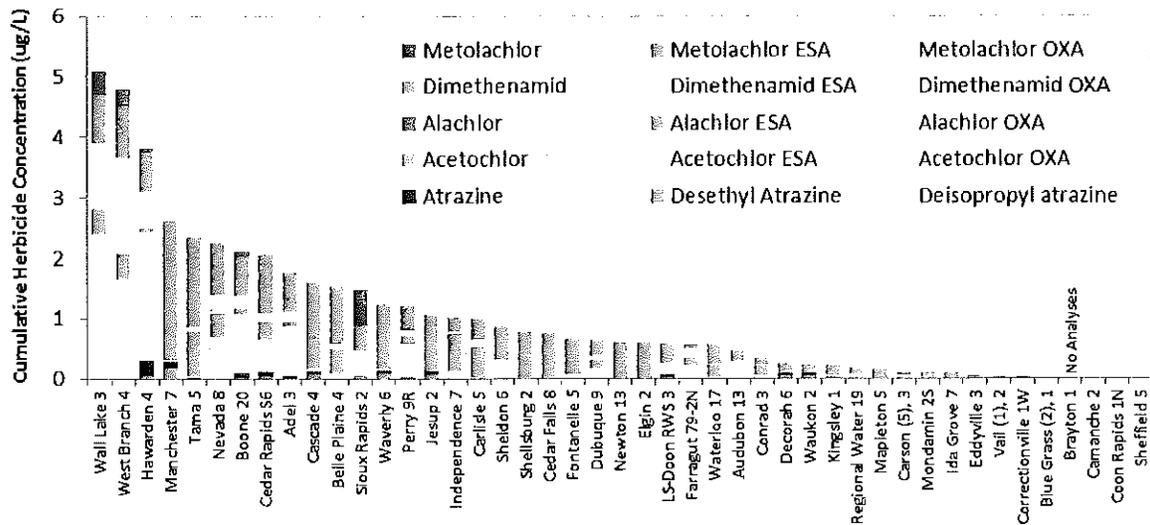


Figure 5. Mixtures of herbicide compounds by well.

The 2013 study of groundwater quality in 66 wells representing all of Iowa's major aquifers reported very low levels of one or more pharmaceuticals in 35% of wells using analytical methods developed by the USGS for 112 compounds.¹ Of the 14 pharmaceuticals detected in 2013, the most common was caffeine (25% of samples), followed by a breakdown product of caffeine. Similarly, caffeine was the most commonly detected pharmaceutical in FY2015 (18% of samples). Of the 16 pharmaceuticals analyzed in FY2015, only sulfamethoxazole, sulfamethazine, and gemfibrozil were detected in addition to caffeine. Sulfamethoxazole is an antibiotic used to treat infections in humans, and sulfamethazine is an antibiotic commonly used to treat livestock. Gemfibrozil is a drug used to treat high cholesterol.

Results presented for FY2015 represent groundwater that is highly vulnerable to contamination from surface activities due to a lack of protective confining material. These wells were not specifically selected to represent urban or rural land use, and analysis of the relationship between land use in the capture zones of these wells and contaminant concentrations has not yet been completed. All of the samples were collected during the late fall and winter in order to avoid short-term variations in concentrations driven by precipitation events or land application of chemicals. Concentrations reported here are thought to be baseline levels; however, more frequent monitoring would be necessary to determine whether these concentrations are sustained year-round, and the SWRL2 study of private wells showed higher percentages of detections during the dry (Oct – March) period than during the wet (April – Sept) season⁷. Further comparisons to herbicide data collected in previous years are planned.

Finally, it is very important to point out that concentrations of these contaminants in untreated water are not necessarily representative of the quality of water that reaches drinking-water users. Many communities that depend on vulnerable aquifers mix from multiple wells within the aquifer, or multiple aquifers, and some treatment methods are effective at removing organic compounds. Because private wells are less likely to be tested or treated for organic contaminants, efforts to assess and mitigate risks of organic contaminant exposures for private well users, like the 2008-2008 SWRL2 study⁷ and the Grants-to-Counties Program⁸, should be continued.

References

- 1 –Hruby, C.E., Libra, R.D., Fields, C.L., Kolpin, D.W., Hubbard, L.E., Borchardt, M.R., Spencer, S.K., Wichman, M.D., Hall, N., Schueller, M.D., Furlong, E.T., and P.J. Weyer, 2015. 2013 Survey of Iowa Groundwater and Evaluation of Public Well Vulnerability Classifications for Contaminants of Emerging Concern, Iowa Geological and Water Survey – Technical Information Series 57, 107 p.
- 2 – Toccalino, P.T., Norman, J.E., and K.J. Hitt, 2010. Quality of Source Water from Public-Supply Wells in the United States, 1993-2007. National Water-Quality Assessment Program, Scientific Investigations Report 2010-5024, url: <http://pubs.usgs.gov/sir/2010/5024/pdf/sir20105024.pdf>, 126 p.
- 3 – Kolpin, D.W., Barbash, J.E., and R.J. Gilliom, 2001. Major herbicides in ground water: results from the National Water-Quality Assessment, *Journal of Environmental Quality*, V. 28, n. 3, p. 103-112.
- 4 – Environmental Protection Agency, 2009. Contaminant Candidate List 3, url: <http://www2.epa.gov/ccl/contaminant-candidate-list-3-ccl-3>, accessed August 24, 2015.
- 5 - Kolpin, D.A., Hallberg, G.R., and Libra, R.D. 1997, Temporal Trends of Selected Agricultural Chemicals in Iowa's Groundwater, 1982-1995: Are things getting better?: *Journal of Environmental Quality*, v. 26, n. 4, p. 1007-1017.
- 6 - Kolpin, D.W., Kalkhoff, S.J., Goolsby, D.A., Sneek-Fahrer, D.A., and Thurman, E.M. 1997, Occurrence of Selected Herbicides and Herbicide Degradation Products in Iowa's Ground Water, 1995: *Ground Water*, v. 35, n. 4, p. 679-688.
- 7 – Center for Health Effects of Environmental Contamination, 2009. Iowa Statewide Rural Well Water Survey Phase 2 (SWRL2) Results and Analyses, report submitted to the Iowa Department of Natural Resources, url: <http://www.cheec.uiowa.edu/research/SWRL2%20results.pdf>, 27 p.
- 8 – Iowa Department of Public Health, 2015. Grants to Counties Water Well Program website, url: <https://www.idph.state.ia.us/eh/grants.asp>.

By Claire Hruby, Ambient Groundwater Quality Monitoring Coordinator - IDNR

Enclosure

H

IDNR Ambient Groundwater Quality Monitoring Summary for Fiscal Year 2016

Annual collection of groundwater monitoring data is important for assessing the quality of water in Iowa's major aquifers, which may be used for a wide variety of purposes including drinking-water for humans and livestock, irrigation, and industrial activities. Groundwater discharges to surface-water can also contribute significantly to surface-water quality, especially during periods of low rainfall. While public drinking water supplies are required to test for contaminants in finished water, the Iowa Department of Natural Resources' (IDNR) ambient groundwater quality monitoring program focuses on raw (untreated) water, most of which is collected from individual public water supply wells. Results of these analyses help us to understand what contaminants are present and how their concentrations change over time. The ambient groundwater quality monitoring efforts in fiscal years (FY) 2015 and 2016 targeted wells considered to be vulnerable to surface activities. A summary of FY 2015's monitoring can be found in the 2015 issue of IGWA UnderGround. The following is a summary of results from FY 2016.

From October 2015 to March 2016, untreated groundwater samples were collected from 68 public water supply wells in Iowa (see Figure 1). Half (34) of the sampled wells are located in alluvial aquifers with less than 40 feet of confining materials. The other 34 wells represent buried sand-and-gravel and bedrock aquifers with less than 130 feet of confining materials. Most of the wells (76%) were sampled in the fall (October – December), 21% of samples were collected in winter (January – March), and 2 samples (3%) were collected in early April. Water samples were analyzed for basic water quality parameters (total suspended solids, total dissolved solids, carbonate and bicarbonate alkalinity), chloride, nutrients (total Kjeldahl nitrogen, ammonia as nitrogen, nitrate + nitrite as nitrogen, total phosphorus, and orthophosphate as phosphorus), atrazine and its degradates (desethyl atrazine, deisopropyl atrazine, and desethyl-deisopropyl atrazine), and chloroacetanilide herbicides (alachlor, acetochlor, dimethenamid, metolachlor) and their ethanesulfonic acid (ESA) and oxanilic acid (OXA) degradates). In addition, a subset of these samples were analyzed for radionuclides as part of a graduate student research project. Results of general water quality, nutrient, and herbicide analyses for FY2016 are summarized in Table 1. Overall, results from the FY2016 monitoring season were very similar to FY2015, which represented a similar set of wells considered vulnerable to surface contamination based on confining layer thickness.

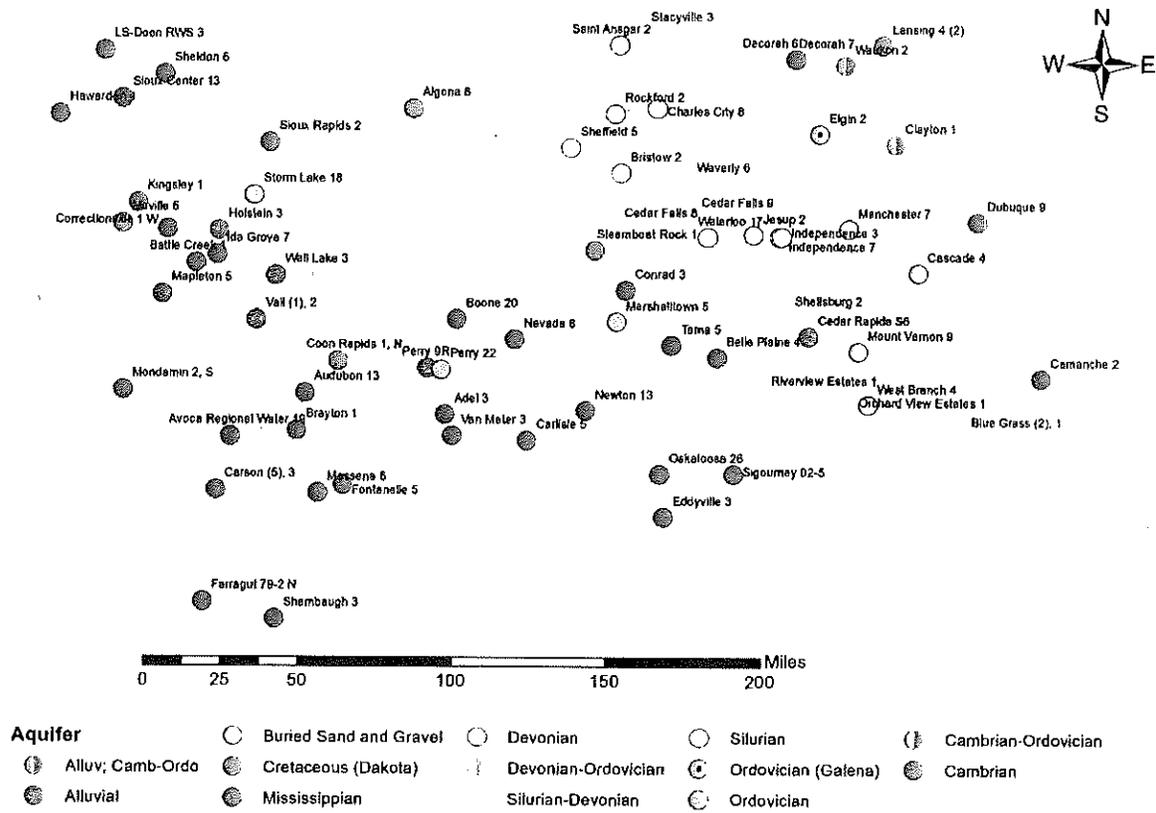


Figure 1. Ambient groundwater quality monitoring sites for FY2016 by aquifer.

Table 1. Summary statistics for general water quality parameters, nutrients, and herbicides.

Group	Analyte	Limit of Detection	Method	N	Number of Detections	Percent Detections	Mean of Detections	Median of all values*	Maximum
General Water Quality	Total Dissolved Solids	1 mg/L	SM2540 C	68	68	100%	440	410	760
	Total Suspended Solids	1 mg/L	USGS I-3765-B5	68	23	37%	6	ND	30
	Bicarbonate Alkalinity	1 mg/L	SM 2320 B	68	68	100%	281	270	500
	Carbonate Alkalinity	1 mg/L	SM 2320 B	68	0	0%	ND	ND	ND
	Chloride	1 mg/L	EPA 300.0	68	64.0	94%	29	20	150
Nutrients	Nitrate + Nitrite nitrogen as N	0.1 mg/L	LAC 10-107-04-1J	68	41	60%	5.9	1.8	24
	Ammonia Nitrogen as N	0.05 mg/L	LAC 10-107-06-1J	68	25	37%	0.50	ND	2.60
	Total Kjeldahl Nitrogen as N	0.1 mg/L	LAC 10-107-06-2E	68	24	35%	0.5	ND	1.7
	Total Phosphorus as P	0.02 mg/L	LAC 10-115-01-1D	68	66	97%	0.11	0.07	0.68
	Ortho-Phosphate as P	0.02 mg/L	LAC 10-115-01-1A	68	29	43%	0.06	ND	0.14
Herbicides and Degradates	Atrazine	0.020 µg/L	EPA 536	68	18	26%	0.060	ND	0.230
	Desethyl Atz.	0.020 µg/L	EPA 536	68	19	28%	0.059	ND	0.170
	Desisopropyl Atz.	0.020 µg/L	EPA 536	68	0	0%	ND	ND	ND
	Desethyl-Desisopropyl Atz.	0.020 µg/L	EPA 536	62	22	35%	0.109	ND	0.32
	Acetochlor	0.025 µg/L	SOP UHL-H-016 LC/MS/MS	68	2	3%	0.042	ND	0.055
	Acetochlor ESA	0.025 µg/L	SOP UHL-H-016 LC/MS/MS	68	29	43%	0.276	ND	1.100
	Acetochlor OXA	0.025 µg/L	SOP UHL-H-016 LC/MS/MS	68	16	24%	0.537	ND	<0.025
	Alachlor	0.025 µg/L	SOP UHL-H-016 LC/MS/MS	68	0	0%	ND	ND	0.030
	Alachlor ESA	0.025 µg/L	SOP UHL-H-016 LC/MS/MS	68	36	53%	0.223	0.037	0.950
	Alachlor OXA	0.025 µg/L	SOP UHL-H-016 LC/MS/MS	68	8	12%	0.601	ND	4.100
	Dimethenamid	0.025 µg/L	SOP UHL-H-016 LC/MS/MS	68	1	1%	ND	ND	0.057
	Dimethenamid ESA	0.025 µg/L	SOP UHL-H-016 LC/MS/MS	68	4	6%	0.038	ND	0.046
	Dimethenamid OXA	0.025 µg/L	SOP UHL-H-016 LC/MS/MS	68	3	4%	0.051	ND	0.077
	Metolachlor	0.025 µg/L	SOP UHL-H-016 LC/MS/MS	68	8	12%	0.408	ND	1.600
	Metolachlor ESA	0.025 µg/L	SOP UHL-H-016 LC/MS/MS	68	53	78%	0.505	0.225	4.000
Metolachlor OXA	0.025 µg/L	SOP UHL-H-016 LC/MS/MS	68	24	35%	0.619	ND	7.100	

*Includes non-detections

Nitrate and nitrite contamination of groundwater supplies has been an ongoing concern for over 30 years. While the primary concerns are related to acute toxicity for babies under 6-months of age and for pregnant woman with certain metabolic diseases, recent studies have also shown that chronic exposures to elevated nitrate in drinking-water and diet is a potential risk-factor for certain types of cancers. One recently published study looked at 34,708 post-menopausal women in Iowa and found that women who consumed drinking water with greater than 5 mg/L nitrate as N for four or more years had significantly greater incidence of bladder cancer than those with no comparable nitrate exposure.¹ In FY2016, nitrate + nitrite as nitrogen (N) was detected in 60% of the wells, with a median concentration of 1.8 mg/L, and a maximum concentration of 24 mg/L. Six wells had nitrate + nitrite as N concentrations above the Environmental Protection Agency's (EPA's) maximum contaminant level (MCL) of 10 mg/L nitrate in drinking-water (the MCL for nitrite as N is 1 mg/L). The highest nitrate + nitrite concentrations were found in alluvial wells in northwest Iowa and in one Devonian well in north-central Iowa (Figure 2). It should be noted that all of the public water supplies that participated in this study were compliant with both nitrate and nitrite standards in their finished water in 2015.² It should also be noted that while nitrate concentrations are generally lower in the winter in shallow groundwater, warmer than average soil temperatures and significant rainfall in the fall of 2016 may have raised nitrate + nitrite concentrations above typical levels for this time of year in some locations.

Ammonia as N was detected in 37% of the wells. Twenty-four of the 25 detections of ammonia occurred in wells where nitrate was not detected. While there is no MCL for ammonia in drinking water, the presence of ammonia at or above 1.0 mg/L indicates a potential for exceeding the nitrite MCL of 1.0 mg/L. The presence of ammonia enhances the formation of chloramines and can cause drinking water systems to feed more chlorine to ensure sufficient disinfection. Only three wells (4%) contained ammonia above 1.0 mg/L. The maximum concentration (2 mg/L) occurred in a well that draws water from a buried sand and gravel aquifer with an estimated confining layer thickness of 116 feet, indicating that the ammonia was likely derived from aquifer materials, and not from a surface source.

Phosphorus is not a concern for drinking-water, but along with nitrogen, it can contribute to the growth of algae in surface waters. In Minnesota, draft nutrient criteria for streams limit total phosphorus (TP) to between 0.050 – 0.150 mg/L depending on the ecoregion.³ In FY2016, 25% of the Iowa groundwater samples exceeded 0.150 mg/L. Ranges of TP and orthophosphate as P ($\text{PO}_4\text{-P}$) concentrations by aquifer type are shown in Figure 3. The majority of these relatively high TP concentrations occurred in alluvial samples, including the three highest concentrations: 0.42 mg/L in Missouri River alluvium, 0.51 mg/L in Mississippi River alluvium, and 0.68 mg/L in West Fork Middle Nodaway River alluvium. Similarly, $\text{PO}_4\text{-P}$ concentrations were highest in alluvial aquifers, with a median $\text{PO}_4\text{-P}$ concentration of 0.035 mg/L, and a maximum concentration of 0.14 mg/L. Both TP and $\text{PO}_4\text{-P}$

concentrations were significantly lower in bedrock aquifers: 90% of the samples from bedrock aquifers contained less than 0.100 mg/L TP and 75% of bedrock samples had no detectable orthophosphate. The three samples taken from buried sand and gravel aquifers ranged from 0.100 to 0.280 mg/L TP, none of which contained detectable levels of orthophosphate.

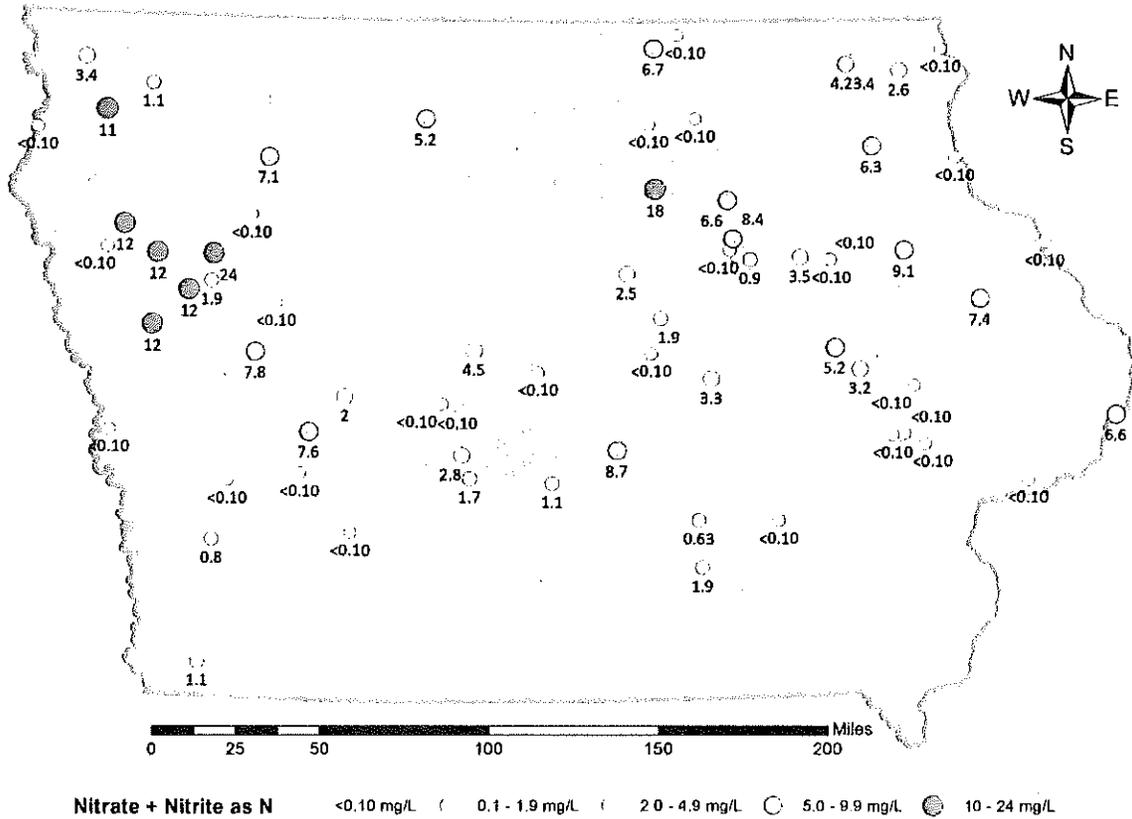


Figure 2. Concentrations of nitrate + nitrite as nitrogen (N) in untreated groundwater samples (FY2016).

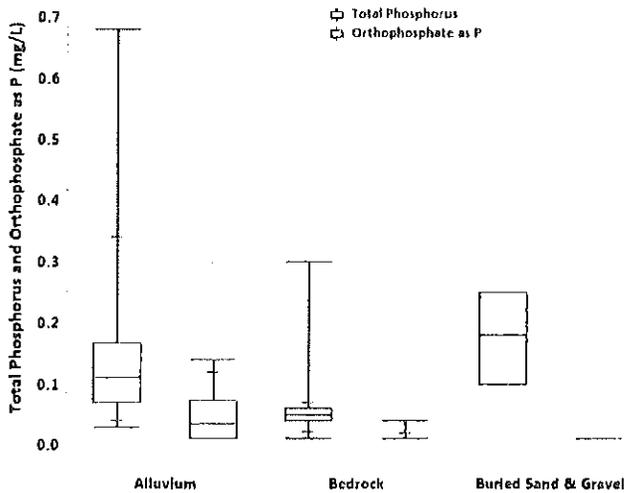


Figure 3. Quantile boxplots showing ranges of total phosphorus and orthophosphate as P concentrations by aquifer type.

Atrazine is a commonly used herbicide in Iowa.⁴ At sufficient concentrations, atrazine has been shown to disrupt the estrous cycles of rats and cause feminization of certain species of frogs. Atrazine was detected at low levels (maximum concentration of 0.240 µg/L or ppb) in 26% of the wells. These concentrations are well below EPA's MCL for in drinking-water of 3 µg/L atrazine. The chloro-s-triazine degradates of atrazine are thought to have similar toxicological effects. In FY2016, two of the three measured degradates of atrazine were detected: desethyl atrazine in 28% of samples, and desethyl-deisopropyl atrazine in 35% of samples. It appears that the timing of sampling may have had an effect on concentrations of desethyl atrazine and desethyl-deisopropyl atrazine as illustrated in Figure 4. The maximum combined concentration of atrazine and its three degradates was 0.38 µg/L, which is also well below EPA's MCL, and is far below the World Health Organization's drinking-water guideline for atrazine and its chloro-s-triazine degradates of 100 µg/L.

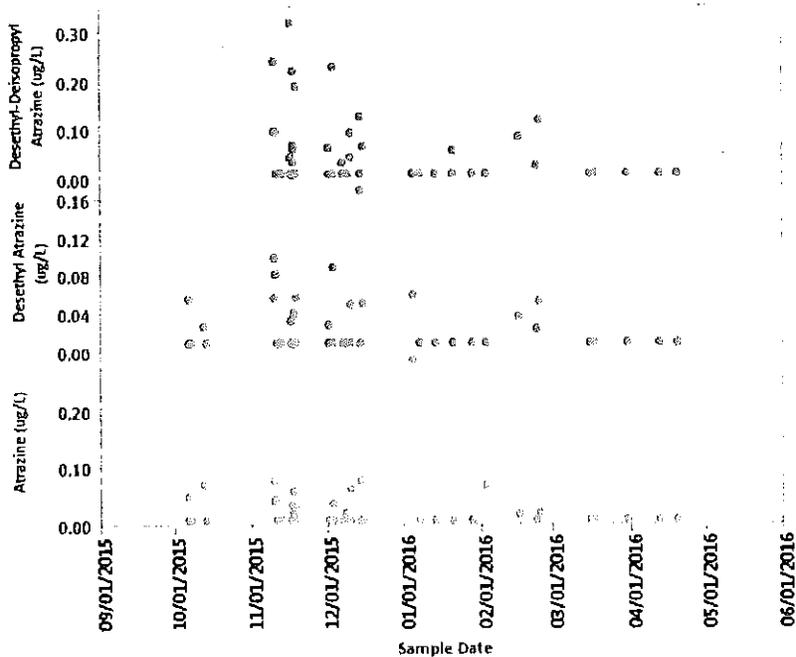


Figure 4. Concentrations of atrazine and its degradates over time.

Among the chloroacetanilide herbicides tested, EPA has only set a drinking-water standard for alachlor (2 µg/L), which was not detected in this study. The remaining chloroacetanilides that were tested are not currently subject to drinking water regulations, but alachlor ESA and OXA, acetochlor and its degradates, and metolachlor and its degradates are listed on the EPA's Contaminant Candidate List indicating that additional investigation of the public health risks associated with these compounds is a priority. Concentrations of metolachlor were below the World Health Organization's recommended guideline for drinking-water of 10 µg/L. The most commonly detected herbicide compound was the

degrade, metolachlor ESA, which was present in 78% of the samples at concentrations up to 4.0 µg/L with a median of 0.225 µg/L. The highest measured concentration of an herbicide was 7.1 µg/L of the degrade metolachlor OXA. Concentrations of metolachlor ESA (Figure 5) and the other chloroacetanilide herbicides were generally highest in Silurian or Silurian-Devonian wells in east-central Iowa. Timing of sampling appears to have had the greatest effect on alachlor ESA concentrations, which were higher in November and December than in other months, although the differences between months were not statistically significant. Most (97%) of the cumulative concentrations of herbicides (including atrazine, the chloroacetanilides, and their degradates) in the wells tested were below 3 µg/L; the remaining two wells had total herbicide concentrations of 11.8 and 19.1 µg/L.

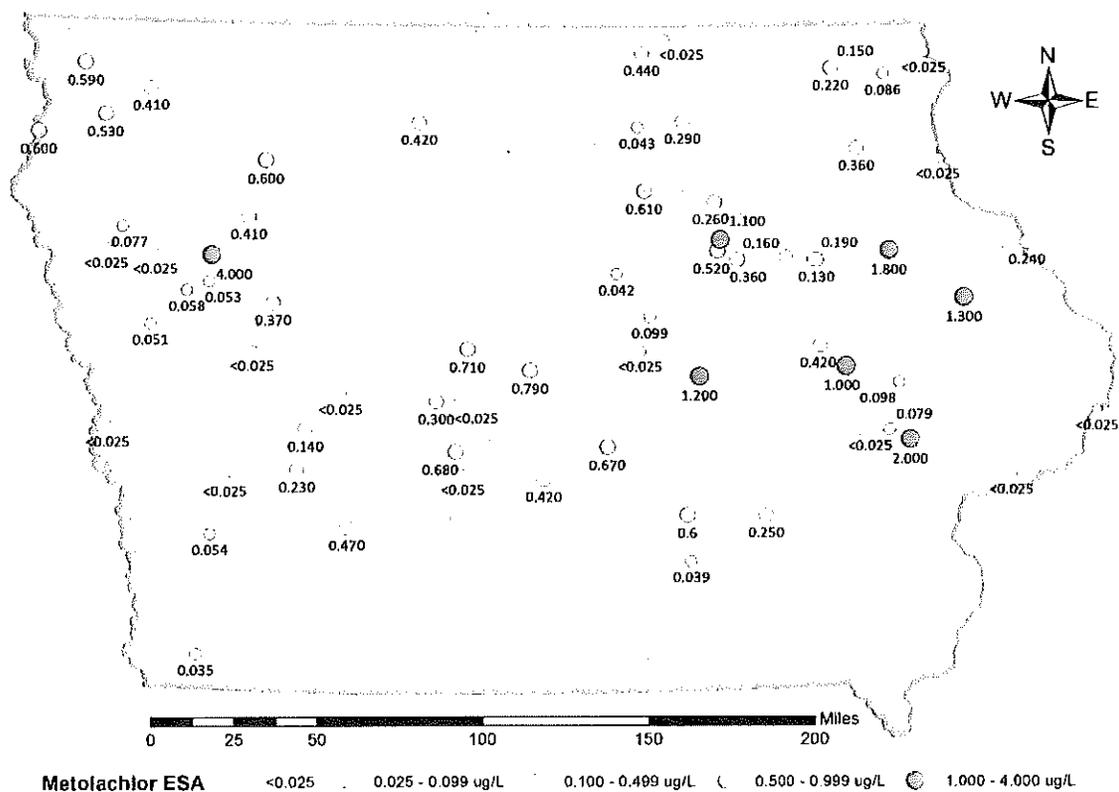


Figure 5. Concentrations of metolachlor ESA in untreated groundwater samples (FY2016).

This is the third consecutive year that untreated groundwater from public wells in Iowa has been tested for atrazine, the chloroacetanilide herbicides, and their degradates. No statistically significant differences in the distributions of concentrations of these compounds are seen between years (2013-2016) when grouped by aquifer. The lack of significance may result from small sample sizes and low detection frequencies. Further examination of data from individual wells may reveal more information about changes in concentration from year to year.

Monitoring of herbicide concentrations in Iowa's groundwater also took place in the 1990's and early 2000's. Although a thorough statistical analysis has not yet been completed, it appears that wells that contained measurable levels of atrazine and metolachlor in 2001-2004 often contain the same compounds in 2013-2016, but at lower concentrations. Most of the samples from the 2001-2004 period were collected in July and August, while the 2013-2016 samples were collected between October and March; therefore, it is possible that some of the differences between these sample sets result from seasonal variations in herbicide concentrations relating to the timing of application. Continued monitoring of these and other agricultural chemicals in groundwater is necessary as use of these chemicals changes over time. Use of alachlor has been dropping since the 1990's and sales are no longer allowed in the U.S. as of this summer.⁵ Meanwhile, the use of a new formulation of metolachlor (metolachlor-S) is increasing, and the use of acetochlor and atrazine on corn has remained relatively consistent for two decades.⁴

Public drinking water supplies are required to test quarterly for radionuclides in finished water, and the drinking-water standards apply to average values of four quarterly samples, thus, these data are not helpful for characterizing radionuclide concentrations in raw groundwater. In cooperation with the State Hygienic Laboratory, Dustin May analyzed untreated groundwater from 52 of the public wells sampled in FY2016 for radionuclides including gross alpha (including uranium) radioactivity, gross beta radioactivity, and radium-226. While the majority (90%) of samples had gross alpha (including uranium) levels below 6 picocuries per liter (pCi/L), four communities in western Iowa contained gross alpha levels above 10 pCi/L (two in alluvial wells, and two in Dakota wells) (Figure 6). All samples were below Iowa's drinking-water MCL for gross alpha radioactivity (excluding uranium) of 15 pCi/L.

References cited:

- 1 - Rena R. Jones, Peter J. Weyer, Curt T. Dellavalle, Maki Inoue-Choi, Kristin E. Anderson, Kenneth P. Cantor, Stuart Krasner, Kim Robien, Laura E. Beane Freeman, Debra T. Silverman, and Mary H. Ward, 2016. Nitrate from Drinking Water and Diet and Bladder Cancer among Postmenopausal Women in Iowa, Environmental Health Perspectives; DOI:10.1289/EHP191. Link: <http://ehp.niehs.nih.gov/EHP191/>
- 2 - 2015 Iowa Drinking Water Annual Compliance Report published by the Iowa Department of Natural Resources: <http://www.iowadnr.gov/Environmental-Protection/Water-Quality/Water-Supply-Engineering/Annual-Compliance-Report>
- 3 - Kroening, S., and M. Ferrey, 2013. The condition of Minnesota's Groundwater, 2007 – 2011. Minnesota Pollution Control Agency document number: wq-am1-06. <https://www.pca.state.mn.us/sites/default/files/wq-am1-06.pdf>
- 4 - Pesticide National Synthesis Project website published by the National Water-Quality Assessment Program of the United States Geological Survey: https://water.usgs.gov/nawqa/pnsp/usage/maps/compound_listing.php
- 5 - Federal Register: <https://www.gpo.gov/fdsys/pkg/FR-2016-06-30/html/2016-15616.htm>

For more information:

Claire Hruby, Geologist III

Iowa Department of Natural Resources

502 E. 9th St., Des Moines, IA 50319

Phone: 515-725-8348

Email: claire.hruby@dnr.iowa.gov

IDNR Groundwater Monitoring Website: <http://www.iowadnr.gov/Environmental-Protection/Water-Quality/Water-Monitoring/Groundwater>

Enclosure

I

Iowa Department of Natural Resources
Manure Discharge Chart

Facility Name	Facility Number	Spill Number	City	Type of Facility	Type of Animal	Unit Number	Date of Discharge	Water Impacted of	Restitution/Investigative Amount	Restitution Paid	Enforcement	Penalty Amount	Penalty Paid	Remedy
Vernon Van Beek	62351		Inwood	Open Feedlot	Cattle	890	6/1/2012	Dry Run Creek	N/A	N/A	Attorney General 5/22/14	\$12,000	6/17/2014	Facility had a NPDES Permit at the time of the discharge. Grassed waterway waterway reseeded and new monitoring for the basin. No NPDES permit required.
Darvin Kick	56895		Blairtown	Open Feedlot	Cattle	700	10/24/2012	Prairie Creek	\$4,719.02	5/30/2014	ACO 1/31/14	\$4,750	5/30/2014	Facility had a NPDES Permit at the time of the discharge. Required to plug pipe and remove buried culvert.
City View Farms	60324		Sutherland	Combined	Dairy Cattle	15,500	May-13	Waterman Creek	N/A	N/A	ACO 1/28/14	\$10,000	1/6/2014	Required to apply for an NPDES permit. Application has been received and draft permit on review.
Dry Creek Farms	64489		Rock Valley	Combined	Dairy Cattle	1,575	5/28/2013	Dry Creek	N/A	N/A	ACO 2/28/14	\$5,000	3/4/2014	Facility had a NPDES Permit at the time of the discharge. Facility was required to ensure runoff control structures were constructed properly.
K&D Farms	60404		Sioux Center	Combined	Cattle	14,000	9/30/2013	Unnamed Tributary of Six Mile Creek	N/A	N/A	ACO 2/17/14	\$9,000	6/30/2014	Facility had a NPDES Permit at the time of the discharge. Correction Action Plan followed. No NPDES permit required.
Douglas Reimer	62815		Guttenberg	Confinement	Swine	805	6/28/2013	South Cedar Creek	N/A	N/A	ACO 2/4/14	\$6,000	2/12/2014	Facility had a NPDES Permit at the time of the discharge.
John Fluit Jr.	56833		Inwood	Open Feedlot	Cattle	4,000	8/29/2013	Unnamed Creek and Stock Pond	N/A	N/A	ACO 5/19/14	\$9,000	6/9/2014	Facility had a NPDES Permit at the time of the discharge.
James Koedam	56653		Doon	Open Feedlot	Cattle	450	9/2/2013	Little Rock River	\$1,775.85	3/13/2014	ACO 3/17/14	\$5,000	3/13/2014	Install new tile and a pumping system. No NPDES permit required.
Marvin	57034		Doon	Open Feedlot	Cattle	800	9/4/2013	Little Rock River	\$1,775.85	3/19/2014	ACO 3/24/14	\$5,000	3/19/2014	Install new pump system and berm improvements. No NPDES permit required.
VonMaanen Grant Wells	N/A		Fonda	Confinement	Swine	300	9/16/2013	Big Cedar Creek	\$22,145.09	Payment Plan - On Schedule	ACO 6/22/14	\$1,500.00	Payment Plan - on Schedule	Facility repaired basin. No NPDES permit required.
High Plains Dairy	60531		Sanborn	Confinement	Dairy Cattle	3,520	9/30/2013	No water - dry creek bed	N/A	N/A	ACO 3/10/14	\$5,000	3/17/2014	Facility improvements including lights and diater. Increased size of berm. No NPDES permit required.
Roanoke L.L.C.	6211		Audubon	Confinement	Swine	1,665	10/30/2013	Unnamed Tributary of Beaver Creek	N/A	N/A	Notice of Violation Issued	N/A	N/A	Dam was constructed to prevent discharge downstream and then manure was removed. No NPDES Permit required.
The Maschoffs	60129		Keosauqua	Confinement	Swine	2,996	11/4/2013	No water - dry creek bed	N/A	N/A	ACO 2/16/14	\$10,000	3/22/2014	Hire consultant and repair piping and connections. No NPDES permit required.
Windy Ridge LLC	64470		North English	Confinement	Swine	992	11/11/2013	Unnamed Dry Creek Bed	N/A	N/A	Notice of Violation Issued	N/A	N/A	Containment dam constructed, flushed water out of for land application, cut off septic drain pipe and raised the PVC riser to a level higher than the pit. No NPDES Permit required.
Dairy Venture	63902		Central City	Confinement	Dairy Cattle	910	12/9/2013	Unnamed Tributary of Wapsipicon River	\$1,294.58	2/10/2014	ACO 4/18/14	\$3,000	4/14/2014	Improve the sand lane with new control and monitoring. No NPDES permit required.
Iowa Select 3	60688		Dows	Confinement	Cattle	1,600	1/21/2014	Drainage Ditch #213	N/A	N/A	Notice of Violation Issued	N/A	N/A	Contaminated water was pumped and the tile was flushed. No NPDES permit required.
Roger Schwiager	56551		Armstrong	Combined	Cattle	900	3/11/2014	Sludge stockpile discharge to tributary of Iowa Lake	N/A	N/A	Notice of Violation Issued	N/A	N/A	Stockpile was removed eliminating the possibility of future discharges. No NPDES permit required.
Brenneman Pork	58768		Washington	Confinement	Swine	3,719	3/19/2014	Entered Tile intake, but did not reach water of the state	N/A	N/A	N/A	N/A	N/A	Small amount of manure entered tile intake; tile was bermed and the manure was removed. The manure did not go anywhere but the tile intake. No NPDES Permit required.
E&M Farms	66910		Osiah	Confinement	Dairy Cattle	600	3/18/2014	Dry Branch Creek	N/A	N/A	EPA Enforcement	\$7,500	1/21/2015	EPA established remedy, contact EPA for document.
Galen Wagner	68186		Osage	Open Feedlot	Cattle	580	4/30/2014	Spring Creek	N/A	N/A	ACO 12/23/14	\$6,500		Reduced number of animals below 300. Constructed additional earthen basins and raised height of concrete walls in existing basins. No NPDES permit required.
Johannes Boehlen	64879		Brooklyn	Confinement	Dairy Cattle	2,320	5/4/2014	Big Bear Creek	N/A	N/A	Notice of Violation Issued	N/A	N/A	Submitted engineering work plan. Created emergency spillway, improved storage, and added more concrete areas from stockpile and drain sand. No NPDES permit required.

Iowa Department of Natural Resources
Manure Discharge Chart

Brian Peterson	57143	Sioux City	Combined	Cattle	24,950	6/16/2014	Big Whiskey Creek	N/A	N/A	N/A	2/9/2015	\$10,000	AD 12/1/14	Facility had a NPDES Permit at the time of the discharge.
Morris Feedyards	56383	Wesley	Open Feedlot	Cattle	2,500	6/17/2014	Tile intake, but no impact to a water of the state	N/A	N/A	N/A	N/A	N/A	Notice of Violation Issued	Construct runoff controls to eliminate the discharge. No NPDES permit required.
Farm Nutrients LLC	N/A	Tiaska	Chicken Manure Stockpile	N/A	N/A	7/25/2014	Buffalo Creek	N/A	N/A	N/A	6/23/2015	\$5,000	ACO 6/2/15	Remove all remaining stockpile and discontinue the use of the stockpile. No NPDES permit required
Summit Dairy (John Westra)	64241	Pringhar	Combined	Dairy Cattle	1,671	8/16/2014	Mill Creek	\$162,495.46	Payment Plan - On Schedule	Payment Plan - On Schedule	1/12/2015	\$10,000	ACO 9/14/15	Settlement 6/1/15
Jeff Pottebaum	67608	Alton	Combined	Cattle and Swine	1,060	8/16/2014	Willow Creek	N/A	N/A	N/A	N/A	N/A	ACO 1/7/15	Improved buffer and added an additional berm. No NPDES permit required
Nathan Tentinger	65496	Claghorn	Combined	Cattle	4,500	8/22/2014	Unnamed Dry Creek Bed	N/A	N/A	N/A	N/A	N/A	Notice of Violation Issued	Facility had a NPDES Permit at time of the discharge
MLS Legacy, LLP	62098	Laurel	Confinement	Swine	1,600	8/27/2014	Unnamed Tributary of Alloway Creek	\$348,28	5/5/2015	5/5/2015	5/5/2015	\$7,850	ACO 3/20/15	Record manure levels weekly; remove all fans; and develop and implement employee SOP for manure releases. No NPDES permit required
Adams Dairy	N/A	Garnavillo	Combined	Dairy Cattle	260	9/9/2014	Buck Creek	\$28,267.49	4/18/2017	4/18/2017	4/18/2017	\$6,000	ACO 5/20/15	Converted half of free stall barn to dry bedded to reduce the liquid manure. Reduced the number of animals at the facility and provided more area for manure to be applied. No NPDES permit required
Daniel Muhlbaier	66277	Manilla	Open Feedlot	Cattle	999	9/9/2014	Unnamed Tributary of West Nishnabota River	N/A	N/A	N/A	N/A	\$7,000	ACO 9/29/15	Settlement 6/8/16
Brian Rorica	59250	Maurice	Combined	Dairy Cattle	2,810	9/14/2014	Orange City Slough Creek and West Branch of the Floyd River	\$35,000	7/28/2015	7/28/2015	7/28/2015	\$5,500	ACO 7/12/15	Develop Plan of Action to prevent future discharges. No NPDES permit required
William and Jeff Lawler	68362	Peosta	Combined	Dairy Cattle	390	9/15/2014	Unnamed Tributary of Little Maubouka River	\$1,118.31	3/24/2016	3/24/2016	3/24/2016	\$6,000	ACO 9/24/15	Settlement 2/9/16
Van Meter Feedyard	56251	Guthrie Center	Open Feedlot	Cattle	14,000	10/27/2014	Unnamed Tributary	N/A	N/A	N/A	9/29/2015	\$1,000	ACO 9/23/15	Facility already has a NPDES Permit
Andy Nagel	68333	Allerton	Open Feedlot	Dairy Cattle	83	10/27/2014	Unnamed Tributary of Medicine Creek	N/A	N/A	N/A	1/12/2015	\$1,000	ACO 10/14/15	Construct containment and second berm around existing lagoon. No NPDES permit required
Smith Ag, Inc.	1253CMS	Osgage	Certified Manure Applicator	N/A	N/A	10/27/2014	Unnamed Tributary of Cedar River	\$4,075.37	6/12/2015	6/12/2015	6/12/2015	\$1,500	ACO 6/17/15	Develop and implement SOP for employees for manure handling. No NPDES Permit required
LDR Ranch	61679	Harper	Confinement	Swine	670	11/12/2014	Clear Creek	N/A	N/A	N/A	2/25/2015	\$4,100	ACO 2/25/15	Develop and implement SOP for employees for manure handling. No NPDES Permit required
Hand Nutrient Management	N/A	Williams	Certified Manure Applicator	N/A	N/A	11/12/2014	Entered Tile Line, but did not reach drainage ditch	N/A	N/A	N/A	N/A	N/A	Notice of Violation issued	Manure was immediately removed from tile line and was land applied before contamination went to drainage ditch. No NPDES permit required
Mark Porter	62630	Fairfield	Confinement	Swine	960	11/20/2014	Tributary of Cedar Creek	N/A	N/A	N/A	7/2/2015	\$1,000	ACO 6/2/15	Develop and implement SOP for employees for manure handling. No NPDES Permit required
Steve Bowers and Dressed, LLC	64497	Fredericka	Confinement	Swine	996	4/14/2015	Tributary of Wapsipinnon River	N/A	N/A	N/A	8/30/2016	\$6,000	ACO 8/11/15	Develop and implement SOP for employees for manure handling. No NPDES Permit required
Lindaoh, LLC	59895	Red Oak	Confinement	Swine	1,280	4/28/2015	Tributary of Nishnabota River	N/A	N/A	N/A	8/27/2015	\$1,000	ACO 9/8/15	Develop and implement SOP for preventative maintenance program. No NPDES permit required
Jason Kies	64383	Wall Lake	Combined	Cattle and Swine	928	4/28/2015	Tributary of Black Hawk Marsh	N/A	N/A	N/A	N/A	N/A	Notice of Violation issued	Cattle pens and settling structures have been removed. Nursery barn and west finisher barn have been discontinued and all manure has been removed. Waterway has been regraded and seeded.

Iowa Department of Natural Resources
Manure Discharge Chart

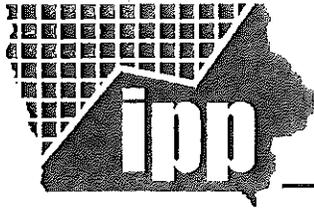
D&L Swine, LLC	58886	050515-DAK-1802	Meivin	Confinement	Swine	720	5/16/2015	Tributary of Floyd River	N/A	N/A	ACO 9/16/15	9/14/2015	\$500	9/14/2015	Repaired tile riser and constructed a cover for the tile intake structure. No NPDES permit required.
Kirk Shlifer	N/A	N/A	Waukon	Open Feedlot	Cattle	65	5/9/2016	Unnamed Tributary of Coon Creek	N/A	N/A					
Enicks Dairy	64237	052915-ESP-0900	Fort Atkinson	Confinement	Cattle	1,346	5/29/2015	Dry Run Branch	N/A	N/A	ACO 11/23/15	11/16/2015	\$4,000	11/16/2015	Develop and implement SOP for handling of manure and preventative maintenance for equipment
Lavern Van Loon	60341	050315-KAH-1500	Hartley	Confinement	Swine	503	6/3/2015	Tributary of Sewer Creek	\$3,000	Payment Plan On Schedule	ACO 3/21/16	Payment Plan On Schedule	\$900	Payment Plan On Schedule	Repair basin, find and plug all tiles
Plymouth Dairy	59964	070115-CAH-1130	LeMars	Combined	Dairy Cattle	5,460	7/1/2015	Tributary of Plymouth Creek	N/A	N/A	ACO 11/23/15	11/16/2015	\$1,000	11/16/2015	Construction of additional containment berms
The Good Egg	67800	071515-BAL-1135	Hampton	Confinement	Chicken	9,000	7/16/2015	Maynes Creek	\$4,579		ACO 1/15/2016	2/9/2016	\$5,000	2/9/2016	Note: Discharge of Egg washwater, not manure (waste water) installed upgraded float alarms
New Fashion Park	61292	073015-DPO-1616	Nodaway	61292	Swine	2,991	7/30/2015	Middle Nodaway River	N/A	N/A	ACO 11/23/15	12/1/2016	\$500	12/1/2016	Implement quarterly routine service for discharge lines and ensure personnel are on site when manure is being transferred.
Rick Shumaker	62810	080515-JIS-1430	Tipton	Confinement	Swine	1,080	8/5/2015	Sugar Creek	\$9,563.30	Out-15	ACO 10/21/15	10/20/2015	\$4,000	10/20/2015	Develop and implement SOP for preventative maintenance for equipment. No NPDES Permit required
Brian Cress	63434	081015-9JB-1030	Winterset	Confinement	Swine	SAFO	8/10/2015	Howerton Creek	N/A	N/A	ACO 1/9/17		\$9,000		Facility to be evaluated by engineer prior to populating the facility again. Must make the necessary repairs or replace the storage before populating the facility.
Paul Seeline	61087		Stratford	Confinement	Swine	2,880	8/15/2015	Squaw Creek	N/A	N/A	ACO 1/23/2016	1/21/2016	\$500	1/21/2016	Increase height of concrete storage tanks
Brad Van N/A	N/A		Lorimer	Certified Manure Applicator	N/A	N/A	8/22/2015	Tributary of Thompson River	N/A	N/A	ACO 12/28/16	1/10/2017	\$2,000	1/10/2017	Develop and implement Standard Operating Procedure for employee training program.
Goldier/Precision Applicators			Holstein	Confinement	Swine	4,525	9/16/2015	Tributary of Ashton Creek	N/A	N/A	ACO 2/15/16	3/10/2016	\$2,750	3/10/2016	Install alarms to prevent future release and develop a Standard Operating Procedure for employees
NIMC Holdings, LLC	62972		May City	Confinement	Chicken		9/28/2015	Stony Creek	26,709.56	11/23/2015	Attorney General Settlement	2/20/2017	\$46,000	2/20/2017	Discharge of Egg washing liquid, not manure (waste water)
Sunnise Farms			Stanly	Confinement	Swine	3,600	9/28/2015	Pine Creek	N/A	N/A	Attorney General Settlement	8/24/2016	\$15,000	8/24/2016	Attorney General Settlement
James Frye	59314	092815-SJM-1019	New Albin	Certified Manure Applicator	N/A	N/A	10/12/2015	Giant Creek	N/A	N/A	ACO 4/13/16	7/28/2016	\$2,000.00	7/28/2016	Develop and implement a Standard Operating Procedure for Employee Training.
Krauskopf Pumping Services	N/A	102215-ABCMA-1500	New Sharon	Certified Manure Applicator	N/A	NA	10/7/2015	Tributary to South Skunk Creek	N/A	N/A	ACO 9/9/16	9/30/2016	\$1,000	9/30/2016	Develop and Implement a Standard Operating Procedure for Employee Training.
John Ryken/Ring Valley, LLC	N/A	100715-WDG-1505	Hubbard	Certified Manure Applicator	N/A	N/A	10/20/2015	Unnamed Creek	N/A	N/A	ACO 2/29/16	3/1/2016	\$1,000	3/1/2016	Cover all tiles prior to future applications
SBK Custom	N/A	102015-SIW-2030	LeMars	Certified Manure Applicator	N/A	N/A	10/30/2015	Unnamed tributary	N/A	N/A	ACO 3/14/15	3/22/2016	\$1,000	3/22/2016	Develop and implement SOP for preventative maintenance program. No NPDES permit required
C&D Services	N/A	103015-LLB-1415	Charlotte	Certified Manure Applicator	Dairy Cattle	352	11/4/2015	Unnamed tributary	N/A	N/A	ACO 2/29/16	3/30/2016	\$4,000	3/30/2016	Develop and Implement Corrective Plan of Action to prevent future discharges
D&D Dairy	68704	112415-JFP-0900	Denison	Confinement	Swine	3,300	11/14/2015	Unnamed tributary	N/A	N/A	ACO 8/22/16	8/24/2016	\$500	8/24/2016	Maintain lock on slurry store lid. Maintain new dilr; and Repairs to system.

Iowa Department of Natural Resources
Manure Discharge Chart

Steister Brothers Dairy	68703	Clayton County	Combined	Dairy Cattle	180	11/4/2015	Unnamed tributary to Bloody Run	N/A	N/A	ACO 12/5/16	\$6,000	On a Payment Plan	Develop plan of action for proper management and maintenance. No NPDES permit required.
Brian Kruse	65410	Osceola County	Open Feedlot	Cattle	999	11/17/2015	Unnamed tributary of Little Rock River	N/A	N/A	ACO 10/26/16	\$1,000	11/4/2016	No NPDES permit required
Kenneth Kline	60963	Harrison County	Open Feedlot	Cattle	850	11/18/2015	Unnamed tributary of Euclid Creek	N/A	N/A	AD 1/7/17	\$10,000		Installed secondary containment and purchased new pump. Order requires one of 3 options: permit, remove conveyance or reduce below 300
Steve Kerns	N/A	Taylor County	Confinement	Swine	300	12/31/2015	Unnamed tributary of One Hundred and Two River	N/A	N/A	ACO 2/6/17	\$6,000	On a Payment Plan	Install secondary containment. Includes stipulated penalties for failure to meet deadline.
Swine Graphics Enterprises (Dave Jones)	50595	Union County	Confinement	Swine	1,536	1/24/2016	Farm Pond	N/A	N/A	ACO 11/23/16	\$1,000	11/11/2016	Install timers and automatic shutoffs. No NPDES permit required.
Carroll Farms	59711	Lee County	Confinement	Swine	800	2/1/2016	Rogers Ditch	N/A	N/A	ACO 6/1/16	\$7,000	5/26/2016	Develop and implement SDP for inspections and emergency action plans. No NPDES permit required.
Cyclone Cattle		Pottawattamie County	Open Feedlot	Cattle	3,500	2/28/2016	Unnamed tributary of Nushnabonna River	N/A	N/A	Combine with 4/20/16 Exclusion Cattle ACO 10/14/16	\$10,000	11/30/2016	Facility has a NPDES permit. Upgrade SDFEBS and application changes

Enclosure

J



The Iowa Policy Project

20 E. Market St. • Iowa City, Iowa 52245 • (319) 338-0773
www.IowaPolicyProject.org

November 2008

Permitting Pigs

Fixing Faults in Iowa's CAFO Approval Process

By Teresa Galluzzo and David Osterberg

In August 2008, Iowa's Environmental Protection Commission (EPC) granted an appeal by the Dallas County Board of Supervisors and, in doing so, denied two permits to build production facilities that would have each housed 7,440 hogs. Then, on October 14, 2008, the EPC reached a consent order that will allow the producer to build the two structures, however with the addition of several requirements. This rare process — of appeal, permit denial based on potential negative water-quality impacts and subsequent consent order — brought renewed attention to Iowa's Concentrated Animal Feeding Operation (CAFO) approval process.

The proposed Dallas County CAFOs passed the county's scoring of the Master Matrix — a list of steps a producer can take to reduce a CAFO's impact on surrounding neighbors and the environment. Iowa's Department of Natural Resources (DNR) also approved the permits, indicating the proposed CAFOs met state location and construction requirements. Despite having successfully passed these earlier stages of the approval process, members of the EPC heard arguments in August that persuaded them the proposed CAFOs should not be approved because of their potential to harm water quality.

Although appeal to the EPC is available under the CAFO decision-making process, this case raises the question of whether the earlier steps of the process adequately address the water-quality concerns associated with proposed CAFOs. How did these CAFOs both pass the Master Matrix and meet the state's regulations if the EPC felt that, prior to the consent order, they posed a significant threat to Iowa's water quality?

This report approaches this question by analyzing the CAFO permit decision-making process and addressing the question of what is missing from the current process. After examining the structure of the CAFO permitting process in Iowa, this analysis returns to the Dallas County case to describe how the current CAFO permitting process allowed scant protection from spreading manure near an already impaired river that is source water for Iowa's largest drinking water system. We close with recommendations for improving the permitting process, focusing, as with the rest of the report, specifically on water quality. This report does not address the several other concerns related to permitting and operating CAFOs.

CAFO Impacts on Water Quality^{a,b}

Twenty million swine live in Iowa,¹ compared with just fewer than 3 million humans.² Swine are increasingly being raised inside and under one roof in CAFOs. Further, swine production is becoming more concentrated in certain regions of the state. This density, coupled with the fact that swine produce 2.8 times more urine and feces per pound of body weight than humans³ and that these waste products are spread over the land untreated, creates a possible recipe for substantial adverse water-quality impacts.

The most noticeable impacts, often exhibited by the sight and smell of dead fish, are fish kills resulting from manure spills. In 2007, there were 63 reported manure spills in Iowa.⁴ These manure spills yield “extremely high concentrations of ammonium, total phosphorus, suspended solids, and fecal coliform bacteria.”⁵ Significant water-quality problems can result from CAFOs even when they are under normal operation.⁶

Iowa’s CAFO Permitting Process

Iowa approved construction permits for 318 CAFOs in 2006; 251 in 2007; and 191 as of mid-September 2008.⁷ The vast majority of these CAFOs went through the following process to reach DNR approval without significant attention or controversy.

A producer wanting to construct a livestock facility of more than 1,000 animal units^c must submit a Manure Management Plan; a construction permit application; and, in counties that have adopted it, a self-scored Master Matrix to the county auditor and the DNR. The county has 14 days to notify the public of the application and has the option to hold a public forum on the application. The county has 30 days to complete its own scoring of the Master Matrix (discussed in detail below); if the producer does not receive 50 percent of possible points, then the county recommends the DNR deny the permit. Even if the score is more than 50 percent, the county can choose to recommend that the DNR deny the permit based on public comment.

The DNR makes its final decision within 30 days of receiving the county’s recommendation. The DNR’s decision is based on compliance with the Matrix and with state CAFO regulations. However, the DNR does not review an applicant’s Matrix if the county recommends a CAFO permit be approved. The DNR will only review an applicant’s Matrix if the county recommends denial of a permit. If an applicant fails the county’s scoring, the DNR performs its own scoring of the Matrix. If the DNR approves the application, the county has 14 days to appeal the decision to the EPC. The EPC then has 35 days to decide whether to approve, deny or modify the permit based on information received from the county, the DNR and the producer.

The following sections describe some of the process in greater detail.

^a For more information on CAFOs’ impacts on water quality and a summary of other concerns, see past IPP reports, *Concentrating on Clean Water: The Challenge of Confined Animal Feeding Operations*, April 2005 and *Hog CAFOs and Sustainability: The Impact on Local Development and Water Quality in Iowa*, October 2007 available at www.IowaPolicyProject.org.

^b Though this report describes the CAFO approval process generally, it uses examples based on the hog industry because Iowa raises 28.5 percent of the nation’s hogs, as compared to between 3 and 14 percent of other livestock animals (three percent of turkeys, 4 percent of cattle and sheep/lambs and 14 percent of chickens). USDA, National Agricultural Statistics Service, available at

http://www.nass.usda.gov/Statistics_by_State/Iowa/Publications/Annual_Statistical_Bulletin/2008/78_08.pdf.

^c In the case of swine, this equals 2,500 hogs over 55 pounds.

The Master Matrix

In 2002 the Iowa General Assembly passed legislation setting guidelines for the establishment of the Master Matrix, which was later created and adopted by the DNR. The Legislature acted in response to citizens calling for greater community-level control over the CAFO permitting process.⁸ The Master Matrix gives counties a voice in the CAFO approval process, though it does not give them final decision-making authority. The Master Matrix is not required; counties have discretion to decide whether to adopt it. As of 2008, only 12 of Iowa's 99 counties have not adopted the Master Matrix.^{d,9}

The Master Matrix is a scoring system that awards points for the adoption of additional practices beyond the minimum that state law requires to approve a CAFO permit. For example, separation is required between CAFOs and residences, churches and vulnerable natural amenities. The Master Matrix awards points for increasing the required separation distances. More stringent manure management practices also gain additional points. The Master Matrix has a total of 880 points, of which 440 are required to "pass." In addition to this overall score, 25 percent of available points must be earned in each of three subcategories of impacts on air, water and the community in order to receive a passing score.¹⁰

The 2002 law that established the Master Matrix, as well as a previous 1995 law, preempted local governments from approving, denying or creating new regulations for CAFOs. Preemption (either expressed or implied) is a common mechanism used by higher levels of government to ensure consistency of laws at lower levels. When the federal government preempts the states, it generally allows individual states to require more than minimum federal requirements.^c Where environmental legislation is concerned, state governments do occasionally bar local governments from passing stronger environmental standards.¹¹ Iowa counties have tested their role in the CAFO decision-making process a number of times and lost each time.

The Iowa Legislature, via the authority set forth in the Iowa Constitution, has curtailed local government authority over siting CAFOs and limiting CAFO discharges. Several Iowa Supreme Court cases have affirmed this. In *Kuehl v. Cass County*, the Iowa Supreme Court held that all agricultural operations, including animal feeding operations, are exempt from county zoning (*Kuehl v. Cass County, 1996*). When Humboldt County later attempted to exercise its home-rule authority by putting controls on CAFOs, it lost in the Iowa Supreme Court (*Goodell v. Humboldt County, 1998*). Later, a Worth County ordinance sought to regulate CAFO operators based on the county's ability to protect public health. This ordinance was held void and unenforceable because it ran contrary to state law.^f The opinion of the court was that the Iowa Legislature intended livestock production to be exclusively governed by state regulation. As such, any regulation by the county was impermissible (*Worth County Friends of Agriculture v. Worth County, 2004*). This legal framework leaves counties to choose: utilize the flawed Master Matrix in order to take advantage of its minimal benefits or have no additional protections beyond the base required by state law.

^d According to the DNR website, counties must adopt or readopt the Construction Evaluation Resolution annually in January in order to use the Master Matrix.

^c See, for example, Clean Water Act, 33 U.S.C. § 1370; Resource Conservation and Recovery Act, 42 U.S.C. § 6929.

^f The Iowa Supreme Court has supported laws that preclude local jurisdictions from regulating livestock with ordinances. However, it has also established that the legislature cannot prevent individuals from suing livestock producers under nuisance law. Though the legislature has attempted to prohibit nuisance lawsuits through Iowa Code §§ 357.11, 657.11, the court has sided with claimants and against the hog industry in three cases, even going so far as to find these sections unconstitutional (*Weinhold v. Wolff* (Iowa 1996); *Bormann v. Kossuth County Bd of Supervisors* (Iowa 1998); and *Gacke v. Pork Xtra LLC* (Iowa 2004)).

While some might believe the Master Matrix is similar to an Environmental Impact Statement (EIS), the two are not comparable. The Master Matrix functions as a menu from which prospective CAFO operators can choose which extra guidelines they will follow. By contrast, an EIS is a report designed to outline the “predicted environmental effects of a particular action” or “highlight the significant environmental ramifications of a project.”¹² As the two are the same in neither form nor function, they should not be compared, and citizens, producers and policy makers should not presume a completed Master Matrix will serve the purposes of an EIS.

The Master Matrix has the potential to be a valuable tool more akin to an EIS; however, it has a number of flaws that prevent it from meeting its potential. These flaws include:

- There are no “negative” points. For example, producers do not *lose* points for being within a specified distance of a drinking water source, or for any other problematic siting factors;
- Points are awarded for practices that are likely to be adopted regardless of whether the producer needs to pass the Master Matrix. For example, points are awarded if an applicant does not have previous environmental or work violations, even if the applicant has not previously operated a CAFO and for using formed manure structures, which are the industry standard.¹³
- The condition of the waterbodies in the watershed is not part of the scoring process. A proposed CAFO along an impaired river would receive the same score if it were near an unimpaired waterbody;
- The format is inappropriate and leaves decision makers with partial information. The Master Matrix only requires producers to provide enough information to achieve a passing score and does not require the producer to give information on how or whether they will be addressing the other items.

DNR Approval

Until 2006, if a proposed CAFO attained the minimum score on the Master Matrix and met other state-mandated CAFO regulations, the permit was approved by the DNR, even if there was public opposition to the operation and the county recommended denial.¹⁴ But in June 2006, the EPC voted to approve a rule that would allow, but not require, the director of the DNR to use more discretion and look beyond the Master Matrix and state regulations and require modifications or deny construction permits and manure management permits for CAFOs.¹⁵ This rule applies to proposals for construction or expansion of CAFOs that require a construction permit or a manure management plan. When the DNR decides to evaluate proposals under this rule, it considers the following factors:

- 1) The likelihood manure will be applied to frozen or snow-covered cropland.
- 2) The proximity of the structured or manure application areas to sensitive areas ...
- 3) Topography, slope vegetation, potential means or routes of conveyance of manure spilled or land-applied. ...
- 4) Whether the operation or manure application area is or will be located in a two-year capture zone for a public water supply.¹⁶

This rule gives the DNR director discretion to deny a construction permit, disapprove a manure management plan or bar construction where proposed if the director determines that “the operation would reasonably be expected to result in” pollution of a water of the state; violation of state water-quality standards; or an adverse effect on natural resources or the environment in a specific area because of the current concentration of confinement feeding operations or associated manure application areas.¹⁷

The director’s discretion rule went into effect in August 2006, but the Administrative Rules Review Committee (ARRC) of the Iowa Legislature filed an objection to the rule in October 2006 saying it was beyond the DNR’s authority.¹⁸ This objection did not strike the rule, but shifted the burden of proof from the producer to the DNR. This shift means that, in any judicial review or enforcement proceeding,

the DNR must prove that the rule is not unreasonable, arbitrary, capricious, or *otherwise beyond the authority delegated to it* (emphasis added).¹⁹ Thus, although this rule remains, the ARRC's objection has diminished the likelihood that the DNR will deny a permit based on director's discretion and commit itself to defending its action if challenged.

The EPC's Role

Once the DNR has approved a permit for a CAFO, an Iowa county has one remaining option to stop the construction of a CAFO it finds objectionable: It can appeal to the EPC.

The EPC is one of two citizen boards that oversee the DNR. Iowa has a tradition of citizen bodies constituted to advise state agencies and ultimately the Governor. The Governor makes appointments to most commissions and boards annually and state law requires these entities to be balanced both by gender and political affiliation. Often geography also plays a part in the selection of commissioners.²⁰

Very few CAFO decisions are appealed to the EPC. In fact, over the 12-month period from October 2007 to September 2008, only seven permits were appealed. The EPC voted to deny permits in three of the appeals and to approve the other four permits. Two of the decisions to deny permits came in the most recent appeal from Dallas County heard by the EPC, though permits were later granted after filing the consent order.

The Dallas County Case

In the case of the proposed Dallas County CAFOs, the Dallas County Board of Supervisors agreed the proposed CAFOs passed the Master Matrix but recommended to the DNR the permits be denied. The DNR then approved the CAFOs. Based on water-quality concerns, the county supervisors appealed this decision, asking the EPC to deny the permits. The appeal was heard on August 19, 2008. Public comment was followed by presentations from attorneys representing the DNR, the Dallas County supervisors and the applicant.

Some of the information included in the public's and attorneys' testimonies and in written public comments to the EPC included:

- *The Raccoon River, the waterbody to which any pollution from the proposed facilities would discharge, is impaired and included on the federal government's Impaired Waters (303(d)) list.*²¹

The Raccoon River had been assigned a Total Maximum Daily Load (TMDL), which specifies the maximum amounts of particular pollutants that can enter the river in one day in order for it still to meet Iowa's water-quality standards. Unlike violation of a National Ambient Air Quality Standard, which would limit development in an offending air shed, the DNR is limited in improving an impaired river. As stated on the DNR website:

For any real improvement to be made on a stream or lake that has a water quality improvement plan, it is up to local communities and landowners to put the plan into action. By organizing a watershed improvement group, locals can apply for funding from the DNR and other agencies to help landowners and others install conservation practices.²²

Thus, while the Raccoon River is impaired no action is required to improve it and more pollutants can be added on top of those already causing the stream to be out of compliance.

If the proposed CAFOs are constructed, nearly 15,000 more hogs would live in the already impaired Raccoon River watershed. Although it is perhaps possible the CAFOs would add no additional pollution to the Raccoon River, the history of CAFOs in Iowa shows this is unlikely. Iowa's existing method for improving water quality does not adequately meet current challenges, let alone address the concerns of adding another potential pollution source to an already impaired watershed.

- *The Raccoon River is the source for the Des Moines Waterworks (DMWW), which provides drinking water for 400,000 Iowans.*

Christopher Jones, a chemist at the DMWW, stated that DMWW's monitoring data showed nitrate levels in the river had doubled since 1974 and that the Raccoon had the highest average nitrate levels of any of the largest tributaries in the Mississippi River basin. Jones went on to state that average *E. coli* concentrations in the river were four to five times what was allowed for recreational contact.²³

Jones and DMWW's Research/Regulatory Coordinator Linda Kinman emphasized the strain that pollution caused in providing clean drinking water. For example, increased ammonia levels in Spring 2008, believed to be caused in part by agricultural practices, required adjustments to the treatment process.²⁴ This resulted in increased costs and "hundreds of consumer complaints" about the smell and taste of drinking water, and placed DMWW at risk of violating the Disinfection and Disinfection Byproducts Rule of the EPA.²⁵

After hearing these and other concerns, the EPC based its August 19, 2008, decision to reject the two CAFOs on the following rationale:

1. The DNR is responsible for protecting Iowa's water resources. The EPC believed that its decision furthered the DNR's duties to protect the environment.
2. The proposed CAFO could "reasonably result in pollution to the water of a state based on [the authority set forth in the director's discretion rule, 567 IAC 65.5(3)(b)]."
3. The addition of the proposed CAFO to the impaired Raccoon River "will negatively impact the waterway based on the credible data already found in the TMDL."²⁶

Following this decision, the producer sought judicial review of the EPC's decision. The producer and the EPC entered a Consent Order, filed October 14, 2008, to resolve the producer's claims. Through the Order, the DNR agreed to issue construction permits for the two CAFOs in Dallas County provided one of the proposed CAFOs meets additional guidelines and water quality protections. These included tree lines, grass buffers, emergency plans and restrictions on manure spreading.²⁷ By signing the Consent Order, the producer waived his right to appeal.²⁸ In addition, the Dallas County Board of Supervisors did not object to entry of the Consent Order.

In many ways, the approval, denial and approval of the Dallas County CAFO permits highlights the uncertainty and inefficiency of the permit process — for producers, residents and regulators — as well as the insufficient protection of water quality. More restrictions were placed on the new hog facilities through the Consent Order. However, the Raccoon River is still impaired and the addition of more swine will not improve the water quality of Iowa's largest drinking-water system. Given the current limits on considering water quality, the parties involved in the regulatory process may have gone as far as they could to protect the Raccoon River watershed. The following section recommends changes that would improve the process.

Recommendations

The two proposed Dallas County CAFOs qualified for approval under the Master Matrix and existing state regulations, but the review process did not evaluate the quality of the river basin and its use as an

important drinking-water source. The EPC initially upheld Dallas County's appeals because it determined these specific CAFOs would be harmful to water quality. The Consent Order reached in October included elements that allayed the concerns of members of the EPC in this specific case, while leaving other aspects of the case and concerns that might arise in future cases unaddressed.

The current process for approving CAFOs has been in place for six years. Iowa's water quality is poor and by some measures deteriorating. CAFOs are one part of this problem. The decision-making process for approving or denying CAFOs needs to be changed to better address Iowa's water-quality problems. The following are recommendations that, if heeded, could help put Iowa on the path toward cleaner water and a better CAFO approval process:

- The state should set stronger minimum requirements for the approval of new construction permits and manure management plans. In particular, the DNR should consider 1) whether the watershed is impaired, 2) any existing water quality improvement plans, 3) the proximity to drinking-water sources and 4) the number of existing CAFOs in the watershed.
- The Legislature should codify the director's discretion rule to allow an additional level of review while maintaining producers' rights to appeal a decision.
- All counties should adopt the Master Matrix. In order to offset the county's cost, applicants should pay an administrative fee equal to the cost incurred to review each Master Matrix. In addition, rather than being a menu from which producers respond only to sections of their choosing, the Master Matrix should require producers to fill in responses to every item. This would provide counties access to complete information about proposed CAFOs so supervisors and the public could address any concerns early in the process. Finally, the Master Matrix should be adapted so applicants lose points for problematic environmental issues.
- Iowa should expand the permitting process to include smaller CAFOs. Currently, only Manure Management Plans are required for facilities with 500 to 999 animal units. Iowa should also require construction permits and the Master Matrix (in counties where adopted) for facilities above 500 animal units. Lowering the threshold would require more producers to complete these steps and provide a more accurate picture of the number and size of CAFOs in a watershed.
- The Legislature should increase local decision-making authority over CAFO approval by allowing counties to adopt rules for the limited purpose of protecting air quality, water quality, public health and community well-being. Additionally, the Legislature should consider giving county boards of supervisors the authority to deny or allow the applicant the opportunity to modify their application if it fails the Master Matrix, rather than simply recommending denial to the DNR.
- Counties and the state should make every effort to clearly outline the items an applicant must meet in order to have a permit application approved. (Following the recommendations in this paper, such a list would include: a completed Master Matrix, a Manure Management Plan, a construction permit and adherence to any applicable local rules) There will occasionally be individual and site-specific circumstances that cannot be addressed within the framework of the standard process. Wherever possible, applicants deserve the certainty that comes with knowing they have met all of the requirements and can expect to have their permit approved.

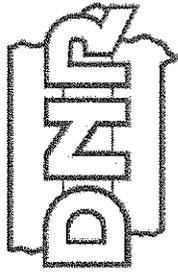
Conclusion

Given the number of livestock raised in Iowa, there is potential to improve our water quality if the permitting process is strengthened and improved. Permitting new CAFOs has been a contentious and

sometimes community-dividing issue. Iowa needs to improve the CAFO permitting process so the health of our water and citizens are better and fairly represented in this process.

Notes

- ¹ United States Department of Agriculture, National Agricultural Statistics Service Quick Stats <http://www.nass.usda.gov/QuickStats>.
- ² American Community Survey, 2007, available at <http://factfinder.census.gov>.
- ³ Carol J. Hodne, *Concentrating on Clean Water: The Challenge of Confined Animal Feeding Operations*, The Iowa Policy Project, April 2005.
- ⁴ Personal communication with Kenneth Hessenius, Iowa DNR, on September 19, 2008.
- ⁵ JoAnn Burkholder, Bob Libra, Peter Weyer, Susan Heathcote, Dana Kolpin, Peter Thorne, and Michael Wichman. *Impacts of Waste from Concentrated Animal Feeding Operations on Water Quality*. Environmental Health Perspectives, February 2007.
- ⁶ See Carol J. Hodne, *Concentrating on Clean Water: The Challenge of Confined Animal Feeding Operations*, The Iowa Policy Project, April 2005; Jan L. Flora et al., *Hog CAFOs and Sustainability: The Impact on Local Development and Water Quality in Iowa*, The Iowa Policy Project, October 2007.
- ⁷ Personal communication with Bob Palla, Iowa DNR, on September 18, 2008.
- ⁸ Leana Stormont, Detailed Discussion of Iowa Hog Farming Practices, 2004.
- ⁹ Available at <http://www.iowadnr.com/afo/files/08cermap.pdf>.
- ¹⁰ Available at <http://www.iowadnr.com/afo/matrix.html>.
- ¹¹ Minnesota Environmental Quality Board. Final Technical Work Paper on the Role of Government: Prepared for the generic environmental impact statement on animal agriculture, page 29 (2001).
- ¹² Available at <http://ohioline.osu.edu/cd-fact/0188.html>.
- ¹³ Baer, Nathaniel. *Failure of the Master Matrix: Industrial Livestock Operations Still Harming Air, Water, and Communities*. Environment Iowa Research & Policy Center. February 2007.
- ¹⁴ Leana Stormont, *Detailed Discussion of Iowa Hog Farming Practices*, 2004.
- ¹⁵ 567 IAC 65.5(3).
- ¹⁶ 567 IAC 65.5(3)(a)(1-4).
- ¹⁷ 567 IAC 65.5(3).
- ¹⁸ Administrative Rules Review Committee, Objection to 567 IAC 65.5(3) and 65.103(5) filed October 10, 2006.
- ¹⁹ I.C.A. § 17A.4(5)).
- ²⁰ Available at <http://openup.iowa.gov/boards/>.
- ²¹ Category 5 of Iowa's Final-Approved 2006 Integrated Report: The Section 303(d) List of Impaired Waters, available at http://wqm.igsb.uiowa.edu/WQA/303d/2006/iowa_06-final-approved-IR-Cat-5-303d.pdf.
- ²² Available at <http://www.iowadnr.com/water/watershed/tmdl/tmdl.html>.
- ²³ Christopher S. Jones, Ph.D., Laboratory Supervisor, Des Moines Waterworks, Public Comment to the EPC, August 19, 2008.
- ²⁴ Linda Kinman, Research/Regulatory Coordinator, Des Moines Water Works, Comment Document, Raccoon River Watershed Total Maximum Daily Load, August 19, 2008.
- ²⁵ Linda Kinman, Public Policy, Iowa Association of Water Agencies and Research/Regulatory Coordinator, Des Moines Water Works, Written Comment to the EPC, May 13, 2008.
- ²⁶ Environmental Protection Commission, August 19, 2008 meeting minutes.
- ²⁷ Consent Order, Judgment and Decree in the District Court in and for Polk County, Dallas Pork, LLC, and Lincoln 1 Pork, LLC v. State of Iowa, October 14, 2008.
- ²⁸ Consent Order, Judgment and Decree in the District Court in and for Polk County, Dallas Pork, LLC, and Lincoln 1 Pork, LLC v. State of Iowa, October 14, 2008.

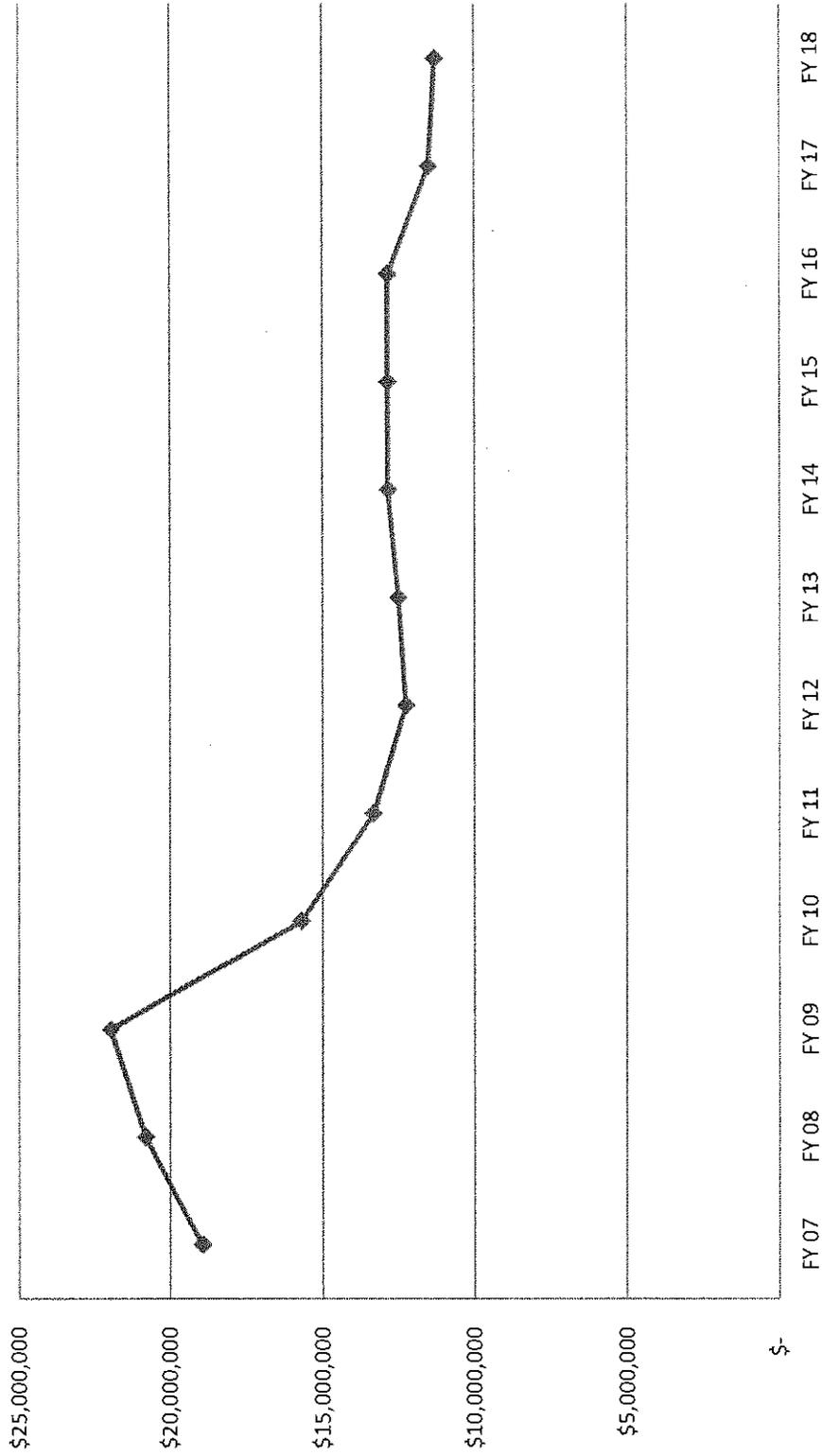


IOWA DEPARTMENT OF NATURAL RESOURCES

LEADING IOWANS IN CARING FOR OUR NATURAL RESOURCES

Budget Presentation to
Natural Resource Commission
Environmental Protection Commission

General Fund History



IOWA DEPARTMENT OF NATURAL RESOURCES
 CHUCK GIFF, DIRECTOR

FY 16-18 Appropriation Summary

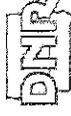
APPROPRIATION NAME	FY 16 Appropriation	FY 17 Appropriation	FY 17 Revised Appropriation	FY 18 Appropriation
GENERAL FUND				
Department Operations	\$12,862,307	\$12,862,307	\$11,507,811	\$11,299,811
Floodplain Management	\$1,950,000	\$1,950,000	\$1,885,000	\$1,950,000
Forestry Health Management	\$500,000	\$500,000	\$470,000	\$500,000
Total General Fund Appropriations	\$15,312,307	\$15,312,307	\$13,862,811	\$13,749,811
INFRASTRUCTURE				
Lake Water Quality Improvements	\$9,600,000	\$9,600,000	\$9,600,000	\$9,600,000
Water Trails/Lowhead Dam	\$1,750,000	\$1,000,000	\$1,000,000	\$0
Park Infrastructure Improvements	\$5,000,000	\$3,000,000	\$3,000,000	\$2,000,000
Total Infrastructure Appropriations	\$16,350,000	\$13,600,000	\$13,600,000	\$11,600,000
ENVIRONMENT FIRST				
Resource Enhancement and Protection	\$16,000,000	\$16,000,000	\$16,000,000	\$12,000,000
Ambient Air Quality Monitoring	\$425,000	\$425,000	\$425,000	\$425,000
Water Quality Monitoring	\$2,955,000	\$2,955,000	\$2,955,000	\$2,955,000
GIS Data for Watershed Managers	\$195,000	\$195,000	\$195,000	\$195,000
Park Operations and Maintenance	\$6,135,000	\$6,235,000	\$6,235,000	\$6,235,000
Water Quantity	\$495,000	\$495,000	\$495,000	\$495,000
Animal Feeding Operations	\$1,320,000	\$1,320,000	\$1,320,000	\$1,320,000
Water Supply Appropriation	\$500,000	\$500,000	\$500,000	\$500,000
Geological and Water Survey	\$200,000	\$200,000	\$200,000	\$200,000
Keep Iowa Beautiful	\$200,000	\$0	\$0	\$0
Total Environment First Appropriations	\$28,425,000	\$28,325,000	\$28,325,000	\$24,325,000
NON-GENERAL FUND				
Fish and Wildlife Operations	\$42,044,573	\$43,147,993	\$43,147,993	\$43,147,993
Groundwater Fund	\$3,455,832	\$3,455,832	\$3,455,832	\$3,455,832
UST Administration Match	\$200,000	\$200,000	\$200,000	\$200,000
Snowmobile Transfer	\$100,000	\$100,000	\$100,000	\$100,000
Total Non General Fund Appropriations	\$45,800,405	\$46,903,825	\$46,903,825	\$46,903,825
TOTAL DEPARTMENT	\$105,887,712	\$104,141,132	\$102,691,636	\$96,578,636

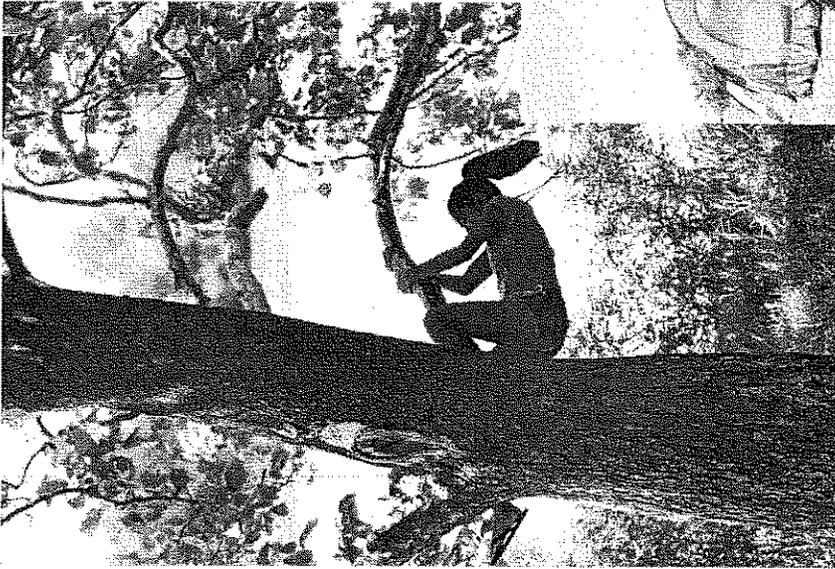


IOWA DEPARTMENT OF NATURAL RESOURCES
CHUCK GIFF, DIRECTOR

Significant 2017 Legislation

- HF 202 DNR Code Change Bill
- HF 291 Collective Bargaining
- HF 475 Straight Wall Cartridges
- HF 511 Plant Nursery Sales
- SF 257 Bass Tournaments
- SF 472 Snowmobile Funds





- Thank you.
- Questions and comments?



Gipp, Chuck <chuck.gipp@dnr.iowa.gov>

Fwd: Iowa Finance Authority and Iowa Department of Natural Resources Announce \$78.1 Million in Water Quality Loans to 32 Communities

1 message

Alex Murphy <alex.murphy@dnr.iowa.gov>

To: Bruce Trautman <bruce.trautman@dnr.iowa.gov>, Chuck Gipp <chuck.gipp@dnr.iowa.gov>, Karen Fynaardt <karen.fynaardt@dnr.iowa.gov> Fri, Jul 14, 2017 at 1:25 PM

FYI...

----- Forwarded message -----

From: Jared, Ashley <ashley.jared@iowa.gov>

Date: Fri, Jul 14, 2017 at 11:28 AM

Subject: Iowa Finance Authority and Iowa Department of Natural Resources Announce \$78.1 Million in Water Quality Loans to 32 Communities

NEWS RELEASE

For immediate release

July 14, 2017

For more information:

Ashley Jared

515.725.4934

Iowa Finance Authority and Iowa Department of Natural Resources Announce \$78.1 Million in Water Quality Loans to 32 Communities

State Revolving Fund Offers Affordable Financing for Water Quality Projects

Des Moines – The Iowa Finance Authority and the Iowa Department of Natural Resources recently announced that 32 Iowa communities have received low-interest water quality loans totaling more than \$78.1 million through the State Revolving Fund.

State Revolving Fund Construction Loans are a low-cost construction financing option available for Iowa cities and municipalities for water quality initiatives. Planning & Design Loans are zero percent loans that assist with the first-phase of project expenses.

“The Iowa Finance Authority is proud to partner with the Iowa Department of Natural Resources to offer programs that assist Iowa communities in improving their waste water or drinking water infrastructure,” said Iowa Finance Authority Executive Director Dave Jamison. “Iowa communities of all sizes have benefited from the affordable financing offered through the State Revolving Fund. The 32 communities announced today join a list of 600 others who have benefited from the financing.”

“Affordable financing programs through the State Revolving Fund play a significant role in advancing water quality improvements throughout Iowa. These programs are available to assist with both the planning & design and construction phases of water infrastructure projects,” said Iowa Department of Natural Resources Director Chuck Gipp. “I encourage Iowa communities to contact the Iowa Department of Natural Resources or the Iowa Finance Authority to learn more.”

The State Revolving Fund has awarded Iowa communities and municipalities with more than \$2.6 billion in Construction Loans and more than \$166 million through Planning & Design Loans since the program’s inception.

“The City of Johnston recently received a \$1.6 million construction loan to finance the replacement of new water mains, as well as a \$9.1 million construction loan from the State Revolving Fund to finance transmission improvements in the sewer system,” said the City of Johnston’s Finance Director, Teresa Rotschafer. “Financing through the State Revolving Fund was the best option for our community because the interest rate was the most competitive in the market and we were able to free up general obligation debt capacity for other important city projects.”

The U.S. Environmental Protection Agency provides annual capitalization grants to states. Leveraged bonds and loan repayments expand the reach of the federal investment. More than \$3 in assistance has been leveraged for Iowa water quality projects for every \$1 of federal funds. More information is available at IowaSRF.com.

The Iowa Finance Authority administers the State Revolving Fund (SRF) in partnership with the Iowa Department of Natural Resources. The SRF assists communities with the costs of upgrading or constructing local wastewater and drinking water infrastructure projects.

Recent loan recipients:

Loan Recipient	County	Amount	Project Type	Contact
Albert City	Buena Vista	\$2,796,000	Sewer - Treatment Improvements	Angie Nielsen: 712-843-5613
Alta Municipal Utilities	Buena Vista	\$1,348,000	Water - Source Improvements	Randy Tilk: 712-200-1122
Baxter	Jasper	\$101,250	Sewer - Planning & Design	Peg Kimberley: 641-227-3120
Baxter	Jasper	\$101,250	Water - Planning & Design	Peg Kimberley: 641-227-3120
Bayard	Guthrie	\$180,000	Sewer - Planning & Design	Julie Winnett: 712-651-2484
Burlington	Des Moines	\$308,957	Sewer - Planning & Design	Jim Ferneau: 319-753-8120
Calmar	Winneshek	\$225,000	Sewer - Planning & Design	Michele Elsbernd: 563-562-3154
Cleghorn	Cherokee	\$200,000	Water - Planning & Design	Ginell Wetter: 712-436-2474
Coralville	Johnson	\$5,000,000	Water - Treatment Improvements	Tracey Mulcahey: 319-626-5712
Duncombe	Webster	\$318,000	Sewer - Lift Station Improvements	Lynda Wunder: 515-543-5716
Galva	Ida	\$238,000	Sewer - Planning & Design	Anita Brandt: 712-282-4228
Harris	Osceola	\$339,000	Sewer - Infiltration & Inflow Corrections	Holly Wilson: 712-832-0094

Hartford	Warren	\$669,000	Sewer - Planning & Design	Brad Herrold: 515-989-0267
Hills	Johnson	\$2,280,000	Sewer - Treatment Improvements	Cathy Fitzmaurice-Hill: 319-679-3197
Iowa Lakes Regional Water	Multiple	\$750,000	Water - Planning & Design	Brad Veit: 712-262-8847
Johnston	Polk	\$1,675,000	Water - Replace Water Mains	Teresa Rotschafer: 515-727-7783
Johnston	Polk	\$9,104,000	Sewer - Transmission Improvements	Teresa Rotschafer: 515-727-7783
Milford	Dickinson	\$97,500	Sewer - Planning & Design	LeAnn Houge: 712-338-2741
Nora Springs	Cerro Gordo/Floyd	\$750,000	Sewer - Planning & Design	Deb Gaul: 641-749-5315
Oxford	Johnson	\$700,000	Sewer - Treatment Improvements	Julie Wade: 319-828-4742
Pierson	Woodbury	\$291,000	Water - Treatment Improvements	Jeanette Beekman: 712-375-5015
Pocahontas	Pocahontas	\$324,500	Sewer - Planning & Design	Eric List: 712-335-4841
Readlyn	Bremer	\$2,630,000	Sewer - New Treatment Plant	Lois Buhr: 319-279-3411
Roland	Story	\$1,135,000	Sewer - Transmission Improvements	Jodi Meredith: 515-388-4861
Roland	Story	\$274,000	Sewer - Planning & Design	Jodi Meredith: 515-388-4861

Margaret Talman: 712-837-5355

Ruthven	Palo Alto	\$569,000	Sewer - Infiltration & Inflow Corrections		
Sioux City	Woodbury	\$33,000,000	Sewer - I29 Relocation	Mark Simms: 712-279-6222	
Sioux City	Woodbury	\$5,700,000	Water - I29 Relocation	Mark Simms: 712-279-6222	
Slater	Story	\$1,028,000	Sewer - Pump Station & Force Main	Jennifer Davies: 515-685-2531	
Smithland	Woodbury	\$109,500	Sewer - Planning & Design	Holly Faber: 712-889-2220	
Solon	Johnson	\$1,891,000	Water - Storage Improvements	Cami Rasmussen: 319-624-3755	
Spencer	Clay	\$1,505,000	Sewer - Combined Sewer Separation	Theresa Reardon: 712-580-7200	
Union	Hardin	\$938,000	Sewer - Infiltration & Inflow Corrections	Kristi Schiebel: 641-486-2302	
Wahpeton	Dickinson	\$1,191,000	Water - Storage Improvements	Bonnie Roberts: 712-337-3522	
Winthrop	Buchanan	\$200,000	Sewer - Planning & Design	Mary Ryan: 319-935-3317	
Woodward	Dallas	\$200,000	Sewer - Planning & Design	Christina Perkins: 515-438-2560	
		\$78,166,957			

###



Ashley Jared
COMMUNICATIONS DIRECTOR
2015 Grand Avenue | Des Moines, Iowa 50312
515.725.4934 | 800.432.7230 | fax 515.725.4901
IowaFinanceAuthority.gov



Inline image

ALEX MURPHY | Director of Communications
Director's Office
Iowa Department of Natural Resources
P 515-725-8219 | C 515-729-7533 | 502 E. 9th St., Des Moines, IA 50319
www.iowadnr.gov

Beneficial Uses of Manure and Environmental Protection

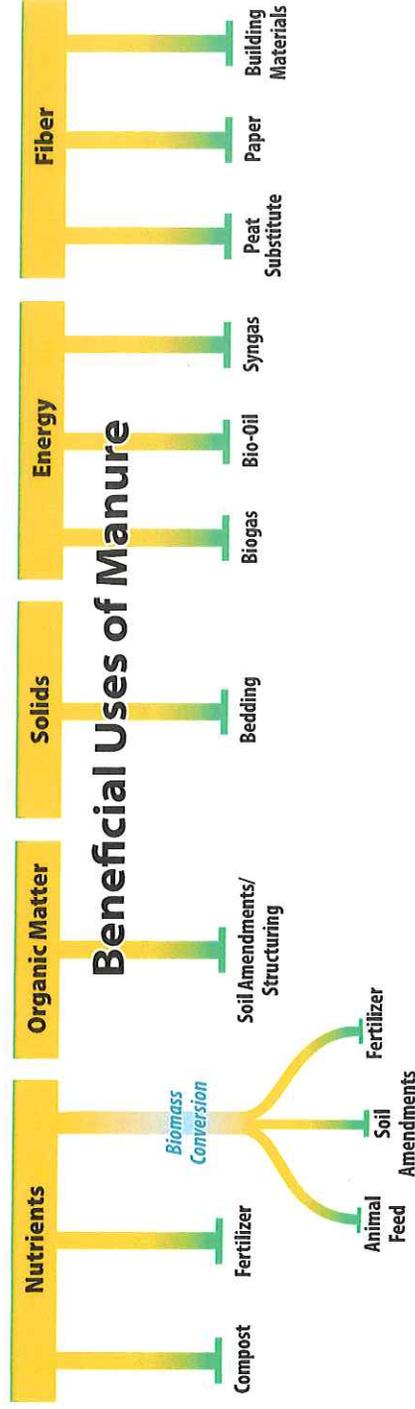


August 2015

The Components of Manure

The value of manure is found in its nutrients, organic matter, solids, energy potential, and fiber. A variety of products and byproducts can be generated using manure. EPA, NCBA, USPOULTRY, UEP, NPPC, and NMPF encourage the environmentally sound use of manure. Its constituents can be used as a resource for crop production, improvement of soil quality, and other purposes, while leading to water quality improvements.

Components of Manure



Throughout history, people who raise livestock and poultry have used manure as a fertilizer, soil amendment, energy source, and even construction material. Manure contains many useful, recyclable components, including nutrients, organic matter, solids, energy, and fiber. With today's science and technology,

we can use manure more efficiently and in more ways than ever. These techniques can protect water and air quality, and reduce greenhouse gases. When managed improperly manure can harm the environment, but when properly managed it can serve as a valuable, renewable resource.



Turning Manure into Valuable Products

Nutrients

Manure contains nitrogen, phosphorus, and other nutrients that plants need to grow. Farmers can often save money by properly using manure as a fertilizer. Farmers can also sell manure or manure products to gardeners, landscapers, golf courses, and others who use nutrients to grow plants.



Manure can be land-applied in its raw form, or after processing (for example, composting, pelletizing, nutrient extraction). Just like other fertilizer sources, as long as the manure is applied from the right source, at the right rate and time, using the right methods, and in the right place, manure nutrients can be recycled safely through agricultural systems. Land application of manure should be guided by a nutrient management plan (NMP) that outlines how to balance crop needs with manure nutrient concentrations. The NMP includes specifications for manure application based on soil and geographical conditions in order to avoid over-application, prevent runoff, and protect water quality. Proper use of manure as a fertilizer minimizes nutrient pollution to water resources and helps build healthy soils.

Manure nutrients can also be used to grow worms, insect larvae, algae, or other living organisms. Through “biomass conversion,” these organisms transfer manure nutrients to their bodies or castings, which can then be harvested and used as fertilizer, animal feeds, or soil amendments.



Organic Matter

Adding manure to soils is an excellent way to increase soil organic matter. Soil organic matter contributes to overall soil health—the soil’s ability and sustainability to function as a living ecosystem. In addition to slowly releasing plant nutrients over time, organic matter

improves soil structure and the soil’s ability to hold water. Healthier soils improve crop yields and reduce soil loss from both wind and water erosion, and protect water quality by reducing contaminated runoff. Land managers can increase soil organic matter by applying raw manure or a manure product like compost, pellets, or biochar—a product of manure combustion. Manure should be utilized appropriately, as noted in the previous section.



Solids

Manure begins as mostly water. Different types of manure can contain from 8 to 26 percent solids. By separating the liquid and solid portions of manure, the solids can be used for other purposes. Many dairy farms use separated manure solids for bedding. This can save farmers up to \$50 per cow every year—savings that can add up for dairy farmers milking hundreds of cows!

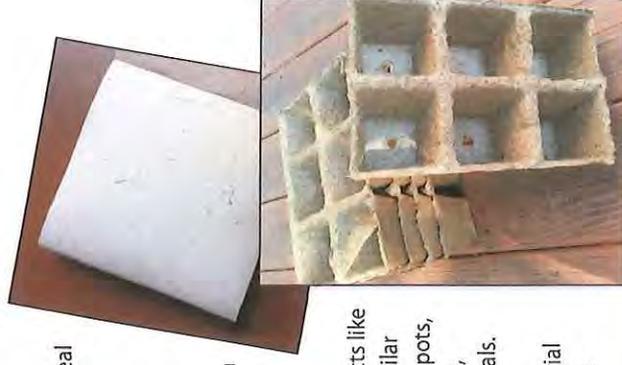


Energy

Manure contains a lot of carbon and other elements that can be used to generate different types of biofuels. Anaerobic digestion is a technology that uses microbes to process manure into biogas. Biogas can be used to generate heat or electricity for use on the farm or sale to the local power grid. Thermal processes can produce liquid bio-oil fuels, including biodiesel, and useful byproducts like biochar. Bio-oils can be used for heating or generating electricity. Biodiesel can be used just like petroleum diesel. Gasification can also be used to convert manure to syngas, a synthetic gas fuel that can power engines, turbines, and fuel cells. Using manure to generate biofuels reduces our reliance on non-renewable fossil fuels. In addition, farmers can save money when biofuels are used on the farm.

Fiber

Manure contains a great deal of fiber. Some of the fiber is from undigested animal feed and some is from straw, sawdust, or other bedding that gets mixed in with the manure. Manure fiber has been used to produce a number of specialty consumer products like plant growth medium (similar to peat moss), seed starter pots, fertilizer garden sculptures, paper, and building materials. Consumer products help turn manure from a potential environmental liability to a commodity.



Agenda

Environmental Protection Commission

Tuesday, July 18, 2017
DNR Air Quality
7900 Hickman Road
Windsor Heights, Iowa

Tuesday, July 18, 2017

10:00 AM – EPC Business Meeting

Public Participation¹ – Requests to speak during the business meeting Public Participation must be submitted to Jerah Sheets at Jerah.Sheets@dnr.iowa.gov, 502 East 9th Des Moines, IA 50319, 515-313-8909, or in-person by the start of the business meeting. Please indicate who you will be representing (yourself, an association, etc.), the agenda item of interest, and your stance of For, Opposed, or Neutral.

If you are unable to attend the business meeting, comments may be submitted via mail and email for the public record. The Commission encourages data, reports, photos, and additional information provided by noon the day before the meeting to allow ample time for review and consideration.

- | | | |
|----|--|---------------------------------|
| 1 | Approval of Agenda | |
| 2 | Approval of Minutes | |
| 3 | Monthly Reports | Bill Ehm
(Information) |
| 4 | Public Participation | |
| 5 | Director's Remarks | Chuck Gipp
(Information) |
| | eMMP Status Update and Demo of Online System | Ted Petersen
(Information) |
| 6 | Notice of Intended Action – Chapter 65 – Proposed Rule Amendment for Animal Feeding Operations | Kelli Book
(Decision) |
| 7 | Contract Amendment with IDALS for Iowa Great Lakes Watershed Project | Steven Konrady
(Decision) |
| 8 | Derelict Building Grant Program – Grant Recommendations | Scott Flagg
(Decision) |
| 9 | Amended Notice of Intended Action: Ease of Application Rules - Chapter 22 | Christine Paulson
(Decision) |
| 10 | The State of Iowa Public Drinking Water Program 2016 Annual Compliance Report
http://www.iowadnr.gov/Environmental-Protection/Water-Quality/Water-Supply-Engineering/Annual-Compliance-Report | Diane Moles
(Information) |
| 11 | General Discussion | |
| 12 | Items for Next Month's Meeting | |
| | <ul style="list-style-type: none">• Tuesday, August 15, 2017 – EPC Business Meeting – Windsor Heights• Monday, September 18, 2017 – EPC Education Tour – Adams County• Tuesday, September 19, 2017 – EPC Business Meeting – Adams County | |

For details on the EPC meeting schedule, visit
<http://www.iowadnr.gov/InsideDNR/BoardsCommissions.aspx>

Updated 7/13/17

¹ Comments during the public participation period regarding proposed rules or notices of intended action are not included in the official comments for that rule package unless they are submitted as required in the Notice of Intended Action.

Any person attending the public meeting and has special requirements such as those related to mobility or hearing impairments should contact the DNR or ADA Coordinator at 515-725-8200, Relay Iowa TTY Service 800-735-7942, or Webmaster@dnr.iowa.gov, and advise of specific needs.

MINUTES
OF THE
ENVIRONMENTAL PROTECTION COMMISSION
MEETING
JUNE 20, 2017

DNR AIR QUALITY
7900 HICKMAN ROAD, WINDSOR HEIGHTS

RECORD COPY

Filename: ADM 1-1-1
Sender's initial: __jzs__

TABLE OF CONTENTS

Call to Order	2
Commissioners Present.....	2
Commissioners Absent	2
Adoption of Agenda	2
APPROVED AS PRESENTED	2
Oath of Office for New Commissioner	2
Chair 2	
CHAD INGELS, CHAIR	2
Vice – Chair.....	2
RALPH LENTS, VICE-CHAIR.....	2
Secretary	3
JOE RIDING, SECRETARY	3
Approval of Minutes.....	3
APPROVED AS PRESENTED	3
Monthly Reports	3
INFORMATION.....	3
Public Comment	3
Directors Remarks	3
INFORMATION.....	4
Contract Amendments with Wapsi Valley Archaeology and The University of Iowa, Office of State Archaeologist for Archaeological and Architectural History Services	4
APPROVED AS PRESENTED	4
Clean Water and Drinking Water State Revolving Loan Fund – FY 2018 Intended Use Plans	4
APPROVED AS PRESENTED	4
Contract with Hy-Vee, Inc. (Charles City) for 2017 Project AWARE Catering	4
APPROVED AS PRESENTED	4
Contract with Contract with State Hygienic Laboratory at The University of Iowa for Ambient Stream Biological Monitoring and Laboratory Services	5
APPROVED AS PRESENTED	5
Contract with The University of Iowa on behalf of the State Hygienic Laboratory for Ambient Stream Monitoring Services FY2018	5
APPROVED AS PRESENTED	5

Contract with the Iowa Department of Agriculture and Land Stewardship for the Protect Rathbun Lake Project5
 APPROVED AS PRESENTED5

Contract with Iowa State University Extension and Outreach for Manure Applicator Certification Training.....6
 APPROVED AS PRESENTED6

Contract Amendment with the University of Iowa for Mapping Review Services.....6
 APPROVED AS PRESENTED6

Contract Amendment #2 with the University of Iowa on behalf of the State Hygienic Laboratory (SHL) for Laboratory Services provide to the Iowa DNR Land Quality Bureau.....6
 APPROVED AS PRESENTED7

Contract with the University of Iowa on behalf of the State Hygienic Laboratory (SHL) for Laboratory Services provide to the Iowa DNR Land Quality Bureau7
 APPROVED AS PRESENTED7

Notice of Intended Action – Chapter 61 – Water Quality Standards (Updates to Wasteload Allocation Procedure and *E. Coli* criteria)7
 APPROVED AS PRESENTED7

2016 Diesel Emissions Reduction Grant Program – Round 2 Recommendations7
 APPROVED AS PRESENTED8

Contract with Windsor Solutions, Inc. for State & Local Emissions Inventory System (SLEIS) license agreement.....8
 APPROVED AS PRESENTED8

2018 Contract with Linn County Air Quality Division: Air Pollution Control in Linn County8
 APPROVED AS PRESENTED8

2018 Contract with Polk County Air Quality Division: Air Pollution Control in Polk8
 APPROVED AS PRESENTED8

2018 Contract University of Northern Iowa – Iowa Air Emissions Assistance Program (IAEAP): Small Business Assistance Program9
 APPROVED AS PRESENTED9

Laboratory Certification Contract Amendment.....9
 APPROVED AS PRESENTED9

Rural Hub and Spoke Recycling Study Report9
 INFORMATION9

Contract with University of Iowa on behalf of the State Hygienic Laboratory for 2018 SHL Services in Support of the DNR Air Quality Bureau10

APPROVED AS PRESENTED 10

Demand for Hearing – Humboldt County 10

 PERMIT ISSUED 12

General Discussion 12

DRAFT

MEETING MINUTES

CALL TO ORDER

The meeting of the Environmental Protection Commission was called to order by Chairperson Mary Boote at 10:00 a.m. on June 20, 2017 at the DNR Air Quality offices in Windsor Heights.

COMMISSIONERS PRESENT

Mary Boote, Chair
Nancy Couser
Howard Hill
Chad Ingels, Vice Chair
Ralph Lents
Joe Riding
Bob Sinclair

COMMISSIONERS ABSENT

Vacant Seat – Commerce and Finance
Vacant Seat – Manufacturing

ADOPTION OF AGENDA

Motion was made by Joe Riding to approve the agenda as presented. Seconded by Chad Ingels. Motion passes.

APPROVED AS PRESENTED

OATH OF OFFICE FOR NEW COMMISSIONER

Director Chuck Gipp swore in Howard Hill to the commission.

ELECTION OF OFFICERS

CHAIR

Ralph Lents nominated Chad Ingels to be Chair. Seconded by Joe Riding. No other nominations were provided. A vote was conducted and passed unanimously by voting members.

CHAD INGELS, CHAIR

VICE – CHAIR

Nancy Couser nominated Ralph Lents to be Vice- Chair. Seconded by Bob Sinclair. No other nominations were provided. A vote was conducted and passed unanimously by voting members.

RALPH LENTS, VICE-CHAIR

SECRETARY

Mary Boote nominated Joe Riding to be Secretary. Seconded by Ralph. No other nominations were provided. A vote was conducted and passed unanimously by voting members.

JOE RIDING, SECRETARY

APPROVAL OF MINUTES

Motion was made by Nancy Couser to approve the May 23, 2017 EPC meeting minutes. Seconded by Mary Boote. Motion passes.

APPROVED AS PRESENTED

MONTHLY REPORTS

- Bill Ehm acknowledged the June EPC meeting typically has a number of contract renewals on the agenda. The DNR's work is often carried out by partners and many of them are present today. One of the larger partners is the University of Iowa State Hygienic Laboratory.
- Bill Ehm shared with the Commission that even though some of the contracts are for multiple years, each program projects out approximately 5 years for budgeting. If revenue is not received as anticipated, all of the contracts have provisions to reduce or terminate contractual obligations.

The following monthly report has been posted on the DNR website under the appropriate meeting month:
<http://www.iowadnr.gov/InsideDNR/BoardsCommissions.aspx>

1. Variance Report

INFORMATION

PUBLIC COMMENT

- No oral comments were presented.
- No written comments were submitted.

END OF PUBLIC COMMENT

DIRECTORS REMARKS

Director Chuck Gipp thanked Howard Hill for volunteering for the Commission. He also summarized the use of General Fund dollars at the DNR with almost half used for the Parks system. A portion of the General Fund is also used as the state's match to receive federal funds in the air, land, and water environmental regulation programs. When the programs are not funded, they are still expected to perform their duties.

INFORMATION

CONTRACT AMENDMENTS WITH WAPSI VALLEY ARCHAEOLOGY AND THE UNIVERSITY OF IOWA, OFFICE OF STATE ARCHAEOLOGIST FOR ARCHAEOLOGICAL AND ARCHITECTURAL HISTORY SERVICES

Patti Cale-Finnegan presented for the Commission's approval the contract amendments for the SRF program.

Motion was made by Nancy Couser to approve the agenda item as presented. Seconded by Joe Riding. Motion passes.

APPROVED AS PRESENTED

CLEAN WATER AND DRINKING WATER STATE REVOLVING LOAN FUND – FY 2018 INTENDED USE PLANS

Patti Cale-Finnegan presented for the Commission's approval the SRF loan fund intended use plans for FY 2018. She summarized the financial planning and projections of the fund. Although federal funds add to the fund, if a reduction of federal funds occurred, the fund would continue to operate. She also discussed the approach for selecting and funding sponsored projects. Bill Ehm shared the President's budget did not lower the funding for clean water and drinking water SRF infrastructure funding.

Motion was made by Ralph Lents to approve the agenda item as presented. Seconded by Bob Sinclair. Motion passes.

APPROVED AS PRESENTED

CONTRACT WITH HY-VEE, INC. (CHARLES CITY) FOR 2017 PROJECT AWARE CATERING

Roger Bruner presented for the Commission's approval a contract for the Project Aware event catering service. He distributed a map of the historical and 2017 planned Project Aware river cleanup routes. He also shared that the registration for the 2017 event has closed because they have reached the maximum capacity of a little over 400 participants.

Motion was made by Bob Sinclair to approve the agenda item as presented. Seconded by Mary Boote. Motion passes.

APPROVED AS PRESENTED

CONTRACT WITH CONTRACT WITH STATE HYGIENIC LABORATORY AT THE UNIVERSITY OF IOWA FOR AMBIENT STREAM BIOLOGICAL MONITORING AND LABORATORY SERVICES

Roger Bruner presented for the Commission's approval a contract for the ambient stream biological monitoring and laboratory services. In response to a question, he also shared the approach for collecting samples for unplanned or emergency events which typically involves the Field Offices. In response to a second question, he explained that with neonicotinoids being a newer item to analyze, he shared the approach for selecting sites, collecting samples, and analyzing results. Roger explained that after engaging with stakeholders regarding water monitoring, a five year plan was developed. The plan involves collecting and analyzing data. Roger noted that this contract has been reduced significantly over the last few years. He noted that there will be a pause in collecting biological data while the existing data is analyzed.

Motion was made by Mary Boote to approve the agenda item as presented. Seconded by Ralph Lents. Motion passes.

APPROVED AS PRESENTED

CONTRACT WITH THE UNIVERSITY OF IOWA ON BEHALF OF THE STATE HYGIENIC LABORATORY FOR AMBIENT STREAM MONITORING SERVICES FY2018

Roger Bruner presented to the Commission a contract with the University of Iowa State Hygienic Laboratory. He shared that if a high level of toxic metal is found, his staff would ensure the protocols for sampling and testing were accurate to validate the results and if confirmed then would work with the Field Office to identify the source. If a stream is impaired for metals, a TMDL would be developed which would outline the regulation of discharges necessary to meet water quality standards. Some metals are created by industry while others are naturally occurring. This data will assist aquatic life and communities with their water treatment.

Motion was made by Mary Boote to approve the agenda item as presented. Seconded by Bob Sinclair. Motion passes.

APPROVED AS PRESENTED

CONTRACT WITH THE IOWA DEPARTMENT OF AGRICULTURE AND LAND STEWARDSHIP FOR THE PROTECT RATHBUN LAKE PROJECT

Steve Hopkins presented to the Commission a contract with IDALS.

Motion was made by Bob Sinclair to approve the agenda item as presented. Seconded by Nancy Couser. Motion passes.

APPROVED AS PRESENTED

CONTRACT WITH IOWA STATE UNIVERSITY EXTENSION AND OUTREACH FOR MANURE APPLICATOR CERTIFICATION TRAINING

Gene Tinker presented to the Commission a contract with Iowa State University Extension and Outreach. He shared that about 10% of the certifications were completed online. He indicated that some of the start-up problems and internet bandwidth issues deterred people from using the online system. DNR periodically performs onsite reviews of land application activities, in addition to responding to complaints and spills. Dr. Dan Anderson from ISU shared the approach for education during the trainings to ensure manure applications maximize and maintain nutrients.

Motion was made by Ralph Lents to approve the agenda item as presented. Seconded by Howard Hill. Motion passes.

APPROVED AS PRESENTED

CONTRACT AMENDMENT WITH THE UNIVERSITY OF IOWA FOR MAPPING REVIEW SERVICES

Kathryne Clark presented to the Commission a contract with the University of Iowa. She distributed a map of the state of Iowa indicating the status of reviews of best management practices for each HUC 12 watershed. This contract is for the continuation of this mapping review. There are options being considered for exploring additional mapping from the 80's and 2016. The project is reviewing every acre in Iowa which is time consuming but provides accurate information. Depending on many factors, the current approach of reviewing every acre may need to be changed to a sample area approach. The data being generated could be used by agencies to engage with landowners on potential best practices.

Motion was made by Mary Boote to approve the agenda item as presented. Seconded by Ralph Lents. Motion passes.

APPROVED AS PRESENTED

CONTRACT AMENDMENT #2 WITH THE UNIVERSITY OF IOWA ON BEHALF OF THE STATE HYGIENIC LABORATORY (SHL) FOR LABORATORY SERVICES PROVIDE TO THE IOWA DNR LAND QUALITY BUREAU

Matt Culp presented to the Commission a contract amendment with the University of Iowa. Ed Tormey summarized that the Commission by rule reviews any amendment greater than 10% of the original contract value or exceeds \$25,000, whichever figure is greater.

Motion was made by Bob Sinclair to approve the agenda item as presented. Seconded by Joe Riding. Motion passes.

APPROVED AS PRESENTED

CONTRACT WITH THE UNIVERSITY OF IOWA ON BEHALF OF THE STATE HYGIENIC LABORATORY (SHL) FOR LABORATORY SERVICES PROVIDE TO THE IOWA DNR LAND QUALITY BUREAU

Matt Culp presented to the Commission a contract with the University of Iowa. He shared the frequency that the DNR and SHL meets to plan for upcoming events and discuss trends and price adjustments.

Motion was made by Nancy Couser to approve the agenda item as presented. Seconded by Mary Boote. Motion passes.

APPROVED AS PRESENTED

NOTICE OF INTENDED ACTION – CHAPTER 61 – WATER QUALITY STANDARDS (UPDATES TO WASTELOAD ALLOCATION PROCEDURE AND *E. COLI* CRITERIA)

Matt Dvorak presented to the Commission a notice of intended action for water quality standards rules. He shared the EPA's recommendation for the use of the proposed methodology for long term assessment of a water body. A single sample would not immediately impair a water body. A minimum of 5 samples over a period of time is the protocol.

Motion was made by Joe Riding to approve the agenda item as presented. Seconded by Ralph Lents. Motion passes.

APPROVED AS PRESENTED

2016 DIESEL EMISSIONS REDUCTION GRANT PROGRAM – ROUND 2 RECOMMENDATIONS

Jim McGraw presented to the Commission recommendations for grant funding. He shared that those successful awardees replacing buses, the old buses are required to be scrapped and no longer used. The funding is not to increase the fleet but rather to get buses off the road which have a high emission rate. Although there are probably more impactful projects, the Department struggles to find qualified applicants who are interested in the program. Bill Ehm shared that in the future, DOT will be administering the program.

Motion was made by Mary Boote to approve the agenda item as presented. Seconded by Bob Sinclair. Motion passes.

APPROVED AS PRESENTED

CONTRACT WITH WINDSOR SOLUTIONS, INC. FOR STATE & LOCAL EMISSIONS INVENTORY SYSTEM (SLEIS) LICENSE AGREEMENT

Nick Page presented to the Commission a contract with Windsor Solutions, Inc. He mentioned the approach for sharing the cost with 13 other states who are also benefiting from the shared product. Even with so many entities involved, the relationship and product received has been extremely satisfactory.

Motion was made by Joe Riding to approve the agenda item as presented. Seconded by Nancy Couser. Motion passes.

APPROVED AS PRESENTED

Joe Riding excused himself from the remainder of the meeting.

2018 CONTRACT WITH LINN COUNTY AIR QUALITY DIVISION: AIR POLLUTION CONTROL IN LINN COUNTY

Christine Paulson presented to the Commission a contract with Linn County.

Motion was made by Mary Boote to approve the agenda item as presented. Seconded by Ralph Lents. Motion passes.

APPROVED AS PRESENTED

2018 CONTRACT WITH POLK COUNTY AIR QUALITY DIVISION: AIR POLLUTION CONTROL IN POLK County

Christine Paulson presented to the Commission a contract with Polk County. She distributed a new agenda brief which listed the Title V fees as a portion of the funding. The information was in the contract but was accidentally excluded from the brief.

Motion was made by Ralph Lents to approve the agenda item as presented. Seconded by Bob Sinclair. Motion passes.

APPROVED AS PRESENTED

2018 CONTRACT UNIVERSITY OF NORTHERN IOWA – IOWA AIR EMISSIONS ASSISTANCE PROGRAM (IAEAP): SMALL BUSINESS ASSISTANCE PROGRAM

Christine Paulson presented to the Commission a contract with the University of Northern Iowa. Jennifer Wittenburg, UNI IAEAP Program Manager, shared with the Commission the number of assistance activities provided to businesses in fiscal year 2017 along with outreach events and conferences. With the reduction in funding, IAEAP will be adjusting their scope of assistance, possibly having longer turnaround time, and looking at different ways of supporting businesses such as no longer printing materials but having them available online.

Motion was made by Bob Sinclair to approve the agenda item as presented. Seconded by Nancy Couser. Motion passes.

APPROVED AS PRESENTED

LABORATORY CERTIFICATION CONTRACT AMENDMENT

Jon Tack presented to the Commission a contract with the University of Iowa State Hygienic Lab. He also shared the program is a national program and certification is for a period of 2 years.

Motion was made by Howard Hill to approve the agenda item as presented. Seconded by Ralph Lents. Motion passes.

APPROVED AS PRESENTED

Jon Tack provided clarification to the Commission if there was any confusion with the University of Iowa contract for mapping services. The information collected could be used in many ways but is not intended for identifying poor land practice and targeting landowners for enforcement. Identifying and collaborating with landowners on potential best practices and cost share programs would be the Department's approach.

RURAL HUB AND SPOKE RECYCLING STUDY REPORT

Tom Anderson summarized the Solid Waste Alternatives Program and the need for a study to be conducted on recycling opportunities in Iowa, especially in rural areas. SCS Engineering was selected from the contract bidding process. Michelle Leonard, Vice President of SCS Engineering, presented to the Commission the results of their study. In the presentation she summarized the project purpose and approach, a database created, and the recommendations provided to the DNR.

INFORMATION

CONTRACT WITH UNIVERSITY OF IOWA ON BEHALF OF THE STATE HYGIENIC LABORATORY FOR 2018 SHL SERVICES IN SUPPORT OF THE DNR AIR QUALITY BUREAU

Sean Fitzsimmons presented to the Commission a contract with the University of Iowa State Hygienic Lab. He also shared the process for working with EPA, public comments, and approvals to remove monitoring stations/requirements due to decreased funding.

Motion was made by Bob Sinclair to approve the agenda item as presented. Seconded by Mary Boote. Motion passes.

APPROVED AS PRESENTED

Lunch Break

DEMAND FOR HEARING – HUMBOLDT COUNTY

Kelli Book, DNR Attorney, summarized for the Commission the events which occurred in early 2017 for the Wacousta Finisher Farm site expansion. Humboldt County’s review of the Master Matrix resulted in not enough points to approve the application. As required by law, when a county’s review of the Master Matrix does not pass, the DNR provides an independent evaluation of the Master Matrix. Cindy Garza, DNR Engineer, provided the independent evaluation of the Master Matrix and determined there were adequate points received to issue a draft construction permit. Humboldt County exercised its right to request a demand for hearing before the EPC.

Melody Larson, Humboldt County Zoning, distributed two plat maps to the Commissioners. She expressed concerns with 244 acres being claimed for manure application by two facilities (Wacousta and Elmer fields highlighted in green). The County is not opposed to expansion but they are frustrated with Manure Management Plans (MMPs) not being recorded at the court house. It is challenging to keep track of manure being applied. Additionally, the county asked for 6 copies of the application and site surveys to be done in advance and both requests have not been fulfilled.

Louis Fallesen, Humboldt County Board of Adjustment, shared that producers receive an informational sheet on how to submit an application and items to include like the site survey. All the information and pieces of the application assist the county with making a decision. He would like to see MMPs recorded because he knows there is a shell game going on with MMPs and they are double applying manure. He provided an example of a different facility where the new confinement was staked out and when it was built it, it was moved closer to a residence and a waterway. Humboldt County is trying to protect the water, county, people, and community within the regulations of the DNR. He is concerned the same MMP is being used for two different sites.

Melody Larson reminded the Commission the County does not have a problem with AFOs coming into the county but just want it done right. She uses a plat map to color code the application locations and there are two areas that are doubled up.

Amy Johnson, Brown Winick Attorney representing Brookglade Farms, distributed a map and the MMPs for Wacousta and Elmer farms. She agrees with DNR's position of the facts and laws and believes Humboldt County misstates the facts and law. Humboldt County's statement that fields are being shared is incorrect. Brookglade Farms owns 2 facilities in the county, Wacousta and Elmer. There are no shared fields for the 2 sites. On the map labeled exhibit A, green outlines are the Wacousta fields and blue outlines are the Elmer fields, of which there are no shared fields.

Amy Johnson continued that Humboldt County stated the MMP for the Wacousta facility was the same as the Elmer facility. The statement is incorrect. Exhibits B and C are the main pages of the MMPs from each facility and the information on the forms is different between the two.

Amy Johnson continued that Humboldt County stated Brookglade Farms did not comply with the County's application submission process of providing 6 copies and conducting a site survey. It is long settled Iowa law that county law is void and unenforceable as determined by the Worth County case. Iowa law clearly intends for livestock regulation to rest at the state level. Brookglade Farms is not required to obey the county policies. Brookglade Farms does have an obligation to comply with state requirements which they have done. She asked the EPC to uphold the DNR's decision to issue a permit. She also asked the Commission to send a clear message to counties who fail to follow the law by removing Humboldt County's ability to score the Master Matrix for the remainder of the year.

Humboldt County explained how they determined fields were being doubled up based on the original MMP but if there are newer versions of the MMP, they do not have it. They also explained that without the site survey completed with the application, how could they determine if the separation distances were accurate? Pre-site information only has a 40 acre area without an exact location.

The county recalled during a pre-meeting, Brookglade Farms promised to provide an accurate site survey with the application. Keith Kratchmer, representing Brookglade Farms, was not at the pre-meeting but his colleague does not remember a promise to perform a site survey in advance. Site surveys are expensive and generally completed after an application is approved.

Amy Johnson asked the Commission to focus on the Wacousta expansion site and not historical events from other facilities Humboldt County references. Wacousta met all the requirements for their application and separation distances.

Cindy Garza, DNR Engineer, shared with the Commission the list of items required for a construction application. The application is first submitted to the County to obtain a letter of receipt and then the same materials are submitted to the DNR. She also reminded the Commission that the MMP must be updated and maintained on site, but it is not required for producers to send updated MMPs to the county or DNR.

Kelli Book shared with the Commission approaches for Master Matrix enforcement through the DNR and not the county.

Motion was made by Mary Boote to approve the construction permit as presented. Seconded by Bob Sinclair.

Chad Ingels-yea, Joe Riding-absent, Bob Sinclair-yea, Ralph Lents-yea, Howard Hill-recused, Nancy Couser-yea, and Mary Boote-yea. Motion passes.

GENERAL DISCUSSION

- The Commission expressed concern for the August tour and meeting during a busy time for everyone with the Iowa State Fair. Jerah Sheets will inquire with Commissioners about date changes.
- Jerah Sheets provided an update to the electronic Manure Management Plan submission process improvement event. About 80% of the online system is built and testing with stakeholders will begin this summer. They are still anticipating to roll out the electronic submission option by the end of the year.
- Commissioners discussed options for providing educational materials to counties regarding the Master Matrix. They are a key part of the process but with limited applications for review and turnover of elected officials, this creates challenges for counties.

Chairperson Ingels adjourned the Environmental Protection Commission meeting at 1:50 p.m., Tuesday, June 20, 2017.

**Monthly Variance Report
May 2017**

Item #	DNR Reviewer	Facility/City	Program	Subject	Decision	Date	Agency Reference
1	Karen Kuhn	Northern Natural Gas - Garner LNG	Air Quality Construction Permits	Waiver of Initial Stack Test Requirement.	approved	5/1/2017	17aqv117
2	Laura Knispel	Grinnell WWTF	Wastewater Construction	The City of Grinnell requested a variance to install mixing equipment in the sludge storage tank that is below the requirements listed in 17.3.4.3 (0.66 HP/1000 CF in lieu of 1 HP/1000 CF)	approved	5/3/2017	17cpv118
3	Laura Knispel	Grinnell WWTF	Wastewater Construction	The City of Grinnell requested a variance to reuse two existing 10-foot depth clarifiers (and construct an additional 12-foot depth clarifier) after an activated sludge process	approved	5/3/2017	17cpv119
4	Ann Seda	Polaris Industries	Air Quality	Add option to route air emissions through different control equipment and vent indoors prior to receiving permit modification.	approved	5/4/2017	17aqv120
5	Danjin Zulic	Hearth and Home Technologies, LLC	Air Quality Construction Permits	Waiver of Initial Stack Test Requirement.	approved	5/5/2017	17aqv121
6	Tara Naber	University Water System	Water Supply Construction	Instead of constructing existing storm sewer of water main material, construct water main of DIP with nitrile gaskets where water main crosses below or less than 18" above storm sewer. Minimum clearance maintained. Project W2017-0326. PWSID 5225101.	approved	5/5/2017	17wcv122
7	Danjin Zulic	ADM Clinton Bioprocessing	Air Quality Construction Permits	Waiver of Initial Stack Test Requirement.	approved	5/9/2017	17aqv123
8	Danjin Zulic	ADM Clinton Bioprocessing	Air Quality Construction Permits	Waiver of Initial Stack Test Requirement.	approved	5/9/2017	17aqv124
9	Tara Naber	Iowa American Water Co - QC District W2017-0354	Water Supply Construction	Install water main in PVC casing pipe at crossing where water main crosses 18" below an existing sanitary sewer instead of replacing sewer with water main material. PWSID 8222001. Project W2017-0354.	approved	5/9/2017	17wcv129
10	Dennis Thielen	Cargill	Air Quality	Condition 2 requires Cargill to conduct a VOC & HAP test for permit 95-A-412-S5. Cargill is requesting an extension to the deadline to perform stack testing after safety issues were discovered with the stack.	approved	5/10/2017	17aqv125
11	Dennis Thielen	Valero	Air Quality	Condition 14 requires the CO2 scrubber minimum flow rate and requires additive feed rate shall be maintained at or above the average rate observed during most recent test. Valero is requesting a variance from these conditions during the May testing.	approved	5/10/2017	17aqv126
12	Rachel Quill	Cooperative Farmers Elevator	Air Quality Construction Permits	Waiver of Initial Stack Test Requirement.	approved	5/11/2017	17aqv127
13	Brian Hutchins	Guardian Industries	Air Quality	Guardian has identified a need to extend the time allowed (from 30 to 40 days) for the glass furnace startup following a furnace rebuild and addition of control equipment as required in a Consent Decree and DNR Permit.	approved	5/11/2017	17aqv142
14	Ann Seda	Green Plains Holdings LLC - Lakota	Air Quality	Construct ductwork and temporarily route the dried distillers grains with solubles (DDGS) from Train #1 through the unused Train # 2 control equipment, without first obtaining a construction permit.	approved	5/12/2017	17aqv128

15	Ryan Olive	Cedar Rapids Water Pollution Control	NPDES Waste Water	Cedar Rapids requests the use of CBOD5 in lieu of BOD5 as the appropriate influent monitoring parameter.	denied	5/12/2017	17cpv131
16	Bob Campbell	Des Moines Water Works	Water Supply Construction	The applicant requests a to design and operate a new piping to receive water plant wastes that will not meet the required separation distances from an existing below ground finished water storage facility.	approved	5/15/2017	17wcv130
17	Danjin Zulic	Pella Corporation - Carroll Division	Air Quality Construction Permits	Waiver of Initial Stack Test Requirement.	approved	5/16/2017	17aqv133
18	Danjin Zulic	Manly Terminal, LLC	Air Quality Construction Permits	Waiver of Initial Stack Test Requirement.	approved	5/17/2017	17aqv132
19	Tara Naber	City of North Liberty	Water Supply Construction	Variance to use ASTM C443 profile gasketed RCP storm sewer & DIP w/ nitrile gasketed water main instead of requiring storm sewer to be water main material where water main crosses 18" below a storm sewer for project W2017-0301, PWSID 5252072.	approved	5/17/2017	17wcv136
20	Dennis Thielen	Homeland Energy	Air Quality	Homeland is seeking to conduct their testing determine if operating the scrubber at a lower flow rate and chemical injection rate while maintaining compliance with their permitted emission limits is possible.	approved	5/18/2017	17aqv134
21	Dennis Thielen	Louis Dreyfus Co.	Air Quality	Louis Dreyfus is requesting a variance from the requirement to inject ammonium bisulfite limits as well as operating and monitoring conditions in permit 07-A-736-S3 (EP S40) in order to perform scrubber cleaning while the process is on line.	denied	5/18/2017	17aqv135
22	Marty Jacobs	City of Fort Madison	Wastewater	Michael Mohrfeld is requesting variance from the Iowa Wastewater Facilities Design Standards Chapter 12 – Iowa Standards for Sewer Systems – 12.6 (Details of Construction) for the installation of a gravity sewer by directional drilling.	approved	5/19/2017	17cpv137
23	Tara Naber	North Liberty Water Supply	Water Supply Construction	Construct water main of DIP w/ nitrile gaskets where crossing below existing storm sewer instead of replacing storm sewer with water main material. Minimum clearance maintained. PWSID 5252072. proj. W2017-0397.	approved	5/24/2017	17wcv138
24	Danjin Zulic	Shearer's Foods, Inc.	Air Quality Construction Permits	Waiver of Initial Stack Test Requirement.	approved	5/25/2017	17aqv139
25	Mike Anderson	Iowa Select Farms, L.L.P.	Water Supply Engineering	ISF requested a ten-year permit duration, instead of the five-year duration provided for in the rule. ISF notes that it cannot recoup its capital expenses in a five year period, and that data shows its well is not approaching Tier 2 status.	denied	5/25/2017	17wcv140
26	Nina M. Koger	US Gypsum Sanitary Landfill	Sanitary Disposal	Request to change sampling from dissolved metals to total metal; and change sampling frequency from semiannual to annual; and change the sampling parameter list.	approved	5/26/2017	17sdv143
27	Tara Naber	Iowa American Water - Clinton District	Water Supply Construction	Construct water main inside PVC casing pipe instead of constructing sanitary sewer of water main material where sewer crosses above water main or less than 18" below water main. PWSID 2326048. Project W2017-0292.	approved	5/30/2017	17wcv141

ITEM

6

DECISION

TOPIC

**Notice of Intended Action – Chapter 65 – Proposed Rule Amendment
for Animal Feeding Operations**

The Commission is requested to approve this Notice of Intended Action (NOIA) to begin the formal rule making process for the proposed amendment to Chapter 65, “Animal Feeding Operations,” Iowa Administrative Code.

The purpose of the proposed rule amendment is to allow for the submittal of manure management plan updates and associated fees electronically through the Department of Natural Resource’s web application system. Under the current rules, those who are required to submit manure management plan updates and associated fees must submit the documents and fees either through the mail or in person to the various field offices around the state. The manure management plan update must also have a county receipt signature, which requires the person filing the manure management plan update to receive a signature from each county where the animal feeding operation is located and each county where manure is applied. With the proposed rule amendment, the manure management plan updates and associated fees will be able to be submitted electronically and impacted counties will receive the submittals electronically. This will allow those who are required to submit manure plan updates and associated fees to save in postage, time, plan preparation and transportation costs.

Kelli Book
DNR Legal Services

ENVIRONMENTAL PROTECTION COMMISSION[567]

Notice of Intended Action

Pursuant to the authority of Iowa Code sections 459.103 and 459.302, the Environmental Protection Commission (Commission) hereby gives Notice of Intended Action to amend Chapter 65, “Animal Feeding Operations,” Iowa Administrative Code.

The purpose of the proposed rule amendment is to allow for the submittal of manure management plan updates and associated fees electronically through the Department of Natural Resource’s web application system. Under the current rules, those who are required to submit manure management plan updates and associated fees must submit the documents and fees either through the mail or in person to the various field offices around the state. The manure management plan update must also have a county receipt signature, which requires the person filing the manure management plan update to receive a signature from each county where the animal feeding operation is located and each county where manure is applied. With the proposed rule amendment, the manure management plan updates and associated fees will be able to be submitted electronically and impacted counties will receive the submittals electronically. This will allow those who are required to submit manure plan updates and associated fees to save in postage, time, plan preparation and transportation costs.

Anyone may make written suggestions or comments on the proposed amendment on or before September 6, 2017. Please direct written comments to Kelli Book, Department of Natural Resources, 7900 Hickman Road Suite 1, Windsor Heights, Iowa 50324, or by E-mail to kelli.book@dnr.iowa.gov.

A public hearing will be held on September 5, 2017 at 1:30 PM in the Wallace State Office Building Auditorium, at which time persons may present their views either orally or in writing. At the hearing, persons will be asked to give their names and addresses for the record and to confine their remarks to the subject of the proposed amendment. All comments must be received no later than 4:30 p.m. on September 6, 2017.

Any person who intends to attend a public hearing and has special requirements such as those related to hearing or mobility impairments should contact Kelli Book at (515) 725-9572, or by E-mail at kelli.book@dnr.iowa.gov to advise of any specific needs.

Jobs Impact Statement

After analysis and review, the Commission has determined that the proposed amendment may have a positive impact on private sector jobs due to savings in postage, time, plan preparation and transportation costs. The complete jobs impact statement is available from the Department upon request.

This proposed amendment is intended to implement Iowa Code sections 459.103 and 459.302.

The following amendment is proposed.

ITEM 1. Amend paragraph **65.16(3) “b”** as follows:

b. The owner of a confinement feeding operation who is required to submit a manure management plan under this rule shall submit an updated manure management plan on an annual basis to the department. The updated manure management plan may be submitted by hard copy or by electronic submittal. The updated plan must reflect all amendments made during the period of time since the previous manure management plan submission.

(1) If the plan is submitted by hard copy, the submittal process shall be as follows: The owner of the animal feeding operation shall also submit the updated manure management plan on an annual basis to the board of supervisors of each county where the confinement feeding operation is located and to the board of supervisors of each county where manure from the confinement feeding operation is land-applied. If the owner of the animal feeding operation has not previously submitted a manure management plan to the board of supervisors of each county where the confinement feeding operation is located and each county where manure is land-applied, the owner must submit a complete manure management plan to each required county. The county auditor or other county official or employee designated by the county board of supervisors may accept the updated plan on behalf of the board. The updated plan shall include documentation that the county board of supervisors or other designated county official or employee received the manure management plan update.

(2) If the plan is submitted electronically, the submittal process shall be as follows: The owner of the animal feeding operation shall submit the updated manure management plan to the department through the department's electronic web application. Once the submittal has been completed, the department shall provide electronic access of the updated manure management plan to the board of supervisors of each county where the confinement feeding operation is located and each county where manure is land-applied.

The department will stagger the dates by which the updated manure management plans are due and will notify each confinement feeding operation owner of the date on which the updated manure management plan is due. To satisfy the requirements of an updated manure management plan, an owner of a confinement feeding operation must submit one of the following:

- (1) A complete manure management plan;
- (2) A department-approved document stating that the manure management plan submitted in the prior year has not changed; or
- (3) A department-approved document listing all the changes made since the previous manure management plan was submitted and approved.

Date

Chuck Gipp, Director

**Environmental Protection Commission
Iowa Department of Natural Resources**

ITEM

7

DECISION

TOPIC Contract Amendment with IDALS for Iowa Great Lakes Watershed Project

Recommendations:

Commission approval is requested for a one-year contract amendment with the Iowa Department of Agriculture and Land Stewardship - Division of Soil Conservation and Water Quality (IDALS) to continue support for the Iowa Great Lakes Watershed Project. The contract amendment will begin on 7/18/2017 and terminate on 8/31/2018. The total amount of this contract amendment shall not exceed \$71,585.

Funding Source:

This contract amendment will be funded through U. S. EPA Section 319 funds and administered under statutory authority granted by Iowa Code 466B.32.

Background:

The Iowa Great Lakes (IGL) watershed is about 87,600 acres; 76 percent of the watershed lies within Dickinson County, Iowa and the rest in Jackson County, Minnesota. Two "Outstanding Iowa Waters" - Big Spirit Lake and West Lake Okoboji - are the largest lakes in the watershed. The IGLs are major recreational outlets for Iowa residents and visitors from adjacent states, and are key to the local economy. Sediment and phosphorus reductions are the primary goals of the project; these have led to harmful algal blooms and eutrophication that have contributed to the impairment of several area waterbodies.

Purpose:

In 2010 the Iowa Great Lakes Watershed Management Plan was developed to prevent and remove impairments in the watershed. Progress from the 2013 implementation grant included pollution reductions of 1,222 lbs/yr nitrogen, 1,311 lbs/yr phosphorus, and 385 tons/yr sediment in addition to improvements in gallons of water infiltrated and suspended solids reduction. Other milestones have included restored wetlands and potholes, shoreline stabilization, and invasive carp control. The proposed contract amendment would continue this work by supporting key staff and funding BMP cost-share in conjunction with other IDALS, DNR, and local funding partners.

Contractor Selection Process:

Not applicable: Amending existing contract.

Contract History:

Watershed planning was completed in 2010 and the original DNR watershed implementation grant was also contracted in 2010. Phase two of the watershed plan was funded through a contract that began in 2013. Phase two received no-cost extensions in 2015, 2016, and 2017 to complete additional project work. An additional year of added funding is now requested (as Amendment 4) to complete additional project work within the six-year term of the 2013 contract. This watershed project has been funded by the following entities in combination with DNR: IDALS, Dickinson County Water Quality Commission, Iowa Natural Heritage Foundation, Lake Restoration, Dickinson SWCD, Center Lake Protective Association, NRCS, and FSA. This watershed project shall be co-managed by IDALS and DNR; IDALS shall be the entity to submit invoices for reimbursement to DNR.

Steven Konrady, Nonpoint Source Project Officer
Water Quality Bureau – Watershed Improvement Section

07/18/2017

13ESDGSBKAMEN-0007-04

Attachment(s): Scope of Work and project summary from the Special Conditions for Contract
Iowa Great Lakes Watershed Project 2017 Summary and Scope of Work

Project Name: Iowa Great Lakes Watershed Project

Amount: \$71,585

Time Frame: July 18, 2017 to August 31, 2018 (one year)

Description: Extension of existing contract at the Iowa Great Lakes (IGLs) to continue work from the 2013 project.

Project Goal: To improve water quality and reduce runoff quantity in the IGLs watershed.

Project Summary

This project will (1) support a project coordinator position in the IGLs region to implement grant funding and cost-share from multiple agencies, (2) improve water quality in the IGLs, and (3) work towards watershed plan goals and the removal of IGL impairments.

Project Background

In 2010 the Iowa Great Lakes Watershed Management Plan was developed to prevent and remove impairments in the watershed. Progress from the 2013 implementation grant included pollution reductions of 1,222 lbs/yr nitrogen, 1,311 lbs/yr phosphorus, and 385 tons/yr sediment in addition to improvements in gallons of water infiltrated and suspended solids reduction. Other milestones have included restored wetlands and potholes, shoreline stabilization, and invasive carp control.

BMP summary 2010-2016: 5 wetland restorations, 4500 sq ft soil quality restoration, 20,000 sq ft porous pavement, 110 ac conservation cover, 212 ac cover crops, >200,000 sq ft raingarden and bioretention basins, and 22 ac of access control (cattle exclusion).

Project Management

This project will be a collaboration between DNR and Iowa Department of Agriculture and land Stewardship - Division of Soil Conservation and Water Quality (IDALS). The efforts of DNR are coordinated through the Nonpoint Source (319) Team from the Watershed Improvement Section and efforts of IDALS are through watershed coordinator John Wills and support staff Mike Franklin and Vince Sitzmann. Primary funding will be provided with U.S. EPA Section 319 (federal) funding for nonpoint source pollution prevention and demonstration. Other funding for the project includes local, state, and federal funding.

Project Objectives

The proposed contract amendment would continue work of the original 2013 contract (13ESDGSBKAMEN-0007) by supporting key staff and funding BMP cost-share in conjunction with other IDALS, DNR, and local funding partners for an additional year.

Iowa DNR and IDALS will cooperate to obtain the following **objectives**:

1. Support partial salary for a project coordinator in the IGL watershed for the term (July 18, 2017 - August 31, 2018) and associated IDALS technical support.
2. Support information/education work and travel/training of watershed coordinator
3. Install practices such as in-field/edge-of-field practices, sediment basins, wetland restorations, urban low impact development, shoreline protection, and land retirement in the watershed as described in the work plan.

Iowa Department of Natural Resources Environmental Protection Commission

ITEM

8

DECISION

TOPIC

Derelict Building Grant Program – Grant Recommendations

The Derelict Building Grant Program is a program established by 2011 Legislation Senate File 509 (Amendment to Iowa Code 455E.11). As established in Code, not more than four hundred thousand dollars (\$400,000.00) to the department for purposes of providing funding assistance to eligible communities to address abandoned buildings by promoting waste abatement, diversion, selective dismantlement of building components, and recycling. Eligible communities include a city with a population of 5,000 or fewer. Eligible costs for program assistance include but are not limited to asbestos and other hazardous material abatement and removal, the recovery processing of recyclable or reusable material through the selective dismantlement of abandoned buildings, and reimbursement for purchased recycled content materials used in the renovation of buildings.

The Department received 24 applications, requesting \$1,052,054.25 in financial assistance, for consideration during the April 2017 round of funding. 19 projects were selected for funding with a total request amount of \$399,940.00. Seven (7) of the 19 projects exceed \$25,000.000 and are therefore subject to EPC review and approval.

The review committee consisted of five persons representing: the Land Quality Bureau, Iowa Economic Development Authority, Iowa Solid Waste Operations, Iowa Recycling Association, and Keep Iowa Beautiful.

At this time, the Department is requesting Commission approval to enter into contracts with selected applicants whose awards will be in excess of \$25,000 subject to satisfactory review of additional requested information, negotiation of budget, match, deliverables, and other requested information.

Scott Flagg, Environmental Specialist Senior
Iowa Department of Natural Resources

DERELICT BUILDING GRANT PROGRAM

PROPOSAL RECOMMENDATIONS

The following provides a description of each project that is \$25,000 or greater, the project type, and the amount of funding assistance.

City of Ackley

Award: \$ 50,000.00

Cash Match: \$ 135,250.00

Total Project Cost: \$185,250.00

Contact: Erik Graham

Phone: 641-847-3332

Description:

The City of Ackley has targeted the use of these grant funds towards the following:

- Abate and dispose of any identified asbestos and hazardous material at the project sites.
- The City plans to deconstruct the old grain elevator and construct a new workshop to house city maintenance vehicles.

City of La Porte City

Award: \$ 31,660.00

Cash Match: \$ 20,660.00

Total Project Cost: \$ 52,320.00

Contact: Jane Whittlesey

Phone: 319-342-3396

Description:

The City of La Porte City has targeted the use of these grant funds toward the following:

- Inspect, abate and dispose of any identified asbestos and hazardous material at the project site.
- The City plans to deconstruct the building and create an outside community meeting space to accompany the other redevelopment that is taking place in its downtown corridor.

City of Letts

Award: \$ 37,500.00

Cash Match: \$ 62,500.00

Total Project Cost: \$ 100,000.00

Contact: Jerry Kirk

Phone: 563-571-4627

Description:

The City of Letts has targeted the use of these grant funds toward the following:

- The City plans to deconstruct the old bank building and turn it into a public green space.

City of Lockridge

Contact: Joyce DeLuc

Description:

Award: \$ 50,000.00
Cash Match: \$ 152,000.00
Total Project Cost: \$ 202,000.00
Phone: 319-696-3311

The City of Lockridge has targeted the use of these grant funds toward the following:

- The City plans to partially deconstruct the building. City plans to construct six housing units for senior citizens and the disabled.

City of Middletown

Contact: Dale Culler

Description:

Award: \$ 34,995.00
Cash Match: \$ 24,995.00
Total Project Cost: \$ 59,990.00
Phone: 319-752-8340

The City of Middletown has targeted the use of these grant funds toward the following:

- The City plans to abate asbestos from the vacant school building.

City of Osceola

Contact: Derek Lumsden

Description:

Award: \$ 60,000.00
Cash Match: \$ 38,988.00
Total Project Cost: \$ 98,988.00
Phone: 641-342-4200

The City of Osceola has targeted the use of these grant funds toward the following:

- Abate and dispose of any identified asbestos and hazardous material at the project site.
- The City plans to renovate the building and is currently in negotiations to lease the building to the Veterans' Affairs office.

City of Tabor

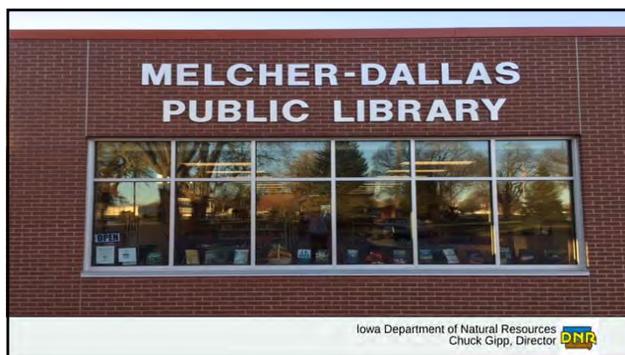
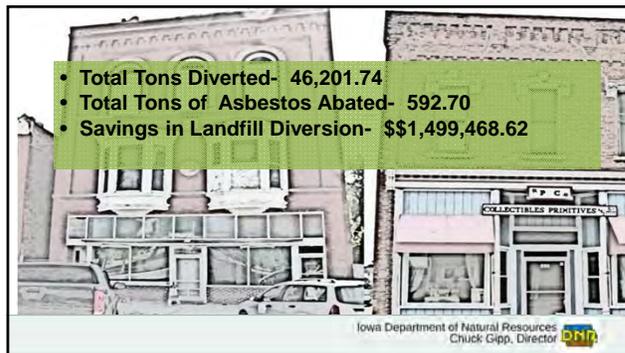
Contact: Jennifer Williams

Description:

Award: \$ 26,600.00
Cash Match: \$ 26,600.00
Total Project Cost: \$ 53,200.00
Phone: 712-629-2505

The City of Tabor has targeted the use of these grant funds toward the following:

- The City plans to deconstruct the vacant building and build a new city library.





2017 Grant Round

- 24 applications received
- \$1,000,000.00 in requested funds
- 19 Projects selected
- \$399,000.000 awarded

Iowa Department of Natural Resources
Chuck Gipp, Director 





Contact Information

Scott Flagg
Phone: 515-725-8318
Email: scott.flagg@dnr.iowa.gov



Iowa Department of Natural Resources
Chuck Gipp, Director 

**Iowa Department of Natural Resources
Environmental Protection Commission**

ITEM

9

DECISION

**TOPIC Amended Notice of Intended Action: Ease of Application Rules -
Chapter 22**

The Department is requesting that the Commission approve an Amended Notice of Intended Action to extend the public comment period for proposed amendments to 567 Iowa Administrative Code Chapter 22, “Controlling Pollution.”

Summary of Rule Changes

The proposed rule changes in the original Notice of Intended Action clarify what types of mail services may be used to submit construction permit and Title V permit applications and to make clear that applications are not required to be submitted by certified mail. Additionally, the rule changes establish electronic media submission requirements necessary for compliance with the federal Cross-Media Electronic Reporting Rule (CROMERR) adopted in 567—Chapter 15. For example, submittal of an application by electronic mail or other electronic program would be acceptable if the application bears a valid electronic signature and otherwise complies with the requirements of CROMERR. Because the Department’s current electronic submittal system does not accommodate the use of a valid electronic signature, an applicant could e-mail all the pages of an application to the Department except the signature page(s). The signature page(s) would need to meet the requirements of 567—Chapter 15. Contingent on funding, the Department anticipates making available in the next 12-18 months an electronic application system that does accommodate a valid electronic signature that complies with CROMERR.

Also, the proposed changes reduce the regulatory burden for construction permit applications for projects that do not emit or will not emit greenhouse gases (GHG) by eliminating the requirement to submit the current 3-page GHG form. Further, the proposed rules reduce the number of required submittal copies of the Title V permit application from two copies to one copy. (A similar change was made for construction permit applications in the Regulatory Certainty rules package.)

Public Comments

On December 20, 2016, the Commission approved the original Notice of Intended Action for public comment. Notice of Intended Action was published in the Iowa Administrative Bulletin on January 18, 2017, as **ARC 2895C**, and a public hearing was held on February 20, 2017, in Windsor Heights, Iowa. The Department received no comments at the public hearing. The Department received one written comment prior to the February 20, 2017, deadline for public comments.

The U.S. Environmental Protection Agency (EPA) submitted a comment stating that the portion of the amendment allowing submittal of a construction permit application or a Title V Operating Permit application by email would not be approved into Iowa’s State Implementation Plan (SIP). EPA stated that it would not approve this rule change into the SIP because Iowa has not submitted the electronic submittal method as part of a formal application for compliance with the federal Cross Media Electronic Reporting Rule (CROMERR).

Subsequently, the Department submitted a request to EPA for an Applicability Determination on whether the email submittal method, if submitted as part of a formal CROMERR application, would be

CROMERR compliant. EPA responded to the Department in a letter dated May 25, 2017, that such an application submittal method would not be considered CROMERR compliant.

In response to the public comment received, the Department is requesting that the Commission approve an Amended Notice of Intended Action to accept additional public comments and to hold another public hearing. The Department made no changes to the proposed amendments published in the original Notice of Intended Action.

Public Comments and Public Hearing

If the Commission approves the attached Amended Notice of Intended Action, the Department will hold a public hearing on Thursday, August 17, 2017, at 10:00 a.m. at the DNR Air Quality Bureau office. The Department will accept written public comments until 4:30 p.m. on August 17, 2017.

Christine Paulson, Environmental Specialist Senior
Program Development Section, Air Quality Bureau
Environment Services Division

Memo date: July 6, 2017

ENVIRONMENTAL PROTECTION COMMISSION [567]

Amended Notice of Intended Action

Pursuant to the authority of Iowa Code section 455B.133, the Environmental Protection Commission (Commission) proposes to amend Chapter 22, “Controlling Pollution,” Iowa Administrative Code.

Notice of Intended Action was published in the Iowa Administrative Bulletin on January 18, 2017, as **ARC 2895C**, and a public hearing was held on February 20, 2017, in Windsor Heights, Iowa. The Department received no comments at the public hearing. The Department received one written comment prior to the February 20, 2017, deadline for public comments.

The U.S. Environmental Protection Agency (EPA) submitted a comment stating that the portions of the amendments allowing submittal of a construction permit application or a Title V Operating Permit application by email would not be approved into Iowa’s State Implementation Plan (SIP). EPA stated that it would not approve these rule changes into the SIP because Iowa has not submitted the electronic submittal method as part of a formal application for compliance with the federal Cross Media Electronic Reporting Rule (CROMERR).

Subsequently, the Department submitted a formal request to EPA for an Applicability Determination on whether the email submittal method, if submitted as part of a formal CROMERR application, would be CROMERR compliant. EPA responded to the Department in a letter dated May 25, 2017, indicating that such an application submittal method would not be considered CROMERR compliant.

In response to the public comment received, the Commission is providing an additional opportunity for public comment on the proposed amendments. The Commission has not made

any changes to the proposed amendments published under the Notice of Intended Action. (Please see **ARC 2895C**, Iowa Administrative Bulletin, January 18, 2017, for the preamble description and proposed amendments to Chapter 22.)

Anyone may make written suggestions or comments on the proposed amendments (ARC 2895C) on or before August 17, 2017. Written comments should be directed to Christine Paulson, Department of Natural Resources, Air Quality Bureau, 7900 Hickman Road, Suite 1, Windsor Heights, Iowa 50324; fax (515)725-9501; or by e-mail to christine.paulson@dnr.iowa.gov.

A public hearing will be held on Thursday, August 17, 2017, at 10:00 a.m. in the conference rooms at the Department's Air Quality Bureau office located at 7900 Hickman Road, Windsor Heights, Iowa. All comments must be received no later than 4:30 p.m. on August 17, 2017.

Any person who intends to attend the public hearing and has special requirements, such as those related to hearing or mobility impairments, should contact Christine Paulson at (515) 725-9510 or by e-mail at christine.paulson@dnr.iowa.gov to advise of any specific needs.

As noted in ARC 2895C, the Commission has determined after analysis and review that the proposed amendments will have a positive impact on private sector jobs.

Date

Chuck Gipp, Director