COMPLETING AN NPDES PERMIT APPLICATION IN MiWATERS

Guidance for Aquaculture Facilities

The National Pollutant Discharge Elimination System (NPDES) program was established under Section 101(a) of the federal Clean Water Act. The NPDES permit is a water quality permit that protects surface waters by helping to ensure that discharges of domestic and industrial wastewater comply with state and federal regulations. Public or private facilities that discharge or propose to discharge wastewater to the surface waters of the state are required to obtain a valid NPDES permit prior to the wastewater discharge.

The NPDES permit describes:

- What the facility must do to protect water quality
- Limits on how much pollution can be discharged to maintain water quality
- The types of monitoring and reporting the facility must perform

APPLICABILITY FOR AQUACULTURE FACILTIES

All facilities that meet the definition of a concentrated aquatic animal production (CAAP) facility are required to have an NPDES permit. The definition of a CAAP is divided into two parts: cold water fish species (e.g., trout and salmon) and warm water species (e.g., catfish, minnows and sunfish).

Cold Water Fish Species in Ponds, Flow-Through, and Recirculating Aquaculture Systems

An NPDES permit is required if a facility meets all of the following criteria:

- The discharge to surface waters of the state is at least 30 days per year.
- Produce 20,000 or more pounds of fish per year.
- Feed more than 5,000 pounds of food during the calendar month of maximum feeding.

Warm Water Fish Species in Ponds, Flow-Through, and Recirculating Aquaculture Systems

An NPDES permit is required if a facility meets all of the following criteria:

- The discharge to surface waters of the state is at least 30 days per year.
- The facility is not a closed pond that only discharges during periods of excess runoff.
- Production is more than 100,000 pounds of fish per year.

The Department of Environment, Great Lakes, and Energy (EGLE) may also designate any warmwater or coldwater aquatic animal production facility as a CAAP facility if it's determined that it is a significant contributor of pollution to surface waters.

DURATION OF AN NPDES PERMIT

The NPDES permit must be renewed every five years. The EGLE has adopted a watershed approach known as the five-year basin plan where each watershed within the state is grouped into one of five

separate basins. All of the NPDES permits within a particular watershed come up for renewal in the same basin year. The watershed approach allows the EGLE to both reevaluate the cumulative water quality impact of all the permits in a watershed and coordinate permit requirements for the watershed, which facilitates the development and implementation of total maximum daily loads (TMDLs) for impaired waters. This process allows the EGLE to allocate load limitations of problem pollutants for all the permitted facilities discharging into the same body of water.

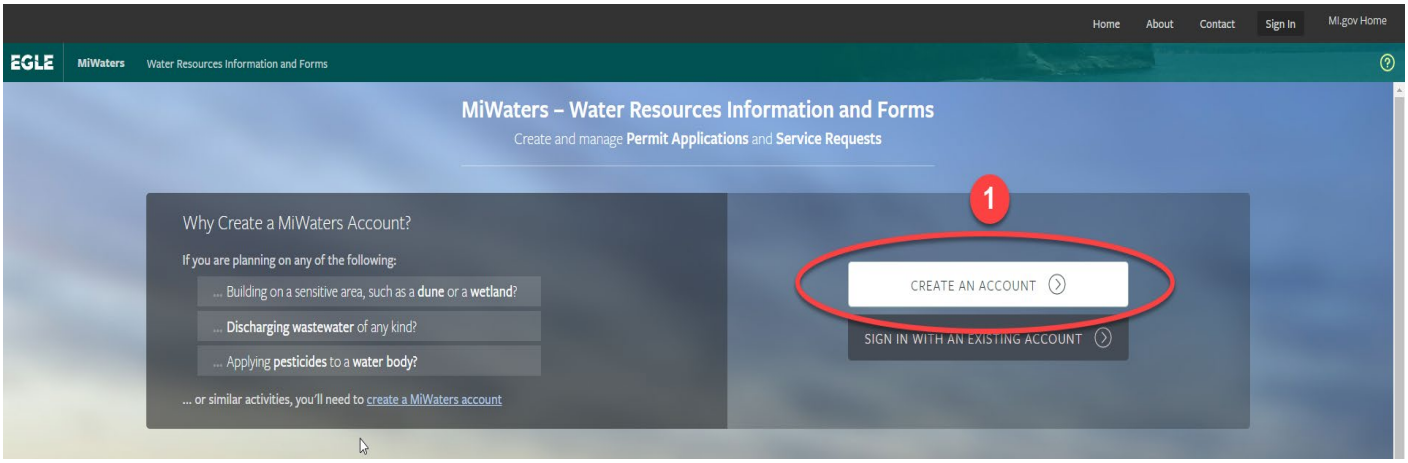
COMPLETING THE NPDES APPLICATION IN MIWATERS

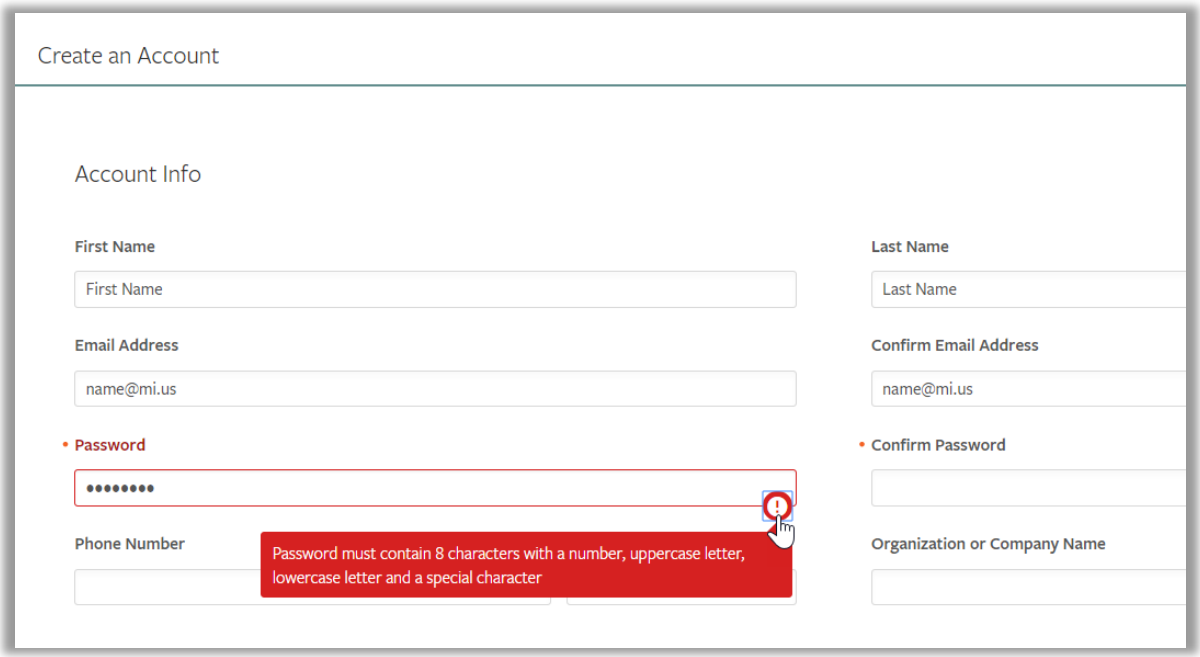
Creating an Account

MiWaters is a web-based system that works with Internet Explorer 10 or 11 (preferred) and current versions of Chrome and Firefox. Initial testing of Microsoft Edge has not uncovered any problems. Internet Explorer 8 and earlier versions and Safari are not compatible with MiWaters.

1. Visit the MiWaters system Web site (https://miwaters.deq.state.mi.us/). Each individual will need to create their own account by selecting "Create an Account."

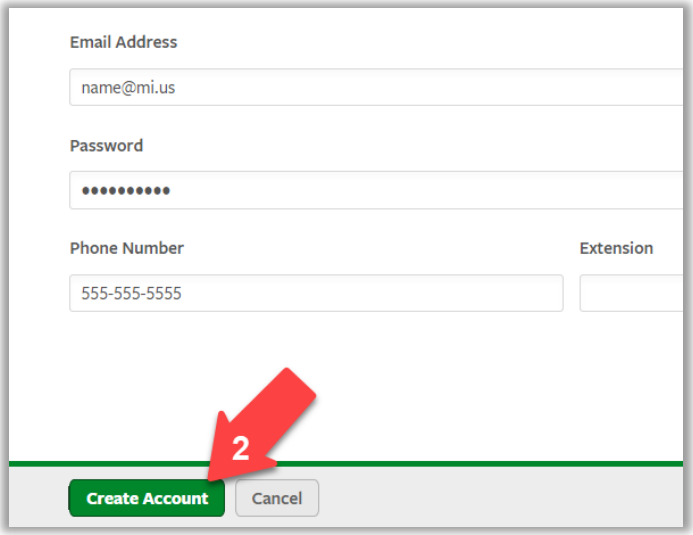
Visual

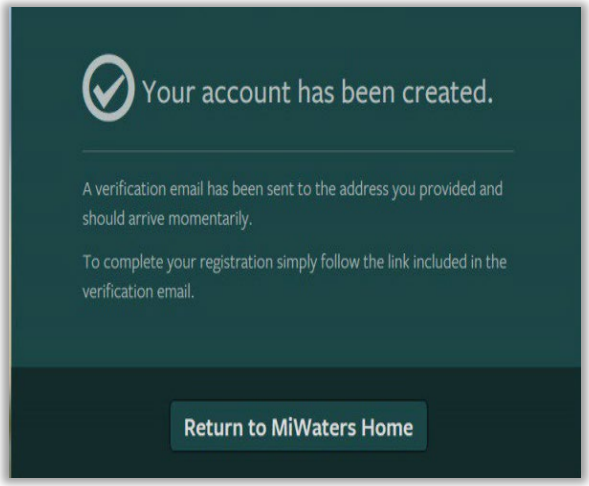




Note: The red exclamation point appears simply to indicate when an email or password has not met the required criteria and disappears when the criteria has been met. Please be advised that when establishing a password, there may be some special characters that are not accepted. You may need to select a different character such as ! # $ for the criteria to be achieved and the red exclamation point to disappear.

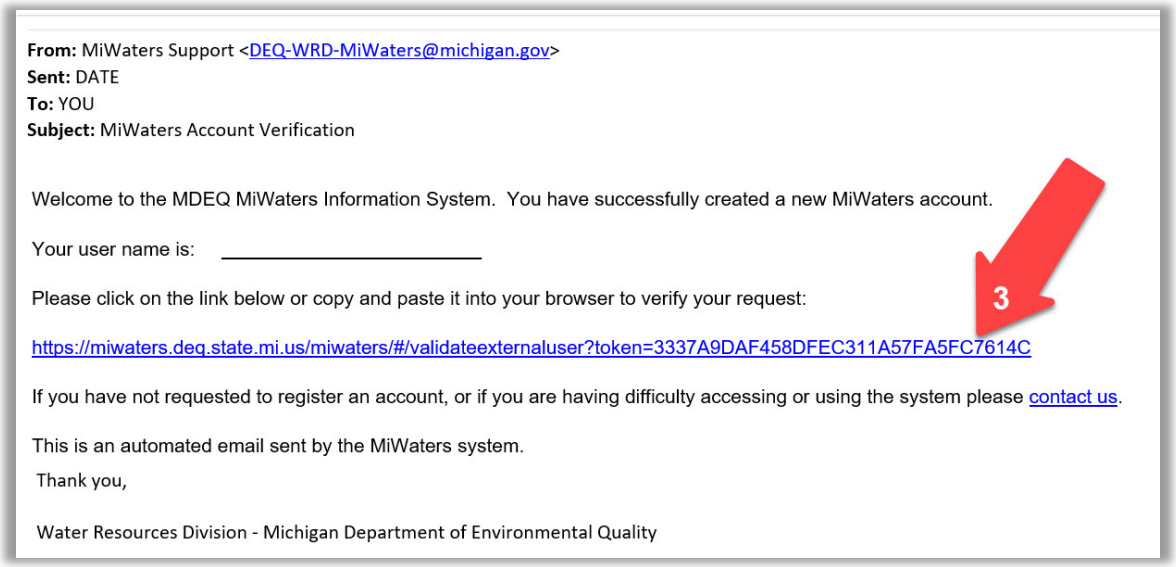
2. Once the required fields have been populated, select "Create Account." MiWaters will indicate an account has been created and a verification email has been sent.





Note: Verification emails are sent instantaneously. In the event you don't receive a verification email, please check your "junk mail" as we've heard this issue could be caused by internal firewall restrictions.

3. Open the email and click the link as indicated to verify your request. In the event the link does not appear as a hyperlink, you will need to copy the entire link and paste in your browser.



From: MiWaters Support <DEQ-WRD-MiWaters@michigan.gov>
Sent: DATE
To: YOU
Subject: MiWaters Account Verification

Welcome to the MDEQ MiWaters Information System. You have successfully created a new MiWaters account.

Your user name is: _____

Please click on the link below or copy and paste it into your browser to verify your request:

https://miwaters.deq.state.mi.us/miwaters/#/validateexternaluser?token=3337A9DAF458DFEC311A57FA5FC7614C

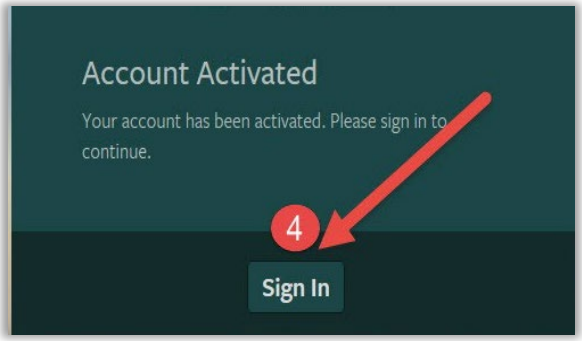
If you have not requested to register an account, or if you are having difficulty accessing or using the system please contact us.

This is an automated email sent by the MiWaters system.

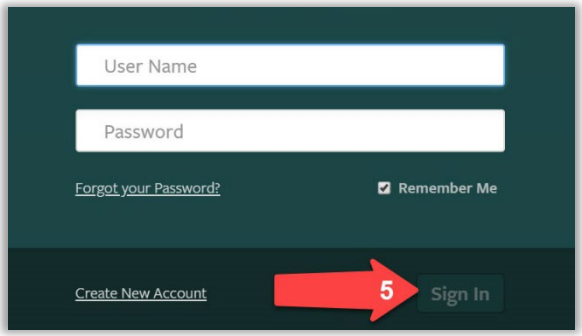
Thank you,

Water Resources Division - Michigan Department of Environmental Quality

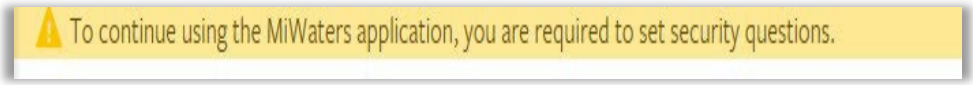
4. Once the link in the email has been clicked, MiWaters will indicate “Account Activated”; click “Sign In” to continue.



5. Fill in username (user’s name is your full email address), password, and click “Sign In.”



6. You will be required to select and answer the five security questions.



WHERE TO GO IF YOU NEED HELP

If you need help, click on the question mark on the screen for help located in the top right corner. If that does not address your questions, send an e-mail to EGLE-WRD-MiWaters@Michigan.gov contact the appropriate NPDES (Surface Water) Discharge staff.

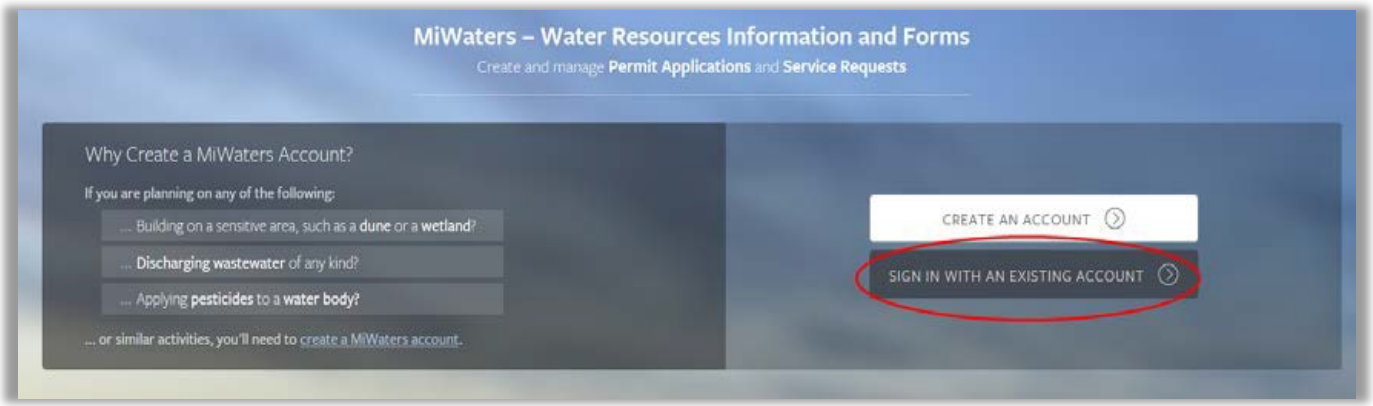
Organization of the Application Process

The application process is broken up into six main steps:

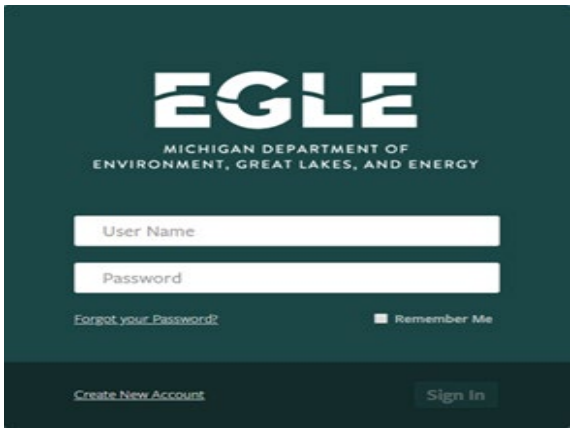
1. Processing Information: determine the appropriate permit application you will be completing.
2. Entry: input data about your facility into the nine sections of the application form.
3. Review: allows you to review all the responses you provided in previous sections of the application.
4. Certify and Submit: identifies who can certify that the application is accurate.
5. Confirmation: verifies the application was submitted.

How to Sign in After You Have Created an Account

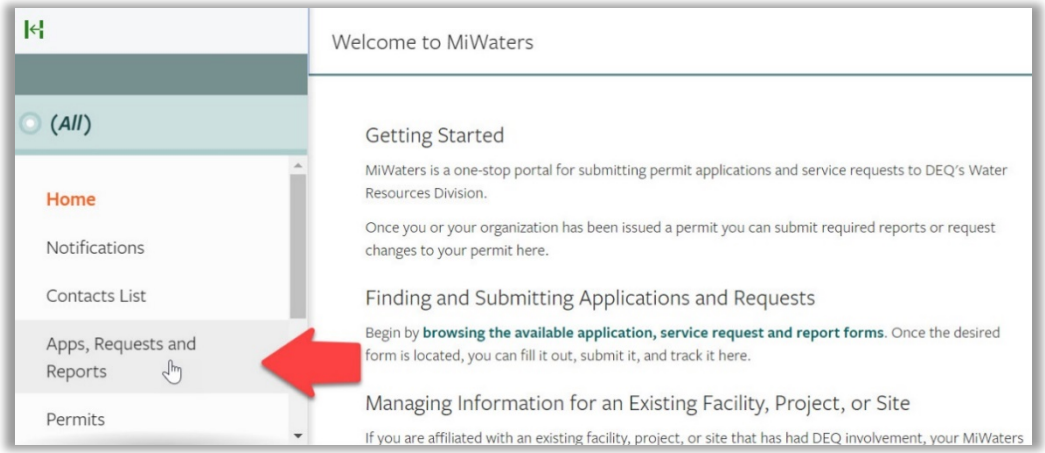
1. Go to https://miwaters.deq.state.mi.us
2. Click to begin the sign in



3. Sign in to your MiWaters account using your login name and password. By checking the box, "Remember Me" your account will automatically open when you access the MiWaters site at https://miwaters.deq.state.mi.us

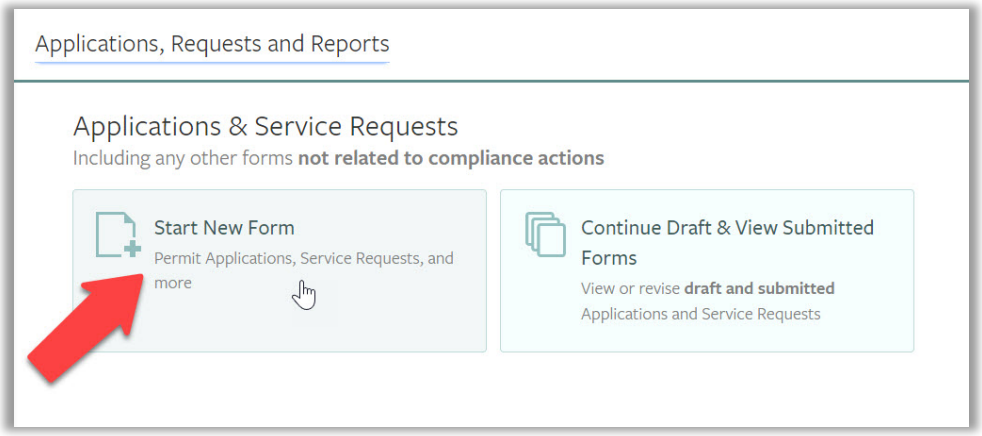


4. Click on "Apps, Requests and Reports" to submit a new application

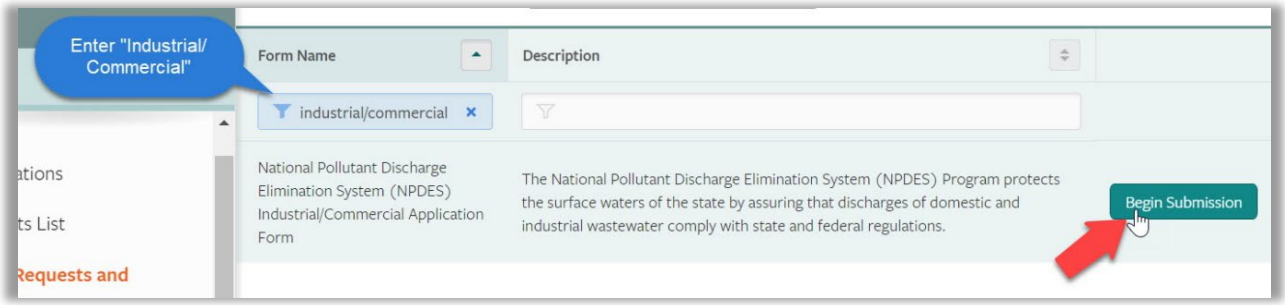


Completion of the Processing Information Step

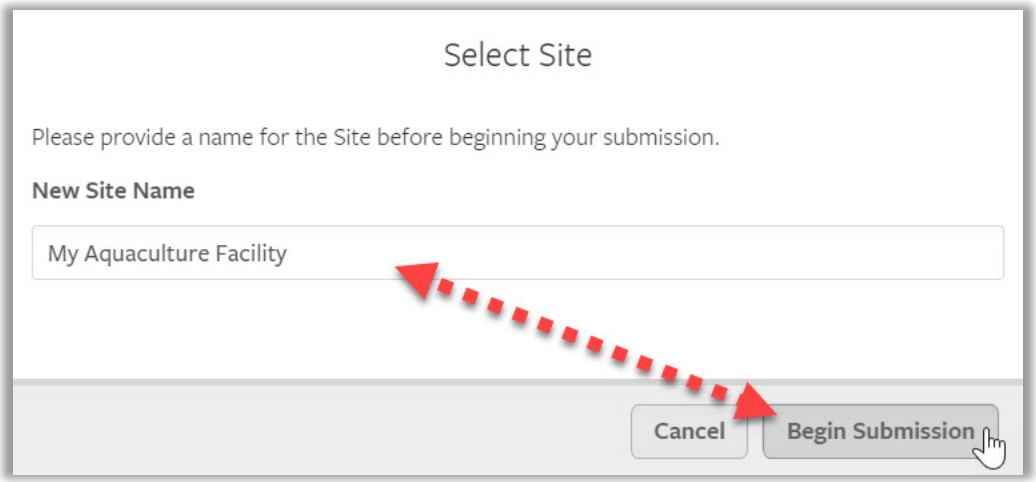
1. Click on “Start New Form”



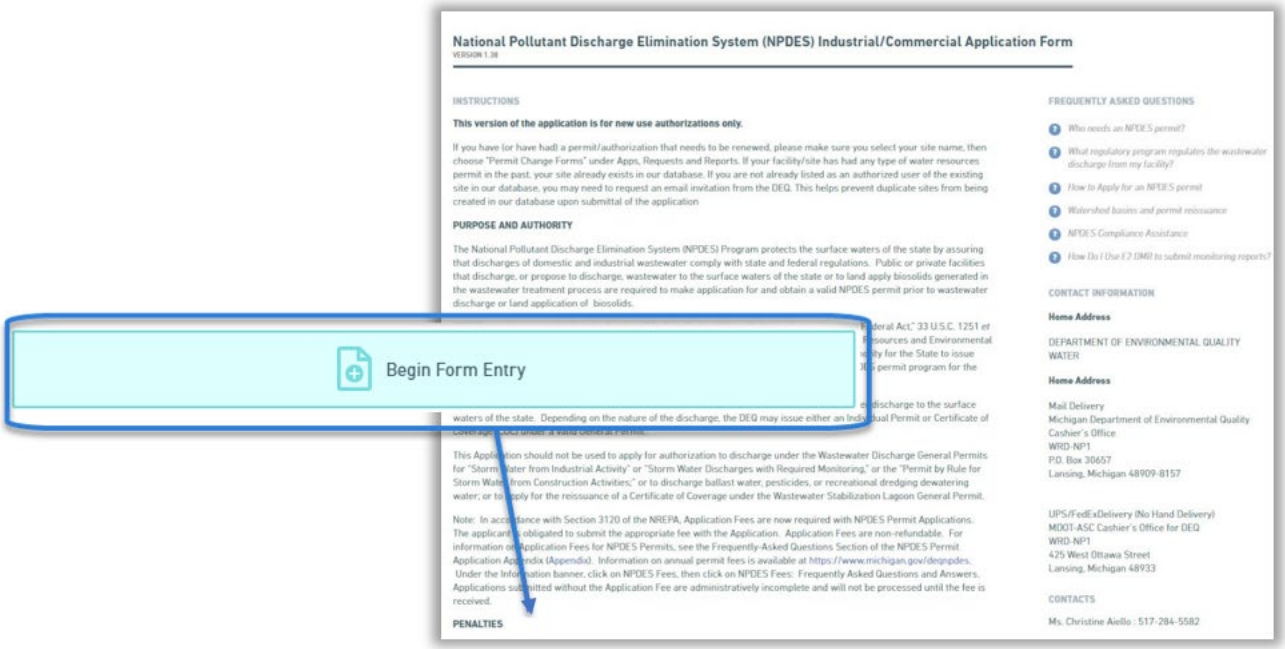
2. Enter “industrial/commercial” in the “Form Name” field. One application should appear. Click on “Begin Submission.”



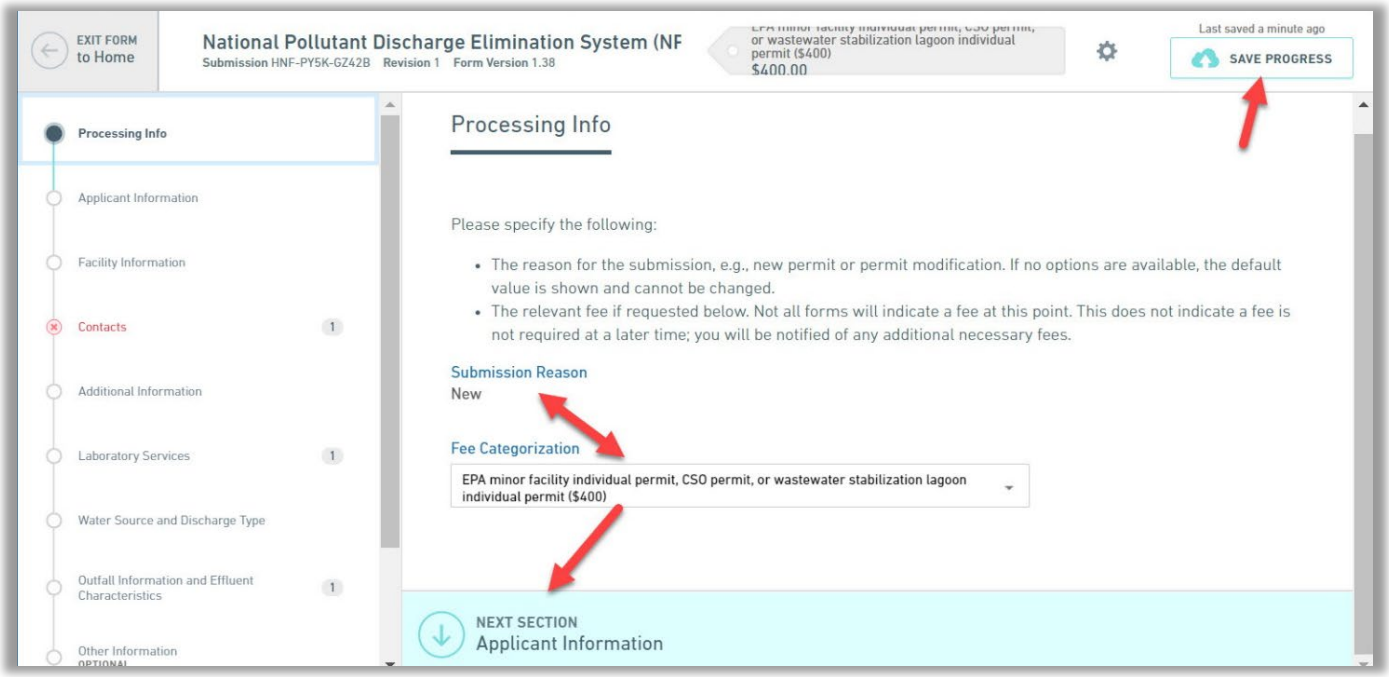
3. A window will appear requesting the site name before you begin submission



4. Read the Instructions, then click on “Begin Form Entry” at the bottom of the page:

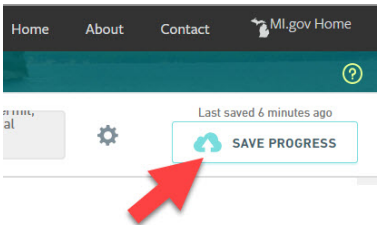


5. Select “New” for the reason for this submission and select “EPA minor facility individual permit” as the appropriate fee categorization. You have the option of continuing to the “Next Step” or “Save for Later” your work and come back to it later.

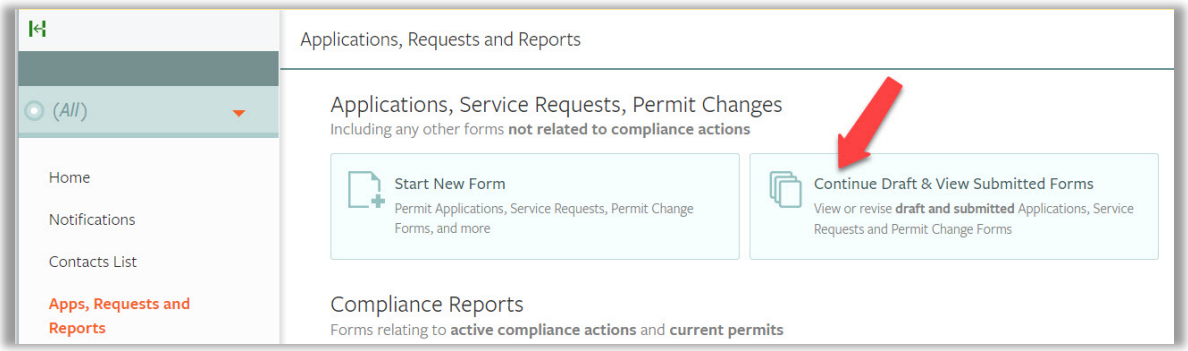


HOW TO SAVE YOUR WORK AND RETURN TO YOUR APPLICATION

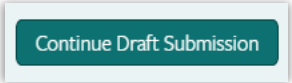
At any time, you can click on the “Save Progress” at the top of the page. It will save your changes and take you back out to the home page.



To return to your application, click on “Apps, Requests and Reports,” but this time click on “Drafts & Submitted Apps/Requests.”



Your draft application will appear. Click on “Continue Draft Submission.”



Completion of the Entry Step

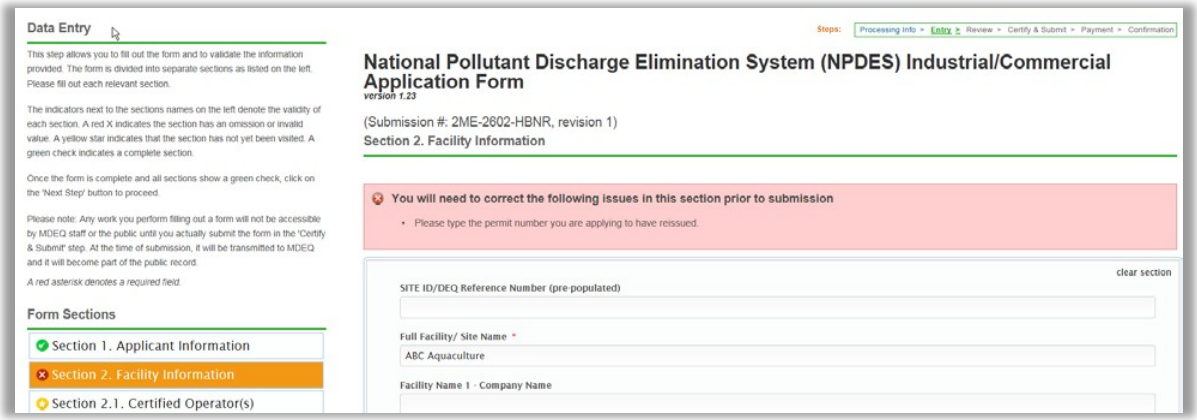
You have completed the first step (Processing Information) and you are on your way to the next step, Entry of data into the nine sections of the application.

APPLICANT INFORMATION

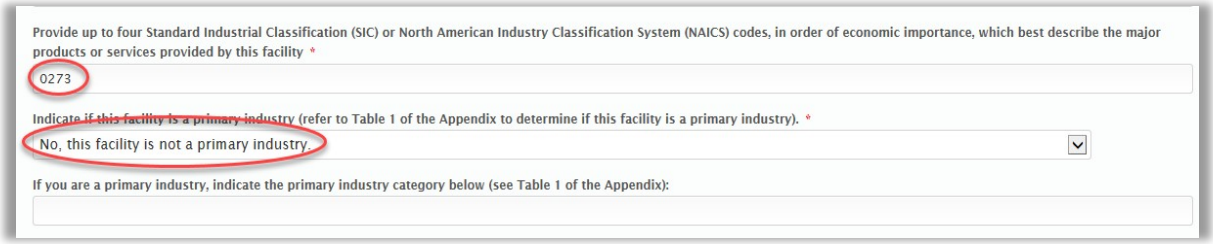
Each application has a unique **Submission #**. This allows you to work on multiple permit applications at one time. Complete the applicant information including the required fields. The Applicant is the legal entity requesting permit coverage and is not intended to be the consultant or individual completing the form. Often the Applicant is the corporation or limited liability company that is the legal owner or operator of the facility. In some cases, this may be an individual. Click on “Next Section” at the bottom of the page to advance to

FACILITY INFORMATION

Facility is defined as the structures and equipment through which the aquaculture activity is taking place. The “SITE ID/ Reference Number” field will not pre-populate and will remain blank because this number will be determined after you submit your application. You have several tools at your disposal to locate your facility location. You can allow a browser to identify your current location, enter your address, or use the Google map feature within the form.



The Standard Industrial Codes (SIC) for animal aquaculture and fish hatchery are 0273 and 0921, respectively. Because aquaculture is not a primary industry, select the “No, this facility is not a primary industry” response.



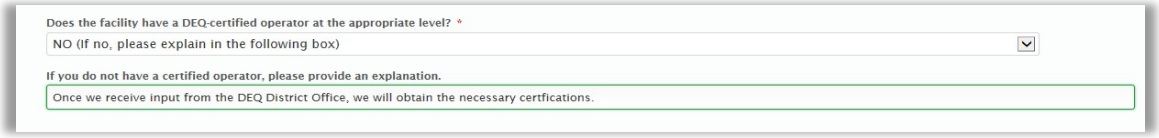
Information Concerning Local Unit of Government (LUG)

Identify the local unit of government (LUG) where the facility is located. Provide an email address for an appropriate LUG contact such as a clerk or city/township manager, who can be notified about the public notice period. Do not provide a Web site address.

All industrial discharges to surface waters need to employ a properly certified operator. After your NPDES permit has been approved, the EGLE District office will identify your facility's treatment classification(s). You will then have to submit an application for certification(s) of the identified classification(s) and take an exam(s).

Certification examinations are offered twice a year: August and February. Information about applications, exam schedules, and training materials are found at the Industrial/Commercial Wastewater Treatment Plant Operator Certification Web site.

If you do not have a EGLE-certified operator at this time, you should respond "No" and explain that an operator will become certified after your NPDES permit has been approved. Click on "Next Section" on the bottom of the page to advance to Section 3. Contacts.



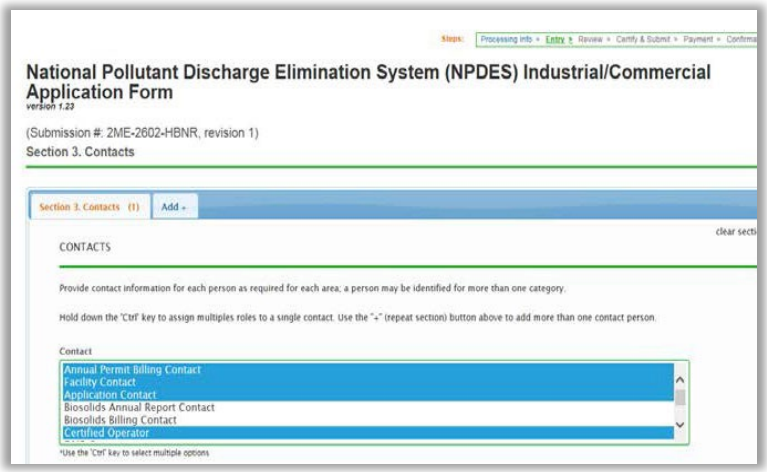
CONTACTS

You will need to provide contact information for the individuals performing the following roles.

- Application Contact: the person who may be contacted by the EGLE to answer questions concerning the information supplied in the application.
- DMR Contact: the person responsible for completing and submitting the facility's discharge monitoring reports (DMRs).
- Annual Permit Billing Contact: the person responsible for payment of the facility's annual NPDES permit fees.
- Facility Contact: the person who may be contacted by the EGLE to answer questions about the facility and its operations and processes.
- Certified Operator: the person who has been certified by the EGLE to operate the facility.

Storm water and biosolids contacts are not typically required for aquaculture facilities.

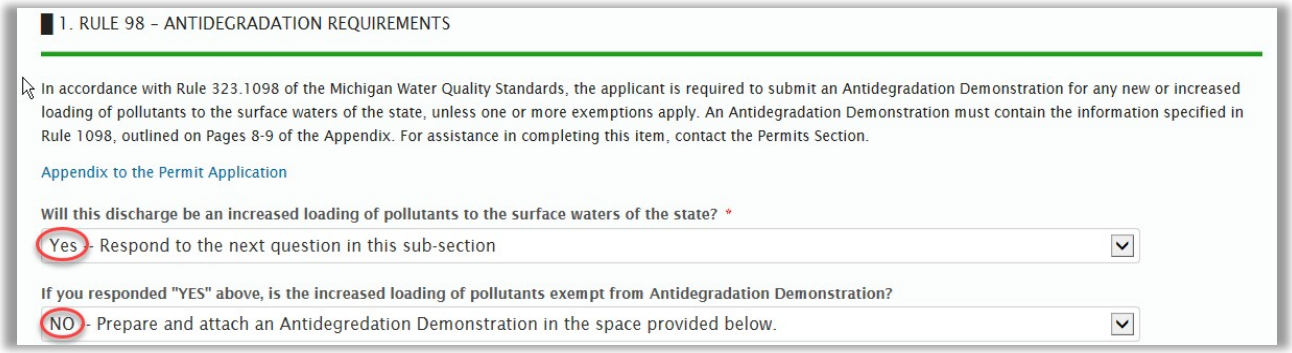
If you have one individual performing more than one role, select all roles assigned to the contact so you only have to enter their contact information once. When you have added one contact, click on "Add New Contacts" for a new blank entry form. Click on "Next Section" on the bottom of the page to advance to Section 4. Additional Information.



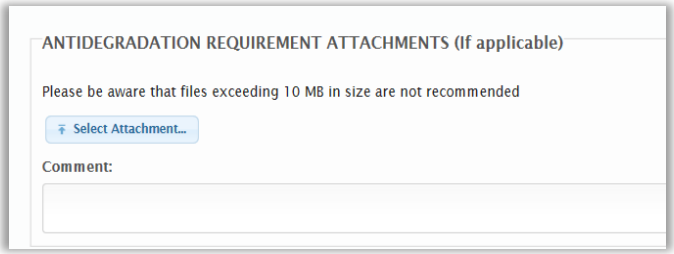
ADDITIONAL INFORMATION

RULE 98 – ANTIDEGRATION REQUIREMENTS

Your response to "Will this discharge be an increased loading of pollutants to the surface waters of the state?" will be "**Yes**." Your response to "If you responded "Yes," above, is the increase loading of pollutants exempt from Antidegration Demonstration?" is "**NO**." A new authorization or increase in a current authorization for an aquaculture facility would not likely qualify for an exemption from providing an Antidegradation Demonstration.



You will need to attach a document containing your antidegradation demonstration.



WHAT IS AN ANTIDEGRADATION DEMONSTRATION?

In general, this is a document that provides justification for the decrease in water quality resulting from the authorization of the proposed discharge. In the demonstration, the applicant is required to identify the social and economic development and benefits that would be forgone if the new or increased use discharge is not permitted. The factors to be addressed may include:

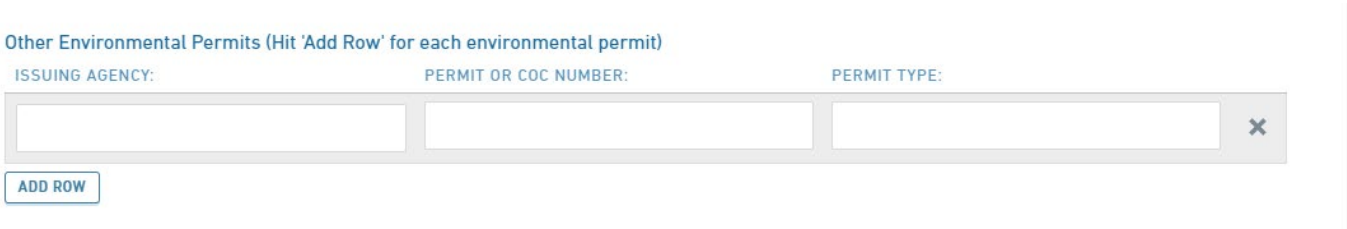
- employment increases
- production level increases
- employment reductions avoidance
- efficiency increases
- industrial, commercial, or residential growth
- environmental or public health corrections
- economic or social benefits to the community

The demonstration will also identify alternatives to the proposed surface water discharge that have been considered and an explanation as to why the alternatives were not feasible. Alternatives to a surface water discharge may include, but are not limited to:

- Groundwater discharges
- Discharges to available sewerage systems
- Water reuse/recycling
- Alternate treatment systems

The EGLE's Water Resources Division follows a procedure for evaluating an antidegradation demonstration. It is called Procedure No. 14 – Antidegradation.

OTHER ENVIRONMENTAL PERMITS



If you have other environmental permits issued by the state, federal, or local government, list them in the provided Excel spreadsheet. Copy and paste the information in the Table Data box provided. Chapter 12 of this resource book contains descriptions of other state environmental permits that may be applicable to an aquaculture facility.

WATER FLOW DIAGRAM AND NARRATIVE DESCRIPTION

Provide a flow diagram and a narrative description that explains the diagram. The diagram should show the wastewater flow through the facility (from intake through discharge), including the following:

- Water sources
- Rearing units
- Treatment units
- Lagoons or ponds (lagoon/pond construction and liner information should be included) used for wastewater treatment or waste storage

- Treatment units that operate intermittently
- Bypass piping
- Operations contributing wastewater
- Locations of flow meters and chemical feeds
- Locations of monitoring and discharge points

The water balance will show the daily average flow rates at the intake and discharge points and approximate daily flow rates between treatment units, including influent and treatment rates. Use actual measurements whenever available, otherwise use the best estimate.

See Appendix 1 for examples of acceptable water flow diagrams and narrative descriptions.

MAP OF FACILITY AND DISCHARGE LOCATION

Provide a map that is a United States Geological Survey quadrangle (7.5-minute series) or other map of comparable detail, scale, and quality (which shows surface water bodies, roads, bathing beaches, and other pertinent landmarks). It is preferred that the minimum area this map shall encompass be approximately one (1) mile beyond the property boundaries.

The map should show the following:

- Location of the existing or proposed facility.
- Wastewater and waste treatment system(s), water intakes or wells, wastewater monitoring, and wastewater discharge points into receiving waters (including bypasses).
- The exact location of all water supply intakes or wells, wastewater monitoring and discharge point(s) and, if applicable, all areas through which the discharge flows (e.g., wetlands, open drains, storm sewers, etc.) between the discharge point and the receiving water.
- If the discharge is to a storm sewer, label the storm sewer and show its flow path to the receiving water.
- Location of any water supply intakes or wells and groundwater monitoring wells.

See Appendix 2 for an example of an acceptable map of a facility and discharge location(s).

LIST ADJACENT PROPERTY OWNERS

Provide the names and mailing addresses of all property owners for all properties directly adjacent to your facility using the provided Excel file. Click on “Next Section” on the bottom right-hand corner of the page to advance to Section 5. Laboratory Services.

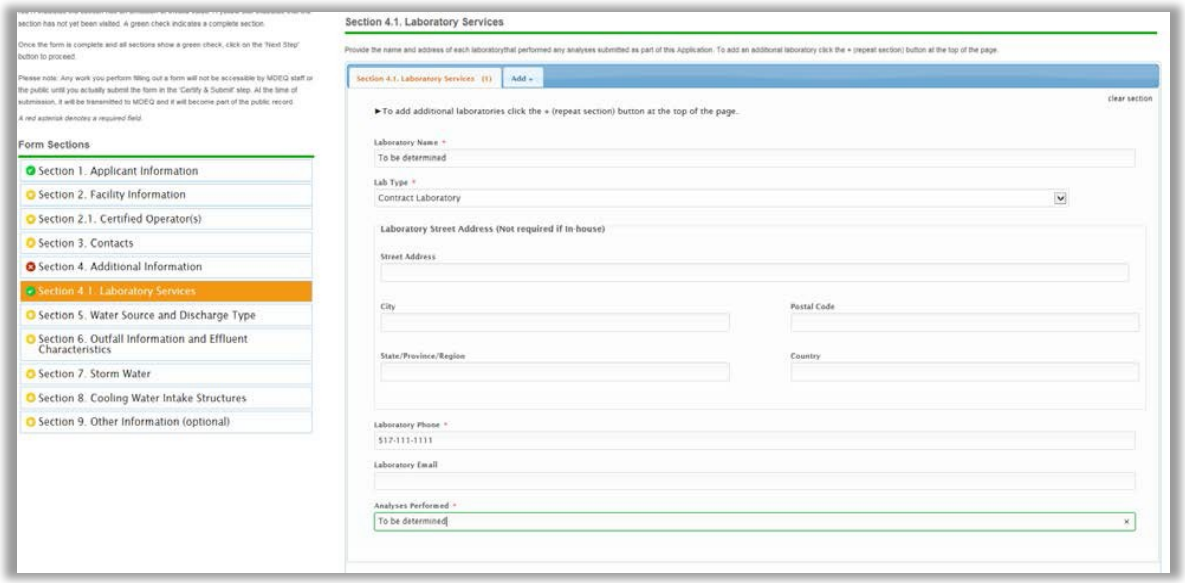
EGLE

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
WATER RESOURCES DIVISION
ADJACENT PROPERTY OWNERS' MAILING ADDRESSES

Business or Lake Board / Lake Association (if applicable)	Individual Property Owner or Business Contact	Address	City	State	ZIP Code	Country

LABORATORY SERVICES

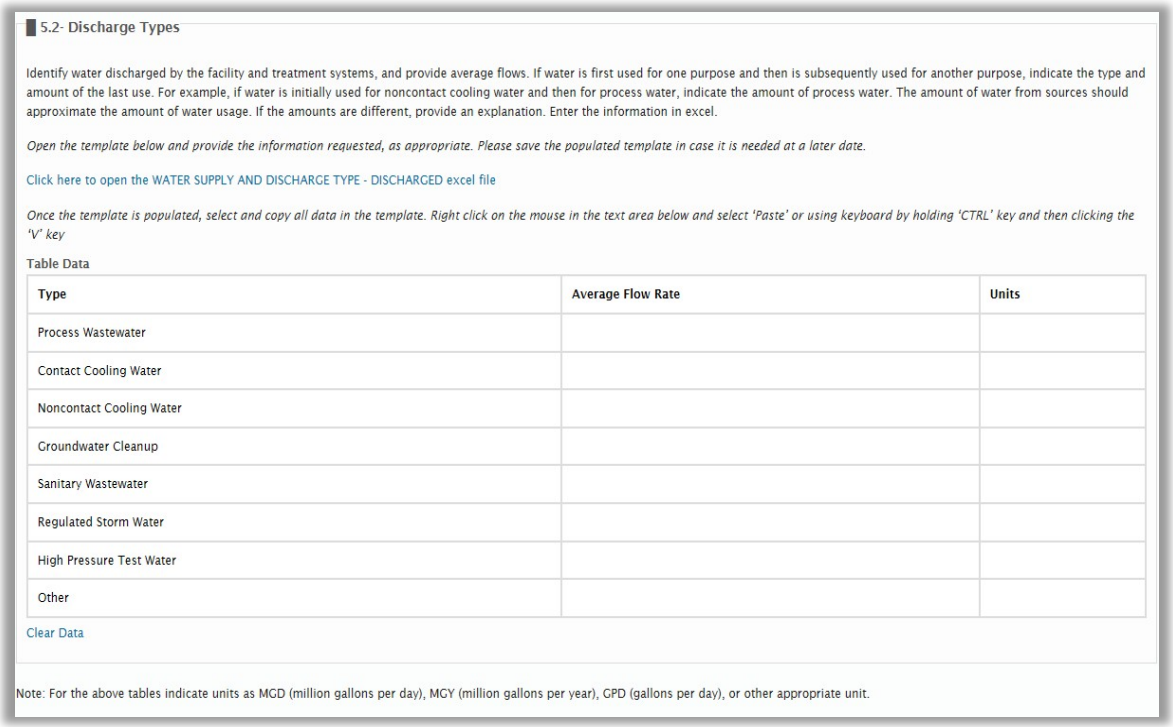
Provide contact information for each contract laboratory or consulting firm that performed analysis submitted as part of this application. If you have not selected a lab because you are not sure what parameters should be identified, type “To Be Determined” in the required fields and ”555-555-5555” in the required phone number field.



WATER SOURCES AND DISCHARGE TYPE

Discharge Types

Aquaculture facilities will be reporting the amount of process wastewater discharged. It is unlikely your facility would have discharges of any of the other wastewaters that are identified in the Excel template, including contact cooling, non-contact cooling, groundwater cleanup, sanitary wastewater, regulated storm water, or high-pressure test water. The total amount of water discharged should approximate the total amount of water usage. If not, provide an explanation. Click on "Next Section" on the bottom right-hand corner of the page to advance to Section 6. Outfall Information.



5.2- Discharge Types

Identify water discharged by the facility and treatment systems, and provide average flows. If water is first used for one purpose and then is subsequently used for another purpose, indicate the type and amount of the last use. For example, if water is initially used for noncontact cooling water and then for process water, indicate the amount of process water. The amount of water from sources should approximate the amount of water usage. If the amounts are different, provide an explanation. Enter the information in excel.

Open the template below and provide the information requested, as appropriate. Please save the populated template in case it is needed at a later date.

Click here to open the WATER SUPPLY AND DISCHARGE TYPE - DISCHARGED excel file

Once the template is populated, select and copy all data in the template. Right click on the mouse in the text area below and select 'Paste' or using keyboard by holding 'CTRL' key and then clicking the 'V' key

Table Data

Type	Average Flow Rate	Units
Process Wastewater		
Contact Cooling Water		
Noncontact Cooling Water		
Groundwater Cleanup		
Sanitary Wastewater		
Regulated Storm Water		
High Pressure Test Water		
Other		

Clear Data

Note: For the above tables indicate units as MGD (million gallons per day), MGY (million gallons per year), GPD (gallons per day), or other appropriate unit.

Water Sources

Water sources include private wells, springs, surface water intakes such as streams and lakes, and municipal water supplies. The name of the source should be provided where appropriate (e.g., Grand River, Lake Michigan, City of Millpond, etc.). The flow rate should be an average over the year. The MiWaters form provides a link to an Excel spreadsheet template. Click on the link, enter your data into the spreadsheet template, then copy and paste the table into the Table Data box.

5.1- Water Sources

Identify all water sources entering the facility and treatment systems, and provide average flows. The volume may be estimated from water supply meter readings, pump capacities, etc. Provide the name of the source where appropriate (i.e., Grand River, Lake Michigan, City of, Millpond).

Open the template below and provide the information requested, as appropriate. Please save the populated template in case it is needed at a later date.

Click here to open the WATER SUPPLY AND DISCHARGE TYPE - SOURCES excel file

Once the template is populated, select and copy all data in the template. Right click on the mouse in the text area below and select 'Paste' or using keyboard by holding 'CTRL' key and then clicking the 'V' key

Table Data

Water Supply Type	Name and Location of Source	Average Volume or Flow Rate	Units
Municipal Supply			
Surface Water Intake			
Private Well			
Other			

Clear Data

Preliminary Storm Water Questions

Aquaculture is not a regulated "industrial activity"; therefore, select the "No" response in Question 7.1. Do not complete the remainder of Section 7.

National Pollutant Discharge Elimination System (NPDES) Industrial/Commercial Application Form
version 1.23

(Submission #: 2ME-2602-HBNR, revision 1)

Section 7. Storm Water

Storm water is defined herein as storm water runoff, snow melt runoff, and surface runoff and drainage.

clear section

1. Is this facility engaged in a regulated "industrial activity" as defined in 40 CFR 122.26(b)(14)? To make this determination, see the DEQ Storm Water website (http://www.michigan.gov/deqstormwater, then click on Industrial Program, then click on Primary Activities & Standard Industrial Classification (SIC) Codes.

No. STOP: Do not complete the rest of Section 7. Storm water authorization is not required

Preliminary Cooling Water Questions

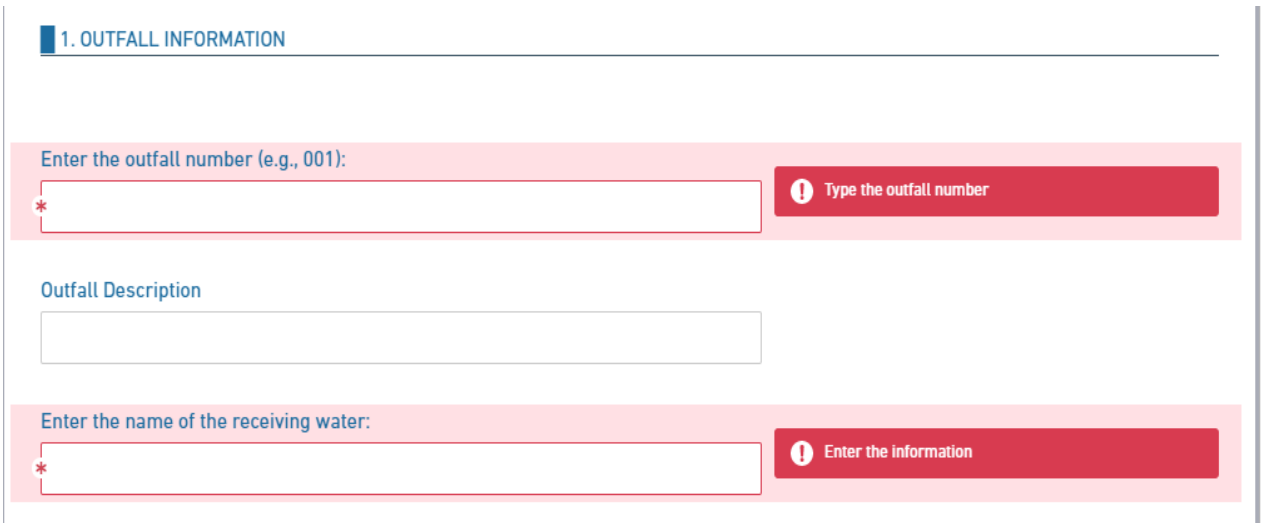
Indicate yes or no depending on whether or not the facility uses water for cooling purposes.

OUTFALL INFORMATION AND EFFLUENT CHARACTERISTICS

OUTFALL INFORMATION

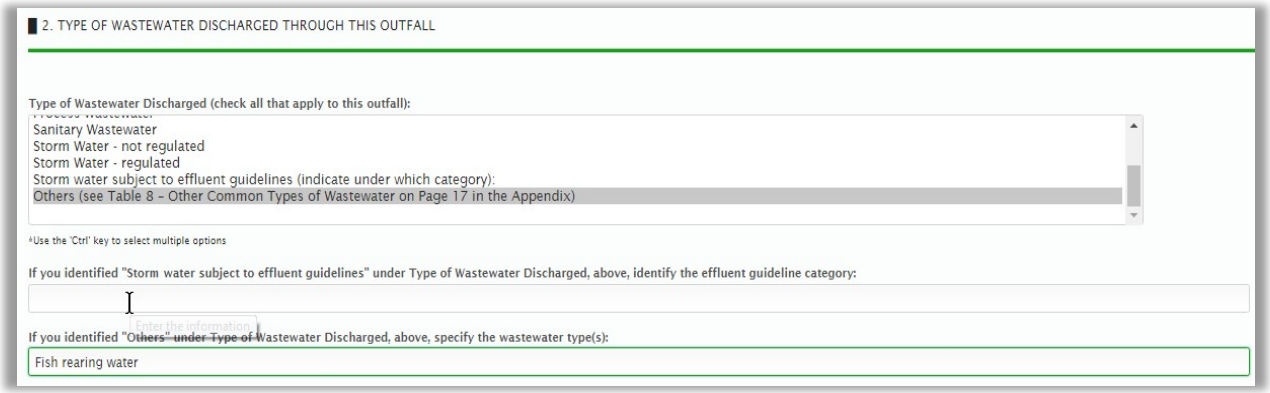
For each outfall (i.e., the point at which the effluent from the aquaculture activities is discharging into the surface water) provide an outfall number and description, identify the receiving water and provide coordinates for the outfall location.

NOTE: To add additional outfalls, please use the "Add New Section" button at the bottom of this page, or select "Duplicate Section" to copy the outfall information and edit a portion of the fields on the page.



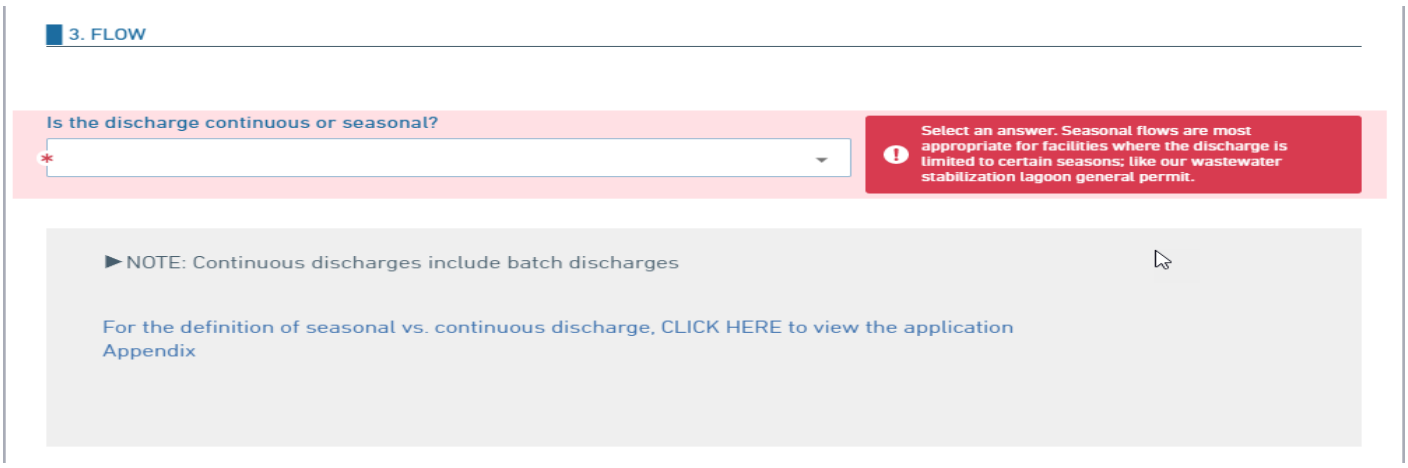
TYPE OF WASTEWATER DISCHARGED THROUGH THIS OUTFALL

Under "Type of Wastewater Discharged," select "Others" and in the comment box enter "fish rearing water," "raceway cleaning water," and/or any other wastewater type as appropriate.



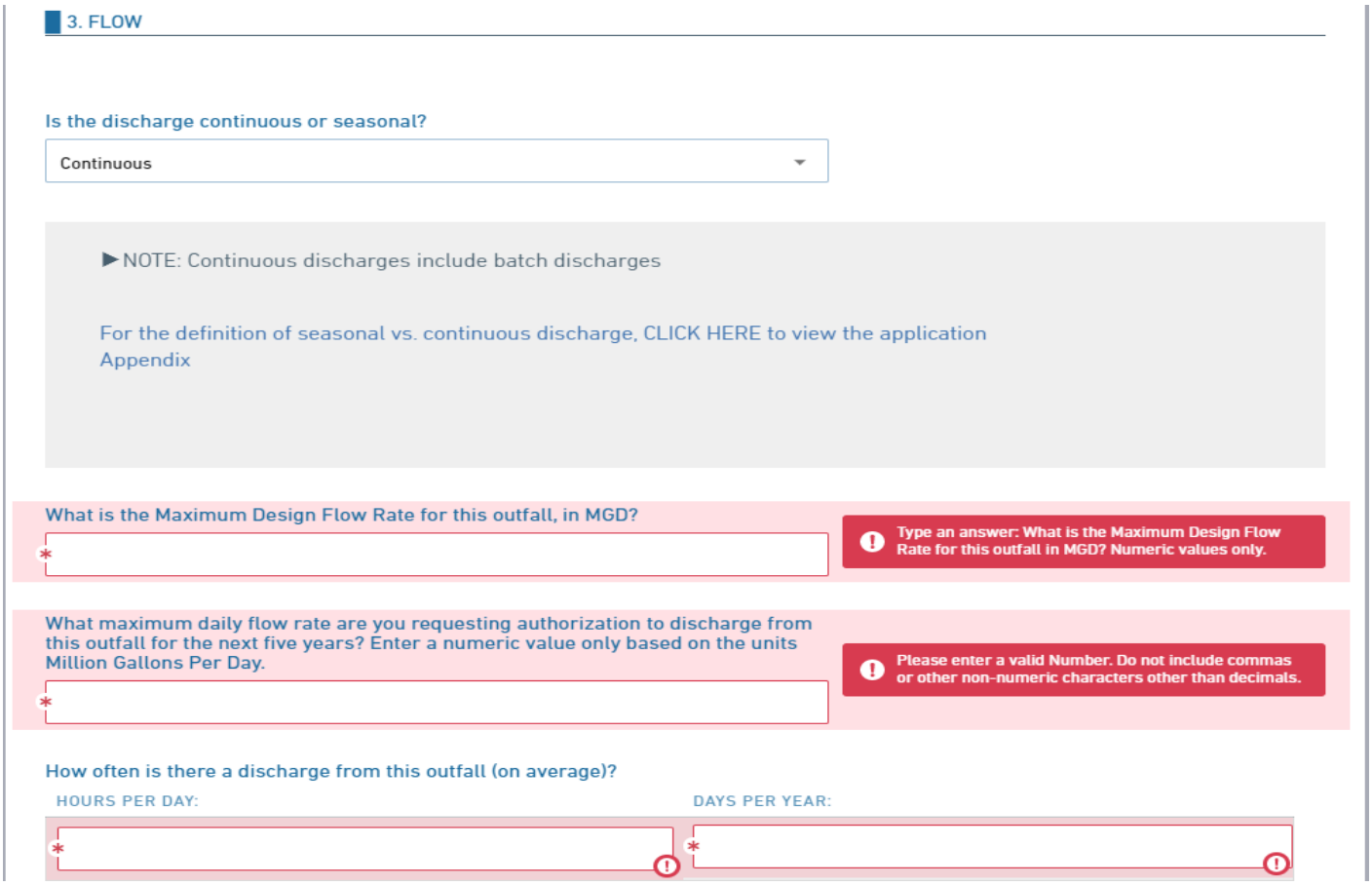
CONTINUOUS OR SEASONAL DISCHARGE:

Most permitted aquaculture facilities have a continuous discharge. Therefore, the continuous option should be selected in the dropdown box.



FLOW

In response to the question "What is the Maximum Design Flow Rate for this outfall, in MGD?" you should enter the flow rate that the outfall pipe/weir/other structure is physically designed to handle, from an engineering standpoint. MGD is the acronym for million gallons per day. In response to the question "What maximum daily flow rate are you requesting authorization to discharge from this outfall for the next five years?" you should enter the amount discharged per day in million gallons per day. This value cannot be more than the design flow rate.



PROCESS STREAMS CONTRIBUTING TO OUTFALL DISCHARGE

Provide the name of the process contributing to the discharge and the Standard Industrial Code (SIC) or North American Industry Classification System (NAICS) code associated with that process and describe the process and provide measures of production. For example, the process(es) contributing to the discharge could be fish rearing or fish processing. The tables below contain NAICS and SIC codes that may apply to your facility's operations:

Process	NAICS Code
Finfish Farming and Fish Hatcheries	112511
Shellfish Farming	112512
Animal Aquaculture (except finfish and shellfish)	112519

Process	SIC Code
Fish Hatcheries and Preserves	0921
Animal Aquaculture	0273
Prepared Fresh or Frozen Fish and Seafood	2092

In the field labeled "Describe the process and provide measures of production," provide the maximum number of aquatic animals, in pounds per year, that the facility will contain, grow, or hold.

EFFLUENT CHARACTERISTICS – CONVENTIONAL POLLUTANTS

Click "CLICK HERE to open the effluent characteristics excel table."

Conventional Request Waviers

CONVENTION POLLUTANTS	LAP REPORT	WAIVER TYPE	REQUEST WAIVER/ADDITIONAL INFORMATION
Biochemical Oxygen Demand – five day (BOD5)	*		
Chemical Oxygen Demand (COD)	*		
Total Organic Carbon (TOC)	*		
Ammonia Nitrogen (as N)	*		
Total Suspended Solids	*		

Select "Yes" if the parameter has been tested for and results are within the lab reports. Select "No" if there are no lab results for each parameter. Aquaculture facilities must report concentrations of total suspended solids (TSS) and total phosphorus. A waiver will not be granted for these parameters; however, a waiver may be requested for carbonaceous biochemical oxygen demand ($CBOD_5$), biochemical oxygen demand – five day (BOD_5), ammonia nitrogen, dissolved oxygen, temperature, chemical oxygen demand (COD) and total organic carbon (TOC). To request a waiver, include the phrase "not of concern" as the basis for the request in the Request Waiver field. Estimates can be given for TSS and total phosphorus. Report all data in the units specified. Analytical testing shall be conducted in accordance with the requirements in Title 40 of the Code of Federal Regulations, (40 CFR) Part 136, "Guidelines Establishing Test Procedures for the Analysis of Pollutants."

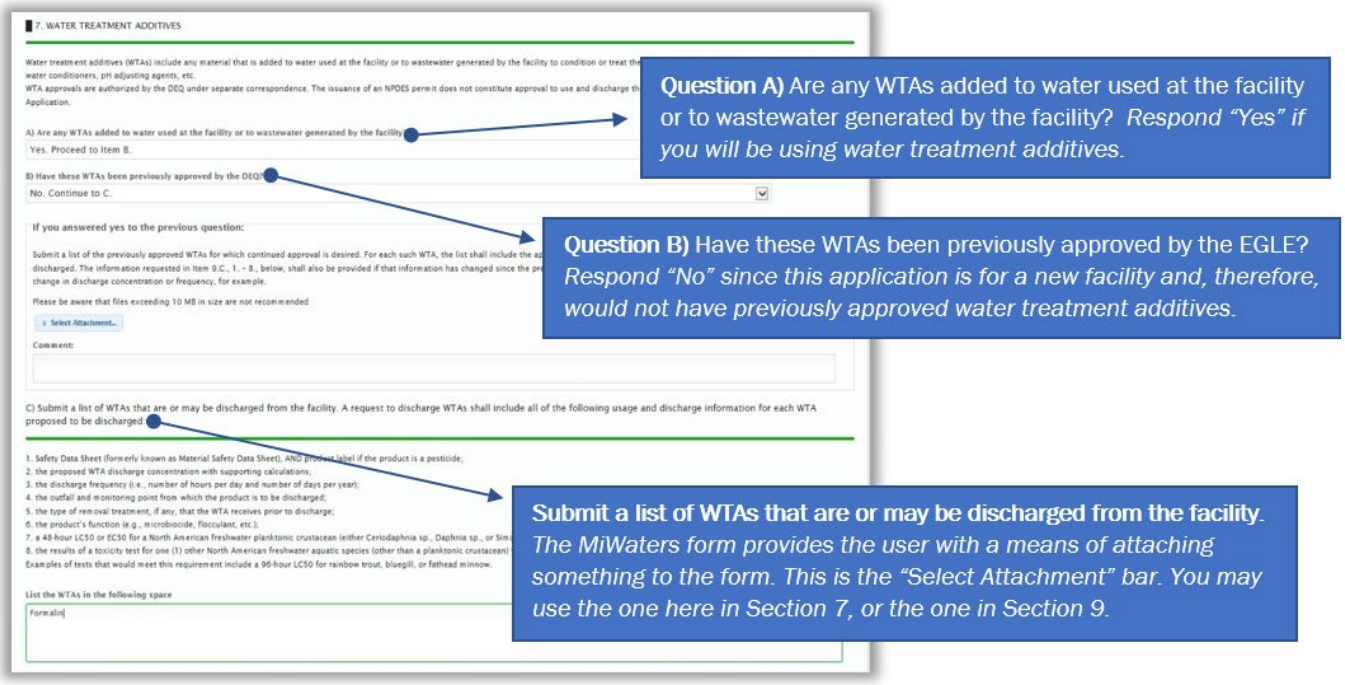
EFFLUENT CHARACTERISTICS – TOXIC POLLUTANTS

It is highly unlikely that an aquaculture facility would have any of the pollutants identified in Tables 1 through 6 of the Appendix to the NPDES application; nevertheless, you should review this section carefully. If no part of it pertains to your discharge, you may skip this section. Otherwise, please provide an estimated effluent concentration for the applicable chemicals.

WATER TREATMENT ADDITIVES

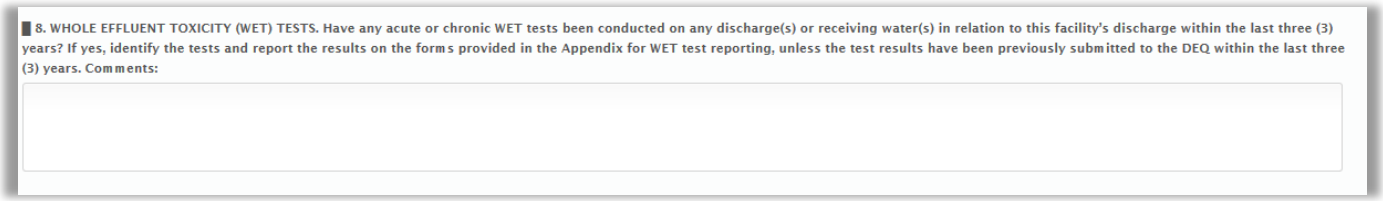
Water treatment additives (WTAs) include any material that is added to the water used at the facility to condition or treat the waters or aquatic animals. If you will use pesticides, tracers, dyes, or immersion drugs like Formalin, Chloramine, Paracide-F or hydrogen peroxide, you will need to report them here.

Water treatment additives are usually approved through separate correspondence, but it is still under the NPDES permitting authority. If monitoring is required, it will be included in the NPDES permit. All additives are reviewed during permit issuance and reissuance. The approval process is often done separate from the permitting process to minimize approval times. If a permit is in place and the permittee submits a request for a new additive, the approval can be completed in a few days. For more information about approvals for WTAs, go to the EGLE's Water Treatment Additives Web site.



WHOLE EFFLUENT TOXICITY (WET) TESTS

A "Not Applicable" or "NA" response is correct if no acute or chronic WET tests been conducted on any discharge or receiving water in relation to this facility's discharge within the last three years. Otherwise, the information requested must be provided.


8. WHOLE EFFLUENT TOXICITY (WET) TESTS. Have any acute or chronic WET tests been conducted on any discharge(s) or receiving water(s) in relation to this facility's discharge within the last three (3) years? If yes, identify the tests and report the results on the forms provided in the Appendix for WET test reporting, unless the test results have been previously submitted to the DEQ within the last three (3) years. Comments:

OTHER INFORMATION (OPTIONAL)

Any additional documentation can be attached to your permit application in this section. You have completed all of the sections of the application. It is now time to proceed to the next step, Review.

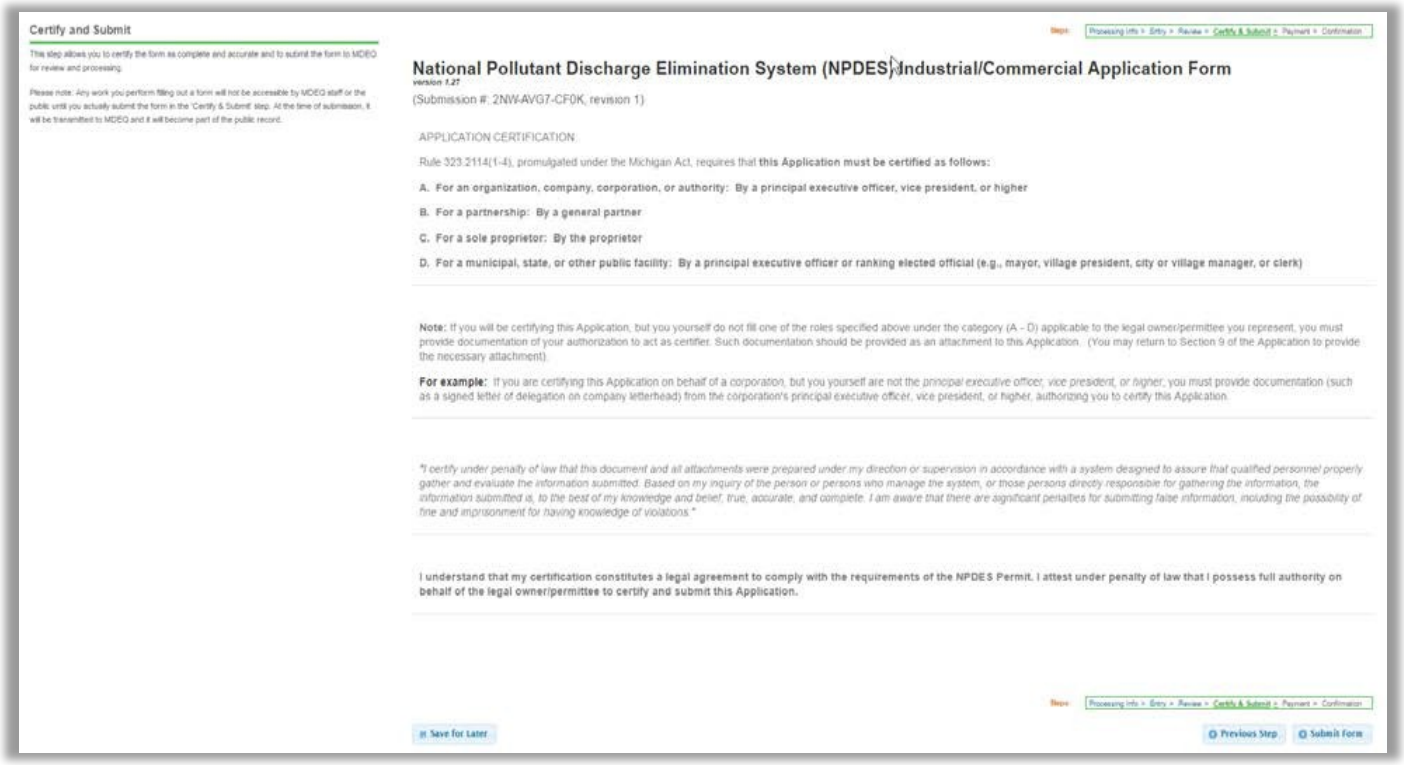
Completion of the Review Step

This step allows you to review all the responses you provided in previous sections of the application. You will not be able to proceed to the Review step unless you provided responses to all required fields in the all of the form sections. If you need to amend your response, go to the previous step, "Entry" and make the needed changes.

Completion of the Certify and Submit Step

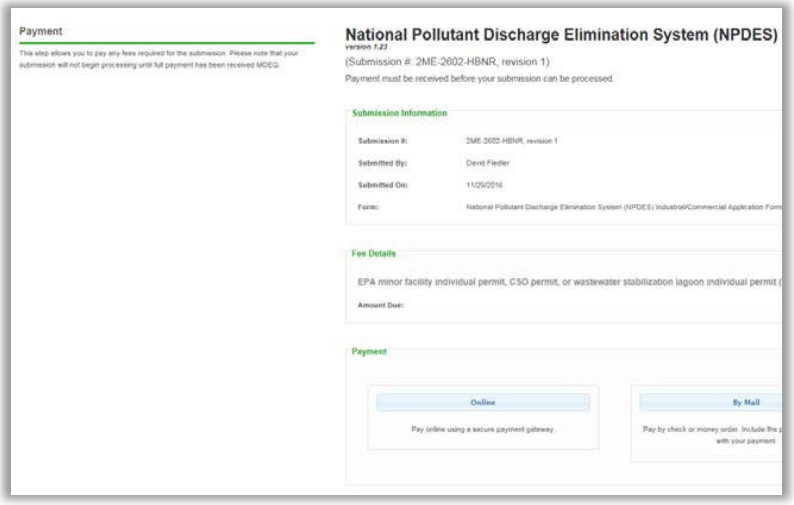
Read all parts of the Certify and Submit page carefully before proceeding to the next step in the form. As indicated in the **"Note:"** under APPLICATION CERTIFICATION, you may need to attach a letter documenting that you are authorized to certify and submit the application.

After you have read all parts of the page and if necessary, provide the required attachment, you are ready to certify and submit the application. To do so, simply click the "Submit Form" button in the lower right corner of the page.



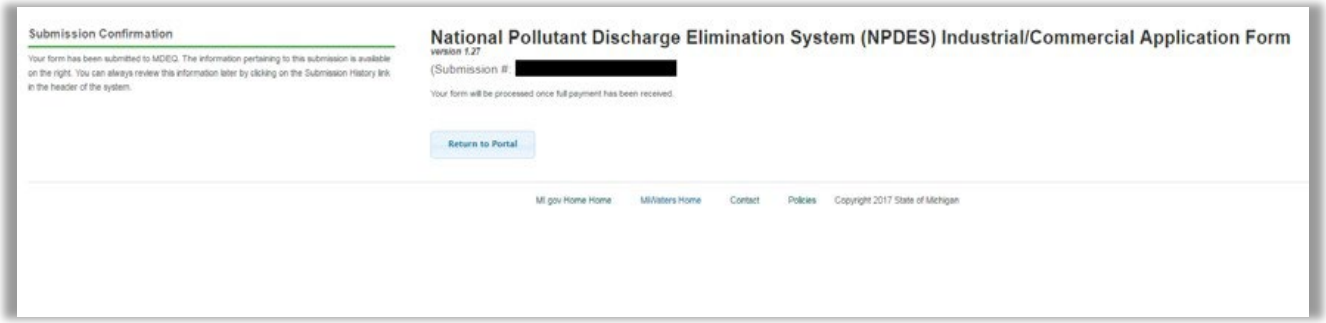
Completion of the Payment Step

You have two options for making the application payment, online or mail. If you select the mail payment option, you will be taken to a screen showing a payment voucher, which contains specific instructions on how to make your payment and where the payment should be sent. Print the payment voucher and follow the instructions on it to make your payment.



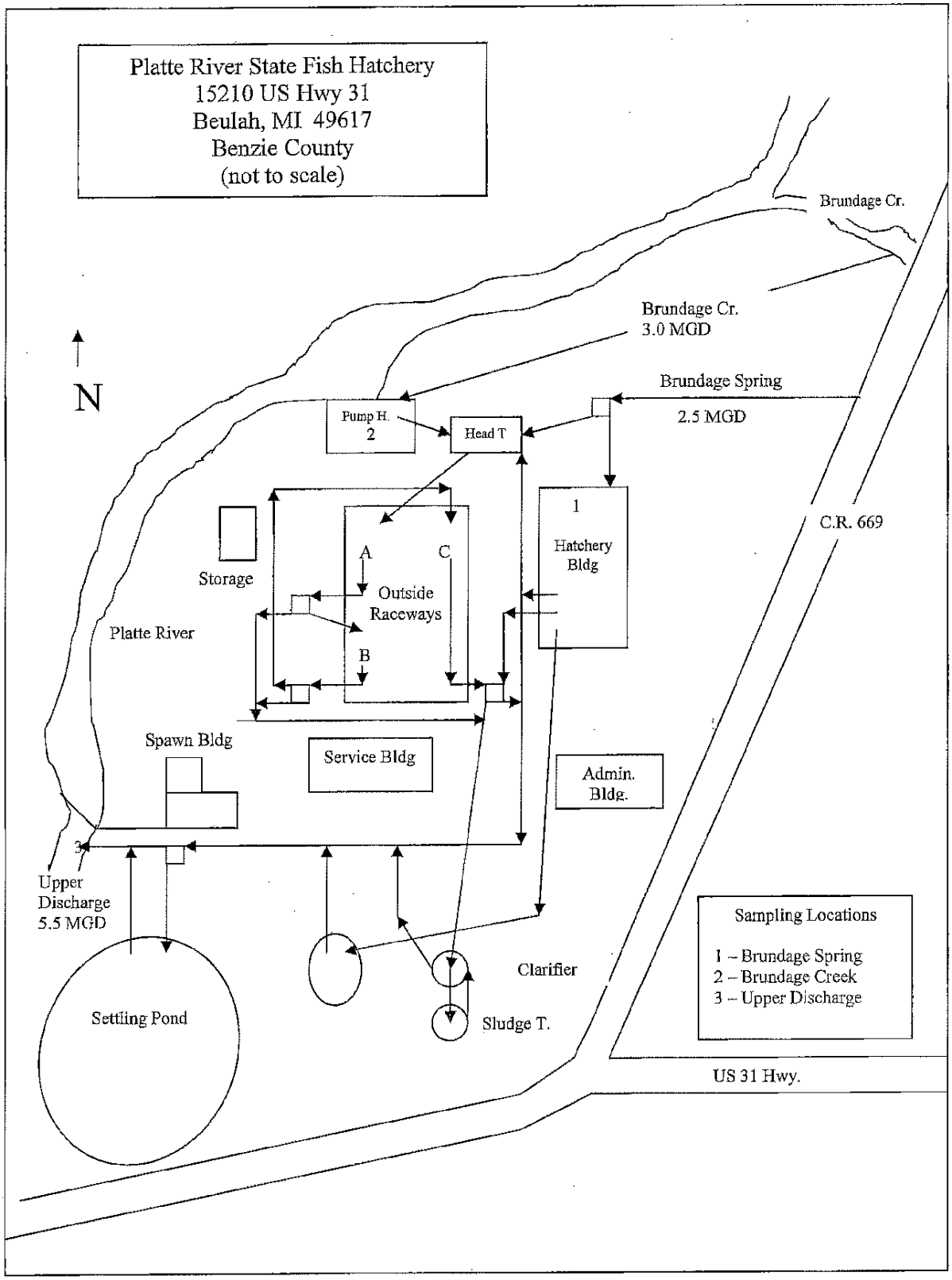
Submission of the Confirmation

This completes your application submittal. If you opted to pay by mail in the payment step, the "Submission Confirmation" screen will instruct you that your application form will be processed once full payment has been received as shown in this sample screenshot of the Submission Confirmation screen.

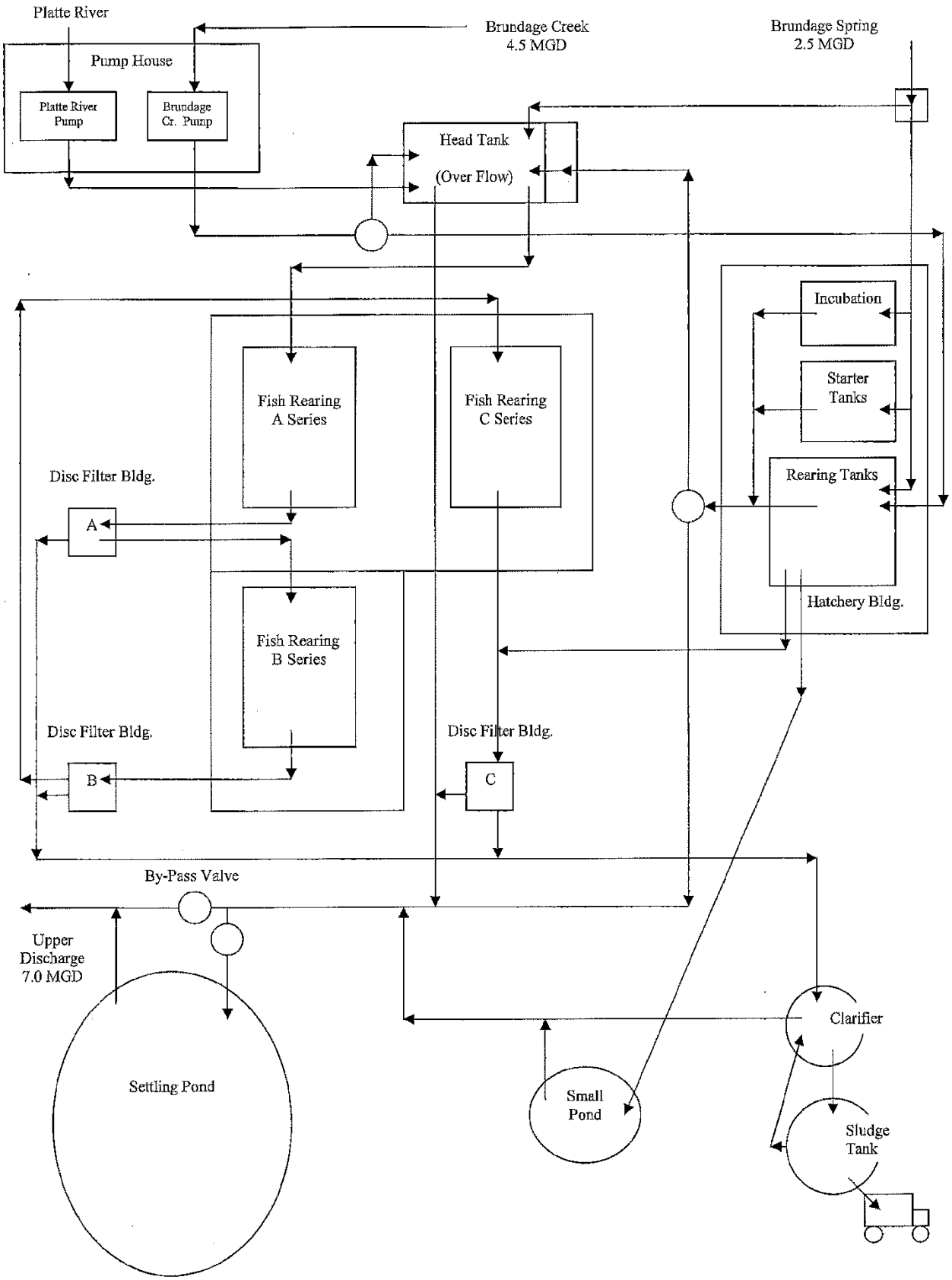


APPENDIX 1: PLATTE RIVER STATE FISH HATCHERY FLOW DIAGRAM (NOT TO SCALE)

Platte River State Fish Hatchery – Facility Location



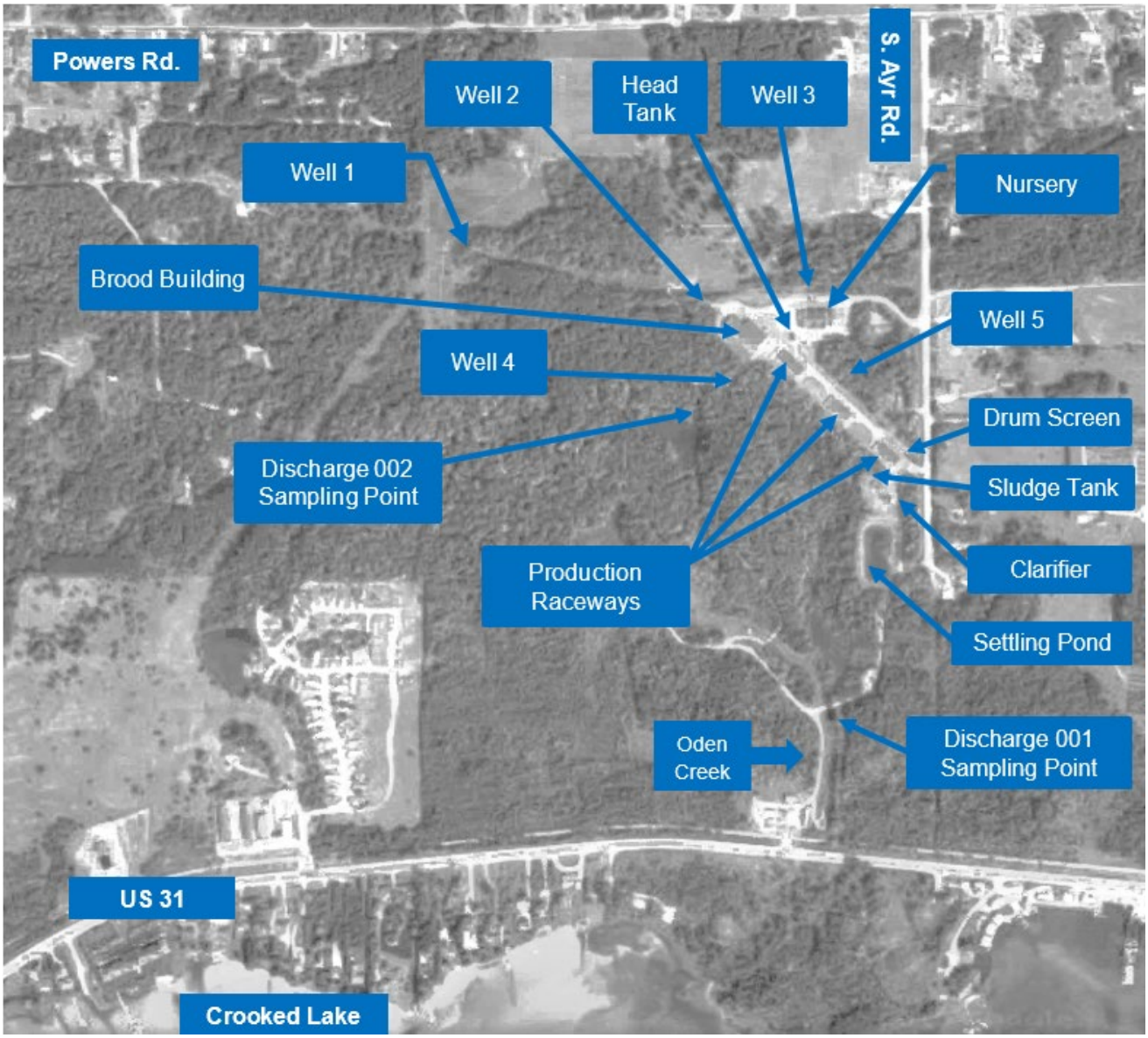
Platte River State Fish Hatchery Flow Diagram (not to scale)



Example Narrative Description: Platte River State Fish Hatchery Flow

Intake water comes from several sources. Brundage Spring water is piped underground approximately 2 miles from the Brundage Spring Pond. A maximum of 2000 gal per minute (2.8 MGD) is used in the Hatchery Building or can be directed to the Head Tank. Approximately 9.0 MGD of Brundage Creek water is available if both pumps are running simultaneously. Often only one pump is running. Platte River water is also available; however, in recent years this water is only used in back-up situations.

Rearing water can be re-used several times. Fish waste is filtered out at the Disc Filter Buildings and pumped to the Clarifier, where it is settled and pumped to the Sludge Tank. The Sludge Tank is emptied once or twice annually. All rearing water and the overflow from the Head Tank, Clarifier, and Sludge Tank passes through the Settling Pond before being discharged back to the Platte River via the Upper Discharge. A maximum of 20.0 MGD is discharged. Average flow is approximately 5.5 MGD. There is no significant loss of water from intake to discharge.

Brundage Spring intake water is sampled in the Hatchery Building. Brundage Creek and Platte River intake water is sampled in the Pump House. The hatchery effluent is sampled at the Upper Discharge.

APPENDIX 2 - MAP OF ODEN STATE FISH HATCHERY MARCH 2016