

IOWA DEPARTMENT OF NATURAL RESOURCES

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

GENERAL PERMIT NO. 6

**EFFECTIVE DATES
XXXXXXXXX THROUGH XXXXXXXXX**

FOR

WELL CONSTRUCTION AND WELL SERVICE DISCHARGES

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PART I. COVERAGE UNDER THIS PERMIT

A. PERMIT AREA

This permit covers all areas of the State of Iowa

B. ELIGIBILITY

1. COVERAGE

Except for discharges identified under Part I.B.2, this permit authorizes well construction and well service related discharges that reach a Water of the United States.

2. LIMITATIONS ON COVERAGE

The following discharges are **not** authorized by this permit:

- A. Well construction and well service discharges mixed with sources other than well construction discharges.
- B. Well construction and well service discharges resulting in an acutely toxic condition in a substance reaching Waters of the United States.
- C. Any well construction and well service discharge covered by an existing individual NPDES permit or which is issued an individual permit in accordance with Part I.C. of this permit.
- D. Any well construction and well service discharge Discharges of drilling fluid and drilling mud (567 IAC 49.11.)not adequately treated to meet 567 Iowa Administrative Code (IAC) 61.3(2). The portion of drilling fluid and drilling mud that cannot be adequately treated must be disposed of in an alternate manner that complies with federal, state and local requirements.
- E. Stormwater associated with industrial or construction activities.
- F. Discharges from geothermal supply wells also known as “pump and dump wells” that are not under construction or reconstruction.
- G. Any new or expanded discharge to Outstanding Iowa Waters (OIW) or Outstanding National Resource Waters (ONRW) (See Attachment 1). Persons seeking to discharge to OIW may apply for an individual permit. Discharges to ONRW cannot be authorized in Iowa.

3. **EXCLUSIONS** NPDES permits are not required for well construction and well service discharges that do not reach Waters of the United States.

C. REQUIRING AN INDIVIDUAL PERMIT

1. The Department may require any person authorized to discharge under this permit to apply for and obtain an individual NPDES permit. The causes for such a request may include but are not limited to location of the discharge, amount of discharge or history of non-compliance with the general permit. When the Department notifies a discharger to apply for an individual permit, a deadline, not longer than one year, will be established for submitting the application. If a person fails to submit a complete individual NPDES permit application by the deadline established by the Department under this paragraph, his/her coverage under this general permit is automatically terminated at the end of the day specified for the application submittal.
2. Any person authorized to discharge by this permit may apply for an individual permit from the Department. The application for an individual permit shall include DNR NPDES Application Forms 1, 2 and 5, an antidegradation alternatives analysis (or justification for temporary and limited degradation) and all applicable fees and shall be submitted to the Department in accordance with 567 IAC 64.3(4)(a).
3. When an individual NPDES permit is issued to a discharger, the applicability of this general permit to the individual NPDES permit applicant is automatically terminated on the issuance date of the individual permit. When an individual NPDES permit is denied to a person for a discharge otherwise subject to this general permit, the applicability of this general permit to the individual NPDES permit applicant is automatically terminated on the date of such denial, unless otherwise specified by the Department.

D. AUTHORIZATION

1. Well construction and well service discharges that reach Waters of the United States are authorized so long as the conditions of this permit are satisfied.
2. Permittees shall notify the Department no earlier than five (5) calendar days prior to and no later than 24 hours after commencing well construction and/or well service activities on a site. Failure to notify the Department is a violation of this General Permit. Instructions for notification are included in the DNR supplement named “Guidance Document for

Well Construction and Well Service Discharges” and can be viewed or downloaded on the DNR web site: www.iowadnr.gov.

PART II. SPECIAL CONDITIONS, MANAGEMENT PRACTICES, AND OTHER NON-NUMERIC LIMITATIONS

A. PROHIBITION ON NON-WELL CONSTRUCTION AND WELL SERVICE DISCHARGES

All discharges authorized by this permit shall be composed entirely of well construction and well service discharge.

B. RELEASES IN EXCESS OF REPORTABLE QUANTITIES

Any owner or operator identified in the Well Water Pollution Prevention Plan (“WWPPP” or “Plan”) is subject to the spill notification requirements as specified in 455B.386 of the Iowa Code. Iowa law requires that as soon as possible but not more than six hours after the onset of a "hazardous condition" the Department and local sheriff's office or the office of the sheriff of the affected county be notified. Well construction and well service activities must cease until the WWPPP described in Part III of this permit is modified to provide a description of the release and the circumstances leading to the release and to identify and provide for the implementation of steps to prevent the reoccurrence of such releases and to respond to such releases.

C. COMPLIANCE WITH EXISTING RULES

Well construction and well service discharges shall be in compliance with 567 I-A-C. 61.3(2).

PART III. WELL WATER POLLUTION PREVENTION PLANS

A site-specific Well Water Pollution Prevention Plan (“WWPPP” or “Plan”) shall be developed or obtained by the permittee prior to commencement of well construction or service activities. Plans for public water supply wells must be developed prior to letting bids for the construction project. All well activities that use the services of an engineer shall have an engineer: a) prepare the WWPPP, b) prepare all revisions pursuant to Part III.C, and c) provide the following certification for the WWPPP and any revisions: “The WWPPP is designed using good engineering practices.”

The Plan shall identify the anticipated quantities of ~~pollution-pollutants~~ which may reasonably be expected to affect the quality of the well construction and well service discharge. In addition, the Plan shall describe and ensure the implementation of controls, identified as Best Management Practices or BMPs, which will be used to reduce the pollutants in well construction and well service discharge at the construction site and to assure compliance with the terms and conditions of this permit. Suggested BMPs are listed in the DNR supplement named “Guidance Document for Well Construction and Well Service Discharges” and can be viewed or downloaded on the DNR web site: www.iowadnr.gov.

A. DEADLINES FOR WWPPP PREPARATION AND COMPLIANCE

1. WWPPP PREPARATION DEADLINE

- A. For public water supply wells, the WWPPP must be developed prior to letting bids for the construction project. The WWPPP shall be completed prior to the commencement of well construction and well service activities and The WWPPP shall be updated as needed to ensure that the discharge complies with 567 IAC 61.3(2).**
- B. For all other water wells, the WWPPP shall be completed prior to the commencement of well construction and well service activities and shall be updated as needed to ensure that the discharge complies with 567 IAC 61.3(2).**

2. WWPPP COMPLIANCE DEADLINE

The WWPPP shall provide for compliance with the terms and schedule of the Plan prior to the commencement of well construction and well service activities.

B. SIGNATURE AND PLAN REVIEW

1. The Plan shall be signed in accordance with Part V.G. and be retained according to Part IV of this permit.
2. The permittee shall make Plans available to the Department for review upon request, or in the case of a discharge associated with well construction and well service activities that discharges through a large or medium municipal separate storm sewer system with an NPDES permit, to the municipal operator of the system.

3. The Department may notify the permittee at any time that the Plan does not meet one or more of the minimum requirements of this Part. After such notification from the Department, the permittee shall make changes to the Plan and shall submit to the Department a written certification that the requested changes have been made. Unless otherwise provided by the Department, the permittee shall have seven (7) days after such notification to make the necessary changes.
4. All WWPPPs are considered reports that shall be available to the public under Section 308(b) of the CWA and Chapter 22 of the Code of Iowa. However, the permittee may claim request that any portion of a WWPPP be treated as confidential in accordance with ~~Chapter 22 of The Code of Iowa and 561 IA Code Administrative Code (561)~~-2.5.

C. KEEPING PLANS CURRENT

The permittee shall amend the Plan whenever there is a change in design, construction, operation, or maintenance which has a significant effect on the discharge of pollutants to a Water of the United States and which has not been addressed in the Plan, or if the Plan proves to be ineffective in significantly minimizing pollutants from well construction and well service activity, or in otherwise achieving the general objectives of controlling pollutants in discharge associated with well construction and well service activity. In addition, the Plan shall be updated to identify any change or transfer of the permit and permit responsibilities or, if required, by the occurrence of a hazardous condition (as defined in Part VII.H of this permit). Amendments to the Plan may be reviewed by the Department in the same manner as Part III.B.2. The Department retains the right to request and review the Plan before or during the well construction and well service and for a period of six months after permit authorization as noted in Part IV.

D. CONTENTS OF THE WWPPP

The WWPPP shall include the following items:

1. SITE DESCRIPTION

Each Plan shall provide a description of the following:

- A. A description of the planned activity. For example, construction of a water supply well approximately 400 feet in depth. The description must also include the types of constituents generated and products used in the well construction and well service activities that may be present in the wastewater discharge, e.g. bentonite drilling fluid, polymers, foaming agents, and other chemicals or products needed in well construction and well services that may be discharged with the wastewater.
- B. Estimates of the total amount of well construction and well service wastewater to be discharged.
- C. A site map indicating drainage patterns and approximate slopes, the location of structural and non-structural controls identified in the WWPPP, surface waters (including wetlands), and locations where well construction and well service wastewater is discharged to a surface water; and
- D. The location of the discharge, the point of entrance into the water body, and the name of the receiving water(s).

2. CONTROLS

Each Plan shall include a description of Best Management Practices that will be implemented at the well construction and well service site. The Plan will clearly describe the appropriate BMPs and the timing during the well construction and well service process that the measures will be implemented. (For example, retention ponds with a minimum of 10 minutes retention time will be utilized for air drilling, followed by retention ponds with 3 minutes retention time will be utilized for test pumping.)

The description of BMPs shall address the following minimum components:

A. EROSION AND SEDIMENT CONTROLS

1. **STABILIZATION PRACTICES** A description of temporary and permanent stabilization practices, including site-specific scheduling of the implementation of the practices. Site plans should ensure that existing vegetation is preserved where attainable and that disturbed areas are stabilized. Stabilization practices may include: temporary seeding, permanent seeding, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures.
2. **STRUCTURAL PRACTICES** A description of structural practices to the degree attainable, to divert flows from exposed soils, store flows or otherwise limit runoff from exposed areas of the site. Such practices may include silt fences, earth dikes, brush barriers, drainage swales, sediment traps, check dams, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins.

B. OTHER CONTROLS

1. **WASTE DISPOSAL** All wastes composed of building materials or other solid or hazardous substances must be removed from the site for disposal in permitted disposal facilities. No such wastes or unused building materials shall be buried, dumped, or discharged at the site.
2. Off-site vehicle tracking of sediments shall be minimized.
3. The Plan shall ensure and demonstrate compliance with applicable State and local waste disposal, sanitary sewer or septic system regulations.

3. **INSPECTIONS**

Qualified personnel (provided by the permittee) shall inspect all control measures at least once every 6 hours during well construction and well service activities that result in discharge.

A. Based on the results of the inspection, the description of potential pollutant, the types of pollutants to be treated as identified in the Plan in accordance with paragraph III.D.1 of this permit and pollution prevention measures identified in the Plan in accordance with paragraph III.D.2. of this permit shall be revised as appropriate as soon as practicable after such inspection.

B. A report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date of the inspection, the time of inspection, major observations relating to the performance of the BMPs, and any actions taken to alter the BMPs shall be documented and retained as part of the WWPPP. The report shall be signed by the permittee or co-permittee in accordance with Part V.G. of this permit.

C. Any discharge deficiencies that are found during inspection that are not consistent with this permit require immediate corrective action and modification of the WWPPP.

4. **CONTRACTORS**

A. **CO-PERMITTEE**

The WWPPP must clearly identify for each BMP in the Plan the contractor(s) and/or subcontractor(s) that will install, manage, or alter the BMPs. All contractors and subcontractors identified in the Plan must sign a copy of the certification statement in Part III.D.4.B. of this permit in accordance with Part V.G. of this permit. Upon signing the certification, the contractor or sub-contractor is a co-permittee with the owner and other co-permittee contractors. All signatures and certifications must be included in the WWPPP.

B. **CERTIFICATION STATEMENT**

All contractors and subcontractors identified in a WWPPP in accordance with Part III.D.4.A. of this permit shall sign a copy of the following certification statement before conducting any professional service at the site identified in the WWPPP:

"I certify under penalty of law that I understand the terms and conditions of National Pollutant Discharge Elimination System (NPDES) general permit #6 that authorizes well construction and well service discharges from the construction or well services site. Further, by my signature, I understand that I am becoming a co-permittee, along with the owner(s) and other contractors and subcontractors signing such certifications. As a co-permittee, I understand that I, and my company, are legally required under the Clean Water Act and the Code of Iowa, to ensure compliance with the terms and conditions of the Well Water Pollution Prevention Plan developed under this NPDES permit and other terms and conditions of this NPDES permit."

The certification must include the name and title of the person providing the signature; the name, address and telephone number of the contracting firm; the address (or other identifying description) of the site; and the date the certification is made.

The failure of any qualifying individual to provide a signed certification statement does not exempt that individual, or entity from whom they are employed, from meeting the requirements as found in the general permit if they meet the qualifications of a co-permittee.

PART IV. RETENTION OF RECORDS

The permittee shall retain copies of the WWPPP and all records required to be kept by this permit for a period of at least six months from the completion date of well services that require the use of this permit.

If there is a construction trailer, shed, portable document mailbox or other covered structure located on the property the permittee shall retain a copy of the WWPPP and all associated records required by this permit at the construction site from the date of project initiation to the date of completion. If there is no construction trailer, shed or other covered structure located on the property, the permittee shall retain a copy of the Plan and associated records at a readily available alternative site and provide it for inspection upon request. If these documents are maintained at an off-site location such as a corporate office, it shall be provided for inspection no later than three hours after being requested.

PART V. STANDARD PERMIT CONDITIONS

A. DUTY TO COMPLY

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Code of Iowa and the Clean Water Act and is grounds for enforcement action; for termination of coverage under this general permit; and/or, for denial of a request for coverage under a reissued general permit.

B. CONTINUATION OF THE EXPIRED GENERAL PERMIT

This permit expires on February 28, 2020. An expired general permit continues in force until replaced by adoption of a new general permit.

C. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

D. DUTY TO MITIGATE

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

E. DUTY TO PROVIDE INFORMATION

The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine compliance with this permit. The permittee shall also furnish to the Department upon request copies of records required to be kept by this permit.

F. OTHER INFORMATION

When the permittee becomes aware that he or she failed to submit any relevant facts or submitted incorrect information in any report to the Department, he or she shall promptly submit such facts or information.

G. SIGNATORY REQUIREMENTS

All Well Water Pollution Prevention Plans, certifications or other information either submitted to the Department or that this permit requires be maintained by the permittee, shall be signed by the appropriate party as indicated in this general permit. If the signatory is not an individual, the person signing shall be as follows:

1. *Corporations*. In the case of corporation, a responsible corporate officer means:
 - A. A president, secretary, treasurer, or vice president in charge of a principal business function, or any other person who performs similar policy- or decision-making functions; or
 - B. The manager of manufacturing, production, or operating facilities, if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
2. *Partnerships*. In the case of a partnership, a general partner.
3. *Sole proprietorships*. In the case of a sole proprietorship, the proprietor.
4. *Municipality, state, federal, or other public agency*. In the case of a municipal, state, or other public facility, either the principal executive officer or the ranking elected official. A principal executive officer of a public agency includes:
 - A. The chief executive officer of the agency; or
 - B. A senior executive officer having responsibility for the overall operations of a unit of the agency.

H. CERTIFICATION

Any person signing documents under paragraph V.G. shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I

am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

I. OIL AND HAZARDOUS SUBSTANCE LIABILITY

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Clean Water Act.

J. PROPERTY RIGHTS

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

K. SEVERABILITY

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

L. PROPER OPERATION AND MAINTENANCE

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit and with the requirements of the Well Water Pollution Prevention Plans. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by a permittee only when necessary to achieve compliance with the conditions of this permit.

M. INSPECTION AND ENTRY

The permittee shall allow the Department or an authorized representative of EPA, the State, county, or, in the case of a facility which discharges through a municipal separate storm sewer, an authorized representative of the municipal operator or the separate storm sewer receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;
2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit;
3. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment); and
4. Sample any discharge of pollutants.

N. PERMIT ACTIONS

Coverage under this permit may be terminated for cause. The notification of planned changes or anticipated noncompliance does not stay any permit condition.

O. ENVIRONMENTAL LAWS

No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations.

PART VI. ADDITIONAL PERMITTING CLAUSE

If there is evidence indicating potential or realized impacts to water quality due to any discharge from an authorized well construction and well service activity covered by this permit, the owner of such system may be required to obtain an individual permit in accordance with Part I.C. of this permit.

PART VII. DEFINITIONS

- A. "Acutely Toxic Substances"** means that level of pollutants which would rapidly induce a severe and unacceptable impact on organisms.

- B. "Best Management Practices"** ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of Waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.
- C. "Contractor(s) and/or Subcontractor(s)"** means any individual or entity who performs work on the well construction/service site involved in installing, managing, and/or altering BMPs intended to manage and treat well construction/service wastewater, or whose on-site work may alter the effectiveness of the BMPs that have been deployed, increase the amount of discharge wastewater, or reduce the quality of the discharge wastewater.
- D. "CWA" or "Clean Water Act"** means the Federal Water Pollution Control Act.
- E. "Co-permittee"** means any individual who performs work on the well construction/service site involved in installing, managing, and/or altering BMPs intended to manage and treat well construction/service wastewater or whose on-site work may alter the effectiveness of the BMPs that have been deployed, increase the amount of discharge wastewater, or ~~the~~ reduce the quality of the discharge wastewater. Planning and design activities related to development or modification of the WWPPP, by themselves, do not constitute co-permittee status.
- F. "Department"** means the Iowa Department of Natural Resources.
- ~~**G. "Drilling Fluid and Drilling Mud"** means naturally developed and/or artificially mixed colloidal, polymer, or other water based fluids used in the drilling process to enhance the carrying capacity of the fluid to lift borehole cuttings to the ground surface and stabilize the well borehole.~~
- H.G. "Hazardous Condition"** means any situation involving the actual, imminent, or probable spillage, leakage, or release of a hazardous substance on to the land, into a water of the state, or into the atmosphere, which creates an immediate or potential danger to the public health or safety or to the environment. 455B.381(2), Code of Iowa.
- H.H. "Hazardous Substance"** means any substance or mixture of substances that presents a danger to the public health or safety and includes, but is not limited to, a substance that is toxic, corrosive, or flammable, or that is an irritant or that, in confinement, generates pressure through decomposition, heat, or other means. The following are examples of substances which, in sufficient quantity may be hazardous: acids; alkalis; explosives; fertilizers; heavy metals such as chromium, arsenic, mercury, lead and cadmium; industrial chemicals; paint thinners; paints; pesticides; petroleum products; poisons, radioactive materials; sludges; and organic solvents. "Hazardous substances" may include any hazardous waste identified or listed by the administrator of the United State Environmental Protection Agency under the Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act of 1976, or any toxic pollutant listed under section 307 of the federal Water Pollution Control Act as amended to January 1, 1977, or any hazardous substance designated under section 311 of the federal Water Pollution Control Act as amended to January 1, 1977, or any hazardous material designated by the secretary of transportation under the Hazardous Materials Transportation Act (49 CFR 172.101). 455B.381(1), Code of Iowa, and 40 CFR Part 116 pursuant to section 311 of the Clean Water Act.
- H.I. "Municipality"** means a city, town, borough, county, parish, district, association, or other public body created by or under State law.
- K.J. "Permittee"** means the owner of the water supply well.
- L.K. "Plan"** means Well Water Pollution Prevention Plan (WWPPP).
- M.L. "Waters of the United States"** means:
- (a) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
 - (b) All interstate waters, including interstate "wetlands;"
 - (c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands," sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:
 - (1) Which are or could be used by interstate or foreign travelers for recreational or other purposes;
 - (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - (3) Which are used or could be used for industrial purposes by industries in interstate commerce;
 - (d) All impoundments of waters otherwise defined as waters of the United States under this definition;
 - (e) Tributaries of waters identified in paragraphs (a) through (d) of this definition;
 - (f) The territorial sea; and
 - (g) "Wetlands" adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition.
- Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR §423.11(m) which also meet the criteria of this definition) are not waters of the United States. This exclusion applies only to manmade bodies of water which neither were originally created in waters of the United States (such as disposal area in wetlands) nor resulted from the impoundment of waters of the United States.
- N.M. "Well Service(s)"** means any service that meets the following definitions: "construction" of a water well, "water well" and "well reconstruction" as found in Iowa Code 455B.171, "~~water well~~ services" as found in 567 Iowa Administrative Code Chapter

49, and ~~for~~ all well construction performed in accordance with 567 Iowa Administrative Code Chapter 43. Examples of water well and well services include but are not limited to: well drilling and well construction for private and public water supply wells, well servicing, well development, well rehabilitation, well repair, and test pumping of all types of water supply wells, well drilling and construction for geothermal production supply wells, borehole drilling and heat exchanger installation for vertical geothermal closed loop heat exchangers, and any other water well services related activity that generates wastewater.

**Attachment 1:
ONRW and OIW Waters in Iowa**

Outstanding National Resource Waters (ONRW)

There are no waters in Iowa designated as Outstanding National Resource Waters as of the date of issuance of this permit.

Outstanding Iowa Waters (OIW)

STREAM	DESCRIPTION	LENGTH (Miles)
Baron Springs	Mouth (S2, T91N, R6W, Clayton Co.) to spring source (S4, T91N, R6W, Clayton Co.)	1.99
Bear Creek	From road crossing in SW ¼, NW1/4, S11, T86N, R10W, Benton Co. to E line, S25, T87N, R10W, Buchanan Co.	5.2
Bloody Run	From (W. line of Section 22, T95N, R4W, Clayton Co.) to the confluence with Unnamed Creek (NAD83) UTM Coordinates X(Easting) 645284.89 Y(Northing) 4766657.44	8.59
Brownfield Creek	Mouth (Clayton Co.) to spring source (S31, T91N, R3W, Clayton Co.)	0.94
Clear Creek	Mouth (Allamakee Co.) to W. line of Section 25, T99N, R4W, Allamakee Co.	3.79
Deer Creek	Road crossing in SE¼, S35, T100N, R19W, Worth Co. to the N. line of S7, T100N, R19W, Worth Co.	7.29
Dousman Creek	Mouth (S33, T96N, R3W, Allamakee Co.) to Allamakee-Clayton Co. line.	3.44
Duck Creek	From the mouth (S14, T100N, R06W Allamakee Co.) to the Iowa-Minnesota state line.	1.98
Ensign Creek (aka Ensign Hollow)	Mouth (S28, T92N, R6W, Clayton Co.) to spring source (S29, T92N, R6W, Clayton Co.)	1.05
Unnamed Creek (aka Erickson Spring Branch)	Mouth (S23, T98N, R4W, Allamakee Co.) to W. line of S23, T98N, R4W, Allamakee Co.	0.91
French Creek	Mouth (Allamakee Co.) to E. line of Section 23, T99N, R5W, Allamakee Co.	5.58
Grannis Creek	Mouth (S30, T95N, R7W, Fayette Co.) to W. line of S36, T93N, R8W, Fayette Co.	3.56
Jones Creek	From the mouth (S19, T98N, R04W Allamakee Co.) to bridge crossing at Clonkitty Rd. (S14, T98N, R05W Allamakee Co.)	5.75

Kleinlein Creek	Mouth (Clayton Co.) to spring source (South Spring) (S10, T91N, R6W, Clayton Co.)	3.96
Lime Creek	From confluence with unnamed tributary in NE ¼, NW ¼, S34, T87N, R10W, Buchanan Co. to N. line of S23, T87N, R10W, Buchanan Co.	3.0
Little Paint Creek	Mouth to N. line of Section 30, T97N, R3W	1.92
Ludlow Creek	Mouth (S2, T96N, R6W, Allamakee Co.) to confluence with an unnamed tributary (S33, T97N, R6W, Allamakee Co.)	2.00
Mill Creek (aka Big Mill Creek)	Confluence with Little Mill Cr. to confluence with Unnamed Cr. (S1, T86N, R3E, Jackson Co.)	8.04
Mossey Glen Creek	Mouth (S3, T91N, R5W, Clayton Co.) to S. line of S10, T91N, R5W, Clayton Co.	1.96
North Bear Creek	Mouth (S25, T100N, R7W, Winneshiek Co.) to Iowa-Minnesota state line.	6.39
Pine Creek (aka South Pine Creek)	Mouth (S26, T99N, R7W, Winneshiek Co.) to N. line of S21, T99N, R7W, Winneshiek Co.	2.80
Smith Creek (aka Trout River)	Mouth (S21, T98N, R7W, Winneshiek Co.) to S. line of S33, T98N, R7W, Winneshiek Co.	3.42
South Canoe Creek	From the mouth (S22, T99N, R08W Winneshiek Co.) to the bridge crossing at Winn Rd. (S21, T99N, R08W Winneshiek Co.)	1.90
Spring Branch Creek	Mouth (S10, T88N, R5W, Delaware Co.) to spring source (S35, T89N, R5W, Delaware Co.)	2.83
Storybook Hollow	Mouth (S7, T86N, R4E, Jackson Co.) to S. line of S12, T86N, R3E, Jackson Co.	1.37
Trout Run	Mouth (S16, T98N, R4W, Allamakee Co.) through one mile reach.	1.0
Twin Springs Creek	Mouth (S17, T98N, R8W, Winneshiek Co.) to springs in Twin Springs Park (S20, T98N, R8W, Winneshiek Co.)	0.61
Unnamed Creek (aka Cold Water Creek)	Mouth (S32, T100N, R9W, Winneshiek Co.) to N. line of Section 31, T100N, R9W, Winneshiek Co.)	2.46
Unnamed Creek (aka S. Fk. Big Mill)	Mouth (S8, T86N, R4E, Jackson Co.) to W. line of S17, T86N, R4E, Jackson Co.	0.97
Village Creek	Mouth (Allamakee Co.) to W. line of S19, T98N, R4W, Allamakee Co.	13.32

Waterloo Creek	Mouth (S35, T100N, R6W, Allamakee Co.) to Iowa-Minnesota state line.	9.39
West Branch French Creek	From the mouth (S23, T99N, R05W, Allamakee Co.) to the confluence with Unnamed Creek (S26, T99N, R05W, Allamakee Co.)	0.67
	Grand Total:	118.08
LAKES	DESCRIPTION (Section, Township, Range)	SIZE (Acres)
Big Spirit Lake SGMA	S33, T100N, R36W	5684
West Okoboji Lake SGMA	S20, T99N, R36W	3,847

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