MINUTES

OF THE

ENVIRONMENTAL PROTECTION COMMISSION

MEETING

MAY 19, 2015

DAVENPORT EAST BRANCH LIBRARY
6000 EASTERN AVENUE
DAVENPORT, IOWA

Chuck Gipp

Chuck Gipp, Director

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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 3
MARY BOOTE, CHAIR 3

Vice – Chair 3
CHAD INGELS, VICE-CHAIR 3

Secretary 3
CINDY GREIMAN, SECRETARY 3

Approval of Minutes 3
APPROVED AS PRESENTED 3

Monthly Reports 4
INFORMATION 4

Public Comment 4

Directors Remarks 8
INFORMATION 8

Notice of Intended Action, Chapter 64, "Wastewater Construction and Operation Permits" and Storm Water General Permit No. 2 for Construction Activities – Topsoil Preservation 8
INFORMATION 8

Contract with The University of Iowa on behalf of The State Hygienic Laboratory for Environmental Monitoring & Laboratory Services 9
APPROVED AS PRESENTED 9

Contract with Iowa State University Extension and Outreach for Manure Applicator Certification Training 10
APPROVED AS PRESENTED 10

Contract – USGS Stream Gage Agreement 11
APPROVED AS PRESENTED 11

Derelict Building Grant Program – Grant Recommendations 12
APPROVED AS PRESENTED 12

Contract with University of Iowa on behalf of the STATE HYGIENIC LABORATORY for 2016 SHL Services in Support of the DNR Air Quality Bureau 13
APPROVED AS PRESENTED 13

Air Quality - Title V Fee 14
APPROVED AS PRESENTED 15

Contract with State Hygienic Laboratory at The University of Iowa for Ambient Stream Biological Monitoring and Laboratory Services 16
APPROVED AS PRESENTED 16

Contract with The University of Iowa for Ambient Stream Sample Collection and Analysis 17
APPROVED AS PRESENTED 17

The draft 2014 state list of CWA Section 303(d) impaired waters 18
INFORMATION 18

Contract with JADA Productions for Tier II Database Hosting, Support, and Maintenance 19
APPROVED AS PRESENTED 19

Donations 20
APPROVED AS PRESENTED 20

General Discussion 21

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 May 19, 2015 at the Davenport East Branch Library in Davenport, Iowa.

COMMISSIONERS PRESENT

Mary Boote, Chair
Nancy Couser, Secretary
Cindy Greiman
LaQuanda Hoskins
Chad Ingels
Ralph Lents
Joe Riding
Bob Sinclair
Gene Ver Steeg

COMMISSIONERS ABSENT

None

Chair Boote thanked the City of Davenport, Alcoa, and Commissioner Hoskins for the educational tours on Monday, May 18, 2015.

ADOPTION OF AGENDA

Motion was made by Gene Ver Steeg to approve the agenda as presented. Seconded by Bob Sinclair. Motion carried unanimously.

APPROVED AS PRESENTED

OATH OF OFFICE FOR NEW COMMISSIONER

Director Chuck Gipp swore in Ralph Lents and Joe Riding to the commission.

ELECTION OF OFFICERS

CHAIR

Motion was made by Bob Sinclair to nominate Mary Boote as Chair. Second by LaQuanda Hoskins. Motion carried unanimously.

MARY BOOTE, CHAIR

VICE – CHAIR

Motion was made by Cindy Greiman to nominate Chad Ingels as Vice- Chair. Second by Nancy Couser. Motion carried unanimously.

CHAD INGELS, VICE-CHAIR

SECRETARY

Motion was made by Nancy Couser to nominate Cindy Greiman as Secretary. Second by LaQuanda Hoskins. Motion carried unanimously.

CINDY GREIMAN, SECRETARY

APPROVAL OF MINUTES

Motion was made by Chad Ingels to approve the April 14, 2015 EPC meeting minutes. Seconded by Cindy Greiman. Commissioner Joe Riding abstained from the vote. Motion carried unanimously.

APPROVED AS PRESENTED

MONTHLY REPORTS

- Bill Ehm thanked Commissioner Hoskins and her colleagues from Alcoa for an incredible tour.
- Bill Ehm shared with the Commission the Iowa Code reference for utilizing a public institution for laboratory needs. He referenced that a number of contracts on the agenda for May and for June will be with the University of Iowa and Iowa State to continue ongoing monitoring work.
- Bill Ehm provided an update to the Commission on DNR's role with the avian influenza outbreak and USDA's lead role in the activities.
- Bill Ehm shared the Legislature passed bills regarding the air quality sustainable funding and animal feeding operation truck washes and is still reviewing moving the Geological Survey permanently to the University of Iowa.
- Bill Ehm introduced the new Water Quality Bureau Chief Jon Tack. The supervisors for the Water Supply Operations, Corey McCoid, and Water Supply Engineering, Mark Moeller, have started in the past couple of weeks. The Water Quality Bureau is currently reviewing applications for the NPDES Supervisor role.

The following monthly reports have been posted on the DNR website under the appropriate meeting month: http://www.iowadnr.gov/InsideDNR/BoardsCommissions.aspx

1. Rulemaking Status Report
2. Variance Report
3. Enforcement Status Report
4. Administrative Penalty Report
5. Attorney General Referrals Report
6. Contested Case Status Report

INFORMATION

PUBLIC COMMENT

Ann Corby – ICCI

Ann Corby shared with the Commission she is concerned for the impaired waterways and in favor of clean water. She is troubled by the number of polluted waterways and how the count continues to raise. She is troubled by the DNR dismissing the 15% increase of impaired waters. The people protecting the water are in denial. She believes voluntary efforts are not working. Iowa's hog facilities have created a number of spills and pollution of the waterways. She would like to see the NPDES permitting process implemented.

Larry Ginter – ICCI

Larry Ginter believes the EPC is in denial and suffering from pride and the Farm Bureau is a supporter of factory farm and antigovernment regulations. Iowa has too much political cronyism. The EPC is the gate keeper yet it has not blushed with the increase of impaired waters. He believes the state is pitting Des Moines Water Works against rural farmers. Many Iowa farmers are not following their conservation plans. Large scale ag production is gaining speed across the state. A moratorium on new factory farms, strict use of the conservation plan, and local control are needed.

Mark Watkins – McAninch Corporation

Mark Watkins works for McAninch Corporation who on average has 20-30 projects in operation. He was a member of the Topsoil EO80 group. He deals with topsoil every day in his business. His company regrades topsoil and he was surprised when he heard some companies don't regrade topsoil. There is a cost that comes with regarding soil and if regulation is added, it adds to the cost if the contractor has to perform this task multiple times (i.e., to meet a uniform 4 inch standard).

Pat Balar – ICCI

Pat Balar expressed concern for impaired waterways because she lives 2 miles from the Mississippi River. She is a rules follower and there should be hefty fines for those who do not follow the rules.

Molly Regan – ICCI

Molly Regan thanked the Commission for visiting Davenport. She has served on the Soil and Water Commission for 6 years and is concerned about the impaired waterways. She believes the Master Matrix is a joke because the farmers rate themselves. She recommends for EPC to work with the Legislature to do something new in place of the Master Matrix. A recent large hog confinement in Scott County proposed spreading 11-13 million gallons of manure over a 3-5 year period. That is a lot of manure for one county and that is what is contributing to the pollution. She has a large family with over 60 cousins, nieces, and nephews and is concerned for their future.

Laforest Sherman – Poweshiek Cares

Laforest Sherman has a farm that has been in his family for four generations. The EPC duties are two-fold: (1) to follow the oath each member took and (2) to be the trustee of the environment now and for future generations. There is a serious problem with our Ag practices over the last half century where companies treat soil as just a commodity. The industrial Ag approach is depopulating rural Iowa and increasing poor water quality. Industrial Ag needs to take responsibility.

Justine Stevenson – Iowa Cattlemen's Association

Justine Stevenson reported the draft impaired waters list is a function of the Clean Water Act to be reported to EPA every 2 years. Iowa's draft list has increased roughly 15% with approximately 1,300 water bodies assessed for primary contact, water supply, and fish consumption. The list also proposes to remove 73 stream segments. Overall, the report is not documenting either an upward or downward trend.

Sharon Donovan – ICCI

Sharon Donovan asked the Commission to issue the Clean Water Act NPDES permit to all factory farms. She called on the EPC to protect the people of Iowa who have to breathe ammonia, hydrogen oxide, and particulates. Iowans are living with the byproducts of factory farms such as nitrogen, hormones, antibiotics, etc. She believes based on the EPC history of decision making, the EPC would have welcomed Auschwitz for its gas technology. She believes it is insufferable that animals should be shut off from light.

Virginia Meyer – ICCI

Virginia Meyer owns a small acreage in Johnson County. She read in the Gazette newspaper her local lake is on the impaired waters list and the county conservation officer believes it is a result of human and geese waste. These issues are all over the State of Iowa. Large scale farms are more like factories rather than farms. Iowa deserves and should have prosperity that feeds the world but also includes environmental sustainability. She asked for enforceable regulations that results in farms and not factories. The decision to site a new factory farm should be made locally by those who are affected.

Jim Yungclas – ICCI

Jim Yungclas spoke to the Commission about the impaired waterways. It is a fact that water quality is getting worse. In 1969, he worked with many agencies to install sanitary sewers around the Iowa Great Lakes to improve the water. The residents didn't have an option to hook up to the sewer. The effects of modern agriculture affect all Iowans. The landscape is corn and soybeans when it used to be hay and grazing fields. We have developed a cropping system that doesn't reduce nitrates.

Sister Mary Rehmann – ICCI

Sister Mary Rehmann is with the Sisters of Humility. She indicated that humus is the Latin word for earth. She worked for the Illinois EPA as an attorney for 8 years. Illinois had a very strong EPA in the 1970s and 80s. She hopes to learn more about Iowa's environmental programs. She has been reading about the issues with nonpoint sources and the long history of these sources contributing to impaired waters. We need numerical standards for nutrients.

Brian Stineman – City of Davenport

Brian Stineman spoke about his concerns with the topsoil rule submitted for public comment. As a compliance officer for 15 years, he believes the proposed language is ambiguous on how to enforce and determine feasibility. He wasn't sure if the current or proposed rules are better but does know the 4" provides a measurable standard. He believes the EO80 group was developed with a political agenda and that further compromise on the language is needed.

Lee Barclay – ICCI

Lee Barclay described a hog facility in Woodward built in July 2014. The confinement was built by former Commissioner Brent Rastetter which he believes is a conflict of interest. The facility is less than 2 miles from the river with more than 22 million gallons of hog manure. In Iowa, there are 8,500 CAFOs that produce 10 billion gallons of toxic waste and resulted in 750 manure spills and 725 polluted waterways. He believes this is a clear sign that voluntary compliance is a failure but the DNR and EPC are performing business as usual and doing nothing.

Shari Hawk – ICCI

Shari Hawk shared with the Commission it is factory farm construction season. There will be more excessive amounts of manure spread on the fields and spills in our waterways with no local control by those affected. On average 300-600 factory farms are built each year. The DNR and EPC have overturned local county decisions to protect the environment and quality of life for those forced to live next to a factory farm. Those who are to protect the environment are the worst enemies. The EPC has enforcement options and should be enforcing the laws.

Sister Cathleen Real – ICCI

Sister Cathleen Real spoke to the Commissioners about the impaired waters. She has heard many things on the environmental problems with factory farms. She agreed with other presenters about animals being in confinements and increasing polluted waters. She urged the EPC to think about the problems seriously. She believes in providing local control to communities which she understands the EPC can allow.

Cynnea Ellison – ICCI

Cynnea Ellison became ill with MRSA last year. Doctors could not figure out where she had contracted her illness for she had not been at the typical locations to contract it like hospitals and travelling. The illness is resistant to antibiotics and her life was threatened. CAFOs are a health risk to Iowans and a breeding ground for disease. She stated 70% of swine and 64% of workers of CAFOs have MRSA. Communities acquire MRSA by manure spreading and workers being exposed to manure. Further studies need to occur. She asked that no new

permits be issued to factory farms. The millions of gallons of manure spread on the ground are also spreading disease.

Carrie Fisher – ICCI

Carrie Fisher shared with the Commission that after removing the 73 impaired waters from the list, there are 652 polluted waters which is still an increase from last year's 630. There is a reason all these good people from across the state attend the EPC meetings. They call upon the EPC to do its job. The EPC is not the Environmental Profit Commission. These people share their stories of how their lives are affected. The EPC has the duty to support communities who can't live with another new site. She asked the Commission to stand up for the people.

Jeannette Bauer – ICCI

Jeannette Bauer expressed concern that the number of impaired waterways keep going up and up each year. Voluntary actions are not working because there are too many bad actors. Factory farms' only interest is making profit on the backs of Iowa, polluting the waters, and contributing to the gulf dead zone. She asked the DNR to step up and issue permits and perform onsite inspections. Cities are required to have clean water facilities. She does not want the factory farms to be able to pass their pollution down the river.

Matthew Pierce – ICCI

Matthew Pierce was raised as a city kid and did not have much interaction with farming. He has learned that modern Ag is based on huge sizes. Nearly all the big businesses are outside of Iowa. People who live nearby don't want these CAFOs next door. Smithfield and Cargill use their corporate might until the people give up. He asked if out of state corporations should decide how Iowans live. He asked the EPC to use its power to allow communities to make local decisions.

Tom Benge – ICCI

Tom Benge shared with the Commission he has been published in local newspapers addressing water quality. With 20 million hogs and 4 million cattle, they generate more waste than the 3 million people in Iowa. The people have sewage treatment plants but factory farms do not. Farms have only spent $11.8 million dollars on water quality conservation efforts. That's a drop in the bucket compared to their profits. Voluntary compliance is not working.

Christy Pogue – ICCI

Christy Pogue desires water quality to be better in Iowa. In the latest press, it has been stated that impaired waterways have increased. Iowa's population is increasing less than 1% each year. The EPC is set up to investigate issues. Duck Creek had E.coli problems which comes from humans and animals. A citizen found a broken sewer pipe going into the creek. Citizens have taken tests and have had meetings but there have been no investigations. The City of Davenport has set up a fund so if a sewer backs up in a basement, the fund is used to pay off the homeowner rather than upgrade the system.

Creighton Cox –

Creighton Cox was the Chair of the EO80 topsoil group and is in favor of the proposed rule language. He appreciates the information the EPC has taken into consideration for the decision they have to make. One item will be added to the draft language. The word "authorization" will be added to the end of the sentence in the draft permit so that the language will be "…shall remain within the area covered by the applicable General Permit No.2 authorization." On the tour we found neighboring cities that are looking at best practices that vary with different soils. The proposed rules would not prohibit cities having local control practices.

Written Comments Submitted

None

END OF PUBLIC COMMENT

DIRECTORS REMARKS

Director Chuck Gipp shared with the Commission that the legislature is currently working on finalizing the state's budget. At one time, the General Fund appropriation to the DNR was $21.9 million and has dropped over the years to around $12 million. Air Quality stakeholders were instrumental in passing a bill for air quality sustainable funding. Rules will be developed to adopt the new fees and will be brought to the Commission for review.

INFORMATION

NOTICE OF INTENDED ACTION, CHAPTER 64, "WASTEWATER CONSTRUCTION AND OPERATION PERMITS" AND STORM WATER GENERAL PERMIT NO. 2 FOR CONSTRUCTION ACTIVITIES – TOPSOIL PRESERVATION

Joe Griffin, Environmental Specialist Senior, of the NPDES Section of the Water Quality Bureau presented the following item.

The public comment period for the proposed changes to Chapter 64 regarding topsoil preservation ended April 1, 2015 during which three public hearings were held. Over 700 mailed, e-mailed and verbal comments were received. At the April meeting, the Commission discussed the preliminary analysis of these comments and expressed the intent to discuss the matter in more detail at the May meeting.

The Department's webpage http://www.iowadnr.gov/InsideDNR/RegulatoryWater/NPDESStormWater.aspx posts all the comments and audio recordings from the hearings.

The current requirement is that if 4 inches or more of topsoil existed prior to development, a minimum of 4 inches is to be in place on the surface of the site after construction is complete unless land use precludes the practice. The proposed requirement is that the permittee(s) shall, unless infeasible, preserve topsoil. "Infeasible" shall mean not technologically possible, or not economically practicable and achievable in light of the best industry practices as determined by the permittee. "Unless infeasible, preserve topsoil" shall mean that, unless infeasible, topsoil from any areas of the site where the surface of the ground for the permitted construction activities is disturbed, shall remain within the area covered by the applicable General Permit No. 2. Soil may be used elsewhere in the development and no minimum retention requirement is applicable to an individual lot or portion of the project.

Joe Griffin entertained questions from the Commissioners and provided responses summarized below.
The Department supports the draft rule language. Cities and local communities have the ability to define infeasibility based on the site circumstances if the proposed rules are passed. With the current or proposed rules, cities and communities have the ability to enact building requirements stricter than federal and state law. The proposal provides for all parties to have greater consideration based on the site. The proposal does not define the affidavit process but if the proposal passes, the Department would work with stakeholders to develop the process. The proposed rule does not address the use of compost with topsoil but the Department has a policy to allow approximately 2" of compost and topsoil for a site. With the current rules, builders document when there is less than 4" of topsoil at the start of the project to validate replacing less than 4" of topsoil at the end of the project.

INFORMATION

CONTRACT WITH THE UNIVERSITY OF IOWA ON BEHALF OF THE STATE HYGIENIC LABORATORY FOR ENVIRONMENTAL MONITORING & LABORATORY SERVICES

Barb Lynch, Bureau Chief of the Field Services & Compliance Bureau presented the following item.

Commission approval was requested for a 1 year-service contract with University of Iowa State Hygienic Laboratory of Iowa City, Iowa. The contract will begin on July 1, 2015 and terminate on June 30, 2016. The total amount of this contract for the period July 1, 2015 through June 30, 2016 (SFY 2016) shall not exceed $159,506.

Funding Source:
This contract will be funded through the EPA Performance Partnership Grant, pursuant to 455B.103(3).

Background:
This contract aids the Director of the Iowa Department of Natural Resources in determining the quality of the environment of the State of Iowa by providing field and lab services in support of environmental control programs and summarizing and reporting environmental quality data. Pursuant to this contract, the Contractor will collect samples, perform lab analyses and report results consistent with US EPA standards related to environmental compliance programs, including drinking water, emergency spills and hazardous conditions, human and livestock waste treatment/disposal, solid waste identification and disposal, and industrial/commercial processes resulting in air, water or land discharges.

Purpose:
The parties propose to enter into this Contract for the purpose of retaining the Contractor to provide: professional laboratory monitoring, analytical and reporting services including sample collection, analysis and reporting consistent with US EPA standards, and Contractor will provide, upon request, training in sample collection/handling procedures and related protocols to IDNR ESD Field Services Bureau environmental field staff.

Contractor Selection Process:
The State Hygienic Laboratory was chosen using the Single Source, Intergovernmental Agreement process. The State Hygienic Laboratory was chosen for this project because they have the demonstrated capacity to provide the full range of scientific analyses required by the department, consistent with state and US EPA QA/QC performance and reporting requirements.

Motion was made by Chad Ingels to approve the agenda item as presented. Seconded by Ralph Lents. Motion carried unanimously

APPROVED AS PRESENTED

CONTRACT WITH IOWA STATE UNIVERSITY EXTENSION AND OUTREACH FOR MANURE APPLICATOR CERTIFICATION TRAINING

Bill Ehm, Division Administrator, of the Environmental Services Division presented the following item.

Commission approval was requested for a 2 year-service contract with Iowa State University Extension and Outreach of Ames, Iowa. The contract will begin on July 1, 2015 and terminate on July 1, 2017. The total amount of this contract shall not exceed $222,100 for fiscal year 2016 of the contract and $213,654 for fiscal year 2017 of the contract (grand total of $435,754).

Funding Source:
This contract will be funded through education and certification fees collected from the Manure Applicator Certification Program.

Background:
HF 644 and HF 2494 require persons who apply, handle, transport and store manure to be properly certified as a Commercial Manure Service, Commercial Manure Service Representative or a Confinement Site Manure Applicator. In addition, HF 312 requires continuing instruction courses be available online. The MAC training materials will be available as part of the DNR's eLearning web site.

Purpose:
The parties propose to enter into this Contract for the purpose of retaining the Contractor to develop manure certification training and testing materials for commercial and confinement site manure applicators. Topics covered in the training materials will include: certification and manure management requirements of Iowa law and DNR rules; proper procedures for the storage, handling and land application of manure; the potential impacts of manure on surface and groundwater: the development of safety and emergency action plans and sources of additional technical and educational assistance.

Contractor Selection Process:
Iowa State University Extension and Outreach was chosen using the University selection process. Iowa State University Extension and Outreach was chosen for this project because Iowa law required partnership and they have the resources and knowledge to assist in training applicators.

Commissioner Bob Sinclair has received a number of compliments regarding the course and attendees believe it is working well. He suggested to the Department that it continue educating the industry on who does and does not have to take the course.

Bill Ehm shared with the Commission the majority of the cost for the contract is the time to host classroom sessions. Over the next two years, he anticipates more people will take the online course and in the future the Department will be able to reduce the contract value because there will be less classroom sessions.

Motion was made by Bob Sinclair to approve the agenda item as presented. Seconded by Gene Ver Steeg. Commissioner Chad Ingels abstained from the vote. Motion carried unanimously

APPROVED AS PRESENTED

CONTRACT – USGS STREAM GAGE AGREEMENT

Lori McDaniel, Supervisor, of the Flood Plain Management & Dam Safety Section of the Land Quality Bureau presented the following item.

The Department requested Commission approval of a contract for $225,970 with USGS for the time period of July 1, 2015 – June 30, 2016. The Department's contribution to this agreement is $224,100. The USGS contribution to this agreement is $1,870. This agreement covers the continuing support, operation and maintenance of 16 stream gaging stations - 14 fully supported and 2 partially supported. The individual gages are listed below.

Funding Source:
This project will be funded through state general fund dollars specifically dedicated to Flood Plain Management and Dam Safety.

Background:
After the floods of 2008, a legislative appropriation was made dedicated to flood plain management and dam safety. Part of the legislative intent of this funding was to continue to support USGS stream gaging efforts in Iowa.

Purpose:
The purpose of this contract is to continue support, operation and maintenance of 16 stream gaging stations. There are 14 fully supported gages and 2 partially supported gages. These stream gages will assist in the tracking and predicting of flood events by compiling the necessary data relating to flood frequency analysis.

USGS Joint Funding Agreement:

The USGS operates and maintains approximately 7,500 stream gages which provide long term, accurate, and unbiased information on stream low to meet the needs of many diverse users. The USGS stream gaging network is currently funded in partnership with over 800 Federal, State, and local agencies nationwide. The Iowa DNR has partnered with USGS for many years to maintain Iowa's network of stream gages. The data gathered through the use of these stream gages is consistent, obtained by using standard techniques and technology and is subject to quality assurance and quality control.

Scope of Work:
The scope of work of this contract is the continued support, operation and maintenance of 16 stream gaging stations. There are 14 fully supported gages and 2 partially supported gages.

The locations of the fully supported and partially supported stream gages were provided to the Commissioners.

Motion was made by LaQuanda Hoskins to approve the agenda item as presented. Seconded by Nancy Couser. Motion carried unanimously

APPROVED AS PRESENTED

DERELICT BUILDING GRANT PROGRAM – GRANT RECOMMENDATIONS

Scott Flagg, Environmental Specialist Senior, of the Financial & Business Assistance Section of the Land Quality Bureau presented the following item.

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 34 applications, requesting $1,421,659.75 in financial assistance, for consideration during the February 2015 round of funding. 22 projects were selected for funding with a total request amount of $399,420.00. Seven (7) of the 22 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.

The Department requested 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 provided a PowerPoint presentation discussing the program, past projects, and proposed projects.

Motion was made by Nancy Couser to approve the agenda item as presented. Seconded by Cindy Greiman. Motion carried unanimously

APPROVED AS PRESENTED

CONTRACT WITH UNIVERSITY OF IOWA ON BEHALF OF THE STATE HYGIENIC LABORATORY FOR 2016 SHL SERVICES IN SUPPORT OF THE DNR AIR QUALITY BUREAU

Sean Fitsimmons, Environmental Specialist Senior, of the Air Monitoring Section of the Air Quality Bureau presented the following item.

Commission approval was requested for a one year-service contract with the University of Iowa on behalf of the State Hygienic Laboratory. The contract will begin on 7/1/2015 and terminate on 6/30/2016. The total amount of this contract shall not exceed $2,152,188.

Funding Source:
Funding for this contract consists of federal 103 grant funds ($386,502), air contaminant funds ($1,452,742), and State "Environment First" HC2A funds ($312,944).

Background:
Under Iowa Code 455B.103, the department has responsibility for conducting ambient air monitoring in the State of Iowa. SHL currently operates most of the ambient air monitoring sites in Iowa. It also provides analytical and technical support for ambient air monitoring activities throughout the State. It weighs and determines the ionic composition of particulate samples and performs analysis of air samples for many toxic compounds found in urban air. SHL also provides analysis of asbestos samples gathered by DNR inspectors. The SHL quality assurance group conducts annual audits of SHL ambient air monitoring activities as well as those of the Local Programs. This contract provides for a continuation of these essential services.

Purpose:
The parties propose to enter into this contract for the purpose of retaining SHL to perform ambient monitoring and related services in support of the department's Air Quality Bureau.

Contractor Selection Process:
The University of Iowa State Hygienic Laboratory was chosen for this project in accordance with Iowa Code 455B.103, which directs the department to contract with other State agencies for services, if possible. Iowa Code 263.7 establishes environmental investigations as an essential duty of SHL, and SHL has considerable experience and expertise in this area.

Contract History:
The DNR has contracted with the University of Iowa for ambient air monitoring services for over thirty years. This contract represents ongoing services provided by SHL to the Air Quality Bureau and is renegotiated annually.
The last contract total was $2,096,268. The 3% increase is due to increased costs for personnel and analytical services. There are no significant changes to the scope of work during this contract period.

Catharine Fitzsimmons, Air Quality Bureau Chief, shared with the Commission the State of Iowa has documented great reductions in air pollutants over the years and continues to see a downward trend. When areas are close to or at non-attainment designations, the Department works with various entities to regain compliant air quality.

Sean Fitzsimmons described an event when PM2.5 exceeded the standards, including the estimated causes and the plans for addressing this matter.

Motion was made by Cindy Greiman to approve the agenda item as presented. Seconded by Ralph Lents. Motion carried unanimously

APPROVED AS PRESENTED

AIR QUALITY - TITLE V FEE

Catharine Fitzsimmons, Bureau Chief, of the Air Quality Bureau presented the following item.

The Commission was asked to approve the annual Title V fee for state fiscal year (FY) 2016 Title V budget at $56 per ton. The Air Quality Bureau's (Bureau) Title V budget is summarized in the attachment. The Bureau's budget is comprised of Title V fees, federal grants, and state funds. This proposal relates only to the Title V fee portion of the Bureau's budget.

Stakeholder Engagement

The Iowa General Assembly provided a special appropriation to fund the shortfall for FY 2015 and established the Air Quality Stakeholder Group to study the air quality services provided and the funding of the air quality program (HF 2473, GA 85). The Stakeholder Group was comprised of representatives of large and small Iowa industries, local governments, and environmental interests. Stakeholder group members developed six recommendations for funding the air quality program for next year and beyond. The recommendations were included in a report submitted in December 2014 to the General Assembly, and presented to the Commission in January by the Bureau. New revenues from notification fees are needed to support the asbestos program, and application fees for operating permits, construction permits, and dispersion modeling.

The Bureau met with a representative group of the Title V fee payers on January 7, 2015, to discuss the budget. An estimated or draft budget to cover the reasonable costs of administering the Title V program was prepared following these meetings. The proposed budget is intended to allow the Department to continue to provide a status quo budget (same level of services).

Bureau Funding

The Title V fee proposed will provide a key element for funding the Air Quality Bureau.

Bureau Revenue For FY 2016	
Title V Emission Fees	*7,840,000*
Title V Carryforward, Interest, Over/Under Payments	*933,000*
Title V Application Review & Permit Issuance Fees	*425,000*
Subtotal - Air Contaminant Fund	**9,198,000**
Major Source Application Review, Permit Issuance	*696,000*
Minor Source Application Review, Permit Issuance	114,000
Federal Grants (Clean Air Act 103 & 105)	1,723,000
State Funds (General Fund & Environment First)	1,129,000
Solid Waste Alternative Fund (SWAP)	77,000
Asbestos Notification Fees	150,000
Bureau Revenue - Total	**13,087,000**

Program Background

The Title V program is required by the federal Clean Air Act as amended in 1990. The Clean Air Act requires states to charge fees sufficient to cover all reasonable direct and indirect costs required to develop and administer the Title V program requirements (42 U.S.C. 7661a). The Bureau developed the Title V fee structure, including eligible program activities, with stakeholder collaboration in the early 1990s.

The Title V fee is calculated by dividing the estimated budget by the chargeable emissions as reported by

facilities each March 31. The Bureau provides this information to the Commission no later than the May meeting. The Commission is asked to set the fee based on the program's budget by no later than the May meeting this year. The Title V fees are due each July 1 and fund the activities for the entire year. For example, the Title V fees to be paid on July 1, 2015, are based on 2014 emissions and will fund FY 2016 (July 1, 2015, to June 30, 2016).

What is a Title V operating permit?
A Title V operating permit is required for those facilities with potential emissions that exceed the major stationary source thresholds. A major stationary source is a facility that has the potential to emit 100 tons per year (tpy) or more of any air pollutant; or the potential to emit 10 tpy or more of any individual hazardous air pollutant; or the potential to emit 25 tpy or more of any combination of hazardous air pollutants.

Iowa has approximately 280 major stationary sources, also referred to as Title V facilities. Examples of Title V facilities include electric utilities, food and grain processors, manufacturing operations, natural gas pipelines, ethanol plants, and cement plants.

The Title V fee is based on the first 4,000 tons of each regulated air pollutant emitted each year from each major stationary source in the state. Regulated pollutants include: particulate matter less than 10 micrometers in diameter (PM_{10}), sulfur dioxide (SO_2), nitrogen oxides (NO_x), volatile organic compounds (VOC), lead (Pb), and hazardous air pollutants (HAP). Greenhouse gas emissions are not subject to Title V fees. The fee is used to support the development and administration of activities associated with the Title V Operating Permit Program and other activities listed in Iowa Code 455B Division II not funded by a fee program.

FY 2016 Proposed Budget
Personnel expenses include an estimated increase of 1.9% and an indirect rate of 13.1%. The final personnel expenses provided by the Department of Management in June, will be used to set the final budget. Contracts for professional services and state aid to Linn and Polk Counties are under negotiation and are anticipated to be on the agenda for approval at the June Commission meeting. The amounts listed in the draft budget are estimates only.

Last year the emissions were 148,038 tons. The current estimate is 140,000 tons based on emission inventories received to date.

Catharine Fitzsimmons provided handouts to the Commissioners regarding the work with stakeholders and Senate File 488. She anticipates returning in August to begin the rulemaking process for the new fees. She described to the Commission the new fee structure and the work to be done with stakeholders to set the fee rate. She also described the relationship with Polk and Linn Counties. They contract with the Department to administer the air quality program in their counties.

Motion was made by Gene Ver Steeg to approve the agenda item as presented. Seconded by Bob Sinclair. Motion carried unanimously

APPROVED AS PRESENTED

CONTRACT WITH STATE HYGIENIC LABORATORY AT THE UNIVERSITY OF IOWA FOR AMBIENT STREAM BIOLOGICAL MONITORING AND LABORATORY SERVICES

Roger Bruner, Supervisor, of the Water Monitoring and Assessment Section of the Water Quality Bureau presented the following item.

Commission approval was requested for a [1.25] year-service contract with the State Hygienic Laboratory at The University of Iowa of Iowa City, IA. The contract will begin on July 1, 2015 and terminate on September 30, 2016. The total amount of this contract shall not exceed $606,706.20.

Funding Source:
This contract will be funded through 455B.103 using Environment First Funds from the HB8A Cost Center.

Background:
The Clean Water Act requires states to monitor and report on the condition of the waters of the state. This contract is a continuation of DNR's long-standing partnership with SHL to collect and analyze samples from Iowa's streams and rivers. Since 1994, the DNR has conducted biological assessments of Iowa streams to determine the ecological status and health of these waterbodies. The protocol primarily consists of sampling water quality, fish, benthic macroinvertebrates and physical habitat during the summer low-flow index period (July through October).

Purpose:
The parties propose to enter into this Contract for the purpose of retaining the Contractor to provide: sampling and analytical services for the ambient biological monitoring and assessment program.

Contractor Selection Process:
The SHL was chosen as contractor based on the Code of Iowa (455B.103), which directs the DNR to contract with public agencies of the state. SHL was also chosen for this project due to their sample collection and analysis expertise.

Roger Bruner described for the Commission the process for collecting data, where it is stored, how it is used, and the accessibility of the data for the public.

Motion was made by Chad Ingels to approve the agenda item as presented. Seconded by Joe Riding. Motion carried unanimously

APPROVED AS PRESENTED

CONTRACT WITH THE UNIVERSITY OF IOWA FOR AMBIENT STREAM SAMPLE COLLECTION AND ANALYSIS

Roger Bruner, Supervisor, of the Water Monitoring and Assessment Section of the Water Quality Bureau presented the following item.

Commission approval was requested for a 1 (one) year-service contract with The University of Iowa –State Hygienic Laboratory of Iowa City, IA. The contract will begin on June 1, 2015 and terminate on May 31, 2016. The total amount of this contract shall not exceed $455,928.48.

Funding Source:
This contract will be funded through State of Iowa Environment First Appropriations for Water Quality Monitoring.

Background:
The Clean Water Act requires the monitoring of State waters to determine the status and trends in water quality. These data are used to determine potential impairment and provide information to decision makers regarding the effectiveness of water pollution prevention programs. The DNR has contracted with SHL to collect water samples at streams across the State of Iowa and to test water samples for general chemistry, nutrients, and sediment content. Data are placed into publicly available database and are used by a wide variety of stakeholders including water quality programs, scientific research and general education.

Purpose:
The parties have entered into this Contract for the purpose of retaining the Contractor to provide assistance to DNR in monitoring the condition of streams in the State of Iowa. Assistance will include sampling, analysis, and reporting of streams for a variety of water chemistry parameters

Contractor Selection Process:
The University of Iowa SHL was chosen as contractor based on the Code of Iowa (455B.103), which directs the DNR to contract with public agencies of the state. SHL was also chosen for this project due to their sample analysis expertise.

Contract History:
This is the seventeenth year of contracting with SHL to provide analytical services for ambient stream sample collection and analysis at 61 sites in Iowa. In 2014, the contract amount was $1,022,600. A decrease in the number of sites sampled (from 72 to 61) and a decrease in the number of analytes tested (pesticides, pharmaceuticals and personal care products were rotated out this year). New to the contract this year is the addition of neonicotinoid insecticides.

Roger Bruner shared with the Commission the methodology for sampling for emerging contaminants. There are a number of considerations like location, costs, stakeholders, laboratory availability, etc. that are taken into account. He hopes that all this monitoring data will assist the state in its nutrient reduction plan implementation.

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

APPROVED AS PRESENTED

THE DRAFT 2014 STATE LIST OF CWA SECTION 303(D) IMPAIRED WATERS

John Olson, Environmental Specialist Senior, of the Water Monitoring and Assessment Section of the Water Quality Bureau presented the following item.

Section 303(d) of the federal Clean Water Act (CWA) requires that each state prepare, every two years, a list of its waters that do not fully meet state water quality standards; these waters are considered "impaired". Iowa's 2014 draft of impaired waters is part of Iowa's "integrated report." According to U.S. EPA guidance, states should provide a single water quality monitoring and assessment report—the Integrated Report—that combines the water quality reporting requirements of Section 305(b), the impaired waters listing requirements of Section 303(d), and the lakes reporting requirements of Section 314 of the CWA. Integrated reports are to be composed of five categories that are designed to give the public and other stakeholders a comprehensive summary of the water quality status in the state. Category 5 of the Integrated Report is the state's Section 303(d) list of impaired waters. Waters in Category 5 must be prioritized for preparation of a total maximum daily load (TMDL) to determine the load of pollutants that a water can receive and still meet state water quality standards.

Iowa's draft 2014 list of impaired waters contains 572 waterbodies. The 2014 list represents IDNR's eighth biennial impaired waters list prepared for EPA approval. This draft list is a subset of the approximately 1,300 Iowa waterbodies or waterbody segments (streams, rivers, lakes, and wetlands) assessed for support of state water quality standards by IDNR staff for the 2014 Integrated Reporting cycle. For comparison, Iowa's final 2012 list contained 482 impaired waters, and the 2010 list 446 impaired waters. The draft 2014 list will be available for public notice for a period of 45 days from May 19, 2015 through July 2, 2015. Following the close of the public comment period, IDNR will prepare a responsiveness summary of comments received. Changes in the list will be made based on public comments, and IDNR will submit the revised draft to U.S. EPA Region 7 for review and final approval.

John Olson provided a PowerPoint presentation describing impaired waters background and history, reporting requirements, number of impairments, and causes. He also gave examples like how straightening a stream or installing a dam can qualify as an impairment. Each state has their own criteria and own standards so comparing states is challenging. The waters being delisted do not have a common reason for being delisted – they each have their own reasons why they can be removed from the list. Deeper lakes have a greater ability to achieve water quality standards compared to shallow lakes. Bill Ehm discussed the difficulty of taking volumes of data and interpreting it for the everyday citizen.

INFORMATION

CONTRACT WITH JADA PRODUCTIONS FOR TIER II DATABASE HOSTING, SUPPORT, AND MAINTENANCE

Adam Broughton, Environmental Specialist Senior, of the Field Services and Compliance Bureau presented the following item.

Commission approval was requested for a four year-service contract amendment with JADA Productions (JADA) of Las Vegas, Nevada. The contract amendment will begin on June 30, 2015, and terminate on June 30, 2019. The total amount of this contract amendment shall not exceed $24,800.00.

Funding Source:

This contract will be funded through a combination of state and federal funds. The Tier 2 database is required to be maintained by the federal Emergency Planning and Community Right to Know Act (EPCRA) and 605 Iowa Administrative Code 104.1(1) and 104.3(2), which implements the federal law.

Background:

The Department of Natural Resources (DNR) took over the Tier II program from Iowa Workforce Development in July 2007. Since 2007 the DNR has utilized a Tier II management software package to gather, analyze and distribute Tier II data. Each year since the software was instituted the DNR has seen an increase in Tier II data collected.

The DNR forwards the data collected for the reporting period to each County Emergency Management Coordinator (EMA) and regional planner. The DNR Emergency Planning and Community Right-to-Know Act (EPCRA) Coordinator and County EMA reconcile reports received with known facilities in the county.

The DNR utilizes the Tier II data for planning and response during disasters. The data is also uploaded to the Homeland Emergency Response Exchange (HERE) system utilized by First Responders and County Emergency Management personnel to provide up-to-date information about facilities.

Purpose:

The parties propose to enter into this Contract for the purpose of retaining the Contractor to provide: hosting, maintenance and support for the DNR's Tier II database.

Contractor Selection Process:

JADA was chosen using the sole source process. JADA was chosen for this project because application is customized proprietary software and cannot be altered without infringing on the intellectual property rights of JADA Productions.

Contract History: (if EPC)

JADA Productions was selected for the original contract by competitive bid for the development, maintenance, and hosting of the Tier II On-line Submittal software for a period of 1 year. The original contract cost was $46,700.00 with one amendment adding $9,870.00. In 2014 a new contract was developed for customization of the software and the continuation of the support, maintenance, and hosting of the software until June 30th, 2015 (6 months). The value of the 2014 contract was $21,680.00. This amendment is for the 2014 contract and brings the total for the contract to $46,480.00.

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

APPROVED AS PRESENTED

DONATIONS

Bill Ehm, Division Administrator, of the Environmental Services Division presented the following item.

Commission approval was requested for the below donation(s) under Iowa Code 455B.103(5):

Iowa Code 455B.103(5) – The Director shall
Accept, receive, and administer grants or other funds or gifts from public or private agencies, including the federal government, for the abatement, prevention, or control of pollution, or other environmental programs, subject to the approval of the commission.

Donation to:	Amount	Description	Donation Provided by:
Water Quality Monitoring	$50.00		Urbandale Federated Garden Club

Motion was made by Chad Ingels to approve the agenda item as presented. Seconded by Joe Riding. Motion carried unanimously

APPROVED AS PRESENTED

General Discussion

- Ed Tormey summarized a legal opinion of the Iowa Code related to the attendance of Commissioners.
- Jerah Sheets provided a summary of the upcoming new commissioner training in June.
- Chair Mary Boote thanked Alcoa, the City of Davenport, and Commissioner LaQuanda Hoskins for the educational tours.

Chairperson Boote adjourned the Environmental Protection Commission meeting at 2:20 p.m., Tuesday, May 19, 2015.

IOWA DEPARTMENT OF NATURAL RESOURCES

LEADING IOWANS IN CARING FOR OUR NATURAL RESOURCES

Iowa's Draft 2014 Clean Water Act Section 303(d) List of Impaired Waters

John Olson
Iowa DNR Water Quality Monitoring & Assessment Section

Meeting of the
Environmental Protection Commission
May 19, 2015

Impaired Water: definition

- In the context of the federal Clean Water Act:
  - *A water assessed as not fully supporting one or more of its designated uses as defined in state water quality standards*
- *Designated uses*:
  - All Iowa waters are designated for a combination of the following uses:
    1. Aquatic life protection (warmwater, coldwater, lake/wetland)
    2. Water contact recreation uses (primary & secondary contact)
    3. Drinking water uses
    4. Human health protection: fish consumption & drinking water use

Background of the Impaired Waters (Section 303(d)) List

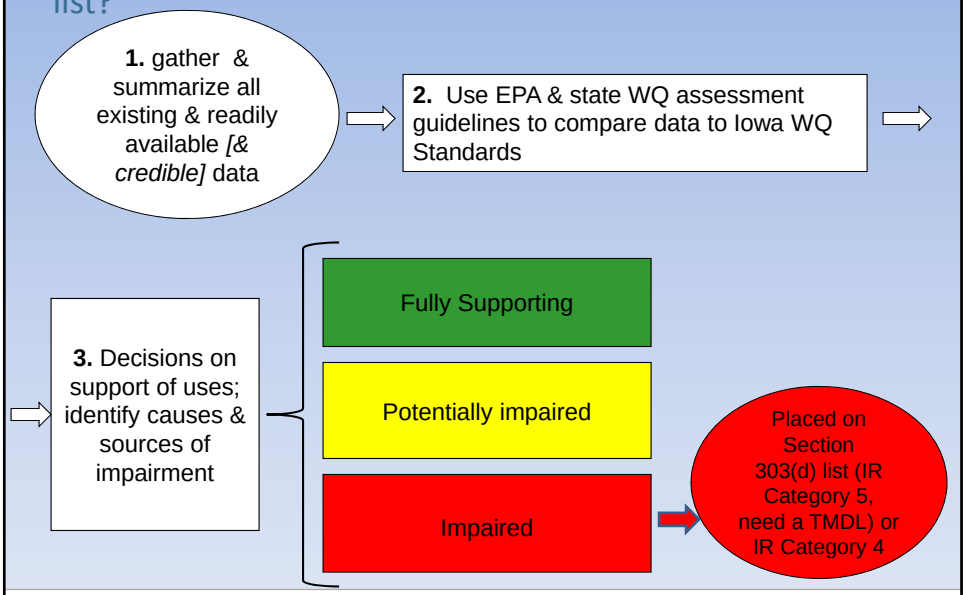
- Required by Section 303(d) of the Clean Water Act
- Due from all states every two years
- Identifies surface waters that (1) do not fully meet applicable **state** WQ Standards and (2) that need a TMDL (= *total maximum daily load = WQ Improvement Plan*)
  - The 303(d) list is strictly tied to state WQ Standards
- The 303(d) list is Category 5 of the "Integrated Report"
  - Category 5 (303(d) list) is the only EPA-approvable portion of the Integrated Report

Integrated Report Categories (according to EPA guidance)

THE FIVE CATEGORIES:

1. All designated uses (swim, fish, &/or DW) met
2. Some uses met; insufficient data to determine if other uses are met
3. Insufficient data to determine if any use met
4. Impaired but a TMDL is not needed
5. Impaired and a TMDL is needed (=303(d) list)

How does a stream/river/lake get on the impaired waters list?

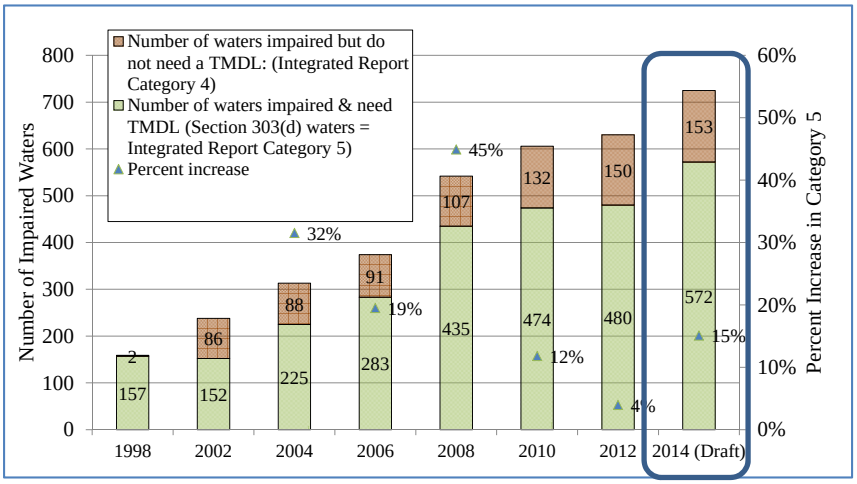


Sources of WQ data used to assess water quality for Integrated Reporting

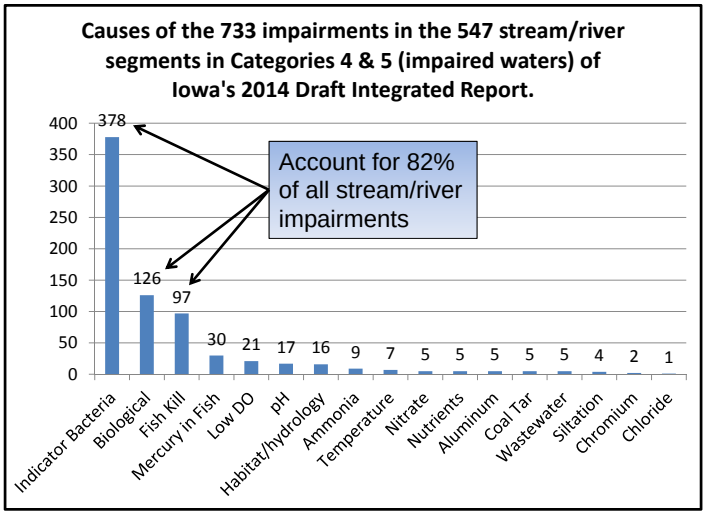
TMDL rules specify that states *shall assemble and evaluate all existing and readily available water quality-related data and information to develop the list*

- Iowa DNR ambient WQ monitoring networks
  - Fixed station river monitoring network:
  - Ambient lake monitoring & beach monitoring programs:
  - Wadeable stream biological (fish & macroinvertebrate) monitoring
  - Fish contaminant monitoring network
  - Wetland/shallow lakes monitoring network
- Iowa DNR Fish kill database
- Other data:
  - Federal: U.S. ACOE, USGS, Mississippi River LTRMP
  - Drinking water utilities (Des Moines & Cedar Rapids)
  - Monitoring data from adjacent states (IL, MN, SD, NE)
  - Special project data: watershed projects

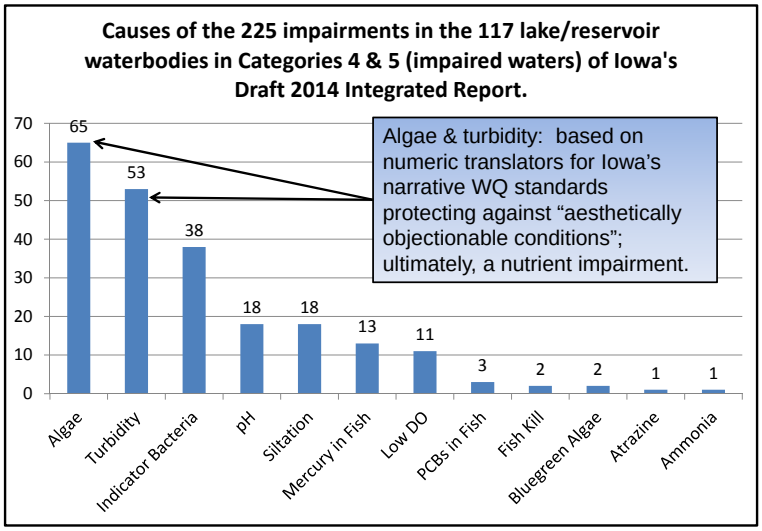
Numbers of impaired waters in Iowa, 1998-2014



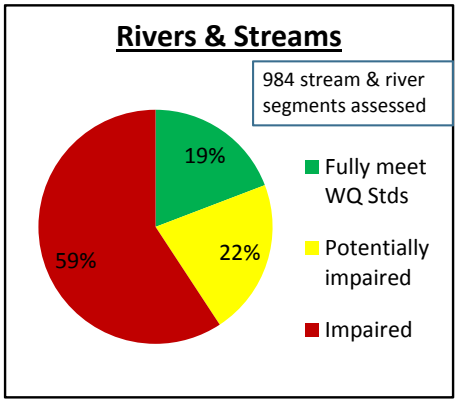
Causes of impairment in Iowa rivers & streams:

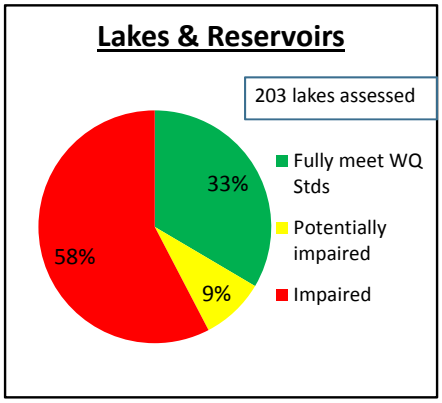


Causes of impairment at Iowa lakes:



Summary of Iowa's draft 2014 CWA Integrated report assessment





"Potentially impaired" waters are placed on Iowa's list of Waters in Need of Further Investigation".

How does a water get removed (*de-listed*) from the Impaired Waters list?

- According to federal rules (CFR 130.7), "good cause" is needed
- "Good cause" includes but is not limited to:
  - More recent or accurate data
  - Flaws in the original analysis that led to listing
- In Iowa, the most common reasons for removing impairments are
  - New data showing improvement in WQ conditions
    - 43 proposed de-listings for 2014
  - Preparation of a TMDL & approval of the TMDL by U.S. EPA
    - 12 proposed de-listings for 2014
  - Assessment errors
    - 12 proposed de-listings for 2014
- NB: All state-proposed de-listings are reviewed in detail by U.S. EPA (Region 7) and are the most intensively scrutinized items in the entire process.

Some quirks of Iowa's impaired waters listing process

- Nutrient criteria:
  - There are no numeric WQ criteria in the Iowa WQ standards (IAC, Chapter 61) for the nutrients nitrogen or phosphorus to protect aquatic life uses.
- Siltation / sedimentation:
  - There are no WQ criteria for "sediment" or "siltation".
- Magnitude of impairment:
  - Contrary to popular belief, "impairment" does not necessarily indicate severe pollution impacts. The degree of impairment ranges from slight to severe.
- WQ Criteria:
  - Iowa's numeric WQ criteria are, in general, protective of the designated use:
  - However, Iowa's approach of assessment algae/turbidity impairments at Iowa lakes is different: an impairment = an observable problem.
- The number of impairments in a state does not indicate WQ condition
- The increase in impaired waters with each listing cycle does not necessarily indicate worsening water quality but more likely reflects additional monitoring.

Examples of "impaired" waters in Iowa with exceptionally high water quality:

More information:

- U.S EPA guidance for Integrated Reporting & 303(d) lists:
  - http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/guidance.cfm
- Iowa DNR Water Quality Monitoring & Assessment:
  http://www.iowadnr.gov/Environment/WaterQuality/WaterMonitoring.aspx
  - *Iowa DNR Impaired waters web site:*
    http://www.iowadnr.gov/Environment/WaterQuality/WaterMonitoring/ImpairedWaters.aspx
  - *Iowa DNR WQ Assessment Database (ADBNet):*
    https://programs.iowadnr.gov/adbnet/index.aspx
  - *Iowa STORET water quality database:*
    https://programs.iowadnr.gov/iastoret/

John Olson
Iowa DNR Water Quality Monitoring & Assessment Section
John.olson@dnr.iowa.gov
515-725-8385

Sheets, Jerah [DNR]

From: Virginia Soelberg <soelbergg@gmail.com>
Sent: Thursday, May 14, 2015 12:11 PM
To: Boote, Mary [DNR]; Couser, Nancy [DNR]; Greiman, Cindy [DNR]; Hoskins, LaQuanda [DNR]; Ingels, Chad [DNR]; Lents, Ralph [DNR]; Sinclair, Bob [DNR]; Riding, Joe [DNR]; VerSteeg, Gene [DNR]; Sheets, Jerah [DNR]
Subject: Topsoil Protection

To the Iowa Environmental Protection Commission:

Dear Commissioners,

I will be unable to attend your meeting next week in Davenport, and I would like to add my thoughts to the discussion.

Much has been said about "burdensome regulations," but in this case, it is the lack of assurance of preservation of topsoil on a building site that becomes the burden to new homeowners, to communities, and to water protection.

Please consider the many comments you have received from the March, 2015 comment period, and consider their source. Many valid questions were raised that the DNR should be asked to respond to. And, especially for the new members, I urge you to also go back to the five batches of comments that were given as input to the Stakeholders process. They also deserve recognition in the process.

The United Nations has declared this the International Year of Soils, and Iowa's greatest natural resource is its precious topsoil. Our topsoil must be protected, including on the surface of each building site. The federal guideline needs clear definition to be effective.

Thank you for your consideration.

Virginia Soelberg

Johnston, IA

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Agenda

Environmental Protection Commission

Tuesday, May 19, 2015
Davenport East Branch Library
6000 Eastern Avenue
Davenport, IA

Monday, May 18, 2015 - EPC Educational Tour - Alcoa in Riverdale, Iowa 52722

Advance registration for the tour is required for security background checks. Please contact Jerah Sheets at Jerah.Sheets@dnr.iowa.gov or 515-313-8909 by May 12th to register.

12:00 PM – Lunch
1:00 PM – Tour of Alcoa
3:00 PM – Driving Tour of Development Sites
6:00 PM – Dinner Thunder Bay Grille, 6511 Brady Street, Davenport, Iowa 52806

Tuesday, May 19, 2015 EPC Business Meeting – Davenport East Library, 6000 Eastern Ave, Davenport, Iowa 52806

8:30-9:30 AM – EPC Coffee Hour at Quality Inn Hotel 6605 N. Brady Street, Davenport, IA 52806
10:00 AM – EPC Business Meeting begins

Public Participation[1] – 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.

	Agenda topics	
1	Approval of Agenda	
	Oath of Office for New Commissioners	
	Election of Officers	
2	Approval of Minutes	
3	Monthly Reports	Bill Ehm (Information)
4	Public Participation	
5	Director's Remarks	Chuck Gipp (Information)
6	Notice of Intended Action, Chapter 64, "Wastewater Construction and Operation Permits" and Storm Water General Permit No. 2 for Construction Activities – Topsoil Preservation	Joe Griffin (Information)
7	Contract with The University of Iowa on behalf of The State Hygienic Laboratory for Environmental Monitoring & Laboratory Services	Barb Lynch (Decision)
8	Contract with Iowa State University Extension and Outreach for Manure Applicator Certification Training	Bill Ehm (Decision)
9	Contract – USGS Stream Gage Agreement	Lori McDaniel (Decision)
10	Derelict Building Grant Program – Grant Recommendations	Scott Flagg (Decision)

11	Contract with University of Iowa on behalf of the STATE HYGIENIC LABORATORY for 2016 SHL Services in Support of the DNR Air Quality Bureau	Sean Fitzsimmons (Decision)
12	Air Quality – Title V Fee	Catharine Fitzsimmons (Decision)
13	Contract with State Hygienic Laboratory at The University of Iowa for Ambient Stream Biological Monitoring and Laboratory Services	Roger Bruner (Decision)
14	Contract with The University of Iowa for Ambient Stream Sample Collection and Analysis	Roger Bruner (Decision)
15	The draft 2014 state list of CWA Section 303(d) impaired waters	John Olson (Information)
16	Contract with JADA Productions for Tier II Database Hosting, Support, and Maintenance	Adam Broughton (Decision)
17	Donations	Bill Ehm (Decision)
18	General Discussion	
19	Items for Next Month's Meeting • June 16, 2015 – EPC Business Meeting, Windsor Heights • July 20, 2015 – EPC Education Tour, Iowa County • July 21, 2015 – EPC Business Meeting, Iowa County	

For details on the EPC meeting schedule, visit
http://www.iowadnr.gov/InsideDNR/BoardsCommissions.aspx

[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.

DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION COMMISSION
ATTORNEY GENERAL REFERRALS
May, 2015

Name, Location and Region Number	Program	Alleged Violation	DNR Action	New or Updated Status	Date
Feinberg, Marty; Feinberg Metals Recycling Corp. Fort Madison (6)	Solid Waste	Operation Without Permit; Illegal Disposal	Referred to Attorney General	Referred	4/14/15
Hoffman, Matt Hinton (3)	Animal Feeding Operation	Failure to Submit MMP and Fees	Referred to Attorney General	Referred Petition Filed Motion for Default Judgment Hearing Date Default Judgment Granted ($20,000 Civil/Injunction)	4/15/14 12/03/14 1/28/15 3/09/15 3/09/15
Kossuth County (2)	Animal Feeding Operation	DNR Defendent	Defense	Petition for Judicial Review State's Answer P&J Pork Motion to Intervene Order Granting Motion to Intervene Kossuth County Brief State's Brief District Court Review Without Oral Argument	9/18/14 10/08/14 11/07/14 11/20/14 2/03/15 2/13/15 3/04/15
North Central Iowa Regional SWA Fort Dodge (2)	Solid Waste	Operating Permit Violations	Referred to Attorney General	Referred	9/17/13
North Iowa Area Solid Waste Agency Sheldon (3) **UPDATED**	Solid Waste	Unapproved Leachate Collection System	Referred to Attorney General	Referred Petition Filed Answer Third Party Petition Against Elliot Waddell and Five States Engineering, PLC State's Resistance to Demand for Jury Trial Hearing Regarding Jury Trial Demand Ruling Denying Jury Demand Motion to Clarify Ruling Nunc Pro Tunc Order Jury Demand Allowed for 3rd Party Defendant State's Motion to Strike or Sever 3rd Party Petition Resistance to Motion to Strike Application for Default Judgment Order Granting Default Judgment Against 3rd Party Defendant Trial Date Consent Decree ($100,000 Civil/ Corrective Action/Injunction)	1/15/13 9/26/13 10/11/13 10/11/13 10/23/13 11/25/13 1/17/14 1/23/14 1/28/14 2/11/14 2/24/14 3/12/14 3/13/14 3/31/15 4/08/15
Peeters Development Co., Inc.; Mt. Joy Mobile Home Park Davenport (6)	Wastewater	Monitoring/Reporting; Compliance Schedule; Discharge Limits; Operation Violations; Certified Operator Discipline	Referred to Attorney General	Referred	3/18/14

DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION COMMISSION
ATTORNEY GENERAL REFERRALS
May, 2015

Name, Location and Region Number	Program	Alleged Violation	DNR Action	New or Updated Status	Date
Pet Memories, Inc. Warren Co. (5)	Solid Waste	Judicial Review	Defense	Petition Filed Answer Pet Memories Brief State's Brief Hearing Date	2/05/14 3/05/14 1/16/15 2/17/15 4/13/15
Scallon, Jim Austinville (2)	Solid Waste	Illegal Disposal	Referred to Attorney General	Referred	5/20/14

Iowa Department of Natural Resources
Environmental Services Division
First Quarter 2015 Report of Wastewater By-passes

During the period January 1, 2015 through March 31, 2015, 35 reports of a wastewater by-pass were received. A general summary and count by field office is presented below. This does not include by-passes resulting from precipitation events or by-passes resulting in basement backups.

Month	Total	Avg. Length (days)	Avg. Volume (MGD)	Sampling Required	Fish Kill
1ST Quarter '15	35(52)	0.237	0.011	3	0(0)
2ND Quarter '14	78(97)	0.188	0.011	11	0(0)
3RD Quarter '14	58(46)	0.184	0.008	8	0(0)
4TH Quarter '14	34(46)	0.460	0.047	4	0(0)

(numbers in parentheses are for same period last year)

Total Number of Incidents per Field Office This Quarter:

Field Office	**1**	**2**	**3**	**4**	**5**	**6**
Reports	4	2	5	3	8	13

DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION COMMISSION
CONTESTED CASES
May, 2015

DATE RECEIVED	NAME OF CASE	F.O.	ACTION APPEALED	PROGRAM	ASSIGNED TO	STATUS
10/29/09	Harlan Rudd; Karen Rudd; dba Rudd Brothers Tires	6	Order/Penalty	UT	Brees	Informal negotiation. CADR was submitted, partially rejected with options. Settlement letter sent 2/24/10.
3/11/10	Bondurant, City of	5	Order/Penalty	WW	Hansen	7/2013-On hold pending further investigation.
2/28/11	Manson, City of	3	Order/Penalty	WS	Hansen	4/1/11 – Settlement conference held with City. 6/22/11- Settlement offer received from City attorney. 6/28/11- More information requested from City attorney concerning the settlement proposal. 11/29/11- Settlement meeting with City regarding new well project. 12/2011 – City proceeding with project. 6/2012- Contractor worked on new well to remove debris in well. Test pump to be installed to do test of well capacity. 07/2012- City to abandon new well and select new site for well to increase PWS capacity. 10/2012- Water plant work to be done week of 12/10/12. 5/2013- New well project & appeal on hold, pending UDSA funding decision. 6/2/13 – USDA funding decision received. 6/26/13 – New bid date for well project. . 7/2013- Tentative schedule for new well received from City's engineer. 8/13 – Drilling on test well begun by contractor. 9/13 – Test well not productive, new well site approved by Dept. New test well to be drilled. 10/13- Test well drilled but not successful. Test well abandoned. City Council to decide on next step. 1/24/14 – City's engineer sent revised construction schedule for another test well and production well. 5/23/14- Test well drilled but not successful. City Council to determine next step. 6/20/14- Letter sent to City requesting plan of action and schedule by 8/30/14 for returning to compliance with order. 8/29/14 – New schedule received from City, to be incorporated into proposed consent amendment. 01/26/14- Proposed consent amendment sent to City for review.
8-27-12	Ag Processing, Inc.; Sergeant Bluff	4	Permit Conditions	AQ	Preziosi	Met with appellant 1/31/14. Met with appellant 3/12/14. Negotiations continuing. Appellant to submit further information in April. Settled in concept. Last communication with appellant on 5/22/14. Communication from appellant 7/22/14. Internal meeting 9/5/14. Letter sent to appellant 12/14 proposing terms of settlement.

DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION COMMISSION
CONTESTED CASES
May, 2015

DATE RECEIVED	NAME OF CASE	F.O.	ACTION APPEALED	PROGRAM	ASSIGNED TO	STATUS
11-21-12	Ag Processing Inc.	6	Permit Conditions	AQ	Preziosi	Continuing negotiations. Last communication with appellant on 5/20/14. Communication from appellant 7/22/14. Internal meeting 9/5/14. Letter sent to appellant 12/14 proposing terms of settlement.
3-04-13	Anderson Excavating Co., Inc.	4	Order/Penalty	SW	Crotty	Landfill closure underway. Settlement will occur after closure. Inspection on 8/20/14. Closure to be completed this fall.
6-10-13	Mike Jahnke	1	Dam Application	FP	Schoenebaum	Hearing held 7/30/14. ALJ upheld the permit issued by the Department. Mr. Jahnke appealed but on 11/3/14 he asked that his appeal be put on hold until April, 2015.
10-28-13	Regional Environmental Improvement Commission/Iowa Co. SLF	6	Variance	WW	Tack	2/20/15 – Settlement reached. Awaiting execution.
1-02-14	P & J Pork, LLC		Construction Permit Denial	AFO	Book	6/10/14 – Proposed decision affirming DNR permit denial. 6/18/14 – P & J Pork appeals proposed decision. 8/19/14 – EPC reverses proposed decision. 9/18/14 – Intervenor, Kossuth County, files Petition for Judicial Review in Kossuth County.
1/16/14	Council Bluffs Water Works	4	Permit Conditions	WW	Tack	Hearing continued. Settlement discussions ongoing.
1/21/14	**AG Processing, Inc.**		**Permit Conditions**	**AQ**	**Preziosi**	**Negotiations continuing. Last communication with appellant on 5/20/14. Communication from appellant 7/22/14. Internal meeting 9/5/14. Revised permits will be issued. Case settled.**
4/17/14	REIC/Iowa Co. Sanitary Landfill	6	Permit Conditions	WW	Tack	**4/27/15 Consent Order signed by REIC. Awaiting receipt.**
9/08/14	Craig Ver Steegh	5	Permit Conditions	WW	Crotty	**Hearing continued until 7/14/15.**
10/01/14	Amsted Rail Company, Inc. (Griffin Wheel Co.)		Permit Conditions	SW	Crotty	Negotiating before filing.
11/13/14	Adam Timmerman	3	Order/Penalty	AFO	Book	Negotiating before filing.
1/21/15	Sidney, City of	4	Permit Conditions	WS	Hansen	Negotiating before filing.
2/05/15	Mahle Engine Components USA	4	Order/Penalty	WW	Hansen	Negotiating before filing.
3/31/15	Duane Covington	5	Notice to Revoke License	WS	Hansen	Negotiating before filing.

DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION COMMISSION
CONTESTED CASES
May, 2015

DATE RECEIVED	NAME OF CASE	F.O.	ACTION APPEALED	PROGRAM	ASSIGNED TO	STATUS

DATE: May, 2015

TO: EPC

FROM: Ed Tormey

RE: Enforcement Report Update

The following new enforcement actions were taken during this reporting period:

Name, Location and Field Office Number	Program	Alleged Violation	Action	Date
Colwell, City of (2)	Wastewater	Municipal Improvement Plan	Consent Order	4/15/15
Rowan, City of (2)	Wastewater	Municipal Improvement Plan	Consent Order	4/15/15
Coralville, City of (6)	Wastewater	Discharge Limits	Amended Consent Order	4/16/15
Terrance Kooima Sioux Co. (3)	Animal Feeding Operation	Monitoring/Reporting	Consent Order	4/16/15
Fort Dodge, City of; John W. Pray Water Facility (2)	Wastewater	Compliance Schedule	Consent Order	4/20/15
Woodland Park, LLC; Woodland MHP Muscatine (6)	Wastewater	Failure to Renew NPDES Permit	Order/Penalty $1,500	4/20/15
New London, City of (6)	Wastewater	Failure to Renew NPDES Permit	Order/Penalty $1,500	4/20/15
Cedar Ridge Vineyard, LLC Johnson Co. (6)	Wastewater	Failure to Renew NPDES Permit	Order/Penalty $1,500	4/20/15
Goebel Pumping Service, LC Bremer Co. (1)	Animal Feeding Operation	Land Application Separation Distance	Consent Order $3,500	4/20/15
Riesberg, Wayne Audubon Co. (4)	Animal Feeding Operation	Land Application Separation Distance	Consent Order $3,000	4/29/15

IOWA DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION COMMISSION
RULE MAKING STATUS REPORT
May, 2015

Proposal	Stakeholder Engagement	Sent for Governor's Pre-Approval (Job Impact) Statement	Notice to EPC	Notice Published	ARRC No.	ARRC Mtg.	Hearing	Comment Period	Final Summary To EPC	Rules Adopted	Rules Published	ARRC No.	ARRC Mtg.	Rule Effective
1. Ch. 50, 52 and 53 – Water Allocation and Use – Jordan Aquifer		1/26/15 1/30/15	2/17/15	3/18/15	1914C	4/10/15	4/8, 9, 10/15	4/14/15						
2. Ch. 60, 62, 63, 64 and 67 – for National Pollutant Discharge Elimination System (NPDES) and Iowa Operation Permits		3/23/15												
3. Ch. 61 – Water Quality Standards; Surface Water Classification; Batch 4		11/10/14 8/22/14 1/8/15	1/21/15	2/18/15	1877C	3/06/15	3/10, 17, 24/15	3/27/15	4/14/15	4/14/15	5/13/15	1988C	6/09/15	6/17/15
4. Ch. 64 – NPDES General Permit No. 2 (GP2)		10/21/14 12/12/14	1/21/15	2/18/15	1873C	3/06/15	3/18, 25, 27/15	4/01/15						
5. Ch. 107 – Beverage Container Deposits – Phase 1; Ch. 110 – Hydrogeologic Investigation and Monitoring Requirements; Ch. 112 – Sanitary Landfills: Biosolids Monofills; Ch. 210 – Beautification Grant Program; and Ch. 218 – Waste Tire Stockpile Abatement Program -- RESCISSION		10/24/14 10/28/14	12/16/14	1/07/15	1823C	2/06/15	1/28/15	1/28/15	3/17/15	3/17/15	4/15/15	1956C	5/08/15	5/20/15
6. Ch. 209 – Landfill Alternative Financial Assistance		4/15/15												

Iowa Department of Natural Resources
Environmental Services Division
First Quarter 2015 Report of Manure Releases

During the period January 1, 2015, through March 31, 2015, 3 reports of manure releases were forwarded to the central office. A general summary and count by field office is presented below.

		Total Incidents		Surface Water Impacts		Feedlot		Confinement		Land Application		Transport		Hog		Cattle		Poultry		Other	
Month	**Year**	**Cur**	**Yr Ago**	**Cur**	**Yr Ago**	**Cur**	**Yr Ago**	**Cur**	**Yr Ago**	**Cur**	**Yr Ago**	**Cur**	**Yr Ago**	**Cur**	**Yr Ago**	**Cur**	**Yr Ago**	**Cur**	**Yr Ago**	**Cur**	**Yr Ago**
Jan	2015	0	2	0	1	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0
Feb	2015	2	1	0	0	0	0	1	0	0	0	1	1	1	0	0	0	1	1	0	0
Mar	2015	1	2	0	1	0	0	1	1	0	0	0	1	1	2	0	0	0	0	0	0
	Total	**3**	**5**	**0**	**2**	**0**	**1**	**2**	**2**	**0**	**0**	**1**	**2**	**2**	**3**	**0**	**1**	**1**	**1**	**0**	**0**

Total Number of Incidents per Field Office for the Selected Period	**Field Office 1**		**Field Office 2**		**Field Office 3**		**Field Office 4**		**Field Office 5**		**Field Office 6**	
	Current	**Previous**	**Current**	**Previous**	**Current**	**Previous**	**Current**	**Previous**	**Current**	**Previous**	**Current**	**Previous**
Total	0	0	0	3	0	1	3	0	0	0	0	1

Iowa Department of Natural Resources
Environmental Services Division
First Quarter 2015 Report of Hazardous Conditions

During the period January 1, 2015, through March 31, 2015, 133 reports of hazardous conditions were forwarded to the central office. A general summary and count by field office is presented below. This does not include releases from underground storage tanks, which are reported separately.

				Substance						Mode											
		Total Incidents		Agrichemical		Petroleum Products		Other Chemicals		Transport		Fixed Facility		Pipeline		Railroad		Fire		Other*	
Month	Year	Cur	Yr Ago	Cur	Yr Ago	Cur	Yr Ago	Cur	Yr Ago	Cur	Yr Ago	Cur	Yr Ago	Cur	Yr Ago	Cur	Yr Ago	Cur	Yr Ago	Cur	Yr Ago
Jan	2015	43	68	2	7	30	40	11	21	14	11	23	48	0	0	3	2	0	2	3	5
Feb	2015	40	69	0	5	36	47	4	17	18	19	15	36	0	1	3	4	0	4	4	5
Mar	2015	50	73	4	1	35	48	11	24	13	19	34	46	0	2	2	4	1	0	0	2
	Total	**133**	**210**	**6**	**13**	**101**	**135**	**26**	**62**	**45**	**49**	**72**	**130**	**0**	**3**	**8**	**10**	**1**	**6**	**7**	**12**

*Other includes dumping, theft, vandalism and unknown

Total Number of Incidents per Field Office This Selected Period	Field Office 1		Field Office 2		Field Office 3		Field Office 4		Field Office 5		Field Office 6	
	Current	Year Ago	Current	Year Ago	Current	Year Ago	Current	Year Ago	Current	Year Ago	Current	Year Ago
Total	21	30	24	34	10	13	16	34	29	52	33	47

IOWA DEPARTMENT OF NATURAL RESOURCES
LEGAL SERVICES BUREAU

DATE: May 1, 2015

TO: Environmental Protection Commission

FROM: Ed Tormey

SUBJECT: Summary of Administrative Penalties

The following administrative penalties are due:

NAME/LOCATION	PROGRAM	AMOUNT	DUE DATE
Robert and Sally Shelley (Guthrie Center)	**SW**	**1,000**	**3-04-91**
Daryl & Karen Hollingsworth d/b/a Medora Store(Indianola)	**UT**	**3,825**	**3-15-96**
Greg Morton; Brenda Hornyak (Decatur Co.)	**SW/AQ/WW**	**3,000**	**11-04-98**
James Harter (Fairfield)	**WW**	**1,336**	**8-01-01**
*** Floyd Kroeze (Butler Co.)**	**AFO**	**1,500**	**2-20-01**
Midway Oil Co.; David Requet (Davenport)	**UT**	**5,355**	**9-20-02**
Midway Oil Co.; David Requet; John Bliss	**UT**	**44,900**	**2-28-03**
Green Valley Mobile Home Park (Mt. Pleasant)	WW	5,000	4-23-03
Midway Oil Company (West Branch)	**UT**	**7,300**	**5-03-03**
Midway Oil Company (Davenport)	**UT**	**5,790**	**5-03-03**
Albert Miller (Kalona)	**AQ/SW**	**9,735**	**9-26-03**
Mike Messerschmidt (Martinsburg)	**AQ/SW**	**500**	**4-13-04**
Interchange Service Co., Inc., et.al. (Onawa)	WW	6,000	5-07-04
# Dunphy Poultry (Union Co.)	**AFO**	**1,500**	**6-27-04**
# Cash Brewer (Cherokee Co.)	**AFO/SW**	**10,000**	**8-25-04**
# Doorenbos Poultry; Scott Doorenbos (Sioux Co.)	**AFO**	**1,500**	**10-09-04**
# Doug Sweeney (O'Brien Co.)	**AFO**	**375**	**12-21-04**
Harold Linnaberry (Clinton Co.)	SW	1,000	5-18-05
# Joel McNeill (Kossuth Co.)	**AFO**	**2,460**	**1 21-06**
Affordable Asbestos Removal, Inc. (Monticello)	**AQ**	**7,000**	**4-28-06**
# Troy VanBeek (Lyon Co.)	**AFO**	**3,500**	**10-16-06**
Larry Bergen (Worth Co.)	**AQ/SW**	**257**	**11-01-06**
# Joshua Van Der Weide (Lyon Co.)	**AFO**	**3,500**	**2-25-08**
Jon Knabel (Clinton Co.)	**AQ/SW**	**2,000**	**12-16-08**
# Rick Renken (LeMars)	**AFO**	**996**	**7-03-09**
# Robert Fangmann (Dubuque Co.)	**AFO**	**1,000**	**7-15-09**
# Brian Lill (Sioux Co.)	**AFO**	**2,865**	**7-18-09**
Denny Geer (New Market)	**SW**	**9,476**	**10-31-09**
Shrey Petroleum; Palean Oil; Profuel Three (Keokuk)	UT	10,000	3-19-10
Melvin Wellik; Wellik-DeWitt Implement (Britt)	**AQ/SW**	**2,900**	**4-08-10**
Alchemist USA, LLC; Ravinder Singh (Malcom)	UT	8,260	5-03-10
# LJ Unlimited, LLC (Franklin Co.)	AFO/AQ/SW	3,500	5-27-10
Bret Cassens; J & J Pit Stop (Columbus Junction)	UT	8,700	6-20-10
# Christopher P. Hardt (Kossuth Co.)	AFO	2,000	7-07-10
AKD Investments, LLC; H.M. Mart, Inc. (Blue Grass)	UT	6,900	8-06-10
Eastern Hills Baptist Church (Council Bluffs)	WS	1,250	11-29-10

#Animal Feeding Operation
BOLD Entries Have Been Referred to DRF

# Joe McNeill (Kossuth Co.)	**AFO**	**2,460**	**12-23-10**
Gonzalez & Sons Express, Inc. (DeSoto)	**WW**	**8,000**	**4-20-11**
David C. Kuhlemeier (Cerro Gordo Co.)	**AQ/SW**	**1,100**	**6-30-11**
Steve Friesth (Webster Co.)	**AQ/SW**	**7,857**	**11-26-11**
Josh Oetken (Worth Co.)	**AQ/SW**	**8,245**	**3-11-12**
Bhupinder Gangahar/Saroj Gangahar/International Business	**UT**	**7,935**	**4-20-12**
Finney Industrial Painting, Inc. (Fairfield)	**AQ/WW**	**1,275**	**4-23-12**
Terry Philips; TK Enterprises (Washington Co.)	**AQ/WW**	**3,000**	**5-30-12**
# Boerderij De Vedhoek, LLC (Butler Co.)	**AFO**	**8,500**	**11-16-12**
B Petro Corporation (Cedar Rapids)	UT	7,728	5-13-13
Ken Odom (Iowa Co.)	**AQ/SW**	**5,000**	**4-26-13**
Massey Properties, LLC; The Wharf (Dubuque)	**WS**	**10,000**	**10-05-13**
Robert Downing (Mahaska Co.)	**AQ/SW**	**10,000**	**11-20-13**
Shriners Hospital for Children, Inc. (Des Moines)	UT	8,890	12-03-13
Larry Eisenhauer (Woodbury Co.)	**AQ/SW**	**4,675**	**3-01-14**
Randy Wise; Wise Construction (Buena Vista Co.)	AQ/SW	3,000	4-10-14
Advanced Electroforming, Inc. (Cedar Co.)	AQ	1,500	4-03-14
Western Iowa Telephone Assoc. (Lawton)	WW	4,000	5-24-14
Wendall Abkes (Parkersburg)	SW	3,000	7-30-14
Donna J. Jensen (Ringsted)	AQ/SW	3,000	10-17-14
Dennis Habben (Sioux Co.)	SW	3,000	11-01-14
Leda Properties, LTD (Dubuque)	WW	5,000	12-12-14
Annie’s LLC; Togie Pub (Lime Springs)	WS	3,500	12-22-14
Joel Thys; Thys Chevrolet, Inc. (Benton Co.)	AQ/SW	10,000	1-04-15
West Central Cooperative (Halbur)	WW	4,000	1-04-15
Muscatine County Solid Waste Mgmt. Agency (Muscatine)	SW	6,000	2-11-15
# Mark Yeggy; Randalyn Yeggy (Washington Co.)	AFO	5,000	3-23-15
# Benjamin J. Waigand (Union Co.)	AFO	2,500	4-15-15
Aerial Crop Care; Tri State Agri; Hoppe Airspray (Lyon)	WW	3,500	4-23-15
# Cob Rollers Pork, LLC (Bremer Co.)	AFO	3,500	4-30-15
# MLS Legacy, LLP; Clinton Vos (Jasper Co.)	AFO	7,850	4-30-15
Cedar Ridge Vineyard, LLC (Swisher)	WW	1,500	5-20-15
New London, City of	WW	1,500	5-20-15
Woodland Park, LLC; Woodland MHP (Muscatine)	WW	1,500	5-20-15
	TOTAL	**353,695**	

The following penalties have been assessed but are not due at this time:

None at this time.

TOTAL

The following penalties have been placed on payment plans:

*** Reginald Parcel (Henry Co.)**	**AQ/SW**	**110**	**4-23-05**
*** Country Stores of Carroll, Ltd. (Carroll)**	**UT**	**1,408**	**6-06-05**
*** Douglas Bloomquist (Webster Co.)**	**AQ/SW**	**3,500**	**12-01-07**
* Jack Knudson (Irwin)	UT	10,000	1-15-08
# Jerry Passehl (Latimer)	SW/WW/HC	2,695	7-01-09
Jerry Wernimont (Carroll)	**AQ/SW**	**216**	**4-19-10**
# Ernest Greiner (Keokuk Co.)	**AFO**	**500**	**10-10-10**
Jim Scallon (Butler Co.)	SW	700	4-15-13

#Animal Feeding Operation

BOLD Entries Have Been Referred to DRF

R.H. Hummer Jr., Inc.; 2161 Highway 6 Trail (Iowa Co.)	AQ/SW	3,643	9-15-13
Patrick Baker; Stockton Auto (Davenport)	AQ/SW	83	12-15-14
Ellsworth Excavating Co. (Muscatine Co.)	AQ/SW	225	3-01-15
# Steve Grettenberg; Dragster LLC	AFO	1,750	11-20-14
Millard Elston III; The Earthman (Jefferson Co.)	**AQ/SW**	**1,815**	**2-15-13**
Simon Simonson (Kossuth Co.)	SW	3,800	11-30-14
ADA Enterprises, Inc. (Worth Co.)	WW	5,000	8-15-14
Niehouse Cleaners & Draperies, Inc. (Marshalltown)	AQ	2,500	9-15-14
# David Dahlgren (Clarion)	AFO	2,250	12-15-14
	TOTAL	**40,195**	

The following administrative penalties have been appealed:

Harlan Rudd; Karen Rudd; Rudd Bros. Tires (Drakesville)	**UT**	**10,000**
Bondurant, City of	**WW**	**10,000**
Helen and Virgil Homer; Grandmas Snack Shop; (Aredale)	WS	8,461
Manson, City of	**WS**	**10,000**
Anderson Excavating Company, Inc. (Pottawattamie Co.)	**SW**	**10,000**
# Adam Timmerman; AT Livestock Ent. South (Cherokee Co.)	AFO	4,250
Mahle Engine Components USA, Inc. (Atlantic)	WW	10,000
	TOTAL	**62,711**

The following administrative penalties have been collected:

# Winchester Carriage; Monarch Enterprises (Jasper Co.)	AFO	3,125
Noah Coppess (Cedar Co.) 1/29/13	AQ/SW	7,500
Ellsworth Excavating Co. (Muscatine Co.)	AQ/SW	75
Simon Simonson (Kossuth Co.)	SW	100
Equistar Chemicals, LP (Clinton)	WW	6,000
Jeffrey G. Gerritson (O'Brien Co.)	**SW**	**2,000**
Albert Miller (Kalona)	**AQ/SW**	**5**
Albert Miller (Kalona)	**AQ/SW**	**5**
Josh Oetken (Worth Co.)	**AQ/SW**	**25**
David C. Kuhlemeier (Cerro Gordo Co.)	**AQ/SW**	**100**
Finney Industrial Painting, Inc. (Fairfield)	**AQ/WW**	**250**
# Goebel Pumping Service, LC (Bremer Co.)	AFO	3,500
ABC Crane Co.(Rockwell City)	AQ	5,000
# Wayne Riesberg (Carroll)	AFO	3,000
# Eric Rasmussen; Thunder Valley Ag LLP (Taylor Co.)	AFO	5,000
	TOTAL	**35,685**

#Animal Feeding Operation
BOLD Entries Have Been Referred to DRF

Monthly Variance Report
March 2015

Item No.	Facility/City	Program	DNR Reviewer	Subject	Decision	Date
1	Nugents Road Bridge over Buffalo Creek	Flood Plain	Asia Azam	variance to freeboard criterion that low chord of bridge must be set 3 feet above 50-year flood elevation.	approved	10/27/2014
2	Equistar Chemicals	Air Quality	Reid Bermel	variance to temporarily operate polymer reactors at higher production rate	approved	3/6/2015
3	Valero Renewable Fuels	Air Quality	Ann Seda	variance to exceed permitted TDS level	approved	3/6/2015
4	Nishnabotna River	Flood Plain	Jeff Simons	variance to backwater criteria for the 100-year frequncy flood event	approved	3/10/2015
5	BROS-CO31(76)--8J-31	Flood Plain	Jim Hallmark	variance to freeboard criterion that low chord of bridge must be set 3 feet above 50-year flood elevation.	approved	3/11/2015
6	City of Manning	Flood Plain	Karen Smith	variance to freeboard criterion that low chord of bridge must be set 3 feet above 50-year flood elevation.	approved	3/11/2015
7	Lafarge US	Air Quality	Dennis Thielen	variance to delay stack testing	approved	3/13/2015
8	Van Diest Supply Co	Air Quality	Ann Seda	variance to alter equipment prior to first obtaining permit	approved	3/17/2015
9	Ft Dodge Correctional Facility	Air Quality	Ann Seda	variance for process change	approved	3/17/2015
10	Gable Corp	Air Quality	Reid Bermel	variance from code to receive and place emergency generators	approved	3/23/2015
11	Iowa Great Lakes Sanitary Distric	Wastewater	Marty Jacobs	variance to design standards for installing gravity sewers	approved	3/24/2015
12	Valero Renewable Fuels	Air Quality	Dennis Thielen	variance to stack testing requirements.	approved	3/25/2015
13	Montgomery Co Secondary Roads Dept	Air Quality	Dennis Thielen	variance to operate a burn pit	denied	3/25/2015
14	IPL Sutherland Generating Station	Air Quality	Reid Bermel	variance to operate rental engines	approved	3/31/2015

Iowa Department of Natural Resources
Environmental Protection Commission

ITEM **6** **INFORMATION**

TOPIC **Notice of Intended Action, Chapter 64, "Wastewater Construction and Operation Permits" and Storm Water General Permit No. 2 for Construction Activities – Topsoil Preservation**

The public comment period for the proposed changes to Chapter 64 regarding topsoil preservation ended April 1, 2015 during which three public hearings were held. Over 700 mailed, e-mailed and verbal comments were received. At the April meeting, the Commission discussed the preliminary analysis of these comments and expressed the intent to discuss the matter in more detail at the May meeting.

The Department's webpage http://www.iowadnr.gov/InsideDNR/RegulatoryWater/NPDESStormWater.aspx posts all the comments and audio recordings from the hearings.

The current requirement is that if 4 inches or more of topsoil existed prior to development, a minimum of 4 inches is to be in place on the surface of the site after construction is complete unless land use precludes the practice. The proposed requirement is that the permittee(s) shall, unless infeasible, preserve topsoil. "Infeasible" shall mean not technologically possible, or not economically practicable and achievable in light of the best industry practices as determined by the permittee. "Unless infeasible, preserve topsoil" shall mean that, unless infeasible, topsoil from any areas of the site where the surface of the ground for the permitted construction activities is disturbed, shall remain within the area covered by the applicable General Permit No. 2. Soil may be used elsewhere in the development and no minimum retention requirement is applicable to an individual lot or portion of the project.

Joe Griffin, Environmental Specialist Senior
NPDES Section, Water Quality Bureau
Iowa Department of Natural Resources

April 27, 2015

ENVIRONMENTAL PROTECTION COMMISSION[567]

Notice of Intended Action

Pursuant to the authority of Iowa Code sections 455B.103A and 455B.105(3), the Environmental Protection Commission (Commission) hereby gives Notice of Intended Action to amend Chapter 64, "Wastewater Construction and Operation Permits," Iowa Administrative Code.

The proposed amendments to Chapter 64 will revise General Permit No. 2 which authorizes the discharge of stormwater from construction sites. Substantive changes in General Permit No. 2 are required to implement the federal effluent guidelines for Construction and Development Point Sources. This standard is found at 40 CFR 450.21. Most of the measures in the federal effluent guidelines are already included in General Permit No. 2. The changes being proposed in General Permit No. 2 involve topsoil preservation at construction sites. The Code of Federal Regulations requires one to minimize soil compaction and, unless infeasible, preserve topsoil. Currently, the Commission defines this requirement as the preservation of at least 4 inches of topsoil at construction sites when this is consistent with land use practices and if at least 4 inches of topsoil existed on the site prior to construction.

After analysis and review of this rule making, a positive impact on jobs could exist. At the time the 4-inch rule was adopted, it was generally believed by the Commission and stakeholders that the fiscal impact of the rule would be minimal and would not significantly impact developers, builders, or home buyers. In early 2014, various members of the development community requested that the language be changed to mirror the federal standard of preserving topsoil, unless feasible. These stakeholders reported that actual costs of implementation of the 4-inch standard were significantly

higher than anticipated, including costs with having to verify that the standard was uniformly met throughout the construction site. Cost impact estimates have been reported to vary from several hundred dollars per lot to several thousand dollars per lot. This economic concern led to the formation of an Executive Order (EO) 80 stakeholders' group, which convened meetings and obtained public input in 2014. The EO 80 stakeholders' group recommended to the Commission that the topsoil preservation requirement in General Permit No. 2 be changed to more closely align with the federal language, with some additional verbiage added. The EO 80 stakeholders' group indicated that the proposed revisions will result in a net reduction in costs to residential developers and home builders which would lead to lower prices for home purchasers. On September 16, 2014, the Commission directed the Department of Natural Resources (Department) to initiate rule making to adopt the EO 80 stakeholders' group recommendation for General Permit No. 2 with further, minor changes recommended by the Commission.

The following revisions to General Permit No. 2 are proposed:

Part IV.D.2.A.(2).(c) of the stormwater General Permit No. 2 is revised as follows:

> **A.(2).(c).** Unless infeasible, the following measures shall be implemented at all sites: utilize outlet structures that withdraw water from the surface when discharging from basins, provide and maintain natural buffers around surface waters, direct storm water to vegetated areas to increase sediment removal and maximize storm water infiltration ~~and minimize soil compaction. Topsoil shall be preserved at all construction sites unless land use precludes the practice. The requirement to preserve topsoil shall be met only when the depth of topsoil after soil disturbing~~

~~activities have been completed and final stabilization achieved for the permitted activity is equal to, or greater than, 4.0 inches, including soil contained in sod, on all areas of the site where the surface of the ground disturbed for the permitted construction activities is exposed and not covered by concrete, asphalt, gravel or other such material and where 4.0 inches or more of topsoil existed prior to the commencement of soil disturbing activities that are permitted under the current permit authorization for the site. On areas where less than 4.0 inches of topsoil existed prior to the commencement of soil disturbing activities that are permitted under the current permit authorization for the site, the minimum depth of topsoil after soil disturbing activities have been completed and final stabilization achieved for the permitted activity shall be equal to, or greater than, the depth of topsoil that existed prior to the commencement of soil disturbing activities that are permitted under the current permit authorization for the site~~. ~~The final topsoil depth is to be measured after the soil has been compacted in a fashion generally considered adequate for an established lawn and so that the expected settling that will occur after measurement will be minimal and shall include the soil contained in any sod that has been placed on the site. The type of topsoil at the site after soil disturbing activities have been completed and final stabilization achieved for the permitted activity shall be similar to that which exists or existed in the general area of the site.~~ The permittee(s) shall minimize soil compaction and, unless infeasible, preserve topsoil. "Infeasible" shall mean not technologically possible, or not economically practicable and achievable in light of the best industry practices. "Unless infeasible,

preserve topsoil" shall mean that, unless infeasible, topsoil from any areas of the site where the surface of the ground for the permitted construction activities is disturbed, shall remain within the area covered by the applicable General Permit No. 2. Minimizing soil compaction is not required where the intended function of a specific area of the site dictates that it be compacted. Preserving topsoil is not required where the intended function of a specific area of the site dictates that the topsoil be disturbed or removed. The permittee(s) shall control stormwater volume and velocity to minimize soil erosion in order to minimize pollutant discharges and shall control stormwater discharges, including both peak flowrates and total stormwater volume, to minimize channel and streambank erosion and scour in the immediate vicinity of discharge points. An affidavit signed by the permittee(s) may be submitted to demonstrate compliance.

For construction activity which is part of a larger common plan of development, such as a housing or commercial development project, in which a new owner agrees in writing to be solely responsible for compliance with the provisions of this permit for the property which has been transferred or in which the new owner has obtained authorization under this permit for a lot or lots (as specified in subrule 567--64.6(6) of the Iowa Administrative Code), the topsoil preservation requirements described above must be met no later than at the time the lot or lots have reached final stabilization as described in this permit.

~~For sites where less than 4.0 inches of topsoil is to be in place after soil disturbing activities have been completed and final stabilization achieved for the permitted activity, a soil survey conducted by properly~~

~~qualified personnel who regularly conduct soil surveys as part of their normal job duties must be conducted prior to commencement of soil disturbing activities that are permitted under the current permit authorization for the site. The results of the soil survey shall become part of the Pollution Prevention Plan and shall indicate the depth of topsoil at a suitable number of points on the site commensurate with standard engineering practices established for the size of the site.~~

The topsoil preservation requirement described above shall be implemented for projects that have not received an authorization under this permit prior to October 1, 2012. The topsoil preservation requirements are not required to be implemented for projects that have been authorized prior to October 1, 2012. In residential and commercial developments, a plat is considered a project. For other large areas that have been authorized for multiple construction sites, including those to be started at a future date, such as those located at industrial facilities, military installations and universities, a new construction project not yet surveyed and platted out is considered a project. This stipulation is intended to be interpreted as requiring the topsoil preservation requirements on development plats and construction activities on other extended areas that may have several construction projects permitted under the same authorization to be implemented on those projects not yet surveyed and platted out prior to October 1, 2012 even if other plats and construction activities in the same development or other extended area were authorized prior to October 1, 2012.

It is not the intent of the Commission that the textual changes in General Permit No. 2 be adopted in the Iowa Administrative Code but that these changes be made in the general permit itself which is adopted by reference into the Iowa Administrative Code.

Copies of the proposed revised General Permit No. 2 are available upon request from the Department at the address or telephone number below.

This amendment is intended to implement Iowa Code chapter 455B, division I.

The following amendment is proposed.

Amend subrule 64.15(2) as follows:

64.15(2) Storm Water Discharge Associated with Industrial Activity for Construction Activities, NPDES General Permit No. 2, effective October 1, 2012 to October 1, 2017, as amended on ~~March 26, 2014~~ July 15, 2015.

_____
Date

_____
Chuck Gipp, Director

Questions Posed in Comments Received During the Public Comment Period for Rulemaking Addressing Proposed Topsoil Preservation Changes

During the public comment period ending April 1 for the proposed topsoil perservation changes, a number of questions were posed by commenters regarding wording and interpretation which the Commission may wish to address. Below is a summary of those questions and concerns.

1. A number of commenters seem uncertain about how the proposed requirement is to be enforced. These concerns were expressed by city personnel who are required to enforce the provisions of General Permit no. 2 (GP2) and by those permittees who not only are required to comply with those provisions but who also actually wish to be in compliance with them. These concerns were expressed by noting the general lack of specificity in the proposed language.

2. A concern was expressed about the affidavit mentioned in the proposal. The proposal states: "An affidavit signed by the permittee(s) may be submitted to demonstrate compliance.". The proposal does not state to whom the affidavit is to be submitted (Department or MS4 city), what it should contain or if the submission of an affidavit precludes the Department from further pursuit of compliance verification.

3. Concerns were expressed about the verification that topsoil has been preseved in the permitted area. It is uncertain how it is to be verified that all the topsoil that was on a site prior to construction remains after construction is completed.

4. Concerns were expressed about the provision that topsoil preservation is not required if infeasible. It is unknown who determines feasibility and what criteria are to be used.

5. Concerns were expressed about the disposition of the topsoil after construction is completed. The proposal does not state that the topsoil is to remain on the surface, only "within the area". With no specific requirement, those who must enforce the proposed language must make the interpretation themselves likely resulting in significant differences in enforcement.

Environmental Protection Commission
Iowa Department of Natural Resources

ITEM **7** **DECISION**

TOPIC **Contract with The University of Iowa on behalf of The State Hygienic Laboratory for Environmental Monitoring & Laboratory Services**

Recommendations:
Commission approval is requested for a 1 year-service contract with University of Iowa State Hygienic Laboratory of Iowa City, Iowa. The contract will begin on July 1, 2015 and terminate on June 30, 2016. The total amount of this contract for the period July 1, 2015 through June 30, 2016 (SFY 2016) shall not exceed $159,506.

Funding Source:
This contract will be funded through the EPA Performance Partnership Grant, pursuant to 455B.103(3).

Background:
This contract aids the Director of the Iowa Department of Natural Resources in determining the quality of the environment of the State of Iowa by providing field and lab services in support of environmental control programs and summarizing and reporting environmental quality data. Pursuant to this contract, the Contractor will collect samples, perform lab analyses and report results consistent with US EPA standards related to environmental compliance programs, including drinking water, emergency spills and hazardous conditions, human and livestock waste treatment/disposal, solid waste identification and disposal, and industrial/commercial processes resulting in air, water or land discharges.

Purpose:
The parties propose to enter into this Contract for the purpose of retaining the Contractor to provide: professional laboratory monitoring, analytical and reporting services including sample collection, analysis and reporting consistent with US EPA standards, and Contractor will provide, upon request, training in sample collection/handling procedures and related protocols to IDNR ESD Field Services Bureau environmental field staff.

Contractor Selection Process:
The State Hygienic Laboratory was chosen using the Single Source, Intergovernmental Agreement process. The State Hygienic Laboratory was chosen for this project because they have the demonstrated capacity to provide the full range of scientific analyses required by the department, consistent with state and US EPA QA/QC performance and reporting requirements.

Contract History:

SFY(s)	Total Contract Amount	Budget Change from Previous	Description and Justification for Changes
2007	$490,746	NK	2006: contract management transferred to Field Services. SFY 2006 New contract based on previous contract. Included: Central contracted staff: $330,161; Environmental sampling: $160,586.
2008	$429,872	-$60,874	New contract based on contract of previous year, including: Central contracted staff: $269,287; Environmental sampling: $160,585. Change: reduced staffing due to reduced need.
2009	$359,766	-$70,116	New contract based on contract of previous year, including: Included: Central contracted staff: $199,181 Environmental sampling: $160,585 Change: reduced staffing due to reduced need.
2010	$242,559	-$117,207	New contract based on contract of previous year, including: Central contracted staff: $83,054; Environmental Sampling: $159,505. Change: staffing moved to other central contracts.
2011	$159,506	-$83,053	New contract based on contract of previous year, including: Contracted Staff: $0; Environmental Sampling: $159,506. Change: reduced staffing due to budget.
2012	$159,506	No change	New contract based on contract of previous year. Environmental Sampling: $159,506.
2013	$159,506	No change	New contract based on contract of previous year. Environmental Sampling: $159,506.
2014 -2015	Total: $319,012 SFY Max $159,506	No change	New contract based on contract of previous year. Change: 2-year contract. No change to per SFY budget. Environmental Sampling: $159,506 max per SFY.

Barbara Lynch
Bureau Chief
Field Services & Compliance Bureau/Environmental Services Division
May 19, 2015

Attachment(s): Scope of Work from the Special Conditions for Contract

ATTACHMENT: Scope of Work from the Special Conditions for Contract

Section 5 STATEMENT OF WORK

5.1 Statement of Work. Contractor shall perform the following Tasks. Contractor shall complete its obligations under this Contract by the Task Milestone Dates set out in the following table.

Obligation	Task Milestone Date
Task 1: Wastewater treatment facility compliance sampling inspections (sample code 03WQCSI) **Description:** Part 1. SHL shall develop a proposed quarterly sampling schedule upon receipt of the following sampling request information from DNR: the facilities, the location of the sampling sites, the types of samples to be collected and the analyses required. The sampling request information will be provided to SHL approximately one month prior to the beginning of each quarter, by Barbara Lynch, Chief of the Compliance and Enforcement Bureau. SHL shall provide the proposed quarterly sampling schedule to DNR and SHL shall make changes to the proposed sampling schedule at DNR's request. The final written sampling schedule shall be provided to Barbara Lynch at DNR. The quarterly sampling schedule shall designate timelines for the following Contractor work: a) Collect and analyze a maximum of two hundred (200) 24-hour influent and effluent composite samples from thirty (30) wastewater treatment facilities during compliance sampling inspections. b) Flow-weighted composite samples shall be collected during the compliance sampling. SHL shall offer a split of all samples to the treatment facility. SHL shall analyze the samples for regulated pollutants, selected parameters having water quality standards, and other characteristic pollutants as specified each quarter. DNR estimates that approximately 50% of the requested sample analyses shall include uninhibited BOD5. Twenty-four (24-hour) flow measurements shall be obtained for the day of sampling. Guidance will be given by the relevant DNR Field Office on the locations for taking flow, dissolved oxygen and other measurements. Sample collection, storage, preservation, transportation and chain-of-custody shall conform to the procedures specified in the U.S. EPA NPDES Compliance Sampling Manual. c) Check the accuracy, as facility configuration allows, of installed flow measuring devices within each facility. The results of this evaluation shall be noted on the sampling results sheet. d) Samples collected for the activity shall be coded as	No later than: Part 1: Within fifteen (15) calendar days of receipt of the sampling request information from DNR.

03WQCSI. All samples submitted to SHL by Department or SHL staff shall be coded and include a detailed written or photocopied list of the analyses to be performed (unless other arrangements have been made before shipment of the sample to SHL). SHL log-in procedures shall accommodate this code.	
Part 2. SHL shall report results of the analyses of samples and flow verification (if collected) to the DNR Field Office requesting the inspection. Results shall be reported in the format previously discussed and agreed to by the parties. The results shall indicate if 24-hour flow or time composites were collected.	Part 2. Analyses of samples collected shall be completed and results reported to the submitter within 15 calendar days of receipt of samples unless analytical work warrants extra time. If the contractor determines that extra time is needed to complete required analyses and reporting, then a written notification shall be made to the DNR submitter. The notification shall include the reason for the delay and the specific analysis or analyses to be delayed. The notification shall occur as soon as possible after the contractor has determined the need for a delay. The notification shall include a revised completion date.
Part 3. SHL shall provide access to a report of analytical results via the online web site as set forth in Task 8, below.	Part 3: See Task 8, below.
Part 4. SHL shall provide sample information to the Department upon request. SHL shall provide copies of Methods Manuals/Standard Operating Procedure Manuals (available from the laboratory) to the Department upon request.	Part 4: As requested by Field Offices, and within a time frame agree upon by the Field Office and SHL at the time the request is made.
Task 2: Analyze and Report samples collected by Department staff for field activities support (sample code 04WQFS) **Description**:	No later than:
Part 1. SHL shall provide sample containers and ice chests for sample transport.	Part 1: As requested by Field Offices, and within a time frame agree upon by the Field Office and SHL at the time the request is made.
Part 2. SHL shall analyze up to six hundred and twenty five (625) samples for any of the parameters specified in the "WQ1 Field Support Parameters" table below, or for other additional parameters as specified by Department staff. The 625 samples will be submitted by Department staff. These samples will be collected during compliance evaluation inspections of wastewater treatment plants and sanitary landfills, and investigations of feedlot complaints and other sources of surface water contamination not covered elsewhere in this statement of work.	Part 2: Analyses of samples shall be completed and results reported to the submitter within 15 calendar days of receipt of samples unless analytical work warrants extra time. If the contractor determines that extra time is needed to complete required analyses and reporting, then a written notification shall be made to the DNR submitter. The notification shall include the reason for the delay and the specific analysis or analyses to be delayed. The notification shall occur as soon as possible after the contractor has determined the need for a delay. The notification shall include a revised completion date.

Part 3. SHL shall code samples collected for the activity as 04WQFS. All samples submitted to SHL by Department or SHL staff shall be coded and include a detailed written or photocopied list of the analyses to be performed (unless other arrangements have been made before shipment of the sample to SHL). SHL log-in procedures shall accommodate this code. WQ1 – FIELD SUPPORT PARAMETERS BOD_5 — Inhibited BOD_5 Total Suspended Solids — Ammonia Nitrogen pH — Oil and Grease Heavy Metals — Solids Series Fecal Coliform (April – October) Organics: Petroleum Products Semi-Volatiles, including Pesticides Common Herbicides Organophosphate Insecticides Chlorinated Hydrocarbon Insecticides/PCBs Acid Herbicides Polycyclic Aromatic Hydrocarbons (PAHs)	Part 3: On-going.
Part 4. SHL shall provide access to a report of analytical results via the online web site as set forth in Task 8, below.	Part 4: See Task 8, below.
Part 5. SHL shall provide sample information to the Department upon request. SHL shall provide copies of Methods Manuals/Standard Operating Procedure Manuals (available from the laboratory) to the Department upon request.	Part 5: As requested by Field Offices, and within a time frame agree upon by the Field Office and SHL at the time the request is made.
Task 3: Analyze and report water, fish and/or waste samples collected by Department staff during fish kill investigations (sample code 05WQFK) **Description**:	No later than:
Part 1. SHL shall provide sample containers and ice chests for sample transport.	Part 1: On-going.
Part 2. SHL shall analyze water, fish and/or waste samples collected by Department staff during the investigation of fish kills not related to emergency response spills. The samples shall be analyzed for any of the parameters listed in the "WQ2 – Fish Kill Samples" list below, and for any additional parameters requested by the investigating personnel. SHL staff shall be available for consultation with Department staff to determine what analyses should be performed. The analytical results shall be submitted to the DNR field office that investigated the fish kill.	Part 2: Analyses of samples shall be completed and results reported to the submitter within 15 calendar days of receipt of samples unless analytical work warrants extra time. If the contractor determines that extra time is needed to complete required analyses and reporting, then a written notification shall be made to the DNR submitter. The notification shall include the reason for the delay and the specific analysis or analyses to be delayed. The notification shall occur as soon as possible after the contractor has determined the need for a delay. The notification shall include a revised completion date.

Part 3. SHL shall code samples collected for the activity as 05WQFK. All samples submitted to SHL by Department or SHL staff shall be coded and shall include a detailed written or photocopied list of the analyses to be performed (unless other arrangements have been made before shipment of the sample to SHL). SHL log-in procedures shall accommodate this code.	Part 3: On-going.
Part 4. Payments for samples analyzed for fish kill investigations shall be negotiated on a case-by-case basis by SHL and the Department, but in no event shall the cost of these negotiated fees cause the original annual contract budget of $159,506 or the two-year total of $319,012 to be exceeded without a fully executed amendment or a change order approved in writing by the DNR. WQ2 – FISH KILL SAMPLES BOD_5 Ammonia Total Suspended Solids pH Chloride Fungicides Heavy Metals Pesticides	Part 4: On-going.
Part 5. SHL shall provide access to a report of analytical results via the online web site as set forth in Task 8, below.	Part 5: See Task 8, below.
Part 6. SHL shall provide sample information to the Department upon request. SHL shall provide copies of Methods Manuals/Standard Operating Procedure Manuals (available from the laboratory) to the Department upon request.	Part 6: As requested by Field Offices, and within a time frame agree upon by the Field Office and SHL at the time the request is made.
Task 4: Analyze and report water, fish, or solid samples collected by Department staff during emergency response investigations (sample code 07WQER) **Description**:	No later than:
Part 1. SHL shall provide sample containers and ice chests for sample transport.	Part 1: On-going.
Part 2. SHL shall analyze approximately seventy-five (75) water, fish, or solid samples collected by Department staff during emergency response investigations. The types of analyses to be performed shall be identified by the sample collector but shall generally fall into three categories: Industrial chemicals, such as solvents and PCBs; agricultural chemicals, including pesticides and fertilizers; and metals. SHL staff shall be available for consultation with Department staff on the analyses that need to be performed.	Part 2: Analyses of samples shall be completed and results reported to the submitter within 15 calendar days of receipt of samples unless analytical work warrants extra time. If the contractor determines that extra time is needed to complete required analyses and reporting, then a written notification shall be made to the DNR submitter. The notification shall include the reason for the delay and the specific analysis or analyses to be delayed. The notification shall occur as soon as possible after the

	contractor has determined the need for a delay. The notification shall include a revised completion date.
Part 3. SHL shall code samples collected for the activity as 07WQER. All samples submitted to SHL by Department or SHL staff shall be coded and shall include a detailed written or photocopied list of the analyses to be performed (unless other arrangements have been made before shipment of the sample to SHL). SHL log-in procedures shall accommodate this code.	Part 3: On-going.
Part 4. SHL shall provide access to a report of analytical results via the online web site as set forth in Task 8, below.	Part 4: See Task 8, below.
Part 5. SHL shall provide sample information to the Department upon request. SHL shall provide copies of Methods Manuals/Standard Operating Procedure Manuals (available from the laboratory) to the Department upon request.	Part 5: As requested by Field Offices, and within a time frame agree upon by the Field Office and SHL at the time the request is made.
Task 5: Analyze and report samples collected by Department staff from storm water runoff (sample code WQSWR) **Description**:	No later than:
Part 1. SHL shall provide sample containers and ice chests for sample transport.	Part 1: As requested by Field Offices, and within a time frame agree upon by the Field Office and SHL at the time the request is made.
Part 2. SHL shall analyze samples for any of the parameters specified in the "WQ4 – Storm Water Runoff Monitoring Parameters" table below, or other parameters as specified by the collector. The samples will be submitted by Department staff. These samples will be collected during evaluations of storm water runoff from industrial activities or municipal storm sewer systems.	Part 2: Analyses of samples shall be completed and results reported to the submitter within 15 calendar days of receipt of samples unless analytical work warrants extra time. If the contractor determines that extra time is needed to complete required analyses and reporting, then a written notification shall be made to the DNR submitter. The notification shall include the reason for the delay and the specific analysis or analyses to be delayed. The notification shall occur as soon as possible after the contractor has determined the need for a delay. The notification shall include a revised completion date.
Part 3. SHL shall code samples collected for the activity as WQSWR. All samples submitted to SHL by Department or SHL staff shall be coded and include a detailed written or photocopied list of the analyses to be performed (unless other arrangements have been made before shipment of the sample to SHL). SHL log-in procedures shall accommodate this code.	Part 3: On-going.

WQ4 – STORM WATER RUNOFF MONITORING PARAMETERS

5-day Biological Oxygen Demand	Total Magnesium

5-day Carbonaceous Oxygen Demand	Total Mercury
Ammonia – Nitrogen	Total Nickel
Total Arsenic	Nitrate+Nitrite (Total as N)
Total Barium	Oil and Grease
Bicarbonate	Total Phosphorous
Total Cadmium	Pentachlorophenol
Calcium	Potassium
Chemical Oxygen Demand	Propylene Glycol
Chloride	Total Selenium
Total Chromium	Total Silver
Total Copper	Sodium
Total Cyanide	Sulfate
Ethylene Glycol	Total Dissolved Solids
Fecal Coliform	Total Organic Carbon
Total Iron	Total Suspended Solids (TSS)
Total Kjeldahl Nitrogen	Total Zinc
Total Lead	pH
Dissolved Magnesium	

Part 4. SHL shall provide access to a report of analytical results via the online data access web site as set forth in Task 8, below.	Part 4: See Task 8, below.
Part 5. SHL shall provide sample information to the Department upon request. SHL shall provide copies of Methods Manuals/Standard Operating Procedure Manuals (available from the laboratory) to the Department upon request.	Part 5: As requested by Field Offices, and within a time frame agree upon by the Field Office and SHL at the time the request is made.
Task 6: Analyze and report samples collected by Department staff for water supply monitoring (sample codes 16WSCOMP, 17WSTECH) **Description**:	No later than:
Part 1. SHL shall analyze approximately 135 samples of raw, intermediate, or finished water collected from public water supplies by field office or central office staff of the Environmental Services Division of DNR. DNR Field Office staff will identify those analytes that are of specific interest for each sample. In addition, SHL shall report all analytes determined by the same U.S. EPA analytical drinking water method. a) SHL shall analyze no more than five (5) samples of raw or finished water collected from public water supplies where synthetic organic compounds (SOCs) or pesticides are suspected, have previously been detected or if the system source has been determined vulnerable by the Department. Samples will be collected by Field Office or Central Office staff of the Environmental Services Division of DNR. Field Office or Central Office staff will submit a minimum of two liters per sample.	Part 1: Analyses of samples shall be completed and results reported to the submitter within 15 calendar days of receipt of samples unless analytical work warrants extra time. If the contractor determines that extra time is needed to complete required analyses and reporting, then a written notification shall be made to the DNR submitter. The notification shall include the reason for the delay and the specific analysis or analyses to be delayed. The notification shall occur as soon as possible after the contractor has determined the need for a delay. The notification shall include a revised completion date.

(Additionally, three 40-ml vials will be submitted if analyses of volatiles are requested). b) SHL shall analyze no more than five (5) samples of raw or finished water collected from public water supplies by Field Office or Central Office staff of the Environmental Services Division of DNR. Parameters for analysis shall include either regulated compounds or unregulated compounds for which a health advisory, established by U.S. EPA, exists. In addition, analysis for ethylene dibromide and 1,2-dibromo-3-chloropropane may be requested by notification from Barbara Lynch. The fees for these two compounds shall be billed to the Department separately. c) SHL shall analyze no more than nine (9) samples of drinking water collected from public water systems by Field Office or Central Office staff of the Environmental Services Division of DNR during the investigation by DNR of complaints by the public, not involving identified spills or aesthetic problems. d) SHL shall analyze no more than nine (9) drinking water samples for the parameters identified by the sample collector and shall include metals, solvents, or petroleum products. Because of the possible health consequences of this contamination, the analysis shall be given highest priority among samples analyzed under this Statement of Work. The collector shall be Field Office or Central Office staff of the Environmental Services Division of DNR. e) SHL shall analyze no more than thirty-five (35) drinking water samples from public water supplies collected by Field Office or Central Office staff of the Environmental Services Division of DNR during the investigation of complaints by the public regarding aesthetic problems. f) Additionally, SHL shall analyze no more than thirty-five (35) drinking water samples for the parameters identified by the sample collector, to include iron, manganese, iron bacteria, or any other unregulated contaminant that might be the cause of aesthetic problems. The collector shall be Field Office or Central Office staff of the Environmental Services Division of DNR.	
Part 2. SHL shall analyze approximately one hundred (100) drinking water samples collected by DNR through sanitary surveys, MCL investigations and technical assistance for bacterial analyses. Samples submitted to SHL shall be coded by SHL as Water Supply Support Bacteria.	Part 2: Analyses of samples shall be completed and results reported to the submitter within 15 calendar days of receipt of samples unless analytical work warrants extra time. If the contractor determines that extra time is needed to complete required analyses and reporting, then a written notification shall be made to the DNR submitter. The notification shall include the reason for the delay and the specific analysis or analyses to be delayed. The notification

	shall occur as soon as possible after the contractor has determined the need for a delay. The notification shall include a revised completion date.
Part 3. Samples submitted to SHL shall be coded as 16WSCOMP if they are to be used for compliance purposes. Samples shall be coded as 17WSTECH if they are being collected for the purpose of technical assistance to a public water supply on the part of the Department. All samples properly identified and submitted to SHL by Department or SHL staff shall be coded to a specific monitoring activity for the SDWA and shall include a detailed written or photocopied list of analyses. SHL log-in procedures shall accommodate this code. For those submittals not properly identified, SHL shall notify the DNR personnel who submitted the sample that the sample will be rejected.	Part 3. On-going.
Part 4. SHL shall perform all analyses in accordance with the applicable procedures and detection limits as specified in the Federal Register and/or the specific U.S. EPA method number. Quality control shall conform at a minimum to the standards listed in EPA Manual for the Certification of Laboratories Analyzing Drinking Water, Fifth Edition (EPA 815-R-05-004, January, 2005) or alternative Department/EPA-approved controls. SHL shall specify quantitation limits for each analyte with each analytical result.	Part 4. On-going
Part 5. SHL shall enter the analytical results of all Department water supply monitoring into the State Drinking Water Information System (SDWIS) for any contaminant that has a contaminant identification number. The Department will notify SHL of additional contaminant identification numbers, and SHL shall use them.	Part 5: Entering the data into SDWIS shall occur by the seventh day of the month following the month in which the samples were analyzed, except that samples received within the last week of the month that are unavailable by the seventh day of the month shall be transmitted within three working days of sample release. If the contractor determines that extra time is needed to complete required analyses and reporting, then a written notification shall be made to the DNR submitter. The notification shall include the reason for the delay and the specific analysis or analyses to be delayed. The notification shall occur as soon as possible after the contractor has determined the need for a delay. The notification shall include a revised completion date. Exception: For Radiological Results, within 50 calendar days of sample receipt, or by the 10th day of the month following the end of the calendar quarter in which the samples were analyzed.

Part 6. SHL shall provide access to a report of analytical results via the online web site as set forth in Task 8, below. Part 7. SHL shall provide sample information to the Department upon request. SHL shall provide copies of Methods Manuals/Standard Operating Procedure Manuals (available from the laboratory) to the Department upon request.	Part 6: See Task 8, below. Part 7: As requested by Field Offices, and within a time frame agree upon by the Field Office and SHL at the time the request is made.
Task 7: SHL shall provide training for new Department staff and shall provide refresher training for current Department staff at the Department's request **Description:** Training shall address the use of proper sampling techniques and containers, holding times, use of data sheets and chain of custody forms, and any other topic which Field Office personnel and/or SHL staff indicate needs to be addressed.	No later than: Annually or bi-annually, at the Department's discretion.
Task 8: Data Transfer **Description:** SHL shall make the data generated pursuant to this Contract available to DNR electronically through the State Hygienic Laboratory OpenELIS database web portal. Data shall be available for download by DNR staff in a mutually agreeable format. The available sample information shall include the STORET station identification number, which will be provided by DNR for all station locations. Data shall be retrievable via the web portal by DNR staff.	No later than: Analytical data shall be made available to DNR staff within 15 calendar days of receipt of samples unless analytical work warrants extra time. If the contractor determines that extra time is needed to complete required analyses and reporting, then a written notification shall be made to the DNR submitter. The notification shall include the reason for the delay and the specific analysis or analyses to be delayed. The notification shall occur as soon as possible after the contractor has determined the need for a delay. The notification shall include a revised completion date.

Environmental Protection Commission
Iowa Department of Natural Resources

ITEM **8** **DECISION**

TOPIC **Contract with Iowa State University Extension and Outreach for Manure Applicator Certification Training**

Recommendations:
Commission approval is requested for a 2 year-service contract with Iowa State University Extension and Outreach of Ames, Iowa. The contract will begin on July 1, 2015 and terminate on July 1, 2017. The total amount of this contract shall not exceed $222,100 for fiscal year 2016 of the contract and $213,654 for fiscal year 2017 of the contract (grand total of $435,754).

Funding Source:
This contract will be funded through education and certification fees collected from the Manure Applicator Certification Program.

Background:
HF 644 and HF 2494 require persons who apply, handle, transport and store manure to be properly certified as a Commercial Manure Service, Commercial Manure Service Representative or a Confinement Site Manure Applicator. In addition, HF 312 requires continuing instruction courses be available online. The MAC training materials will be available as part of the DNR's eLearning web site.

Purpose:
The parties propose to enter into this Contract for the purpose of retaining the Contractor to develop manure certification training and testing materials for commercial and confinement site manure applicators. Topics covered in the training materials will include: certification and manure management requirements of Iowa law and DNR rules; proper procedures for the storage, handling and land application of manure; the potential impacts of manure on surface and groundwater: the development of safety and emergency action plans and sources of additional technical and educational assistance.

Contractor Selection Process:
Iowa State University Extension and Outreach was chosen using the University selection process. Iowa State University Extension and Outreach was chosen for this project because Iowa law required partnership and they have the resources and knowledge to assist in training applicators.

William Ehm
Division Administrator
Environmental Services Division
May 19, 2015

Attachment(s): Special Conditions for Contract

Obligation	Task Milestone Date
Task 1: Update Training Materials **Description:** During each year of this contract, ISU shall update current manure applicator certification training materials, including online training materials (see Task 4) and fact sheets for applicators. Training materials shall address • handling, application and storage of manure; • potential effects of manure on surface water and groundwater; • procedures to remediate the potential effects on surface water and groundwater; • manure nutrient values; • manure use to maximize crop production benefits and prevent contamination of surface water and groundwater; • requirements of Iowa law, including statutes, DNR rules and any relevant federal law; • timing of land application based on manure storage levels, crop needs, weather and soil conditions; • best management practices for manure application and management recommended by DNR and ISU; • development of safety and emergency action plans, availability of technical and educational assistance; • practical and cost-effective methods to prevent and limit the impact of manure spills, especially from manure storage structures. **The development of these training materials shall take into account the content and topics recommended by the Advisory Committee (see Task 6b) and any recommendations made following the ISU Field Specialist meeting (see Task 7).**	No later than December 31, 2015 and December 31, 2016.
Task 2a: Development of Commercial Certification Course **Description:** During each year of this Contract, ISU shall develop a three hour manure certification course for commercial manure service representatives. ISU shall develop the following for use in the course or in connection with the course (a) program evaluation materials, (b) DVDs for program delivery, (c) recruitment materials for the course, and (d) online training materials (see Task 4). The development of this course shall take into account the content and topics recommended by the Advisory Committee (See task 6b) and any recommendations made following the ISU Field Specialist meeting (see Task 7).	No later than December 31, 2015 and December 31, 2016.
Task 2b: Presentation of Commercial Certification Course **Description:** During each year of this Contract, ISU shall publicize and shall conduct at least one time a coordinated statewide presentation, via DVD, of the three hour manure certification course for commercial manure service representatives. This presentation shall be recorded for the purpose of providing pre-recorded presentations through the remainder of the contract term. This program may be presented at a DNR approved alternate location, ie, Pork Congress, ISU Field Day, industry trade show, etc.	No later than March 1, 2016 and March 1, 2017.
Task 2c; Pre-recorded Presentation of Commercial Certification Course **Description:** An archived DVD of the annually updated course shall be available for viewing during regular business hours, with an appointment, at ISU county offices.	This task shall be performed throughout the contract term. From March 1, 2016, forward for the remainder of the contract term, the pre-recorded and printed materials presented shall be those developed from the 2015 Advisory Committee meeting. After March 1, 2017,

	the materials presented shall be those developed from the 2016 Advisory Committee meeting (see Task 6b).
Task 3a: **Development of Confinement Certification Courses** **Description:** During each year of this contract ISU shall develop a two-hour manure initial certification and continuing instruction course (CIC) for confinement site manure applicators. The course shall be designed to be delivered and shall be delivered by ISU Teaching Teams, which shall consist of ISU Field Specialists and campus specialists or other qualified personnel. In addition, the course shall be made available online (see Task 4). During each year of the contract, ISU shall develop the following for use in the course or in connection with the course (a) program evaluation materials, (b) DVDs for program delivery following the courses/certification meetings, (c) recruitment materials for the course, and (d) online training materials (see Task 4). The development of this course shall take into account content and topics recommended by the Advisory Committee (see Task 6b) and any recommendations made following the ISU Field Specialist meeting (see Task 7)	No later than December 31, 2015 and December 31, 2016.
Task 3b: Presentation of Confinement Certification Courses **Description:** During each year of the contract, ISU shall publicize, schedule and conduct certification meetings using these course materials in most counties throughout the State, where the courses shall be delivered by members of the ISU Teaching Teams. No less than 45 live presentations shall occur. ISU shall prepare and distribute sets of course teaching materials to appropriate ISU Teaching Teams, including CDs with Powerpoint training materials. This program may be presented at a DNR approved alternate location, ie, Pork Congress, ISU Field Day, industry trade show, etc.	No later than March 1, 2016 and March 1, 2017.
Task 3c: Pre-recorded Presentation of Confinement Certification Course **Description:** Pre-recorded delivery of these annually updated courses shall occur as often as needed throughout the contract term. DVDs of the courses shall be available for viewing during regular business hours, with an appointment at ISU county offices.	This Task shall be performed throughout the contract term. From March 1, 2016, forward for the remainder of the contract term, the pre-recorded and printed materials shall be those developed from the 2015 Advisory Committee meeting. After March 1, 2017, the materials presented shall be those developed from the 2016 Advisory Committee meeting (see Task 6b).
Task 4: Video footage and other training materials **Description:** ISU shall format and edit training materials for online training purposes. These training materials shall be formatted into modules that are no more than 15 minutes in length to be compliant with and may be used in conjunction with DNR's Learning Management System (LMS) known as Modular Object Oriented Dynamic Learning Environment (MOODLE). This content shall be submitted into the DNR LMS in Sharable Content Object Reference Model (SCORM) compliant format using content software agreed upon by DNR and ISU. Video footage and other learning materials shall be formatted and edited to produce the following: (a) A three-hour manure certification training course for commercial manure service representatives, as designated in 567 IAC 65.19(6)(a); and	No later than December 31, 2015 and December 31, 2016.

(b) A two-hour confinement site manure applicator training course for confinement site manure applicators, as designated in 567 IAC 65.19(6)(b).	
Task 5: **Update Certification Exams** **Description:** ISU shall update manure applicator certification exams as requested by DNR and test the exams on members of ISU Teaching Teams, following DNR review.	Upon DNR request, but shall be completed by no later than December 31 of the year during which the request was made.
Task 6a: **Advisory Committee Recruitment** **Description:** During each year of this Contract, ISU shall identify commercial manure service representatives to serve on an Advisory Committee for development of manure applicator training materials. Members of the Advisory Committee shall include at least the following: ISU representatives, DNR representatives and members of the Iowa Commercial Nutrient Applicators Association. Other persons or organizations may be included as determined by ISU. The purpose of the Advisory Committee shall be to develop a list of potential content and topics for the education courses and training materials to be developed during Fiscal Year 2016 and Fiscal Year 2017.	This Task shall be performed throughout the contract term.
Task 6b: Advisory Committee Meeting **Description:** The Advisory Committee shall meet at least twice (once during Fiscal Year 2016 and once during Fiscal Year 2017) during the contract term and shall develop a list of potential content and topics for the courses and training materials to be developed during Fiscal Year 2016 and Fiscal Year 2017.	No later than December 31, 2015 and December 31, 2016.
Task 7: ISU Field Specialist Meeting **Description:** ISU shall schedule and with DNR shall conduct two meetings (one in 2016 and one in 2017) of ISU Field Specialists. The purpose of the meeting shall be to discuss the implementation of Fiscal Year 2016 and Fiscal Year 2017 training materials for the Manure Applicator Certification program.	No later than December 31, 2015 and December 31, 2016.
Task 8: In-Service Training – ISU Field Staff Support Personnel **Description:** ISU and DNR shall provide in-service training in Fiscal Year 2016 and Fiscal Year 2017 to ISU Field Staff support personnel responsible for county program delivery to implement pre-recorded courses and materials, and administrative paperwork for the Manure Applicator Certification program.	No later than December 31, 2015 and December 31, 2016.
Task 9: Website Maintenance **Description:** ISU shall ensure that the public may download copies of current course materials, topics and other training materials at the following internet address: http://www.agronext.iastate.edu/immag/mac.html. ISU shall ensure that the materials available on this website include a current list of times and locations for course presentations. This website also shall include a current list of certified commercial applicators and the final report due pursuant to this contract, as well as the final reports from the previous five contract terms. The website shall be maintained & updated by ISU as needed throughout the contract term.	This Task shall be performed through the contract term.
Task 10: **Continuing External Information** **Description:** ISU shall use the mass media and personal contact to keep the public, support groups, and external partners who are members or potential members of the Advisory Committee informed about the program. ISU shall publish evaluation results and behavior change resulting from the certification program.	This Task shall be performed through the contract term.

Iowa Department of Natural Resources
Environmental Protection Commission

ITEM **9** **DECISION**

TOPIC **Contract – USGS Stream Gage Agreement**

Recommendation:
The Department requests Commission approval of a contract for $225,970 with USGS for the time period of July 1, 2015 – June 30, 2016. The Department's contribution to this agreement is $224,100. The USGS contribution to this agreement is $1,870. This agreement covers the continuing support, operation and maintenance of 16 stream gaging stations - 14 fully supported and 2 partially supported. The individual gages are listed below.

Funding Source:
This project will be funded through state general fund dollars specifically dedicated to Flood Plain Management and Dam Safety.

Background:
After the floods of 2008, a legislative appropriation was made dedicated to flood plain management and dam safety. Part of the legislative intent of this funding was to continue to support USGS stream gaging efforts in Iowa.

Purpose:
The purpose of this contract is to continue support, operation and maintenance of 16 stream gaging stations. There are 14 fully supported gages and 2 partially supported gages. These stream gages will assist in the tracking and predicting of flood events by compiling the necessary data relating to flood frequency analysis.

USGS Joint Funding Agreement:

The USGS operates and maintains approximately 7,500 stream gages which provide long term, accurate, and unbiased information on stream low to meet the needs of many diverse users. The USGS stream gaging network is currently funded in partnership with over 800 Federal, State, and local agencies nationwide. The Iowa DNR has partnered with USGS for many years to maintain Iowa's network of stream gages. The data gathered through the use of these stream gages is consistent, obtained by using standard techniques and technology and is subject to quality assurance and quality control.

Scope of Work:
The scope of work of this contract is the continued support, operation and maintenance of 16 stream gaging stations. There are 14 fully supported gages and 2 partially supported gages.

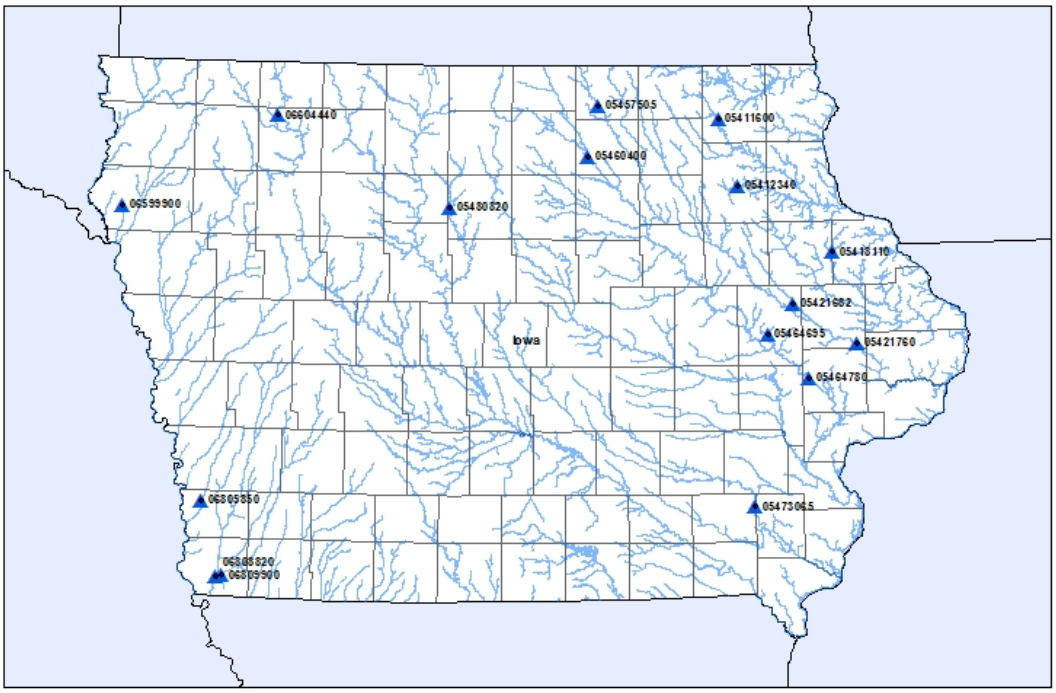
The locations of the fully supported and partially supported stream gages are listed below:

Fully supported stream gages:

Gage Num	Location
05411600	Turkey River at Spillville, IA
05412340	Volga River at Fayette, IA
05418110	NF Maquoketa River below Bear Cr at Dyersville, IA
05421682	Buffalo Creek South of Praireburg, IA
05421760	Wapsipinicon River at Oxford Mills, IA
05457505	Cedar River at Osage, IA
05460400	Shell Rock River near Rockford, IA
05464695	Indian Creek at Marion, IA
05464780	Cedar River at Cedar Bluff, IA
05473065	Skunk River at Merrimac, IA
06604440	Little Sioux River at 300th St near Spencer, IA
06805850	Keg Creek at Epperson Avenue near Glenwood, IA
06808820	West Nishnabotna River near Riverton, IA
06809900	East Nishnabotna River at Riverton, IA

Partially supported stream gages:

06599900	Perry Creek near Millnerville, IA
05480820	Boone River near Goldfield, IA



USGS streamgages operated in cooperation with the Iowa DNR - Water Quality Bureau, Water Year 2012

streamgage | Stream | State boundary | County boundary

Streamgage

0 30 60 Miles

0 50 100 Kilometers

Lori McDaniel, Supervisor
Flood Plain Management & Dam Safety Section, Land Quality Bureau
Environmental Services Division

May 19, 2015

Iowa Department of Natural Resources
Environmental Protection Commission

ITEM **10** **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 34 applications, requesting $1,421,659.75 in financial assistance, for consideration during the February 2015 round of funding. 22 projects were selected for funding with a total request amount of $399,420.00. Seven (7) of the 22 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 Bedford

Award: $ 50,000.00
Cash Match: $ 50,000.00
Total Project Cost: $100,000.00

Contact: Kenny Spencer **Phone: 712-523-2210**

Description: **The City of Bedford 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.**
- **Deconstruct two commercial buildings located on Main Street and market vacated site to interested commercial interests.**

City of Belmond

Award: $ 50,000.00
Cash Match: $ 25,000.00
Total Project Cost: $ 75,000.00

Contact: Lee Ann Waltzing **Phone: 641-444-3386**

Description: **The City of Belmond 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/renovate the building. City has an interested buyer who wants to start a micro-brewery on the renovated site.**

Eldora New Providence Community School District

Award: $ 29,000.00
Cash Match: $157,000.00
Total Project Cost: $186,500.00

Contact: Jay Mathis **Phone: 641-939-5631**

Description: **Eldora-New Providence Community School District 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.**

City of Garden Grove

Award: $ 37,000.00
Cash Match: $ 22,000.00
Total Project Cost: $ 59,000.00

Contact: Jeremy Rounds **Phone: 641-782-8491**

Description: **The City of Garden Grove has targeted the use of these grant funds toward the following:**

- **Inspect for asbestos at the project site.**
- **Abate and dispose of any identified asbestos and hazardous material at the project site.**
- **The City plans to deconstruct the building and transform the site into a recreational green space that includes soccer, football, and baseball fields.**

City of Imogene

Award: $ 25,000.00
Cash Match: $ 60,000.00
Total Project Cost: $ 85,000.00

Contact: Kevin Olson **Phone: 712-386-2132**

Description: **The City of Imogene has targeted the use of these grant funds toward the following:**

- **The City plans to renovate the vacant building and sell the building to an interested buyer who is looking for a place to start their business.**

City of Strawberry Point

Award: $ 55,000.00
Cash Match: $ 60,000.00
Total Project Cost: $115,000.00

Contact: Elizabeth Jaster **Phone: 563-933-4482**

Description: **The City of Strawberry Point has targeted the use of these grant funds toward the following:**

- **The City plans to deconstruct the vacant building and transform the building into a new police, fire department, and EMS station.**

City of Vincent

Award: $ 40,000.00
Cash Match: $ 55,000.00
Total Project Cost: $ 99,000.00

Contact: Michel Fransen **Phone: 515-356-4365**

Description: **The City of Vincent has targeted the use of these grant funds toward the following:**

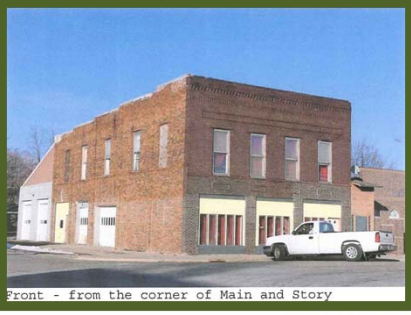
- **The City plans to deconstruct the vacant school building and market the space for future commercial development.**

The Iowa Department of Natural Resources: Financial Assistance Options

The Derelict Building Grant Program

Derelict Building grant program
City of Slater Project

Derelict Building grant program
City of Slater Project



Front - from the corner of Main and Story

Derelict Building grant program
City of Slater Project

Derelict Building grant program
City of Slater Project

Derelict Building grant program
City of Glidden Project

Derelict Building grant program
City of Glidden Project

Derelict Building grant program
City of Glidden Project

Derelict Building grant program
City of Glidden Project

Derelict Building grant program

2015 grant funding round

- ❑ 34 applications received
  - $1.4 million requested
- ❑ 22 projects selected
  - $4000,000 awarded
  - Projects to begin in July

Derelict Building grant program
City of Bedford Projects

Derelict Building grant program
City of Belmond Project

Derelict Building grant program City of Eldora Project

Derelict Building grant program City of Garden Grove Project

Derelict Building grant program City of Imogene Project

Derelict Building grant program City of Strawberry Point Project

Derelict Building grant program City of Vincent Project

Derelict Building grant program

Contact Information
Scott Flagg
Land Quality Bureau
Financial and Business Assistance Section
Phone: 515-281-4876
E-mail: scott.flagg@dnr.iowa.gov

- **For more information on these and other Derelict Building Grant projects please visit: www.iowadnr.gov/FABA**
  And click on the Derelict Building Grant Program link.

Environmental Protection Commission
Iowa Department of Natural Resources

ITEM **11** **DECISION**

TOPIC **Contract with University of Iowa on behalf of the STATE HYGIENIC LABORATORY for 2016 SHL Services in Support of the DNR Air Quality Bureau**

Recommendations:
Commission approval is requested for a one year-service contract with the University of Iowa on behalf of the State Hygienic Laboratory. The contract will begin on 7/1/2015 and terminate on 6/30/2016. The total amount of this contract shall not exceed $2,152,188.

Funding Source:
Funding for this contract consists of federal 103 grant funds ($386,502), air contaminant funds ($1,452,742), and State "Environment First" HC2A funds ($312,944).

Background:
Under Iowa Code 455B.103, the department has responsibility for conducting ambient air monitoring in the State of Iowa. SHL currently operates most of the ambient air monitoring sites in Iowa. It also provides analytical and technical support for ambient air monitoring activities throughout the State. It weighs and determines the ionic composition of particulate samples and performs analysis of air samples for many toxic compounds found in urban air. SHL also provides analysis of asbestos samples gathered by DNR inspectors. The SHL quality assurance group conducts annual audits of SHL ambient air monitoring activities as well as those of the Local Programs. This contract provides for a continuation of these essential services.

Purpose:
The parties propose to enter into this contract for the purpose of retaining SHL to perform ambient monitoring and related services in support of the department's Air Quality Bureau.

Contractor Selection Process:
The University of Iowa State Hygienic Laboratory was chosen for this project in accordance with Iowa Code 455B.103, which directs the department to contract with other State agencies for services, if possible. Iowa Code 263.7 establishes environmental investigations as an essential duty of SHL, and SHL has considerable experience and expertise in this area.

Contract History:
The DNR has contracted with the University of Iowa for ambient air monitoring services for over thirty years. This contract represents ongoing services provided by SHL to the Air Quality Bureau and is renegotiated annually.
The last contract total was $2,096,268. The 3% increase is due to increased costs for personnel and analytical services. There are no significant changes to the scope of work during this contract period.

Sean Fitzsimmons
Environmental Specialist Senior
Air Quality Bureau, Environmental Services Division
May 19, 2015

5.1 Statement of Work. Contractor shall perform the Tasks indicated below on the schedule described in Appendices A and C.

5.1.1 STAFFING SHL will provide adequately trained staff to be able to perform the tasks in this contract.

5.1.2 QUALITY ASSURANCE

5.1.2.1 SHL Internal Quality Assurance Activities

Quality System. SHL shall develop and implement a Quality System in accordance with EPA guidance in order to assure the quality of its air monitoring activities. The Quality System developed by SHL shall insure that the environmental data generated by SHL meets the requirements of EPA and/or the DNR. This will include development and implementation of a Quality Management Plan (QMP) according to EPA guidance document QA/R-2, development and implementation of Quality Assurance Project Plans (QAPP's) consistent with EPA guidance document QA/R-5, and development and implementation of Standard Operating Procedures (SOP's) for operation of air monitoring equipment, data handling, laboratory analyses, and other repetitive procedures. The QAPP/SOP's shall be reviewed and revised as necessary to remain current with EPA requirements outlined in 40 CFR Part 58, guidance in the current edition of EPA's Quality Assurance Handbook for Air Pollution Measurement Systems ("the Redbook 2013"), and applicable EPA guidance or DNR agreements. A complete set of QMP/QAPP's/SOP's for all air monitoring activities shall be submitted to the DNR electronically in PDF format as a component of the annual review of air monitoring activities.

Revision of Quality Assurance Documents. Substantive revisions of SHL's QMP/QAPP's/SOP's require approval of the DNR and EPA. Electronic copies of all proposed revisions to quality assurance documents shall be provided to the DNR at least thirty (30) days prior to compliance monitoring data generation. QAPP/SOP revisions shall be submitted to EPA/DNR within thirty (30) days following (1) promulgation of new monitoring rules or procedures by EPA as requested in writing (email) from the DNR, or (2) written notification of a deficiency in procedures by EPA/DNR. Upon receipt of new equipment for which no QAPP/SOP exists, SHL shall develop a new SOP for operation of the equipment within sixty (60) days of equipment receipt unless otherwise indicated in the special projects section of this contract. SHL shall not deploy monitoring equipment for compliance monitoring without an associated QAPP/SOP.

EPA Audit programs. SHL shall participate in EPA's National Performance Audit Program (NPAP), the performance evaluation program (PEP) for PM2.5 monitoring, and EPA technical systems audits (TSA's) as requested by the DNR. SHL shall fund at least one annual NPAP audit for all monitors for which NPAP audit devices are available. SHL shall conduct additional audits including but not limited to performance audits, systems audits, and review of quality assurance documents (e.g. QMP's, QAPP's or SOP's) at the request of the DNR.

Annual Network/Quality Assurance Review. On an annual basis, SHL shall demonstrate that its quality system is sufficiently developed, and that its monitors are appropriately sited. In addition, SHL shall review its AQS/PARS data and site/monitor parameters in the AQS database for errors during the previous calendar year, and then generate graphical and statistical summaries of the data. SHL shall evaluate the data relative to EPA acceptance criteria for data completeness, precision and accuracy. On the basis of this review, SHL shall submit its annual State and Local Air Monitoring Stations (SLAMS) certification letter in hard copy and electronic formats. The Annual Network/Quality Assurance review shall contain the following components:

- a complete, current set of Quality assurance documentation (QMP/QAPP's/SOP's) submitted to the DNR in electronic format (PDF),
- AQS/PARS raw data listings generated from the AQS system (AQS AMP251 and AMP350 reports) in electronic format for all monitors operated by SHL for the calendar year under review,
- graphs of concentration vs. time submitted in electronic format for all monitors operated by SHL for the calendar year under review,
- completed current National Ambient Air Monitoring Technical Systems Audit Form contained in Volume II Appendix H, of EPA's Quality Assurance Handbook for Air Pollution Measurement Systems (May, 2013), in electronic format,

- an annual quality assurance report following the example contained in Volume II Appendix I, of EPA's Quality Assurance Handbook for Air Pollution Measurement Systems (May, 2013), in electronic format and written (hard copy) reports of findings with recommendations based on the annual review.
- an annual SLAMS report (AQS AMP 450NC), a summary report of precision and accuracy data (AMP600), additional reports as specified by EPA for data certification in electronic format, as well as a letter certifying the accuracy of the reports based on a review of all materials contained in the annual review in hard copy and electronic formats.

The Annual Network/Quality Assurance Review shall be submitted to the DNR by March 15.

SHL will conduct an annual systems audit of the toxics, metals, ions, and filter weighing laboratories using a protocol approved by the DNR and consistent with EPA Guidance (EPA QA/G7). Reports summarizing the most recent toxics and filter weighing laboratory audits shall be submitted to the DNR as a component of the Annual Network/Quality Assurance Review.

SHL shall include a DNR auditor in its annual TSA audits.

5.1.2.2 External Quality Assurance Activities (Outside SHL's Reporting Organization)

Polk and Linn County Quality Assurance Audits. SHL will perform quality assurance reviews of the Polk and Linn County Local Programs air quality laboratories and monitoring programs using the forms and procedures found in Volume II, Appendix H, of the Quality Assurance Handbook for Air Pollution Measurement Systems (May, 2013). The questionnaires shall be completed and submitted to the DNR by SHL no later than March 15, and hard copy and electronic reports of findings and recommendations will be provided no later than April 1, or within two weeks of receipt of completed questionnaire from Polk and Linn Counties, whichever is later.

Prevention of Significant Deterioration (PSD) Ambient Monitoring Sites. Within thirty (30) days of DNR's written request SHL will review and provide written comments on the standard operating procedures and quality assurance plan components of facility PSD ambient monitoring plans. SHL will continue to work with facilities to ensure that the data gathered during the monitoring period is of acceptable quality. SHL shall observe and evaluate (quarterly) site audits of facility-run PSD ambient monitoring sites at specified PSD facilities. These site audits are to be performed in accordance with Appendix A of 40 CFR Pt. 58. SHL will notify the DNR when an audit was performed. Within two (2) weeks of receiving the site audit data, SHL will provide, in writing, the audit results and any recommendations for corrective actions to both DNR and the field staff operating the PSD site(s). To ensure format compatibility with EPA's AQS database, SHL will provide quality assurance reviews on ambient monitoring data generated by facility-run PSD monitoring sites, as specified by DNR within thirty (30) days of DNR's written request. The number of PSD monitoring sites shall be limited to no more than four (4) sites per year. SHL will be compensated for additional sites at the rate of $1000 per site, to be billed to its "Operation and Expenses" variable cost line item.

5.1.3 EXISTING NETWORK AND NETWORK MODIFICATIONS

Network Modifications. SHL shall operate the monitoring network indicated in Appendix B with modifications as indicated in Appendix C. In addition, SHL shall work with the DNR to site additional monitors in response to public health concerns that develop during the contract period, as resources and time allow.

New Monitoring Sites. Potential monitoring sites will meet the specifications set forth in Appendices D and E of 40 CFR 58. SHL shall not set up a new monitor site, dismantle an existing monitor site, or relocate any existing monitors without written approval from DNR.

Change in Sampling Frequency. SHL shall change sampling frequency at a monitor site within thirty (30) days of written notice by the DNR.

5.1.4 NETWORK PLANNING

Training and Safety Plan. SHL shall implement training and safety plans developed for all air monitoring staff. SHL shall ensure that its staff are adequately trained and work in a safe environment

Inventory. SHL shall maintain a complete and current list of all equipment which is part of the air monitoring system in the state of Iowa, including the location, description of equipment type, model number, serial number, ownership agency, and DNR and/or SHL inventory tag number. SHL shall record in the equipment inventory the installation date for any equipment newly installed in the air monitoring system.

For the purposes of this agreement, equipment is any item that has an acquisition value of $5,000 or more and an anticipated useful life of one (1) year or more. See Chapter 110-110.2(1) of the Iowa Administrative Code.

This agreement shall supersede any and all agreements by and between the DNR and SHL with respect to equipment. Equipment purchased under previous DNR/SHL agreements or purchased through amendment to this agreement is to be listed on the joint DNR/SHL equipment inventory. SHL shall ensure through the University of Iowa equipment inventory process that all equipment listed on the joint DNR/SHL inventory has been marked with University of Iowa property tags.

Equipment listed in the DNR/SHL Equipment Inventory includes equipment that was obtained in part from federal grant funds. In accordance with Title 40 Code of Federal Regulations, Part 30, the DNR as the grantee agency retains title to all equipment listed on the DNR/SHL Inventory and may require its return upon 30 days written notice.

SHL shall account for all equipment on the DNR/SHL equipment inventory in the event of damage, loss or theft incurred through normal usage.

SHL shall use the equipment in a careful and proper manner and provide routine repairs, service and supplies required for the normal operation of the equipment.

The DNR and SHL shall agree in writing prior to subleasing or transferring rights to the equipment to any third party.

The DNR shall have the right to enter the premises where the equipment is located for the purpose of inspecting the equipment at any reasonable time.

SHL shall submit to the DNR an annual inventory of joint DNR/SHL equipment. The following shall be included as part of such inventory.

- UI property tag number.
- Equipment description.
- UI purchase order number.
- UI purchase order date.
- Equipment cost as shown on invoice.
- A list of additions to the previous year's inventory including the cost for each item and the total cost.
- A list of deletions from the previous year's inventory including the cost of each item, total cost and reason for deletion.
- An inventory balance sheet including totals as follows:
    - Previous years inventory total;
    - Current years deletions total;
    - Current years additions total;
    - Current years inventory total.
- Signed certification that the inventory as presented is true and correct to the best of SHL knowledge.

Equipment costs shall not change once listed on the DNR/SHL joint property inventory. Equipment parts that are added to or removed from existing equipment shall be handled in the following manner:

- Parts that do not fit the definition of equipment used in this agreement shall not be accounted for on the joint property inventory.
- Parts that do fit the definition of equipment used in this agreement shall be tagged and listed individually on the joint inventory.

These provisions do not apply to integral component parts utilized in the repair of equipment and necessary to continued operation of the equipment.

Network Planning Report. SHL shall submit a proposal for additional equipment or staff desired for the next contract by February 15.

Annual Review of Computer Security. SHL shall submit an annual review of its computer security plan to the DNR by August 1. This plan shall indicate the strategy by which SHL shall insure the security of all data gathered under the terms of this contract. This review shall include a review of remote computers and data acquisition systems. The plan will be reviewed and signed by SHL's computer services supervisor.

Existing Vehicles. Twelve vehicles shall be maintained and utilized by SHL for exclusive use by air quality personnel solely for the operation of the ambient air monitoring network.

The DNR will not be responsible for mileage costs for a replacement vehicle(s) except for periods of time when the vehicle being replaced is undergoing repairs or maintenance, or when additional vehicles are needed.

New Vehicles. SHL will purchase two new service vehicles for exclusive use by air quality personnel solely for operating the ambient air network, with funds to be provided by the DNR for this purpose. The vehicles shall be purchased no later than March 15, and, once purchased, shall be included in the equipment inventory.

Vehicles to be Retired. Vehicles taken out of service by SHL shall be disposed of through a state vehicle auction or University of Iowa Motor Pool. Proceeds from the sale of auctioned vehicles shall be returned to the contract funds through a credit on the monthly billing report.

5.1.5 DATA MANAGEMENT

Data Validation. Data obtained from ambient monitors shall be validated as specified in the approved QAPP and in this scope of work.

Data Validation for Continuous Monitors. SHL shall store short term (5 minute) monitoring data for the purpose of validation of all hourly continuous monitoring data. This data may be captured either by daily polling of all monitors, or by on site storage of short term data using data logging software at the site.

Real-time monitoring. SHL shall display hourly real-time monitoring data in graphical formats as well as current and predicted AQI on its web site. SHL shall post data to EPA's ozone and particulate mapping server within twenty-five (25) minutes after the end of each hour. SHL shall establish procedures and assign personnel to ensure that continuous data is being transmitted successfully to the EPA AIRNow website and the SHL real-time website. SHL shall ensure that real-time data are processed and posted to the SHL and AIRNow websites on a timely basis. Communications, download, and upload problems greater than four hours in duration shall be documented and submitted to the DNR in the monthly report, including any corrective actions taken to resolve such problems. Procedures and frequencies for polling and posting data shall be as indicated in SHL's real-time monitoring QAPP/SOP. SHL will upload all non-continuous data to the SHL real-time website on the same schedule that the data is submitted to the AQS database. SHL shall provide charts of FRM versus real time (continuous-derived) concentrations for all continuous PM monitoring sites on its web-site. Upon DNR approval SHL may send preliminary data via email to interested third parties.

Site Setup and Closure in AQS. SHL shall be responsible for opening and closing sites and monitors in the AQS database for its reporting organization, and for its monthly data uploads. SHL shall contact the DNR in order to confirm that new site or monitor setup parameters are accurate before uploading the new parameters to the database. SHL will not close sites or monitors in the AQS database without approval from the DNR. SHL will inform the DNR via e-mail whenever modifications to the AQS database are made. This notification shall contain a note of explanation of the modifications made and the rationale for the modifications.

AQS/PARS Data Submission. Validated monitoring data (AQS data) and precision and accuracy data (PARS data) for all continuous monitors shall be uploaded by SHL staff to the AQS system by the 15th of the month following the month in which it is collected. Validated monitoring data and precision and accuracy (PARS) data for all gravimetric filter samplers shall be uploaded to AQS within 30 days of the end of the month in which it is collected.

Data from samplers requiring laboratory analysis for ions, manganese, metals, and toxics shall be uploaded to the AQS database with a goal of 45 days from the end of the month in which it is collected. Data from samplers requiring laboratory analysis for lead shall be uploaded to the AQS database within 45 days from the end of the month in which it is collected. SHL will inform the DNR via e-mail after completing its monthly data uploads. This report shall include a copy of the final version of the screening file, and copies of the edit and scan checks. In the event that the monthly data upload is not complete, this report shall indicate the reason for the backlog and the anticipated date when the backlogged data will be uploaded.

Data Screening. SHL shall archive an AQS AMP120 to document the data uploaded immediately after each data file is loaded into the system.

Monthly AQS Record keeping Requirements. On a monthly basis, SHL shall:

- run and review the AQS AMP251 and AQS AMP350 monitor reports to determine the completeness and accuracy of the AQS and PARS data uploaded by SHL to the AQS system.

Quarterly AQS Record keeping Requirements. On a quarterly basis, SHL shall:

- run and review the AQS AMP251 report to evaluate the PARS data uploaded by SHL;
- run and review two AQS AMP256 reports, one for the current quarter, and a cumulative AMP256 report for the year through the end of the quarter being summarized.;
- run and review the AQS AMP430 report in order to evaluate the quarterly data completeness of the monitors operated by SHL;
- run and review the AQS AMP380 report in order to evaluate the accuracy and completeness of the site setup parameters of the monitors operated by SHL.

5.1.6 REPORTS

Immediate Reports. SHL will notify the DNR immediately and provide a written follow-up upon validation of any exceedance of an ambient air quality standard, emergency episode or potential emergency episode (as defined in 567 IAC 26.2), or exceedance of any other pollutant threshold provided in writing by the DNR.

Weekly Network Status Report. SHL will transmit a written report of the status of air monitoring systems to the DNR Project Manager on the first working day of every week. This report will note any sites or monitors that have been added or removed from the network during the previous week. For each site that is modified or for which data are missed, the report will also include:

- date of last valid data;
- date inoperative condition detected;
- cause of inoperative condition;
- step(s) taken to correct condition;
- expected date data reporting will resume.

Monthly Monitoring Reports. SHL will submit to the DNR Project Manager, a monthly report within fifty (50) days of the end of each month. This report will include a list of fixed station air monitoring sites in operation during the report period, and for each station:

- the number of samples collected or received;
- the number and type of analyses performed;
- the number of exceedances of ambient air quality standards, the number of emergency episodes or potential emergency episodes, and the number of exceedances of pollutant thresholds;
- a listing of all sampling that was omitted by reason of equipment failure, calibration, zero and span checks, sample handling accident, laboratory accident or failure of the operator to collect samples; the type and number of equipment failures; corrective actions taken to mitigate sampling failures;
- a complete listing of the scheduled number of checks and actual completion dates for PARS precision and accuracy checks and calibrations on each monitor or analyzer as well as an explanation and corrective actions taken for calibrations, precision checks, or audits that were not performed on schedule or did not meet acceptance criteria listed in the QAPP and SOP's;
- the percentage of total possible samples which were translated into valid air quality data;
- a listing of all backlogged AQS or PARS data, the reason for the backlog, and the date when the backlogged data will be uploaded to AQS.
- A performance evaluation of the "Smart Heaters" on the BAM 1020 particulate monitor(s).

- A summary of the availability of real-time air monitoring data, including a description of any issues with communication, download or upload of data that causes a delay in reporting data to the SHL or AIRNow websites of greater than four hours, along with a corrective action plan to address these issues.
- Zero air test data for all continuous particulate monitors.

Quarterly Monitoring Report. SHL will submit to the DNR Project Manager, a quarterly report within fifty (50) days of the end of each calendar quarter. This report will include a list of fixed station air monitoring sites in operation during the report period, and for each station:

- the data completeness associated with each monitor; and, in the event the percentages do not meet EPA completeness criteria, an explanation of the reasons for the insufficient data and corrective action plan for the monitor;
- the scheduled number of checks and actual completion dates for PARS precision and accuracy checks and calibrations on each monitor or analyzer as well as an explanation and corrective actions taken for calibrations, precision checks, or audits that were not performed on schedule or did not meet acceptance criteria listed in the QAPP and SOP's;
- the precision and accuracy quarterly rollup for all monitors or analyzers operated during the quarter, calculated as specified in 40 CFR Pt. 58 App. A. SHL Air Quality shall certify that QA has been completed as well as any corrective action plans for analyzers that may be in danger of not meeting Appendix A requirements;
- a listing of all backlogged AQS or PARS data, the reason for the backlog, and the date when the backlogged data will be uploaded to AQS.
- An AMP256 report for the quarter being summarized as well as an AMP256 report for the year through the end of the quarter being summarized. The report will indicate if the number of precision checks and accuracy audits that were done; is at least equal to the minimum required by 40 CFR Pt. 58 App A, the EPA's QA Handbook ("Redbook"), or other agreements between the DNR and SHL (whichever is greater). The Report shall also include a detailed comparison between precision and accuracy results, and the relevant acceptance criteria. In the event that the acceptance criteria are not met, or the cumulative AMP600 suggests they are unlikely to be met for the year, a corrective action plan shall be included.

Inventory Reporting. SHL will supply to the DNR a copy of the complete up to date equipment inventory within seven days of a request by the DNR during the agreement period.

5.1.7 PM10, PM2.5, PM2.5 SPECIATION, METALS, AND TOXICS ACTIVITIES

- Third Party Contractors for lead, PM10, PM2.5 Federal Reference Method, and IMPROVE Visibility Sampler Operations. Where third party filter collectors are used to gather lead, PM10, PM2.5, or visibility filters within the SHL reporting organization, SHL shall perform all operations except for filter collection, and transmission of sampler performance data to SHL and the national visibility laboratory. SHL's duties include, but are not limited to, the performance of all calibrations, audits, and routine maintenance for all lead, PM10, PM2.5, and visibility monitors within their reporting organization. For new sites where third party operators are to be employed, DNR shall locate qualified third party operators and SHL shall train them to operate samplers in accordance with the SHL's standard operating procedures developed for third party operators. SHL shall manage third party operators to insure that the data generated meets DNR goals for completeness and data quality. SHL shall supply a certified IMPROVE auditor and conduct quarterly audits on IMPROVE samplers.

PM2.5 Speciation Activities. SHL shall perform the following activities in support of the PM2.5 speciation network:

- Field Activities. SHL shall perform all field activities at speciation sites specified in this agreement including canister replacement and transmission of sampler performance data to EPA's National Speciation Laboratory. In addition, SHL shall be responsible for the performance of all calibrations, audits, and routine maintenance for all PM2.5 speciation monitors.

  Data validation and AQS maintenance. SHL shall be responsible for setting up or shutting down speciation sites in AQS and shall validate speciated PM2.5 data in cooperation with EPA's National Speciation Laboratory.

Toxics Analysis Laboratory. SHL shall manage and operate the State's air toxics analysis laboratory in support of the State toxics monitoring network. The laboratory shall provide support and analysis for toxic samplers operated by contractors, the Local Programs, or by SHL, as directed by the DNR. The SHL toxics laboratory shall:

- operate all laboratory equipment in accordance with EPA/DNR approved QAPP, SOP's, and manufacturer's operation manuals;
- analyze canister and cartridge samples as well as other appropriate samples as determined by the DNR;
- conduct a method detection limit analysis for toxics at a minimum annual frequency;
- clean and evacuate sampling canisters and maintain an inventory of clean, evacuated canisters sufficient for Iowa toxics monitoring sites;
- provide shipping containers, coolers, thermometers, and ice substitute packs as needed to insure sample handling is conducted in accordance with the QAPP and SOP's;
- maintain an inventory of supplies and consumables sufficient to support toxic monitoring efforts in the State;

SHL Air Quality Department shall:

- report toxic data analysis results to the DNR with a goal of forty-five (45) days from the end of the month when the samples were collected.
- Enter all non-zero values (even if less than the MDL or IDL) into the AQS database along with appropriate flags and the MDL for each concentration.

Toxics Monitoring Activities. SHL shall perform the following toxic monitoring activities in support of the State toxics monitoring network.

- Field Activities. SHL shall perform all field activities at toxic monitoring sites in the SHL network. These duties include sample collection, calibrations, audits, and routine maintenance for all toxics monitors. These duties shall be performed in accordance with EPA/DNR approved QAPP and SOP's.
- Data validation and AQS maintenance. SHL shall be responsible for setting up or shutting down toxics sites in AQS and shall validate toxics data in accordance with EPA/DNR approved QAPP and SOP's. SHL shall upload toxics data to AQS unless otherwise directed by the DNR.

Ion monitoring and analysis activities.

- SHL shall coat and extract denuders, and perform ion analysis for particulate filters as requested by the DNR during the contract year. Ion sampling and analysis shall be conducted following QAPP’s and SOP’s approved by the DNR. SHL shall conduct a method detection analysis for ions analyzed on each type of filter substrate at a minimum annual frequency. Enter all non-zero values (even if less than the MDL or IDL) into the AQS database along with appropriate flags and the MDL for each concentration.
- SHL shall provide the results of the ion analysis to the Local Programs in a format that can be directly uploaded to AQS. For ion samples collected by SHL, the associated data shall be loaded to AQS with a goal of forty-five (45) days from the end of the month in which the samples were collected. For samples collected by the Local Programs, the data shall be sent by e-mail to the Local Programs and to the DNR with a goal of forty-five (45) days from the end of the month in which the samples were collected.

Teflon Filter Weighing Laboratory. SHL shall manage and operate the State's Teflon filter weighing laboratory. This laboratory shall provide support for Teflon filter monitors run by contractors, the Local Programs or by SHL, as directed by the DNR. SHL shall:

- operate in accordance with DNR/EPA approved QAPP's and associated SOP's for all Teflon filter weighing laboratory operations;
- order filters and manage the Teflon filter inventory so that sufficient filters are available in order to meet the sampling needs of its customers;
- pre-weigh the filters, load them into clean filter holders, and load the filter holders into clean filter magazines within the laboratory;
- provide shipping containers to mail the filter magazines to the field operators;
- provide coolant and thermometers to ensure that the loaded filters are adequately cooled in transport from the field back to the weighing laboratory;
- equilibrate and weigh the loaded filters, and provide the results of the gravimetric analysis along with all other laboratory data required for upload to the AQS system to its customers in a format that can be directly uploaded to AQS. The data shall be sent by e-mail to all customers and DNR Local Program contacts within 30 days of the end of the month in which the data were collected;
- archive all Teflon filters, as well as filters from portable samplers where directed by the DNR, in refrigerated storage for a minimum of 1 year in accordance with EPA guidance;

Lead/Metals Analysis Laboratory. SHL shall manage and operate the State's air lead/metals analysis laboratory in support of the State monitoring network. The laboratory shall provide support and analysis for lead/metals samplers operated by contractors, the Local Programs, or by SHL, as directed by the DNR. The SHL lead and metals laboratory shall:

- operate all laboratory equipment in accordance with EPA/DNR approved QAPP, SOP's, and manufacturer's operation manuals;
- conduct a method detection limit determination for metals for each analyte on each filter substrate at a minimum annual frequency;
- analyze filter samples as determined by the DNR;
- maintain an inventory of supplies and consumables sufficient to support lead and metals monitoring efforts in the State;

SHL Air Quality Department shall:

- provide shipping containers, coolers, thermometers, and ice substitute packs as needed to insure sample handling is conducted in accordance with the QAPP and SOP's;
- maintain an inventory of supplies and consumables sufficient to support lead and metals monitoring efforts in the State;
- report metals data analysis results to the DNR and upload to the AQS database with a goal of forty-five (45) days from the end of the month in which the samples were collected.
- report lead data analysis results to the DNR and upload to the AQS database within forty-five (45) days from the end of the month in which the samples were collected.
- Enter all non-zero values (even if less than the MDL or IDL) into the AQS database along with appropriate flags and the MDL for each concentration.

5.1.8 TECHNICAL ASSISTANCE

Technical Assistance to the Local Programs. SHL shall provide technical assistance to the Local Programs in cooperation with the DNR in matters related to the operation of the local monitoring networks.

5.1.9 SPECIAL PROJECTS

SHL shall complete the following special projects:

- New Monitoring Sites. SHL shall install new monitoring sites and discontinue sites/monitors as indicated below and in Appendix C.
- Complete deployment of 2025i samplers by June 1.
- Agilaire Training. SHL shall host training for Agilaire AirVision software for SHL and the Local Programs by June 1.
- Suspension of Manganese Analysis. SHL shall suspend supplemental manganese analysis of filters from the Griffin Pipe site on January 1.
- Upgrade of BAM Analyzers. SHL shall install an upgraded inlet heater in one BAM monitor by December 1.
- Plan to Improve BAM Comparability. SHL shall create a plan to improve comparability of collocated BAM analyzers and achieve better comparability between collocated BAM and FRM samplers by August 1.
- PM2.5 Audit Sampling. SHL shall operate a PM2.5 audit sampler at locations selected by the DNR during the contract period.

Survey Sampling/Public Outreach. SHL will conduct survey sampling or investigate the feasibility of survey sampling on behalf of the DNR.

- If the survey involves equipment and analytical methods in use in the current air monitoring network, then the sampling results will be analyzed following the time frames and pricing schedules established in the contract for routine samples. SHL will initiate sampling within thirty (30) days of a request by the DNR and issue a final public report within (30) days after conclusion of analysis. The final report will contain a description of the monitoring location, a comparison of the site location to any applicable federal siting criteria, the sampling data, a comparison of the data to health standards established for routine sampling.
- If the survey involves equipment or analytical methods not in use in the current air monitoring network. SHL will develop criteria for siting survey or passive samplers, calibration and operation of sampling equipment, analytical methods used to develop samples, and data reduction and analysis techniques. In addition, within thirty (30) days of a request of the DNR, SHL shall distribute available portable or passive samplers to members of the public and train them in the operation of these samplers. SHL or other DNR

approved laboratory shall be responsible for analyzing the results of these sampler runs, and submitting a report to the sample operator and to the DNR in a mutually agreed upon timeframe.

Backup Continuous Monitors. Within thirty (30) days of a request by the DNR, SHL shall install and operate backup continuous samplers in the SHL network. Precision checks, audits, and calibrations shall be performed on the backup monitors in the same manner as for the primary monitor.

Digital Data Capture. SHL shall configure continuous monitors for digital data capture at monitoring locations where it is practical and feasible

5.1.10 SUPPLEMENTAL ANALYTICAL SERVICES

- Toxics analysis. Toxics analysis costs for the contract period shall be $315.00 per TO-15* analysis and $184.50 per TO-11A analysis.
- Ion analysis. Ion analysis costs for the contract period shall be $25.50 per sample for sulfate or nitrate analysis, $40.00 per sample for both sulfate and nitrate analysis.
- Asbestos analysis. Asbestos analysis costs for the contract period shall be $40.00 per sample.
- Lead or manganese analysis*(GFAA). Lead or manganese analysis costs for the contract period shall be $14.50 per metal analyzed and $11.00 per digestion required.
- Metals analysis (ICP-MS). Metals analysis costs for the contract period shall be $14.50 per metal analyzed plus $11.00 per digestion required.

  *The DNR has purchased the analytical equipment.

5.1.11 ASBESTOS NESHAP PROGRAM

Asbestos Samples Submitted by the DNR. SHL will analyze all samples submitted by departmental DNR staff as described in the second paragraph of this section. Sample containers for sample transport will be provided by SHL. The results of the tests will be forwarded to the Air Quality Section within fifteen (15) calendar days of receipt. Extra time for analysis is allowed in cases when the analytical work warrants. A notification to the submitter, stating that analytical results from a sample will be delayed and the reason for the delay will be made within fifteen (15) calendar days of receipt of the sample if extra time is required for analysis.

Asbestos Sample Analysis. SHL shall analyze samples for asbestos submitted by DNR staff. Unless otherwise directed, the analysis will use the published polarized light microscopy method from 40 CFR Part 763 Appendix A to Subpart F. These samples will be collected during NESHAP compliance evaluation inspections of asbestos abatement contractor work. Samples collected for this activity will be coded as AQ-AB.

Iowa Department of Natural Resources
Environmental Protection Commission

ITEM **12** **DECISION**

TOPIC **Air Quality - Title V Fee**

The Commission is asked to approve the annual Title V fee for state fiscal year (FY) 2016 Title V budget at $56 per ton. The Air Quality Bureau's (Bureau) Title V budget is summarized in the attachment. The Bureau's budget is comprised of Title V fees, federal grants, and state funds. This proposal relates only to the Title V fee portion of the Bureau's budget.

Stakeholder Engagement

The Iowa General Assembly provided a special appropriation to fund the shortfall for FY 2015 and established the Air Quality Stakeholder Group to study the air quality services provided and the funding of the air quality program (HF 2473, GA 85). The Stakeholder Group was comprised of representatives of large and small Iowa industries, local governments, and environmental interests. Stakeholder group members developed six recommendations for funding the air quality program for next year and beyond. The recommendations were included in a report submitted in December 2014 to the General Assembly, and presented to the Commission in January by the Bureau. New revenues from notification fees are needed to support the asbestos program, and application fees for operating permits, construction permits, and dispersion modeling.

The Bureau met with a representative group of the Title V fee payers on January 7, 2015, to discuss the budget. An estimated or draft budget to cover the reasonable costs of administering the Title V program was prepared following these meetings. The proposed budget is intended to allow the Department to continue to provide a status quo budget (same level of services).

Bureau Funding

The Title V fee proposed will provide a key element for funding the Air Quality Bureau.

Bureau Revenue For FY 2016	
Title V Emission Fees	*7,840,000*
Title V Carryforward, Interest, Over/Under Payments	*933,000*
Title V Application Review & Permit Issuance Fees	*425,000*
Subtotal - Air Contaminant Fund	**9,198,000**
Major Source Application Review, Permit Issuance	*696,000*
Minor Source Application Review, Permit Issuance	114,000
Federal Grants (Clean Air Act 103 & 105)	1,723,000
State Funds (General Fund & Environment First)	1,129,000
Solid Waste Alternative Fund (SWAP)	77,000
Asbestos Notification Fees	150,000

Bureau Revenue - Total	**13,087,000**

Program Background

The Title V program is required by the federal Clean Air Act as amended in 1990. The Clean Air Act requires states to charge fees sufficient to cover all reasonable direct and indirect costs required to develop and administer the Title V program requirements (42 U.S.C. 7661a). The Bureau developed the Title V fee structure, including eligible program activities, with stakeholder collaboration in the early 1990s.

The Title V fee is calculated by dividing the estimated budget by the chargeable emissions as reported by facilities each March 31. The Bureau provides this information to the Commission no later than the May meeting. The Commission is asked to set the fee based on the program's budget by no later than the May meeting this year. The Title V fees are due each July 1 and fund the activities for the entire year. For example, the Title V fees to be paid on July 1, 2015, are based on 2014 emissions and will fund FY 2016 (July 1, 2015, to June 30, 2016).

What is a Title V operating permit?

A Title V operating permit is required for those facilities with potential emissions that exceed the major stationary source thresholds. A major stationary source is a facility that has the potential to emit 100 tons per year (tpy) or more of any air pollutant; or the potential to emit 10 tpy or more of any individual hazardous air pollutant; or the potential to emit 25 tpy or more of any combination of hazardous air pollutants.

Iowa has approximately 280 major stationary sources, also referred to as Title V facilities. Examples of Title V facilities include electric utilities, food and grain processors, manufacturing operations, natural gas pipelines, ethanol plants, and cement plants.

The Title V fee is based on the first 4,000 tons of each regulated air pollutant emitted each year from each major stationary source in the state. Regulated pollutants include: particulate matter less than 10 micrometers in diameter (PM_{10}), sulfur dioxide (SO_2), nitrogen oxides (NO_x), volatile organic compounds (VOC), lead (Pb), and hazardous air pollutants (HAP). Greenhouse gas emissions are not subject to Title V fees. The fee is used to support the development and administration of activities associated with the Title V Operating Permit Program and other activities listed in Iowa Code 455B Division II not funded by a fee program.

FY 2016 Proposed Budget

Personnel expenses include an estimated increase of 1.9% and an indirect rate of 13.1%. The final personnel expenses provided by the Department of Management in June, will be used to set the final budget. Contracts for professional services and state aid to Linn and Polk Counties are under negotiation and are anticipated to be on the agenda for approval at the June Commission meeting. The amounts listed in the draft budget are estimates only.

Last year the emissions were 148,038 tons. The current estimate is 140,000 tons based on emission inventories received to date.

Catharine Fitzsimmons, Bureau Chief
Air Quality Bureau
Environment Services Division

Air Contaminant Source Fund - Expenses	SFY 2014 Actual	SFY 2015 Budget	Draft SFY 2016 Budget
FTE	**56.25**	**56.25**	**57.25**
Personnel	4,802,874	5,397,416	5,215,408
Travel in state	9,857	7,100	7,100
State vehicle	17,391	15,700	15,700
Depreciation	7,184	30,900	30,900
Travel out of state	12,835	11,000	11,000
Office supplies	7,639	5,600	5,600
Facility maintenance supplies	510	50	50
Equipment maintenance	5,289	6,000	6,000
Other supplies	2,845	1,100	1,100
Printing and binding	1,002	550	550
Uniforms	1,193	1,500	1,500
Postage	718	500	500
Communications	50,378	65,000	65,000
Rental	169,989	176,400	176,400
Monitoring utilities	23,860	40,000	40,000
UNI Small Business Assistance agreement	287,576	298,507	304,000
SHL agreement	1,367,972	1,426,322	1,452,742
Professional Services (Total)	**1,655,548**	**1,724,829**	**1,756,742**
Outside Services	66,961	35,000	35,000
Advertisement in publications	4,102	3,000	3,000
Reimbursement to other agencies	6,889	10,600	10,600
ITS reimbursement	273	750	750
Govt/Transfer Attorney General	30,000	30,000	30,000
Govt/Transfer Other State Agency	20	0	0
Equipment	128,083	130,000	130,000
Equipment non-inventory	717	1,100	1,100
Other expenses	6,374	8,000	8,000
IT Equipment & software	52,189	140,000	140,000
IT Outside Services	0		75,000
Linn County Local Program Agreement	678,090	705,942	719,000
Polk County Local Program Agreement	679,575	711,128	725,000
State Aid (Total)	**1,357,665**	**1,417,070**	**1,444,000**
Indirect charges	572,697	603,372	683,000
Total Expenses	**8,995,081**	**9,862,536**	**9,894,000**
Revenue			
Special Appropriation	0	1,390,900	0
Major Construction Permit Application Fee			696,000
Title V Application Fee			425,000
Balance forward	888,723	512,845	960,000
Fund interest	16,939	20,000	15,000
Under and over payments	1,742	0	-42,000
Title V fees	8,603,004	8,311,335	7,840,000
annual tons (est)	*153,917*	*148,417*	*140,000*
$/ton	*56.00*	*56.00*	*56.00*
Total Revenue	**9,510,408**	**10,235,080**	**9,894,000**
Revenues - Expenditures	**515,327**	**372,544**	**0**

Environmental Protection Commission
Iowa Department of Natural Resources

ITEM **13** **DECISION**

TOPIC **Contract with State Hygienic Laboratory at The University of Iowa for Ambient Stream Biological Monitoring and Laboratory Services**

Recommendations:
Commission approval is requested for a [1.25] year-service contract with the State Hygienic Laboratory at The University of Iowa of Iowa City, IA. The contract will begin on July 1, 2015 and terminate on September 30, 2016. The total amount of this contract shall not exceed $606,706.20.

Funding Source:
This contract will be funded through 455B.103 using Environment First Funds from the HB8A Cost Center.

Background:
The Clean Water Act requires states to monitor and report on the condition of the waters of the state. This contract is a continuation of DNR's long-standing partnership with SHL to collect and analyze samples from Iowa's streams and rivers. Since 1994, the DNR has conducted biological assessments of Iowa streams to determine the ecological status and health of these waterbodies. The protocol primarily consists of sampling water quality, fish, benthic macroinvertebrates and physical habitat during the summer low-flow index period (July through October).

Purpose:
The parties propose to enter into this Contract for the purpose of retaining the Contractor to provide: sampling and analytical services for the ambient biological monitoring and assessment program.

Contractor Selection Process:
The SHL was chosen as contractor based on the Code of Iowa (455B.103), which directs the DNR to contract with public agencies of the state. SHL was also chosen for this project due to their sample collection and analysis expertise.

Scope of Work:
For an outline of the **scope of work**, see the attached document.

Roger Bruner, Supervisor
Water Monitoring and Assessment Section, Water Quality Bureau
Environmental Services Division
May 19, 2015

Attachment(s): Special Conditions for Contract

Section 5 STATEMENT OF WORK

5.1 Statement of Work. Contractor shall perform the following Tasks. Contractor shall complete its obligations under this Contract by the Task Milestone Dates set out in the following table.

Obligation	Task Milestone Date
Task 1: Calibrated Wadeable Stream Reference Site Sample Collection **Description:** One full biocriteria (IBI) sampling event shall be completed by the Contractor at each of the 17 sites identified in Exhibit A, which is attached to and shall by this reference become a part of this Contract. All biological and physical habitat data shall be entered by the Contractor directly into the DNR's online BioNet database. All other recorded observations shall be reported to the DNR in a DNR-approved electronic format. Contractor shall provide the following deliverables to DNR: a) Calibrated wadeable stream reference site sample collection: benthic macroinvertebrates and fish (2015 revised DNR IBI protocols, 2015 revised DNR field forms); quantitative transect-based habitat survey (2015 revised DNR intensive habitat protocol; 2015 revised DNR intensive habitat field forms); benthic chlorophyll, water quality grab sample and field analytes (expanded aquatic life parameter suite; see Table 1). b) Fish and benthic macroinvertebrate sample analysis of samples collected under Task 1a: field form submittal, fish, benthic macroinvertebrate, physical habitat and field form data entry. c) Fish and benthic macroinvertebrate sample analysis of samples collected from nine FY15 Task 1 sites listed under Task 1 in Exhibit A: field form submittal, fish, benthic macroinvertebrate, physical habitat and field form data entry. d) QA/QC of all data entered into the BioNet database under Task 1b and 1c.	No later than: a) October 15, 2015 b) April 1, 2016 c) April 1, 2016 d) May 1, 2016 Any deviation from this schedule shall be approved in writing by DNR prior to the change.
Task 2: Headwater Stream Candidate Reference Site, HW Stream Temporal Candidate Reference Site and HW Stream Gear Comparison Candidate Reference Site Sample Collection **Description:** <u>HW Stream Candidate Reference Site sampling</u>: One full biocriteria (IBI) sampling event shall be completed by the Contractor at each of the 29 sites identified and described in Exhibit A. 10 of the full-bio samples shall be collected in the July 15 - August 31 period, 10 samples collected in September 15 - October 15, 2015 period and nine of the samples shall be collected during May 15 - June 30, 2016 as described in Exhibit A. <u>HW Stream Temporal Candidate Reference Site Sampling</u>: 12 full-bio samples shall be collected at four sites in each of three periods: July 15 - August 31, 2015; September 15 –October 15, 2015; May 15 - June 30, 2016 as described in Exhibit A. <u>HW Stream Gear Comparison Candidate Reference Site Sampling</u>: three additional semi-quantitative benthic macroinvertebrate samples shall be collected at three sites in each of three periods: July 15 - August 31, 2015; September 15 - October 15, 2015; May 15 - June 30, 2016 as described in Exhibit A. All biological and physical habitat data shall be entered by the Contractor directly into the DNR's online BioNet database. All other recorded observations shall be reported to the DNR in a DNR-approved electronic format. Contractor shall provide the following Deliverables to DNR: a) HW stream candidate reference site sample collection: benthic macroinvertebrates and fish (2015 revised DNR IBI protocols, 2015 revised DNR field forms); quantitative transect-based habitat survey (2015 revised DNR intensive habitat protocol; 2015 revised DNR intensive habitat field forms); benthic chlorophyll, water quality grab sample and field analytes (includes two Neonicotinoid Insecticide samples from two	No later than: a) 1/3 by August 31, 2015; 1/3 by October 15, 2015; 1/3 by June 30, 2016

FY15 HWCRS; expanded aquatic life parameter suite; see Table 1). b) HW stream temporal candidate reference site sample collection: benthic macroinvertebrates and fish (2015 revised DNR IBI protocols, 2015 revised DNR field forms); quantitative transect-based habitat survey (2015 revised DNR intensive habitat protocol; 2015 revised DNR intensive habitat field forms); benthic chlorophyll, water quality grab sample and field analytes (expanded aquatic life parameter suite; see Table 1). c) HW stream gear comparison candidate reference site sample collection: benthic macroinvertebrates (2015 revised DNR IBI protocols, 2015 revised DNR field forms). d) Fish and benthic macroinvertebrate sample analysis of samples collected under Tasks 2a-c; field form submittal, fish, benthic macroinvertebrate, physical habitat and field form data entry. e) Fish and benthic macroinvertebrate sample analysis of samples collected from two FY15 Task 2 sites listed under Task 2 in Exhibit A: field form submittal, fish, benthic macroinvertebrate, physical habitat and field form data entry. f) QA/QC of all data entered into the BioNet database under Task 2d.	b) 1/3 by August 31, 2015; 1/3 by October 15, 2015; 1/3 by June 30, 2016 c) 1/3 by August 31, 2015; 1/3 by October 15, 2015; 1/3 by June 30, 2016 d) 2/3 by April 1, 2016; 1/3 by September 1, 2016 e) April 1, 2016 Any deviation from this schedule shall be approved in writing by DNR prior to the change.
Task 3: Headwater Stream Survey Site Sample Collection **Description:** One full biocriteria (IBI) sampling event shall be completed by the Contractor in each of the three periods: July 15 - August 31, 2015; September 15 –October 15, 2015; May 15 - June 30, 2016 at the site identified and described in Exhibit A. All biological and physical habitat data shall be entered by the Contractor directly into the DNR's online BioNet database. All other recorded observations shall be reported to the DNR in a DNR-approved electronic format. Contractor shall provide the following Deliverables to DNR: a) HW stream survey site sample collection: benthic macroinvertebrates and fish (2015 revised DNR IBI protocols, 2015 revised DNR field forms); quantitative transect-based habitat survey (2015 revised DNR intensive habitat protocol; 2015 revised DNR intensive habitat field forms); benthic chlorophyll, water quality grab sample and field analytes (expanded aquatic life parameter suite; see Table 1). b) Fish and benthic macroinvertebrate sample analysis of samples collected under Task 3a; field form submittal, fish, benthic macroinvertebrate, physical habitat and field form data entry. c) QA/QC of all data entered into the BioNet database under Task 3b.	No later than: a) 1/3 by August 31, 2015; 1/3 by October 15, 2015; 1/3 by June 30, 2016 b) 2/3 by April 1, 2016; 1/3 by September 1, 2016 c) 2/3 by May 1, 2016; 1/3 by September 30, 2016 Any deviation from this schedule shall be approved in writing by DNR prior to the change.
Task 4: Coldwater Stream Reference Site Sample Collection **Description:** One full biocriteria (IBI) sampling event shall be completed by the Contractor at each of the four sites identified in Exhibit A. A thermal logger shall be placed at all stream sites in this task. All biological and physical habitat data shall be entered by the Contractor directly into the DNR's online BioNet database. All other recorded observations shall be reported to the DNR in a DNR-approved electronic format. Contractor shall provide the following Deliverables to DNR: a) Coldwater stream reference site sample collection: benthic macroinvertebrates and fish (2015 revised DNR IBI protocols, 2015 revised DNR field forms); quantitative transect-based habitat survey (2015 revised DNR intensive habitat protocol; 2015 revised DNR intensive habitat field forms); benthic chlorophyll, water quality grab sample and field analytes (expanded aquatic life parameter suite; see Table 1). b) Fish and benthic macroinvertebrate sample analysis of samples collected under Task 4a; field form and thermal data submittal, fish, benthic macroinvertebrate, physical habitat and field form data entry. c) QA/QC of all data entered into the BioNet database under Task 4b.	No later than: a) October 15, 2015 b) April 1, 2016 c) May 1, 2016 Any deviation from this schedule shall be approved in writing by DNR prior to the change.
Task 5: Watershed Improvement Section (WIS) Survey Site Sample Collection	No later than:

Description: One full biocriteria (IBI) sampling event shall be completed by the Contractor at the two sites identified in Exhibit A. All biological and physical habitat data shall be entered by the Contractor directly into the DNR's online BioNet database. All other recorded observations shall be reported to the DNR in a DNR-approved electronic format. Contractor shall provide the following Deliverables to DNR: a) Watershed Improvement Section (WIS) survey site sample collection: benthic macroinvertebrates and fish (2015 revised DNR IBI protocols, 2015 revised DNR field forms); quantitative transect-based habitat survey (2015 revised DNR intensive habitat protocol; 2015 revised DNR intensive habitat field forms); benthic chlorophyll, water quality grab sample and field analytes (expanded aquatic life parameter suite; see Table 1). b) Fish and benthic macroinvertebrate sample analysis of samples collected under Task 5a; field form submittal, fish, benthic macroinvertebrate, physical habitat and field form data entry. c) QA/QC of all data entered into the BioNet database under Task 5b.	a) October 15, 2015 b) December 31, 2015 c) January 31, 2015 Any deviation from this schedule shall be approved in writing by DNR prior to the change.
Task 6: Stream Nutrient Criteria Sample Collection **Description:** The Contractor shall perform sample collection to support development of stream nutrient criteria. Contractor shall provide the following Deliverables to DNR: a) Water, chlorophyll and biological sample collection: Surface water and benthic chlorophyll sampling shall occur biweekly between July 1 and September 21, 2015 at six stream sites identified in Exhibit A. A total of six sets of samples shall be collected. Five sets shall be collected under this task and analyzed for parameters listed in Table 1. A sixth set of samples shall be collected concurrently with collection of a full biocriteria sample (benthic macroinvertebrates, fish, intensive habitat) and analyzed for parameters listed in Table 1. The sixth set of samples and the full biocriteria sample shall either be covered by this task (2 sites), under Task 1 (3 sites) or under Task 4 (1 site) as indicated in Exhibit A. A densiometer reading and current velocity measurement shall be taken at each benthic chlorophyll sampling point. All biological and physical habitat data shall be entered by the Contractor directly into the DNR's online BioNet database. All other recorded observations shall be reported to the DNR in a DNR-approved electronic format. b) Data logger deployment: A data logger shall be deployed at each site for a ten-week period between July 1 and September 21, 2015. The instruments shall be programmed to record dissolved oxygen and water temperature at six-minute intervals continuously throughout the deployment period. A flow measurement and two mini-flow measurements shall be taken at deployment, retrieval and each two-week sampling / data logger maintenance visit. A submersible pressure transducer logger and an atmospheric pressure logger shall be deployed at each site. The loggers shall be programmed to record pressure measurements at 15-minute intervals throughout the deployment period. c) Supplemental benthic macroinvertebrate sample collection: a supplemental benthic macroinvertebrate IBI sample (2015revised DNR IBI protocols, 2015 revised DNR field forms) shall be collected at each site in conjunction with a water and benthic chlorophyll sampling visit. Sampling shall occur no sooner than two weeks following data logger deployment and shall be separated by at least four weeks before or after full biocriteria sample. The field forms – benthic macroinvertebrate, RBP-qualitative habitat, Stressor ID, and flood disturbance shall be completed at each benthic macroinvertebrate IBI site. All biological and physical habitat data shall be entered by the Contractor directly into the DNR's online BioNet database. All other recorded observations shall be reported to the DNR in a DNR-approved electronic format. d) Field form submittal, submission (electronic) of densiometer and current velocity measurements, data logger readings and flow measurements	No later than: a) July 1 – September 21, 2015 b) July 1 – September 21, 2015 c) July 30 – September 21, 2015 d) December 1, 2015

e) Fish and benthic macroinvertebrate sample analysis of samples collected under Tasks 6a and 6c; field form and thermal data submittal, fish, benthic macroinvertebrate, physical habitat and field form data entry. f) QA/QC of all data entered into the BioNet database under Task 5b.	e) April 1, 2016 f) May 1, 2016 Any deviation from this schedule shall be approved in writing by DNR prior to the change.
Task 7: Large River Benthic Macroinvertebrate Index Development Sample Collection **Description:** The Contractor shall perform sample collection and analysis to support development of a benthic macroinvertebrate index for large wadeable and non-wadeable streams. Contractor shall provide the following Deliverables to DNR: a) Benthic macroinvertebrate and phytoplankton sample collection: One set of benthic macroinvertebrate samples consisting of three semi-quantitative subsamples and one qualitative sample (2015 DNR IBI protocols; 2015 revised DNR field forms) and one phytoplankton composition sample shall be collected at 30 DNR/SHL monthly stream monitoring locations as described in Exhibit A. Semi-quantitative samples shall be collected using either a Hess sampler or multi-plate (Hester-Dendy type) artificial substrates to be determined by the Contractor. Whenever possible, as determined by the Contractor, artificial substrate deployment and benthic macroinvertebrate sampling visits shall coincide with scheduled ambient monthly monitoring visits. A supplemental phytoplankton sample and a supplemental set of benthic macroinvertebrate samples consisting of three semi-quantitative subsamples and one qualitative sample shall be collected at five sites described in Exhibit A. The supplemental set shall be collected within the July 15 - October 15 index period and separated by the first sample set by at least four weeks. If possible the secondary set of semi-quantitative subsamples shall be collected using the same sampling gear as the first set. A rapid habitat assessment form shall be completed at each site on each benthic macroinvertebrate sampling occasion. b) Data logger deployment: A multi-parameter data logger shall be deployed for a one month period between July 1 and September 15, 2015 at six sampling locations as described in Exhibit A. Data loggers shall be deployed approximately four weeks prior to benthic macroinvertebrate sample collection. The data logger shall be programmed to record dissolved oxygen, pH, specific conductance, temperature, and turbidity in six-minute intervals continuously throughout the deployment period. Data logger data shall be reported to DNR in a standardized electronic spreadsheet format approved by DNR. c) Field form submittal, submission (electronic) of data logger readings. d) Benthic macroinvertebrate sample analysis of samples collected under Task 7a; field form and benthic macroinvertebrate data entry. Identification of benthic macroinvertebrates shall be completed to the lowest practical taxonomic level. In all of the semi-quantitative subsamples, the target level for organisms belonging to the aquatic Dipteran family of Chironomidae shall be genus or species. All biological and physical habitat data shall be entered by the Contractor directly into the DNR's online BioNet database. All other recorded observations shall be reported to the DNR in a DNR-approved electronic format. e) Phytoplankton sample analysis of samples collected under Task 7a and data entry. Identification of phytoplankton taxa shall be completed to the genus taxonomic level whenever feasible. Results shall be reported to DNR in a standardized electronic spreadsheet format approved by DNR.	No later than: a) July 15 – October 15, 2015 b) July 1 – September 15, 2015 c) December 31, 2015 d) September 30, 2016 e) September 30, 2016 Any deviation from this schedule shall be approved in writing by DNR prior to the change.
Task 8: Water Quality Sample Analysis and Data Submission **Description:** The Contractor shall perform the analyses on the water quality and chlorophyll samples collected in Tasks 1-6.	No later than:

Contractor shall provide the following Deliverables to DNR: a) Benthic Chlorophyll and Water Sample Analysis and submission (electronic) of samples collected under Task 1a. b) Benthic Chlorophyll and Water Sample Analysis and submission (electronic) of samples collected under Tasks 2a and 2b. c) Benthic Chlorophyll and Water Sample Analysis and submission (electronic) of samples collected under Task 3a. d) Benthic Chlorophyll and Water Sample Analysis and submission (electronic) of samples collected under Task 4a. e) Benthic Chlorophyll and Water Sample Analysis and submission (electronic) of samples collected under Task 5a. f) Benthic Chlorophyll and Water Sample Analysis and submission (electronic) of samples collected under Tasks 6a and 6b.	a) December 1, 2015 b) 2/3 by December 1, 2015; 1/3 by August 1, 2016 c) 2/3 by December 1, 2015; 1/3 by August 1, 2016 d) December 1, 2015 e) December 1, 2015 f) December 1, 2015 Any deviation from this schedule shall be approved in writing by DNR prior to the change.
Task 9: Site Reconnaissance and Landowner Contacts **Description:** The Contractor shall provide assistance to DNR for completing desktop review, field reconnaissance of sites and contacting landowners for the SFY2017 field season.	No later than: September 30, 2016 Any deviation from this schedule shall be approved in writing by DNR prior to the change.
Task 10: Data Transfer **Description:** SHL shall make the data generated pursuant to this Contract available to DNR electronically through the State Hygienic Laboratory OpenELIS database web portal. Data shall be available for download by DNR staff in a mutually agreeable format. The available sample information shall include the STORET station identification number, which will be provided by DNR for all station locations. Data shall be retrievable via the web portal by DNR staff. Analytical reports may be retrieved electronically by DNR staff having the appropriate authorization. SHL shall assist DNR staff in obtaining appropriate authorization when requested. When accessing electronic data, the following information is required: • SHL OpenELIS/Telcor Organization ID number (to be provided by SHL) • SHL Project Code (to be provided by SHL)	Analytical chemistry data shall be made available to DNR staff no later than 15 calendar days following the end of the month of collection. If the contractor determines that extra time is needed to complete required analyses, then a written notification shall be made to the DNR submitter or contract manager. The notification shall include the reason for the delay and the specific analytical chemistry data requiring delayed reporting. The notification shall occur as soon as possible after the contractor has determined the need for a reporting delay.

Table 1. Expanded Aquatic life suite water quality sampling parameters, frequency and fee for Task 8.

Parameter		Cost/ Test	# Sampling Sites	Total # of Samples	Total Fee
Boron		$14.50	65	99	$1,435.50
Bromide		$14.50	65	99	$1,435.50
Calcium		$14.50	65	99	$1,435.50
Carbonaceous Biochemical Oxygen Demand (CBOD5)		$36.50	65	99	$3,613.50
Chloride		$14.50	65	99	$1,435.50
Chlorophyll-A (periphyton)	Benthic Chlorophyll-A	$43.50	65	99	$4,306.50
Chlorophyll-A (sediment)		$43.50	65	99	$4,306.50
Chlorophyll-A (water)		$43.50	65	99	$4,306.50
Field Measurements: (Dissolved Oxygen, pH, Stream Flow, and Water Temperature)		$38.50	65	99	$3,811.50
Hardness (as CaCO3)		$14.50	65	99	$1,435.50
Magnesium		$14.50	65	99	$1,435.50
Neonicotinoids*		$310.00	30	38	$11,780.00
Ammonia Nitrogen	Nitrogen Series	$65.50	65	99	$6,484.50
Nitrite + Nitrate Nitrogen					
Total Kjeldahl Nitrogen					
Dissolved Orthophosphate	Phosphorus Series	$29.00	65	99	$2,871.00
Total Phosphorus					
Potassium		$14.50	65	99	$1,435.50
Sodium		$14.50	65	99	$1,435.50
Sulfate		$14.50	65	99	$1,435.50
Total Dissolved Solids		$14.50	65	99	$1,435.50
Total Suspended Solids		$14.50	65	99	$1,435.50
Total Volatile Suspended Solids		$29.00	65	99	$2,871.00
Turbidity		$13.50	65	99	$1,336.50
Total:					$61,478.00
* Analyte only collected at all sites in Task 1 and four HW temporal candidate reference sites in Task 2.					

Environmental Protection Commission
Iowa Department of Natural Resources

ITEM **14** **DECISION**

TOPIC **Contract with The University of Iowa for Ambient Stream Sample Collection and Analysis**

Recommendations:
Commission approval is requested for a 1 (one) year-service contract with The University of Iowa –State Hygienic Laboratory of Iowa City, IA. The contract will begin on June 1, 2015 and terminate on May 31, 2016. The total amount of this contract shall not exceed $455,928.48.

Funding Source:
This contract will be funded through State of Iowa Environment First Appropriations for Water Quality Monitoring.

Background:
The Clean Water Act requires the monitoring of State waters to determine the status and trends in water quality. These data are used to determine potential impairment and provide information to decision makers regarding the effectiveness of water pollution prevention programs. The DNR has contracted with SHL to collect water samples at streams across the State of Iowa and to test water samples for general chemistry, nutrients, and sediment content. Data are placed into publicly available database and are used by a wide variety of stakeholders including water quality programs, scientific research and general education.

Purpose:
The parties have entered into this Contract for the purpose of retaining the Contractor to provide assistance to DNR in monitoring the condition of streams in the State of Iowa. Assistance will include sampling, analysis, and reporting of streams for a variety of water chemistry parameters

Contractor Selection Process:
The University of Iowa SHL was chosen as contractor based on the Code of Iowa (455B.103), which directs the DNR to contract with public agencies of the state. SHL was also chosen for this project due to their sample analysis expertise.

Contract History:
This is the seventeenth year of contracting with SHL to provide analytical services for ambient stream sample collection and analysis at 61 sites in Iowa. In 2014, the contract amount was $1,022,600. A decrease in the number of sites sampled (from 72 to 61) and a decrease in the number of analytes tested (pesticides, pharmaceuticals and personal care products were rotated out this year). New to the contract this year is the addition of neonicotinoid insecticides.

Presenter's name: Roger Bruner
Presenter's Title: Supervisor, Water Quality Monitoring and Assessment Section
Presenter's Bureau and Division Water Quality Bureau, Environmental Services Division
Commission Date May 19, 2015

Attachment(s): Scope of Work from the Special Conditions for Contract

Obligation	Task Milestone Date
Task 1: Non-City Sample Collection **Description:** SHL shall collect stream grab samples from 55 non-city sites, on the same day of the month, if possible, monthly from June 1, 2015 through May 31, 2016. See Table 1A for sites. Samples collected as part of this activity shall be coded as **01WQFMM**. All samples submitted to SHL by Department or SHL staff shall be coded to a specific monitoring activity and shall include a detailed list of the analysis provided by DNR to be performed unless other arrangements have been made before shipment of the sample to SHL. SHL log-in procedures shall accommodate this code. The DNR project manager shall receive an email each time samples are logged in. The log-in email shall contain the SHL accession number, date the sample was collected, date received and any quality assurance issues related to the received sample. Any deviation from normal sampling procedures, including but not limited to, a change in the sampling location, omission of samples for analysis, shall be identified to DNR in writing prior to transmittal of analytical results.	Each month, samples shall be taken by the 15th of the month, or as early as possible in the month pending any sampling and/or scheduling constraints. The Contractor shall notify the DNR of all sampling dates beyond the 15th of the month in writing.
Task 2: Non-City Sample Analysis **Description**: Contractor shall analyze samples collected under Task 1 for the parameters listed in Table 1B. For analytical results below the quantitation limit, the test quantitation limit shall be reported as "less than". Analyses shall not be started or conducted on samples after recommended holding times have been exceeded.	Samples shall be analyzed no later than established holding times listed in Exhibit A with the exception of bacteria, which shall have a holding time of 30 hrs for purposes of this task. For purposes of invoices, the effective Task Milestone Date shall be the last day of the month.
Task 3: Big River Sample Collection **Description**: SHL shall collect stream grab samples from 6 additional big river sites, on the same day of the month, if possible, monthly from June 1, 2015 through May 31, 2016. See Table 2A for sites. Samples collected as part of this activity shall be coded as **01WQFMM**. All samples submitted to SHL by Department or SHL staff shall be coded to a specific monitoring activity and shall include a detailed list of the analysis provided by DNR to be performed, unless other arrangements have been made before shipment of the sample to SHL. SHL log-in procedures shall accommodate this code. The DNR project manager shall receive an email each time samples are logged in. The log-in email shall contain the SHL accession number, date the sample was collected, date received and any quality assurance issues related to the received sample. Any deviation from normal sampling procedures, including but not limited to a change in the sampling location, or omission of samples for analysis, shall be identified to DNR in writing prior to transmittal of analytical results.	Each month, samples shall be taken by the 15th of the month, or as early as possible in the month pending any sampling or scheduling constraints. The Contractor shall notify the DNR of all sampling dates beyond the 15th of the month in writing.
Task 4: Big River Sample Analysis **Description**: Contractor shall analyze samples collected under Task 3 for parameters listed in Table 2B. For analytical results below the quantitation limit, the test quantitation limit shall be reported as "less than (<)". Analyses shall not be started or conducted on samples after recommended holding times have been exceeded.	Samples shall be analyzed no later than established holding times listed in Exhibit A, with the exception of bacteria, which shall have a holding time of 30 hrs for purposes of this task. For purposes of invoices, the effective Task Milestone Date shall be the last day of the month.
Task 5: Neonicotinoid Analysis **Description:** Contractor shall analyze a subset of samples collected under Task 1 and Task 3 and listed in Table 3A for parameters listed in Table 3B. Samples shall be collected during high-flow conditions in Spring of 2015 and low-flow conditions during the Fall of 2015. The contractor shall consult with the project manager prior to collecting samples to ensure proper flow conditions exist. Samples collected under this activity shall be coded to	Samples shall be analyzed no later than established holding times listed in Exhibit A. For purposes of invoices, the effective Task Milestone Date shall be the last day of the month.

01WQFMM. For analytical results below the quantitation limit, the test quantitation limit shall be reported as "less than (<)". Analyses shall not be started or conducted on samples after recommended holding times have been exceeded.	
Task 6: QA/QC Procedures Contractor shall submit information on data quality requirements and assessments (such as detection limit, quantitation limit, estimated accuracy, accuracy protocol, estimated precision and precision protocol) to DNR for any sample upon request. Information on the analytical reference method, sample preservation and holding time also shall be provided if requested. Contractor shall provide copies of revised Methods Manuals and Standard Operating Procedure Manuals to the Department upon request. Copies of manuals and procedures shall be available from the laboratory.	The Task shall be completed no later than 30 working days after a request is made by DNR.
Task 7: Data Transfer Description: SHL shall make the data generated pursuant to this Contract available to DNR electronically through the State Hygienic Laboratory OpenELIS database web portal. Data shall be available for download by DNR staff in a mutually agreeable format. The available sample information shall include the STORET station identification number, which will be provided by DNR for all station locations. Data shall be retrievable via the web portal by DNR staff. Analytical reports may be retrieved electronically by DNR staff having the appropriate authorization. SHL shall assist DNR staff in obtaining appropriate authorization when requested. When accessing electronic data, the following information is required: • SHL OpenELIS/Telcor Organization ID number ((3024) • SHL Project Code (01WQFMM)	Analytical chemistry data shall be made available to DNR staff no later than 15 calendar days following the end of the month of collection. If the contractor determines that extra time is needed to complete required analyses, then a written notification shall be made to the DNR submitter or contract manager. The notification shall include the reason for the delay and the specific analytical chemistry data requiring delayed reporting. The notification shall occur as soon as possible after the contractor has determined the need for a reporting delay.
Task 8: Equipment Purchase **Description:** Contractor shall purchase equipment and supplies as needed for tasks listed above**.**	This Task shall be completed no later than May 30, 2016.
Task 9: Repair **Description:** Contractor shall repair existing equipment, as needed for tasks listed above**.**	This Task shall be completed no later than May 30, 2016.
Task 10: Shipping Samples **Description:** Contractor shall ship samples as needed to meet required holding times**.**	This Task shall be completed no later than May 30, 2016.

Table 1A. Non-City Stream Sampling Locations (55)

Stream Name	Ambient Monitoring Station Locations	River Basin[1]	STORET #
Upper Iowa River	Highway 76 bridge three mi south of Dorchester	NE	10030001
Yellow River	County Rd X36 bridge three miles south of HWY 76	NE	10030002
Chariton River	Highway 5 bridge 2.5 mi north of Centerville	S	10040001
Beaver Creek	County Rd. T75 bridge 3.5 mi NW of Cedar Falls	IC	10070001
Wolf Creek	At Main St. bridge in La Porte City	IC	10070002
West Fork Cedar River	County Rd. T71 bridge in Finchford at USGS gage	IC	10070003
Black Hawk Creek	Ridgeway Avenue bridge SW of Waterloo	IC	10070004
Cedar River	County Rd. north of Janesville 0.25 mi east of Highway 218, upstream of USGS gage	IC	10090001
Wapsipinicon River	County Rd. bridge 0.5 mi west of County Rd. D16, north of Independence (Otterville Access)	NE	10100001
Shell Rock River	County Rd. C45 bridge in Shell Rock, below the dam downstream of USGS gage station	IC	10120001
Little Sioux River	County Rd. C16 bridge 5.2 mi east of Larabee	W	10180001
Turkey River	County Rd. C43 (Jupiter Rd.) south of Garber at USGS gage	NE	10220001
Volga River	County Rd. X3C bridge north of Elkport	NE	10220002
Bloody Run Creek	Highway 18 bridge, 0.5 mi west of Marquette	NE	10220003
South Raccoon River	Bridge 0.75 mi SE of Redfield	DSM	10250001
Thompson Fork-Grand River	U.S. Highway 69 bridge at Davis City	S	10270001
Little Sioux River	Gravel Rd. bridge 1.2 miles west of Milford, 0.5 mi upstream of mouth of Mill Creek	W	10300001
Cedar River	County Rd. bridge four mi SE of Charles City, near Carrville	IC	10340001
East Nishnabotna River	Highway 59 bridge north of Shenandoah	S	10360001
Boone River	Bells Mills Rd. bridge, 6.5 mi NE of Stratford	DSM	10400001
Iowa River	County Rd. D53 bridge 1.8 mi NE of Gifford	IC	10420001
Boyer River	County Rd. F58 bridge 2.5 miles NE of Missouri valley	W	10430001
Soldier River	County Rd. F20 bridge west of Pisgah	W	10430002
Cedar Creek	Gravel road bridge three mi SW of Oakland Mills	SK	10440001
West Fork Des Moines River	County Rd. two miles south of Humboldt	DSM	10460001
No. Fork Maquoketa River	County Rd. north of Maquoketa, SE of Hurstville	NE	10490001
Maquoketa River	Highway 61 bridge NW of Maquoketa	NE	10490002
Indian Creek	Gravel Rd. bridge 1.8 mi east of Green Castle, 4.8 mi north of Colfax	SK	10500001
Old Man's Creek	County Rd. W62 bridge 5.0 mi SW of Iowa City	IC	10520001
North Skunk River	180th Ave. bridge SW of Sigourney, west of Highway 149	SK	10540001

Stream Name	Ambient Monitoring Station Locations	River Basin[1]	STORET #
E. Fork Des Moines River	County Rd. B63 bridge north of St. Joseph	DSM	10550001
Cedar Rapids DS1	Highway 30 bridge east of Cedar Rapids	IC	10570001
Iowa River	County Rd W66 (660th Street) bridge at USGS gauge SW of Lone Tree	IC	10580001
South Skunk River	Highway 63 bridge north of Oskaloosa	SK	10620001
Whitebreast Creek	Three mi SW of Knoxville	DSM	10630001
Cedar Creek	State Highway 156 (County Rd. G71) bridge, 1.5 mi NW of Bussey	DSM	10630002
Marshalltown DS1	County Rd E35 bridge east of Marshalltown	IC	10640002
West Nishnabotna River	Three mi east of Malvern	S	10650001
Maple River	At Highway 141-175 bridge 0.25 mi north of Mapleton	W	10670002
Cedar River	County Rd. G28 bridge NE of Conesville	IC	10700001
West Nodaway River	County Rd. J53 bridge near Shambaugh	S	10730001
East Nodaway River	State Highway 2 bridge 2.5 mi east of Clarinda	S	10730002
Floyd River	County Rd. C70 bridge three mi north of Sioux City	W	10750001
Beaver Creek	NW 70th Avenue bridge, two miles east of Grimes	DSM	10770001
North Raccoon River (Sac City DS1)	Level B road. Bridge one mile downstream of Sac City, Section 13/24.	DSM	10810001
Wapsipinicon River	Highway 956 bridge three mi south of DeWitt	NE	10820001
Rock River	County Rd. B40 bridge north of Hawarden	W	10840001
Ames DS1	County Rd. E55 bridge near Cambridge	SK	10850002
Middle River	USGS gage 1.5 mi west of Highway 65-69, near Indianola	DSM	10910001
North River	County Rd. R57 bridge, SE of Norwalk at USGS gage.	DSM	10910002
South River	State Highway 92 bridge near Ackworth	DSM	10910003
English River	County Rd. W61 bridge south of Riverside	IC	10920001
Little Sioux River	Two mi NE of Smithland	W	10970001
West Fork Little Sioux River	Highway 141 bridge 1.0 mi east of Hornick at USGS gage	W	10970002
Big Spring	Big Spring Fish Hatchery	NE	30220001

Table 1B. Sample Analysis for 55 Non-city Sites

Parameter	Cost/Test	# Sampling Sites	Frequency of Sampling	Total Cost
Temperature	$7.00	55	12	$4,620.00
pH	$7.00	55	12	$4,620.00
DO	$7.00	55	12	$4,620.00
Flow - manual*	$17.50	4	12	$840.00
Ammonia Nitrogen	$14.50	55	12	$9,570.00
Nitrite + Nitrate Nitrogen	$14.50	55	12	$9,570.00
Total Kjeldahl Nitrogen	$36.50	55	12	$24,090.00
Dissolved Othophosphate (as P)	$14.50	55	12	$9,570.00
Total Phosphate (as P)	$14.50	55	12	$9,570.00
Total Dissolved Solids	$14.50	55	12	$9,570.00
Total Volatile Suspended Solids	$29.00	55	12	$19,140.00
Total Suspended Solids	$14.50	55	12	$9,570.00
Turbidity	$13.50	55	12	$8,910.00
Hardness (as CaCO3)	$14.50	55	12	$9,570.00
Chloride	$14.50	55	12	$9,570.00
Sulfate	$14.50	55	12	$9,570.00
CBOD5	$36.50	55	12	$24,090.00
Escherichia coli	$18.00	55	12	$11,880.00
Chlorophyll a	$43.50	55	12	$28,710.00
SUB-TOTAL	**$328.50**		**Sub-total**	**$217,650.00**

Table 2A. Big River Monitoring Location

Stream Name	Big River Monitoring Station Locations	STORET #
Des Moines River	Des Moines River at Keosauqua	10890001
Iowa River	Iowa River at Wapello	10580003
Little Sioux River	Little Sioux River at Turin	10670003
Maquoketa River	Maquoketa River near Spragueville	10490005
Nishnabotna River	Nishnabotna River above Hamburg	10360003
Skunk River	Skunk River at Augusta	10560002

Table 2B. Big River Monitoring Analytes

Parameter	Cost/Test	# Sampling Sites	Frequency of Sampling	Total Cost
Temperature	$7.00	6	12	$504.00
pH	$7.00	6	12	$504.00
DO	$7.00	6	12	$504.00
Ammonia Nitrogen	$14.50	6	12	$1,044.00
Nitrite + Nitrate Nitrogen	$14.50	6	12	$1,044.00
Total Kjeldahl Nitrogen	$36.50	6	12	$2,628.00
Dissolved Othophosphate (as P)	$14.50	6	12	$1,044.00
Total Phosphate (as P)	$14.50	6	12	$1,044.00
Total Dissolved Solids	$14.50	6	12	$1,044.00

Parameter	Cost/Test	# Sampling Sites	Frequency of Sampling	Total Cost
Total Volatile Suspended Solids	$29.00	6	12	$2,088.00
Total Suspended Solids	$14.50	6	12	$1,044.00
Turbidity	$13.50	6	12	$972.00
Hardness (as CaCO3)	$14.50	6	12	$1,044.00
Chloride	$14.50	6	12	$1,044.00
Sulfate	$14.50	6	12	$1,044.00
CBOD5	$36.50	6	12	$2,628.00
Escherichia coli	$18.00	6	12	$1,296.00
Chlorophyll a	$43.50	6	12	$3,132.00
SUB-TOTAL	**$328.50**		**Sub-total**	**$23,652.00**

Table 3A. Neonicotinoid Sample Locations.

Stream Name	Location	River Basin	STORET #
Beaver Creek	County Rd. T75 bridge 3.5 mi NW of Cedar Falls	IC	10070001
Volga River	County Rd. X3C bridge north of Elkport	NE	10220002
Nishnabotna River	Nishnabotna River above Hamburg	S	10360003
No. Fork Maquoketa River	County Rd. north of Maquoketa, SE of Hurstville	NE	10490001
Old Man's Creek	County Rd. W62 bridge 5.0 mi SW of Iowa City	IC	10520001
Cedar Rapids DS1	Highway 30 bridge east of Cedar Rapids	IC	10570001
Iowa River at Wapello	Iowa River at Wapello	IC	10580003
Iowa River Marshalltown DS1	County Rd E35 bridge east of Marshalltown	IC	10640002
Floyd River	County Rd. C70 bridge three mi north of Sioux City	W	10750001
N. Raccoon River (Sac City DS1)	Bridge one mile downstream of Sac City, Section 13/24.	DSM	10810001
South Skunk Ames DS1	County Rd. E55 bridge near Cambridge	SK	10850002
Big Spring	Big Spring Fish Hatchery	NE	30220001

Table 3B. Neonicotinoid Sample Analyses

Parameter	Cost/test	# of Sites	Frequency of Sampling	Total Cost
acetamiprid				
clothianidin				
dinotefurn				
imadacloprid				
sulfoxaflor				
thiacloprid				
thiamethoxam				
Neonicotinoid Group Price	**$310**	**12**	**2**	**$7,440**

Iowa Department of Natural Resources
Environmental Protection Commission

ITEM **15** **INFORMATION**

TOPIC **The draft 2014 state list of CWA Section 303(d) impaired waters**

Section 303(d) of the federal Clean Water Act (CWA) requires that each state prepare, every two years, a list of its waters that do not fully meet state water quality standards; these waters are considered "impaired". Iowa's 2014 draft of impaired waters is part of Iowa's "integrated report." According to U.S. EPA guidance, states should provide a single water quality monitoring and assessment report—the Integrated Report—that combines the water quality reporting requirements of Section 305(b), the impaired waters listing requirements of Section 303(d), and the lakes reporting requirements of Section 314 of the CWA. Integrated reports are to be composed of five categories that are designed to give the public and other stakeholders a comprehensive summary of the water quality status in the state. Category 5 of the Integrated Report is the state's Section 303(d) list of impaired waters. Waters in Category 5 must be prioritized for preparation of a total maximum daily load (TMDL) to determine the load of pollutants that a water can receive and still meet state water quality standards.

Iowa's draft 2014 list of impaired waters contains 572 waterbodies. The 2014 list represents IDNR's eighth biennial impaired waters list prepared for EPA approval. This draft list is a subset of the approximately 1,300 Iowa waterbodies or waterbody segments (streams, rivers, lakes, and wetlands) assessed for support of state water quality standards by IDNR staff for the 2014 Integrated Reporting cycle. For comparison, Iowa's final 2012 list contained 482 impaired waters, and the 2010 list 446 impaired waters. The draft 2014 list will be available for public notice for a period of 45 days from May 19, 2015 through July 2, 2015. Following the close of the public comment period, IDNR will prepare a responsiveness summary of comments received. Changes in the list will be made based on public comments, and IDNR will submit the revised draft to U.S. EPA Region 7 for review and final approval.

John Olson, Environmental Specialist Senior
Water Quality Monitoring & Assessment Section
Water Quality Bureau
Environmental Services Division

Memo Date: April 27, 2015

The DRAFT 2014 Iowa list of Clean Water Act Section 303(d) Impaired Waters

Watershed Quality Monitoring & Assessment Section, Water Quality Bureau,
Iowa Department of Natural Resources

April 2015

Summary: Iowa's draft 2014 Section 303(d) list of impaired waters contains 572 waterbodies with a total of 751 impairments. This draft list is Category 5 of Iowa's 2014 Integrated Report. The list includes 482 stream/river segments, 69 lakes, 7 segments of three federal flood control reservoirs, and 14 wetlands and is a subset of the 1,316 waterbodies assessed by IDNR staff for support of their designated beneficial uses as described in the *Iowa Water Quality Standards* as part of the Clean Water Act Section 305(b) reporting for the 2014 cycle (Table 1). Impairments are identified for all classes of beneficial uses (primary contact recreation, aquatic life, drinking water, fish consumption, and general uses) designated for Iowa surface waters. The total number of impaired waters in Iowa's draft 2014 Integrated Report is 725, with 572 Section 303(d) waters [Category 5: impaired and TMDL needed] and 153 waters in Category 4 [impaired but TMDL not required]. Similar to past listing cycles, the most frequently identified causes of impairment of streams and rivers are indicator bacteria (*E. coli*), biological impairments, and fish kills: these three causes account for 82% of the 730 stream/river impairments. For lakes, the most commonly identified impairments remain algal turbidity, non-algal turbidity (suspended sediment), and indicator bacteria (*E. coli*) with these three causes accounting for 69% of the 225 lake/reservoir impairments (see Figures 1 through 3). All of Iowa's Section 305(b) water quality assessments developed since 1992 are available at Iowa DNR's on-line water quality assessment database, *ADBNet*.

Federal Requirements for water quality reporting and impaired waters listing: The Federal Water Pollution Control Act (commonly referred to as the Clean Water Act (CWA)) requires each state to develop a program to monitor the quality of its surface waters (streams, lakes, and wetlands (=waterbodies)). Section 305(b) of the CWA requires states to prepare, every two years, a report that describes, based on the monitoring data available, the status of water quality and the extent to which state waters meet goals of the Act. Section 303(d) of the CWA requires each state, "from time to time", to list its waters for which effluent limitations are not sufficient to meet state water quality standards. In federal regulations for implementing Section 303(d), U.S. EPA has defined "from time to time" to mean April 1 of even-numbered years, which coincides with the deadline for Section 305(b) reporting. Beginning with the 2004 water quality reporting cycle, U.S. EPA recommended that states provide a single water quality monitoring and assessment report—the Integrated Report—that combines the water quality reporting requirements of Section 305(b), the impaired waters listing requirements of Section 303(d), and the lakes reporting requirements of Section 314 of the Clean Water Act. This "Integrated Report" is composed of five categories that are designed to give the public and other stakeholders a comprehensive summary of the water quality status in the state (Table 1). According to U.S. EPA's guidelines, water quality problems identified in the Integrated Report should be emphasized and reflected in the state's water quality management plan and annual work programs under Sections 106, 205(j), and 319 of the Clean Water Act.

Iowa's Water Quality Monitoring Programs: The current IDNR surface water monitoring network consists of 84 stations mostly on the larger interior rivers with a few stations on larger streams. Sixty of these are ambient stations that are sampled monthly; 24 stations are monitored monthly as part of the upstream-downstream city monitoring. In addition, swimming beaches at 35 state-owned lakes are sampled for indicator bacteria (*E. coli*) weekly from April through October. During the period 2008-2012, 131 Iowa lakes were sampled during summer seasons either by Iowa State University or by the State Hygienic Laboratory (SHL) as part of the IDNR-sponsored statewide lake monitoring program. Approximately 70 stations on smaller rivers and streams are sampled yearly by SHL for fish and macroinvertebrates as part of IDNR's biological monitoring program. In cooperation with U.S. EPA (Region 7), IDNR conducts annual monitoring of toxic contaminants in fish from approximately 35 sites on Iowa's rivers and lakes. Iowa DNR also uses data from monitoring networks operated by the Corps of Engineers, U.S. Geological Survey, and municipal water utilities (e.g., Des Moines, Cedar Rapids, and the Rathbun Rural Water Association). Results of fish kill investigations are also used to develop water quality assessments and to identify impairments.

Qualifiers: The list of impaired waters is only as inclusive as the various water quality (WQ) monitoring networks in Iowa. In general, the greater the amount of monitoring, the greater the number of impaired waters on the list. Also, the identification of impairments is strongly tied to the state's water quality standards. Because Iowa does not yet have numeric WQ criteria for nutrients or sediment/siltation, identification of such impairments is relatively rare. Because Iowa's WQ Standards lack criteria for turbidity, any lake or wetland impairments attributed to algae (chlorophyll) or non-algal turbidity are based on violations of the state's narrative standards protecting against "aesthetically objectionable conditions." Eventual adoption of numeric criteria

for nutrients, chlorophyll, and/or turbidity will likely result in a substantial *increase* the number of waterbodies on Iowa's future lists of impaired waters.

Perspective on the meaning of "impairment": Much confusion exists regarding the meaning of "impairment" as used for Clean Water Act Section 303(d) listing. In terms of water quality condition, "impairment" is not a "one size fits all" concept. The degree of water quality impairment ranges from slight to severe. Severe water quality problems, although rare, do continue to occur in Iowa. Most of the impairments on Iowa's draft list of impaired waters, however, do not indicate severely or grossly polluted conditions. Often, the difference between assessing a waterbody as "impaired" versus "fully supported" can come down to contaminant levels in only one of 36 monthly samples or the absence of a few key aquatic species in a stream. Iowa's water quality standards and numeric water quality criteria—which are the basis for identifying impairments—are designed to be protective of the beneficial uses designated for Iowa's streams, rivers, and lakes. These criteria are set to warn of potential water quality problems well before anything approaching "grossly polluted conditions" occurs. Many waters assessed as "impaired" for aquatic life uses often continue to support a moderately healthy and diverse aquatic community. Also, the designated recreational uses of many Iowa waters—especially rivers and streams—are impaired by high levels of indicator bacteria, but reports of waterborne illness related to these high levels of bacteria have been extremely rare in Iowa over the last 40 years.

Why does the number of impaired waters in Iowa continue to increase? A state's Section 303(d) list of impaired waters is, in part, an accumulation of impairments identified in past listing cycles. Once added to a state list, the impairment is likely to remain on the list. In general, impairments are identified faster than impairments are removed through the TMDL process or due to water quality improvement. Thus, the number of waters on state lists tend to increase over time. Also, as more state waters are monitored over time, the number of impairments continues to increase. While states can easily add new impairments, U.S. EPA carefully scrutinizes any state proposal to remove (de-list) an impairment from a Section 303(d) list and sometimes rejects state recommendations for de-listing. Also, many impairments (for example, those due to bacteria and many biological impairments) are related to nonpoint sources of pollution. Unless a state has authority and the means to reduce levels of nonpoint source pollution, the NPS-related impairments will likely continue to reside on the state's list of impaired waters.

Why is the number of impaired waters on the 2014 list greater to that on the 2012 list? The number of impaired waters on Iowa's draft 2014 Section 303(d) list (572) shows a 15% increase over the number on Iowa's final/approved 2012 list (480) (Figure 4). This increase is due primarily to additional monitoring for indicator bacteria in small watersheds with 58% of the new impairments for 2014 (106 of 182) due to levels of indicator bacteria that exceed state water quality criteria (Figure 5).

Removal of impairments: According to U.S. EPA regulations, impairments can only be removed from a state list for specific reasons, including (1) more recent data showing that the impairment no longer exists, (2) discovery of an error in the data or rationale for the original listing, and (3) preparation and approval of a total maximum daily load (TMDL) that identifies sources of pollutant loadings and reductions in loadings necessary to fully attain applicable water quality standards. A primary mechanism for removing waters from Iowa's list of impaired waters has been preparation and U.S. EPA approval of TMDLs. Category 4a of the draft 2014 Integrated Report consists of 126 waterbodies that were previously on Iowa's lists of impaired waters (IR Category 5) but that now have TMDLs approved for their impairments. Seventy-three impairments are proposed for removal from the final/approved 2012 list due to one of the following reasons: new data (48), preparation of TMDLs (13), receiving and errors in the original assessment (12) (see Figures 6 and 7). Review of recent (2010-12) monitoring data for Iowa's surface waters suggests neither general improvement nor decline in the status of water quality statewide. Table 2 presents a brief summary of the impairment status of the streams, river, and lakes assessed for Iowa's 2014 Integrated Reporting cycle.

The Integrated Report Format

As specified in U.S. EPA's guidelines for the 2014 water quality reporting and impaired waters listing cycle, the integrated report consists of five categories:

Category 1:	All designated uses are met
Category 2.	Some of the designated uses are met, but there are insufficient data to determine if the remaining designated uses are met.
Category 3:	Insufficient data to determine whether any designated uses are met.
Category 4:	Waterbody is impaired or threatened but a TMDL is not needed.
Category 5:	Waterbody is impaired or threatened and a TMDL is needed.

In their guidance to states, U.S. EPA has added the following Integrated Report subcategories:

- *4a: all TMDLs need to result in attainment of all applicable water quality standards have been approved or established by EPA.*
- *4b. other required control measures are expected to result in the attainment of water quality standards in a reasonable period of time;*
- *4c: the impairment or threat is not caused by a pollutant.*

The U.S. EPA guidelines allow states to create additional subcategories in order to refine the reporting process. In order to better track the attainment status of Iowa waterbodies, the following subcategories have been created by IDNR:

- Category 2b: At least one use is met with at least one other use potentially impaired.
- Category 3b: Insufficient data to determine whether any designated uses are met but at least one use is potentially impaired.
- Category 4d: Waterbody assessed as "impaired" due to a fish kill where enforcement action was taken to address the source of the kill: no TMDL required.
- Category 5b: Impairment is based on results of a fish kill investigation or biological monitoring where specific causes and/or sources of the impairment have not yet been identified.
- Category 5p: A presumptively-applied use is impaired (most often applied to bacterial impairments of the presumptively applied Class A1 (primary contact recreation) use).

Iowa's List of Waters in Need of Further Investigation:

The list of waters in need of further investigation (WINOFI), as required by Iowa's "credible data law", is comprised of those waterbodies assessed as "potentially impaired" and placed in IR subcategories 2b and 3b. As stated in the rationales for subcategories 2b and 3b above, the assessments of any impairments in these waterbodies are based on less than complete information that suggests only a potential impairment. Thus, the assessments are of relatively low confidence and are not appropriate for addition to Iowa's impaired waters list. Iowa's draft 2014 list of waters in need of further investigation contains 358 waterbodies. Of the 363 waterbodies on the final 2012 WINOFI list, a total of 42 waterbodies were moved to other categories of the draft 2014 integrated report as follows:

- New data at 12 waterbodies showed that an impairment did not exist; thus, these waterbodies were moved to IR Category 2a (at least one use assessed as fully supporting designated uses).
- Twenty-one fish kill waterbodies where IDNR brought legal action and fines against responsible parties were moved to IR Category 3a (uses not assessed.)
- New data showed that nine waterbodies should, in fact, be assessed as "impaired", and these waters were placed in Category 5 (=Section 303(d) list).

New monitoring data showed that 32 waterbodies should be added to the 2014 WINOFI list while an additional nine waterbodies were added due to movement of fish kill waterbodies where IDNR brought legal action and fines against responsible parties for IR Category 4d (TMDL not required) to IR 3b (potentially impaired).

Table 1. Summary of the number of waterbodies in each category of Iowa's draft 2014 integrated Section 305(b) / Section 303(d) report. The 572 waterbodies in Categories 5a, 5b, and 5p comprise Iowa's draft 2014 Section 303(d) list; the 358 waterbodies in Categories 2b and 3b comprise Iowa's draft list of waters in need of further investigation.

Integrated Report Category	Category Description	Number of Waterbodies
1	All designated uses met.	7
2a	At least one designated use met; insufficient data to determine whether other uses are met.	317
2b	At least one designated use is met with at least one other use potentially impaired based on an "evaluated" assessment.	23
3a	Insufficient data to determine whether any designated uses are met.	1,120
3b	Insufficient data to determine whether any designated uses are met but at least one use is potentially impaired based on an "evaluated" assessment.	335
4a	All TMDLs need to result in attainment of all applicable water quality standards have been approved or established by EPA.	126
4b	Other required control measures are expected to result in the attainment of water quality standards in a reasonable period of time; TMDL not required.	0

4c	The impairment or threat is not caused by a pollutant; TMDL not required.	28
4d	Waterbody assessed as "impaired" due to a fish kill where enforcement action was taken to address the source of the kill: TMDL not required.	39
5a	Waterbody is impaired or threatened and a TMDL is needed.	230
5b	Impairment is based on results of biological monitoring or a fish kill investigation where specific causes and/or sources of the impairment have not yet been identified.	143
5p	A presumptively applied use is impaired.	199

Table 2. Summary of the assessed lake and stream/river waterbodies for Iowa's draft 2014 305(b)/303(d) cycle according to general water quality condition (good, potentially impaired, impaired). Note: each assessed waterbody may have more than one impairment.

Waterbody Type	**Number of WB assessed:**	**Good water quality: Categories 1 & 2a:**	**Potentially impaired: Categories 2b and 3b (WINOFI):**	**Impaired: Categories 4 & 5:**
Streams and Rivers	984	189 (19%)	212 (22%)	583 (59%)
Lakes and Flood Control reservoirs	203	68 (33%)	18 (9%)	117 (58%)

Web links:
EPA guidelines for 2012 Integrated Reporting : http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/guidance.cfm#reporting.
ADBNet: Iowa's Section 305(b) assessment database: http://programs.iowadnr.gov/adbnet/index.aspx.
Iowa Water Quality Standards: https://www.legis.iowa.gov/DOCS/ACO/IAC/LINC/Chapter.567.61.pdf.

Figure 1. Causes of the 730 impairments in the 547 stream/river segments in Categories 4 & 5 (impaired waters) of Iowa's 2014 Draft Integrated Report.

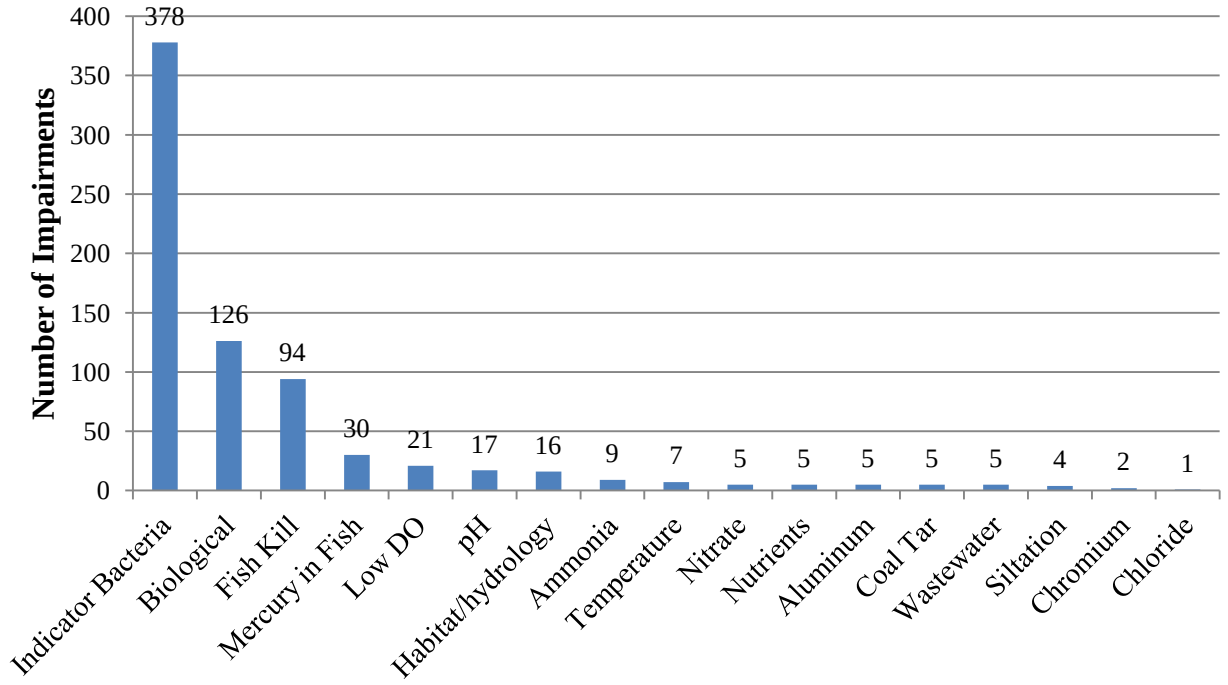


Figure 2. Causes of the 96 fish kill impairments in rivers & lakes in Categories 4 & 5 (impaired waters) of Iowa's Draft 2014 Integrated Report.

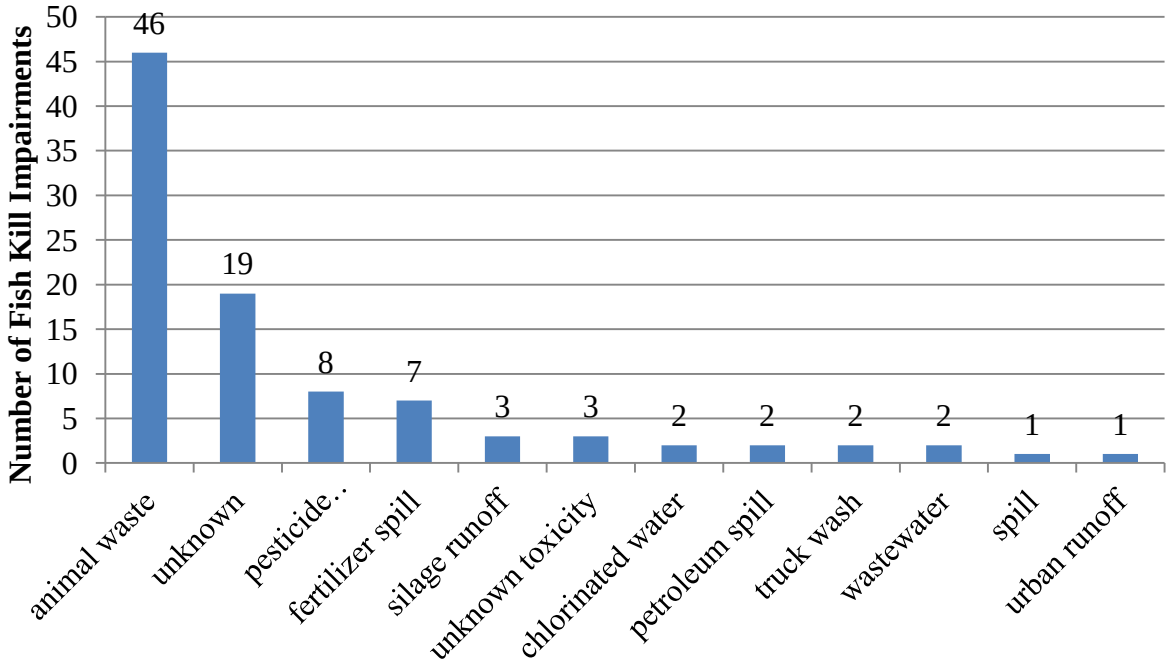
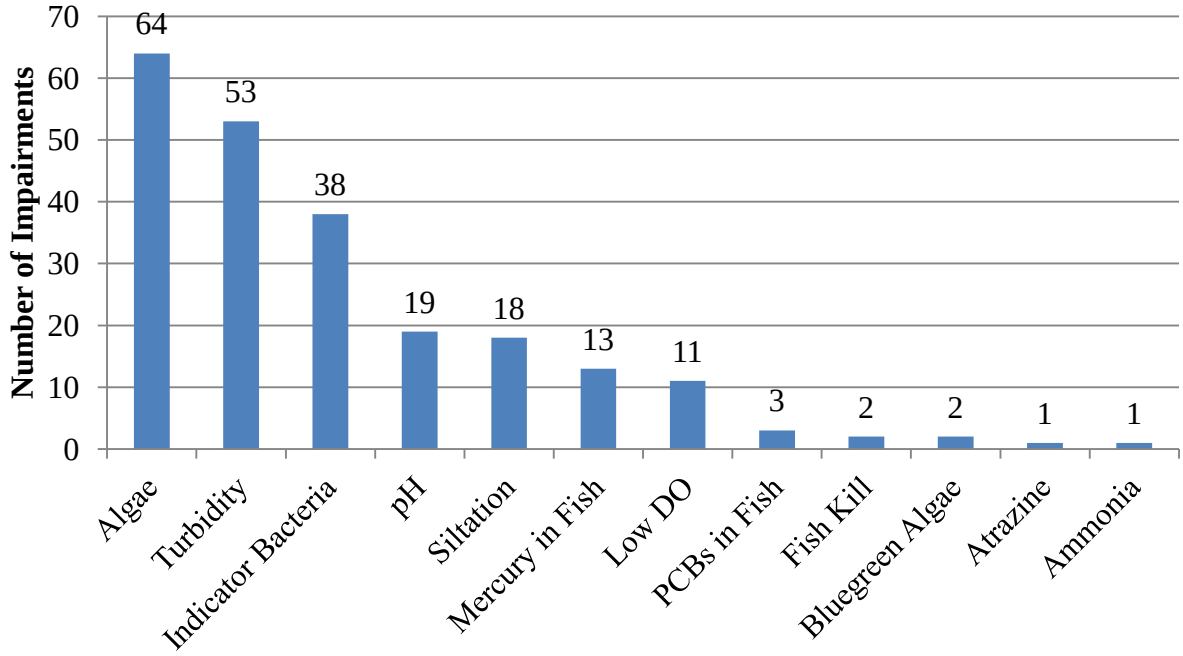


Figure 3. Causes of the 225 impairments in the 117 lake/reservoir waterbodies in Categories 4 & 5 (impaired waters) of Iowa's Draft 2014 Integrated Report.



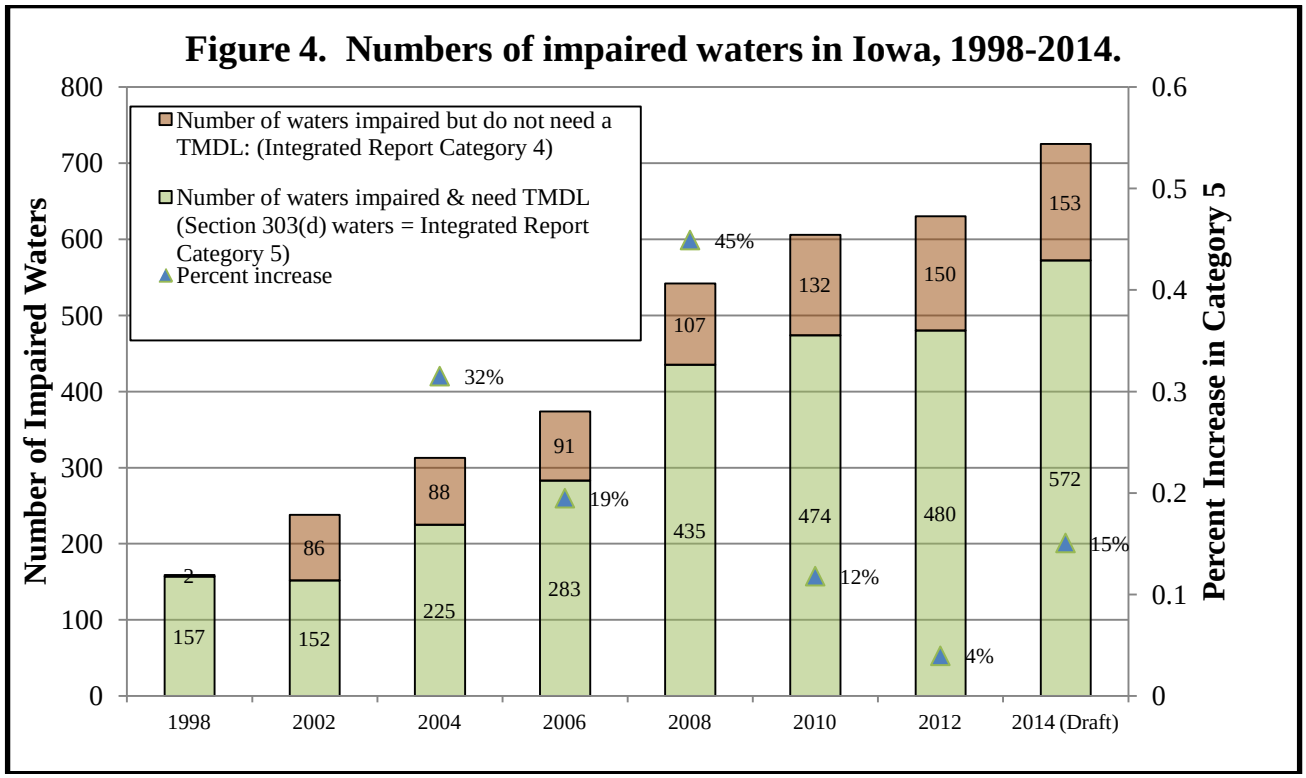


Figure 4. Numbers of impaired waters in Iowa, 1998-2014.
Number of Impaired Waters
Percent Increase in Category 5
Number of waters impaired but do not need a TMDL: (Integrated Report Category 4)
Number of waters impaired & need TMDL (Section 303(d) waters = Integrated Report Category 5)
Percent increase
800
700
600
500
400
300
200
100
0
0.6
0.5
0.4
0.3
0.2
0.1
0
1998
2002
2004
2006
2008
2010
2012
2014 (Draft)
157
2
152
86
225
88
283
91
435
107
474
132
480
150
572
153
32%
19%
45%
12%
4%
15%

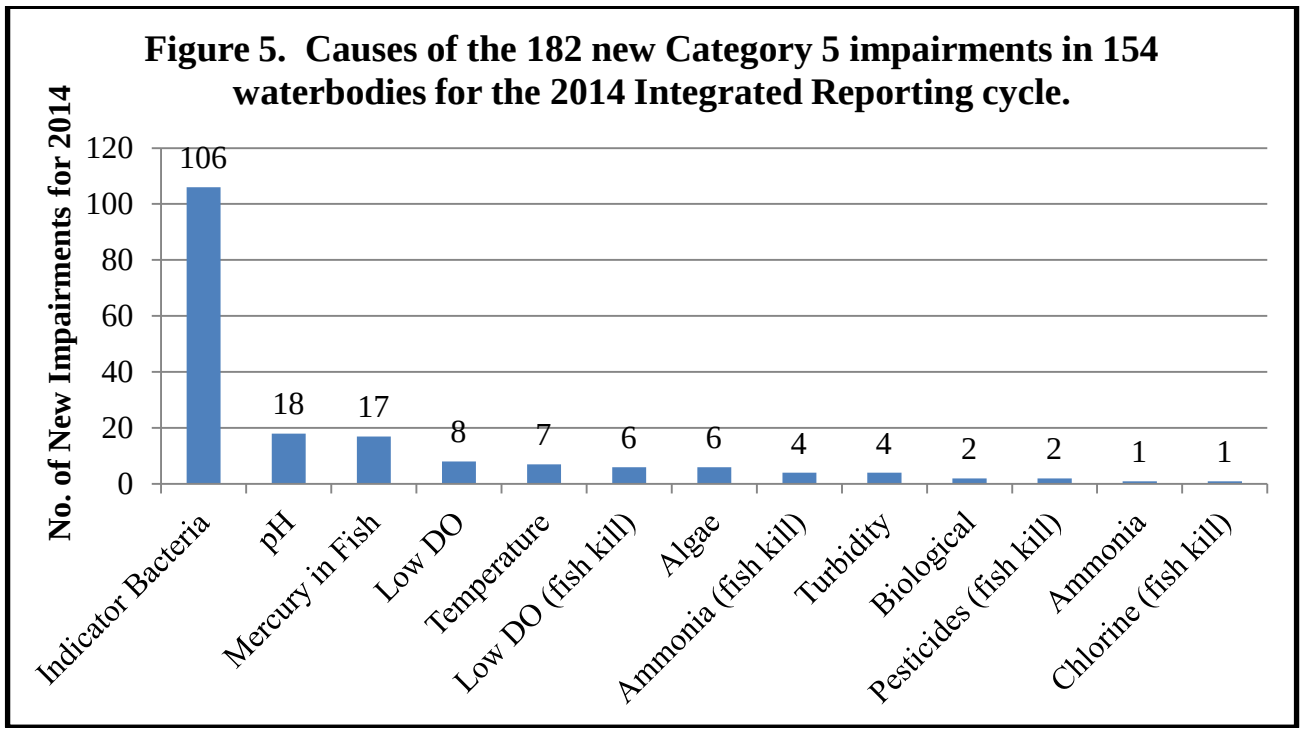


Figure 5. Causes of the 182 new Category 5 impairments in 154 waterbodies for the 2014 Integrated Reporting cycle.
No. of New Impairments for 2014
120
100
80
60
40
20
0
106
18
17
8
7
6
6
4
4
2
2
1
1
Indicator Bacteria
pH
Mercury in Fish
Low DO
Temperature
Low DO (fish kill)
Algae
Ammonia (fish kill)
Turbidity
Biological
Pesticides (fish kill)
Ammonia
Chlorine (fish kill)

Figure 6. Rationales for proposed removal (de-listing) of 73 waters that were on Iowa's previous (2012) list of impaired waters (IR Category 5).

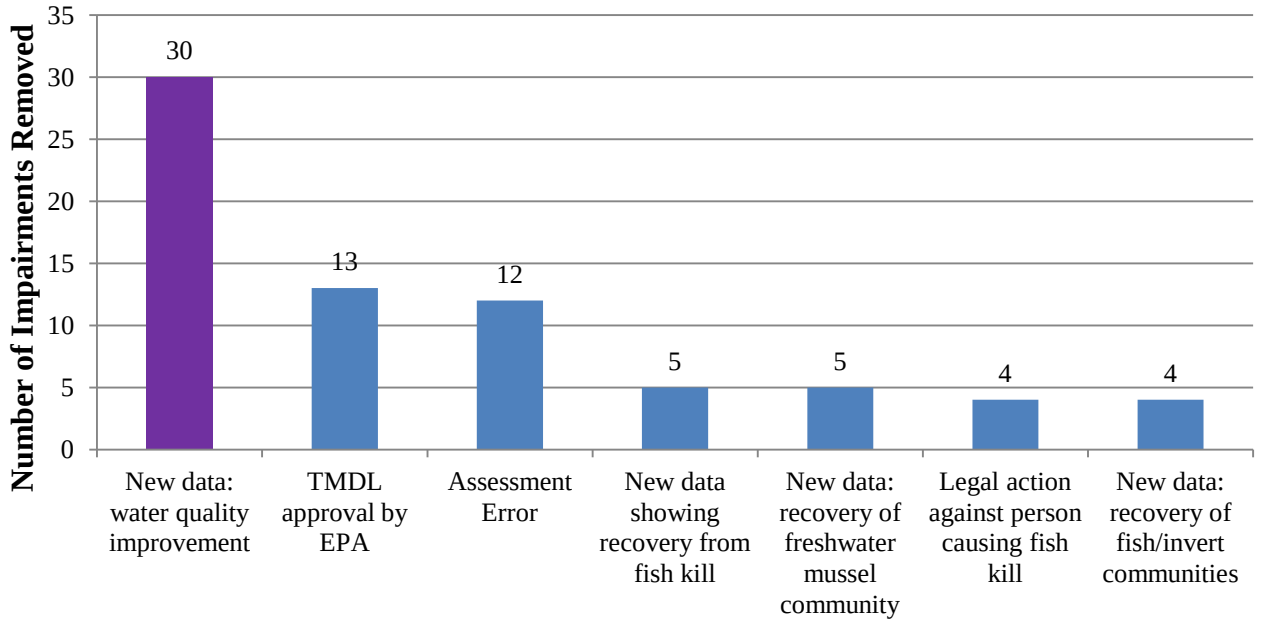
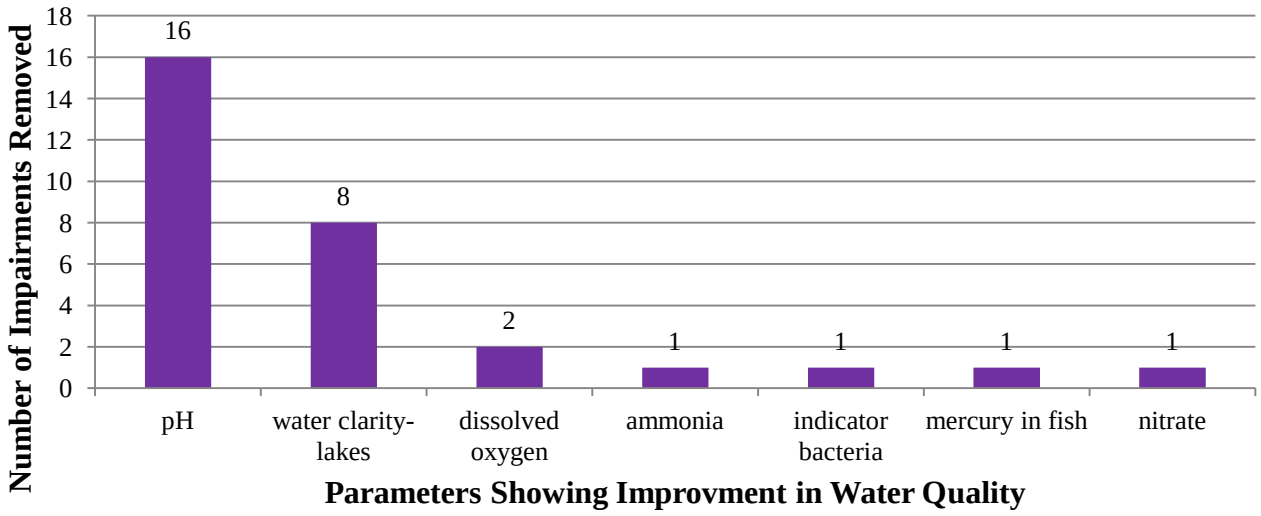


Figure 7. Details of the 30 impairments in Figure 6 proposed for removal from Iowa's previous (2012) list of impaired waters due to new data: water quaity improvement



April 30, 2015

Category 5 [Section 303(d) list] of Iowa's draft 2014 Integrated Report (IR).

Category 5 waters: impaired by a pollutant and in need of a TMDL (i.e., the state's Section 303(d) list)

Iowa's draft 2014 Section 303(d) list contains 572 waterbodies with a total of 751 impairments.

Explanations of Subcategories for Integrated Report Category 5:

Category 5a: cause of impairment due to known pollutant

Category 5b: biological impairment with cause unknown, or fish-kill impairment

Category 5b-t: biologically impaired but impairment tentative; need additional monitoring to confirm impairment

Category 5b-v: biologically impaired; impairment confirmed with multiple samplings

Category 5p: impairment of presumptive use; EPA-approved use attainability analysis (UAA) is needed to determine appropriate use.

Waterbodies are listed alphabetically by waterbody name.

Additional information for all impaired waters can be found in Iowa DNR's assessment database, ADBNet. https://programs.iowadnr.gov/adbnet/search.aspx

TMDL Priorities:*

Tier I: impairments with relatively ***high*** social impact and relatively ***low*** complexity &/or cost for TMDL development

Tier II: impairments with relatively ***high*** social impact and relatively ***high*** complexity &/or cost for TMDL development

Tier III: impairments with relatively ***low*** social impact and relatively ***low*** complexity &/or cost for TMDL development

Tier IV: impairments with relatively ***low*** social impact and relatively ***high*** complexity &/or cost for TMDL development

**See Attachment 7 of the 2014 methodology for more information (http://www.iowadnr.gov/Environment/WaterQuality/WaterMonitoring/ImpairedWaters.aspx.*

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2008	5a	IA 06-WED-00270-L_0	Arrowhead Pond	Pottawattamie County S29T77NR41W 1.5 mi SE of Neola	Lake	Primary Contact	Not supporting	Algae	Aesthetically objectionable conditions (chlorophyll TSI = 67.	ISU and UHL Lake monitoring programs.	Tier I
2010	5p	IA 06-LSR-01495_0	Ashton Creek	from tributary(T89N R41W Sec3 Ida Co.) to headwaters (T88N R41W Sec2) Ida Co.	River	Aquatic Life	Not supporting	Organic Enrichment/ Low DO	Continuous DO monitoring shows violations of aquatic life criteria.	IDNR/UHL biological (REMAP) monitoring 2004.	Tier IV
2004	5a	IA 02-SHL-00105-L_0	Avenue Of The Saints Lake	Bremer Co. approximately 2 miles E of Shell Rock in S7 T91N R14W	Lake	Aquatic Life	Partial	Algae	Algae levels (chlorophyll TSI > 65) adversely impact fish and plant communities	ISU statewide lake survey 2000-2002. information from DNR Fisheries	Tier I

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2004	5a	IA 02-SHL-00105-L_0	Avenue Of The Saints Lake	Bremer Co. approximately 2 miles E of Shell Rock in S7 T91N R14W	Lake	Aquatic Life	Partial	Turbidity	Turbidity levels (Secchi TSI > 65) adversely impact fish and plant communities	ISU statewide lake survey 2000-2002. information from DNR Fisheries	Tier I
2004	5a	IA 01-MAQ-0090-L_0	Backbone Lake	Backbone Lake Dam to S Fk Maquoketa R. (S16 T90N R6W Delaware Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	geometric means > WQS	IDNR/UHL beach monitoring	Tier III
2010	5b	IA 02-WFC-0110_0	Bailey Creek	mouth (NE 1/4 S19 T93N R19W Franklin Co.) to confluence with unnamed tributary in S16 T94N R22W Cerro Gordo Co.	River	Aquatic Life	Partial	Biological: fish kill, pesticide	Fish kill caused by spill of pesticides at a local ag-chemical dealer.	IDNR fish kill investigation.	Tier IV
2006	5b-v	IA 02-WFC-0110_0	Bailey Creek	mouth (NE 1/4 S19 T93N R19W Franklin Co.) to confluence with unnamed tributary in S16 T94N R22W Cerro Gordo Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL REMAP monitoring 2003	Tier IV
2004	5b	IA 03-SSK-0057_0	Ballard Creek	mouth to unnamed tributary in S15 T82N R24W Story Co.	River	Aquatic Life	Partial	Biological: fish kill, ammonia	fish kill in 2002	IDNR fish kill investigation	Tier IV
2014	5p	IA 01-TRK-0450_1	Bass Creek	mouth (S3 T95N R9W Fayette Co.) to west line of S3 T95N R9W Fayette Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Turkey River Watershed Monitoring project 2011-2012.	Tier III
2014	5p	IA 01-TRK-0450_1	Bass Creek	mouth (S3 T95N R9W Fayette Co.) to west line of S3 T95N R9W Fayette Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A2 criterion.	Turkey River Watershed monitoring project 2011-2012.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2014	5p	IA 01-TRK-0450_1	Bass Creek	mouth (S3 T95N R9W Fayette Co.) to west line of S3 T95N R9W Fayette Co.	River	Aquatic Life	Partial	Thermal Modifications: Water Temperature	Significantly greater than 10% of samples have water temperature greater than the Class B(CW1) criterion.	Turkey River Watershed Monitoring project 2011-1012.	Tier IV
2004	5b	IA 01-NMQ-0140_0	Bear Creek	mouth (S31 T89N R2W Dubuque Co.) to confluence with unnamed tributary in NW 1/4 S2 T89N R3W Delaware Co.	River	Aquatic Life	Partial	Biological: fish kill, ammonia/low DO	pollutant-caused fish kill; no source identified	IDNR fish kill investigation	Tier IV
2006	5b	IA 01-NMQ-0141_0	Bear Creek	confluence with unnamed tributary (T89N R3W Sec2 NW) to headwaters (T90N R4W Sec26) Delaware Co.	River	Aquatic Life	Partial	Biological: fish kill, ammonia/low DO	fish kills in 2004 and 2005	IDNR fish kill investigations	Tier IV
2008	5p	IA 01-UIA-0170_1	Bear Creek	mouth (S1 T99N R6W Allamakee Co.) to confluence with N. Bear Cr. in S25 T100N R7W Winneshiek Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Upper Iowa River Watershed Project monitoring Site 25.	Tier III
2004	5b	IA 01-UIA-0170_2	Bear Creek	confluence with N. Bear Cr. (S25 T100N R7W) to spring source (Mestad Spring) in S29 T100N R7W Winneshiek Co.	River	Aquatic Life	Partial	Biological: fish kill, unknown toxicity	runoff-related fish kill in 1999; no cause or source identified	IDNR fish kill investigation	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2014	5p	IA 01-VOL-0030_1	Bear Creek	mouth (S34 T92N R4W Clayton Co.) to south line of S18 T91N R4W Clayton Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	DNR Project monitoring from May 2011 to November 2012 (STORET station 11220009)	Tier III
2014	5a	IA 02-CED-0231_0	Bear Creek	mouth to Wildcat Cr. Benton Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli in recreation seasons of 2010 & 2011 >> Class A1/A3 criterion.	IDNR-sponsored ambient monitoring in 2010 & 2011 at STORET station 15570007.	Tier III
2014	5p	IA 02-CED-0260_0	Bear Creek	mouth (S21 T86N R10W Benton Co.) to confluence with unnamed tributary in SW 1/4 S34 T88N R9W Buchanan Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of E. coli in recreation seasons of 2010 & 2011 were > Class A1 criterion.	IDNR-sponsored monitoring at STORET station 15060002 from May 2010 to July 2011.	Tier III
2006	5b-t	IA 02-IOW-0180_2	Bear Creek	from confluence with L. Bear Cr. (S16 T80N R13W Poweshiek Co.) to confluence with unnamed tributary in SW 1/4 S9 T80N R14W Poweshiek Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL REMAP monitoring 2002	Tier IV
2010	5p	IA 04-LDM-0350_0	Bear Creek	mouth (SE1/4 S23 T72N R14W Wapello Co.) to headwaters in NE1/4 S7 T71N R15W Wapello Co.	River	Aquatic Life	Partial	Organic Enrichment/ Low DO	Significantly greater than 10% of the samples exceed the dissolved oxygen criteria.	IDNR/UHL continuous monitoring 2005.	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2012	5p	IA 01-UIA-0420_1	Beaver Creek	mouth (S19 T100N R12W Howard Co.) to south line of S29 T100N R13W Howard Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria exceed the Class A2 criterion.	Upper Iowa River Watershed project 2008-10.	Tier III
2008	5p	IA 01-UIA-0420_1	Beaver Creek	mouth (S19 T100N R12W Howard Co.) to south line of S29 T100N R13W Howard Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Upper Iowa River Watershed Project monitoring Site 5.	Tier III
2014	5p	IA 01-UIA-0420_1	Beaver Creek	mouth (S19 T100N R12W Howard Co.) to south line of S29 T100N R13W Howard Co.	River	Aquatic Life	Partial	Thermal Modifications: Water Temperature	Significantly greater than 10% of samples violated the Class B(CW1) criterion for temperature.	Upper Iowa River Watershed monitoring Site 5 (STORET station 190890001).	Tier IV
2008	5p	IA 02-CED-0400_0	Beaver Creek	mouth (S34 T90N R14W Black Hawk Co.) to confluence with South Beaver Cr. in S25 T90R R17W Butler Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL ambient water quality monitoring network.	Tier III
2008	5b-t	IA 02-CED-0410_2	Beaver Creek	from confluence with North Beaver Cr. (S23 T90N R18W Butler Co) to confluence with unnamed tributary in SE 1/4 S29 T90N R19W Franklin Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index.	IDNR biological (REMAP) monitoring in 2005.	Tier IV
2010	5p	IA 02-IOW-0290_0	Beaver Creek	mouth (SE 1/4 S25 T87N R19W Hardin Co.) to confluence with South Beaver Cr. in NE 1/4 S28 T88N R20W Hardin Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	USDA National Lab for Agriculture & Environment monitoring 2006-08.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2010	5p	IA 02-IOW-0295_0	Beaver Creek	from confluence with South Beaver Creek (NE1/4 S28 T88N R20W) to headwaters (S28 T89N R21W Hardin Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	USDA National Lab for Agriculture & Environment monitoring 2006-08.	Tier III
2010	5p	IA 02-WIN-0081_0	Beaver Creek	from confluence with DD54 in T98N R23W S25 Winnebago Co. to outlet structure at Rice Lake T99N R22W S19 Worth Co.	River	Aquatic Life	Not supporting	Organic Enrichment/ Low DO	Continuous monitoring for dissolved oxygen shows violations of Class B(WW1) criteria.	IDNR/UHL REMAP monitoring 2003.	Tier IV
2008	5p	IA 04-UDM-0110_1	Beaver Creek	mouth (S17 T79N R24W Polk Co.) to the Polk/Dallas county line (west line S18 T80N R25W Polk Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL statewide ambient water quality monitoring network.	Tier III
2008	5a	IA 02-WFC-0090-L_0	Beeds Lake	Franklin County S20T92NR20W 2 mi W 1 mi N of Hampton	Lake	Primary Contact	Not supporting	Algae	aesthetically objectionable conditions (chlorophyll TSI = 67)	ISU and UHL lake surveys IDNR Fisheries information	Tier I
2010	5p	IA 02-IOW-0213_0	Bennett Creek	From mouth (T83N R15W Sec32 Tama Co.) to headwaters (T82N R16W Sec16 Tama Co.) excluding portion on Mesqwaki Settlement	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than Class A1 criterion (126 orgs/100 ml).	USGS monitoring station 05451773 near Tama April-December 2006.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2014	5p	IA 04-UDM-0151_0	Big Creek	from tributary (T83N R25W Sec33 Boone Co.) to headwaters (T84N R26W Sec26 Boone Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of indicator bacteria (E. coli) violated the Class A1 criterion.	Iowa DNR special project monitoring from March to September 2011.	Tier III
2004	5b	IA 06-BSR-0010_3	Big Sioux River	from confluence Brule Cr. near Richland SD (S33 T92N R49W Plymouth Co.) to confluence with Indian Cr. in S9 T93N R48W Plymouth Co.	River	Aquatic Life	Threatened	Biological: fish kill, low DO	Level of DO during daytime fishkill investigation was .5 mg/L	IDNR and South Dakota joint fish kill investigation 2001	Tier IV
2008	5a	IA 06-LSR-02850-L_0	Big Spirit Lake	Dickinson County S33T100NR36W at Spirit Lake	Lake	Primary Contact	Not supporting	Indicator Bacteria	Violations of the state's geometric mean criterion.	DNR beach monitoring program.	Tier II
2006	5b-v	IA 02-CED-0370_2	Black Hawk Creek	from Hwy 58 (E 1/2 S27 T88N R14W Black Hawk Co.) to confluence with N. Fk. Black Hawk Cr. in S1 T87N R15W Grundy Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL biocriteria monitoring	Tier IV
2008	5b	IA 02-CED-0370_2	Black Hawk Creek	from Hwy 58 (E 1/2 S27 T88N R14W Black Hawk Co.) to confluence with N. Fk. Black Hawk Cr. in S1 T87N R15W Grundy Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean is greater than the Class A1 criterion.	IDNR/UHL TMDL-related monitoring in 2001 and 2005.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2008	5p	IA 02-CED-0380_0	Black Hawk Creek	from N. Fk. Black Hawk Cr. (S1 T87N R15W Grundy Co.) to confluence with unnamed tributary in S12 T87N R18W Grundy Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL TMDL-related monitoring at three stations in 2005.	Tier III
2010	5p	IA 01-YEL-0060_0	Bloody Run	mouth (Clayton Co.) to west line of S22 T95N R4W Clayton Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than Class A1 criterion.	IDNR bacteria monitoring 2006-08.	Tier III
2014	5p	IA 02-CED-0233_0	Blue Creek	mouth (S18 T85N R8W Linn Co.) to confluence with East Branch Blue Cr. in S7 T85N R8W Linn Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli during recreation seasons of 2010 & 2011 >> Class A1 criterion.	DNR-sponsored monitoring in 2011 and 2012 at Cedar Ridge Road (STOERT station 15570008).	Tier III
2012	5a	IA 06-LSR-02393-L_0	Bluewing Marsh	Palo Alto County S4T96NR34W 3 mi NNE of Ruthven.	Wetland	Aquatic Life	Partial	Algae	Algae levels (chlorophyll TSI > 65) adversely impact fish and plant communities	IDNR shallow lakes monitoring program.	Tier IV
2008	5a	IA 05-CHA-00690-L_0	Bob White Lake	Wayne County S4T68NR22W 1 mi W of Allerton.	Lake	Primary Contact	Not supporting	Algae	aesthetically objectionable conditions (chlorophyll TSI = 69)	ISU and UHL lake surveys IDNR Fisheries information.	Tier I
2004	5a	IA 05-CHA-00690-L_0	Bob White Lake	Wayne County S4T68NR22W 1 mi W of Allerton.	Lake	Primary Contact	Not supporting	Indicator Bacteria	geometric means > WQS	IDNR/UHL ambient WQ monitoring	Tier II
2014	5a	IA 05-CHA-00690-L_0	Bob White Lake	Wayne County S4T68NR22W 1 mi W of Allerton.	Lake	Aquatic Life	Partial	Organic Enrichment/ Low DO	Significantly greater than 10% of the samples exceed the dissolved oxygen criteria	ISU and UHL lake monitoring programs IDNR Fisheries information	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2006	5a	IA 05-CHA-00690-L_0	Bob White Lake	Wayne County S4T68NR22W 1 mi W of Allerton.	Lake	Primary Contact	Not supporting	Turbidity	Aesthetically objectionable conditions (Secchi TSI = 80)	ISU Lake survey IDNR Fisheries information.	Tier I
2014	5a	IA 01-TRK-0460_0	Bohemian Creek	mouth (S11 T97N R10W Winneshiek Co.) to Howard Co. road V58 (west line of S2 T97N R11W Howard Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Turkey River Watershed Monitoring project 2011-2012.	Tier III
2014	5a	IA 01-TRK-0460_0	Bohemian Creek	mouth (S11 T97N R10W Winneshiek Co.) to Howard Co. road V58 (west line of S2 T97N R11W Howard Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A2 criterion.	Turkey River Watershed Monitoring project 2011-2012.	Tier III
2014	5a	IA 01-TRK-0460_0	Bohemian Creek	mouth (S11 T97N R10W Winneshiek Co.) to Howard Co. road V58 (west line of S2 T97N R11W Howard Co.)	River	Aquatic Life	Partial	Thermal Modifications: Water Temperature	Significantly greater than 10% of samples exceed Class B(CW1) criterion for temperature.	Turkey River Watershed Monitoring project.	Tier IV
2014	5a	IA 04-UDM-0180_1	Boone River	mouth (Webster Co.) to Hwy 17 in S18 T88N R25W Hamilton Co.	River	Primary Contact	Partial	Indicator Bacteria	Greater than 10% of samples during the 2010-12 assessment period exceed the Class A1 single-sample max criterion.	IDNR/SHL routine monthly ambient monitoring 2010-12 at Boone River station 10400001.	Tier III
2008	5a	IA 06-BOY-0020_1	Boyer River	from confluence with Willow Cr. (S28 T78N R44W Harrison Co.) to the Harrison-Crawford county line.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli exceeds the Class A1 criterion.	IDNR/UHL statewide ambient water quality monitoring network.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2012	5a	IA 04-UDM-01880-L_0	Briggs Woods Lake	Hamilton County S17T88NR25W near Webster City.	Lake	Primary Contact	Partial	pH	Significantly more than 10% of samples exceed the Class A1 pH criteria.	ISU and SHL statewide ambient lake monitoring 2006-10.	Tier I
2012	5a	IA 04-UDM-01880-L_0	Briggs Woods Lake	Hamilton County S17T88NR25W near Webster City.	Lake	Aquatic Life	Partial	pH	Significantly more than 10% of samples exceed the Class B(LW) pH criteria.	ISU and SHL statewide ambient lake monitoring 2006-10.	Tier I
2004	5b-t	IA 06-BSR-0023_0	Broken Kettle Creek	from mouth (S9 T90N R48W Plymouth Co.) to confluence with an unnamed tributary in S19 T92N R47W Plymouth Co.	River	Aquatic Life	Not supporting	Biological: IBI	Low biotic index	IDNR/UHL REMAP monitoring 2002	Tier IV
2006	5b-t	IA 01-WPS-0050_1	Brophy Creek	mouth (S1 T80N R4E Clinton Co.) to confluence with Cherry Cr. in S17 T81N R5E Clinton Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL REMAP monitoring 2004	Tier IV
2008	5a	IA 06-WEM-00485-L_0	Browns Lake	Woodbury County S32T87NR47W 2 mi W of Salix.	Lake	Primary Contact	Partial	Indicator Bacteria	Violations of the state's geometric mean criterion.	DNR beach monitoring program.	Tier II
2004	5a	IA 06-WEM-00485-L_0	Browns Lake	Woodbury County S32T87NR47W 2 mi W of Salix.	Lake	Primary Contact	Not supporting	Turbidity	aesthetically objectionable conditions; Secchi trophic state index =72 Chl-a TSI =60	ISU statewide lake survey	Tier IV
2006	5b-t	IA 01-VOL-0120_2	Brush Creek	from confluence with Bear Cr. (S8 T92N R7W Fayette Co.) to east line of S17 T92N R7W Fayette Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	UHL special project monitoring 2004	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2006	5b	IA 04-RAC-0251_0	Brushy Creek	from Guthrie/Audubon county line (west line S6 T81N R33W Guthrie Co.) to confluence with an unnamed tributary in S6 T82N R34W Carroll Co.	River	General Use	Partial	Biological: fish kill, ammonia/low DO	fish kill in 2005; caused by animal waste	IDNR fish kill investigation	Tier IV
2008	5b	IA 04-RAC-0253_0	Brushy Creek	from confluence with unnamed tributary (S6 T82N R34W Carroll Co.) to headwaters in S27 T84N R36W Carroll Co.	River	Aquatic Life	Partial	Biological: fish kill, ammonia/low DO	Fish kills in December 2005 caused by animal waste.	IDNR fish kill investigations.	Tier IV
2012	5a	IA 04-UDM-0275-L_0	Brushy Creek Lake	Webster Co. in S34 T88N R27W; 5 miles E. of Lehigh	Lake	Primary Contact	Partial	Indicator Bacteria	Significantly greater than 10% of the bacteria samples exceeded the single-sample maximum criterion.	IDNR Beach Monitoring Program	Tier II
2004	5b-t	IA 01-MAQ-0210_0	Buck Creek	mouth (S11 T87N R4W Delaware Co.) to Golden Branch in S11 T87N R5W Delaware Co.	River	Aquatic Life	Partial	Biological: IBI	low biotic index	IDNR/UHL biological monitoring in 2001	Tier IV
2004	5b	IA 01-MAQ-0210_0	Buck Creek	mouth (S11 T87N R4W Delaware Co.) to Golden Branch in S11 T87N R5W Delaware Co.	River	Aquatic Life	Partial	Biological: FW mussels	> 50% decline in mussel species richness	ISU freshwater mussel study	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2004	5b-t	IA 04-EDM-0090_2	Buffalo Creek	from confluence with Union Slough Outlet (S9 T97N R28W Kossuth Co.) to confluence with Little Buffalo Cr. in S4 T97N R27W Kossuth Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL biocriteria monitoring 2000	Tier IV
2004	5b-t	IA 04-EDM-0090_3	Buffalo Creek	confluence with Little Buffalo Cr.(S4 T97N R27W Kossuth Co.) to confluence with Drainage Ditch 48 in S33 T98N R26W Winnebago Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL biocriteria monitoring 2000	Tier IV
2006	5b-v	IA 02-CED-0490_1	Burr Oak Creek	mouth (S12 T98N R16W Mitchell Co.) to Mitchell County Road T46 at W line S10 T98N R16W Mitchell Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL biocriteria monitoring	Tier IV
2008	5a	IA 04-UDM-0247_0	Buttermilk Creek	mouth (T92N R26W Sec 33) to headwaters (T92N R26W Sec 34) Wright County	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL TMDL-related monitoring.	Tier III
2006	5b-t	IA 02-WIN-0050_0	Calmus Creek	mouth (S34 T97N R20W Cerro Gordo Co.) to west line S30 T97N R20W Cerro Gordo Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index.	IDNR biological (biocriteria) monitoring in 2001.	Tier IV
2010	5p	IA 01-NEM-0066_0	Candlelight Creek	from mouth (SE1/4 S14 T78N R3E Scott Co.) to headwaters in NW1/4 S11 T78N R3E Scott Co.	River	Aquatic Life	Partial	Indicator Bacteria	Geometric mean of E. coli greater than Class A1 criterion.	IDNR/UHL TMDL monitoring 2008.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2008	5p	IA 01-UIA-0240_1	Canoe Creek	mouth (S25 T99N R7W Winneshiek Co.) to county road W38 (S23 T99N R8W Winneshiek Co.).	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Upper Iowa River Watershed Project monitoring Site 20.	Tier III
2008	5a	IA 06-WEM-00265-L_0	Carter Lake	Pottawattamie County S23T75NR44W at Carter Lake.	Lake	Aquatic Life	Partial	Organic Enrichment/ Low DO	Significantly greater than 10% of the dissolved oxygen samples exceed the criterion.	ISU and UHL lake surveys.	Tier IV
2002	5a	IA 06-WEM-00265-L_0	Carter Lake	Pottawattamie County S23T75NR44W at Carter Lake.	Lake	Fish Consumption	Not supporting	PCBs in fish	Fish consumption advisory for PCBs	Nebraska Dept. of Environmental Quality.	Tier IV
2012	5a	IA 06-WEM-00265-L_0	Carter Lake	Pottawattamie County S23T75NR44W at Carter Lake.	Lake	Primary Contact	Not supporting	Turbidity	Aesthetically objectionable conditions (Secchi TSI > 65).	Results of ISU and SHL statewide ambient lake monitoring 2006-10	Tier IV
2012	5a	IA 01-TRK-0100_1	Catfish Creek	mouth (Dubuque Co.) to confluence with South Fork Catfish Cr. Dubuque Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria exceed Class A1 criterion.	Catfish Creek Watershed Project.	Tier III
2012	5p	IA 01-TRK-0100_2	Catfish Creek	from S. Fk. Catfish Cr. (S2 T88N R2E Dubuque Co.) to south line of S9 T88N R2E Dubuque Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean levels of indicator bacteria far greater than the Class A1 criterion.	Monitoring in 2010 as part of the Catfish Creek Watershed Project.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2014	5p	IA 03-SKU-0061_0	Cedar Creek	from Lake Geode (T70N R5W Sec25 Henry Co.) to headwaters (T70N R4W Sec5 Des Moines Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria (E. coli) violated the Class A1 criterion.	Iowa DNR special project monitoring at five stations from September 2010 to July 2011.	Tier III
2008	5a	IA 03-SKU-0090_1	Cedar Creek	mouth (S9 T71N R7W Henry Co.) to confluence with Little Cedar Cr. in S17 T70N R7W Henry Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL ambient water quality monitoring network.	Tier III
2008	5p	IA 04-LDM-0160_0	Cedar Creek	mouth (S33 T75N R17W Mahaska Co.) to confluence with North Cedar Cr. in S15 T74N R18W Marion Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL ambient water quality monitoring network.	Tier III
2008	5b-t	IA 04-LDM-0170_0	Cedar Creek	from confluence with North Cedar Cr. in S15 T74N R18W Marion Co. to Mormon Branch in S5T71NR18W Monroe Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index.	IDNR/UHL biological (REMAP) monitoring 2006.	Tier IV
2014	5b	IA 04-RAC-0160_1	Cedar Creek	from confluence with Little Cedar Cr. (S15 T90N R34W Pocahontas Co.) to confluence with Drainage Ditch 21 in S7 T91N R33W Pocahontas Co.	River	Aquatic Life	Partial	Biological: fish kill, ammonia/low DO	Fish kill in September 2013 caused by spill of animal waste from hog confinement.	Iowa DNR fish kill database.	Tier IV
2006	5a	IA 02-CED-02250-L_0	Cedar Lake	Linn County S21T83NR7W in Cedar Rapids.	Lake	Fish Consumption	Not supporting	PCBs in fish	Fish consumption advisory for PCBs	fish contaminant (RAFT) monitoring	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2010	5a	IA 02-CED-0010_0	Cedar River	mouth (S20 T75N R4W Louisa Co.) to confluence with Sugar Cr. in S17 T78N R2W Muscatine Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR ambient water quality monitoring network 2006-08.	Tier III
2014	5a	IA 02-CED-0010_0	Cedar River	mouth (S20 T75N R4W Louisa Co.) to confluence with Sugar Cr. in S17 T78N R2W Muscatine Co.	River	Primary Contact	Not supporting	pH	Significantly greater than 10% of samples exceed the Class A1 criterion for pH.	Iowa DNR ambient monitoring station near Conesville (STORET station 10700001).	Tier IV
2014	5a	IA 02-CED-0010_0	Cedar River	mouth (S20 T75N R4W Louisa Co.) to confluence with Sugar Cr. in S17 T78N R2W Muscatine Co.	River	Aquatic Life	Not supporting	pH	Significantly greater than 10% of samples exceed the Class B(WW1) criterion for pH.	Iowa DNR ambient monitoring station near Conesville (STORET station 10700001).	Tier IV
2004	5a	IA 02-CED-0020_2	Cedar River	from Rock Run Cr. (S28 T80NR3W Cedar Co) to Hwy 30 bridge at Cedar Rapids in S9 T82N R6W Linn Co.	River	Aquatic Life	Not supporting	Biological: FW mussels	> 50% decline in mussel species richness	ISU freshwater mussel study	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2014	5a	IA 02-CED-0030_2	Cedar River	from confluence with McCloud Run (SW 1/4 S16 T83N R7W Linn Co.) to confluence with Bear Cr. in NE 1/4 S21 T84N R8W Linn Co. (includes East West Seminole and Northwest well fields for city of Cedar Rapids water supply).	River	Primary Contact	Not supporting	pH	Significantly greater than 10% of samples exceed the Class A1 criteria for pH.	IDNR and USGS monitoring from 2010-12 (IDNR station 10570002 & USGS station 05464480).	Tier IV
2014	5a	IA 02-CED-0030_2	Cedar River	from confluence with McCloud Run (SW 1/4 S16 T83N R7W Linn Co.) to confluence with Bear Cr. in NE 1/4 S21 T84N R8W Linn Co. (includes East West Seminole and Northwest well fields for city of Cedar Rapids water supply).	River	Aquatic Life	Partial	pH	Significantly greater than 10% of samples violate the Class B(WW1) criteria for pH.	IDNR and USGS monitoring from 2010-12 (IDNR station 10570002 & USGS station 05464480).	Tier IV
2008	5a	IA 02-CED-0030_3	Cedar River	from confluence with Bear Cr. (NE 1/4 S21 T84N R8W Linn Co.) to confluence with Hinkle Cr. in SW 1/4 S16 T85N R10W Benton Co.	River	Primary Contact	Partial	Indicator Bacteria	Greater than 10% of samples exceed the Class A1 single-sample maximum criterion.	IDNR ambient water quality monitoring network.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2014	5a	IA 02-CED-0030_3	Cedar River	from confluence with Bear Cr. (NE 1/4 S21 T84N R8W Linn Co.) to confluence with Hinkle Cr. in SW 1/4 S16 T85N R10W Benton Co.	River	Primary Contact	Not supporting	pH	Significantly greater than 10% of samples exceed the Class A1 criteria for pH.	IDNR and USGS ambient monitoring from 2010-12 (IDNR station 10570002 & USGS station 05464480).	Tier IV
2014	5a	IA 02-CED-0030_3	Cedar River	from confluence with Bear Cr. (NE 1/4 S21 T84N R8W Linn Co.) to confluence with Hinkle Cr. in SW 1/4 S16 T85N R10W Benton Co.	River	Aquatic Life	Partial	pH	Significantly greater than 10% of samples exceed the Class B(WW1) criteria for pH.	IDNR and USGS ambient monitoring from 2010-12 (IDNR station 10570002 & USGS station 05464480).	Tier IV
2008	5a	IA 02-CED-0040_2	Cedar River	from bridge crossing in LaPorte City in S19 T87N R11W Black Hawk Co.) to dam of Cedar Falls Impoundment in NW 1/4 S12 T89N R14W Black Hawk Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR ambient water quality monitoring network.	Tier III
2008	5a	IA 02-CED-0060_1	Cedar River	upper end of impoundment (W line S2 T89N R14W Black Hawk Co.) to confluence with Beaver Cr. in S34 T90N R14W Black Hawk Co.	River	Primary Contact	Partial	Indicator Bacteria	Greater than 10% of samples exceed the Class A1 single-sample maximum criterion.	IDNR ambient water quality monitoring network 2004-2006.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2008	5a	IA 02-CED-0060_2	Cedar River	from Beaver Creek (S34 T90N R14W Black Hawk Co.) to confluence with W. Fk. Cedar R. in S4 T90N R14W Black Hawk Co.)	River	Primary Contact	Partial	Indicator Bacteria	Greater than 10% of samples exceed the Class A1 single-sample maximum criterion.	IDNR ambient water quality monitoring network 2004-06.	Tier III
2008	5a	IA 02-CED-0070_0	Cedar River	from W. Fk. Cedar R. (S4 T90N R14W Black Hawk Co.) to lowhead dam at Waverly in NW 1/4 S2 T91N R14W Bremer Co.	River	Primary Contact	Partial	Indicator Bacteria	Greater than 10% of samples exceed the Class A1 single-sample maximum criterion.	IDNR ambient water quality monitoring network 2004-06.	Tier III
2008	5a	IA 02-CED-0110_1	Cedar River	from upper end of Nashua Impoundment (Chickasaw/Floyd county line (W line S7 T94N R14W Chickasaw Co.)) to Dam No. 2 at Charles City in NW 1/4 NE 1/4 S12 T95N R16W Floyd Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR ambient water quality monitoring network 2004-06.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2014	5a	IA 02-CED-0110_1	Cedar River	from upper end of Nashua Impoundment (Chickasaw/Floyd county line (W line S7 T94N R14W Chickasaw Co.)) to Dam No. 2 at Charles City in NW 1/4 NE 1/4 S12 T95N R16W Floyd Co.	River	Fish Consumption	Partial	Mercury in fish	Levels of mercury in predator fish exceed the 1 meal/week advisory threshold; advisory issuance likely	U.S. EPA/IDNR fish contaminant monitoring in 2012.	Tier IV
2006	5a	IA 02-CED-0110_2	Cedar River	from Charles City Dam No. 2 (NW 1/4 NE 1/4 S12 T95N R16W Floyd Co.) to confluence with Rock Cr. in S24 T97N R17W Floyd Co.)	River	Fish Consumption	Not supporting	Mercury in fish	> IDNR/IDPH trigger level for 1 meal/week advisory; consumption advisory issued in 2006	fish contaminant (RAFT) monitoring	Tier IV
2006	5a	IA 02-CED-0110_3	Cedar River	from Rock Cr. nr Orchard (S24 T97N R17W Floyd Co.) to Iowa / Minnesota state line (S8 T100N R18W Mitchell Co.)	River	Fish Consumption	Not supporting	Mercury in fish	> IDNR/IDPH trigger level for 1 meal/week advisory; consumption advisory issued in 2006	fish contaminant (RAFT) monitoring	Tier IV
2010	5a	IA 05-CHA-00325-L_0	Centerville Reservoir Upper	Appanoose County S11T68NR18W near Centerville.	Lake	Fish Consumption	Partial	Mercury in fish	Fish consumption advisory (1 meal/week) issued in 2009.	IDNR/U.S. EPA fish tissue (RAFT) monitoring.	Tier IV
2008	5a	IA 01-MAQ-01580-L_0	Central Park Lake	Jones County S1T84NR3W 6 mi E of Anamosa.	Lake	Primary Contact	Not supporting	Algae	aesthetically objectionable conditions (chlorophyll TSI = 69)	ISU and UHL lake surveys IDNR Fisheries information	Tier I

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2008	5a	IA 01-MAQ-01580-L_0	Central Park Lake	Jones County S1T84NR3W 6 mi E of Anamosa.	Lake	Primary Contact	Not supporting	Indicator Bacteria	Violations of the state's geometric mean criterion.	DNR beach monitoring program.	Tier II
2008	5p	IA 05-CHA-00302_0	Chariton Creek	mouth (S19 T71N R23W Lucas Co.) to headwaters	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Iowa State University/Army Corps of Engineers Rathbun watershed monitoring project.	Tier III
2008	5a	IA 05-CHA-0010_2	Chariton River	from the Highway 2 crossing (S27 T69N R17W Appanoose Co.) to Rathbun Dam in S35 T69N R18W Appanoose Co.	River	Primary Contact	Partial	Indicator Bacteria	Greater than 10% of E. coli samples exceed the Class A1 single-sample maximum criterion.	IDNR/UHL statewide ambient water quality monitoring network.	Tier III
2014	5b-t	IA 05-CHA-0030_1	Chariton River	from upper end of Rathbun Lake to Hwy 14 Lucas Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index.	IDNR Fisheries Bureau biological monitoring.	Tier IV
2008	5a	IA 05-CHA-0030_1	Chariton River	from upper end of Rathbun Lake to Hwy 14 Lucas Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Iowa State University/Army Corps of Engineers Rathbun watershed monitoring.	Tier III
2004	5b-t	IA 05-CHA-0030_2	Chariton River	from Hwy 14 (Lucas Co.) to confluence with Chariton Cr. in S19 T71N R23W Lucas Co.	River	Aquatic Life	Not supporting	Biological: IBI	Low biotic index	IDNR/UHL REMAP sampling 2002	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2008	5p	IA 05-CHA-00301_0	Chariton River	from confluence with Chariton Creek (S19 T71N R23W Lucas Co.) to headwaters	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Iowa State University/Army Corps of Engineers Rathbun watershed monitoring.	Tier III
2012	5p	IA 01-UIA-0150_0	Clear Creek	mouth (S35 T100N R5W Allamakee Co.) to north line of S15 T100N R5W Allamakee Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of indicator bacteria exceeds the Class A2 criterion.	Upper Iowa River Watershed Project monitoring 2008-10.	Tier III
2008	5p	IA 01-UIA-0150_0	Clear Creek	mouth (S35 T100N R5W Allamakee Co.) to north line of S15 T100N R5W Allamakee Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Upper Iowa River Watershed Project monitoring Site 28.	Tier III
2004	5a	IA 02-WIN-00450-L_0	Clear Lake	Cerro Gordo County S13T96NR22W at Clear Lake.	Lake	Primary Contact	Not supporting	Indicator Bacteria	geometric means > WQS	IDNR/UHL beach monitoring	Tier II
2010	5p	IA 01-MAQ-0240_0	Coffins Creek	mouth (S19 T89N R5W Delaware Co.) to unnamed tributary in S29 T89N R6W Delaware Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli greater than the Class A1 criterion.	Lake Delhi Watershed Association monitoring.	Tier III
2012	5p	IA 01-UIA-0270_0	Coon Creek	mouth (NE 1/4 S3 T99N R7W Winneshiek Co.) to road crossing in S13 T98N R7W Winneshiek Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria exceed the Class A2 criterion.	Upper Iowa River Watershed project 2008-10.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2008	5p	IA 01-UIA-0270_0	Coon Creek	mouth (NE 1/4 S3 T99N R7W Winneshiek Co.) to road crossing in S13 T98N R7W Winneshiek Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Upper Iowa River Watershed Project monitoring Site 19.	Tier III
2008	5b-t	IA 05-CHA-0040_0	Cooper Creek	mouth to trib S9T68NR19W Appanoose Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index.	IDNR/UHL biological (REMAP) monitoring 2005.	Tier IV
2006	5a	IA 02-IOW-0040-L_0	Coralville Reservoir	Johnson County S22T80NR6W (dam) 3 mi N of Iowa City.	Reservoir	Primary Contact	Partial	Turbidity	Aesthetically objectionable conditions (Secchi TSI > 65).	ISU statewide lakes survey 2000-04	Tier II
2006	5b-t	IA 02-ICD-0031_1	Cottonwood Drain	mouth (SE 1/4 S1 T70N R2W Des Moines Co.) to confluence with unnamed tributary in S13 T71N R2W Des Moines Co.	River	Aquatic Life	Not supporting	Biological: IBI	Low biotic index	IDNR/UHL biocriteria monitoring	Tier IV
2014	5p	IA 01-VOL-0070_1	Cox Creek (aka Alderson Hollow)	mouth (S21 T92N R5W Clayton Co.) to confluence with Kleinlein Cr. in S36 T92N R6W Clayton Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Monitoring from May 2011 to November 2012 at station Cox 20 (STORET station 15220010)	Tier III
2014	5p	IA 01-TRK-0440_1	Crane Creek	mouth (S31 T95N R9W Fayette Co.) to confluence with unnamed tributary in NE 1/4 NW 1/4 S4 T95N R11W Chickasaw Co. (near Lawler)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Turkey River Watershed monitoring 2011-2012.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2014	5p	IA 01-TRK-0440_2	Crane Creek	from confluence with unnamed tributary (NE 1/4 NW 1/4 S4 T95N R11W Chickasaw Co.) to confluence with Spring Cr. in S17 T98N R12W Howard Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Turkey River Watershed monitoring 2011-2012.	Tier III
2014	5p	IA 01-TRK-0440_3	Crane Creek	confluence with Spring Cr. (S17 T97N R12W Howard Co.) to confluence with unnamed tributary in NW 1/4 S33 T99N R13W Howard Co. north of Maple Leaf.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of E. coli are greater than the Class A1 criterion.	Turkey River Watershed Project monitoring 2011-2012.	Tier III
2008	5b-t	IA 01-TRK-0440_4	Crane Creek	from confluence with unnamed tributary (NW 1/4 S33 T99N R13W Howard Co.) to confluence with unnamed tributary in S7 T99N R13W Howard Co. approximately 2 miles north of Saratoga.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index.	IDNR/UHL biological (REMAP) monitoring.	Tier IV
2008	5b-t	IA 06-FLO-0070_0	Deep Creek	mo to trib S35T94NR43W Sioux Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index.	IDNR/UHL (REMAP) monitoring in 2006.	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2008	5p	IA 02-CED-0540_1	Deer Creek	mouth (S23 T99N R18W Mitchell Co.) to the Mitchell-Worth county line (west line S6 T100N R18W Mitchell Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL/Mitchell Co. CB ambient monitoring for Cedar River/Mitchell Co. project 2006-08	Tier III
2014	5p	IA 02-IOW-0225_0	Deer Creek	from Union Grove Lake (Tama Co.) to headwaters (T85N R17W Sec24 SW)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli for 2010 recreation season exceeded Iowa's Class A1 water quality criterion	IDNR special project monitoring from April to September 2010.	Tier III
2008	5a	IA 04-LDM-0010_1	Des Moines River	mouth (S34 T65N R5W Lee Co.) to confluence with Sugar Cr. in S25 T65N R6W Lee Co.	River	Primary Contact	Partial	Indicator Bacteria	Greater than 10% of samples exceed the Class A1 single-sample maximum criterion	IDNR/UHL ambient water quality monitoring.	Tier III
2008	5a	IA 04-LDM-0010_2	Des Moines River	from confluence with Sugar Cr. (S25 T65N R6W Lee Co.) to confluence with Indian Cr. in S35 T68N R8W Van Buren Co.	River	Primary Contact	Partial	Indicator Bacteria	Greater than 10% of samples exceed the Class A1 single-sample maximum criterion.	IDNR/UHL ambient water quality monitoring network.	Tier III
2008	5b	IA 04-LDM-0010_3	Des Moines River	from confluence with Indian Cr. (S35 T68N R8W Van Buren Co.) to confluence with Chequest Cr. in S27 T69N R10W Van Buren Co.	River	Aquatic Life	Partial	Biological: fish kill, unknown toxicity	Fish kills primarily of shovelnose sturgeon in 2002 and 2006.	IDNR fish kill investigations.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2012	5a	IA 04-LDM-0010_3	Des Moines River	from confluence with Indian Cr. (S35 T68N R8W Van Buren Co.) to confluence with Chequest Cr. in S27 T69N R10W Van Buren Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria exceed the Class A1 criterion.	USGS monitoring at Keosauqua 2008-10.	Tier IV
2006	5b	IA 04-LDM-0010_4	Des Moines River	from confluence with Chequest Cr. (S27 T69N R10W Van Buren Co.) to confluence with Soap Cr. in S35 T71N R12W Wapello Co.	River	Aquatic Life	Partial	Biological: fish kill, unknown toxicity	fish kills primarily of shovelnose sturgeon; most recent in 2002 and 2006	IDNR Fisheries Bureau	Tier IV
2012	5a	IA 04-LDM-0010_4	Des Moines River	from confluence with Chequest Cr. (S27 T69N R10W Van Buren Co.) to confluence with Soap Cr. in S35 T71N R12W Wapello Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria exceed the Class A1 criterion.	USGS monitoring at Keosauqua 2008-10.	Tier III
2006	5b	IA 04-LDM-0020_1	Des Moines River	from confluence with Soap Cr. (S35 T71NR12W Wapello Co.) to lowhead dam at Ottumwa in S24 T72N R14W Wapello Co.	River	Aquatic Life	Partial	Biological: fish kill, unknown toxicity	fish kills primarily of shovelnose sturgeon; most recent in 2002 and 2006	IDNR Fisheries Bureau	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2004	5a	IA 04-LDM-0020_1	Des Moines River	from confluence with Soap Cr. (S35 T71NR12W Wapello Co.) to lowhead dam at Ottumwa in S24 T72N R14W Wapello Co.	River	Primary Contact	Partial	Indicator Bacteria	> 10% of samples > 400 orgs/100 mL	IDNR/UHL ambient city water quality monitoring	Tier III
2006	5a	IA 04-LDM-0020_2	Des Moines River	from Ottumwa dam (S24 T72N R14W Wapello Co.) to confluence with Cedar Cr in S33 T75N R17W Mahaska Co.	River	Primary Contact	Not supporting	Indicator Bacteria	geometric mean > WQS	IDNR/UHL ambient city water quality monitoring	Tier III
2008	5a	IA 04-UDM-0030_1	Des Moines River	from upper end of Saylorville Reservoir to Fraser Dam in S34 T85N R27W Boone Co.	River	Primary Contact	Partial	Indicator Bacteria	Greater than 10% of samples exceed the Class A1 single-sample maximum criterion.	Iowa State University/Army Corps of Engineers water quality monitoring network.	Tier III
2008	5a	IA 04-UDM-0030_2	Des Moines River	from Fraser Dam (S34 T85N R27W Boone Co.) to confluence with the Boone R. in SE 1/4 S25 T87N R27W Webster Co.	River	Primary Contact	Partial	Indicator Bacteria	Greater than 10% of samples exceed the Class A1 single-sample maximum criterion.	Iowa State University/Army Corps of Engineers water quality monitoring network.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2008	5a	IA 04-UDM-0040_1	Des Moines River	from confluence with Boone R. (S25 T87N R27W Webster Co.) to west line of S15 T88N R28W Webster Co. (approximately 1.3 miles downriver from Kalo)	River	Primary Contact	Partial	Indicator Bacteria	Greater than 10% of samples exceed the Class A1 single-sample maximum criterion.	IDNR/UHL statewide ambient water quality monitoring network.	Tier III
2008	5a	IA 04-UDM-0040_2	Des Moines River	from the west line of S15 T88N R28W (Webster Co.) to the dam of the Ft. Dodge impoundment.	River	Primary Contact	Partial	Indicator Bacteria	Greater than 10% of samples exceed the Class A1 single-sample maximum criterion.	IDNR/UHL statewide ambient water quality monitoring network.	Tier III
2010	5a	IA 04-UDM-0060_0	Des Moines River	from upper end of the Ft. Dodge impoundment (Webster Co.) to the confluence with the East Fork Des Moines R. in S19 T91N R28W Humboldt Co.	River	Primary Contact	Partial	Indicator Bacteria	Greater than 10% of E. coli samples exceed the Class A1 single-sample maximum criterion.	IDNR/UHL statewide ambient water quality monitoring network.	Tier III
2008	5a	IA 04-UDM-0070_0	Des Moines River	from confluence with East Fork Des Moines R. (S19 T91N R28W Humboldt Co.) to Humboldt Dam at Lake Nokomis at Humboldt.	River	Primary Contact	Partial	Indicator Bacteria	Greater than 10% of E. coli samples exceed the Class A1 single-sample maximum criterion.	IDNR/UHL statewide ambient water quality monitoring network.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2012	5a	IA 04-UDM-0090_1	Des Moines River	from upper end of Lake Nokomis at Humboldt to confluence with Pilot Cr. nr Bradgate in S1 T92N R31W Pocahontas Co.	River	Fish Consumption	Partial	Mercury in fish	Fish consumption advisory was issued for mercury in walleye.	IDNR/U.S. EPA fish tissue contaminant (RAFT) program.	Tier IV
2004	5a	IA 06-WEM-00340-L_0	Desoto Bend	Harrison County S21T78NR45W 5 mi. W of Missouri Valley.	Lake	Primary Contact	Partial	Turbidity	aesthetically objectionable conditions; Secchi trophic state index =66 Chl-a TSI =60	ISU statewide lake survey	Tier IV
2004	5b-v	IA 05-CHA-0067_0	Dick Creek	mouth to trib S18T69NR22W Wayne Co.	River	Aquatic Life	Not supporting	Biological: IBI	Low biotic index	IDNR Fisheries Bureau	Tier IV
2008	5a	IA 01-YEL-0090_0	Dousman Creek	mouth (S33 T96N R3W Allamakee Co.) to Allamakee-Clayton county line.	River	Aquatic Life	Partial	Organic Enrichment/ Low DO	Significantly greater than 10% of samples violate Class B(CW1) dissolved oxygen criterion.	Yellow River Watershed Project monitoring.	Tier IV
2014	5p	IA 02-IOW-0382_0	Drainage Ditch 81	from mouth (T95N R24W Sec1 Hancock Co.) to headwaters (T96N R23W Sec15 Hancock Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria (E. coli) violate the Class A1 criterion.	Iowa DNR special project monitoring at two sites from June 2010 through November 2012.	Tier III
2014	5p	IA 02-IOW-0382_0	Drainage Ditch 81	from mouth (T95N R24W Sec1 Hancock Co.) to headwaters (T96N R23W Sec15 Hancock Co.)	River	Aquatic Life	Partial	Organic Enrichment/ Low DO	Significantly greater than 10% of samples analyzed between May and November 2012 violated the Class B(WW1) criterion for dissolved oxygen.	Iowa DNR special project monitoring near Garner from May to November 2012.	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2014	5b	IA 04-UDM-0202_0	Drainage Ditch 97	from mouth (T95N R26W Sec10 Hancock Co.) to headwaters (T96N R26W Sec21 NW NW Hancock Co.)	River	Aquatic Life	Partial	Biological: fish kill, fertilizer	Fish kill in March 2012 caused by spill of ammonia fertilizer.	IDNR fish kill database (https://programs.iowadnr.gov/fishkill/detail.aspx?fkid=859)	Tier IV
2014	5p	IA 01-TRK-0419_0	Dry Branch	confluence with unnamed tributary in the N 1/2 S4 T95N R8W Fayette Co. to headwaters in SW1/4 S33 T97N R8W Winneshiek Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of E. coli are greater than the Class A1 criterion.	Turkey River watershed monitoring from May 2011 to November 2012 (STORET station 15960015).	Tier III
2008	5p	IA 02-CED-0217_0	Dry Creek	mouth (S1 T83N R7W Linn Co.) to confluence with unnamed tributary in S15 T84N R7W Linn Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Cedar Rapids Intensive Urban Water Quality Study 2005.	Tier III
2006	5b-t	IA 06-BSR-0035_0	Dry Creek	mouth (T94N R48W Sec4 Sioux Co.) to headwaters (T97N R45W Sec32) Sioux Co.	River	Aquatic Life	Not supporting	Biological	overwhelming evidence of impacts; no fish found in IDNR/UHL bio assessments in 2004 and 2005	IDNR/UHL REMAP monitoring 2004 and 2005	Tier IV
2006	5b	IA 06-BSR-0035_0	Dry Creek	mouth (T94N R48W Sec4 Sioux Co.) to headwaters (T97N R45W Sec32) Sioux Co.	River	Aquatic Life	Not supporting	Biological: fish kill, unknown toxicity	Fish kill in September 2003; cause unknown possibly low dissolved oxygen.	IDNR fish kill investigation.	Tier IV
2014	5p	IA 01-TRK-0370_1	Dry Mill Creek	mouth (S25 T94N R5W Clayton Co.) to west line of S9 T93N R4W Clayton Co.	River	Primary Contact	Not supporting	Indicator Bacteria	E. coli geomean > Class A1 criterion.	IDNR monitoring from May 2011 to November 2012.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2012	5a	IA 01-UIA-0320_0	Dry Run	mouth (S17 T98N R8W Winneshiek Co.) to west line of S36 T98N R9W Winneshiek Co	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of indicator bacteria exceeds the Class A2 criterion.	Section 319 monitoring in 2010.	Tier III
2008	5p	IA 01-UIA-0320_0	Dry Run	mouth (S17 T98N R8W Winneshiek Co.) to west line of S36 T98N R9W Winneshiek Co	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Upper Iowa River Watershed Project monitoring Site 13.	Tier III
2014	5a	IA 01-UIA-0320_0	Dry Run	mouth (S17 T98N R8W Winneshiek Co.) to west line of S36 T98N R9W Winneshiek Co.	River	Aquatic Life	Partial	Thermal Modifications: Water Temperature	Significantly more than 10% of samples violated the Class B(CW1) temperature criterion.	Section 319 monitoring at DRC-19 (STORET station 159600331) in 2010 and 2011.	Tier IV
2004	5b-v	IA 02-CED-0390_0	Dry Run	mouth (S18 T89N R13W Black Hawk Co.) to confluence with unnamed tributary in S23 T89N R14W Black Hawk Co	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL biological monitoring	Tier IV
2008	5a	IA 02-CED-0390_0	Dry Run	mouth (S18 T89N R13W Black Hawk Co.) to confluence with unnamed tributary in S23 T89N R14W Black Hawk Co	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Dry Run Creek watershed project monitoring at four stations 2005-08.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2012	5p	IA 02-CED-0393_0	Dry Run	from confluence with unnamed tributary (center S23 T89N R14W Black Hawk Co.) to headwaters in SW1/4 S32 T89N R14W Black Hawk Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria exceed the Class A1 criterion.	Dry Run Creek project monitoring 2006-10.	Tier III
2008	5p	IA 02-CED-0392_0	Dry Run (North Branch)	mouth (T89N R14W Sec13) to headwaters (T89N R14W Sec9)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Dry Run Creek watershed project monitoring 2005-06.	Tier III
2008	5p	IA 02-CED-0391_0	Dry Run (South Branch)	mouth (T89N R14W Sec13) to headwaters (T88N R14W Sec9)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean is greater than the Class A1 criterion.	Dry Run Creek watershed project monitoring at three stations 2006-08.	Tier III
2014	5p	IA 01-UIA-0321_0	Dry Run Creek	from west line of section (T98N R9W Sec36) to headwaters (T98N R9W Sec29) Winneshiek Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria (E. coli) exceed the Class A1 criterion.	IDNR special project monitoring at two stations in 2010 and 2011.	Tier III
2014	5p	IA 01-UIA-0185_0	Duck Creek	mouth (NE 1/4 S14 T100N R6W Allamakee Co.) to IA/MN state line (S11 T100N R6W Allamakee Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Section 319 monitoring in 2010 & 2011 at STORET station 13030001.	Tier III
2006	5b	IA 02-CED-0234_0	East Branch Blue Creek	from confluence with Blue Creek (T85N R8W Sec7 Linn Co.) to headwaters in NE1/4 S33 T87N 8W Buchanan Co.	River	Aquatic Life	Partial	Biological: fish kill, ammonia/low DO	fish kills in 2003 2004 and 2005	IDNR fish kill investigations	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2010	5b	IA 04-UDM-0266_0	East Branch Boone River	from mouth (T94N R26W Sec36) to headwaters (T95N R25W Sec4)	River	Aquatic Life	Partial	Biological: fish kill, pesticide	Fish kills in 2009 caused by aerial spraying of pesticides.	IDNR fish kill investigations.	Tier IV
2012	5a	IA 01-WPS-0132_0	East Branch Buffalo Creek	mouth (S35 T90N R8W Buchanan Co.) to confluence with unnamed tributary in S34 T91N R8W Fayette Co.	River	Aquatic Life	Partial	Organic Enrichment/ Low DO	Significantly greater than 10% of samples violated dissolved oxygen criterion.	Section 319 water quality monitoring in 2008.	Tier IV
2004	5b-v	IA 02-IOW-0380_1	East Branch Iowa River	mouth (S19T93N R23W Wright Co.) to confluence with unnamed tributary in S16 T94N R23W Hancock Co. north of Goodell State Wildlife Management Area.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL biocriteria monitoring 2001	Tier IV
2012	5p	IA 02-IOW-0380_1	East Branch Iowa River	mouth (S19T93N R23W Wright Co.) to confluence with unnamed tributary in S16 T94N R23W Hancock Co. north of Goodell State Wildlife Management Area.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria exceed Class A1 criteria.	Section 319 project monitoring 2009-10.	Tier III
2012	5p	IA 02-IOW-0380_3	East Branch Iowa River	from confluence with Ditch No. 9 (S31 T95N R23W Hancock Co.) to confluence with unnamed tributary at Garner in SE 1/4 S25 T96N R24W Hancock Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria exceed Class A1 criteria.	Section 319 project from June 2009 to October 2010.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2008	5b-t	IA 05-GRA-0030_0	East Fork Medicine Creek	IA/MO line to trib S24T68NR22W Wayne Co	River	Aquatic Life	Not supporting	Biological: IBI	Low biotic index.	IDNR/UHL biological (REMAP) monitoring in 2005.	Tier IV
2012	5b	IA 01-WPS-0190_3	East Fork Wapsipinicon River	from the Bremer/Chickasaw county line (N line S3 T93N R12W Bremer Co.) to confluence with unnamed tributary in SW 1/4 S6 T94N R11W Chickasaw Co.	River	Aquatic Life	Partial	Biological: fish kill, unknown toxicity	Large number of fish killed (~75000) & lack of environmental extremes suggest pollutant cause.	Results of a fish kill investigation in August 2008.	Tier IV
2008	5a	IA 05-NSH-0020_1	East Nishnabotna River	mouth (S2 T67N R42W Fremont Co.) to confluence with Fisher Cr. in S27 T69N R40W Fremont Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli exceeds the Class A1 criterion.	IDNR/UHL statewide ambient water quality monitoring network.	Tier III
2008	5a	IA 05-NSH-0020_2	East Nishnabotna River	from confluence with Fisher Cr. (S27 T69N R40W Fremont Co.) to Page/Montgomery county line	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli exceeds the Class A1 criterion.	IDNR/UHL statewide ambient water quality monitoring network.	Tier III
2008	5p	IA 05-NOD-0030_1	East Nodaway River	mouth (S6 T67N R36W Page Co.) to confluence with Long Branch Cr at S17-18 line T70N R35W Taylor Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL statewide ambient water quality monitoring network.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2006	5b-t	IA 05-NOD-0030_2	East Nodaway River	Long Branch Cr (at W line S17 T70N R35W Taylor Co.) to Kemp Cr at E line S11 T71N R35W Adams Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL REMAP monitoring 2004	Tier IV
2006	5b-v	IA 01-UIA-0380_0	East Pine Creek	mouth (S28 T100N R9W Winneshiek Co.) to IA/MN state line	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL REMAP monitoring 2003	Tier IV
2014	5p	IA 02-IOW-0226_0	East Tributary to Union Grove Lake	from mouth (T85N R16W Sec29 Tama Co.) to headwaters (T85N R16W Sec17 SE Tama Co.)	River	Primary Contact	Partial	Indicator Bacteria	Percentage of samples exceeding Iowa's single-sample maximum criterion (235 orgs/100 ml) is significantly > 10%.	Iowa DNR-sponsored watershed monitoring at STORET station 13860002 from 2008-2010	Tier III
2010	5a	IA 04-LDM-00490-L_0	Easter Lake	Polk County S19T78R23W SE edge of Des Moines.	Lake	Primary Contact	Not supporting	Indicator Bacteria	Violations of the state's geometric mean criterion.	DNR beach monitoring program.	Tier II
2008	5a	IA 02-IOW-03830-L_0	Eldred Sherwood Lake	Hancock County S21T94NR24W 3 mi. NE of Goodell.	Lake	Primary Contact	Not supporting	Algae	aesthetically objectionable conditions (chlorophyll TSI = 66)	ISU and UHL lake surveys IDNR Fisheries information.	Tier I
2008	5a	IA 02-IOW-03830-L_0	Eldred Sherwood Lake	Hancock County S21T94NR24W 3 mi. NE of Goodell.	Lake	Primary Contact	Not supporting	Indicator Bacteria	Violations of the state's geometric mean criterion.	DNR beach monitoring program.	Tier II
2014	5p	IA 01-TRK-0280_1	Elk Creek	mouth (S36 T92N R4W Clayton Co.) to confluence with Steeles Br. in S26 T91N R4W Clayton Co.	River	Primary Contact	Not supporting	Indicator Bacteria	E. coli > Class A1 geomean criterion.	IDNR monitoring from May 2011 to November 2012.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2014	5a	IA 06-LSR-02325-L_0	Elk Lake	Clay County S36T96NR35W 6 mi SE of Dickens.	Wetland	Aquatic Life	Not supporting	Algae	Algae levels (chlorophyll TSI = 78) adversely impact fish and plant communities	IDNR Shallow Lakes Monitoring program	Tier IV
2014	5a	IA 06-LSR-02325-L_0	Elk Lake	Clay County S36T96NR35W 6 mi SE of Dickens.	Wetland	Aquatic Life	Not supporting	Turbidity	High levels of suspended solids leads to turbidity that inhibits growth of submersed aquatic vegetation.	IDNR Shallow Lakes Monitoring Program	Tier IV
2010	5b	IA 04-RAC-0127_0	Elk Run	mouth-> DD-72/81 S5T85NR34W Carroll Co	River	Aquatic Life	Partial	Biological: fish kill, ammonia	Fish kill in 2004 caused by animal waste.	IDNR fish kill investigation.	Tier IV
2012	5a	IA 02-IOW-00870-L_0	Elm Lake	Wright County S21T92NR24W 1 mi. S of Cornelia.	Wetland	Aquatic Life	Not supporting	Algae	Extremely high levels of chlorophyll-a and resultant turbidity suppress submersed aquatic vegetation.	IDNR shallow lakes monitoring program 2008-10.	Tier IV
2012	5a	IA 02-IOW-00870-L_0	Elm Lake	Wright County S21T92NR24W 1 mi. S of Cornelia.	Wetland	Aquatic Life	Not supporting	Turbidity	High levels of suspended solids in water column lead to turbidity at suppresses growth of submersed aquatic vegetation	IDNR shallow lakes monitoring program 2008-10.	Tier IV
2008	5a	IA 02-IOW-0100_1	English River	mouth (S12 T77N R6W Washington Co.) to confluence with Ramsey Cr. in S14 T77N R8W Washington Co	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL ambient water quality monitoring network.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2004	5b-t	IA 01-NMQ-0040_0	Farmers Creek	mouth (S24 T85N R2E Jackson Co.) to confluence with unnamed tributary in W 1/2 NW 1/4 S8 T86N R3E Jackson Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL biocriteria monitoring	Tier IV
2008	5p	IA 05-CHA-0077_0	Fivemile Creek	mouth (S35 T71N R22W Lucas Co.) to confluence with unnamed tributary in S29 T71N R22W Lucas Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Iowa State University/Army Corps of Engineers Rathbun watershed monitoring project 2004-06.	Tier III
2008	5p	IA 02-SHL-0021_0	Flood Creek	mouth (S27 T93N R16W Butler Co.) to confluence with Beaver Cr. in S36 T95N R17W Floyd Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL ambient water quality monitoring network.	Tier III
2008	5a	IA 06-FLO-0010_0	Floyd River	mouth to West Branch Floyd R. in S2 T91N R46W Plymouth Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL statewide ambient water quality monitoring network.	Tier III
2006	5b-t	IA 06-FLO-0020_1	Floyd River	from confluence with West Branch Floyd R. (S2 T91N R46W Plymouth Co.) to city of Alton at north line S11 T94N R44W Sioux Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL REMAP monitoring 2004	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2004	5b	IA 06-FLO-0020_2	Floyd River	from city of Alton (north line S11 T94N R44W Sioux Co.) to confluence with North Fork Floyd R. in S9 T97N R41W O'Brien Co.	River	Aquatic Life	Not supporting	Biological: fish kill, ammonia/low DO	fish kills since 1997; two in 2002; one in 2003;	IDNR fish kill investigations;	Tier IV
2004	5b-t	IA 06-FLO-0020_2	Floyd River	from city of Alton (north line S11 T94N R44W Sioux Co.) to confluence with North Fork Floyd R. in S9 T97N R41W O'Brien Co.	River	Aquatic Life	Not supporting	Biological: IBI	Low biotic index.	IDNR/UHL biological (REMAP) monitoring in 1999 2003 and 2006.	Tier IV
2010	5b	IA 06-FLO-0021_0	Floyd River	from confluence (T97N R41W Sec9) to headwaters (T97N R40W Sec7)	River	Aquatic Life	Partial	Biological: fish kill, pesticide	Fish kill in August 2008 possibly caused by aerial application of pesticides.	IDNR fish kill investigation.	Tier IV
2008	5b-t	IA 04-FOX-0010_1	Fox River	from the Iowa/Missouri state line to confluence with an unnamed tributary in NW 1/4 S6 T68N R12W Davis Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index.	IDNR/UHL biological (REMAP) monitoring in 2005.	Tier IV
2004	5b-v	IA 04-FOX-0010_2	Fox River	from unnamed tributary (NW 1/4 S6 T68N R12W Davis Co.) to confluence with unnamed tributary in S29 T69N R15W Davis Co.	River	Aquatic Life	Not supporting	Biological: IBI	Low biotic index	IDNR/UHL biocriteria monitoring	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2012	5p	IA 04-FOX-0010_2	Fox River	from unnamed tributary (NW 1/4 S6 T68N R12W Davis Co.) to confluence with unnamed tributary in S29 T69N R15W Davis Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria slightly exceed the Class A1 criterion.	USGS monitoring from March to December 2009.	Tier III
2012	5p	IA 01-UIA-0140_0	French Creek	mouth (S1 T99N R5W Allamakee Co.) to east line of S23 T99N R5W Allamakee Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of indicator bacteria exceeds Class A2 criterion.	Upper Iowa River Watershed 2008-10.	Tier III
2008	5p	IA 01-UIA-0140_0	French Creek	mouth (S1 T99N R5W Allamakee Co.) to east line of S23 T99N R5W Allamakee Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli greater than the Class A1 WQ criterion.	Upper Iowa River Watershed Project at Site 29.	Tier III
2012	5p	IA 02-IOW-0390_0	Galls Creek	mouth (S12 T95N R24W Hancock Co.) to unnamed tributary in SW 1/4 S13 T95N R23W Hancock Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria far exceed Class A1 criteria.	Section 319 project from June 2009 to October 2010.	Tier III
2010	5a	IA 03-SKU-00650-L_0	Geode Lake	Henry County S36T70NR5W 4 mi. SW of Danville.	Lake	Fish Consumption	Partial	Mercury in fish	Fish consumption advisory issued for mercury	fish contaminant (RAFT) sampling	Tier IV
2010	5a	IA 04-LDM-02700-L_0	Grade Lake	Osceola (T72N R25W Sec19)	Lake	Fish Consumption	Partial	Mercury in fish	Fish consumption advisory issued for mercury	fish contaminant (RAFT) sampling	Tier IV
2012	5a	IA 01-TRK-0110_0	Granger Creek	mouth (Dubuque Co.) to county road bridge crossing in S24 T88N R2E Dubuque Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean levels of indicator bacteria far greater than the Class A1 & A2 criteria	Monitoring in 2010 as part of the Catfish Creek Watershed Project.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2014	5p	IA 01-VOL-0140_0	Grannis Creek	mouth (S30 T93N R7W Fayette Co.) to west line of S36 T93N R8W Fayette Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli was greater than the Class A1 criterion.	DNR project monitoring at Station GRA 10 at Fox Road (STORET station 15330005) from 2011-12.	Tier III
2004	5a	IA 05-PLA-00295-L_0	Green Valley Lake	Union County S26T73NR31W 2.5 mi NW of Creston.	Lake	Primary Contact	Partial	Algae	Aesthetically objectionable conditions (chlorophyll TSI = 67.	ISU statewide lake survey	Tier I
2014	5a	IA 06-LSR-02220-L_0	Gustafson Lake	Buena Vista County S18T93NR36W 1 mi S of Sioux Rapids.	Lake	Primary Contact	Partial	Indicator Bacteria	Violations to the state's water quality criteria for E.coli (percentage of single-sample maximum violations)	Beach monitoring data from the IDNR county/city volunteer beach monitoring program	Tier II
2010	5a	IA 03-NSK-00250-L_0	Hawthorn Lake	Mahaska County S10T77NR14W 1 mi S of Barnes City.	Lake	Primary Contact	Partial	Algae	Aesthetically objectionable conditions (chlorophyll TSI > 65).	ISU and UHL lake surveys. DNR Fisheries information.	Tier I
2008	5a	IA 03-NSK-00250-L_0	Hawthorn Lake	Mahaska County S10T77NR14W 1 mi S of Barnes City.	Lake	Primary Contact	Fully	Turbidity	aesthetically objectionable conditions (Secchi approaching 65).	ISU and UHL lake surveys. DNR Fisheries information.	Tier I
2008	5a	IA 03-NSK-00250-L_0	Hawthorn Lake	Mahaska County S10T77NR14W 1 mi S of Barnes City.	Lake	Aquatic Life	Partial	Turbidity	Information from IDNR Fisheries shows decline in water clarity and fish populations	IDNR Fisheries Bureau	Tier I

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2014	5a	IA 01-VOL-0090_0	Hewett Creek	mouth (S12 T92N R6W Clayton Co.) to south line of S29 T92N R6W Clayton Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Monitoring from May 2011 to November 2012 at station HEW 20 (STORET station 15220013)	Tier III
2014	5a	IA 01-VOL-0090_0	Hewett Creek	mouth (S12 T92N R6W Clayton Co.) to south line of S29 T92N R6W Clayton Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A2 (secondary contact) criterion.	Monitoring from May 2011 to November 2012 at station HEW 20 (STORET station 15220013)	Tier III
2014	5a	IA 01-VOL-0090_0	Hewett Creek	mouth (S12 T92N R6W Clayton Co.) to south line of S29 T92N R6W Clayton Co.	River	Aquatic Life	Partial	Thermal Modifications: Water Temperature	Significantly greater than 10% violation frequency of the Class B(CW1) criterion for temperature	Monitoring from May 2011 to November 2012 at station HEW 20 (STORET station 15220013)	Tier IV
2004	5b-t	IA 01-NMQ-0160_0	Hickory Creek	mouth (S21 T89N R2W Dubuque Co.) to confluence with unnamed tributary in S14 T89N R2W Dubuque Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL biocriteria monitoring 1999	Tier IV
2008	5a	IA 01-YEL-0120_1	Hickory Creek	mouth (NE 1/4 S23 T96N R5W Allamakee Co.) to south line of S28 T96N R5W Allamakee Co.	River	Aquatic Life	Partial	Organic Enrichment/ Low DO	Significantly greater than 10% violation of the Class B(CW1) criterion.	Yellow River Watershed Project monitoring.	Tier IV
2008	5a	IA 03-SSK-00530-L_0	Hickory Grove Lake	Story County S24T83NR22W 2.5 mi SW of Colo.	Lake	Primary Contact	Not supporting	Indicator Bacteria	Violations of the geometric mean bacteria criterion.	DNR county beach monitoring program.	Tier II

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2014	5a	IA 04-UDM-03990-L_0	High Lake	Emmet County S14T98NR33W 4 mi. ESE of Wallingford.	Wetland	Aquatic Life	Not supporting	Algae	Algae levels (chlorophyll TSI = 78) adversely impact fish and plant communities	IDNR Shallow Lakes and Wetlands Monitoring Program	Tier IV
2014	5a	IA 04-UDM-03990-L_0	High Lake	Emmet County S14T98NR33W 4 mi. ESE of Wallingford.	Wetland	Aquatic Life	Not supporting	Turbidity	High levels of suspended solids in water column lead to turbidity at suppresses growth of submersed aquatic vegetation	IDNR Shallow Lakes and Wetlands Monitoring Program	Tier IV
2008	5p	IA 02-CED-0385_0	Holland Creek	mouth (S35 T88N R17W Grundy Co.) to confluence with unnamed tributary in S29 T88N R17W Grundy Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than Class A1 criterion.	IDNR/UHL TMDL-related monitoring in 2005.	Tier III
2012	5p	IA 02-CED-03855_0	Holland Creek	from confluence with unnamed tributary in NE1/4 S29 T88N R17W Grundy Co. to headwaters in NE1/4 S26 T88N R18W Grundy Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria exceed the Class A1 criterion.	Section 319 project monitoring 2009-10.	Tier III
2010	5p	IA 01-MAQ-0250_0	Honey Creek	mouth (S19 T89N R5W Delaware Co.) to Rutherford Branch in S26 T90N R5W Delaware Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean greater than the Class A1 criterion.	Lake Delhi Watershed Association monitoring.	Tier III
2014	5p	IA 01-MAQ-0251_0	Honey Creek	from Rutherford Branch (T90N R5W Sec26 Delaware Co.) to headwaters (T90N R5W Sec2 Delaware Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of E. coli for 2011 & 2012 recreation seasons exceed Iowa's Class A1 criterion	IDNR special project monitoring at two sites from May 2011 to May 2012	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2006	5b-t	IA 02-IOW-0093_0	Honey Creek	mouth (S1 T75N R5W Louisa Co.) to road crossing in S25 T76N R5W Louisa Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL biocriteria monitoring 2004	Tier IV
2008	5p	IA 05-CHA-0056_0	Honey Creek	from upper end of Honey Creek arm of Rathbun Lake (NW 1/4 S8 T70N R18W Appanoose Co.) to headwaters in NW 1/4 S27 T71N R19W Monroe Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Iowa State University/Army Corps of Engineers Rathbun watershed monitoring project.	Tier III
2008	5p	IA 05-CHA-0068_0	Honey Creek	mouth (S26 T71N R20W Lucas Co.) to confluence with unnamed tributary in S10 T71N R20W Lucas Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Iowa State University/Army Corps of Engineers Rathbun watershed monitoring project.	Tier III
2014	5p	IA 01-TRK-0380_0	Howard Creek	mouth (S25 T94N R5W Clayton Co.) to north line of S13 T94N R5W Clayton Co. (Prior to 1990 designated for Class B(w) uses.)	River	Primary Contact	Not supporting	Indicator Bacteria	E. coli geomean > Class A1 criterion.	IDNR monitoring from May 2011 to November 2012.	Tier III
2004	5b-v	IA 02-CED-0210_1	Indian Creek	mouth (S30 T83N R6W Linn Co.) to confluence with Dry Cr. in S1 T83N R7W Linn Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL biological monitoring	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2008	5b	IA 02-CED-0210_1	Indian Creek	mouth (S30 T83N R6W Linn Co.) to confluence with Dry Cr. in S1 T83N R7W Linn Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Cedar Rapids Intensive Urban Water Quality Study 2002 and 2005.	Tier III
2008	5p	IA 02-CED-0210_2	Indian Creek	from confluence with Dry Cr. (S1 T83N R7W Linn Co.) to confluence with unnamed tributary in NE 1/4 S20 T84N R6W Linn Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Cedar Rapids Intensive Urban Water Quality Study 2002 and 2005.	Tier III
2008	5p	IA 03-SSK-0040_0	Indian Creek	mouth (S32 T80N R20W Jasper Co.) to confluence of East Indian and West Indian creeks in S16 T82N R22W Story Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL ambient water quality monitoring network.	Tier III
2008	5p	IA 06-BSR-0027_0	Indian Creek	mo to trib S33T94NR47W Sioux Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of indicator bacteria (E. coli) exceeds the Class A1 water quality criterion.	IDNR/UHL TMDL-related monitoring in 2003-2004.	Tier III
2010	5a	IA 02-IOW-01150-L_0	Iowa Lake	Iowa County S19T79NR11W 4 mi. NNW of Millersburg.	Lake	Primary Contact	Partial	Algae	aesthetically objectionable conditions (chlorophyll TSI = 67)	ISU and UHL lake surveys. DNR Fisheries information.	Tier I
2012	5a	IA 02-IOW-01150-L_0	Iowa Lake	Iowa County S19T79NR11W 4 mi. NNW of Millersburg.	Lake	Primary Contact	Partial	Indicator Bacteria	Significantly greater than 10% of the samples exceeded the single-sample maximum in 2009.	IDNR City/County Beach Monitoring Program	Tier II

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2014	5a	IA 02-IOW-01150-L_0	Iowa Lake	Iowa County S19T79NR11W 4 mi. NNW of Millersburg.	Lake	Fish Consumption	Partial	Mercury in fish	Composite fillet samples from largemouth bass exceeded the 1 meal per week trigger level for both 2011 and 2012; fish consumption advisory issued	IDNR/EPA RAFT monitoring program	Tier IV
2012	5a	IA 02-IOW-0010_1	Iowa River	mouth (Louisa Co.) to S. corporate limit of Wapello (S35 T74N R3W Louisa Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means slightly exceed the Class A1 criterion.	USGS NAWQA program monitoring 2008-10.	Tier III
2012	5a	IA 02-IOW-0010_2	Iowa River	from south corporate limit of Wapello (S35 T74N R3W Louisa Co.) to Long Cr (S1 T74N R4W Louisa Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria slightly exceed Class A1 criterion.	USGS NAWQA program 2008-10.	Tier III
2008	5a	IA 02-IOW-0010_3	Iowa River	from confluence with Long Cr. (S1 T74N R4W Louisa Co.) to confluence with Cedar R in S20 T75 R4W Louisa Co.	River	Primary Contact	Partial	Indicator Bacteria	Greater than 10% of samples exceed Class A1 single-sample maximum criterion.	IDNR/UHL ambient water quality monitoring network.	Tier III
2004	5b	IA 02-IOW-0020_1	Iowa River	from confluence with Cedar R. to Johnson-Washington Co. line	River	Aquatic Life	Partial	Biological: FW mussels	> 50% decline in mussel species richness	ISU freshwater mussel study	Tier IV
2008	5a	IA 02-IOW-0020_1	Iowa River	from confluence with Cedar R. to Johnson-Washington Co. line	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli greater than the Class A1 criterion.	IDNR/UHL ambient water quality monitoring network.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2010	5a	IA 02-IOW-0030_1	Iowa River	from confluence with English R. (Washington Co.) to Burlington Street Dam in Iowa City (Johnson Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL ambient city water quality monitoring network.	Tier III
2004	5a	IA 02-IOW-0050_1	Iowa River	from upper end of Coralville Reservoir (=U.S. Highway 218 bridge in SW 1/4 S22 T81N R7W Johnson Co.) to the state Highway 149 bridge in S35 T81N R9W Iowa Co.	River	Primary Contact	Not supporting	Indicator Bacteria	geometric means > WQS	UI/ACOE ambient water quality monitoring	Tier III
2014	5a	IA 02-IOW-0050_1	Iowa River	from upper end of Coralville Reservoir (=U.S. Highway 218 bridge in SW 1/4 S22 T81N R7W Johnson Co.) to the state Highway 149 bridge in S35 T81N R9W Iowa Co.	River	Fish Consumption	Partial	Mercury in fish	Levels of mercury in samples of predator fish (walleye) exceed the 1 meal/week consumption advisory threshold.	Iowa DNR fish contaminant monitoring in 2011 and 2012 at Marshalltown.	Tier IV
2014	5a	IA 02-IOW-0050_2	Iowa River	from Highway 149 near Amana (S35 T81N R9W Iowa Co.) to confluence with Bear Cr. near Marengo (S24 T81N R11W Iowa Co.)	River	Fish Consumption	Partial	Mercury in fish	One meal per week fish consumption advisory due to mercury in predator fish issued in 2013.	Iowa DNR/U.S. EPA fish contaminant monitoring in 2011 and 2012.	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2014	5a	IA 02-IOW-0050_3	Iowa River	from confluence with Bear Cr. near Marengo (S24 T81N R11W Iowa Co.) to confluence with Salt Cr. near Belle Plaine (S31 T82N R12W Benton Co.)	River	Fish Consumption	Partial	Mercury in fish	Issuance of a one meal per week fish consumption advisory in 2013.	IDNR/U.S. EPA fish contaminant monitoring in 2011 and 2012.	Tier IV
2014	5a	IA 02-IOW-0060_1	Iowa River	from confluence with Salt Cr. (S31 T82N R12W Benton Co.) to confluence with Richland Cr. in S13 T82N R14W Tama Co.	River	Fish Consumption	Partial	Mercury in fish	Levels of mercury in predator fish (walleye) exceed Iowa's 1 meal/week advisory threshold.	Iowa DNR fish contaminant monitoring in 2011 and 2012.	Tier IV
2014	5a	IA 02-IOW-0060_2	Iowa River	from confluence with Richland Cr. (S13 T82N R14W Tama Co.) to confluence with Deer Cr. at Tama (S34 T83N R15W Tama Co.).	River	Fish Consumption	Partial	Mercury in fish	The level of mercury in predator fish (walleye) is above Iowa's 1 meal/week consumption advisory threshold.	Iowa DNR fish contaminant monitoring in 2011 and 2012.	Tier IV
2014	5a	IA 02-IOW-0060_3	Iowa River	from confluence with Deer Cr. at Tama (S34 T83N R15W Tama Co.) to confluence with Timber Cr. in S3 T83N R17W Marshall Co. excluding portions on Mesqwaki Settlement	River	Fish Consumption	Partial	Mercury in fish	Issuance of a one meal per week fish consumption advisory for mercury in 2013.	IDNR/EPA fish contaminant monitoring in 2011 and 2012.	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2004	5a	IA 02-IOW-0060_4	Iowa River	from confluence Timber Cr. (S3 T83N R17W Marshall Co.) to confluence with Asher Cr. in S27 T84N R18W Marshall Co.	River	Primary Contact	Partial	Indicator Bacteria	geometric means > WQS	IDNR/UHL ambient city water quality monitoring	Tier III
2014	5a	IA 02-IOW-0060_4	Iowa River	from confluence Timber Cr. (S3 T83N R17W Marshall Co.) to confluence with Asher Cr. in S27 T84N R18W Marshall Co.	River	Fish Consumption	Partial	Mercury in fish	Issuance of a one meal per week fish consumption advisory in 2013.	IDNR/U.S. EPA fish contaminant monitoring in 2011 and 2012.	Tier IV
2004	5a	IA 02-IOW-0060_5	Iowa River	from confluence with Asher Cr. at Marshalltown (S27 T84N R18W Marshall Co.) to confluence with Minerva Cr. in S2 T84N R19W Marshall Co.	River	Primary Contact	Not supporting	Indicator Bacteria	geometric means > WQS	IDNR/UHL ambient city water quality monitoring	Tier III
2014	5a	IA 02-IOW-0060_5	Iowa River	from confluence with Asher Cr. at Marshalltown (S27 T84N R18W Marshall Co.) to confluence with Minerva Cr. in S2 T84N R19W Marshall Co.	River	Fish Consumption	Partial	Mercury in fish	Issuance of a one meal per week fish consumption advisory for predator fish in 2013.	Iowa DNR/U.S. EPA fish contaminant monitoring at Marshalltown in 2011 and 2012.	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2014	5a	IA 02-IOW-0070_1	Iowa River	from confluence with Minerva Cr. (S2 T84N R19W Marshall Co.) to the Marshall / Hardin Co. line.	River	Fish Consumption	Partial	Mercury in fish	The level of mercury in predator fish (walleye) is above Iowa's 1 meal/week consumption advisory threshold.	Iowa DNR fish tissue monitoring in 2011 and 2012.	Tier IV
2014	5a	IA 02-IOW-0070_2	Iowa River	from the Hardin/Marshall line to confluence with South Fork Iowa R. in S25 T87N R20W Hardin Co.	River	Fish Consumption	Partial	Mercury in fish	The level of mercury in predator fish (walleye) is above Iowa's 1 meal/week consumption advisory threshold.	Iowa DNR fish contaminant monitoring in 2011 and 2012.	Tier IV
2004	5a	IA 02-IOW-0070_3	Iowa River	from confluence with South Fork Iowa R. (S25 T87N R20W Hardin Co.) to confluence with Pine Cr. in S8 T87N R19W Hardin Co.	River	Primary Contact	Partial	Indicator Bacteria	>10% of samples >400 orgs/100 ml	IDNR/UHL ambient WQ monitoring	Tier III
2014	5a	IA 02-IOW-0070_3	Iowa River	from confluence with South Fork Iowa R. (S25 T87N R20W Hardin Co.) to confluence with Pine Cr. in S8 T87N R19W Hardin Co.	River	Fish Consumption	Partial	Mercury in fish	Issuance of a one meal per week fish consumption advisory in 2013.	IDNR/U.S. EPE fish contaminant monitoring in 2011 and 2012.	Tier IV
2014	5a	IA 02-IOW-0070_4	Iowa River	from confluence with Pine Cr. (S8 T87N R19W Hardin Co.) to bridge crossing in SE 1/4 S12 T88N R20W Hardin Co.	River	Fish Consumption	Partial	Mercury in fish	Issuance of a one meal per week fish consumption advisory in 2013.	Iowa DNR/U.S. EPA fish contaminant monitoring in 2011 and 2012.	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2012	5a	IA 02-IOW-0070_5	Iowa River	from bridge crossing (SE 1/4 S12 T88N R20W Hardin Co.) to east corporate limit of Iowa Falls in S20 T89N R20W Hardin Co.	River	Fish Consumption	Partial	Mercury in fish	Issuance of a fish consumption advisory for mercury in smallmouth bass.	U.S. EPA/IDNR fish contaminant monitoring in 2009 and 2010.	Tier IV
2006	5a	IA 02-IOW-0080_2	Iowa River	from confluence with Drainage Ditch No. 3 (aka Wheeler Cr.) in NW 1/4 SE 1/4 S10 T91N R23W Wright Co. to the Hwy 69 bridge at the south edge of Belmond in S30 T93N R23W Wright Co.	River	Primary Contact	Partial	Indicator Bacteria	> 10% of samples > single-sample criterion	IDNR ambient WQ monitoring 2002-04	Tier III
2008	5b-t	IA 01-UIA-0130_0	Irish Hollow Creek	mouth (S21 T100N R4W Allamakee Co.). to north line of S17 T100N R4W Allamakee Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index.	IDNR/UHL biological monitoring in 2005.	Tier IV
2006	5b-t	IA 05-CHA-0063_0	Jackson Creek	mouth (S1 T70N R21W Wayne Co.) to confluence with unnamed tributary in S12 T68N R21W Wayne Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR Fisheries Bureau biological monitoring 1999-2002	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2008	5a	IA 05-CHA-0063_0	Jackson Creek	mouth (S1 T70N R21W Wayne Co.) to confluence with unnamed tributary in S12 T68N R21W Wayne Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Iowa State University/Army Corps of Engineers Rathbun watershed monitoring project.	Tier III
2004	5b	IA 01-NMQ-0110_0	Johns Creek	mouth (S26 T87N R1W Dubuque Co.) to confluence with Bakers Cr. in S36 T88N R2W Dubuque Co.	River	Aquatic Life	Not supporting	Biological: FW mussels	> 50% decline in mussel species richness	ISU freshwater mussel study	Tier IV
2006	5b-t	IA 06-LSR-0143_0	Johns Creek	mouth (S24 T90N R44W Plymouth Co.) to confluence with Rathburn Cr. in S26 T91N R44W Plymouth Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL REMAP monitoring 2004	Tier IV
2006	5b-t	IA 05-CHA-0062_0	Jordan Creek	mouth (S1 T70N R21W Wayne Co.) to confluence with unnamed tributary in E 1/2 NW 1/4 S26 T70N R21W Wayne Co.	River	Aquatic Life	Partial	Biological: IBI	low biotic index; should have been listed in 2004	IDNR Fisheries Bureau biological monitoring 1999-2002	Tier IV
2008	5p	IA 05-CHA-0062_0	Jordan Creek	mouth (S1 T70N R21W Wayne Co.) to confluence with unnamed tributary in E 1/2 NW 1/4 S26 T70N R21W Wayne Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Iowa State University/Army Corps of Engineers Rathbun watershed monitoring project.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2004	5b-t	IA 05-NSH-0133_0	Jordan Creek	mouth (S31 T74N R39W Pottawattamie Co.) to confluence with Spring Cr. in S4 T74N R39W Pottawattamie Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL biocriteria monitoring 2001	Tier IV
2004	5b-t	IA 06-WED-0010_1	Keg Creek	mouth (S6 T71N R43W Mills Co.) to confluence with Little Keg Cr. in S27 T75N R42W Pottawattamie Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL biological monitoring in 1997 and 2001	Tier IV
2004	5b-t	IA 06-WED-0010_2	Keg Creek	from confluence with Little Keg Cr. (S27 T75N R42W Pottawattamie Co.) to confluence with unnamed tributary in S35 T78N R41W Harrison Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL REMAP monitoring 2002	Tier IV
2010	5a	IA 02-IOW-01630-L_0	Kent Park Lake	Johnson County S24T80NR8W 2.5 mi. W of Tiffin.	Lake	Primary Contact	Partial	Algae	Aesthetically objectionable conditions (chlorophyll TSI > 65).	ISU and UHL lake surveys. DNR Fisheries information.	Tier I
2014	5a	IA 02-IOW-01630-L_0	Kent Park Lake	Johnson County S24T80NR8W 2.5 mi. W of Tiffin.	Lake	Primary Contact	Partial	Indicator Bacteria	Violations to the state water quality criteria for indicator bacteria	IDNR beach monitoring program	Tier II
2012	5a	IA 04-LDM-00160-L_0	Lacey Keosauqua Lake	Van Buren County S2T68NR10W 1 mi S of Keosauqua	Lake	Primary Contact	Partial	Indicator Bacteria	Significantly greater than 10% of the samples exceeded the single-sample maximum criterion in 2010	IDNR Beach Monitoring Program	Tier II

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2008	5a	IA 04-LDM-02615-L_0	Lake Ahquabi	Warren County S14T75NR24W 4 mi SSW of Indianola.	Lake	Primary Contact	Partial	Algae	aesthetically objectionable conditions (chlorophyll TSI = 66)	ISU and UHL lake surveys. DNR Fisheries information.	Tier I
2012	5a	IA 04-LDM-02615-L_0	Lake Ahquabi	Warren County S14T75NR24W 4 mi SSW of Indianola.	Lake	Primary Contact	Partial	Indicator Bacteria	Significantly greater than 10% of the samples exceeded the single-sample maximum criterion in 2010	IDNR Beach Monitoring Program	Tier II
2010	5a	IA 05-NSH-00580-L_0	Lake Anita	Cass County S32T77NR34W 1/2 mi S Anita.	Lake	Primary Contact	Not supporting	Algae	aesthetically objectionable conditions (chlorophyll TSI = 67)	ISU and UHL lake surveys. DNR Fisheries information.	Tier I
2010	5a	IA 05-NSH-00580-L_0	Lake Anita	Cass County S32T77NR34W 1/2 mi S Anita.	Lake	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean violations in 2010. Significantly greater than 10% of the samples exceeded the single-sample maximum criterion in 2010	DNR beach monitoring program.	Tier II
2004	5a	IA 01-WPS-00375-L_0	Lake Hendricks	Howard County S19T99NR14W 0.5 mi NE of Riceville.	Lake	Primary Contact	Partial	Algae	Aesthetically objectionable conditions (chlorophyll TSI > 65).	ISU statewide lake survey	Tier I
2006	5a	IA 01-WPS-00375-L_0	Lake Hendricks	Howard County S19T99NR14W 0.5 mi NE of Riceville.	Lake	Aquatic Life	Partial	pH	significantly more than 10% of the samples violated the pH criteria	ISU and UHL lake surveys.	Tier I
2006	5a	IA 01-WPS-00375-L_0	Lake Hendricks	Howard County S19T99NR14W 0.5 mi NE of Riceville.	Lake	Primary Contact	Partial	pH	significantly more than 10% of the samples violated the pH criteria	ISU and UHL lake surveys.	Tier I

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2008	5a	IA 03-SSK-00120-L_0	Lake Keomah	Mahaska County S13T75NR15W 4.5 mi E of Oskaloosa.	Lake	Primary Contact	Not supporting	Indicator Bacteria	Violations of the geometric mean bacteria criterion.	DNR beach monitoring program.	Tier II
2012	5a	IA 03-SSK-00120-L_0	Lake Keomah	Mahaska County S13T75NR15W 4.5 mi E of Oskaloosa.	Lake	Fish Consumption	Partial	Mercury in fish	Fish consumption advisory for mercury	IDNR/USEPA fish contaminant monitoring in 2009 and 2010	Tier IV
2014	5a	IA 03-SSK-00120-L_0	Lake Keomah	Mahaska County S13T75NR15W 4.5 mi E of Oskaloosa.	Lake	Aquatic Life	Partial	Organic Enrichment/ Low DO	Significantly greater than 10% of samples violating water quality standards for oxygen	ISU and UHL lake monitoring programs; information from the IDNR Fisheries Bureau	Tier IV
2010	5a	IA 02-IOW-00390-L_0	Lake MacBride	Johnson County S29T81NR6W 4 mi. W of Solon.	Lake	Primary Contact	Not supporting	Algae	aesthetically objectionable conditions (chlorophyll TSI approaching 65)	ISU and UHL lake surveys. DNR Fisheries information.	Tier I
2006	5a	IA 02-IOW-00390-L_0	Lake MacBride	Johnson County S29T81NR6W 4 mi. W of Solon.	Lake	Primary Contact	Not supporting	Indicator Bacteria	geometric mean > WQS	IDNR/UHL beach monitoring	Tier II
2004	5a	IA 06-WEM-00235-L_0	Lake Manawa	Pottawattamie County S13T74NR44W S edge Council Bluffs	Lake	Primary Contact	Not supporting	Algae	aesthetically objectionable conditions; Chl-a TSI =65	ISU statewide lake survey	Tier IV
2004	5a	IA 06-WEM-00235-L_0	Lake Manawa	Pottawattamie County S13T74NR44W S edge Council Bluffs	Lake	Primary Contact	Not supporting	Turbidity	aesthetically objectionable conditions; Secchi trophic state index =72	ISU statewide lake survey	Tier IV
2012	5a	IA 04-LDM-00270-L_0	Lake Miami	Monroe County S20T73NR17W 5 mi. SE of Lovilia.	Lake	Fish Consumption	Partial	Mercury in fish	Fish consumption advisory for mercury	IDNR/USEPA fish contaminant monitoring in 2009 and 2010	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2010	5a	IA 01-NEM-00160-L_0	Lake Of The Hills	Scott County S25T78NR2E 1/4 mi W of Davenport.	Lake	Primary Contact	Partial	Algae	Aesthetically objectionable conditions (chlorophyll TSI > 65).	ISU and UHL lake surveys. DNR Fisheries information.	Tier I
2014	5a	IA 01-NEM-00160-L_0	Lake Of The Hills	Scott County S25T78NR2E 1/4 mi W of Davenport.	Lake	Primary Contact	Partial	Turbidity	Aesthetically objectionable conditions (Secchi TSI = 66).	ISU and UHL lake monitoring surveys; information for the IDNR Fisheries Bureau	Tier I
2014	5a	IA 05-PLA-00335-L_0	Lake Of Three Fires	Taylor County S12T68NR34W 2 mi NNE of Bedford.	Lake	Aquatic Life	Partial	Organic Enrichment/ Low DO	Significantly greater than 10% of the samples exceed the dissolved oxygen criteria.	IDNR and UHL lake monitoring surveys; information from the IDNR Fisheries Bureau	Tier IV
2008	5a	IA 06-BSR-00280-L_0	Lake Pahoja	Lyon County S23T99NR48W 5 mi SSW of Larchwood.	Lake	Primary Contact	Not supporting	Algae	aesthetically objectionable conditions (chlorophyll TSI = 68)	ISU and UHL lake surveys. DNR Fisheries information.	Tier I
2012	5a	IA 06-BSR-00280-L_0	Lake Pahoja	Lyon County S23T99NR48W 5 mi SSW of Larchwood.	Lake	Primary Contact	Partial	pH	Significantly greater than 10% of samples exceed the Class A1 pH criteria.	ISU and SHL statewide ambient lake monitoring 2006-10.	Tier I
2012	5a	IA 06-BSR-00280-L_0	Lake Pahoja	Lyon County S23T99NR48W 5 mi SSW of Larchwood.	Lake	Aquatic Life	Partial	pH	Significantly greater than 10% of samples exceed the Class B(LW) pH criteria.	ISU and SHL statewide ambient lake monitoring 2006-10.	Tier I
2006	5a	IA 03-SSK-0056-L_0	Lake Patoka	Polk Co. T80N R22W Section 29 SE East of Bondurant on Hwy 65	Lake	General Use	Partial	Biological: fish kill, chlorine	fish kill in 2005	IDNR fish kill investigation	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2012	5a	IA 04-LDM-00995-L_0	Lake Wapello	Davis County S34T70NR15 7 mi. W of Drakesville.	Lake	Primary Contact	Partial	Indicator Bacteria	Significantly greater than 10% of the samples exceeded the single-sample maximum criterion in 2010	IDNR Beach Monitoring Program	Tier II
2014	5a	IA 04-LDM-00995-L_0	Lake Wapello	Davis County S34T70NR15 7 mi. W of Drakesville.	Lake	Fish Consumption	Partial	Mercury in fish	IDNR fish contaminant monitoring showed average Hg level of 1.212 ppm in 2013 largemouth bass tissue plugs but lower levels in 2014 follow-up monitoring.	IDNR fish contaminant monitoring in 2013 and 2014.	Tier IV
2010	5a	IA 02-CED-0270_1	Lime Creek	mouth (SW 1/4 S4 T86N R10W Benton Co.) to confluence with unnamed tributary in S1 T87N R10W Buchanan Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL TMDL monitoring near Brandon from 2007-08.	Tier III
2014	5p	IA 02-CED-0270_2	Lime Creek	from confluence with unnamed tributary (S1 T87N R10W Buchanan Co.) to confluence with unnamed tributary in SW 1/4 S11 T88N R10W Buchanan Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of E. coli during recreations seasons of 2010 & 2011 > Class A1 criterion.	IDNR sponsored monitoring at STORET stations 15100007 and 15100008.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2014	5p	IA 01-MAQ-0260_1	Lindsey Creek	mouth (S3 T89N R5W Delaware Co.) to north line S16 T90N R5W Delaware Co. (prior to 1990 designated for Class B(w) uses.)	River	Primary Contact	Not supporting	Indicator Bacteria	E. coli > Class A1 geomean criterion.	Monitoring from May 2011 to May 2012.	Tier III
2008	5b-t	IA 02-IOW-0185_1	Little Bear Creek	mouth (S16 T80N R13W Poweshiek Co.) to confluence with unnamed tributary in SE 1/4 NW 1/4 S29 T80N R14W Poweshiek Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index.	IDNR/UHL biological (REMAP) monitoring in 2005.	Tier IV
2014	5p	IA 02-IOW-0185_1	Little Bear Creek	mouth (S16 T80N R13W Poweshiek Co.) to confluence with unnamed tributary in SE 1/4 NW 1/4 S29 T80N R14W Poweshiek Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of E. coli were greater than the Class A1 criterion.	Monitoring in 2011-12 at three stations in the Little Bear Creek Watershed Monitoring Project.	Tier III
2014	5p	IA 02-IOW-0185_2	Little Bear Creek	from confluence with unnamed tributary (SE 1/4 NW 1/4 S29 T80N R14W Poweshiek Co.) to confluence with unnamed tributary in SW 1/4 S13 T80N R16W Poweshiek Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of E. coli were greater than the Class A1 (and Class A2) criterion.	Section 319 monitoring from July 2011 to November 2012.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2014	5p	IA 02-IOW-0500_0	Little Bear Creek	from confluence with unnamed tributary(T80N R16W Sec13 Poweshiek Co.) to headwaters (T80N R16W Sec16 Poweshiek Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of indicator bacteria (E. coli) >> Class A1 criterion of 126 orgs/100 ml: overwhelming evidence of impairment	Iowa DNR-sponsored water quality project monitoring from July 2011 to October 2012.	Tier III
2008	5a	IA 02-CED-0470_1	Little Cedar River	mouth (S20 T94N R14W Chickasaw Co.) to the Chickasaw/Floyd county line at W line S6 T95N R14W Chickasaw Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL TMDL-related monitoring 2002-2004.	Tier III
2014	5p	IA 04-UDM-0520_0	Little Creek	from Big Creek Lake (T81N R25W Sec16 Polk Co.) to headwaters (T82N R25W Sec7 Boone Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria (E. coli) violates the Class A1 criterion.	Iowa DNR special project monitoring at two stations from March to September 2011.	Tier III
2004	5b-t	IA 05-GRA-0080_0	Little River	IA/MO line to dam S30T69NR25W Decatur	River	Aquatic Life	Not supporting	Biological: IBI	Low biotic index	IDNR/UHL biocriteria monitoring	Tier IV
2014	5a	IA 05-GRA-00810-L_0	Little River Watershed Lake	Decatur County S19T69NR25W approx 2 mi NW of Leon.	Lake	Primary Contact	Not supporting	Indicator Bacteria	E.coli concentrations exceeded the state WQS	IDNR beach monitoring program	Tier II
2014	5b	IA 06-BSR-0060_1	Little Rock River	mouth (S35 T98N R46W Lyon Co.) to confluence with Otter Cr. in NW 1/4 S21 T98N R44W Lyon Co.	River	Aquatic Life	Fully	Biological: fish kill, ammonia/low DO	Fish kill on September 3 2013 caused by animal waste from open cattle feedlot.	IDNR fish kill database (https://programs.iowadnr.gov/fishkill/detail.aspx?fkid=868)	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2008	5a	IA 06-BSR-0060_1	Little Rock River	mouth (S35 T98N R46W Lyon Co.) to confluence with Otter Cr. in NW 1/4 S21 T98N R44W Lyon Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli exceeds the Class A1 criterion.	IDNR/UHL TMDL-related monitoring 2002-03.	Tier IV
2014	5b-v	IA 06-BSR-0060_2	Little Rock River	from confluence with Otter Cr. (NW 1/4 S21 T98N R44W Lyon Co.) to confluence with Argo Slough in S17 T99N R43W Lyon Co.	River	Aquatic Life	Partial	Biological: IBI	Two benthic macroinvertebrate samples failed Biological Impairment Criteria in the last five years.	2008 and 2011 IDNR/SHL biological sampling.	Tier IV
2008	5p	IA 06-BSR-0060_3	Little Rock River	from confluence with Argo Slough (S17 T99N R43W Lyon Co.) to the Iowa/Minnesota state line	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli exceeds the Class A1 criterion.	IDNR/UHL TMDL-related monitoring 2002-03.	Tier III
2008	5a	IA 06-LSR-00250-L_0	Little Sioux Park Lake	Woodbury County S12T89NR42W 2 mi SSW of Correctionville.	Lake	Aquatic Life	Partial	pH	Significantly greater than 10% of the samples exceed the pH criterion.	ISU and UHL lake surveys 2002-2006.	Tier I
2008	5a	IA 06-LSR-00250-L_0	Little Sioux Park Lake	Woodbury County S12T89NR42W 2 mi SSW of Correctionville.	Lake	Primary Contact	Partial	pH	Significantly greater than 10% of the samples exceed the pH criterion.	ISU and UHL lake surveys 2002-2006.	Tier I
2012	5a	IA 06-LSR-0010_0	Little Sioux River	mouth (Harrison Co.) to confluence with Maple R. near Turin in S17 T83N R44W Monona Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means from 2009 and 2010 exceeded the criterion.	USGS ambient monthly monitoring.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2008	5a	IA 06-LSR-0020_1	Little Sioux River	from confluence with Maple R. (S17 T83N R44W Monona Co.) to confluence with Big Cr. in Anthon in S4 T87N R43W Woodbury Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL statewide ambient water quality monitoring network.	Tier III
2004	5a	IA 06-LSR-0030_1	Little Sioux River	from Highway 3 (S26 T92N R40W Cherokee Co.) to confluence with Waterman Cr. in S26 T94N R39W O'Brien Co.	River	Primary Contact	Partial	Indicator Bacteria	> 10% of samples > single sample maximum criterion	IDNR/UHL statewide ambient WQ monitoring network.	Tier III
2008	5a	IA 06-LSR-0030_4	Little Sioux River	from confluence with Willow Cr. (S17 T94N R36W Clay Co.) to east corporate limit of Spencer at west line of S17 T96N R36W Clay Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL statewide ambient water quality monitoring network.	Tier III
2008	5a	IA 06-LSR-0040_1	Little Sioux River	from confluence with Ocheyedan R. at Spencer (S13 T96N R37W Clay Co.) to confluence with Milford Cr. in NW 1/4 S14 T98N R37W Dickinson Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL statewide ambient water quality monitoring network.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2008	5a	IA 06-LSR-0040_2	Little Sioux River	from confluence with Milford Cr. (NW 1/4 S14 T98N R37W Dickinson Co.) to confluence with West Fork Little Sioux R. in S36 T100N R38W Dickinson Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL statewide ambient water quality monitoring network.	Tier III
2006	5b-t	IA 06-LSR-0040_3	Little Sioux River	from confluence with West Fork Little Sioux R. (S36 T100N R38W Dickinson Co.) to the Iowa/Minnesota state line	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL biocriteria monitoring 2003	Tier IV
2014	5p	IA 01-TRK-0230_1	Little Turkey River	mouth (S10 T91N R2W Clayton Co.) to confluence with White Pine Hollow in S31 T91N R2W Clayton Co.	River	Primary Contact	Not supporting	Indicator Bacteria	E. coli geomean is > the Class A1 criterion.	IDNR monitoring from May 2011 to November 2012.	Tier III
2008	5b-t	IA 01-TRK-0230_3	Little Turkey River	from the Clayton/Delaware county line to south line of S11 T90N R3W in Delaware Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index.	UHL special project: benthic macroinvertebrate sampling 2006.	Tier IV
2012	5p	IA 01-TRK-0230_3	Little Turkey River	from the Clayton/Delaware county line to south line of S11 T90N R3W in Delaware Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of indicator bacteria far exceeds Class A1 criterion.	Results of IDNR TMDL monitoring in 2010.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2012	5p	IA 01-TRK-0230_3	Little Turkey River	from the Clayton/Delaware county line to south line of S11 T90N R3W in Delaware Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of indicator bacteria far exceeds Class A2 criterion.	IDNR TMDL monitoring in 2010.	Tier III
2012	5p	IA 01-TRK-0230_4	Little Turkey River	from south line of S11 T90N R3W (Delaware Co.) to confluence with unnamed tributary in the S 1/2 of S15 T90N R3W Delaware Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of indicator bacteria far exceeds the Class A1 criterion.	IDNR TMDL monitoring in 2010 near Colesburg IA.	Tier III
2014	5a	IA 01-TRK-0420_0	Little Turkey River	mouth (S18 T95N R8W Fayette Co.) to confluence with Crane Cr. in S31 T95N R9W Fayette Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of E. coli are greater than the Class A1 criterion.	Turkey River Watershed Alliance monitoring from 2011 to 2012.	Tier III
2014	5a	IA 01-TRK-0430_1	Little Turkey River	confluence with Crane Cr. (S31 T95N R9W Fayette Co.) to confluence with unnamed tributary in SE 1/4 S14 T96N R11W Chickasaw Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 WQ criterion.	Turkey River Watershed monitoring from 2011-2012.	Tier III
2014	5p	IA 01-TRK-0430_2	Little Turkey River	confluence with unnamed tributary (SE 1/4 S14 T96N R11W Chickasaw Co.) to confluence with unnamed tributary in S12 T97 R12W Howard Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Turkey River Watershed project monitoring May 2011 to November 2012.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2014	5a	IA 01-VOL-0150_1	Little Volga River	mouth (north line of S2 T92N R9W Fayette Co.) to Hwy 150 bridge crossing at Maynard at south line of S14 T92N R9W Fayette Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli during the 2011 & 2012 recreation seasons were greater than the Class A1 criterion.	Iowa DNR project monitoring from May 2011 to November 2012 at STORET station 15330008.	Tier III
2008	5a	IA 01-VOL-0150_1	Little Volga River	mouth (north line of S2 T92N R9W Fayette Co.) to Hwy 150 bridge crossing at Maynard at south line of S14 T92N R9W Fayette Co.	River	Fish Consumption	Partial	Mercury in fish	Fish consumption advisory (1 mean/week) issued in 2006.	IDNR/U.S. EPA fish contaminant (RAFT) monitoring.	Tier IV
2006	5b-v	IA 04-UDM-0300_1	Lizard Creek	mouth to confluence with unnamed tributary in N 1/2 S31 T90N R30W Webster Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL biological monitoring in 2002 and 2004	Tier IV
2008	5b	IA 04-UDM-0300_1	Lizard Creek	mouth to confluence with unnamed tributary in N 1/2 S31 T90N R30W Webster Co.	River	Primary Contact	Partial	Indicator Bacteria	Greater than 10% of E. coli samples exceed the Class A1 single-sample maximum criterion.	IDNR/UHL statewide ambient water quality monitoring network.	Tier III
2010	5a	IA 04-UDM-03110-L_0	Lizard Lake	Pocahontas County S22T91NR34W 4 mi SW of Gilmore City.	Wetland	Aquatic Life	Not supporting	Algae	Algae levels (chlorophyll TSI = 84) adversely impact fish and plant communities	DNR Shallow Lakes monitoring.	Tier IV
2010	5a	IA 04-UDM-03110-L_0	Lizard Lake	Pocahontas County S22T91NR34W 4 mi SW of Gilmore City.	Wetland	Aquatic Life	Not supporting	Turbidity	Turbidity levels (Secchi TSI = 78) adversely impact fish and plant communities	DNR Shallow Lakes monitoring.	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2004	5b-t	IA 03-SSK-0090_0	Long Dick Creek	mouth (S18 T85N R23W Story Co.) to N. line of S34 T86N R23W Hamilton Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL biocriteria monitoring 1997	Tier IV
2006	5b	IA 03-SSK-0091_0	Long Dick Creek	N. line of S34 (SE1/4) T86N R23W Hamilton Co to headwaters in NE1/4 S8 T87N R23W Hamilton Co.	River	Aquatic Life	Partial	Biological: fish kill, ammonia/low DO	fish kill in 2004 caused by spill of animal waste and resultant ammonia & low DO in the stream.	IDNR fish kill investigation	Tier III
2014	5b	IA 03-SSK-0091_0	Long Dick Creek	N. line of S34 (SE1/4) T86N R23W Hamilton Co to headwaters in NE1/4 S8 T87N R23W Hamilton Co.	River	Aquatic Life	Partial	Biological: fish kill, pesticide	Fish kill in August 2011 caused by aerial spraying of a fungicide.	IDNR fish kill database (https://programs.iowadnr.gov/fishkill/detail.aspx?fkid=834)	Tier IV
2010	5p	IA 03-SSK-0091_0	Long Dick Creek	N. line of S34 (SE1/4) T86N R23W Hamilton Co to headwaters in NE1/4 S8 T87N R23W Hamilton Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of indicator bacteria exceeds the Class A1 criterion.	IDNR TMDL monitoring in 2007-2008.	Tier IV
2010	5b	IA 04-EDM-0041_0	Lotts Creek	from confluence with DD79 in T94N R30W Sec 15 SE Kossuth Co. to headwaters in SE1/4 S12 T97N R31W Palo Alto Co.	River	Aquatic Life	Partial	Biological: fish kill, unknown toxicity	Fish kill in September 2008; suspected human cause.	IDNR fish kill investigation.	Tier IV
2006	5b-t	IA 05-GRA-0170_0	Lotts Creek	IA/MO line (S24 TT67N R29W Ringgold Co.) to confluence with Tuckers Cr. in S12 T67N R29W Ringgold Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL biocriteria monitoring 2003	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2006	5a	IA 02-IOW-0330-L_0	Lower Pine Lake	Hardin County S4T87NR19W 0.5 mi E of Eldora.	Lake	Primary Contact	Not supporting	Indicator Bacteria	geometric mean > WQS	IDNR/UHL beach monitoring 2002-2004	Tier II
2012	5p	IA 01-TRK-0095_0	Lux Creek	mouth (S7 T87N R4E Jackson Co.) to confluence with an unnamed tributary in S35 T88N R3E Dubuque Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of indicator bacteria greater than Class A1 criterion.	Clean Water Act Section 319 water quality project conducted from July 2009 through November 2010	Tier III
2004	5b	IA 04-UDM-0215_0	Lyons Creek	mouth (NW 1/4 S6 T88N R25W Hamilton Co.) to headwaters in S18 T89NR24W Hamilton Co.	River	General Use	Partial	Biological: fish kill, unknown toxicity	fish kill in 2001. Although traced to tile line no cause/source identified	IDNR fish kill investigation	Tier IV
2008	5a	IA 04-UDM-0215_0	Lyons Creek	mouth (NW 1/4 S6 T88N R25W Hamilton Co.) to headwaters in S18 T89NR24W Hamilton Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL TMDL-related monitoring.	Tier III
2010	5a	IA 01-NEM-0053_0	Mad Creek	mouth (S36 T77N R2W Muscatine Co.) to confluence with unnamed tributary in SE 1/4 S13 T77N R2W Muscatine Co.	River	Aquatic Life	Not assessed	Indicator Bacteria	Geometric mean of E. coli greater than Class A1 criterion.	IDALS/DSC watershed project monitoring.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2008	5a	IA 06-LSR-0070_1	Maple River	mouth (S17 T83N R44W Monona Co.) to confluence with unnamed tributary approximately 1 mile east of Danbury in SW 1/4 NE 1/4 S26 T86N R42W Woodbury Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL statewide ambient water quality monitoring network.	Tier III
2012	5a	IA 01-MAQ-0050_2	Maquoketa River	Deep Cr. (Jackson Co.) to confluence with N. Fk. Maquoketa R. in S13 T84N R2E Jackson Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of indicator bacteria exceeds Class A1 criterion.	USGS monitoring near Spragueville in 2009 and 2010.	Tier III
2004	5b	IA 01-MAQ-0060_1	Maquoketa River	from N. Fk. Maquoketa R. to confluence with Farm Cr. in S10 T85N R1W Jones Co.	River	Aquatic Life	Not supporting	Biological: FW mussels	> 50% decline in mussel species richness	ISU freshwater mussel study	Tier IV
2004	5b	IA 01-MAQ-0060_2	Maquoketa River	from Farm Cr. (Jones Co) to confluence with Plum Cr. in S11 T87N R4W Delaware Co.	River	Aquatic Life	Partial	Biological: FW mussels	> 50% decline in mussel species richness	ISU freshwater mussel study	Tier IV
2008	5a	IA 01-MAQ-0060_2	Maquoketa River	from Farm Cr. (Jones Co) to confluence with Plum Cr. in S11 T87N R4W Delaware Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli greater than Class A1 WQ criterion.	IDNR/UHL TMDL monitoring near Monticello from 2006-08.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2006	5b-t	IA 01-MAQ-0060_3	Maquoketa River	from Plum Cr. (S11 T87N R4W Delaware Co.) to Quaker Mill Dam in S19 T89N R5W Delaware Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL REMAP monitoring 2002; IDNR Fisheries biological monitoring 2002	Tier IV
2008	5a	IA 01-MAQ-0060_3	Maquoketa River	from Plum Cr. (S11 T87N R4W Delaware Co.) to Quaker Mill Dam in S19 T89N R5W Delaware Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli greater than the Class A1 WQ criterion.	IDNR/UHL TMDL monitoring.	Tier III
2010	5a	IA 01-MAQ-0080_0	Maquoketa River	upper end of Quaker Mill Pond to Forestville Dam at Backbone Lake (SE 1/4 S15 T90N R6W Delaware Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli greater than the Class A1 criterion	Lake Delhi Watershed Association monitoring in 2006.	Tier III
2014	5a	IA 06-LSR-02855-L_0	Marble Lake	Dickinson County S17T100NR36W 3.5 mi. NE of Montgomery.	Wetland	Aquatic Life	Partial	Algae	Algae levels (chlorophyll TSI = 68) adversely impact fish and plant communities	IDNR shallow lakes and wetlands monitoring program	Tier IV
2004	5b-t	IA 04-RAC-0123_0	Marrowbone Creek	mouth to trib S17T85NR33W Carroll Co.	River	Aquatic Life	Partial	Biological: IBI	low biotic index; continuous DO monitoring shows levels <3 during night and <5 during daytime	IDNR/UHL REMAP sampling	Tier IV
2008	5a	IA 04-RAC-0123_0	Marrowbone Creek	mouth to trib S17T85NR33W Carroll Co.	River	Aquatic Life	Partial	Organic Enrichment/ Low DO	Significantly greater than 10% of the samples exceed the dissolved oxygen criteria	IDNR/UHL REMAP continuous monitoring for dissolved oxygen 2006	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2012	5a	IA 05-PLA-00285-L_0	McKinley Lake	Union County S11T72NR31W at W edge of Creston.	Lake	Fish Consumption	Partial	PCBs in fish	Fish consumption advisory for PCBs	IDNR/USEPA fish contaminant monitoring in 2009 and 2010	Tier IV
2014	5a	IA 02-CED-0218_0	McLoud Run	mouth (SW 1/4 S16 T83N R7W Linn Co.) to headwaters in SW 1/4 S5 T83N R7W Linn Co.	River	Aquatic Life	Partial	Biological: fish kill, chlorine	Occurrence of two fish kills (Sept. 2013 and Oct. 2012) due to discharge of chlorinated water (i.e., (drinking water) to stream.	IDNR fish kill investigations.	Tier IV
2006	5b	IA 02-CED-0218_0	McLoud Run	mouth (SW 1/4 S16 T83N R7W Linn Co.) to headwaters in SW 1/4 S5 T83N R7W Linn Co.	River	Aquatic Life	Partial	Biological: fish kill, unknown toxicity	fish kills in 2001 2004 and 2005	IDNR fish kill investigations	Tier III
2014	5a	IA 02-CED-0218_0	McLoud Run	mouth (SW 1/4 S16 T83N R7W Linn Co.) to headwaters in SW 1/4 S5 T83N R7W Linn Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of E. coli in 2010 & 2011 sampling were >> Class A1 criterion.	IDNR sponsored ambient monitoring from May 2010 to July 2011 at STORET station 15570003.	Tier IV
2004	5a	IA 04-LDM-02870-L_0	Meadow Lake	Adair County S17T76NR31W 5 mi N of Greenfield.	Lake	Primary Contact	Partial	Algae	Aesthetically objectionable conditions (chlorophyll TSI > 65).	ISU statewide lake survey	Tier I
2008	5a	IA 02-CED-00460-L_0	Meyers Lake	Black Hawk County S6T88NR12W at Waterloo.	Lake	Primary Contact	Partial	Algae	Aesthetically objectionable conditions (chlorophyll TSI > 65).	ISU and UHL lake surveys 2002-2006.	Tier I

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2012	5p	IA 01-TRK-0120_0	Middle Fork Catfish Creek	mouth (S1 T88N R2E Dubuque Co.) to west line of S30 T89N R2E Dubuque Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria far exceed Class A1 criterion.	Monitoring in 2010 for Catfish Creek Watershed Project.	Tier III
2012	5p	IA 01-TRK-0123_0	Middle Fork Catfish Creek	from Seippel Road (W line S30 T89N R2E Dubuque Co.) to headwaters in SW1/4 S27 T89N R1E Dubuque Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of indicator bacteria far exceeds the Class A1 criterion.	Monitoring in 2010 for the Catfish Creek Watershed Project.	Tier III
2006	5b-v	IA 05-GRA-0180_0	Middle Fork Grand River	IA/MO line to trib S13T68NR30W Ringgold	River	Aquatic Life	Not supporting	Biological: IBI	Low biotic index	IDNR/UHL biocriteria monitoring 2003	Tier IV
2014	5a	IA 05-GRA-0180_0	Middle Fork Grand River	IA/MO line to trib S13T68NR30W Ringgold	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of E. coli > the Class A1 criterion.	TMDL related monitoring in 2011 at three STORET stations (21IOWA): 11800001 11800002 and 16800002.	Tier III
2006	5b-t	IA 01-TRK-0180_2	Middle Fork Little Maquoketa River (a.k.a. Bankston Cr.)	from west line of S31 T90N R1E (Dubuque Co.) to north line of S33 T90N R1W Dubuque Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL REMAP monitoring 2004	Tier IV
2004	5b-t	IA 05-NOD-0070_0	Middle Nodaway River	from confluence with West Fork Middle Nodaway R. (S33 T74N R33W Adair Co.) to confluence with unnamed tributary in S1 T75N R32W Adair Co.	River	Aquatic Life	Not supporting	Biological: IBI	Low biotic index	IDNR/UHL biocriteria monitoring 1998	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2004	5b-t	IA 04-LDM-0270_0	Middle River	mouth (Warren Co.) to confluence with Clanton Cr. in S28 T76N R25W Warren Co.	River	Aquatic Life	Not supporting	Biological: IBI	Low biotic index	IDNR/UHL biocriteria monitoring 2002	Tier IV
2008	5a	IA 04-LDM-0270_0	Middle River	mouth (Warren Co.) to confluence with Clanton Cr. in S28 T76N R25W Warren Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL ambient water quality monitoring network.	Tier III
2004	5b-t	IA 06-LSR-0305_0	Milford Creek	from confluence with unnamed tributary (S18 T98N R36W Dickinson Co.) to outlet structure of Lower Gar Lake in NW 1/4 S5 T98N R36W Dickinson Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL biocriteria monitoring 2001--TMDL approved in Dec. 2008 did not cover this segment of stream.	Tier IV
2004	5b-t	IA 06-LSR-0170_0	Mill Creek	mouth (S14 T92N R40W Cherokee Co.) to confluence with Whisky Cr. at east line S29 T94N R41W O'Brien Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL biological monitoring in 1998 and 2002	Tier IV
2006	5b	IA 04-LDM-0130_0	Miller Creek	mouth (S7 T73N R15W Wapello Co.) to unnamed tributary in S29 T73N R16W Monroe Co.	River	Aquatic Life	Partial	Biological: fish kill, unknown toxicity	fish kills in 2000 and 2003	IDNR fish kill investigations	Tier IV
2006	5b-t	IA 01-YEL-0010_2	Miners Creek	from Hwy 52 bridge (SE 1/4 S20 T92N R2W Clayton Co.) to west line of S1 T92N R3W Clayton Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL biocriteria monitoring 2001	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2014	5p	IA 01-VOL-0110_1	Mink Creek	mouth (S30 T93N R6W Clayton Co.) to west line of S15 T93N R7W Fayette Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 (primary contact) criterion.	IDNR project monitoring at Station MIN-10 at Aztec Road (STORET station 15220016).	Tier III
2014	5p	IA 01-VOL-0110_1	Mink Creek	mouth (S30 T93N R6W Clayton Co.) to west line of S15 T93N R7W Fayette Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A2 (secondary contact) criterion.	IDNR project monitoring at Station MIN-10 at Aztec Road (STORET station 15220016).	Tier III
2012	5p	IA 02-CED-03835_0	Minnehaha Creek	from mouth (E 1/2 S7 T87N R16W Grundy Co.) to headwaters in NE1/4 S21 T87N R17W Grundy Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria far exceed the Class A1 criterion.	Section 319 monitoring 2009-10.	Tier III
2014	5p	IA 01-UIA-0407_0	Minor Creek	mouth (S10 T99N R10W Winneshiek Co.) to confluence with unnamed tributary in E 1/2 S1 T99N R11W Howard Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	DNR monitoring at Site 3 (318th Ave) STORET station 15960043.	Tier III
2006	5a	IA 01-NEM-0010_2	Mississippi River	from Lock &Dam 15 at Davenport (Scott Co.) to Lock & Dam 14 at Le Claire (Scott Co.) (= Pool 15) (Davenport water supply intake is located near river mile 484.)	River	Aquatic Life	Not supporting	Aluminum	Violations of chronic WQ criterion	Illinois EPA ambient WQ monitoring 2000-03	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2006	5a	IA 01-NEM-0010_4	Mississippi River	from Wapsipinicon R. (Scott / Clinton Co. line) to Lock & Dam 13 at Clinton (Clinton Co.)	River	Aquatic Life	Not supporting	Aluminum	Violations of chronic WQ criterion	Illinois EPA ambient WQ monitoring 2000-03	Tier IV
2006	5a	IA 01-NEM-0030_1	Mississippi River	from Lock & Dam 11 at north side of Dubuque (Dubuque Co.) to Lock & Dam 10 at Guttenberg (Clayton Co.)	River	Aquatic Life	Not supporting	Aluminum	Violations of chronic WQ criterion	Illinois EPA ambient WQ monitoring 2000-03	Tier IV
2006	5a	IA 02-ICM-0010_2	Mississippi River	from Burlington water supply intake (Des Moines Co.) to confluence with Iowa R (S36 T74N R2W Louisa Co.)	River	Aquatic Life	Not supporting	Aluminum	Violations of chronic WQ criterion	Illinois EPA ambient WQ monitoring 2000-03	Tier IV
2006	5a	IA 03-SKM-0010_1	Mississippi River	IA/MO line to confluence with Sugar Cr. in S23 T67N R5W Lee Co.	River	Aquatic Life	Fully	Aluminum	Violations of chronic WQ criterion	Illinois EPA ambient WQ monitoring 2000-03	Tier IV
2014	5p	IA 03-SSK-0170_0	Montgomery Creek	from mouth (SE1/4 NE1/4 S35 T85N R25W Boone Co.) to headwaters (NW1/4 S22 ST85N R26W Boone Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of indicator bacteria is greater than the Class A1 criterion.	Iowa DNR snapshot monitoring from 2008-2012 at STORET station 908020.	Tier III
2008	5a	IA 06-LSR-00805-L_0	Moorehead Park Pond	Ida County S10T87NR39W 0.5 mi N of Ida Grove.	Lake	Aquatic Life	Partial	pH	Significantly greater than 10% of the samples exceed the pH criterion.	ISU and UHL lake surveys 2002-2006.	Tier I

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2014	5p	IA 02-CED-0227_0	Morgan Creek	mouth (S14 T83N R8W Linn Co.) to confluence with unnamed tributary in SW 1/4 S22 T83N R8W Linn Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of E. coli for recreation seasons of 2010 & 2011 exceeded the Class A1 criterion.	IDNR-sponsored ambient monitoring at STORET station 15570009 from May 2010 to July 2011.	Tier III
2008	5a	IA 05-NOD-00820-L_0	Mormon Trail Lake	Adair County S17T76NR31W 1.5 mi SE of Bridgewater.	Lake	Fish Consumption	Partial	Mercury in fish	Fish consumption advisory (1 meal/week) issued.	IDNR/U.S. EPA fish tissue (RAFT) monitoring.	Tier IV
2014	5a	IA 02-IOW-00890-L_0	Morse Lake	Wright County S28T93NR24W 3.5 mi W of Belmond.	Wetland	Aquatic Life	Not supporting	Algae	Algae levels (chlorophyll TSI = 75) adversely impact fish and plant communities.	IDNR shallow lakes and wetlands monitoring program; information from the IDNR fisheries bureau	Tier IV
2012	5p	IA 02-CED-03833_0	Mosquito Creek	from mouth (SE 1/4 S20 T87N R15W Grundy Co.) to headwaters in NE 1/4 S36 T87N R17W Grundy Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria far exceed the Class A1 criterion.	Section 319 project monitoring in 2008-09.	Tier III
2004	5b-t	IA 06-WED-0020_1	Mosquito Creek	mouth (S30 T74N R43W Pottawattamie Co.) to the drinking water intake for Lake Manawa in center S7 T74N R43W Pottawattamie Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL biocriteria monitoring 2000	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2004	5b-t	IA 06-WED-0020_2	Mosquito Creek	from drinking water intake for Lake Manawa (center S7 T74N R43W Pottawattamie Co.) to confluence with Little Mosquito Cr. in S29 T75N R43W Pottawattamie Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL biocriteria monitoring 2000	Tier IV
2004	5b-t	IA 06-WED-0020_3	Mosquito Creek	from confluence with Little Mosquito Cr. S29 T75N R43W Pottawattamie Co.) to confluence with Spring Cr. in S9 T78N R41W Harrison Co.	River	Aquatic Life	Not supporting	Biological: IBI	Low biotic index	IDNR/UHL biocriteria monitoring 2000	Tier IV
2004	5b-t	IA 04-LDM-0140_1	Muchakinock Creek	mouth (SW 1/4 NW 1/4 S6 T73N R15W Wapello Co.) to confluence with Little Muchakinock Cr. in S34 T75N R16W Mahaska Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL biocriteria monitoring 2000	Tier IV
2004	5b-t	IA 04-LDM-0140_2	Muchakinock Creek	from confluence with Little Muchakinock Cr. (S34 T75N R16W Mahaska Co.) to confluence with unnamed tributary in NW 1/4 SW 1/4 S27 T76N R17W Mahaska Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL biocriteria monitoring 2000	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2014	5p	IA 02-CED-0235_0	Mud Creek	mouth (NE 1/4 S22 T85N R10W Benton Co.) to confluence with unnamed tributary in S15 T84N R11W Benton Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli in recreation seasons of 2010 & 2011 > Class A1 criterion.	DNR-sponsored monitoring in 2010 & 2011 at 61st Street Ln. (STORET station 15060001).	Tier III
2008	5b-t	IA 05-NSH-0128_0	Mud Creek	mo to trib S14T73NR41W Mills Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index.	IDNR/UHL biological (REMAP) monitoring in 2005.	Tier IV
2006	5b	IA 06-BSR-0080_0	Mud Creek	mouth (S26 T98N R46W Lyon Co.) to the IA-MN state line	River	Aquatic Life	Partial	Biological: fish kill, ammonia/low DO	Fish kills in August 2001 and July 2006 due to animal waste from unknown source	IDNR fish kill investigations.	Tier IV
2006	5b-v	IA 06-BSR-0080_0	Mud Creek	mouth (S26 T98N R46W Lyon Co.) to the IA-MN state line	River	Aquatic Life	Partial	Biological: IBI	Low biotic index.	IDNR/UHL biological (REMAP) monitoring in 2004 and 2005.	Tier IV
2008	5a	IA 06-BSR-0080_0	Mud Creek	mouth (S26 T98N R46W Lyon Co.) to the IA-MN state line	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL TMDL-related monitoring 2002-04.	Tier III
2008	5a	IA 02-IOW-0162_0	Muddy Creek	from mouth (S33 T80N R6W Johnson Co.) to headwaters in SW 1/4 S12 T80N R7W Johnson Co.	River	Aquatic Life	Not supporting	Ammonia	Sewage sludge/ammonia-violations of narrative criteria.	IDNR monitoring in 2005 and 2006.	Tier IV
2008	5a	IA 02-IOW-0162_0	Muddy Creek	from mouth (S33 T80N R6W Johnson Co.) to headwaters in SW 1/4 S12 T80N R7W Johnson Co.	River	Primary Contact	Not supporting	Ammonia	Sewage sludge/ammonia-violations of narrative criteria.	IDNR monitoring in 2005 and 2006.	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2006	5a	IA 02-IOW-0162_0	Muddy Creek	from mouth (S33 T80N R6W Johnson Co.) to headwaters in SW 1/4 S12 T80N R7W Johnson Co.	River	General Use	Not supporting	Ammonia	sewage sludge/ammonia-violations of narrative criteria	IDNR monitoring in 2005 and 2006	Tier IV
2012	5a	IA 02-IOW-0162_0	Muddy Creek	from mouth (S33 T80N R6W Johnson Co.) to headwaters in SW 1/4 S12 T80N R7W Johnson Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria far exceed the Class A1 criterion.	IDNR Snapshot volunteer water quality monitoring from 2006-09.	Tier III
2012	5p	IA 01-UIA-0410_0	Nichols Creek (aka Bigalk Cr.)	mouth (S18 T100N R10W Winneshiek Co.) to west line of S23 T100N R11W Howard Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of indicator bacteria exceeds the Class A2 criterion.	Upper Iowa River Watershed project 2008-10.	Tier III
2008	5p	IA 01-UIA-0410_0	Nichols Creek (aka Bigalk Cr.)	mouth (S18 T100N R10W Winneshiek Co.) to west line of S23 T100N R11W Howard Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Upper Iowa River Watershed Project monitoring Site 7.	Tier III
2014	5p	IA 01-UIA-0410_0	Nichols Creek (aka Bigalk Cr.)	mouth (S18 T100N R10W Winneshiek Co.) to west line of S23 T100N R11W Howard Co.	River	Aquatic Life	Partial	Thermal Modifications: Water Temperature	Significantly greater than 10% of samples exceed Class B(CW1) temperature criterion.	Upper Iowa River Watershed monitoring Site 7 (STORET station 191910001).	Tier IV
2006	5a	IA 05-GRA-01010-L_0	Nine Eagles Lake	Decatur County S18T67NR25W 3.5 mi. SE of Davis City.	Lake	Primary Contact	Not supporting	Indicator Bacteria	geometric mean > WQS	IDNR/UHL beach monitoring 2002-2004	Tier II
2006	5a	IA 05-GRA-01010-L_0	Nine Eagles Lake	Decatur County S18T67NR25W 3.5 mi. SE of Davis City.	Lake	Fish Consumption	Not supporting	Mercury in fish	> IDNR/IDPH trigger level for 1 meal/week advisory; consumption advisory issued in 2006	fish contaminant (RAFT) monitoring	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2006	5b-t	IA 05-CHA-0066_0	Ninemile Creek	mouth (S4 T69N R22W Wayne Co.) to confluence with unnamed tributary in S31 T70N R22W Wayne Co.	River	Aquatic Life	Partial	Biological: IBI	low biotic index; should have been listed in 2004	IDNR Fisheries Bureau biological monitoring 1999-2002	Tier IV
2008	5a	IA 05-CHA-0066_0	Ninemile Creek	mouth (S4 T69N R22W Wayne Co.) to confluence with unnamed tributary in S31 T70N R22W Wayne Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Iowa State University/Army Corps of Engineers Rathbun watershed monitoring project.	Tier III
2012	5p	IA 05-NSH-0010_0	Nishnabotna River	IA/MO line to (S26 T67NR42W Fremont Co.) to confluence of E. Nishnabotna and W. Nishnabotna rivers in S2 T67N R42W Fremont Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria far exceed the Class A1 criterion.	USGS monitoring at Hamburg 2008-2010.	Tier III
2008	5p	IA 05-NOD-0020_0	Nodaway River (aka West Nodaway R.)	from confluence with East Nodaway R. (S6 T67N R36W Page Co.) to confluence with Middle Nodaway R. in S33 T71N R36W Montgomery Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL statewide ambient water quality monitoring network.	Tier III
2006	5a	IA 01-YEL-0130_0	Norfolk Creek	mouth (S6 T96N R5W Allamakee Co.) to confluence with Teeple Cr. in S24 T97N R6W Allamakee Co.	River	Aquatic Life	Partial	Organic Enrichment/ Low DO	Significantly greater than 10% of the samples exceed the dissolved oxygen criteria.	IDNR/UHL ambient WQ monitoring 2004	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2008	5a	IA 04-LDM-02726-L_0	North Banner Lake	Warren County S30T77NR23W 5 mi N of Indianola.	Lake	Fish Consumption	Partial	Mercury in fish	Fish consumption advisory issued at this lake.	RAFT fish tissue monitoring.	Tier IV
2008	5p	IA 01-UIA-0190_0	North Bear Creek	mouth (S25 T100N R6W Winneshiek Co.) to IA/MN state line (Winneshiek Co.)	River	Primary Contact	Partial	Indicator Bacteria	Greater than 10% of samples exceed the Class A1 single-sample maximum criterion.	Upper Iowa River Watershed Project monitoring Site 24.	Tier III
2008	5p	IA 02-CED-0383_0	North Black Hawk Creek	mouth (S1 T87N R15W Grundy Co.) to confluence with unnamed tributary in S8 T88N R15W Grundy Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL TMDL-related monitoring in 2005.	Tier III
2014	5p	IA 01-TRK-0480_0	North Branch Turkey River	mouth (S31 T99N R11W Howard Co.) to confluence with unnamed tributary (mouth located on left descending bank) in SE 1/4 S14 T99N R12W Howard Co	River	Primary Contact	Not supporting	Indicator Bacteria	The geometric mean of E. coli is greater than the Class A1 criterion.	Turkey River Watershed Monitoring project 2011-2012.	Tier III
2014	5a	IA 01-VOL-0160_0	North Branch Volga River	mouth (S33 T93N R9W Fayette Co.) to confluence with unnamed tributary in S8 T93N R9W Fayette Co.	River	Primary Contact	Partial	Indicator Bacteria	Geometric means of indicator bacteria exceeded the Class A1 criterion in recreation seasons of 2011 & 2012.	Iowa DNR-sponsored monitoring from May 2011 through November 2012.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2014	5a	IA 01-VOL-0160_0	North Branch Volga River	mouth (S33 T93N R9W Fayette Co.) to confluence with unnamed tributary in S8 T93N R9W Fayette Co.	River	Fish Consumption	Partial	Mercury in fish	Levels of mercury in predator fish (smallmouth bass) in 2001 & 2005 exceeded threshold for a 1 meal/week consumption advisory	U.S. EPA/IDNR fish contaminant monitoring in 2001 and 2005.	Tier IV
2008	5b-t	IA 04-FAB-0010_0	North Fabius River	IA/MO line to trib S33T68NR15W Davis Co	River	Aquatic Life	Partial	Biological: IBI	Low biotic index.	IDNR/UHL biological (REMAP) monitoring in 2006.	Tier IV
2012	5p	IA 01-TRK-0125_0	North Fork Catfish Creek	mouth (NE1/4 S34 T89N R2E Dubuque Co.) to Hwy 20 bridge crossing in S27 T89N R2E Dubuque Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of indicator bacteria far exceeds the Class A1 criterion.	Monitoring in 2010 for the Catfish Creek Watershed Project.	Tier III
2012	5p	IA 01-TRK-0127_0	North Fork Catfish Creek	from Hwy 20 bridge in Dubuque (S27 T89NR2E Dubuque Co.) to headwaters in NW1/4 S20 T89N R2E Dubuque Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of indicator bacteria far exceeds the Class A1 criterion.	Monitoring in 2010 for the Catfish Creek Watershed Project.	Tier III
2008	5a	IA 01-NMQ-0010_1	North Fork Maquoketa River	mouth (Jackson Co.) to confluence with Lytle Cr. S8 T85N R2E Jackson Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli greater than Class A1 criterion.	IDNR ambient WQ monitoring network.	Tier III
2008	5b-t	IA 01-NMQ-0020_1	North Fork Maquoketa River	confluence with Whitewater Cr.(S10 T86N R1W Jones Co) to Bear Cr. (S31 T89N R2W Dubuque Co.)	River	Aquatic Life	Partial	Biological: IBI	Low biotic index.	IDNR/UHL biological (REMAP) monitoring in 2005.	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2010	5b	IA 01-NMQ-0020_1	North Fork Maquoketa River	confluence with Whitewater Cr.(S10 T86N R1W Jones Co) to Bear Cr. (S31 T89N R2W Dubuque Co.)	River	Aquatic Life	Partial	Biological: FW mussels	> 50% decline in mussel species richness	Iowa State University freshwater mussel study.	Tier IV
2008	5a	IA 01-YEL-0160_0	North Fork Yellow River	mouth (S13 T96N R7W Winneshiek Co.) to confluence with unnamed tributary in S3 T96N R7W Winneshiek Co.	River	Aquatic Life	Partial	Organic Enrichment/ Low DO	Significantly greater than 10% of samples violate the Class B(WW2) dissolved oxygen criterion.	Yellow River Watershed Project monitoring 2004-06.	Tier IV
2006	5b-t	IA 04-RAC-0050_2	North Raccoon River	from County Road M54 (S24T88N R36W Sac Co.) to confluence with Drainage Ditch 101 in S36 T91N R36W Buena Vista Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL biocriteria monitoring 2004	Tier IV
2004	5b-t	IA 04-LDM-0300_2	North River	from Co. Rd. R-63 (S16 T77N R24W Warren Co.) to confluence with Badger Cr. in S33 T77N R25W Warren Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL biocriteria monitoring 2002	Tier IV
2008	5a	IA 04-LDM-0300_2	North River	from Co. Rd. R-63 (S16 T77N R24W Warren Co.) to confluence with Badger Cr. in S33 T77N R25W Warren Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL ambient water quality monitoring network.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2010	5a	IA 03-NSK-0010_1	North Skunk River	mouth (S5 T74N R10W Keokuk Co.) to confluence with Cedar Cr. in S15 T75N R12W Keokuk Co.	River	Aquatic Life	Not supporting	Chromium	Violations of Class B(WW1) acute criterion for chromium.	IDNR/UHL ambient water quality monitoring network.	Tier III
2008	5a	IA 03-NSK-0010_1	North Skunk River	mouth (S5 T74N R10W Keokuk Co.) to confluence with Cedar Cr. in S15 T75N R12W Keokuk Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL ambient water quality monitoring network.	Tier IV
2010	5a	IA 03-NSK-0010_2	North Skunk River	from confluence with Cedar Cr. (S15 T75N R12W Keokuk Co.) to confluence with Middle Cr. in S35 T76N R14W Mahaska Co.	River	Aquatic Life	Not supporting	Chromium	Violations of acute Class B(WW1) criterion for chromium.	IDNR/UHL ambient water quality monitoring network.	Tier III
2008	5a	IA 03-NSK-0010_2	North Skunk River	from confluence with Cedar Cr. (S15 T75N R12W Keokuk Co.) to confluence with Middle Cr. in S35 T76N R14W Mahaska Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL ambient water quality monitoring network.	Tier IV
2004	5b-t	IA 03-NSK-0020_2	North Skunk River	from the Mahaska/Poweshiek line to confluence with Sugar Cr. in S20 T78N R16W Poweshiek Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL biocriteria monitoring 1999	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2012	5a	IA 04-RAC-01390-L_0	North Twin Lake	Calhoun County S1T88NR33W 4 mi N of Rockwell City.	Lake	Primary Contact	Partial	Indicator Bacteria	Significantly greater than 10% of the samples exceeded the single sample maximum in 2010.	IDNR Beach Monitoring Program	Tier II
2008	5p	IA 01-TRK-0416_0	Nutting Creek	mouth (S19 T95N R7W Fayette Co.) to confluence with unnamed tributary in S2 T95N R8W Fayette Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli greater than the Class A1 criterion.	IDNR/UHL TMDL-related monitoring.	Tier III
2008	5p	IA 06-LSR-0250_0	Ocheyedan River	mouth (S13 T96N R37W Clay Co.) to confluence with Little Ocheyedan R. in S28 T98N R39W Osceola Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL statewide ambient water quality monitoring network.	Tier III
2006	5b-t	IA 02-IOW-0150_1	Old Mans Creek	mouth (NE 1/4 S27 T78N R6W Johnson Co.) to confluence with unnamed tributary at north line S1 T78N R7W Johnson Co. (approx. 1/2 mile downstream from county road W62).	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL REMAP monitoring 2004	Tier IV
2006	5b-t	IA 02-IOW-0150_2	Old Mans Creek	from confluence with unnamed tributary (N line S1 T78N R7W Johnson Co.) to confluence with unnamed tributary in NE 1/4 S4 T78N R8W Johnson Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL REMAP monitoring 2004	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2008	5p	IA 02-IOW-0150_2	Old Mans Creek	from confluence with unnamed tributary (N line S1 T78N R7W Johnson Co.) to confluence with unnamed tributary in NE 1/4 S4 T78N R8W Johnson Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL ambient water quality monitoring network.	Tier III
2008	5a	IA 05-NOD-00485-L_0	Orient Lake	Adair County S20T74NR31W approx 1 mi SW of Orient.	Lake	Primary Contact	Not supporting	Algae	Aesthetically objectionable conditions (chlorophyll TSI = 67).	ISU and UHL lake surveys 2002-2006.	Tier I
2008	5a	IA 05-NOD-00485-L_0	Orient Lake	Adair County S20T74NR31W approx 1 mi SW of Orient.	Lake	Primary Contact	Not supporting	pH	Significantly greater than 10% of the samples exceed the pH criterion.	ISU and UHL lake surveys 2002-2006.	Tier I
2008	5a	IA 05-NOD-00485-L_0	Orient Lake	Adair County S20T74NR31W approx 1 mi SW of Orient.	Lake	Aquatic Life	Partial	pH	Significantly greater than 10% of the samples exceed the pH criterion.	ISU and UHL lake surveys 2002-2006.	Tier I
2014	5p	IA 01-TRK-0390_1	Otter Creek	mouth (S13 T94N R7W Fayette Co.) to confluence with unnamed tributary (aka Glovers Cr.) in S22 T94N R8W Fayette Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion (126 orgs/100 ml).	Monitoring from May 2011 to November 2014 at STORET station 15330009.	Tier III
2014	5a	IA 01-TRK-0390_1	Otter Creek	mouth (S13 T94N R7W Fayette Co.) to confluence with unnamed tributary (aka Glovers Cr.) in S22 T94N R8W Fayette Co.	River	Aquatic Life	Partial	Thermal Modifications: Water Temperature	Significantly greater than 10% violation of Class B(CW1) temperature criterion 2011-12.	Monitoring from May 2011 to November 2012 at STORET station 15330009.	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2014	5p	IA 02-CED-0230_0	Otter Creek	mouth (S35 T84N R8W Linn Co.) to confluence with East Otter and West Otter creeks in S7 T84N R7W Linn Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of E. coli in recreation seasons of 2010 & 2011 > Class A1 criterion.	IDNR sponsored ambient monitoring at Tower Terrace Road (STORET station 15570010).	Tier III
2010	5b	IA 02-CED-0550_0	Otter Creek	mouth (S21 T100N R18W Mitchell Co.) to Iowa/Minnesota line at N line S11 T100N R18W Mitchell Co.	River	Aquatic Life	Partial	Biological: fish kill, ammonia/low DO	Fish kill in September 2009 caused by hog manure; no indication of restitution sought or received for value of fish killed.	IDNR fish kill investigation.	Tier III
2008	5p	IA 02-CED-0550_0	Otter Creek	mouth (S21 T100N R18W Mitchell Co.) to Iowa/Minnesota line at N line S11 T100N R18W Mitchell Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL/Mitchell Co. CB ambient monitoring for Cedar River/Mitchell Co. project 2006-08	Tier IV
2006	5b	IA 06-BSR-0070_3	Otter Creek	from the Lyon-Osceola county line (E line S36 T98N R43W Lyon Co.) to confluence with unnamed tributary in S14 T99N R42W Osceola Co.	River	Aquatic Life	Partial	Biological: fish kill, unknown toxicity	fish kills in 2002 and 2004	IDNR fish kill investigations	Tier IV
2004	5b	IA 06-BSR-0072_0	Otter Creek	from confluence with unnamed tributary (S14 T99NR42 W Osceola Co.) to the Iowa/Minnesota state line	River	General Use	Not supporting	Biological: fish kill, ammonia/low DO	fish kills in 2001 and 2002; 2001 kill caused by animal waste no source identified	IDNR fish kill investigation	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2008	5b	IA 04-LDM-00215-L_0	Ottumwa Lagoon	Wapello County S25T72NR14W at Ottumwa.	Lake	Aquatic Life	Not supporting	Biological: fish kill, unknown toxicity	Fish kill caused by a spill of petroleum products.	DNR fish kill investigation.	Tier IV
2012	5p	IA 01-UIA-0210_0	Paint Creek (aka Pine Cr.)	mouth (S9 T99N R6W Allamakee Co.) to confluence with unnamed tributary in SE 1/4 S11 T99N R7W Winneshiek Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria slightly exceed the Class A1 criterion.	Upper Iowa River Watershed (UIRW) project 2008-10.	Tier III
2004	5b	IA 02-SHL-00235_0	Palmer Creek	mouth (NW 1/4 S29 T93N R16W Butler Co.) to headwaters in S32 T93N R17W Butler Co.	River	Aquatic Life	Partial	Biological: fish kill, ammonia/low DO	fish kill in 2000	IDNR fish kill investigation	Tier IV
2012	5p	IA 01-UIA-0230_0	Patterson Creek	mouth (S29 T99N R6W Allamakee Co.) to east line of S3 T98N R6W Allamakee Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria exceed the Class A2 criterion.	Upper Iowa River Watershed project 2008-10.	Tier III
2008	5p	IA 01-UIA-0230_0	Patterson Creek	mouth (S29 T99N R6W Allamakee Co.) to east line of S3 T98N R6W Allamakee Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Upper Iowa River Watershed Project monitoring Site 21.	Tier III
2004	5b-t	IA 01-TRK-0260_0	Pecks Creek	mouth (S1 T91N R3W Clayton Co.) to south line of S15 T91N R3W Clayton Co.	River	Aquatic Life	Not supporting	Biological: IBI	Low biotic index	IDNR/UHL REMAP sampling 2002	Tier IV
2014	5p	IA 01-TRK-0260_0	Pecks Creek	mouth (S1 T91N R3W Clayton Co.) to south line of S15 T91N R3W Clayton Co.	River	Primary Contact	Not supporting	Indicator Bacteria	E. coli > Class A1 geomean criterion.	Iowa DNR monitoring in 2011 and 2012.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2006	5b-t	IA 06-BSR-0021_0	Perry Creek	from mouth (S32 T89N R47W Woodbury Co.) to confluence with unnamed tributary in S35 T91N R47W Plymouth Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL REMAP monitoring 2004	Tier IV
2010	5a	IA 04-RAC-01690-L_0	Pickerel Lake	Buena Vista County S1T93NR35W 4 mi NE of Marathon.	Wetland	Primary Contact	Not supporting	Algae	Aesthetically objectionable conditions: chlorophyll TSI is greater than 65	IDNR shallow lakes & wetland monitoring program 2006-2008.	Tier IV
2010	5a	IA 04-RAC-01690-L_0	Pickerel Lake	Buena Vista County S1T93NR35W 4 mi NE of Marathon.	Wetland	Aquatic Life	Not supporting	Algae	Algae levels (chlorophyll TSI = 78) adversely impact fish and plant communities	DNR Shallow Lakes monitoring.	Tier IV
2010	5a	IA 04-RAC-01690-L_0	Pickerel Lake	Buena Vista County S1T93NR35W 4 mi NE of Marathon.	Wetland	Primary Contact	Not supporting	Turbidity	Aesthetically objectionable conditions (Secchi TSI > 65).	IDNR shallow lakes & wetland monitoring 2006-2008.	Tier IV
2010	5a	IA 04-RAC-01690-L_0	Pickerel Lake	Buena Vista County S1T93NR35W 4 mi NE of Marathon.	Wetland	Aquatic Life	Not supporting	Turbidity	Turbidity levels (Secchi TSI = 76) adversely impact fish and plant communities	DNR Shallow Lakes monitoring.	Tier IV
2006	5b-v	IA 02-CED-0157_1	Pike Run	mouth (SW 1/4 S19 T77N R3W Muscatine Co.) to confluence with unnamed tributary in S9 T77N R3W Muscatine Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL biocriteria monitoring 2004	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2008	5b-v	IA 02-CED-0157_2	Pike Run	from unnamed tributary (NW 1/4 S9 T77N R3W Muscatine Co.) to road crossing in SW 1/4 S34 T78N R3W Muscatine Co.	River	Aquatic Life	Not supporting	Biological: IBI	Low biotic index.	IDNR/UHL biological (biocriteria) sampling in 2005 and 2006.	Tier IV
2008	5p	IA 01-UIA-0370_0	Pine Creek	mouth (S10 T99N R9W Winneshiek Co.) to IA/MN state line.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Upper Iowa River Watershed Project monitoring Site 10.	Tier III
2012	5a	IA 02-CED-00310-L_0	Pleasant Creek Lake	Linn County S31T85NR8W 4 mi. NNW of Palo.	Lake	Aquatic Life	Fully	Indicator Bacteria	Significantly greater than 10% of the samples exceeded the single sample maximum in 2010.	IDNR Beach Monitoring Program	Tier II
2008	5b-t	IA 01-MAQ-0220_1	Plum Creek	mouth (Delaware Co.) to confluence with unnamed tributary in E 1/2 S24 T89N R4W Delaware Co.	River	Aquatic Life	Partial	Biological: IBI	low biotic index	IDNR/UHL biological monitoring	Tier IV
2004	5b	IA 01-MAQ-0220_1	Plum Creek	mouth (Delaware Co.) to confluence with unnamed tributary in E 1/2 S24 T89N R4W Delaware Co.	River	Aquatic Life	Not supporting	Biological: FW mussels	> 50% decline in mussel species richness	ISU freshwater mussel study	Tier IV
2008	5b-t	IA 06-WED-0003_2	Plum Creek	Thurman to trib S29T70NR42W Fremont	River	Aquatic Life	Partial	Biological: IBI	Low biotic index.	IDNR/UHL biological (REMAP) monitoring in 2005.	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2006	5b-v	IA 01-TRK-0240_0	Point Hollow Creek (aka White Pine Cr.)	mouth (S31 T91N R2W Clayton Co.) to spring source in S8 T90N R2W Dubuque Co.	River	Aquatic Life	Not supporting	Biological: IBI	Low biotic index	IDNR/UHL biological monitoring in 2003 (REMAP) and 2004	Tier IV
2014	5p	IA 01-TRK-0240_0	Point Hollow Creek (aka White Pine Cr.)	mouth (S31 T91N R2W Clayton Co.) to spring source in S8 T90N R2W Dubuque Co.	River	Primary Contact	Not supporting	Indicator Bacteria	E. coli geomean > Class A1 criterion.	IDNR monitoring from March to July 2010.	Tier III
2014	5a	IA 03-SKM-00178-L_0	Pollmiller Park Lake	Lee County S9T68NR5W 0.5 mi. E of West Point.	Lake	Fish Consumption	Partial	Mercury in fish	Levels of mercury in snapping turtle tissue in 2010 & 2012 equaled or exceeded the threshold for a 1 meal/week consumption advisory.	Iowa DNR fish/turtle contaminant monitoring in 2010 and 2012.	Tier IV
2006	5b	IA 04-RAC-01695_0	Poor Farm Creek	mouth (NE1/4 S15 T91N R36W Buena Vista Co.) to headwaters in S34 T91N R37W Buena Vista Co.	River	Aquatic Life	Partial	Biological: fish kill, unknown toxicity	Fish kills in July 2004 cause by storm sewer flush.	IDNR fish kill investigations.	Tier IV
2010	5a	IA 02-IOW-0098_0	Prairie Creek	mouth (S31 T77N R5W Johnson Co.) to the Lone Tree wastewater treatment plant outfall (NE1/4 S16 T77N R5W Johnson Co.)	River	Aquatic Life	Not supporting	Unknown Toxicity	Violation of narrative criteria due to wastewater impact.	IDNR use attainability analysis 2006.	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2014	5p	IA 03-SSK-0175_0	Prairie Creek	from mouth (SE1/4 S34 T85N R25W) to headwaters in the NW1/4 S33 T85N R26W.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of indicator bacteria is greater than the Class A1 criterion.	Iowa DNR snapshot WQ monitoring from 2008-2012 at STORET station 908022.	Tier III
2014	5p	IA 04-UDM-0535_0	Prairie Creek	from mouth (T81N R25W Sec5 Polk Co.) to headwaters (T82N R26W Sec24 Boone Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of indicator bacteria (E. coli) violated the Class A1 criterion.	Iowa DNR special project monitoring from March to September 2011.	Tier III
2004	5a	IA 05-NSH-01440-L_0	Prairie Rose Lake	Shelby County S36T79NR38W 6 mi SE of Harlan.	Lake	Primary Contact	Not supporting	Algae	Aesthetically objectionable conditions (chlorophyll-a TSI = 68; Secchi TSI= 66)	IDNR/UHL beach monitoring; ISU statewide lake survey	Tier I
2012	5a	IA 05-NSH-01440-L_0	Prairie Rose Lake	Shelby County S36T79NR38W 6 mi SE of Harlan.	Lake	Primary Contact	Partial	Indicator Bacteria	Significantly greater than 10% of beach samples exceeded Iowa's Class A1 single sample maximum criterion in 2009 & 2010.	IDNR beach monitoring program.	Tier II
2004	5a	IA 05-NSH-01440-L_0	Prairie Rose Lake	Shelby County S36T79NR38W 6 mi SE of Harlan.	Lake	Primary Contact	Not supporting	Turbidity	Aesthetically objectionable conditions (Secchi TSI = 66) and high levels of inorganic suspended solids	ISU lake survey.	Tier I
2010	5p	IA 02-IOW-0175_2	Price Creek	from mouth of Mill Race (S26 T81N R9W Iowa Co.) to confluence with unnamed tributary in NW 1/4 S8 T81N R9W Iowa Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IOWATER monitoring 2005-06.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2010	5p	IA 02-IOW-0176_0	Price Creek	from confluence with unnamed trib in NW1/4 S8 T81N R9W Iowa Co. to headwaters in S31 T82N R10W Benton Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IOWATER monitoring 2005-06.	Tier III
2008	5a	IA 02-IOW-0155_1	Ralston Creek	from mouth (S15 T79N R6W Johnson Co.) to confluence with unnamed tributary in S11 T79N R6W Johnson Co.	River	Aquatic Life	Partial	Priority Organics: coal tar	Coal tar site; studies suggest influence on surface water.	Coal tar studies in 1995 1998 and 2001.	Tier IV
2008	5a	IA 02-IOW-0155_1	Ralston Creek	from mouth (S15 T79N R6W Johnson Co.) to confluence with unnamed tributary in S11 T79N R6W Johnson Co.	River	Primary Contact	Partial	Priority Organics: coal tar	Coal tar site; studies suggest influence on surface water.	Coal tar studies in 1995 1998 and 2001.	Tier IV
2004	5a	IA 02-IOW-0155_1	Ralston Creek	from mouth (S15 T79N R6W Johnson Co.) to confluence with unnamed tributary in S11 T79N R6W Johnson Co.	River	General Use	Partial	Priority Organics: coal tar	coal tar site; studies suggest influence on surface water	Coal tar studies in 1995 1998 and 2001.	Tier IV
2012	5a	IA 05-CHA-0020-L_1	Rathbun Reservoir	Appanoose County approx 6 miles N of Centerville.	Reservoir	Primary Contact	Not supporting	Turbidity	Aesthetically objectionable conditions (Secchi TSI > 65).	U.S. Army Corps of Engineer water quality monitoring 2008-10.	Tier II

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2006	5a	IA 05-CHA-0020-L_2	Rathbun Reservoir	from main lake basin uplake to inflow of South Fork Chariton River in S36 T70N R20W Wayne Co.	Reservoir	Primary Contact	Not supporting	Turbidity	aesthetically objectionable conditions; Secchi trophic state index >70	Army Corps of Engineers monitoring 2002-04	Tier II
2006	5a	IA 05-CHA-0020-L_2	Rathbun Reservoir	from main lake basin uplake to inflow of South Fork Chariton River in S36 T70N R20W Wayne Co.	Reservoir	Aquatic Life	Not supporting	Turbidity	Turbidity levels (Secchi TSI > 65) adversely impact fish and plant communities.	IDNR Fisheries Bureau	Tier II
2006	5a	IA 05-CHA-0020-L_3	Rathbun Reservoir	from main lake basin (state highway 142) uplake to inflow of the Chariton River at the Wayne/Lucas county line.	Reservoir	Primary Contact	Not supporting	Turbidity	aesthetically objectionable conditions; Secchi trophic state index >70	Army Corps of Engineers monitoring 2002-04	Tier II
2006	5a	IA 05-CHA-0020-L_3	Rathbun Reservoir	from main lake basin (state highway 142) uplake to inflow of the Chariton River at the Wayne/Lucas county line.	Reservoir	Aquatic Life	Partial	Turbidity	Turbidity levels (Secchi TSI > 65) adversely impact fish and plant communities.	IDNR Fisheries Bureau	Tier II
2010	5a	IA 05-CHA-0020-L_4	Rathbun Reservoir	from main lake basin uplake to inflow of Honey Creek in NW1/4 S8 T70N R18W Appanoose Co.	Reservoir	Primary Contact	Partial	Turbidity	Aesthetically objectionable conditions (Secchi TSI > 65).	Army Corps of Engineers monitoring 2006-2008.	Tier II

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2010	5p	IA 02-IOW-0215_0	Raven Creek	mouth (S25 T83NR16W Tama Co.) to W line of S35 T83N R16W Tama Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion (126 orgs/100 ml).	USGS monitoring near Montour (station 05451762) from April through December 2006.	Tier III
2008	5a	IA 04-LDM-02296-L_0	Red Haw Lake	Lucas County S28T71NR21W 2 mi SE of Chariton.	Lake	Primary Contact	Not supporting	Indicator Bacteria	Violations of the geometric mean criterion.	DNR beach monitoring program.	Tier II
2010	5a	IA 04-LDM-02296-L_0	Red Haw Lake	Lucas County S28T71NR21W 2 mi SE of Chariton.	Lake	Fish Consumption	Partial	Mercury in fish	Fish consumption advisory for mercury (1 meal/week) issued in 2009.	IDNR/U.S. EPA fish tissue (RAFT) monitoring in 2004 2007 and 2008.	Tier IV
2014	5a	IA 04-LDM-0030-L_0	Red Rock Reservoir	Marion County S19T76NR18W near Pella.	Reservoir	Primary Contact	Not supporting	Indicator Bacteria	Violations to the geometric mean and single-sample maximum criteria for indicator bacteria	ISU/ACOE water monitoring; IDNR beach monitoring program	Tier II
2010	5a	IA 04-LDM-0030-L_0	Red Rock Reservoir	Marion County S19T76NR18W near Pella.	Reservoir	Primary Contact	Not supporting	Turbidity	Aesthetically objectionable conditions; Secchi trophic state index greater than 65	ISU and UHL statewide lakes surveys.	Tier II
2014	5b	IA 02-IOW-01608_0	Rhine Creek	mouth (NE/14 S28 T80N R8W Johnson Co.) to headwaters in S7 T80N R8W Johnson Co.	River	General Use	Partial	Biological: fish kill, pesticide	Fish kill in November 2012 caused by spill of pesticide.	IDNR fish kill database (https://programs.iowadnr.gov/fishkill/detail.aspx?fkid=855)	Tier IV
2014	5a	IA 02-WIN-00210-L_0	Rice Lake	Winnebago County S13T99NR23W at SE edge of Lake Mills.	Wetland	Primary Contact	Not supporting	Algae	aesthetically objectionable conditions (chlorophyll TSI = 79)	IDNR shallow lakes monitoring program	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2014	5a	IA 02-WIN-00210-L_0	Rice Lake	Winnebago County S13T99NR23W at SE edge of Lake Mills.	Wetland	Aquatic Life	Partial	Turbidity	Turbidity levels above the UMCC guideline (median TSS = 60.5)	IDNR wetlands and shallow lakes monitoring program	Tier IV
2014	5p	IA 01-TRK-0360_1	Roberts Creek	mouth (S25 T93N R5W Clayton Co.) to confluence with Howard Cr. at St. Olaf (S25 T94N R5W Clayton Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	E. coli > geomean criterion.	IDNR monitoring from May 2011 to November 2012.	Tier III
2014	5p	IA 01-TRK-0360_3	Roberts Creek	from confluence with Silver Cr. (S16 T94N R5W Clayton Co.) to confluence with unnamed tributary in S8 T95N R6W Clayton Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli > WQ criterion.	Iowa DNR monitoring May 2011 to November 2012.	Tier III
2008	5a	IA 04-LDM-00380-L_0	Roberts Creek Lake	Marion County S4T76NR19W 6 mi NE of Knoxville.	Lake	Primary Contact	Partial	Algae	Aesthetically objectionable conditions (chlorophyll TSI = 66).	ISU and UHL lake surveys 2002-2006.	Tier I
2004	5a	IA 04-LDM-00380-L_0	Roberts Creek Lake	Marion County S4T76NR19W 6 mi NE of Knoxville.	Lake	Primary Contact	Partial	Turbidity	Aesthetically objectionable conditions (Secchi TSI > 65).	ISU statewide lake survey 2000-2002. information from DNR Fisheries	Tier I
2010	5p	IA 01-NEM-0067_0	Robin Creek	from mouth (SW1/4 S14 T78N R3E Scott Co.) to headwaters in SW1/4 S10 T78N R3E Scott Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli greater than Class A1 criterion.	IDNR/UHL TMDL monitoring 2008.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2014	5a	IA 01-MAQ-0010_1	Rock Creek	mouth (S31 T81N R6E Clinton Co.) to unnamed tributary in SW 1/4 NE 1/4 S30 T81N R6E Clinton Co. (upstream from PCS Nitrogen).	River	Aquatic Life	Not supporting	Organic Enrichment/ Low DO	Greater than 10% of samples violate the Class B(WW-2) criterion for dissolved oxygen.	LTRMP ambient monitoring	Tier IV
2008	5p	IA 02-CED-0510_1	Rock Creek	mouth (S24 T97N R17W Floyd Co.) to confluence with unnamed tributary in NW 1/4 SE 1/4 S17 T97N R17W Mitchell Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL/Mitchell Co. CB ambient monitoring for Cedar River/Mitchell Co. project 2006-08.	Tier III
2014	5p	IA 02-CED-0510_3	Rock Creek	from confluence with Goose Cr. (S35 T98N R18W Mitchell Co.) to Hwy 9 crossing at N line S26 T98N R18W Mitchell Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of E. coli from 2010-2012 were greater than the Class A1 criterion.	Cedar River/Mitchell County monitoring at STORET station 15660013.	Tier III
2006	5a	IA 03-NSK-00340-L_0	Rock Creek Lake	Jasper County S17T80NR17W 4 mi. ENE of Kellogg.	Lake	Primary Contact	Not supporting	Indicator Bacteria	geometric mean > WQS	IDNR/UHL beach monitoring 2002-2004	Tier II
2004	5b	IA 06-BSR-0030_0	Rock River	mouth (S1 T95N R48W Sioux Co.) to confluence with Little Rock R. in S35 T98N R46W Lyon Co.	River	Aquatic Life	Partial	Biological: fish kill, ammonia/low DO	fish kill in 2001; caused by animal waste no source identified	IDNR fish kill investigation	Tier IV
2008	5a	IA 06-BSR-0030_0	Rock River	mouth (S1 T95N R48W Sioux Co.) to confluence with Little Rock R. in S35 T98N R46W Lyon Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Violations of the state's geometric mean criterion.	DNR/UHL ambient river monitoring.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2008	5a	IA 06-BSR-0040_1	Rock River	from confluence with Little Rock R. (S35 T98N R46W Lyon Co.) to confluence with Kanaranzi Cr. in S28 T100N R45W Lyon Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli exceeds the Class A1 criterion.	IDNR/UHL TMDL-related monitoring 2002-03.	Tier III
2008	5p	IA 06-BSR-0040_2	Rock River	from confluence with Kanaranzi Cr. (S28 T100N R45W Lyon Co.) to the IA/MN state line	River	Primary Contact	Partial	Indicator Bacteria	Geometric mean of E. coli exceeds the Class A1 criterion.	IDNR/UHL TMDL-related monitoring 2002-03.	Tier III
2010	5a	IA 02-IOW-00865_2	Roff Creek	from confluence with unnamed creek (SE1/4 NE1/4 S23 T73N R4W Louisa Co.) to the confluence with unnamed creek (NW1/4 S25 T73 R4W Louisa Co. [middle of 3 unnamed streams on west side])	River	Aquatic Life	Not supporting	Unknown Toxicity	Violation of narrative criteria due to wastewater impact.	IDNR use attainability analysis 2006.	Tier IV
2014	5p	IA 01-TRK-0455_0	Rogers Creek	mouth (S8 T96N R9W Winneshiek Co.) to confluence with Goodard and Krumm creeks (S18 T96N R9W Winneshiek Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Turkey River Watershed Monitoring project 2011-2012.	Tier III
2014	5p	IA 01-MAQ-0255_0	Rutherford Branch	from mouth (T90N R5W Sec26) to headwaters (T90N R5W Sec12) Delaware Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli for 2011 recreation season exceeds Iowa's Class A1 criterion.	IDNR special project monitoring from May 2011 to May 2012.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2006	5a	IA 05-PLA-0015-L_0	Sands Timber Lake (aka Blockton Reservoir)	S2 T67N R32W Taylor Co.	Lake	Aquatic Life	Partial	Turbidity	turbidity-related impacts on sport fishery related to siltation and/or common carp	IDNR Fisheries Bureau	Tier I
2004	5a	IA 03-SKU-0085_0	Saunders Branch	mouth (SW 1/4 S17 T71N R6W Henry Co.) to headwaters	River	Aquatic Life	Not supporting	Ammonia	overwhelming evidence of impacts from coal tar site and/or discharge from WWTP	IDNR/UHL biocriteria monitoring 1998	Tier IV
2004	5a	IA 03-SKU-0085_0	Saunders Branch	mouth (SW 1/4 S17 T71N R6W Henry Co.) to headwaters	River	Aquatic Life	Not supporting	Organic Enrichment/ Low DO	Overwhelming evidence of impacts from coal tar site and/or discharge from WWTP	IDNR/UHL biocriteria monitoring 1998	Tier IV
2004	5a	IA 03-SKU-0085_0	Saunders Branch	mouth (SW 1/4 S17 T71N R6W Henry Co.) to headwaters	River	Aquatic Life	Not supporting	Priority Organics: coal tar	overwhelming evidence of impacts from coal tar site and/or discharge from WWTP	IDNR/UHL biocriteria monitoring 1998	Tier IV
2006	5a	IA 04-UDM-0020-L_0	Saylorville Reservoir	Polk County Saylorville Dam to Polk-Dallas county line.	Reservoir	Primary Contact	Not supporting	Indicator Bacteria	geometric mean > WQS	ISU/ACOE beach monitoring 2002-2004	Tier II
2012	5a	IA 02-SHL-0010_1	Shell Rock River	from mouth (S4 T90N R14W Black Hawk Co.) to the south corporate limit of the city of Shell Rock in S12 T91N R15W Butler Co.	River	Fish Consumption	Partial	Mercury in fish	One meal/week consumption advisory issued in late 2012 due to high level of mercury in predatory fish sample.	U.S. EPA/Iowa DNR fish tissue (RAFT) monitoring in 2011.	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2012	5a	IA 02-SHL-0010_2	Shell Rock River	from south corporate limit of Shell Rock (S12 T91N R15W Butler Co.) to confluence with Flood Cr. in S27 T93N R16W Butler Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of indicator bacteria slightly exceeds Class A1 criterion.	IDNR/SHL ambient monitoring 2008-10.	Tier III
2012	5a	IA 02-SHL-0010_2	Shell Rock River	from south corporate limit of Shell Rock (S12 T91N R15W Butler Co.) to confluence with Flood Cr. in S27 T93N R16W Butler Co.	River	Fish Consumption	Partial	Mercury in fish	One meal/week consumption advisory issued in late 2012 due to high level of mercury in predatory fish sample.	U.S. EPA/Iowa DNR fish contaminant (RAFT) monitoring in 2011.	Tier IV
2012	5a	IA 02-SHL-0010_3	Shell Rock River	from confluence with Flood Cr. (S27 T93N R16W Butler Co.) to confluence with Winnebago R. in S14 T96N R18W Floyd Co.	River	Fish Consumption	Partial	Mercury in fish	One meal/week consumption advisory issued in late 2012 due to high level of mercury in predatory fish sample.	U.S. EPA/Iowa DNR fish contaminant (RAFT) monitoring in 2011.	Tier IV
2010	5a	IA 02-SHL-0020_2	Shell Rock River	from confluence with Rose Cr. (NW 1/4 S8 T97N R19W Cerro Gordo Co.) to the Iowa/Minnesota state line.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Minnesota Pollution Control Agency monitoring 2006-08.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2012	5a	IA 02-SHL-0020_2	Shell Rock River	from confluence with Rose Cr. (NW 1/4 S8 T97N R19W Cerro Gordo Co.) to the Iowa/Minnesota state line.	River	Aquatic Life	Partial	Organic Enrichment/ Low DO	Significantly greater than 10% of samples violated Iowa's dissolved oxygen criterion.	Minnesota Pollution Control Agency (MPCA) monitoring near Gordonsville 2008-10	Tier IV
2004	5a	IA 01-MAQ-0005-L_0	Shrickers Slough	approximately 2 miles SW of Camanche in Sections 5 6 and 7 of T80N R6E Clinton Co.	Wetland	Aquatic Life	Not supporting	Algae	Algae levels (chlorophyll TSI > 65) adversely impact fish and plant communities.	LTRMP ambient monitoring	Tier IV
2004	5a	IA 01-MAQ-0005-L_0	Shrickers Slough	approximately 2 miles SW of Camanche in Sections 5 6 and 7 of T80N R6E Clinton Co.	Wetland	Aquatic Life	Not supporting	Turbidity	Turbidity levels (Secchi TSI > 65) adversely impact fish and plant communities.	LTRMP ambient monitoring	Tier IV
2014	5p	IA 01-UIA-0304_0	Siewers Spring	from mouth (NE1/4 SW1/4 S27 T98NR8W Winneshiek Co.) to headwaters (spring head) in SW1/4SW1/4 S27 T98N R8W Winneshiek Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of indicator bacteria (E. coli) exceeds Iowa's Class A1 criterion.	Northeast Iowa RC&D monitoring from April 2010 to October 2012.	Tier III
2004	5b	IA 01-MAQ-0200_0	Silver Creek	mouth (S8 T86N R3W Jones Co.) to unnamed tributary in S10 T86N R4W Jones Co.	River	Aquatic Life	Not supporting	Biological: FW mussels	> 50% decline in mussel species richness	ISU freshwater mussel study	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2004	5b-t	IA 01-TRK-0381_0	Silver Creek	mouth (S16 T94N R5W Clayton Co.) to confluence with unnamed tributary in S32 T95N R5W Clayton Co.	River	Aquatic Life	Not supporting	Biological: IBI	Low biotic index	IDNR/UHL biocriteria monitoring 2000	Tier IV
2008	5p	IA 01-TRK-0381_0	Silver Creek	mouth (S16 T94N R5W Clayton Co.) to confluence with unnamed tributary in S32 T95N R5W Clayton Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli greater than Class A1 WQ criterion.	IDNR/UHL TMDL-related WQ monitoring near Monona.	Tier III
2014	5a	IA 01-TRK-0381_0	Silver Creek	mouth (S16 T94N R5W Clayton Co.) to confluence with unnamed tributary in S32 T95N R5W Clayton Co.	River	Aquatic Life	Not supporting	Organic Enrichment/ Low DO	Significantly greater than 10% violations of Class B(WW2) dissolved oxygen criterion.	IDNR monitoring from June 2011 to November 2012.	Tier IV
2008	5p	IA 01-TRK-0382_0	Silver Creek	confluence with unnamed tributary in S32 T95N R5W to headwaters(T95N R6W Sec11)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli greater than Class A1 WQ criterion.	IDNR/UHL TMDL-related WQ monitoring.	Tier III
2012	5p	IA 01-UIA-0160_0	Silver Creek	mouth (S4 T99N R5W Allamakee Co.) to south line of S31 T99N R5W Allamakee Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of indicator bacteria exceeds Class A2 criterion.	Upper Iowa River Watershed project 2008-10.	Tier III
2010	5p	IA 01-UIA-0160_0	Silver Creek	mouth (S4 T99N R5W Allamakee Co.) to south line of S31 T99N R5W Allamakee Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Upper Iowa River Watershed Project monitoring Site 27.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2008	5p	IA 01-UIA-0403_0	Silver Creek	mouth (S2 T99N R10W Winneshiek Co.) to west line of S12 T99N R11W Howard Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Upper Iowa River Watershed Project monitoring Site 8.	Tier III
2004	5b-t	IA 05-NSH-0120_0	Silver Creek	from Middle Silver Cr. (S31 T74N R41W Pottawattamie Co.) to confluence with Little Silver Cr. in S34 T78N R40W Shelby Co.	River	Aquatic Life	Not supporting	Biological: IBI	Low biotic index	IDNR Fisheries Bureau biological sampling in 1998.	Tier IV
2006	5b-t	IA 06-BSR-0029_0	Sixmile Creek	mouth (S28T94N R48W Sioux Co.) to confluence with unnamed tributary in S19 T95N R46W Sioux Co.	River	Aquatic Life	Not supporting	Biological: IBI	Low biotic index	IDNR/UHL biocriteria monitoring 2000	Tier IV
2008	5a	IA 06-BSR-0029_0	Sixmile Creek	mouth (S28T94N R48W Sioux Co.) to confluence with unnamed tributary in S19 T95N R46W Sioux Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean for E. coli exceeds the Class A1 criterion.	IDNR/UHL TMDL-related monitoring in 2002.	Tier III
2004	5b-t	IA 04-UDM-0170_0	Skillet Creek	mouth (S16 T86N R27W Webster Co.) to confluence with unnamed tributary in NW 1/4 SE 1/4 S14 T86N R28W Webster Co.	River	Aquatic Life	Not supporting	Biological: IBI	Low biotic index believed due to WWTP discharge	IDNR/UHL biocriteria monitoring	Tier IV
2012	5a	IA 03-SKU-0010_1	Skunk River	mouth to confluence with Big Cr. southeast of Mt. Pleasant in S19 T70N R5W in Henry Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria far exceed the Class A1 criterion.	USGS NAWQA monitoring near Augusta from 2008-10.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2014	5p	IA 02-CED-0525_0	Slough Creek	from mouth (T97N R16W Sec18 Mitchell Co.) to headwaters (T97N R16W Sec15 Floyd Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria (E. coli) violated the Class A1 criterion.	IDNR special project monitoring from 2010 through 2012.	Tier III
2006	5b-t	IA 04-LDM-0090_2	Soap Creek	from confluence with Little Soap Cr. (S1 T70N R13W Davis Co.) to confluence with unnamed tributary in S31 T71N R16W Monroe Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL REMAP monitoring 2002 and 2004	Tier IV
2012	5b	IA 04-UDM-0290_0	Soldier Creek	mouth (S19 T89N R28W Webster Co.) to confluence with unnamed tributary in S26 T90N R28W Webster Co.	River	Aquatic Life	Partial	Biological: fish kill, unknown toxicity	Suspect a pollutant-related cause of this fish kill.	IDNR fish kill investigation in 2006.	Tier IV
2008	5p	IA 06-SOL-0010_1	Soldier River	mouth (S17 T80N R45W Harrison Co.) to confluence with Jordan Cr. in S16 T82N R43W Monona Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean greater than the Class A1 criterion.	IDNR/UHL statewide ambient water quality monitoring network.	Tier III
2008	5a	IA 04-LDM-02725-L_0	South Banner Lake	Warren County S30T77NR23W 5 mi N of Indianola.	Lake	Fish Consumption	Partial	Mercury in fish	Fish consumption advisory issued at this lake.	RAFT fish tissue monitoring.	Tier IV
2010	5p	IA 02-IOW-0297_0	South Beaver Creek	from mouth (NE 1/4 S28 T88N R20W Hardin Co.) to headwaters (S5 T88N R21W Hardin Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Levels of indicator bacteria exceed the Class A1 geometric mean criterion.	National Soil Tilth Lab monitoring near Owasa (station BC264) from 2007-08.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2014	5p	IA 01-TRK-0270_1	South Cedar Creek (aka Cedar Cr.)	mouth (S33 T92N R3W Clayton Co.) to north line of S7 T92N R3W Clayton Co.	River	Primary Contact	Not supporting	Indicator Bacteria	E. coli > Class A1 geomean criterion.	IDNR monitoring from May 2011 to November 2012.	Tier III
2012	5a	IA 01-TRK-0130_0	South Fork Catfish Creek	mouth (S2 T88N R2E Dubuque Co.) to confluence with unnamed tributary in SW 1/4 S3 T88N R1E Dubuque Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of indicator bacteria far exceeds the Class A1 criterion.	Monitoring in 2010 for the Catfish Creek Watershed Project.	Tier III
2006	5b-t	IA 05-CHA-0060_1	South Fork Chariton River	mouth (at Rathbun Lake) to confluence with Ninemile Cr. in S4 T69N R22W Wayne Co.	River	Aquatic Life	Partial	Biological: IBI	low biotic index; should have been listed in 2004	IDNR Fisheries Bureau biological monitoring 1999-2002	Tier IV
2008	5a	IA 05-CHA-0060_1	South Fork Chariton River	mouth (at Rathbun Lake) to confluence with Ninemile Cr. in S4 T69N R22W Wayne Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Iowa State University/Army Corps of Engineers Rathbun watershed monitoring project.	Tier III
2006	5b-t	IA 05-CHA-0060_2	South Fork Chariton River	from confluence with Ninemile Cr. (S4 T69N R22W Wayne Co.) to outfall of Bob White Lake in S4 T68N R22W Wayne Co.	River	Aquatic Life	Partial	Biological: IBI	low biotic index; should have been listed in 2004	IDNR Fisheries Bureau biological monitoring 1999-2002	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2008	5a	IA 05-CHA-0060_2	South Fork Chariton River	from confluence with Ninemile Cr. (S4 T69N R22W Wayne Co.) to outfall of Bob White Lake in S4 T68N R22W Wayne Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Iowa State University/Army Corps of Engineers Rathbun watershed monitoring project.	Tier III
2010	5p	IA 02-IOW-0270_0	South Fork Iowa River	mouth (S4 T86N R19W Hardin Co.) to confluence with Tipton Cr. in S21 T87N R20W Hardin Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Levels of indicator bacteria (E. coli) exceed Class A1 geometric mean criterion.	National Soil Tilth Lab (USDA ARS) monitoring 2006-2008 near New Providence.	Tier III
2010	5p	IA 02-IOW-0280_3	South Fork Iowa River	from confluence with unnamed tributary in W 1/2 S19 T88N R21W Hardin Co. to confluence with unnamed tributary in E 1/2 S11 T88N R22W Hardin Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	USDA National Lab for Agriculture & Environment monitoring 2006-08.	Tier III
2014	5b	IA 02-IOW-0280_4	South Fork Iowa River	from confluence with unnamed tributary in E 1/2 S11 T88N R22W Hardin Co. to confluence with unnamed tributary in NE 1/4 S32 T89N R22W Hardin Co.	River	Aquatic Life	Partial	Biological: fish kill, ammonia/low DO	Pollutant-caused fish kill in Sept. 2011 attributed to runoff from a silage pile.	IDNR fish kill investigation on Sept. 29 2011.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2010	5p	IA 02-IOW-0280_4	South Fork Iowa River	from confluence with unnamed tributary in E 1/2 S11 T88N R22W Hardin Co. to confluence with unnamed tributary in NE 1/4 S32 T89N R22W Hardin Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	USDA National Lab for Agriculture & Environment monitoring 2006-08.	Tier IV
2014	5b	IA 02-IOW-0280_5	South Fork Iowa River	from confluence with unnamed tributary in NE 1/4 S32 T89N R22W Hardin Co. to confluence with unnamed tributary in SE 1/4 S35 T90N R23W Wright Co.	River	Aquatic Life	Partial	Biological: fish kill, low DO	Pollutant-caused fish kill in September 2011 attributed to runoff from a silage pile.	Iowa DNR fish kill investigation on September 29 2011.	Tier III
2010	5p	IA 02-IOW-0280_5	South Fork Iowa River	from confluence with unnamed tributary in NE 1/4 S32 T89N R22W Hardin Co. to confluence with unnamed tributary in SE 1/4 S35 T90N R23W Wright Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	USDA National Lab for Agriculture & Environment monitoring 2006-08.	Tier IV
2010	5p	IA 02-IOW-0282_0	South Fork Iowa River	from confluence with unnamed tributary (S35 T90N R23W Wright Co.) to headwaters in S24 T89N R24W Hamilton Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	USDA National Lab for Agriculture & Environment monitoring 2006-08.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2008	5a	IA 04-RAC-0170_0	South Raccoon River	mouth (S21 T78 R27W Dallas Co.) to confluence with Middle Raccoon R. in S9 T78N R29W near Redfield in Dallas Co	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL ambient water quality monitoring network.	Tier III
2008	5p	IA 04-LDM-0230_0	South River	mouth (Warren Co.) to confluence with Squaw Cr. in S2 T75N R24W Warren Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL ambient water quality monitoring network.	Tier III
2008	5a	IA 03-SSK-0010_2	South Skunk River	from the Highway 21 bridge (S34T75N R13W Keokuk Co.) to the Highway 63 bridge north of Oskaloosa in S25 T76N R16W Mahaska Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL ambient water quality monitoring network.	Tier III
2008	5a	IA 03-SSK-0010_3	South Skunk River	from the Highway 63 bridge north of Oskaloosa (S25 T76N R16W Mahaska Co.) to confluence with Elk Cr. in NE 1/4 S19 T77N R17W Mahaska Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL ambient water quality monitoring network.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2008	5a	IA 03-SSK-0020_1	South Skunk River	from confluence with Indian Creek (S32 T80N R20W Jasper Co.) to outfall of Ames wastewater treatment plant in SW 1/4 S32 T83N R23W Story Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL ambient water quality monitoring network.	Tier III
2004	5a	IA 03-SSK-0030_2	South Skunk River	from the Ames Water Works dam in River Valley Park at Ames (S36 T84N R24W Story Co.) to the Co. Rd. at north line of S6 T85 R23W Story Co (approximately 1 mile NNE of Story City)	River	Primary Contact	Partial	Indicator Bacteria	> 10% of samples > 400 orgs/100 mL	IDNR/UHL ambient WQ monitoring	Tier III
2006	5b-t	IA 03-SSK-0030_3	South Skunk River	from the north line of S6 T85 R23W Story Co (approximately 1 mile NNE of Story City) to confluence with Drainage Ditch 71 in SE 1/4 S11 T86N R24W Hamilton Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL REMAP monitoring 2003	Tier IV
2010	5a	IA 04-RAC-01395-L_0	South Twin Lake	Calhoun County S1T88NR33W 3 mi N of Rockwell City.	Wetland	Aquatic Life	Not supporting	Algae	Algae levels (chlorophyll TSI = 74) adversely impact fish and plant communities	DNR Shallow Lakes monitoring.	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2010	5a	IA 04-RAC-01395-L_0	South Twin Lake	Calhoun County S1T88NR33W 3 mi N of Rockwell City.	Wetland	Aquatic Life	Not supporting	Turbidity	Turbidity levels (Secchi TSI = 75) adversely impact fish and plant communities	DNR Shallow Lakes monitoring.	Tier IV
2012	5p	IA 02-CED-0520_0	Spring Creek	mouth (S13 T97N R17W Mitchell Co.) to N line S8 T97N R16W Mitchell Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean for 2008 exceeds the Class A2 criterion.	Cedar River/Mitchell County Project monitoring 2008-10	Tier III
2008	5p	IA 02-CED-0520_0	Spring Creek	mouth (S13 T97N R17W Mitchell Co.) to N line S8 T97N R16W Mitchell Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Greater than 10% of samples exceed the Class A1 single-sample maximum criterion.	IDNR/UHL/Mitchell Co. CB ambient monitoring for Cedar River/Mitchell Co. project 2006-08	Tier III
2014	5p	IA 02-CED-0521_0	Spring Creek	from north line (T97N R16W Sec8) to headwaters (T98N R17W Sec2) Mitchell Co	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria (E. coli) violate the Class A1 criterion.	Iowa DNR special project monitoring from April 2010 to November 2012.	Tier III
2012	5a	IA 04-RAC-02220-L_0	Springbrook Lake	Guthrie County S33T81NR31W 6 mi NNE of Guthrie Center.	Lake	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean violation in 2010.	IDNR Beach Monitoring Program	Tier II
2012	5p	IA 01-UIA-0430_0	Staff Creek	mouth (S7 T100N R13W Howard Co. to west line of S27 T100N R14W Howard Co	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of indicator bacteria exceeds the Class A2 criterion.	Upper Iowa River Watershed project 2008-10.	Tier III
2010	5p	IA 01-UIA-0430_0	Staff Creek	mouth (S7 T100N R13W Howard Co. to west line of S27 T100N R14W Howard Co	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Upper Iowa River Watershed Project monitoring Site 3.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2010	5p	IA 01-NEM-0063_0	Stafford Creek	from mouth (SE1/4 S21 T78N R4E Scott Co.) to headwaters in SW1/4 S9 T78N R4E Scott Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli greater than Class A1 criterion.	IDNR/UHL TMDL monitoring in 2008.	Tier III
2008	5b-t	IA 06-LSR-0270_0	Stony Creek	mo to trib S27T98NR38W Dickinson Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index.	IDNR/UHL biological (REMAP) monitoring in 2005.	Tier IV
2010	5a	IA 04-RAC-00530-L_0	Storm Lake	Buena Vista County S14T90NR37W at Storm Lake.	Lake	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	City/county beach monitoring program 2008 and 2009.	Tier II
2004	5b-t	IA 02-CED-0170_1	Sugar Creek	mouth (S17 T78N R2W Muscatine Co.) to confluence with Mud Cr. in S10 T78N R2W Muscatine Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL biological monitoring	Tier IV
2006	5a	IA 01-YEL-0100_0	Suttle Creek	mouth (S17 T96N R4W Allamakee Co.) to Allamakee-Clayton county line.	River	Aquatic Life	Not supporting	Organic Enrichment/ Low DO	Significantly greater than 10% of the samples exceed the dissolved oxygen criteria.	IDNR/UHL ambient WQ monitoring 2004	Tier IV
2008	5b-t	IA 01-UIA-0340_0	Ten Mile Creek	mouth (S1 T98N R9W Winneshiek Co.) to confluence with Walnut Cr. in S18 T98N R9W Winneshiek Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index.	IDNR/UHL biological (biocriteria) sampling in 2005.	Tier IV
2012	5p	IA 01-UIA-0340_0	Ten Mile Creek	mouth (S1 T98N R9W Winneshiek Co.) to confluence with Walnut Cr. in S18 T98N R9W Winneshiek Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of indicator bacteria slightly exceeds the Class A1 criterion.	Upper Iowa River Watershed project 2008-10.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2006	5b	IA 01-TRK-0090_1	Tetes Des Morts Creek	mouth (Dubuque Co.) to confluence with Lux Cr. in S7 T87N R4E Jackson Co.	River	Aquatic Life	Partial	Biological: fish kill, unknown toxicity	fish kill in 2005	IDNR fish kill investigation	Tier IV
2004	5b-v	IA 01-TRK-0090_1	Tetes Des Morts Creek	mouth (Dubuque Co.) to confluence with Lux Cr. in S7 T87N R4E Jackson Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL biocriteria monitoring 2001	Tier IV
2012	5a	IA 01-TRK-0090_1	Tetes Des Morts Creek	mouth (Dubuque Co.) to confluence with Lux Cr. in S7 T87N R4E Jackson Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria exceed the Class A1 criterion.	Section 319 monitoring project from July 2009 to November 2010.	Tier III
2012	5a	IA 01-TRK-0090_2	Tetes Des Morts Creek	from confluence with Lux Cr. (S7 T87N R4E Jackson Co.) to confluence with unnamed tributary in SW 1/4 NE 1/4 S32 T88N R3E Dubuque Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria exceed Class A1 criterion.	Section 319 water quality project from July 2009 through November 2010.	Tier III
2008	5a	IA 05-GRA-01410-L_0	Thayer Lake	Union County S22T72NR28W 1 mi SW of Thayer.	Lake	Primary Contact	Not supporting	Algae	Aesthetically objectionable conditions (chlorophyll TSI = 67).	ISU and UHL lake surveys 2002-2006.	Tier I
2004	5a	IA 05-GRA-01410-L_0	Thayer Lake	Union County S22T72NR28W 1 mi SW of Thayer.	Lake	Primary Contact	Partial	Turbidity	aesthetically objectionable conditions; Secchi trophic state index =69	ISU statewide lake survey	Tier I

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2004	5a	IA 05-GRA-0040_0	Thompson River	from the Iowa/Missouri state line to confluence with Long Cr. in SW 1/4 S8 T69N R26W Decatur Co.	River	Primary Contact	Not supporting	Indicator Bacteria	geometric means > WQS	IDNR/UHL ambient WQ monitoring	Tier III
2014	5a	IA 05-GRA-0145-L_0	Threemile Lake	Union County S32 T73N R29W approximately 3 miles N or Afton.	Lake	Aquatic Life	Partial	Organic Enrichment/ Low DO	Significantly greater that 10% of the samples violating the criterion for dissolved oxygen		Tier IV
2010	5p	IA 02-IOW-0300_1	Tipton Creek	mouth (S21 T87N R20W Hardin Co.) to confluence with unnamed tributary in SE 1/4 S17 T87N R21W Hardin Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	USDA National Lab for Agriculture & Environment monitoring 2006-08.	Tier III
2010	5p	IA 02-IOW-0300_2	Tipton Creek	from confluence with unnamed tributary (SE 1/4 S17 T87N R21W Hardin Co.) to confluence with New York Branch in S32 T88N R22W Hardin Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean for E. coli is greater than the Class A1 criterion.	USDA National Lab for Agriculture & Environment monitoring 2006-08.	Tier III
2008	5b-t	IA 05-NSH-0060_0	Troublesome Creek	mouth to Fourmile Cr. Audubon Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index.	IDNR/UHL biological (REMAP) monitoring in 2006.	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2008	5p	IA 01-UIA-0280_1	Trout Creek	mouth (S9 T98N R7W Winneshiek Co.) to Smith Cr. (aka Trout River) in S21 T98N R7W Winneshiek Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater that the Class A1 criterion.	Upper Iowa River Watershed Project monitoring Site 18.	Tier III
2012	5a	IA 01-UIA-0300_1	Trout Creek (aka Trout Run)	mouth (S23 T98N R8W Winneshiek Co.) to confluence with unnamed tributary (aka Trout Run) in S27 T98N R8W Winneshiek Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria exceed the Class A2 criterion.	Upper Iowa River Watershed project 2008-10.	Tier III
2008	5p	IA 01-UIA-0300_1	Trout Creek (aka Trout Run)	mouth (S23 T98N R8W Winneshiek Co.) to confluence with unnamed tributary (aka Trout Run) in S27 T98N R8W Winneshiek Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than Class A1 criterion.	Upper Iowa River Watershed Project monitoring Site 16.	Tier III
2014	5p	IA 04-UDM-0525_0	Turkey Creek	from Big Creek Lake (T81N R25W Sec14 Polk Co.) to headwaters (T81N R25W Sec1 Polk Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of indicator bacteria (E. coli) violated the Class A1 criterion.	Iowa DNR special project monitoring from March to September 2011.	Tier III
2008	5a	IA 01-TRK-0200_0	Turkey River	mouth (Clayton Co.) to confluence with Volga R. in S26 T92N R4W Clayton Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR ambient WQ monitoring network.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2014	5a	IA 01-TRK-0200_0	Turkey River	mouth (Clayton Co.) to confluence with Volga R. in S26 T92N R4W Clayton Co.	River	Fish Consumption	Partial	Mercury in fish	Fish consumption advisory (1 meal/week) issued for predator fish in 2013	EPA/Iowa DNR fish contaminant monitoring.	Tier IV
2014	5a	IA 01-TRK-0210_4	Turkey River	from bridge crossing at Elgin (S13 T94N R7 Fayette Co.) to confluence with Little Turkey R near Eldorado (S18 T95N R8W Fayette Co.).	River	Primary Contact	Not supporting	Indicator Bacteria	E. coli geomean > the Class A1 criterion.	IDNR monitoring from May 2011 to November 2012.	Tier III
2014	5a	IA 01-TRK-0220_1	Turkey River	from confluence with L. Turkey R. (S18 T95N R8W Fayette Co.) to confluence with Bohemian Cr. in S11 T97N R10W Winneshiek Co.	River	Primary Contact	Not supporting	Indicator Bacteria	E. coli geomean > Class A1 criterion.	IDNR monitoring from May 2011 to November 2012.	Tier III
2014	5p	IA 01-TRK-0220_4	Turkey River	from confluence with N. Br. Turkey R. (S31 T99N R11W Howard Co.) to confluence with S. Br. Turkey R. in S2 T98N R12W Howard Co.	River	Primary Contact	Not supporting	Indicator Bacteria	E. coli geomean is > Class A1 criterion.	IDNR monitoring from May 2011 to November 2012.	Tier III
2008	5p	IA 02-CED-0530_0	Turtle Creek	mouth (S23 T99N R18W Mitchell Co.) to E line S7 T99N R17W Mitchell Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL/Mitchell Co. CB ambient monitoring for Cedar River/Mitchell Co. project 2006-08	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2012	5p	IA 01-UIA-0330_0	Twin Springs Creek	mouth (S17 T98N R8W Winneshiek Co.) to springs in Twin Springs Parks (S20 T98N R8W Winneshiek Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of indicator bacteria slightly exceeds the Class A1 criterion.	Section 319 water quality monitoring in 2010.	Tier III
2006	5a	IA 01-YEL-0110_0	Unnamed Creek (aka Bear Cr.)	mouth (S13 T96N R5W Allamakee Co.) to north line of S12 T96N R5W Allamakee Co.	River	Aquatic Life	Not supporting	Organic Enrichment/ Low DO	Significantly greater than 10% of samples violate WQ criteria for dissolved oxygen.	Yellow River Watershed Project.	Tier IV
2008	5p	IA 01-UIA-0350_0	Unnamed Creek (aka Casey Spring Cr.)	mouth (S25 T99N R9W Winneshiek Co.) to west line of S26 T99N R9W Winneshiek Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Greater than 10% of samples exceed the Class A1 single-sample maximum criterion.	Upper Iowa River Watershed Project monitoring Site 11.	Tier III
2008	5p	IA 01-UIA-0390_0	Unnamed Creek (aka Cold Water Cr.)	mouth (S32 T100N R9W Winneshiek Co.) to north line of S31 T100N R9W Winneshiek Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Upper Iowa River Watershed Project monitoring Site 9.	Tier III
2004	5b-t	IA 01-YEL-0155_0	Unnamed Creek (aka Hecker Cr.)	mouth (S17T96NR06W Allamakee Co.) to headwaters (Allamakee Co.)	River	General Use	Not supporting	Biological: IBI	low biotic index; fishkill	IDNR/UHL biological monitoring; fish kill investigation	Tier IV
2012	5a	IA 01-YEL-0155_0	Unnamed Creek (aka Hecker Cr.)	mouth (S17T96NR06W Allamakee Co.) to headwaters (Allamakee Co.)	River	Aquatic Life	Partial	Chloride	Significantly greater than 10% of samples exceed the Class B(WW1) criterion for chloride.	IDNR/UHL monitoring for the Yellow River Watershed Project 2006-08.	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2010	5b-t	IA 01-YEL-0150_0	Unnamed Creek (aka Ludlow Creek)	mouth (NW 1/4 S2 T96N R6W Allamakee Co.) to confluence with unnamed tributary in S33 T97N R6W Allamakee Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index.	IDNR/UHL biological (biocriteria) monitoring in 2006 and 2007.	Tier IV
2014	5p	IA 01-VOL-0146_0	Unnamed Creek (aka Volga Lake Outlet)	mouth (S14 T93N R8W Fayette Co.) to Volga Lake dam in S3 T93N R8W Fayette Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	DNR project monitoring at station UNV-10 (STORET station 15330012) from May 2011 to August 2012	Tier III
2010	5b	IA 01-WPS-0153_0	Unnamed Creek (near Hazleton)	mouth (NE 1/4 SW 1/4 S28 T90N R9W Buchanan Co.) to headwaters in S26 T90N R9W Buchanan Co.	River	Aquatic Life	Partial	Biological: fish kill, unknown toxicity	Fish kill in 2009; cause unknown possibly pesticides.	IDNR fish kill investigation in 2009.	Tier IV
2006	5b	IA 01-TRK-04515_0	Unnamed Tributary to Bass Creek	mouth (T95N R9W Sec5 Fayette Co.) to headwaters (T95N R9W Sec8) Fayette Co.	River	Aquatic Life	Partial	Biological: fish kill, ammonia/low DO	fish kill in 2004	IDNR fish kill investigation	Tier IV
2014	5p	IA 04-UDM-0153_0	Unnamed Tributary to Big Creek	from mouth (T83N R25W Sec20 Boone Co.) to headwaters (T83N R25W Sec7 Boone Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of indicator bacteria (E. coli) violated the Class A1 criterion.	Iowa DNR special project monitoring from March to September 2011.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2010	5a	IA 03-SKU-00835_1	unnamed tributary to Brush Creek	mouth (SE1/4 SE1/4 S31 T71N R5W Henry Co.) to confluence with unnamed trib in SE1/4 SW1/4 S27 T71N R5W Henry Co.	River	Aquatic Life	Not supporting	Unknown Toxicity	Violation of narrative criteria due to wastewater impact.	IDNR use attainability analysis 2006.	Tier IV
2010	5a	IA 01-TRK-01005_2	Unnamed tributary to Catfish Creek	from confluence with unnamed trib in SW ? S7 T88N R02E Dubuque Co. upstream for 750 feet to the outfall of Super 20 MHP WWTP in SW1/4 S7 T88N R02E Dubuque Co.)	River	Aquatic Life	Not supporting	Organic Enrichment/ Low DO	Wastewater causing violations of narrative WQ Standards	UAA field sheets.	Tier IV
2014	5p	IA 03-SKU-0063_0	Unnamed Tributary to Cedar Creek	from mouth (T70N R4W Sec30 Des Moines Co.) to headwaters (T70N R4W Sec28 Des Moines Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria (E. coli) exceed the Class A1 criterion.	Iowa DNR special project monitoring at three sites from September 2010 through August 2011.	Tier III
2014	5p	IA 03-SKU-0064_0	Unnamed Tributary to Cedar Creek	from mouth (T70N R4W Sec18 Des Moines Co.) to headwaters (T70N R4W Sec9 Des Moines Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria (E. coli) violate the Class A1 criterion.	Iowa DNR special project monitoring from September 2010 through July 2011.	Tier III
2014	5p	IA 03-SKU-0065_0	Unnamed Tributary to Cedar Creek	from mouth (T70N R4W Sec19 Des Moines Co.) to headwaters (T70N R4W Sec18 Des Moines Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria (E. coli) violate the Class A1 criterion.	Iowa DNR special project monitoring from September 2010 through July 2011.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2014	5p	IA 02-CED-0551_0	Unnamed Tributary to Cedar River	from mouth (T100N R18W Sec21 Mitchell Co.) to state line (T100N R18W Sec10)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria (E. coli) violate the Class A1 criterion.	Iowa DNR special project monitoring from 2010 through 2012.	Tier III
2012	5p	IA 02-CED-0394_0	Unnamed Tributary to Dry Run	from mouth (T89N R14W Sec23 Black Hawk Co.) to headwaters (T89N R14W Sec9 Black Hawk Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria exceed the Class A1 criterion.	Dry Run Creek project monitoring 2005-10.	Tier III
2014	5p	IA 01-UIA-0322_0	Unnamed Tributary to Dry Run Creek	from mouth (SE1/4SE1/4 S35 T98N R9W Winneshiek Co.) to headwaters (T97N R9W Sec5)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria far exceeded the Class A1 criterion of 126 orgs/100 ml.	Iowa DNR sponsored watershed monitoring at three sites from April 2010 to October 2011	Tier III
2014	5p	IA 01-UIA-0326_0	Unnamed Tributary to Dry Run Creek	from mouth (T98N R8W Sec20) to headwaters (T98N R9W Sec20) Winneshiek Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria (E. coli) exceed the Class A1 criterion.	IDNR special project monitoring at two stations in 2010.	Tier III
2014	5p	IA 01-UIA-0327_0	Unnamed Tributary to Dry Run Creek	from mouth (T98N R8W Sec30) to headwaters (T98N R9W Sec26) Winneshiek Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria (E. coli) exceed the Class A1 criterion.	IDNR special project monitoring from 2010 through 2011.	Tier III
2014	5p	IA 02-IOW-0395_0	Unnamed Tributary to East Branch Iowa River	from mouth (T95N R24W Sec11 Hancock Co.) to headwaters (T95N R23W Sec16 SE Hancock Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of indicator bacteria (E. coli) exceed the Class A1 criterion of 126 orgs/100 ml.	Iowa DNR-sponsored monitoring from June to November 2009 at STORET station 13410008.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2014	5p	IA 03-SKU-0066_0	Unnamed Tributary to Lake Geode	from mouth (T70N R5W Sec25 Henry Co.) to headwaters (T70N R5W Sec24 Henry Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria (E. coli) violate the Class A1 criterion.	Iowa DNR special project monitoring from September 2010 through July 2011.	Tier III
2010	5p	IA 01-WPS-0237_0	unnamed tributary to Lake Hendricks	from inflow to Lake Hendricks in NE1/4 SE1/4 S19 T99N R14W Howard Co. to headwaters in NW1/4 S21 T99N R14W Howard Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli greater than Class A1 criterion.	IDNR Fisheries Bureau and Howard County SWCD.	Tier III
2014	5p	IA 02-CED-0275_0	Unnamed Tributary to Lime Creek	from mouth (T87N R10W Sec1) to headwaters (T88N R9W Sec30 NE NW)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of E. coli in recreation seasons of 2010 & 2011 are > Class A1 criterion.	IDNR-sponsored monitoring at STORET station 15100009.	Tier III
2006	5b	IA 06-BSR-0065_0	Unnamed Tributary to Little Rock River	mouth (T98N R44W Sec7 NE) to headwaters (T99N R44W Sec23 SE) Lyon Co.	River	General Use	Partial	Biological: fish kill, unknown toxicity	fish kill in 2005	IDNR fish kill investigation	Tier IV
2014	5b	IA 06-LSR-0207_0	Unnamed Tributary to Little Sioux River	from mouth in S34 T94N R38W Clay Co. to headwaters in S14 T94N R38W Clay Co.	River	Aquatic Life	Partial	Biological: fish kill, ammonia/low DO	Fish kill in September 2011 caused by animal waste (swine manure).	IDNR fish kill database (https://programs.iowadnr.gov/fishkill/detail.aspx?fkid=831)	Tier IV
2014	5p	IA 02-IOW-0166_0	Unnamed Tributary to Muddy Creek	from mouth to headwaters (T80N R7W Sec12 Johnson Co.)	River	Aquatic Life	Not supporting	Organic Enrichment/ Low DO	Greater than 25% of samples violated the Class B(WW1) criterion for dissolved oxygen.	Iowa DNR special project monitoring from May to November 2012.	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2012	5b	IA 02-IOW-0156_0	Unnamed Tributary to Ralston Creek	from mouth (SW1/4 S11 T79N R06W Johnson Co.) to headwaters in NE1/4 S7 T79N R05W Johnson Co.	River	Aquatic Life	Partial	Biological: fish kill, unknown toxicity	Cause of kill could not be determined but kill was related to tile line discharge; suspect a pollutant-related cause.	Results of a fish kill investigation by IDNR staff in May 2009.	Tier IV
2006	5b	IA 05-CHA-0057_0	Unnamed Tributary to Rathbun Reservoir	mouth at Rathbun Reservoir to headwaters (T70N R19W Sec 25) Appanoose Co.	River	Aquatic Life	Partial	Biological: fish kill, unknown toxicity	fish kill in 2005 caused by diesel fuel spill	IDNR fish kill investigation	Tier IV
2014	5p	IA 01-UIA-0404_0	Unnamed Tributary to Silver Creek	from mouth (T99N R11W Sec13) to headwaters (T99N R11W Sec23) Howard Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria (E. coli) violated the Class A1 criterion.	IDNR special project monitoring at two sites in 2011 and 2012.	Tier III
2010	5a	IA 02-IOW-01485_0	Unnamed tributary to Snyder Creek	mouth (S36 T79N R6W Johnson Co.) to headwaters in NE1/4 S18 T79N R5W Johnson Co.	River	Aquatic Life	Not supporting	Unknown Toxicity	Violation of narrative criteria due to wastewater impact.	IDNR use attainability analysis 2006.	Tier IV
2014	5p	IA 02-CED-0522_0	Unnamed Tributary to Spring Creek	from mouth (T97N R16W Sec5) to headwaters (T98N R16W Sec15) Mitchell Co.	River	Aquatic Life	Not supporting	Ammonia	Significantly greater than 10% of samples exceed the Class B(WW1) aquatic life criterion for ammonia.	Iowa DNR special project monitoring from April 2011 through September 2012.	Tier IV
2014	5p	IA 02-CED-0522_0	Unnamed Tributary to Spring Creek	from mouth (T97N R16W Sec5) to headwaters (T98N R16W Sec15) Mitchell Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria (E. coli) exceed the Class A1 criterion.	Iowa DNR special project monitoring from 2010 through 2012.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2014	5p	IA 02-CED-0522_0	Unnamed Tributary to Spring Creek	from mouth (T97N R16W Sec5) to headwaters (T98N R16W Sec15) Mitchell Co.	River	Aquatic Life	Not supporting	Organic Enrichment/ Low DO	Significantly greater than 10% of samples violate the Class B(WW1) aquatic life criterion for dissolved oxygen.	Iowa DNR special project monitoring from April 2011 through September 2012.	Tier IV
2014	5p	IA 03-SSK-0160_0	Unnamed Tributary to Squaw Creek	from mouth (SE1/4 S9 T85N R25W Boone Co.) to headwaters (T86N R25W Sec22 Hamilton Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of indicator bacteria exceeds the Class A1 criterion.	Iowa DNR snapshot monitoring from 2008-12 at STORET monitoring station 908036.	Tier III
2014	5p	IA 01-TRK-0093_0	Unnamed Tributary to Tetes Des Morts Creek	from mouth (T87N R4E Sec8) to headwaters (T87N R4E Sec20 NW) Jackson Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means in recreation seasons of 2010 & 2011 exceed the Class A1 criterion.	IDNR special water quality project.	Tier III
2014	5p	IA 01-TRK-0094_0	Unnamed Tributary to Tetes Des Morts Creek	from mouth (NW 1/4 S 18 T87N R4E Jackson Co.) to headwaters (T87N R4E Sec30 Jackson Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria exceed the Class A1 criterion.	IDNR special project monitoring in 2010 and 2011.	Tier III
2012	5p	IA 02-IOW-0302_0	Unnamed Tributary to Tipton Creek	from mouth (NW1/4 S23 T88N R23W) to headwaters in NE1/4 S20 T88N R23W Hamilton Co.	River	Primary Contact	Partial	Indicator Bacteria	Significantly more than 10% of samples exceed Iowa's single-sample maximum criterion.	Monitoring by National Laboratory for Agriculture and the Environment (NLAE) Ames IA 2007-08.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2014	5p	IA 01-TRK-0223_0	Unnamed Tributary to Turkey River	from mouth (T96N R9W Sec9) to Lake Meyer (T97N R9W Sec33) Winneshiek Co.	River	Primary Contact	Partial	pH	Significantly greater than 10% of the samples exceeded the Class A1 criterion of 9.0 units for pH.	IDNR special project monitoring from May 2011 to November 2012.	Tier IV
2014	5p	IA 01-TRK-0223_0	Unnamed Tributary to Turkey River	from mouth (T96N R9W Sec9) to Lake Meyer (T97N R9W Sec33) Winneshiek Co.	River	Aquatic Life	Partial	pH	Significantly greater than 10% of the samples exceeded the Class B(WW1) criterion for pH of 9.0	IDNR special project monitoring from May 2011 to November 2012.	Tier IV
2012	5b	IA 02-WFC-0146_0	Unnamed Tributary to Unnamed Tributary of West Fork Cedar River	from mouth (SE1/4 SW1/4 S29 T93N R19W Franklin Co.) to headwaters in NW1/4 S1 T92N R20W Franklin Co.	River	Aquatic Life	Partial	Biological: fish kill, unknown toxicity	Due to large number of fish killed and lack of environmental extremes suspect pollutant-related kill.	IDNR fish kill investigation in 2007.	Tier IV
2014	5p	IA 01-UIA-0323_0	Unnamed Tributary to Unnamed Tributary to Dry Run Creek	from mouth (T97N R9W Sec2 Winneshiek Co.) to headwaters (T97N R9W Sec14 SW Winneshiek Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria (E. coli) violated the Class A1 criterion.	Iowa DNR special project monitoring from April 2010 to October 2011.	Tier III
2014	5p	IA 01-UIA-0324_0	Unnamed Tributary to Unnamed Tributary to Dry Run Creek	from mouth (T97N R9W Sec3) to headwaters (T97N R9W Sec15) Winneshiek Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria (E. coli) exceed the Class A1 criterion.	IDNR special project monitoring in 2010 and 2011.	Tier III
2014	5p	IA 01-UIA-0325_0	Unnamed Tributary to Unnamed Tributary to Dry Run Creek	from mouth (T97N R9W Sec3) to headwaters (T97N R9W Sec9) Winneshiek Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria (E. coli) exceed the Class A1 criterion.	IDNR special project monitoring from August 2010 to October 2011.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2014	5p	IA 01-YEL-0172_0	Unnamed Tributary to Unnamed Tributary to Yellow River	from mouth (T96N R7W Sec15) to headwaters (T96N R7W Sec21) Winneshiek Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of indicator bacteria violated the Class A1 criterion.	Iowa DNR special project monitoring from April through October 2011.	Tier III
2014	5p	IA 01-YEL-0172_0	Unnamed Tributary to Unnamed Tributary to Yellow River	from mouth (T96N R7W Sec15) to headwaters (T96N R7W Sec21) Winneshiek Co.	River	Aquatic Life	Partial	pH	Significantly greater than 10% of pH samples violated the Class B(WW1) criterion.	Iowa DNR special project monitoring from April through October 2011.	Tier IV
2014	5p	IA 01-YEL-0172_0	Unnamed Tributary to Unnamed Tributary to Yellow River	from mouth (T96N R7W Sec15) to headwaters (T96N R7W Sec21) Winneshiek Co.	River	Primary Contact	Not supporting	pH	Significantly greater than 10% of samples violated the Class A1 criterion for pH.	Iowa DNR special project monitoring from April through October 2011.	Tier IV
2014	5p	IA 01-UIA-0440_0	Unnamed Tributary to Upper Iowa River	from mouth (NW1/4 SE1/4 S15 T98N R8W Winneshiek Co.) to headwaters (T98N R8W Sec29 Winneshiek Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria (E. coli) exceed the Class A1 criterion of 126 orgs/100 ml.	Monitoring from 2010 through 2012 at NEIARCD Site 15 at Decorah (STORET station 191910008).	Tier III
2008	5a	IA 01-TRK-03817_0	Unnamed Tributary to UT to Silver Creek	mouth (T95N R5W Sec20) to headwaters (T95N R5W Sec14) in Monona city limits	River	Aquatic Life	Not supporting	Ammonia	Significantly greater than 10% of samples exceed the Class B(WW1) aquatic life criterion for ammonia.	IDNR/UHL TMDL-related monitoring.	Tier IV
2010	5a	IA 01-TRK-03817_0	Unnamed Tributary to UT to Silver Creek	mouth (T95N R5W Sec20) to headwaters (T95N R5W Sec14) in Monona city limits	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli much greater than Class A1 WQ criterion.	IDNR/UHL TMDL-related WQ monitoring.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2012	5p	IA 02-IOW-0189_0	Unnamed Tributary to Walnut Creek	from mouth (T81N R15W Sec24 Poweshiek Co.) to headwaters (T81N R15W Sec15 SW Poweshiek Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria exceed the Class A1 criterion.	Section 319 monitoring from 2009-10.	Tier III
2012	5p	IA 02-IOW-0191_0	Unnamed Tributary to Walnut Creek	from mouth (T81N R14W Sec17 Poweshiek Co.) to headwaters (T81N R15W Sec1 Poweshiek Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria exceed the Class A1 criterion.	Section 319 monitoring from 2009-10.	Tier III
2014	5p	IA 02-IOW-0510_0	Unnamed Tributary to Walnut Creek	from mouth to Holiday Lake(T81N R14W Sec14 Poweshiek Co.)	River	Primary Contact	Partial	Indicator Bacteria	Greater than 10% of samples exceeded the Class A1 single-sample maximum criterion for indicator bacteria (E. coli).	Iowa DNR special project monitoring from March 2010 through August 2011.	Tier III
2014	5p	IA 01-UIA-0182_0	Unnamed Tributary to Waterloo Creek	from mouth (T100N R6W Sec24) to state line(T100N R5W Sec7 NW) Allamakee Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria (E. coli) exceed the Class A1 criterion.	Results of IDNR water quality project monitoring at two sites in 2010 and 2011.	Tier III
2008	5p	IA 02-CED-01545_0	Unnamed Tributary to West Branch Wapsinonoc Creek (aka Hoover Creek)	from mouth (T79N R04W Sec08 Cedar Co.) to headwaters (T80N R05W Sec25 Johnson Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Levels of E. coli greater than the Class A1 criterion.	Herbert Hoover Creek water monitoring project 2004-05.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2014	5p	IA 02-IOW-0179_0	Unnamed Tributary to Willow Creek	from mouth (T81N R9W Sec5 Iowa Co.) to headwaters (T82N R10W Sec36 NW Benton Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of indicator bacteria (E. coli) violated the Class A1 criterion.	Iowa DNR special project monitoring from June to November 2011.	Tier III
2014	5p	IA 01-YEL-0085_0	Unnamed Tributary to Yellow River	from mouth (T96N R6W Sec18 Allamakee Co.) to headwaters (T96N R7W Sec26 Winneshiek Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of indicator bacteria (E. coli) violated the Class A1 criterion.	Iowa DNR special project monitoring from April through October 2011.	Tier III
2014	5p	IA 01-YEL-0085_0	Unnamed Tributary to Yellow River	from mouth (T96N R6W Sec18 Allamakee Co.) to headwaters (T96N R7W Sec26 Winneshiek Co.)	River	Aquatic Life	Partial	pH	Significantly greater than 10% of pH samples violated the Class B(WW1) criterion.	Iowa DNR special project monitoring from April through October 2011.	Tier IV
2014	5p	IA 01-YEL-0085_0	Unnamed Tributary to Yellow River	from mouth (T96N R6W Sec18 Allamakee Co.) to headwaters (T96N R7W Sec26 Winneshiek Co.)	River	Primary Contact	Not supporting	pH	Significantly greater than 10% of samples violated the Class A1 criterion for pH.	Iowa DNR special project monitoring from April through October 2011.	Tier IV
2014	5p	IA 01-YEL-0170_0	Unnamed Tributary to Yellow River	mouth (S14 T96N R7W Winneshiek Co.) to headwaters in NW1/4 S26 T96N. R7W Winneshiek Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion of 126 orgs/100 ml.	Monitoring from April-October 2011 at 135th Street (STORET station 15960037).	Tier III
2014	5p	IA 01-YEL-0170_0	Unnamed Tributary to Yellow River	mouth (S14 T96N R7W Winneshiek Co.) to headwaters in NW1/4 S26 T96N. R7W Winneshiek Co.	River	Aquatic Life	Partial	pH	Significantly greater than 10% of samples in 2011 exceeded the B(WW1) pH criterion of 9.0 units.	Monitoring at 135th Street from April to October 2011 (STORET station 15960037).	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2014	5p	IA 01-YEL-0173_0	Unnamed Tributary to Yellow River	from mouth (T96N R7W Sec13) to headwaters (T96N R7W Sec23) Winneshiek Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of indicator bacteria (E. coli) violated the Class A1 criterion.	Iowa DNR special project monitoring from April to October 2011.	Tier III
2014	5p	IA 01-YEL-0173_0	Unnamed Tributary to Yellow River	from mouth (T96N R7W Sec13) to headwaters (T96N R7W Sec23) Winneshiek Co.	River	Aquatic Life	Partial	pH	Significantly greater than 10% of pH samples violated the Class B(WW1) criterion.	Iowa DNR special project monitoring from April through October 2011.	Tier IV
2014	5p	IA 01-YEL-0173_0	Unnamed Tributary to Yellow River	from mouth (T96N R7W Sec13) to headwaters (T96N R7W Sec23) Winneshiek Co.	River	Primary Contact	Not supporting	pH	Significantly greater than 10% of samples violated the Class A1 criterion for pH.	Iowa DNR special project monitoring from April through October 2011.	Tier IV
2004	5a	IA 01-UIA-0090_0	Upper Iowa River	mouth (Allamakee Co.) to Lane's Bridge at river mile 6 (NW 1/4 S31 T100N R4W Allamakee Co.).	River	Primary Contact	Partial	Indicator Bacteria	Geometric mean of E. coli greater than Class A1 criterion.	IDNR/UHL ambient WQ monitoring	Tier III
2006	5a	IA 01-UIA-0090_0	Upper Iowa River	mouth (Allamakee Co.) to Lane's Bridge at river mile 6 (NW 1/4 S31 T100N R4W Allamakee Co.).	River	Fish Consumption	Threatened	Mercury in fish	> IDNR/IDPH trigger level for 1 meal/week advisory; consumption advisory issued in 2006	fish contaminant (RAFT) monitoring	Tier IV
2004	5a	IA 01-UIA-0100_0	Upper Iowa River	from Lane's Bridge (NW 1/4 S31 T100N R4W Allamakee Co.) to confluence with Canoe Cr. in S25 T99N R7W Winneshiek Co.	River	Primary Contact	Partial	Indicator Bacteria	>10% of samples exceed Class A1 single-sample maximum criterion	IDNR/UHL ambient WQ monitoring	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2006	5a	IA 01-UIA-0100_0	Upper Iowa River	from Lane's Bridge (NW 1/4 S31 T100N R4W Allamakee Co.) to confluence with Canoe Cr. in S25 T99N R7W Winneshiek Co.	River	Fish Consumption	Threatened	Mercury in fish	> IDNR/IDPH trigger level for 1 meal/week advisory; consumption advisory issued in 2006	fish contaminant (RAFT) monitoring	Tier IV
2008	5a	IA 01-UIA-0110_1	Upper Iowa River	confluence with Canoe Cr. (S25 T99N R7W Winneshiek Co.) to confluence with Trout Cr. in S9 T98N R7W Winneshiek Co.	River	Fish Consumption	Partial	Mercury in fish	Fish consumption advisory (1 meal/week) issued in 2006.	IDNR/U.S. EPA fish contaminant (RAFT) monitoring.	Tier IV
2004	5b	IA 01-UIA-0110_2	Upper Iowa River	from confluence with Trout Cr. (S9 T98N R7W Winneshiek Co.) to confluence with Tenmile Cr. in S1 T98N R9W Winneshiek Co.	River	Aquatic Life	Not supporting	Biological: FW mussels	> 50% decline in mussel species richness	ISU freshwater mussel study	Tier IV
2006	5a	IA 01-UIA-0110_2	Upper Iowa River	from confluence with Trout Cr. (S9 T98N R7W Winneshiek Co.) to confluence with Tenmile Cr. in S1 T98N R9W Winneshiek Co.	River	Primary Contact	Not supporting	Indicator Bacteria	geometric mean > WQS	IDNR/UHL ambient WQ monitoring 2002-04	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2006	5a	IA 01-UIA-0110_2	Upper Iowa River	from confluence with Trout Cr. (S9 T98N R7W Winneshiek Co.) to confluence with Tenmile Cr. in S1 T98N R9W Winneshiek Co.	River	Fish Consumption	Partial	Mercury in fish	> IDNR/IDPH trigger level for 1 meal/week advisory; consumption advisory issued in 2006	fish contaminant (RAFT) monitoring	Tier IV
2004	5b	IA 01-UIA-0120_1	Upper Iowa River	confluence with Silver Cr. (S10 T99N R9W Winneshiek Co.) to confluence with Silver Cr. in S2 T99N R10W Winneshiek Co.).	River	Aquatic Life	Not supporting	Biological: FW mussels	> 50% decline in mussel species richness	ISU freshwater mussel study	Tier IV
2012	5a	IA 01-UIA-0120_1	Upper Iowa River	confluence with Silver Cr. (S10 T99N R9W Winneshiek Co.) to confluence with Silver Cr. in S2 T99N R10W Winneshiek Co.).	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of indicator bacteria slightly exceeds Class A1 criterion.	Upper Iowa River Watershed Project 2008-10.	Tier III
2006	5a	IA 05-NOD-00930-L_0	Viking Lake	Montgomery County S6T71NR36W 4 mi. E of Stanton.	Lake	Primary Contact	Not supporting	Indicator Bacteria	geometric mean > WQS	IDNR/UHL beach monitoring 2002-2004	Tier II
2010	5a	IA 06-LSR-02330-L_0	Virgin Lake	Palo Alto County S30T96NR34W 2 mi S of Ruthven.	Wetland	Aquatic Life	Not supporting	Algae	Algae levels (chlorophyll TSI = 83) adversely impact fish and plant communities	DNR Shallow Lakes monitoring.	Tier IV
2010	5a	IA 06-LSR-02330-L_0	Virgin Lake	Palo Alto County S30T96NR34W 2 mi S of Ruthven.	Wetland	Aquatic Life	Not supporting	Turbidity	Turbidity levels (Secchi TSI = 80) adversely impact fish and plant communities	DNR Shallow Lakes monitoring.	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2008	5a	IA 01-VOL-0010_3	Volga River	bridge crossing in Volga (north line S10 T92N R6W Clayton Co.) to confluence with Brush Cr. in S26 T93N R7W Fayette Co.	River	Fish Consumption	Partial	Mercury in fish	Fish consumption advisory (1 meal/week) issued in 2006.	IDNR/U.S. EPA fish contaminant (RAFT) monitoring.	Tier IV
2008	5a	IA 01-VOL-0020_1	Volga River	confluence with Brush Cr. (S26 TT93N R7W Fayette Co.) to east corporate limit of Fayette (NE 1/4 S28 T93N R8W Fayette Co.)	River	Fish Consumption	Partial	Mercury in fish	Fish consumption advisory (1 meal/week) issued in 2006.	IDNR/U.S. EPA fish contaminant (RAFT) monitoring.	Tier IV
2008	5a	IA 01-VOL-0020_2	Volga River	east corporate limit of Fayette (NE 1/4 S28 T93N R8W Fayette Co.) to confluence with Little Volga R. in S2 T92N R9W Fayette Co.	River	Fish Consumption	Partial	Mercury in fish	Fish consumption advisory (1 meal/week) issued in 2006.	IDNR/U.S. EPA fish contaminant (RAFT) monitoring.	Tier IV
2014	5p	IA 01-VOL-0020_3	Volga River	confluence with Little Volga R. (S2 T92N R9W Fayette Co.) to confluence with unnamed tributary in SE 1/4 S24 T93N R10W Fayette Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	DNR project monitoring from May 2011 to November 2011 (STORET station 15330013).	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2008	5p	IA 05-CHA-0061_0	Walker Branch	mouth (S36 T70N R20W Wayne Co.) to confluence with S. Fk. Walker Branch in SE 1/4 S26 T70N R20W Wayne Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Iowa State University/Army Corps of Engineers Rathbun watershed monitoring project.	Tier III
2004	5b	IA 01-WPS-0109_0	Walnut Creek	mouth (S18 T83N R2W Jones Co.) to confluence with White Oak Cr. in S19 T83N R3W Jones Co.	River	Aquatic Life	Partial	Biological: fish kill, ammonia/low DO	fish kill caused by feedlot runoff	IDNR fish kill investigation	Tier IV
2006	5b-t	IA 02-IOW-0187_1	Walnut Creek	mouth (S31 T82N R12W Benton Co.) to confluence with North Walnut Cr in S7 T81N R13W Poweshiek Co. trib S24T81NR15W Poweshiek Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL REMAP monitoring 2003	Tier IV
2004	5b-v	IA 02-IOW-0187_2	Walnut Creek	from confluence with North Walnut Cr. (S7 T81N R13W Poweshiek Co.) to confluence with unnamed tributary in NW 1/4 S24 T81N R15W Poweshiek Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL biocriteria monitoring 1999	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2012	5p	IA 02-IOW-0187_2	Walnut Creek	from confluence with North Walnut Cr. (S7 T81N R13W Poweshiek Co.) to confluence with unnamed tributary in NW 1/4 S24 T81N R15W Poweshiek Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria exceed the Class A1 criterion.	Section 319 monitoring in 2009-10.	Tier III
2012	5p	IA 02-IOW-0188_0	Walnut Creek	confluence with unnamed tributary in NW 1/4 S24 T81N R15W Poweshiek Co. to headwaters in S10 T81N R16W Poweshiek Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of indicator bacteria exceed the Class A1 criterion.	Section 319 water quality project 2009-10.	Tier III
2004	5b-t	IA 03-SSK-0058_0	Walnut Creek	mouth (S5 T82N R23W Story Co.) to confluence with unnamed tributary in SE 1/4 S34 T83N R24W Story Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL biocriteria monitoring 1999	Tier IV
2004	5a	IA 01-WPS-0010_1	Wapsipinicon River	mouth (Scott-Clinton county line) to confluence with Silver Cr. in NW 14 S6 T80N R4E Clinton Co.	River	Primary Contact	Partial	Indicator Bacteria	>10% of samples >400 orgs/100 ml	IDNR/UHL ambient WQ monitoring	Tier III
2004	5a	IA 01-WPS-0010_2	Wapsipinicon River	from Silver Cr. (NW 14 S6 T80N R4E Clinton Co.) to confluence Rock Cr. in S35 T81N R1E Clinton Co.)	River	Primary Contact	Partial	Indicator Bacteria	>10% of samples >400 orgs/100 ml	IDNR/UHL ambient WQ monitoring	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2006	5b	IA 01-WPS-0010_4	Wapsipinicon River	from Plum Cr. (S18 T82N R1E Clinton Co.) to confluence with Walnut Cr. in S18 T83N R2W Jones Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR ambient WQ monitoring network.	Tier III
2006	5b	IA 01-WPS-0010_5	Wapsipinicon River	from Walnut Cr. (S18 T83N R2W Jones Co.) to confluence with Buffalo Creek in S10 T84N R4W Jones Co.	River	Primary Contact	Not supporting	Indicator Bacteria	geometric mean > WQS	IDNR/UHL ambient WQ monitoring 2002-04	Tier III
2010	5a	IA 01-WPS-0020_1	Wapsipinicon River	from Buffalo Cr. (S10 T84N R4W Jones Co.) to confluence with Walton Cr. in S20 T86N R6W Linn Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR city/county beach monitoring 2007-08.	Tier III
2004	5a	IA 01-WPS-0020_4	Wapsipinicon River	from Harter Cr. at Independence (NW 1/4 S34 T89N R9W Buchanan Co.) to confluence with Little Wapsipinicon R. near Littleton in S9 T89N R10W Buchanan Co.	River	Primary Contact	Partial	Indicator Bacteria	>10% of samples >400 orgs/100 ml	IDNR/UHL ambient WQ monitoring	Tier III
2004	5b	IA 01-WPS-0030_5	Wapsipinicon River	from town of McIntyre (S34 T100N R15W Mitchell Co.) to north line of S20 T100N R15W Mitchell Co.	River	Aquatic Life	Not supporting	Biological: fish kill, low DO	Fish kill in 2002.	IDNR fish kill investigation.	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2004	5b-v	IA 01-WPS-0030_5	Wapsipinicon River	from town of McIntyre (S34 T100N R15W Mitchell Co.) to north line of S20 T100N R15W Mitchell Co.	River	Aquatic Life	Not supporting	Biological: IBI	low biotic index	IDNR/UHL biological monitoring	Tier III
2014	5a	IA 01-WPS-0030_5	Wapsipinicon River	from town of McIntyre (S34 T100N R15W Mitchell Co.) to north line of S20 T100N R15W Mitchell Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of E. coli were greater than the Class A1 criterion.	IDNR TMDL & biomonitoring in 2010 (STORET stations 11660001 11660002 & 12660005).	Tier III
2014	5a	IA 01-WPS-0030_5	Wapsipinicon River	from town of McIntyre (S34 T100N R15W Mitchell Co.) to north line of S20 T100N R15W Mitchell Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric means of E. coli were greater than the Class A2 criterion (630 orgs/100 ml).	IDNR TMDL & biomonitoring in 2010 (STORET stations 11660001 11660002 & 12660005).	Tier IV
2012	5p	IA 01-UIA-0180_0	Waterloo Creek	mouth (S35 T100N R6W Allamakee Co.) to IA/MN state line (S9 T100N R6W Allamakee Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of indicator bacteria slightly exceeds Class A2 criterion.	Upper Iowa River Watershed (UIRW) project 2008-10.	Tier III
2008	5p	IA 01-UIA-0180_0	Waterloo Creek	mouth (S35 T100N R6W Allamakee Co.) to IA/MN state line (S9 T100N R6W Allamakee Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Upper Iowa River Watershed Project monitoring Site 26.	Tier III
2006	5b-t	IA 05-GRA-0070_0	Weldon River	IA/MO line to Mormon Pool Decatur Co.	River	Aquatic Life	Not supporting	Biological: IBI	Low biotic index	IDNR/UHL REMAP monitoring 2002	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2014	5b	IA 06-FLO-0040_0	West Branch Floyd River	from confluence with Orange City Slough (S28 T94N R45W Sioux Co.) to confluence with unnamed tributary in NE 1/4 S18 T96N R44W Sioux Co.	River	Aquatic Life	Partial	Biological: fish kill, ammonia/low DO	Fish kill in October 2012 caused by discharge of wastewater from packing plant pond.	Iowa DNR fish kill investigation (see https://programs.iowadnr.gov/fishkill/detail.aspx?fkid=856).	Tier IV
2004	5b-t	IA 06-FLO-0040_0	West Branch Floyd River	from confluence with Orange City Slough (S28 T94N R45W Sioux Co.) to confluence with unnamed tributary in NE 1/4 S18 T96N R44W Sioux Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL biocriteria monitoring	Tier IV
2004	5b-t	IA 05-PLA-0040_1	West Branch One Hundred And Two River	mouth (NW 1/4 S10 T68N R35W Taylor Co.) to confluence with Middle Branch One Hundred and Two R. in S6 T69N R34W Taylor Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL biocriteria monitoring 1995	Tier IV
2008	5p	IA 02-WFC-0020_1	West Fork Cedar River	from confluence with Shell Rock R. (S4 T90N R14W Black Hawk Co.) to confluence with Maynes Cr. in S7 T91N R17W Butler Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL ambient water quality monitoring network.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2008	5p	IA 06-LSR-0120_1	West Fork Little Sioux River	mouth (S12 T84N R45W Monona Co.) to confluence with a small unnamed tributary near Climbing Hill in S16 T87N R45W Woodbury Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL statewide ambient water quality monitoring network.	Tier III
2008	5b-t	IA 06-LSR-0120_2	West Fork Little Sioux River	from confluence with small unnamed tributary near Climbing Hill (S16 T87N R45W Woodbury Co.) to confluence with Mud Cr. in S31 T89N R44W Woodbury Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index.	IDNR/UHL biological (REMAP) monitoring in 2005.	Tier IV
2006	5b	IA 06-LSR-0131_0	West Fork Little Sioux River	confluence with unnamed tributary in S3 T91N R42W Cherokee Co. to headwaters	River	General Use	Partial	Biological: fish kill, unknown toxicity	fish kill in 2004 potentially pollutant-related	IDNR fish kill investigation	Tier IV
2004	5b-t	IA 05-CHA-0064_0	West Jackson Creek	mouth to trib S31T69NR21W Wayne Co.	River	Aquatic Life	Not supporting	Biological: IBI	Low biotic index	IDNR Fisheries Bureau	Tier IV
2008	5a	IA 04-LDM-02690-L_0	West Lake (Osceola)	Clarke County S13T72NR26W approx 2 mi W of Osceola.	Lake	Aquatic Life	Partial	Organic Enrichment/ Low DO	Significantly greater than 10% of the samples exceed the dissolved oxygen criteria	ISU and UHL lake surveys.	Tier IV
2008	5a	IA 05-NSH-0080_1	West Nishnabotna River	from confluence with Silver Cr. (S21 T71N R41W Mills Co.) to confluence Farm Cr. in S9 T73N R40W Mills Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli exceeds the Class A1 criterion.	IDNR/UHL statewide ambient water quality monitoring network.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2006	5b-t	IA 05-NSH-0090_3	West Nishnabotna River	from confluence with Elk Cr. (S36 T81N R38W Shelby Co.) to the Crawford-Carroll county line (west line S36 T82N R37W Crawford Co.)	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL REMAP monitoring 2000 and 2003	Tier IV
2004	5b	IA 05-NSH-0090_4	West Nishnabotna River	from the Crawford-Carroll county line (west line S36 T82N R37W Crawford Co.) to confluence with unnamed tributary in S34 T83N R36W Carroll Co.	River	General Use	Partial	Biological: fish kill, ammonia/low DO	fish kill in 2001; caused by animal waste no source identified	IDNR fish kill investigation	Tier IV
2014	5a	IA 06-LSR-02840-L_1	West Okoboji Lake	portion of West Okoboji Lake south of Manhattan Beach on the western shore and Omaha Beach on the eastern shore; approximate center of basin is in SW 1/4 S24T99NR37W Dickinson Co.	Lake	Primary Contact	Partial	Indicator Bacteria	violations to the single-maximum criterion E.coli bacteria in 2011.	IDNR beach monitoring program in 2010-2012	Tier II
2006	5a	IA 06-LSR-02840-L_2	West Okoboji Lake	southwestern bay of West Okoboji Lake in Sections 25 26 35 36 T99N R37W Dickinson Co.	Lake	Primary Contact	Not supporting	Indicator Bacteria	geometric mean > WQS	IDNR/UHL beach monitoring 2002-2004	Tier II

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2004	5b	IA 04-UDM-0253_1	West Otter Creek	mouth (S31 T93N R25W Wright Co.) to the Wright-Hancock county line (north line S4 T93N R25W Wright Co.	River	General Use	Partial	Biological: fish kill, unknown toxicity	Fish kill in 2000; pollutant suspected but no cause/source identified.	IDNR fish kill investigation	Tier IV
2012	5a	IA 04-UDM-03983-L_0	West Swan Lake	Emmet County S31T99NR32W 3 mi. SE of Gruver.	Wetland	Aquatic Life	Not supporting	Algae	High levels of chlorophyll contribute to turbidity that prevents grown of submersed aquatic vegetation	IDNR shallow lakes/wetlands monitoring program 2008-10.	Tier IV
2012	5a	IA 04-UDM-03983-L_0	West Swan Lake	Emmet County S31T99NR32W 3 mi. SE of Gruver.	Wetland	Aquatic Life	Not supporting	Turbidity	High levels of suspended solids leads to turbidity that inhibits growth of submersed aquatic vegetation.	IDNR shallow lakes/wetlands monitoring 2008-10	Tier IV
2004	5b-t	IA 05-TAR-0020_0	West Tarkio Creek	from the Iowa/Missouri state line to confluence with an unnamed tributary in S9 T69N R38W Page Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL biocriteria monitoring 1995	Tier IV
2012	5a	IA 02-IOW-04045-L_0	West Twin Lake	Hancock County S30T94NR24 4 mi E of Kanawha.	Wetland	Aquatic Life	Not supporting	Algae	Algae levels (chlorophyll TSI > 65) adversely impact fish and plant communities	IDNR shallow lakes and wetlands program	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2008	5b-v	IA 04-LDM-0200_0	White Breast Creek	from mouth (S10 T76N R19W Marion Co.) to confluence with Little White Breast Cr. in S11 T73 R22 Lucas Co.	River	Aquatic Life	Threatened	Biological: IBI	Low biotic index.	IDNR Fisheries Bureau sampling 1999.	Tier IV
2008	5a	IA 04-LDM-0200_0	White Breast Creek	from mouth (S10 T76N R19W Marion Co.) to confluence with Little White Breast Cr. in S11 T73 R22 Lucas Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL ambient water quality monitoring network.	Tier III
2004	5b-t	IA 04-LDM-0210_2	White Breast Creek	from confluence with Brush Cr. (S22 T72N R23W Lucas Co.) to confluence with unnamed tributary in S4 T71N R24W Clarke Co.	River	Aquatic Life	Not supporting	Biological: IBI	Low biotic index	IDNR/UHL biocriteria monitoring 2002	Tier IV
2004	5a	IA 03-SSK-00118-L_0	White Oak Conservation Area Lake	Mahaska County S28T75NR14W 4 mi SSW of Rose Hill.	Lake	Primary Contact	Partial	Algae	Aesthetically objectionable conditions (chlorophyll TSI > 65).	ISU statewide lake survey 2000-2002. information from DNR Fisheries	Tier I
2004	5b	IA 01-NMQ-0100_1	Whitewater Creek	mouth (S10 T86N R1W Jones Co.) to confluence with Curran Branch in S12 T87N R1W Dubuque Co.	River	Aquatic Life	Not supporting	Biological: FW mussels	> 50% decline in mussel species richness	ISU freshwater mussel study	Tier IV
2010	5p	IA 01-NMQ-0100_1	Whitewater Creek	mouth (S10 T86N R1W Jones Co.) to confluence with Curran Branch in S12 T87N R1W Dubuque Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli greater than Class A1 criterion.	IDNR bacteria monitoring 2008.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2014	5p	IA 02-CED-0115_0	Willow Creek	from mouth (T99N R18W Sec26) to headwaters (T99N R18W Sec19) Mitchell Co.	River	Primary Contact	Not supporting	Indicator Bacteria	The geometric means of indicator bacteria (E. coli) violated the Class A1 criterion.	Iowa DNR special project monitoring from April 2011 through November 2012.	Tier III
2014	5p	IA 02-IOW-0177_0	Willow Creek	from mouth (T81N R9W Sec8 Benton Co.) to headwaters (T82N R9W Sec29 SW Benton Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of indicator bacteria (E. coli) violated the Class A1 criterion.	Iowa DNR special project monitoring from June through November 2011.	Tier III
2006	5b	IA 06-FLO-0065_0	Willow Creek	from tributary in NE 1/4 S11 T93N R44W Plymouth Co. to headwaters.	River	Aquatic Life	Partial	Biological: fish kill, unknown toxicity	fish kill in 2003	IDNR fish kill investigation	Tier IV
2008	5b-t	IA 06-LSR-0150_0	Willow Creek	mouth (S30 T90N R41W Cherokee Co.) to confluence with unnamed tributary in N 1/2 S31 T91N R41W Cherokee Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index.	IDNR/UHL biological (REMAP) monitoring in 2005.	Tier IV
2004	5b	IA 06-LSR-0223_0	Willow Creek	mouth (S17 T94N R36W Clay Co.) to confluence with unnamed tributary in NW 1/4 S31 T95N R37W Clay Co.	River	Aquatic Life	Not supporting	Biological: fish kill, ammonia/low DO	Fish kills in September 2001 and September 2002 caused by animal waste.	IDNR fish kill investigation.	Tier IV
2004	5b-v	IA 06-LSR-0223_0	Willow Creek	mouth (S17 T94N R36W Clay Co.) to confluence with unnamed tributary in NW 1/4 S31 T95N R37W Clay Co.	River	Aquatic Life	Not supporting	Biological: IBI	low biotic index: declining trend in biotic index from 1999 to 2002;	IDNR/UHL biocriteria monitoring (1999) REMAP (2002) and biocriteria (2005).	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2012	5a	IA 06-LSR-0223_0	Willow Creek	mouth (S17 T94N R36W Clay Co.) to confluence with unnamed tributary in NW 1/4 S31 T95N R37W Clay Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Violation of the geometric mean criterion.	TMDL monitoring in 2009 and 2010	Tier III
2008	5b	IA 06-LSR-0224_0	Willow Creek	from confluence with unnamed tributary in S31 T95N R37W Clay Co. to headwaters (T96N R39W Sec 15 O'Brien Co.)	River	Aquatic Life	Partial	Biological: fish kill, ammonia/low DO	Fish kills in September 2001 and September 2002 caused by animal waste.	IDNR fish kill investigations.	Tier IV
2012	5a	IA 06-LSR-0224_0	Willow Creek	from confluence with unnamed tributary in S31 T95N R37W Clay Co. to headwaters (T96N R39W Sec 15 O'Brien Co.)	River	Primary Contact	Not supporting	Indicator Bacteria	Violation of the geometric mean criterion.	TMDL monitoring in 2010	Tier III
2014	5a	IA 05-PLA-00380-L_0	Wilson Park Lake	Taylor County S28T70NR32W 3 mi SSE of Lenox.	Lake	Primary Contact	Partial	Algae	Aesthetically objectionable conditions (chlorophyll TSI > 65).	ISU and UHL lake monitoring surveys	Tier I
2006	5a	IA 05-PLA-00380-L_0	Wilson Park Lake	Taylor County S28T70NR32W 3 mi SSE of Lenox.	Lake	Primary Contact	Partial	pH	signification violations to the state's water quality criterion for pH	ISU and UHL lake monitoring survey data	Tier I
2014	5a	IA 05-PLA-00380-L_0	Wilson Park Lake	Taylor County S28T70NR32W 3 mi SSE of Lenox.	Lake	Aquatic Life	Partial	pH	signification violations to the state's water quality criterion for pH	ISU and UHL lake monitoring survey data	Tier I

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2004	5a	IA 05-PLA-00430-L_0	Windmill Lake	Taylor County S36T69NR35W 4 mi E of New Market.	Lake	Primary Contact	Partial	Algae	aesthetically objectionable conditions; trophic state index for chl-a and Secchi = 70	ISU statewide lake survey	Tier I
2006	5a	IA 05-PLA-00430-L_0	Windmill Lake	Taylor County S36T69NR35W 4 mi E of New Market.	Lake	Primary Contact	Partial	Turbidity	aesthetically objectionable conditions; Secchi trophic state index =67 Chl-a TSI =64	ISU statewide lake survey 2000-2004	Tier I
2008	5a	IA 02-WIN-0010_1	Winnebago River	mouth (Floyd Co.) to confluence with Calmus Cr. at Mason City in S34 T97N R20W Cerro Gordo Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL ambient water quality monitoring network.	Tier III
2008	5a	IA 02-WIN-0010_2	Winnebago River	from confluence with Calmus Cr. (S34 T97N R20W Cerro Gordo Co.) to mill dam at Fertile in S34 T98N R22W Worth Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL ambient water quality monitoring network.	Tier III
2004	5b-t	IA 02-WIN-0020_2	Winnebago River	from confluence with Pike Run (S25 T99N R24W Winnebago Co.) to the Iowa/Minnesota state line	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL biocriteria monitoring 2000	Tier IV
2008	5p	IA 02-CED-0300_0	Wolf Creek	mouth (S29 T87N R11W Black Hawk Co.) to confluence with Twelvemile Cr. in S19 T86N R13W Tama Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	IDNR/UHL ambient water quality monitoring network.	Tier III

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2008	5b-v	IA 05-CHA-0070_0	Wolf Creek	mouth (S15 T71N R21W Lucas Co.) to confluence with unnamed tributary in E 1/2 NW 1/4 S8 T70N R22W Wayne Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index.	IDNR/UHL biological (REMAP) monitoring in 2005 & IDNR Fisheries biological monitoring in 2002.	Tier IV
2008	5p	IA 05-CHA-0070_0	Wolf Creek	mouth (S15 T71N R21W Lucas Co.) to confluence with unnamed tributary in E 1/2 NW 1/4 S8 T70N R22W Wayne Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Iowa State University/Army Corps of Engineers Rathbun watershed monitoring project 2004-06.	Tier III
2014	5p	IA 01-TRK-0457_1	Wonder Creek	mouth (S19 T97N R9W Winneshiek Co.) to confluence with unnamed tributary in S24 T97N R10W Winneshiek Co.	River	Primary Contact	Not supporting	Indicator Bacteria	Geometric mean of E. coli is greater than the Class A1 criterion.	Turkey River Watershed Monitoring project 2011-2012.	Tier III
2008	5b-t	IA 01-YEL-0080_1	Yellow River	from County Road X-26 (S24 T96N R5W Allamakee Co.) to old Hwy 51 crossing in NE 1/4 S11 T96N R6W Allamakee Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index.	IDNR biological (REMAP) monitoring in 2006.	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
2006	5a	IA 01-YEL-0080_2	Yellow River	from old Hwy 51 crossing (NE 1/4 S11 T96N R6W Allamakee Co.) to confluence with N. Fk. Yellow R. in S13 T96N R7W Winneshiek Co.	River	Aquatic Life	Not supporting	Organic Enrichment/ Low DO	Significantly greater than 10% of samples violate dissolved oxygen criterion.	IDNR/UHL Yellow River Watershed Project.	Tier IV
2004	5b-v	IA 01-YEL-0080_3	Yellow River	from N. Fk. Yellow R. (S13 T96N R7W Allamakee Co.) to confluence with unnamed tributary in SE 1/4 S8 T96N R7W Winneshiek Co.	River	Aquatic Life	Partial	Biological: IBI	Low biotic index	IDNR/UHL biological monitoring	Tier IV
2014	5a	IA 01-YEL-0080_3	Yellow River	from N. Fk. Yellow R. (S13 T96N R7W Allamakee Co.) to confluence with unnamed tributary in SE 1/4 S8 T96N R7W Winneshiek Co.	River	Aquatic Life	Partial	pH	Significantly greater than 10% of samples violated the upper pH criterion (9.0 units) in 2011.	IDNR TMDL follow-up monitoring from April-October 2011 (STORET station 11960006).	Tier IV
2014	5p	IA 01-YEL-0081_0	Yellow River	from confluence with unnamed tributary in SE 1/4 S8 T96N R7W to headwaters (T96N R8W Sec3 Winneshiek Co.)	River	Aquatic Life	Partial	pH	Significantly greater than 10% of pH samples violated the Class B(WW1) criterion.	IDNR monitoring from April to October 2011 (STORET station 11960008).	Tier IV

IR Cycle Added	2014 IR Cat.	ADB Code	Waterbody Name	Location Description	Water-body type	Impaired Use	Use Support	Cause/ Stressor	Listing Rationale	Data Source	TMDL Priority
5a	339			Rivers:	607					Tier I:	48
5b	72			Lakes:	108					Tier II:	41
5b-t	91			Reservoirs:	10					Tier III:	329
5b-v	23			Wetlands:	26					Tier IV:	333
5p	226										
Total	**751**			**Total:**	**751**					**Total:**	**751**

Environmental Protection Commission
Iowa Department of Natural Resources

ITEM **16** **DECISION**

TOPIC **Contract with JADA Productions for Tier II Database Hosting, Support, and Maintenance**

Recommendations:
Commission approval is requested for a four year-service contract amendment with JADA Productions (JADA) of Las Vegas, Nevada. The contract amendment will begin on June 30, 2015, and terminate on June 30, 2019. The total amount of this contract amendment shall not exceed $24,800.00.

Funding Source:
This contract will be funded through a combination of state and federal funds. The Tier 2 database is required to be maintained by the federal Emergency Planning and Community Right to Know Act (EPCRA) and 605 Iowa Administrative Code 104.1(1) and 104.3(2), which implements the federal law.

Background:
The Department of Natural Resources (DNR) took over the Tier II program from Iowa Workforce Development in July 2007. Since 2007 the DNR has utilized a Tier II management software package to gather, analyze and distribute Tier II data. Each year since the software was instituted the DNR has seen an increase in Tier II data collected.

The DNR forwards the data collected for the reporting period to each County Emergency Management Coordinator (EMA) and regional planner. The DNR Emergency Planning and Community Right-to-Know Act (EPCRA) Coordinator and County EMA reconcile reports received with known facilities in the county.

The DNR utilizes the Tier II data for planning and response during disasters. The data is also uploaded to the Homeland Emergency Response Exchange (HERE) system utilized by First Responders and County Emergency Management personnel to provide up-to-date information about facilities.

Purpose:
The parties propose to enter into this Contract for the purpose of retaining the Contractor to provide: hosting, maintenance and support for the DNR's Tier II database.

Contractor Selection Process:
JADA was chosen using the sole source process. JADA was chosen for this project because application is customized proprietary software and cannot be altered without infringing on the intellectual property rights of JADA Productions.

Contract History: (if EPC)
JADA Productions was selected for the original contract by competitive bid for the development, maintenance, and hosting of the Tier II On-line Submittal software for a period of 1 year. The original contract cost was $46,700.00 with one amendment adding $9,870.00. In 2014 a new contract was developed for customization of the software and the continuation of the support, maintenance, and hosting of the software until June 30th, 2015 (6 months). The value of the 2014 contract was $21,680.00. This amendment is for the 2014 contract and brings the total for the contract to $46,480.00.

Presenter's name	Adam Broughton
Presenter's Title	Environmental Specialist Sr.
Presenter's Bureau and Division	ESD – Field Services and Compliance Bureau

Obligation	Task Milestone Date	Amount of compensation allotted to Task	Invoice Due No Later Than
<u>Original Task 2 is revised to add the following language:</u> **Task 2: Provide application and data hosting** **Description of Revision:** Time period of contract is extended an additional 4 years through June 30, 2019.		$3,000.00/year for a total of 4 years	First month of contract anniversary
<u>Original Task 3 is revised to add the following language:</u> **Task 3: Provide application maintenance and support** **Description of Revision:** Time period of contract is extended an additional 4 years through June 30, 2019.		$3,200.00/year for a total of 4 years	First month of contract anniversary
<u>Original Task 4 is revised to add the following language:</u> **Task 4: Provide a backup of the Tier II data to the Iowa DNR** **Description of Revision:** Time period of contract is extended an additional 4 years through June 30, 2019.		Costs included in Task 3	NA
		Total $24,800.00	

Environmental Protection Commission
Iowa Department of Natural Resources

ITEM **17** **DECISION**

TOPIC **Donations**

Commission approval is requested for the below donation(s) under Iowa Code 455B.103(5) of Director's Duties to the Environmental Services Division of the Iowa Department of Natural Resources.

Iowa Code 455B.103(5)
Accept, receive, and administer grants or other funds or gifts from public or private agencies, including the federal government, for the abatement, prevention, or control of pollution, or other environmental programs, subject to the approval of the commission.

Donation to:	Amount	Description	Donation Provided by:
Water Quality Monitoring	$50.00		Urbandale Federated Garden Club

Bill Ehm
Division Administrator
Environmental Services Division