

**IOWA DEPARTMENT OF NATURAL RESOURCES**

**NATIONAL POLLUTANT  
DISCHARGE ELIMINATION SYSTEM (NPDES)**

**and**

**STATE OPERATION PERMIT**

**GENERAL PERMIT NO. 9**

**EFFECTIVE DATES**

*[Insert issuance date] THROUGH [Insert date 5 years after issuance]*

**FOR**

**DISCHARGES RESULTING FROM**

**DEWATERING ACTIVITIES**

**and**

**RESIDENTIAL OPEN-LOOP GEOTHERMAL HEATING AND COOLING  
SYSTEMS**

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## **PART I. COVERAGE UNDER THIS PERMIT**

### **A. Coverage Area**

This permit covers all areas within the borders of the State of Iowa.

### **B. Discharges Covered Under This Permit**

This permit authorizes the discharge of a pollutant to surface waters of the State or to the land surface resulting from the following:

- Excavation dewatering associated with construction activity where pumps, sumps, etc. are used within or near excavation areas to remove accumulated groundwater, surface water, and storm water;
- Groundwater dewatering through the installation of temporary dewatering wells, vacuum well points, eductors, etc. to cause the localized lowering of the water table to facilitate construction activity; and
- Residential open-loop geothermal heating and cooling systems that use water as a heat transfer medium.

### **C. Discharges Not Covered Under This Permit**

Discharges of pollutants from the following activities are not authorized by this permit.

- Any new or expanded discharge to an Outstanding Iowa Water (OIW) or Outstanding National Resource Water (ONRW) {See Attachment 1};
- Any discharge to a state-owned natural or artificial lake {See Attachment 2};
- Any discharge to a sanitary sewer system;
- Any discharge the Department has shown to be contributing to or that may reasonably be expected to contribute to a violation of any water quality standard;
- Discharges that contain domestic sewage, industrial process waste or livestock waste, whether treated or untreated;
- Any discharge from an open-loop geothermal heating and cooling system other than a residential open-loop geothermal heating and cooling system as defined in Part V of this permit;
- Discharges covered under another NPDES permit (individual or general);<sup>1</sup>
- Dewatering of mines and quarry pits;

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<sup>1</sup> Iowa's General Permit #1 for Storm Water Discharge Associated with Industrial Activity, General Permit #2 for Storm Water Discharge Associated with Industrial Activity for Construction Activity and General Permit #3 for Storm Water Discharge Associated with Asphalt Plants, Concrete Batch Plants, Rock Crushing Plants and Construction Sand and Gravel Facilities authorize the discharge of uncontaminated groundwater where flows are not contaminated with process materials such as solvents. Iowa's General Permit #5 for Mining and Processing Facilities authorizes mine and quarry dewatering. Iowa's General Permit #6 for Well Construction and Well Service Discharges authorizes well construction and well service related discharges that reach a water of the United States.

- Discharges that may adversely impact critical habitat of threatened or endangered species as designated by the Iowa Department of Natural Resources (<http://www.iowadnr.gov/>) or the U.S. Fish and Wildlife Service (<http://www.fws.gov/>);
- Discharges that may adversely affect properties listed on the National Register of Historic Places (<http://www.iowahistory.org/>); and
- Discharges that may adversely affect known archeological sites.

## **D. Individual Permits**

Any person seeking authorization to discharge a pollutant resulting from activities listed in Part I.B. that cannot meet the requirements of this permit must apply for and be issued an individual permit.

Any person authorized to discharge a pollutant under this permit may apply for an individual permit at any time.

The Department may require any person authorized to discharge under this permit to apply for and obtain an individual permit. The causes for doing so may include, but are not limited to, the location of the discharge, duration of the discharge, volume of discharge, types of pollutants present or suspected and history of non-compliance with this general permit.

To apply for an individual permit a permit application and an Antidegradation Alternatives Analysis (Alternatives Analysis), when required, must be submitted a minimum of 180 days prior to the date on which authorization to discharge under the individual permit is desired and in accordance with the requirements of subrules 567 IAC 64.3(3) and 567 IAC 64.3(4).

When an individual permit is issued for a discharge authorized under this general permit, coverage under this general permit is automatically terminated on the effective date of the individual permit. When an individual permit is denied for a discharge authorized under this general permit, coverage under this general permit is automatically terminated on the date of such denial, unless otherwise specified by the Department.

The discharge of a pollutant to waters of the United States without a permit is a violation of the Clean Water Act and federal regulations. The discharge of a pollutant to a water of the State or to the ground surface without a permit is a violation of the Code of Iowa and the Iowa Administrative Code.

## **E. Notice of Intent (NOI) for Coverage Under This Permit**

### **1. Discharge to a Water of State**

An NOI is not required to be submitted for any discharge listed in Part I.B. to a water of the State except when chemicals have or will be added to the water, when dewatering will occur in an area where the soil is known or suspected to be contaminated by toxic or hazardous pollutants resulting from human activity, or where the discharge is within 1,000 feet of a known or suspected contaminated groundwater plume.

**2. Discharge to the Ground Surface**

A NOI is not required to be submitted for any discharge listed in Part I.B. when the water is discharged to the ground surface with no resulting runoff to a water of the State, except when chemicals have or will be added to the water, when dewatering will occur in an area where the soil is known or suspected to be contaminated by toxic or hazardous pollutants resulting from human activity, or where the discharge is within 1,000 feet of a known or suspected contaminated groundwater plume.

**3. Discharges Requiring a Notice of Intent and Alternatives Analysis**

For any discharge to a water of the State or to the ground surface listed in Part I.B. not exempted by Parts I.E.1. or E.2., a complete and accurate NOI must be submitted a minimum of thirty (30) days prior to the date the discharge is scheduled to commence. A completed NOI (DNR Form 542-XXXX) shall be signed in accordance with Part VI.G. of the Standard Conditions of this permit, and shall contain all of the following:

- a. The name, mailing address, and telephone number of the person responsible for the discharge;
- b. Name, street address (where applicable), ¼ section, section, township, range, county, or latitude and longitude where the discharge will occur;
- c. The anticipated start date of the discharge and the anticipated end date if the discharge is not permanent;
- d. The receiving water body and route of flow to the first named stream shown on a 7.5 minute USGS topographic map; or, in the case of discharge to the ground surface where no runoff will be allowed to occur, the name of the land owner;
- e. A list of each pollutant that could potentially be present in the discharge; and
- f. The expected concentration of each pollutant that could potentially be present in the discharge.

If the discharge will reach a water of the United States, a complete Alternatives Analysis shall be submitted with the NOI.<sup>2,3</sup>

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<sup>2</sup> *The department has prepared an Alternatives Analysis as part of the development of this general permit for discharges that do not require the submittal of an NOI. However, because of the variety of pollutants that could potentially be present in a discharge from an area where past spills, leaks, or other practices might have occurred, the department is not able to prepare an Alternatives Analysis for discharges which require the submittal of an NOI under this permit. The applicant must prepare and submit the Alternatives Analysis or the information required to justify that degradation will be temporary and limited as part of the NOI for coverage under this permit.*

<sup>3</sup> *Note! An Alternatives Analysis requires a thirty (30) day public comment period prior to submittal to the department. This should be factored into project time frames to avoid unnecessary delays in obtaining coverage under this permit or an individual permit.*

**4. NOI and Alternatives Analysis Submittal**

- a. The completed NOI form and Alternatives Analysis, if required, must be submitted to the department at the following address:

Iowa Department of Natural Resources  
NPDES Section  
502 E. 9<sup>th</sup> Street  
Des Moines, Iowa 50319

- b. The complete NOI and Alternative Analysis, if required, must be received by the Department at least 30 days prior to the commencement of discharge.
- c. Within thirty (30) days of receipt of a complete NOI and Alternatives Analysis the Department will either: (1) issue a written authorization to discharge under the terms and conditions of this permit; or, (2) issue a written notification that coverage under this general permit is denied which states the reason for denial. If coverage under this general permit is denied, a person may apply for an individual permit in accordance with Part I.D. of this permit.
- d. If the Department fails to authorize a discharge or deny coverage under this permit within 30 days of receipt of a complete NOI and Alternatives Analysis the discharge is automatically considered to be authorized and discharge may commence beginning on the 31<sup>st</sup> day

**F. Duration of Coverage**

For residential open-loop geothermal heating and cooling systems, coverage under this permit shall remain in effect from the issuance date of this permit until coverage is revoked or suspended or the permit is reissued by the department.

For excavation dewatering and groundwater dewatering discharges for which submittal of an NOI is not required, coverage under this permit shall be in effect from the first day of discharge through the last day of discharge at a single location.

For discharges for which submittal of an NOI is required, coverage under this permit shall be in effect from the anticipated start date of the discharge to the anticipated end date of the discharge as stated in the NOI.

**G. Transfer of Coverage**

**1. NOI Not Required**

Coverage under this permit for any discharge for which an NOI is not required by Part I.E. of this permit may be transferred without written notice to the Department provided there is consent of the original permittee and the person to whom coverage is being transferred.

**2. NOI Required**

For any discharge for which an NOI was submitted the Department must be notified in writing of the transfer no later than thirty (30) days following the effective date of the transfer. The written notice must contain the name and address of the original permittee, the name and address of the person to whom the coverage is being transferred, the location of the discharge and the effective date of the transfer. The notice must be submitted to the following address:

Iowa Department of Natural Resources  
NPDES Section  
502 E. 9<sup>th</sup> Street  
Des Moines, IA 50319

## H. Emergency Dewatering Associated with Repair or Reconstruction Activities

For a dewatering discharge to be considered an emergency there must be a significant risk to public health or the environment if the repair or reconstruction activity that requires dewatering is not begun immediately. Discharges from dewatering activities conducted in response to an emergency are authorized by this permit. However, if the discharge is one that would otherwise require submittal of a NOI by Part I.E.4. of this permit, an NOI must be filed with the Department within thirty (30) calendar days following the commencement of dewatering activities. For discharges occurring prior to the submittal of an NOI, the permittee must demonstrate compliance with the terms and conditions of this permit to the extent practicable depending on the nature of the emergency.

## PART II. REQUIREMENTS FOR DISCHARGE TO A WATER OF THE STATE

### A. Operating Requirements

Any discharge that will reach a water of the State shall comply with the following requirements:

1. Discharge points shall be selected to avoid a direct discharge into a water of the State whenever possible.
2. Discharges into storm sewers or agricultural tile lines should be avoided whenever possible.<sup>4</sup>
3. Discharges shall be free from:
  - pollutants that will settle to form deposits in the stream bed;
  - floating debris, oil, grease, scum, and other floating materials in amounts sufficient to create nuisance conditions or cause a visible sheen;
  - pollutants producing objectionable color, odor, or other aesthetically objectionable conditions;
  - pollutants in concentrations or combinations which are acutely toxic to human, animal, or plant life; or
  - pollutants in amounts which would produce undesirable or nuisance aquatic life.

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<sup>4</sup> Storm sewers and agricultural tile lines typically discharge directly into rivers, streams, or wetlands without prior treatment. If discharge to a storm sewer or agricultural tile line cannot be avoided, extra precautions must be taken to prevent the discharge of pollutants that can negatively impact water quality.

4. Discharges shall be conducted in a manner to prevent erosion of soil or other materials into a water of the State. Practices to prevent erosion include, but are not limited to, splash pads, straw bales, silt fences, and vegetated buffer strips.
5. Best Management Practices (BMPs) shall be used for all discharges to prevent contamination of any discharge with fuel, lubricants or other pollutants.
6. For any discharge for which an NOI is required to be submitted by Part I.E.4., the permittee shall develop and implement a written BMP Plan that addresses, at a minimum, the following:
  - The location of each discharge point by  $\frac{1}{4}$  section, section, township, range or latitude and longitude and county.
  - The procedures that will be implemented to minimize soil erosion at the location of each discharge point.
  - The type of treatment and/or other measures, if any, that will be used to minimize the discharge of pollutants to the maximum extent possible.
  - Any other practices necessary to minimize the discharge of pollutants.
7. BMP plans must be kept at the site where dewatering will occur. BMP plans shall not be submitted to the department except on the request of the department.

## **B. Monitoring Requirements**

### **1. Residential Open-Loop Geothermal Heating and Cooling Systems**

No monitoring of residential open-loop geothermal heating and cooling system discharges is required.

### **2. Dewatering Discharges**

Each day that a discharge resulting from dewatering occurs at a unique location, the physical appearance of the discharge must be observed. Visual observations of color, odor, turbidity, petroleum sheen, other floating or suspended matter and the general appearance of the discharge shall be noted. If any observation finds that the discharge does not comply with one or more of the operating requirements, the discharge shall immediately cease and shall not resume until corrective action is taken. Guidance on performing visual observations can be found in Attachment 3.

## **PART III. REQUIREMENTS FOR DISCHARGE TO GROUND SURFACE**

Any discharge onto the ground surface that will not reach a water of the State shall comply with all of the following. Any discharge not meeting all of these conditions shall cease immediately.

1. Discharges are prohibited while it is raining;
2. Discharges onto soils that are saturated are prohibited;
3. Discharges to any site with a slope greater than 5% are prohibited;
4. Discharges to frozen or snow covered ground should be avoided whenever possible;
5. No ponding of the discharged water shall be allowed to occur; and
6. Discharge shall occur in a manner to prevent erosion of soil or other materials.

## **PART IV. REPORTING AND RECORDKEEPING**

### **A. Reporting**

No written reports are required to be submitted.

### **B. Recordkeeping**

#### **1. Residential Open-Loop Geothermal Heating and Cooling System Discharges**

No records are required to be kept.

#### **2. Dewatering Discharges**

- A written record of all of the following shall be kept for each discharge at each location:
- The date(s) each discharge started and ended;
- The measured or estimated volume of water discharged on each date;
- The location of the discharge (either street address or ¼ section, section, township and range); and
- Records of visual observations required by Part II.B. of this permit.

All records shall be retained for a minimum of three years after the discharge ends. This period is automatically extended during the course of any litigation related to the discharge for the duration of the litigation.

### **C. Emergency Discharge**

Contemporaneous records shall be kept of any emergency discharge. These records shall include the date(s) and locations of each discharge, the name of the person responsible for the discharge and the estimated volume of the discharge.

## **PART V. GLOSSARY of TERMS**

*Dewatering* means the intentional removal, normally by pumping, to lower the level of groundwater and/or storm water to allow for installation, construction, reconstruction, maintenance or repair activities to occur or continue.

*Discharge of a pollutant or discharge* means any addition of any pollutant or combination of pollutants to navigable waters or waters of the state from any point source. *Discharge of a pollutant* includes additions of pollutants into navigable waters or waters of the state from surface runoff which is collected or channeled by human activity; discharges through pipes, sewers, or other conveyances owned by a state, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. *Discharge of a pollutant* does not include an addition of pollutants by any indirect discharger.

*Individual NPDES permit* means a permit issued for the discharge of a pollutant from a point source to waters of the United States in accordance with subrule 567 IAC 64.3(4) or a state operation permit.

*Person* means any agency of the state or federal government or institution thereof, any municipality, governmental subdivision, interstate body, public or private corporation, individual, partnership, or other entity and includes any officer or governing or managing body of any municipality, governmental subdivision, interstate body or public or private corporation.

*Residential open-loop geothermal heating and cooling system* means an individual open-loop geothermal system that's sole use is providing comfort heating and/or cooling for living quarters in a single, family home.

*State operation permit* means a written permit by the director authorizing the operation of a wastewater disposal system or part thereof or discharge source and, if applicable, the discharge of wastes from the disposal system or part thereof or discharge source to waters of the state. An NPDES permit will constitute the operation permit in cases where there is a discharge to a water of the United States and an NPDES permit is required by the Act.

*Temporary* means a discharge that occurs for a period of not more than thirty (30) consecutive days at a single location.

*Water of the State* means any stream, lake, pond, marsh, watercourse, waterway, well, spring, reservoir, aquifer, irrigation system, drainage system, and any other body or accumulation of water, surface or underground, natural or artificial, public or private, which are contained within, flow through or border upon the state or any portion thereof.

*Waters of the United States or waters of the U.S.* 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. Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA.

## **PART VI. STANDARD 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; or, for denial of a request for coverage under a reissued general permit.

### **B. CONTINUATION OF THE EXPIRED GENERAL PERMIT**

This permit expires on XX – XX – XXXX and continues in force and effect 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 NOIs, Best Management Practices 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 a 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 any Best Management Practices Plan required to be prepared by this permit. 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.

## Attachment 1 - OIW and ONRW 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 (a.k.a Ensign Hollow)	Mouth (S28, T92N, R6W, Clayton Co.) to spring source (S29, T92N, R6W, Clayton Co.)	1.05
Unnamed Creek (a.k.a. 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	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	2.00
Mill Creek (a.k.a 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	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 (a.k.a Cold Water Cr.)	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
	<b>Grand Total:</b>	<b>118.08</b>
<b>LAKES</b>	<b>DESCRIPTION (Section, Township, Range)</b>	<b>SIZE (Acres)</b>
Big Spirit Lake SGMA	S33, T100N, R36W	5684
West Okoboji Lake SGMA	S20, T99N, R36W	3,847

## Attachment 2 - State-owned Natural and Artificial Lakes in Iowa

County	Lakes
Adair	Meadow Lake
Adams	Lake Icaria
Allamakee	Kains Lake S.W.A., Big Lake (Lansing), Mud Hen, New Albin Big Lake, Yellow River Pond, Waukon Junction Marsh
Appanoose	Stephen's Forest – Unionville Area Pond
Benton	Dudgeon Lake
Black Hawk	Fisher Lake, Railroad Lake (Falls Access S.W.M.A., Alice Wyth Lake, Big Woods Lake, George Wyth Lake
Bremer	Martens Lake, Sweet Marsh Reservoir, Sweet Marsh Seg A, Sweet Marsh Seg C
Buchanan	Troy Mills Marsh
Buena Vista	Storm Lake (including Little Little Storm Lake), Pickeral Lake
Butler	Big Marsh
Calhoun	North Twin Lake, Calhoun W. A. Pond, South Twin Lake
Carroll	Swan Lake, Artesian Lake
Cass	Cold Springs Lake, Lake Anita
Cerro Gordo	Clear Lake, Clear Lake Marsh, Lekwa Marsh, McIntosh Wildlife Area, Ventura Marsh
Clay	Elk Lake, Trumbull Lake, Hawk Valley Pond (east), Hawk Valley Pond (west), Barringer Slough, Dan Greene Slough, Ducks Unlimited Marsh, Mud Lake, Round Lake,
Clayton	Sny Magill Ponds (3)
Clinton	Goose Lake, McAndrews Wildlife Area Pond
Dallas	Beaver Lake
Davis	Lake Wapello, Eldon Game Area Ponds
Decatur	Nine Eagles Lake
Delaware	Silver Lake (Delaware), Backbone Lake
Des Moines	Round Lake, Allen Greene Refuge Marsh
Dickinson	Big Spirit Lake, Center Lake, Diamond Lake, East Okoboji Lake, Little Spirit Lake,

	Minnewashta Lake, Silver Lake (Dickinson), West Okoboji Lake, Diamond Lake, Lower Gar Lake, Upper Gar Lake, Pleasant Lake, Prairie Lake, Swan Lake, Upper Gar Lake, Welch Lake, Christopherson Slough, East Hottes, Garlock Slough, Grovers Marsh, Hale Slough, Jemmerson Slough, Lake Park Pond, Lilly Lake, Marble Lake, Sandbar Slough, Sunken Lake, West Hottes, Little Swan Lake
Emmet	Ingham Lake, High Lake, Iowa Lake, Tuttle Lake, West Swan Lake S.W.M.A., Burr Oak Lake, Cheever, Eagle, Four Mile, Twelve Mile Lake,
Fayette	Volga Lake
Franklin	Beeds Lake
Fremont	Waubonsie Access Lake, McPaul A Pond, McPaul B Pond, Percival Lake, Scott Lake A, Scott Lake B, Bartlett Lake, Forney's Lake S.W.M.A, Lake Virginia
Greene	Goose Lake,
Guthrie	Springbrook Lake
Hamilton	Little Wall Lake
Hancock	Pilot Knob Lake, Crystal Lake, West Twin Lake, Eight Mile Pits, Eagle Lake, East Twin Lake, Meredith Marsh, Crystal Lake Sediment Pond
Hardin	Lower Pine Lake, Pine Ridge R.A. Lake, Upper Pine Lake, Steamboat Rock
Harrison	Nobles, California Bend, Hebb Wetland #1, Hebb Wetland #2, Kress Wetland, Round Bend, Shriners Wetland, Spencer Area Wetland, St. John's Lake, Tyson Bend
Henry	Lake Geode, Lake Geode Pond #1, Lake Geode Pond #3, Lake Geode Pond #4, Lake Geode Pond #5, Lake Geode Pond #6
Jackson	Blake's Lake, Green Island Lake, Little Sawmill Lake, Sawmill Lake, Snider Lake, Densmore Lake, Fish Lake, Bellevue Pond,
Jasper	Rock Creek, Stephens State Forest Reichelt Unit Lake
Johnson	Lake McBride, Burlington Street Dam, Redbird Farms W.A. Ponds, Swan Lake, Oakdale Ponds
Jones	Olin R.A. Ponds, Muskrat Slough
Kossuth	Burt Lake, Goose Lake, State Line Marsh
Lee	Bitternut, Black Oak, Shagbark, White Oak, Martens Pond, Martin Pond
Linn	Pleasant Creek Lake, Chain-O-Lakes Area

Louisa	<i>Lake Odessa, Cone Marsh, Klum Lake</i>
Lucas	Red Haw Lake, Williamson Pond, Red Haw Pond 1 (E), Red Haw Pond 2 (middle), Red Haw Pond 3 (north), Stephens Forest Whitebreast Pond 2, Stephens Forest Lucas Unit Pond 1, Stephens Forest Lucas Unit Pond 2, Stephens Forest Whitebreast Pond 1, Browns Slough, North Colyn Marsh, South Colyn Marsh
Lyon	Jasper Pool
Madison	Badger Creek Lake, Badger Creek Lake Pond
Mahaska	Hawthorn Lake (aka Barnes City Lake), Lake Keomah, Hull W.A. Marsh, Hawthorn Lake Watershed Ponds
Marion	Pella S.G.M.A. Ponds
Mills	Fulsom Lake, Mile Hill Lake, Keg Creek Lake, P.J. Lake, Willow Slough
Mitchell	Otranto Impoundment
Monona	Blue Lake, Middle Decatur Lake, Upper Decatur Bend, Loess Hills State Forest – Jones Creek, I-29 Access Area borrow pit – DRY, Badger Lake, Blackbird Bend, Blencoe Lake, Decatur Lake, Jepsen Wetland, Louisville Bend Marsh W.A., Lower Decatur Lake
Monroe	Lake Miami, Carmack Park Pond, Cottonwood Pits, La Hart Area Wetland
Montgomery	Viking Lake
Muscatine	Weise Slough
Osceola	Ashton Pits Wildlife Management Area, Iowa Lake, Rush
Palo Alto	Five Island Lake, Silver Lake (Palo Alto), Virgin Lake, Rush Lake S.W.M.A.
Plymouth	Deer Creek Lakes S.W.M.A.
Pocahontas	Little Clear Lake, Lizard Lake, Shimon Marsh, Sunken Grove Lake
Polk	Big Creek Lake, Ankeny Lake (DMACC)
Pottawattamie	Carter Lake, Lake Manawa, Saganaush Pond
Ringgold	Fogel Lake S.W.A., Mt. Ayr Old Reservoir, Mt. Ayr Game Aea Ponds, Ringgold Management Area Ponds, Walnut Creek Marsh
Sac	Black Hawk Lake, Jana R.A. Pit, Arrowhead Lake, Black Hawk Pits, L Pond
Scott	Crow Creek W.A. Lake, Lost Grove Lake
Shelby	Prairie Rose Lake

Story	Lake Laverne, Hendrickson Marsh
Tama	Union Grove Lake, Otter Creek Marsh
Taylor	Lake of Three Fires
Union	Green Valley Lake, Summit Lake, Thayer Lake, Three Mile Lake, Twelve Mile Creek Lake
Van Buren	Lacey Keosauqua Park Lake, Lake Miss (Tug Fork W), Lake Sugema, Piper's Pond (Tug Fork E)
Wapello	Arrowhead Lake
Warren	Hooper Area Pond, Lake Ahquabi, Banner Lake (north), Banner Lake (south)
Washington	Lake Darling, Darling Campground Pond, Lake Darling Watershed Pond 1, Lake Darling Watershed Pond 2, Lake Darling Watershed Pond 3, Lake Darling Watershed Pond 4, Lake Darling Watershed Pond 5, Lake Darling Watershed Pond 6, Lake Darling Watershed Pond 7, Lake Darling Watershed Pond 8, Lake Darling Watershed Pond 9, Lake Darling Watershed Pond 10, Lake Darling Watershed Pond 11, Lake Darling Watershed Pond 12, Lake Darling Watershed Pond 13, Lake Darling Watershed Pond 14, Lake Darling Watershed Pond 15, Lake Darling Watershed Pond 16, Lake Darling Watershed Pond 17, Lake Darling Watershed Pond 18, Lake Darling Watershed Pond 19, Lake Darling Watershed Pond 20, Lake Darling Watershed Pond 21, Lake Darling Watershed Pond 22, Lake Darling Watershed Pond 23, Lake Darling Watershed Pond 24, Lake Darling Watershed Pond 25, Lake Darling Watershed Pond 1, Darling Youth Camp Pond
Wayne	Bob White Lake
Webster	Brushy Creek Lake, Lizard Creek Game Area Ponds
Winneshiek	Lower Dam Impoundment, Upper Dam Impoundment, Cardinal Marsh
Winnebago	Rice Lake , Harmon Lake, Myre Slough
Woodbury	Browns Lake, Snyder Bend Lake, Midway Park Lake, Stone State Park Pond, Winnebago Bend Lake
Worth	Silver Lake (Worth), Elk Creek Marsh, Silver Lake Marsh
Wright	Lake Cornelia, Morse Lake, Big Wall Lake, Elm Lake

### **Attachment 3 - Guidance for Conducting and Documenting Visual Observations of Dewatering Discharges**

A visual examination of a discharge must be conducted at least once during each day a dewatering discharge occurs. However, more frequent examinations are encouraged to detect and correct problems, if any, as soon as possible. If dewatering is to occur during nighttime hours, an examination should take place during the late afternoon or evening while there is sufficient light available and again early in the morning.

Each visual examination must document observations of color, odor, clarity, floating solids, settled materials, foam, sheens, erosion and any other obvious indications of water pollution.

It is recommended that the same person or persons perform and document the visual examinations each day that discharge occurs so that they are done in a consistent manner. The examination should be conducted at the end of the hose, pipe or other conduit that carries water but prior to the point where the water enters any river, stream, drainage ditch or tile line or at the point where the water is discharged onto the ground surface.

The results should be documented in writing with the date and time of the examination and the name of the person performing the examination. The documentation should be retained for at least thirty (30) days after dewatering at a site has ceased. Documentation is not required to be submitted to the department but must be made available upon request.

If evidence of any pollution is noted during a visual examination, the permittee must:

- notify the department's Field Office within 6 hours of discovering the contamination, and
- attempt to determine if the contamination is due to its discharge(s). If it is determined that the contamination is due to the discharge(s), the permittee must take steps to control and clean up the contamination.