

**Wisconsin Pollutant Discharge Elimination System (WPDES)  
MUNICIPAL Wastewater Discharge Individual Permit Application  
Instructions for *Form 3400-178*  
Revised December 2024**

This document provides detailed instructions for completing an application for a municipal wastewater discharge individual permit using the Department of Natural Resources' on-line electronic system.

***Completion of this application is required pursuant to ss. 283.37 and 283.53, Wis. Stats., and ch. NR 200, Wis. Adm. Code. Failure to provide the requested information may result in fines, forfeitures, or other penalties pursuant to ss. 283.89 and 283.91, Wis. Stats. Personally identifiable information is not likely to be used by the Department of Natural Resources (DNR) for any purpose other than the reasons stated in the form or for the purpose the form is being submitted.***

You must use this form (or a DNR-approved modification to this form) to apply for an initial permit or a reissued permit for a discharge that the DNR determines requires an individual permit under ss. NR 200.03(1)(a), (b) and (c), Wis. Adm. Code.

- Initial permit - If you are applying for an initial permit, s. NR 200.05(3), Wis. Adm. Code, requires that you file a complete application with the DNR no later than 180 days prior to the date you intend to commence discharging.
- Reissued permit - If you have an existing permit and wish to continue to discharge after expiration of the permit, s. NR 200.06, Wis. Adm. Code, requires that you must file a complete application with the DNR no later than 180 days prior to the current permit expiration date.

**\*\*\*Only those individuals designated as an “Authorized Representative” have authority to certify an application, pursuant to s. NR [200.07\(4\)](#), Wis. Adm. Code.** For additional information on being designated an Authorized Representative see s. NR [205.07\(1\)\(g\)](#), Wis. Adm. Code. To request access to the application as an Authorized Representative see additional instructions at [Creating a Web Access Management State of Wisconsin User ID](#). Authorized Representatives will need to request both eApplication entry and submittal access for a facility in order to submit and certify an application.\*\*\*

### **Using the on-line system**

The application for a given permittee consists of a number of sections that may differ from another permittee's application, based on whether your facility is municipal or industrial and based on the discharge type (surface water, land treatment, land application). You must answer every question in the sections that apply to your facility. If you try to submit the application with required fields missing or inappropriate information, an error message will alert you. You may then go back and supply the required information. These error messages are to help you avoid skipping questions or answering incorrectly. For many questions, any entry into a free-form text box will allow you to submit the application. Other questions require that answers be given in a specific format.

For certain outfalls (all surface water and industrial land treatment and land application), effluent monitoring for a list of pollutants is required as part of the application. Please plan accordingly so results are available to submit with the application by 180 days before the deadline. The DNR

may contact you for additional information that is either missing from the submitted application, or was not specifically requested in this application. Some pollutants require multiple tests and you may be required to provide attachments to your application, including documentation on additives used at your facility. Your application will not be considered complete until the DNR receives the results of all required tests and all additional documentation as requested within the application and by department staff.

To begin, check to see if the Permittee and the Facility name shown at the top of the title page are correct. If the facility name and permittee name are not correct, please use the “contact us” button in the menu bar at the left of the opening screen to report the error. If changes occurred at your facility since the last time the DNR reissued your permit and the DNR was not informed, this application may not contain all of the correct sections or outfalls. When you open the application for your facility, the correct discharge type(s) should appear in the menu bar. Outfalls for your facility will be listed under permit sections named for the type of discharged occurring at each outfall. To view individual outfalls, click on the permit section names. A bulleted list of outfalls included in each section will appear as the section headings are clicked. If the proper sections or outfalls are not given, notify the DNR of changes needed using the “contact us” button prior to filling out the application. We will make the necessary changes and notify you when the application has been re-tailored to your facility. Any information entered in the application prior to re-tailoring will be lost when the application is released back to you with the correct sections and outfalls so it is important to make sure the application includes the correct sections and information prior to filling out any sections.

If the information in your application is correct:

- Click on the various sections in the menu bar to the left, one at a time, and complete the information requested by checking boxes, clicking buttons, or entering words and numbers as requested.
- If you are unsure on the information needed for specific questions, click on the **Instructions** button on the left menu bar. This instruction document will open to the section you are working on. Useful tip: After you bring up the instructions, you may print them. Set the print job to only print the pages you’d like printed, otherwise the complete 30+-page instruction document will print.
- At certain points in the process, you may be requested to save. Your work will automatically be saved upon exiting but we recommend using the **save** button before you exit a section and frequently between questions to prevent data loss in the event of a computer system crash. Data may also be lost if you do not save between network timeout periods (every 20 min). You may complete some parts of the application, log out of the system and come back at another time to finish.
- When filling out special forms, the save button in the left menu bar will be disabled. Prior to closing out any special forms, save the information entered using the **save** button provided at the bottom of the form.
- You may print a section or multiple sections at any time by using the **print** button in the left menu bar. This will allow you to select what you want to print, open a PDF file and print pages using normal printing procedures you use for any other PDF document. You

may also save a copy of your application using this print button. To get back to the application program, close the PDF application and select “cancel” in the print window.

- When you believe a section is complete, click on the **validate** button in the left menu bar. If information is missing, a message will tell you what needs to be completed still. Once all the required information for that section has been supplied, a red check mark will appear in the left menu bar next to the section. You may change your answer to a question in a validated section up until you **submit** your application. After you change an answer in a validated section, you must save and re-validate.
- When all sections are complete, as indicated by red check marks next to the sections, the Authorized representative will use the **submit** button to send the application to the DNR. When the Authorized Representative clicks on the submit button, they will see a box stating they believe the application is complete and accurate and warning them that they will no longer be able to make changes. Clicking OK will bring up a Certification Statement page and send a "finalize submission" email with a certification code to the facility's Authorized Representative, whose email should be listed on the certification page.
- To receive the certification code, the Authorized Representative must make sure [WTeReports@wisconsin.gov](mailto:WTeReports@wisconsin.gov) isn't blocked by their spam filter. If they do not receive the email to finalize submission, they should double check the email address listed in the certification page and look for an email from [WTeReports@wisconsin.gov](mailto:WTeReports@wisconsin.gov) in the junk mail folder for the listed email address.
- To certify the application, the code received via the "finalize submission" email will need to be entered in the box included on the certification page. Only the Authorized Representative for the facility will be able to hit the certify button.
- Once the permit is certified, an automated email will be sent to the individual filling out the application, the facility's Authorized Representative, and the facility owner (when applicable). Instructions for submitting additional documents and attachments to the application will be included in this automated email along with instructions for viewing, printing and saving the final, certified application.
- To view, print or save the final, certified application follow these steps:
  - Log into Switchboard, using your WAMS ID.
  - Select 'My Facilities & Roles' in the blue bar at the top of the screen.
  - Select facility named under 'Approved Facilities'
  - Select 'eApplication (Wastewater Permits)' under 'Actions'
  - Locate the permit application under the 'History' tab of the eReport Home Page and click the print button associated with that document.

The following set of instructions is for municipal facilities and provides instructions for all possible outfall types that pertain to municipal facilities. The application for your facility may not include all sections referenced in this instructional document. As such, certain parts of these instructions may not apply to your facility's application.

## General Information

**Item 1. Facility Name and Location** – This field will be pre-populated with the facility's official or legal name to be shown on the permit. For a municipal entity, this will usually be the City of or Village of \_\_\_\_\_. Or it might be a name followed by “Metropolitan Sewerage District” or “Sanitary District”.

**Facility Site Name, Site Address, MCD and County** – This field will likely be pre-populated. The address will be a physical location for the site address, not a PO Box number. If the facility lacks a street address and route number, the address might include alternative geographic information such as a highway or road with the distance and direction from the nearest city, or a quarter-quarter section, town and range description. It will contain the municipal civil division (MCD) (city, village or township) and county.

**Item 2. Other Environmental Permits or Approvals** - If the facility's discharge of storm water, cooling water or any process wastewater is currently covered by a WPDES general permit, such as WPDES Permit No. WI-0044938, "Noncontact Cooling Water or Condensate and Boiler Water," provide the permit number and a brief description of the discharge covered by the general permit. If you have received or applied for coverage under any other federal, state or local environmental permit, provide identifying information and describe the activity covered by the permit.

**Item 3. Tribal Lands** - Indicate whether or not any part of the facility, including the wastewater treatment system if present, is located on Tribal lands. Indicate if the receiving stream for your facility, or the larger body of water that the receiving stream flows into, flows through Tribal lands after it receives discharge from your facility. Indicate if sludge or biosolids generated by the facility are stored on, disposed on or land applied on Tribal lands. If you answer yes to any of the questions, you will need to include additional details in the box provided.

**Item 4. Site Map** - In addition to a USGS topographic map, you may use a plat map or aerial photo. You may trace your map from a geological survey chart or other map that meets the specifications listed on the form. If you do, identify the map or chart from which you traced your map and include on your map the names of nearby towns, water bodies and other prominent points. Submit a copy of the map following instructions provided for submitting application attachments.

**Item 5. Contact Information** - Please supply the name(s), address(es), phone number(s), and email address(es) for one or more persons associated with the entity. If the information is pre-populated on the form, please check for accuracy and make changes and additions where appropriate. To make changes on the electronic form, click on the **contact type**.

Many of the contact types should be self-explanatory. However:

The *Authorized Representative* is someone who is authorized to sign all applications, reports or other information submitted to the DNR. This person may be; for a corporation, a responsible corporate officer including a president, secretary, treasurer, vice president or manager; and for a municipality, a ranking elected official; for a corporation or a municipality, another person authorized by one of those officers or officials and who has responsibility for the overall operation of the facility or activity regulated by the permit. This is the person to whom we will send information regarding the application, the draft permit and permit reissuance. Please note, this is also the person who will be required to certify the permit application in order for it to be accepted by the DNR, so it is important

that the correct person is listed for this contact type.

The *Discharge Monitoring Contact* will be granted access to enter information into electronic Discharge Monitoring Reports (eDMRs). eDMRs are used by the permittee to submit effluent and groundwater monitoring data required by the facility's permit.

The *Owner* for a municipal treatment works might be City of \_\_\_\_\_ or \_\_\_\_\_ Sanitary District. For address, e-mail and telephone fields, consider using the city office and general contact information.

**\*\*\*Starting in August, 2023, users granted eApplication Entry access will be able to fill out an application, but only those individuals designated as an “Authorized Representative” and granted both eApplication Entry and Submittal access for a facility will be able to submit and certify an application, pursuant to s. NR [200.07\(4\)](#), Wis. Adm. Code. These functions within the application will not work for individuals who have not been granted this level of access within Switchboard. For more information on becoming an Authorized Representative see s. NR [205.07\(1\)\(g\)](#), Wis. Adm. Code. To request access to the application as an Authorized Representative see additional instructions at [Creating a Web Access Management State of Wisconsin User ID](#).\*\*\***

## Description of Municipal Activity

**Item 1. Treatment Facility Description** - Provide a brief description of the wastewater treatment facility. Include treatment types, identify all treatment units and list all treatment chemicals.

**1.2. Blending** – If your facility is designed to operate with blending and you wish to operate the facility with blending, you must request blending approval at the time of each permit reissuance per s. NR 210.12(2), Wis. Adm. Code. To request blending approval, click on the link labeled ‘Blending Approval Checklist’. You will need to submit a copy of your request with application attachments.

**Item 2. Change in Operations** – Examples of operational changes that could affect discharge quality and/or quantity include changes in activated sludge mode (for example, plug flow versus contact stabilization versus extended aeration) and changes in treatment chemicals. Examples of treatment system modifications that could affect discharge quality include increasing the hydraulic capacity of treatment units or adding or deleting physical, chemical and biological treatment processes, including sludge treatment processes. Examples of treatment processes include sedimentation, biological oxidation (for example, activated sludge), chlorination and dechlorination, filtration, carbon adsorption, chemical treatment and flocculation, and sludge digestion, heat treatment and dewatering.

If changes have occurred or will occur, describe in the space provided the changes and indicate how the quantity and/or quality of the facility's discharge has been affected or is anticipated to be affected.

If you are applying for a first-time permit, click on or check the NA button and go on to part 2.2.

**Item 3. Design Flow** – The DNR’s records contain an average design flow for each municipal facility. That design flow value should be based on an approved facilities plan. This value, in million gallons per day (MGD), is pre-populated on the application form that is generated for your facility. If the design flow listed looks correct, based on information available to you, click on or check the appropriate box. If you believe that the design flow listed is incorrect, indicate so and provide the reason for your belief.

The Average Design Flow is the maximum effluent flow, expressed in MGD, that is anticipated to occur (on average) for 12 continuous months during the design life of the treatment facility.

**Item 4. Influent Flow Monitoring** - Identify the flow monitoring type as a "V" notch weir, Parshall flume, magnetic flow meter, etc. and provide its age and location in the process stream. Identify the sampling type as 24-hr composite (flow proportional), composite (and specify number of hourly samples), grab, etc. and provide a very brief description of location (in the process stream) of influent sampling.

When providing flow monitoring or sampling locations, specify, for example, if the location is prior to entry of all return flows from other processes and after or before grit removal or other preliminary treatment units such as comminutors or flow equalization basins. If flows from one or more communities are monitored separately prior to combining the flows, provide the information for each sample point. You may supply information that does not fit in the spaces provided in the additional comments section (last section of the permit application).

### Item 5. Service Area Information-

**5.1-** If this is a publicly owned treatment works, list the governmental jurisdictions (cities, villages, towns or sanitary districts) served. If this is a privately owned treatment works, describe the development (mobile home park, nursing home, industrial facility) served. Provide an estimate of the population served in each jurisdiction or development.

**5.2-** Please describe the water supplies providing source water to the treatment works. These might be municipal wells, private wells or surface water intakes or other. Each municipal well in a given governmental jurisdiction need not be listed separately (simply indicate the municipality's name followed by the word "well" or "wells"). Please indicate approximate average flow for each water supply. If the water supply receives chemical treatment, other than chlorine or fluoride treatment, please describe. For example, caustic soda for corrosion control, polyphosphates for iron sequestering, alum for settling during surface water supply treatment, iron removal, ion-exchange softening, lime softening, etc.

**Item 6. Wastewater Bypassing or Overflows** - Indicate if there have been any bypassing or overflow events since you last applied for a permit. Reportable events include instances of raw wastewater overflowing manholes or pumping stations (even if at the treatment plant), temporary pumping of raw wastewater from manholes or pumping stations, leakage from broken or plugged sewers or force mains, or other discharge of untreated wastewater directly to surface waters, storm sewers or the ground surface. If you answer yes, indicate if you provided notification and detailed reporting to the DNR on such events as required in your permit's Standard Requirements or Standard Conditions Section. If you did not previously provide that notification or reporting to the DNR, provide detailed descriptions of the problems. You may obtain the proper form (form 3400-184, Sanitary Sewer Overflow or Bypass Notification Summary Report) by clicking on the link provided or calling your DNR contact. You will need to submit a copy of the form with application attachments.

**Item 7. Contributors of Non-domestic Wastewater-**

**7.1 Pretreatment program** - Generally, any POTW with a design flow greater than 5 million gallons per day (MGD) is required to operate a pretreatment program. For further information, see chapter NR 211, Wis. Adm. Code. If the treatment works has a pretreatment program, so indicate and provide the date of program approval.

**Categorical industrial users** - If your POTW operates a pretreatment program, you have already submitted information to the DNR on categorical industrial users. In that case, simply record the number of categorical users contributing wastewater to your system.

If your POTW does not operate a pretreatment program, please name industrial users that contribute wastewater, other than sanitary wastewater, that fit any of the categories listed below. Sanitary wastewater is wastewater from bathroom toilets, sinks, tubs or showers or kitchens or residential laundries.

The classification of an industry as a categorical industry allows some prediction of the types of pollutants that may be discharged or emitted from that facility. Please use your best judgment, based on what you know about the processes used, to place each industry into one of the following categories. If no category seems to fit, name the industry in other parts of this question and describe the industry using the Detailed Non-Domestic Contributor Sheet provided under question 7.5.

List of Categorical Industries

Aluminum Forming  
Battery Manufacturing  
Carbon Black Manufacturing  
Coil Coating  
Industrial Waster Combustors

Asbestos Manufacturing  
Builders Paper and Board Mills  
Centralized Waste Treatment  
Copper Forming  
Electrical and Electrical Components

Electroplating	Feedlots
Ferroalloy Manufacturing	Fertilizer Manufacturing
Glass Manufacturing	Grain Mills Manufacturing
Ink Formulating	Inorganic Chemicals
Iron and Steel Manufacturing	Leather Tanning Manufacturing
Landfills	Metal Finishing
Metal Molding and Casting	Nonferrous Metals Forming and Metal Powders
Nonferrous Metals Manufacturing	Organic Chemicals, Plastics & Synthetic Fibers
Paint Formulating	Paving and Roofing
Pesticide Manufacturing	Petroleum Refining
Pharmaceutical Manufacturing	Porcelain Enameling
Pulp, Paper and Paperboard	Rubber Manufacturing
Soap and Detergents Manufacturing	Steam Electric Power Generating
Sugar Processing	Textile Mills
Timber Products Manufacturing	Transportation Equipment Cleaning

**Other significant industrial users** - Please name any other industrial contributor that may not fit into one of the above categories but that meets the definition of Significant Industrial Contributor. Section NR 211.03(19m), Wis. Adm. Code, defines Significant Industrial Contributor and includes in that definition an industrial user that: 1) "discharges an average of 25,000 gallons per day or more of wastewater to the POTW, excluding sanitary, noncontact cooling and boiler blowdown wastewater" or 2) "discharges to the POTW a process waste stream which makes up 5% or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant.

**7.2 Potentially toxic discharges** - Name any industrial discharge fitting these descriptions given. Although they do not automatically fit the categorical or significant industrial contributor definitions, these industries have a history of producing whole effluent toxicity (WET) test failures.

**7.3 Wastes from other activities** - Name any entity discharging wastewater from any of the activities listed. Wastewaters from these sources have the potential to contain toxic or hazardous substances.

**7.4 Total Number of Non-domestic Contributors** - Total the number of contributors named in parts 7.2 and 7.3. The DNR uses this information as a basis for determining whole effluent toxicity (WET) monitoring requirements. Enter '0' (zero) if none.

**7.5 Detailed Contributor Information** - Fill out a copy of the one-page, Detailed Non-domestic Contributor Sheet for **each** contributor that you have **named** in parts of this question. Note the difference between **numbering** and **naming** users. If you were only required to number a user in the first part of question 7 because you operate a pretreatment program, you need not fill out the sheet for that user. Click on the "Add Non-Domestic Contributor" button for each copy of the sheet you need.

### Detailed Non-domestic Contributor Sheet

Provide the information requested as completely as possible. If you don't have this information readily available, we recommend you survey industrial, commercial and other non-domestic contributors to your sewer system. Be sure to clearly instruct anyone completing a survey that, if the discharge consists solely of sanitary wastewater, a verified statement to that effect constitutes a sufficient response.

Complete a separate form for each contributor. You can bring up as many forms as you need by clicking

on the button provided. If you make a mistake and bring up too many forms, you can click on the contributor name field (it will be a button) and click on the delete button at the bottom of the form you wish to delete.

If you operate a pretreatment program and you provide this information as part of your annual report, you do not need to provide this information again for facilities classified as categorical or significant industrial contributors. The DNR has this information as part of pretreatment program files. You still need to provide this information for entities named in parts 7.2 and 7.3.

**Item 8. Hauled Wastes** - Indicate which of the listed wastes are accepted at your facility and estimate the amount of each waste as a monthly average in units of gallons per day. If none are accepted, so indicate.

**Item 9. Schematic Diagram of Treatment System** - Provide a line drawing showing the water flow through the facility. Include all sample points, plant recycle lines and sludge draw off points. You will need to submit a copy of the schematic with the application attachments.

## **Surface Water Outfall Information**

This section of the application must be completed for each surface water outfall excluding those that discharge only storm water runoff. Your application should include a copy of the section for each outfall identified with an outfall number. Outfall sections can be collapsed and expanded for easier navigation by clicking on the outfall heading bar included for each numbered outfall.

**Item 1. Receiving Water** – The space should be populated with the name of the receiving water to which the outfall discharges or will discharge. If the correct receiving water is not shown, you may supply the information if you know it. You will not be able to input information into the space however you may provide the information in the Additional Comments section of the application (last section listed in the left menu bar).

**Item 2. Outfall Location**- Provide a brief description of the outfall location (for example, east bank of Wisconsin River one-quarter mile down stream of Second Street Bridge).

**Item 3. Seasonal or Intermittent Discharges**- Specify how the discharge, with the exception of storm water runoff and spillage or leaks, varies with time of the year.

- A discharge is year-round if it occurs daily, without interruption, during the operating hours of the facility. A sequencing batch reactor, even though the discharge may cease for periods during the day is a year-round discharge.
- For intermittent discharges, describe the frequency of discharge and the duration and volume of each discharge.
- A discharge is seasonal if it occurs only during certain periods of the year. For seasonal discharges, provide the period from starting day and month to ending day and month during which wastewater is discharged.

**Item 4. Effluent Flow Monitoring and Sampling**- Identify the flow monitoring type as a "V" notch weir, Parshall flume, magnetic flow meter, etc. and provide its age and location (in relation to other units). Identify the sampling type as 24-hr composite (flow proportional), composite (and specify number of hourly samples), grab, etc. Provide a brief description of locations of composite sampling devices and all locations where effluent grab samples will be taken.

**Item 5. Phosphorus**- You may wish to consider the compliance options for phosphorus listed in 5.1 through 5.3 (“Alternative Technology Based Effluent Limit”, “Adaptive Management/Trading” and “Variance”). Review each option and check the ‘Yes’ box for any option that you have chosen. (Check the ‘No’ box for options not chosen.) Note that each option has a link that you can click to find the form that must be completed for that option. You will need to submit a copy of your completed form with application attachments.

**Item 6. Biological Toxicity Data**- Indicate whether or not acute or chronic toxicity tests were performed on the receiving water or the discharge from the outfall in the last 5 years. If tests were performed, provide test dates and type of test (acute or chronic). For any test not previously reported to the DNR, mail a report with results to the Biomonitoring Coordinator at the Department of Natural Resources, 101 South Webster Street, Box 7921, Madison WI 53707.

**Item 7. Chloride Variance**- A significant number of municipal permittees, particularly those in hard-water areas of the State, may have discharge concentrations that approach or exceed 395 mg/L as a

weekly average. Limits for facilities that discharge to streams that provide dilution of the effluent will likely be raised, above the 395 mg/L limit that would apply to effluent dominated situations, as more and more dilution is available.

DNR has a rule in place that sets a variance process to account for problems with meeting chloride limits including that:

- the cost of end-of-pipe treatment may cause an adverse social and economic impact,
- some permittees cannot consistently meet necessary effluent levels for chloride without additional action (treatment or source reduction), and
- in many cases, source reduction measures are preferable to treatment options because the concentrated brine that results from treatment may be more of a liability than the untreated effluent.

If you believe that you may have trouble meeting limits for chloride discharge, you should fill out the Chloride Variance Application Form 3400-193 provided and submit the form with application attachments. Based on the chloride data you submit with this form, the DNR will determine if there is reasonable potential that your facility will exceed water quality based effluent limits. If the DNR determination concludes that limits are not necessary in your permit, no limits will be imposed in your permit, although some additional monitoring could be required. If the determination is that your discharge may exceed limits, the DNR will contact you to discuss options for source reduction efforts.

**Item 8. Mercury Variance-** If your plant is considered a major, as defined by having an average flow greater than 1 million gallons per day (MGD), and you have collected at least 12 quantified mercury results that meet the data quality requirements necessary for low-level analyses, the DNR will determine if your permit needs to limit mercury discharge. It is likely that the DNR's determination will result in the need to impose effluent limitations. You may anticipate the DNR's determination and request a variance to water quality standards based on the costs of meeting the extremely low effluent limitations that apply. For most municipal facilities, the effluent limitation would be set equal to the water quality criterion of 1.3 ng/L.

If you are considered a minor facility (generally, your average flow is less than 1 MGD) or if your previous permit did not require that you collect the necessary low-level data, there is no need for you to apply for a mercury variance.

You may obtain the proper form to apply for a mercury variance (alternative mercury effluent limitation) by clicking on the link provided. You will need to submit a copy of the form with application attachments.

**Item 9. Temperature- Dissipative Cooling or Alternative Effluent Limit (AEL)-** If your facility is subject to effluent temperature limits, you may wish to consider the options listed in parts 9.1 through 9.3 ("Dissipative Cooling Request", "Continued Consideration of Dissipative Cooling" and "Temperature Alternative Effluent Limit"). Note that options 9.1 & 9.3 require you to submit the applicable form and option 9.2 allows you to request continued consideration of dissipative cooling per NR 106.59(8). You will need to submit a copy of the form if requesting option 9.1 or 9.3 with application attachments. When requesting continued consideration of dissipative cooling, either submit your request with application attachments or enter your request in the Comments section of the permit application.

**Item 10. Disinfection-** Answer part 10.1 based on the conditions at the point where the facility's effluent is discharged to a surface water of the state. If wastewater is conveyed via effluent channels constructed primarily for the purpose of transporting wastes from a facility to a point of discharge (as defined in s. NR 104.02(1)(d), Wis. Adm. Code) then answer parts 10.1.1 and 10.1.2 based on the waterbody conditions at the end of the effluent channel.

*"Nonflowing waterbody"* means a waterbody whose current is more or less stagnant or does not exhibit a unidirectional flow at the point of discharge. This can include lakes, ponds, and static

wetlands.

*“Flowing waterbody”* means a river or stream (continuous or intermittent) that flows long enough during the year to maintain a defined channel. This can also include waterways created by water from rains, intermittent springs and melting snow.

For part 10.1.3, information related to the timeframe of recreational activities could come from on-site observations, firsthand experience, local organizations, or other publicly available information. It is not anticipated that applicants will contract for special studies or otherwise spend significant time or effort collecting this information, but rather will list information that is known to locals in the area.

If your facility treatment process consists of treatment lagoons, the total operating pond volume required for part 10.2.2 may be found in your facility’s Operation and Maintenance Manual.

For more explanation and detail related to disinfection requirements, please review the [Disinfection Requirements for Discharges to Surface Waters](#) guidance document.

**Item 11. Variance to a Water Quality Standard and/or Water Quality Trading-** Click on the links provided to learn more about variances and water quality trading.

**Item 12. Discharge Monitoring Report (DMR) Information** - When evaluating effluent quality, the DNR usually assumes that the information reported by the permittee on their Discharge Monitoring Reports (DMR), Forms 3200-28 or 3200-40, for the last 36 months is representative of the permittee's current discharge.

If this is a first-time permit application for a facility that does not yet have a discharge to monitor, select the first button.

If you agree that the last 36 months of DMR information accurately represents the current discharge from your outfall, select the second button.

If you believe that a time period other than the last 36 months is representative of the current discharge, select the third button, specify the time period over which you believe DMR data are representative of the current discharge and provide the reasons for your belief. For example, a time period less than 36 months would be appropriate if 18 months ago a contributing industry added or modified a significant production process or a wastewater treatment process. If you believe certain DMR data points over the selected time period are not representative of the current discharge, identify the data points and provide the reasons for your belief.

**Item 13. Additive Totals** - Report the **total number** of biocides, water quality conditioners and certain process additives that you add to the waters that are discharged from this outfall. Examples of additives include biocides, fungicides, molluscicides, scale and corrosion inhibitors, pH adjustment chemicals, phosphorus treatment chemicals, oxygen scavengers, water softening compounds, etc. Include additives that are used to treat intake waters, added as part of the production process and used to treat wastewaters. Note whether any additives are used less frequently than once in any four-day period. Submit the Safety Data Sheet (SDS) for water treatment additives with your signed certification statement.

**Item 14. Additives Grid-**

The Additives Grid must be completed when any additives are listed in Item 12, Additive Totals. Additional information and guidance related to additives can be found online at:

<https://dnr.wisconsin.gov/topic/Wastewater/Additives.html>.

For each additive that has the potential to be discharged to a surface water, submit the information outlined in bullets below with application attachments. If an additive is not expected to reach a surface water, information must be included in the additives grid, but an additives worksheet does not need to be submitted.

- Additive Review Worksheet - Provide an Additive Review Worksheet for each additive listed in the additives grid.
- Toxicity Data - Enter aquatic life toxicity data on the Additive Review Worksheet for each additive except chlorine, hypochlorite, bromine, sulfuric and hydrochloric acids, and sodium hydroxide. At least one 48-hour LC50 or EC50 for a daphnid species on the whole commercial product formulation is needed to complete an additive review. If aquatic toxicity data is not included on the SDS, please contact the chemical supplier or manufacturer for this information. Toxicity information may also be acquired by performing toxicity testing at a [Department-certified laboratory](#) or another lab given [Department-approved testing methods](#) are used.

For each additive, provide the following information in the Additives Grid.

- Additive Name and Manufacturer - List the additive name and manufacturer.
- Purpose of Additive - State the reason why you use the additive. For example, the additive is a

biocide, it is used to prevent scale or adjust pH, it is used as a flocculent or water softening agent, etc.

- Intermittent or Continuous Feed - Indicate whether the additive, when in use, is applied to the system continuously or intermittently. Intermittent feed is the periodic addition of the additive on a sporadic or timed basis, or based on the level of a water characteristic, such as the concentration of dissolved solids, within the system. Continuous feed is the uninterrupted addition of the additive to the system. Continuous feed is often used to maintain the concentration of the additive as a specific level within the system.
- Frequency of Use (months per year) - Indicate the number of months per year that the additive is used at least once. For example, if the additive is used at least once each month during the entire year, you would enter "12" in the "months per year" column. If the additive is used only during the summer months of May through September, you would enter "5".
- Frequency of Use (days per week) - On average over the period when the additive is in use, determine the number of days per week that the additive is applied to the system and enter the result in the "days per week" column. For example, if the additive is applied weekly over the summer months enter "1". If the additive is applied every third day over a period of six months, you would enter "2.3". (That is, 60 days of additive application divided by 180 days between the first and last day of additive application, times 7 days per week.)
- Maximum Quantity Used - Identify the maximum amount of additive, in pounds (lbs) or gallons (gal) per day that you intend to apply to the system during any one day.
- Average Quantity Used - Identify the average amount of additive, in pounds (lbs) or gallons (gal) per day that you intend to apply to the system over the period of additive use. For example, if 60 pounds of additive will be used over five months the average quantity used would be 0.4 pounds per day. (That is, 60 pounds divided by 150 days.)
- Concentration of Additive at the Outfall – When determining the need for an effluent limitation for an additive, the DNR will likely assume that the entire amount of additive that is applied to the system during a day will be present in the discharge from the system for that day. The DNR will use the flow information that you provide in earlier parts of this application to perform this calculation. For example, if on average 10 pounds of an additive are applied to the system per day and the annual average discharge from the system is 10,000 gallons per day, the DNR will assume the discharge contains 120 mg/L of additive. (That is, 10 pounds divided by the product of 0.01 million gallons of discharge per day times 8.34.)

If you believe that the above calculation misrepresents the actual concentration of the additive at the discharge outfall, enter the value, in parts per million (ppm), that you believe more accurately represents the discharge concentration and explain how you derived the value. You may use the additional information section to explain or submit additional information with application attachments. You may use discharge-monitoring results if available for an additive. You may also estimate an additive's concentration at the outfall using stoichiometry and/or mass balance approaches. If the additive is not expected to be discharged to a surface water, enter a zero and note this in the additional information section.

**Item 15. Required Effluent Monitoring (for surface water outfalls)-** All municipal permittees discharging to surface waters and applying for a permit reissuance must monitor the physical, chemical and biological characteristics of each outfall. The monitoring that each permittee must perform is based on the category of discharger (major or minor) and also on individual circumstances. Results of monitoring must be reported on one or more monitoring grids.

These instructions are provided to help you properly complete the required monitoring. To help avoid problems, you might want to forward a copy of these instructions and any information on effluent limitations that have been calculated for your facility (if you know them) to your laboratory. Generally, effluent limitations do not get calculated until after the DNR receives your application. However, you may have calculated limits for many of these substances from the last time your permit was reissued. Unless there have been changes in your facility, these limits will likely not have changed significantly since then. Exceptions are limits for phosphorus and temperature. Rules relating to water quality requirements for phosphorus and temperature became effective in 2010 per NR 106 and NR 217, Wis. Adm. Code.

There are conditions under which you are not required to provide results of monitoring. These conditions are shown on part 12.2. of the form. You must either select the first button and provide monitoring for all substances in the grid or select the second button and indicate which one of the special conditions applies. Note that the fourth and fifth conditions still require that you submit information. The fourth condition allows you to submit the information late, after a seasonal discharge resumes. The fifth condition only exempts you from monitoring for one or more parameters on the standard list as directed by the application notification letter. The last condition allows you to fulfill the data submittal requirement by submitting hard copies of the lab reports, if directed by the application notification letter.

### **What are my testing requirements?**

Except as indicated above, you must complete one set of monitoring grids for each outfall that discharges effluent to surface waters. Analyze at least one sample for each line on the set of grids. If you analyze additional samples, report results on the Additional Values Grid. For any given line, you must fill in all of the boxes. Other general instructions are:

- **Discharge Monitoring Report (DMR) Data** – Only substances that are not regularly tested on the DMR will appear on the monitoring grid. If phosphorus testing is included on the DMR, you may be asked to provide additional test results using low level analytical methods as part of the permit application process.
- **Past Monitoring Results** - Any monitoring results collected within the last 5 years may be used toward the monitoring required by the application if the monitoring results are representative of the current discharge.
- **Identical Outfalls** - If you have two or more outfalls that discharge substantially identical wastewaters, you may request permission from the DNR to sample and analyze only one of the outfalls. If your request is granted, you may select the appropriate option in part 12.2 of the Required Effluent Monitoring portion of the surface water outfall section and then leave the Required Monitoring Grid blank for the other outfalls.

### **How must I perform this testing?**

It is important that you provide the DNR with quality monitoring data, since those data will be used to help determine what regulatory requirements we place in your reissued permit. The three important steps

in the process of providing the data are sampling, laboratory testing and data reporting. (For more detailed guidance on steps to follow to accomplish the required monitoring, see the Monitoring Procedures Guidance, which is included at the back of these instructions.)

- **Sampling** - Data generated by your laboratory are only as good as the samples you collect. You must insure that the composition of your samples is as close as possible to the composition of the wastewater stream you are sampling. To do this you must consider sample time and location and you must minimize contamination. The time when you sample should be representative of your normal operation, to the extent feasible, with all processes that contribute wastewater in normal operation, and with your treatment system operating properly with no system upsets. Sample types, preservation methods and maximum holding times are listed in Table 1, at the back of these instructions. Although Table 1 specifies 24-hour composite samples for many of the substances, the DNR may waive composite sampling for any outfall for which you demonstrate that use of an automatic sampler is not feasible and that a minimum of four grab samples will be representative of the discharge from the outfall. Any required sample preservation must be performed immediately. Labs will need to check if samples arrived at the laboratory meeting temperature requirements.

If you are required to monitor for a parameter more than once, you must insure a sufficient interval between discharge samples. If the DNR has not specified a monitoring interval for a parameter, weekly intervals are generally about right. Please do not sample more frequently than once every 3 days unless the DNR so directs you.

- **Laboratory Testing** - Sample analyses shall be performed by laboratories that are certified by the DNR. You may contact the Laboratory Certification Program, WI DNR, 101 S. Webster St., Box 7921, Madison WI 53707, (608) 267-7633 for a current list of certified labs. Alternatively, visit the Program's Web Site at <https://dnr.wisconsin.gov/topic/labCert/certified-lab-lists> that can meet your needs for proper sensitivity and data quality.

We suggest that you provide a copy of the Required Monitoring Grid, along with these instructions, to your laboratory. The Grid will tell your laboratory personnel what substances they need to test and the quality control information they need to supply with the data.

Unless instructed otherwise, you must use approved analytical test methods as identified in ch. NR 219, Wis. Adm. Code. For many pollutants, more than one analytical test method is approved. Your lab should pay close attention to analytical detection limits in selecting the proper test methods and should use any available information that might help predict effluent limitations to guide them in this effort. Recognize that detection limits can be affected by analytical test methods and clean up procedures, interference or sample contamination.

The DNR has listed recommended test methods in Table 1 (at the back of these instructions) in an attempt to balance the need to measure compounds below levels that are environmentally significant against method sensitivity and positive compound identification. A number of the substances given in Table 1 are toxic in the environment at levels below the analytical detection limits of even the most sensitive analytical methods. If you report these substances as not detected and your lab did not use a method as sensitive as the one recommended in Table 1 or reports an unusually high detection limit above the DNR's level of concern, the DNR may require you to repeat the testing. However, you may be able to provide an explanation for the high detection limit and indicate those steps taken by your laboratory to lower the detection limit.

For mercury, the regulatory level is most often 1.3 ng/L. Virtually all effluents will have mercury levels low enough that the most sensitive method, EPA Method 1631, will be needed to get quantifiable results. See footnote e. to Table 1 to find a Wisconsin-certified lab who has demonstrated low-level mercury analysis capability.

For phosphorus, water quality criteria specified in NR 102, Wis. Adm. Code, range from 0.1 mg/L to 0.03 mg/L (and lower for the Great Lakes) so it is possible that calculated effluent limits for many facilities will be very stringent. When testing for phosphorus, the analytical method used should be sensitive enough to quantify the concentration in the sample or quantify the phosphorus down to the lowest potential effluent limit whichever is greater. The recommended test method is EPA Method 365.1 (automated ascorbic acid) for Total Phosphorus with a level of detection of 0.03 mg/L. Contact your DNR representative if you have questions on the level of sensitivity needed for phosphorus testing.

- **Data Reporting** - You must report the data on one or more monitoring grids.

A numerical test result, by itself, is not very meaningful. The other information you report on the Grid will be used to help determine how accurately the data represents your discharge. It should also serve as a quality check for you. If you find that an unusual circumstance or qualification pertains to a certain piece of data, you should immediately take steps to clarify the situation, such as through re-sampling.

At the present time, you will need to directly enter in all of the grid information. The web-based system is not conducive to copying electronic data from other file formats into the grid. Use of copy and paste functions will speed up data entry. (Select or highlight in a cell of the grid what you want to copy into another cell, right-click to expose a drop-down, click on copy, place the cursor where you want to paste the entry, right-click to expose the drop-down and click on paste. You may continue to paste the same entry multiple times. You may find the keyboard stroke Ctrl+V as a faster option for repeating the paste function.

## Monitoring Grids

- **Blank Cells** - Fill in all blank cells in the table. Where the cells have been pre-filled or shaded, you need not record any further information. Use of copy and paste functions will speed up data entry (Select or highlight in a cell of the grid what you want to copy into another cell, right-click to expose a drop-down, click on copy, place the cursor where you want to paste the entry, right-click to expose the drop-down and click on paste). You may continue to paste the same entry multiple times. You may find the keyboard stroke Ctrl+V as a faster option for repeating the paste function.
- **Parameters** - You must monitor for each parameter in the grid. The grid is pre-printed with the parameters you must test and, when multiple samples for a parameter are required, it contains the correct number of lines for the test results (namely, one line for each required test result).
- **Additional Sample Results** - You may provide more sample results than specified by the table. For example, if your initial sample result for a substance is greater than 1/5 of your expected effluent limitation, or if you have some reason to question if the data results you have are not representative of your discharge, you may want to sample one or more additional times. To report

those additional data, use the Additional Values Grid by selecting the parameters from the drop-down list and completing the corresponding lines with the required information.

- The information necessary to complete the form should be available to you on the analytical report(s) provided to you by your contract laboratory.

### Column by Column Instructions for the Monitoring Grids

- **Code** - This is a number that is unique to the parameter (pollutant) and will normally be pre-printed. It is used as a reference by the DNR.
- **Name** - The name column will normally be pre-printed with the name of the parameter (pollutant) for which you must report data. The CAS (Chemical Abstract Services) number for that parameter is usually also pre-printed on the form. If you are working in the Additional Values Grid, you must select the chemical name using the drop-down list.
- **Sample Result** - Record the numeric result as provided to you by your laboratory. Make sure to report the correct results for the units listed, which will generally be pre-printed (except on the Additional Values Grid). If a parameter is not detected in a sample, report the result as < (less than) the value of the detection limit. For example, if the substance ammonia nitrogen is not detected and your laboratory indicates that the detection limit is 0.1 mg/L, report the result as <0.1 in the sample result cell if the cells in the units column shows mg/L.
- **QC Flags** - Use the check box to signal that there has been some sort of laboratory quality control (QC) exceedance. Similar to how a footnote is used in printed papers or other documents, explain the meaning of the "flag" at the bottom of the report form. If you place a check in the QC exceedance column, you will need to make an entry in the explanation text box in order to validate the section.

*(NOTE: Flagged data are not necessarily bad data. However, unless your laboratory has documentation, which shows that a quality control exceedance did not affect sample results, please arrange for re-analysis or re-sampling and analysis for affected parameters.)*

- **Units** - The units column normally will be pre-printed with the units of measurement in which you should report the analytical results. If your laboratory reports results for a given parameter in different units, you will need to convert them to the pre-printed units. Usually, a change in units requires that you move the decimal point in the result 3 places to the right or left. For example, 0.018 mg/L is the same as 18 µg/L. 8 ng/L is the same as 0.008 µg/L. If you are unsure how to convert the results into the required units, contact the DNR or your lab for help.
- **LOD (Limit of Detection)** - Record a numeric value for the limit of detection (LOD) reported to you by your laboratory. Sometimes this quantity is called the method detection limit (MDL). You need not report a detection limit for certain parameters (the space will be shaded) such as for BOD, temperature or pH.
- **LOQ (Limit of Quantitation)** - Record the numeric value for the limit of quantitation (LOQ) reported to you by your laboratory. You need not report a limit of quantitation for certain parameters, such as BOD, temperature or pH.

- **Analytical Method** - Record what laboratory analytical method was used to test for the parameter. Usually, methods are specified using method numbers. Refer to Table 1 at the back of these instructions for a listing of recommended analytical test methods. When required to test for Total Nitrogen please enter 'Calculate' in the column for Analytical Method.
- **Sample Collection Date** - Record the day, month and year (mm/dd/yyyy) when the sample was collected. If the sample is a 24-hour composite, show the end date of the compositing period.
- **Sample Type** - Record the type of sampling used for that parameter; comp (for 24-hour composite) or grab. Table 1 at the back of these instructions lists required sample types by parameter.
- **Lab ID Number** - Provide the nine-digit Wisconsin laboratory certification number of the lab that performed the analyses. If analytical testing was sub-contracted to another lab, you still must provide the certification number of the lab that performed the analyses. Certain tests (for example, chlorine residual) need not be conducted by certified labs. This field will be shaded for parameters not requiring certified labs.

**Item 16. Additional Values Grid-** If you have sampled for a parameter more frequently than required by the Required Monitoring Grid, please provide the extra test results on the Additional Values Grid. After navigating to the Additional Values Grid, click on the "Add" button and then use the drop-down by clicking on the down-arrow and select the parameter code and name. Repeat the process to select units. Then enter the sample results and other information in the appropriate cells and save to exit. Perform these steps for as many times as you have results to enter.

The column instructions are the same as for the Required Monitoring Grid.

## Land Treatment System Discharge Information

You must complete this section for each land treatment system outfall. If you have more than one such outfall, your application should contain a copy for each outfall identified with an outfall number. If you have a land treatment system discharge that has not been previously permitted, you should contact the DNR. One option is to complete the application, indicating what changes have occurred when you answer questions that ask you to report changes. Alternatively, if the changes are extensive, you may use the Contact Us button to request that changes be made to our data system before you complete a new form that has been tailored to your facility.

**Item 1. Type of Land Treatment System** - Identify the type of land treatment system. Use the drop-down box to select from the following list. The types of land treatment are:

Absorption Ponds (Seepage Cells) - These are treatment ponds that are designed to infiltrate wastewater into the unsaturated soil zone for treatment and disposal.

Overland Flow - These are land treatment systems in which the applied wastewater flows uniformly down grassy sloped terrain having very low permeability soils and is collected at the bottom of the slope for subsequent discharge.

Spray Irrigation - These are either fixed or traveling spray devices that distribute wastewater onto vegetated fields for treatment and disposal. These are not vehicle hauled wastes. A spray irrigation system is usually dedicated to a specific field and is usually served by a pipeline that transports the wastewater to be irrigated.

Ridge and Furrow - This type of treatment system relies on above-ground disposal into a set of infiltration cells that may be dosed and rested as needed. Each cell is partitioned into several furrows by vegetated ridges.

Subsurface Soil Absorption - This type of treatment is designed as a series of underground perforated pipes that distribute wastewater for infiltration and soil treatment. A subsurface soil absorption system may be divided into cells that may be dosed and rested.

**Item 2. Location of Land Treatment System** - Provide the quarter-quarter section (NE, NW, SE or SW), quarter section (NE, NW, SE or SW), section (1 through 36), township (1 through 53 and always north, 30 N for example) and range (1 through 30 east or 1 through 20 west, 3 E for example) of the tract of land on which the land treatment system is located. The requested location description is similar to the legal description of a tract of land and can be found in a plat book of the county in which the land treatment system is located.

**Item 3. Seasonal or Intermittent Discharges** – Specify how the discharge, with the exception of storm water runoff and spillage or leaks, varies with time of the year.

- A discharge is year round if it occurs daily, without interruption, during the operating hours of the facility. A sequencing batch reactor, even though the discharge may cease for periods during the day is a year round discharge.
- For intermittent discharges, describe the frequency of discharge and the duration and volume of each discharge.
- A discharge is seasonal if it occurs only during certain periods of the year. For seasonal

discharges, provide the period from starting day and month to ending day and month during which wastewater is discharged.

**Item 4. Size of Land Treatment System** - Provide the area in acres that the land treatment system physically covers. It may be necessary to subdivide the area into different components such as lagoon area, ridge and furrow area, etc. to adequately describe the system. The land treatment system is the part of the system that actually receives wastewater for infiltration. A sealed treatment lagoon would not be part of the land treatment system.

**Item 5. Schematic Diagram of the Land Treatment System** - Include a line drawing of the entire system and its components. The drawing size should not exceed 11 x 17 inches. If necessary, subdivide the drawing into smaller individual drawings, but include a master overview that has a key to all the sub-drawings. Do not include blueprints that exceed the maximum size (11" x 17"). Include all areal dimensions and appropriate elevations in the drawing based on a five foot contour interval. Show the relationship of the system to all buildings within 500 feet and the nearest public road. Include all streams and wetlands that may be within the area of the system. Include all locations where samples are collected and all monitoring wells. If you have supplied all of this information as part of the Description of Municipal Activity, Item #9, you need not duplicate that information here.

You will need to submit a copy of the map with application attachments.

**Item 6. Effluent Flow Monitoring and Sampling** - Identify the flow monitoring type as a "V" notch weir, Parshall flume, magnetic flow meter, etc. and provide its age and location (in relation to other units). Identify the sampling type as 24-hr composite (flow proportional), composite (and specify number of hourly samples), grab, etc. Provide a brief description of locations of composite sampling devices and all locations where effluent grab samples will be taken.

**Item 7. Management Plan** - Indicate whether or not a management plan for the land treatment system has been prepared and approved by the DNR. If one has been approved, provide the date the plan was approved and describe any changes in the land treatment system or in the operation of the system that have occurred since the plan was approved. Examples of changes include an expansion of the system, an increase in the amount of wastewater discharged to the system, production process changes that change the characteristics of the wastewater that is discharged to the system, etc.

## Land Application Discharge - General Sludge/Biosolids Management Information

You must complete this section for each land application or sludge/biosolids system outfall. If you have more than one such outfall, your application should contain a section for each outfall identified with an outfall number. Answers for certain questions may be the same for different outfalls. If so, provide the same information for each such outfall.

Even if you do not land-apply biosolids, you must complete this section if you produce sludge for some other method of disposition. If this will be a new facility, enter “does not apply” or “new facility” for any questions that would require information that cannot be known or described.

**Item 1. Existing Sludge Generating Units** - Indicate each type of treatment process that is or will be utilized at your facility that contributes to this outfall by placing X's in the appropriate box(es). For reissuance applications, this information will be pre-populated from the DNR data base. If the information is incorrect or has been changed, please update the information.

For septic tanks, polishing ponds, aerated lagoons and stabilization ponds, provide the date when the sludge was last removed in day/month/year (dd/mm/yyyy) format and fill out the remainder of questions in this section only as appropriate.

**Item 2. Sludge Production** - Indicate in dry U.S. tons the average amount of sludge, over the last several years, that your facility has generated, land applied, and otherwise disposed of (indicating the method; i.e., landfilled, hauled to another facility, etc.). This should be a total amount for each method of disposition for this outfall.

To convert quantities of sludge given in other units to dry U.S. tons, use the following conversions:

From gallons:

$$\text{Dry U.S. Tons} = \text{gallons} \times \% \text{ total solids} \times 0.0000417$$

(express 5.5% total solids as 5.5, not 0.055)

From cubic yards:

$$\text{Dry U.S. Tons} = \text{cubic yards} \times \% \text{ total solids} \times 0.008425$$

(express 5.5% total solids as 5.5, not 0.055)

From dry Metric Tons:

$$\text{Dry U.S. Tons} = \text{Dry Metric Tons}/0.907$$

**Item 3. Screenings and Grit Disposal** - Check the box corresponding to how screenings and grit, if produced, are disposed of. Indicate if screenings and grit are disposed of in a municipal solid waste landfill and specify the name and license number. If screenings and grit are not disposed of at a licensed solid waste landfill, as required by section NR 204.12, Wis. Adm. Code, explain why. If you have multiple sludge/biosolids outfalls, you will need to enter this same information multiple times.

**Item 4. Sludge Storage** – For this outfall:

**4.1 How is storage provided for this outfall?** - If you provide sludge storage, indicate if it is on or off-site. If it is off-site and owned by another entity, provide the requested identifying information for

that facility. Name the company providing the storage and provide a contact person for the company.

**4.2 Number of days of sludge storage provided** - Indicate the number of days of storage capacity which is provided in any storage facility associated with this outfall (excess capacity in a digester above the digestive need of the sludge may be included here).

**4.3 Capacity of storage units** - Estimate the combined capacity of sludge storage units in gallons if liquid sludge or cubic yards or dry U.S. tons if cake sludge for this outfall.

**4.4 Type of Sludge** - Indicate whether the sludge that is stored is liquid or cake. Check none if you do not have storage associated with this outfall.

**4.5 No storage or less than 180 days storage provided** - If no sludge storage or less than 180 days of storage associated with this outfall is provided, please indicate why. Check all boxes that apply. If sludge is hauled to another facility, provide the requested identifying information for that facility. If the total storage for multiple outfalls is 180 days or more, you may select other and so indicate in the explanation box provided.

**Item 5. Sludge Transportation** - Indicate who transports the sludge for this outfall to the land application site, landfill, other treatment or storage facility, or other method of disposition. If a contract hauler is used, provide the company name, contact person's name and license number.

#### **Item 6. Sludge Treatment & Thickening**

**6.1 Treatment** - Indicate all methods of sludge treatment utilized by your facility for this outfall. For reissuance applications, this information will be pre-populated from the DNR data base. If the information is incorrect or has been changed, please update the information.

**6.2 Thickening/Dewatering** - Indicate all methods of thickening or dewatering utilized by your facility for this outfall. For reissuance applications, this information will be pre-populated from the DNR data base. If the information is incorrect or has been changed, please update the information.

**Item 7. Sludge/Biosolids Use and Disposal** - Indicate all methods for use/disposal of your biosolids for this outfall. If your primary biological treatment process is a stabilization pond or aerated lagoon or if you use a sludge reed bed system and you plan to remove sludge this permit term, use "other" and indicate the year you anticipate that happening. Also indicate the method of disposal of the sludge.

**Item 8. Sample Location** – Indicate where (from what point in the piping or transfer system) you physically collect your sludge samples for this outfall.

**Item 9. Pathogen Control** – For this outfall:

- Indicate the level of pathogen control achieved at your facility. If you dispose of sludge by a means other than land application, mark the box labeled "do not land-apply".
- If your facility achieves class A pathogen control, indicate what organism you test, in addition to treatment, to show compliance.
- If your facility achieves class B pathogen control, indicate whether you demonstrate compliance by testing for fecal coliform or by one of the treatment processes you checked in item 6.1.

**Item 10. Vector Control** - Indicate what principal method you use to satisfy vector control requirements

for this outfall. If you dispose of sludge by a means other than land application, mark the box labeled "do not land-apply".

**Item 11. Ceiling Limits** - Indicate if you met all ceiling pollutant concentration limits for metals testing conducted on your biosolids during your last permit term. For a listing of ceiling pollutant concentrations, see chapter NR 204.07(5)(a), Wis. Adm. Code. If these standards were not met, indicate what pollutants exceeded the ceiling limits and what steps, if any, you took to address the issue. If you did not monitor for metals, so indicate.

**Item 12. High Quality Limits** - Indicate if you met all high quality pollutant concentration limits for metals testing conducted on your biosolids during your last permit term for this outfall. For a listing of high quality pollutant concentrations, see chapter NR 204.07(5)(c), Wisconsin Administrative Code. If these standards were not met, indicate what pollutants exceeded the high quality limits and what steps, if any, you took to address the issue. If you did not monitor for metals, so indicate.

**Item 13. Exceptional Quality Biosolids** - Indicate if you produce exceptional quality biosolids as defined in chapter NR 204.07(4)(a), Wis. Adm. Code.

## Groundwater Monitoring Information

You must complete and return this section if your current WPDES discharge permit requires groundwater monitoring or you are applying for a new permit for a facility that will require groundwater monitoring wells.

**Item 1. Groundwater Monitoring** – If this is a permit reissuance application, you are required to complete this section of the application only if your current WPDES permit requires groundwater monitoring using monitoring wells. If it does not, check the box labeled "No" and continue on to the next section of the application.

If your current WPDES permit requires groundwater monitoring, click the "Yes" button and indicate whether or not the Groundwater Monitoring Reports that the DNR sends you to report groundwater monitoring results are consistent with the monitoring requirements of the permit and reflect the current regulated materials in your discharge. For example, if you have begun a new operation that discharges chloride (or another material), do the Groundwater Monitoring Reports show chloride as a parameter that requires monitoring? If not, click the "No" button and indicate the materials that need to be added to the Groundwater Monitoring Reports. Or, if conditions have changed at the facility, indicate which parameters need to be removed from the Groundwater Monitoring Reports.

If this application is for a new land treatment discharge that will require groundwater monitoring, click the "Does not apply" button and continue to item 2.

**Item 2. Existing Land Use** – Describe the land use on or near your facility. "Near the facility" means within one mile in radius of each groundwater monitoring well that is now in place. Examples of land use include agricultural cropland, forest land, residential subdivision and commercial use.

**Item 3. Other Existing Wells** – If all the groundwater monitoring wells that are located on your facility's property and/or land treatment site(s) are required to be monitored by your current WPDES click the "No" button. Also click "No" if this is an application for a new permit and there are no existing wells on the site. Continue to item #4.

If there are operable groundwater monitoring wells on the site that your current WPDES does not require you to monitor, click on the "Yes" button. If yes, then answer if another DNR program or state agency requires you to monitor the well(s).

- If the answer to that second question is yes, click on the second "yes" button and supply the name of the program or state agency.
- If the answer to the second question is no (monitoring is not required by any agency), click on the second "no", describe the location of the well(s) and explain how you use the wells. If the wells are no longer monitored, explain why the well(s) have not been abandoned.

**Item 4. Abandoned Wells** – If you have abandoned (i.e., stopped monitoring) any groundwater monitoring well(s) and have not submitted a copy of Well/Drillhole/Borehole Abandonment Form 3300-5, submit a copy of the form for each such well with application attachments. Note that ch. NR 141, Wis. Adm. Code, requires any permanent groundwater monitoring well no longer being used to be abandoned within 60 days after its use has been discontinued. Click "No" if this is an application for a new permit.

**Item 5. Documentation for New Wells** – If, during the term of your current permit or in preparation for a new discharge, you installed a new well(s) to monitor your land application (spreading) or land

treatment site(s) and you have not submitted Monitoring Well Construction Form 4400-113A, Well Development Form 4400-113B and Soil Boring Log Form 4400-122, click “Yes” and submit the forms with application attachments. Also, submit a site map showing the locations of all wells. If this is an application for a new permit that will require groundwater monitoring but wells have not yet been installed click on the “Does not apply” button and supply the necessary information when it is available. If there have been no new wells installed during the term of your current permit and none are planned, click “No”.

**Item 6. New Permit to Cover Land Treatment or Storage Site** – Provide any groundwater monitoring well data that is available at the time of this application. Submit a copy of the data summary with the application attachments.

## **Additional Comments**

You may use this section of the application to report any information that is not specifically requested by this application, but that you believe is pertinent to the reissuance of your WPDES permit. You may also use the section to report or clarify any answers that you could not report due to lack of space or specific questions.

**TABLE 1. - SAMPLING, PRESERVATION AND ANALYTICAL INFORMATION**

**Substances Which May Require Testing With Permit Applications**

Parameter	Sample Type <sup>a</sup>	Recommended Analytical Test Methods <sup>b</sup>	Preservation <sup>c</sup>	Maximum Holding Time <sup>c</sup>
<u>COMMON POLLUTANTS</u>				
Biochemical Oxygen Demand (BOD <sub>5</sub> )	24-hr. comp.	-	Cool to 6°C	48 hours
Chemical Oxygen Demand (COD)	24-hr. comp.	-	Cool to 6°C	28 days
Chlorides, Total	24-hr. comp.	-	None required	28 days
Chlorine, Total Residual	Grab	EPA 330.2 (amperometric), 330.5, or electrode	Analyze immediately	-
Nitrogen (all forms including NO <sub>2</sub> <sup>-</sup> + NO <sub>3</sub> <sup>-</sup> , NH <sub>3</sub> and TKN)	24-hr. comp.	-	Cool to 6°C, H <sub>2</sub> SO <sub>4</sub> to pH < 2	28 days
Oil and Grease	Grab	EPA 1664	Cool to 6°C, pH to < 2	28 days
PH	Grab	-	Analyze immediately	-
Phosphorus, Total	24-hr. comp.	365.1	Cool to 4°C, H <sub>2</sub> SO <sub>4</sub> to pH < 2	28 days
Suspended Solids, Total	24-hr. comp.	-	Cool to 6°C	7 days
Temperature	Grab	-	Analyze in field	-
<u>METALS, CYANIDE HARDNESS AND PHENOLS</u>				
Antimony, Total Recoverable	24-hr. comp.	EPA 200.9 <sup>d</sup>	HNO <sub>3</sub> to pH < 2	6 months
Arsenic, Total Recoverable	24-hr. comp.	EPA 200.9 <sup>d</sup>	HNO <sub>3</sub> to pH < 2	6 months
Beryllium, Total Recoverable	24-hr. comp.	EPA 200.7 or 200.9 <sup>d</sup>	HNO <sub>3</sub> to pH < 2	6 months
Cadmium, Total Recoverable	24-hr. comp.	EPA 200.7 or 200.9 <sup>d</sup>	HNO <sub>3</sub> to pH < 2	6 months
Chromium, Hexavalent	Grab	EPA 218.6	Cool to 6°C	24 hours
Chromium, Total Recoverable	24-hr. comp.	EPA 200.7 or 200.9 <sup>d</sup>	HNO <sub>3</sub> to pH < 2	6 months
Copper, Total Recoverable	24-hr. comp.	EPA 200.9 <sup>d</sup>	HNO <sub>3</sub> to pH < 2	6 months
Cyanide, Total	Grab	EPA 335.4	Cool to 6°C, NaOH to pH > 12, neutralize Cl <sub>2</sub>	14 days
Cyanide, Amenable	Grab	EPA 335.1	Cool to 6°C, NaOH to pH > 12, neutralize Cl <sub>2</sub>	14 days
Lead, Total Recoverable	24-hr. comp.	EPA 200.7 or 200.9 <sup>d</sup>	HNO <sub>3</sub> to pH < 2	6 months
Mercury, Total Recoverable	Grab <sup>e</sup>	EPA 1631E	See Method	90 days
Nickel, Total Recoverable	24-hr. comp.	EPA 200.7 or 200.9 <sup>d</sup>	HNO <sub>3</sub> to pH < 2	6 months
Selenium, Total Recoverable	24-hr. comp.	EPA 200.9 <sup>d</sup>	HNO <sub>3</sub> to pH < 2	6 months
Silver, Total Recoverable	24-hr. comp.	EPA 200.9 <sup>d</sup>	HNO <sub>3</sub> to pH < 2	6 months
Thallium, Total Recoverable	24-hr. comp.	EPA 200.7 or 200.9 <sup>d</sup>	HNO <sub>3</sub> to pH < 2	6 months
Zinc, Total Recoverable	24-hr. comp.	SW-846 7950 or EPA 200.7	HNO <sub>3</sub> to pH < 2	6 months
Hardness (Total as CaCO <sub>3</sub> )	24-hr. comp.	-	HNO <sub>3</sub> to pH < 2	6 months
Phenols, Total	24-hr. comp.	-	Cool to 6°C, H <sub>2</sub> SO <sub>4</sub> to pH < 2	28 days
<u>VOLATILE ORGANICS</u>				
Acrolein	Grab	SW-846 8260B	Cool to 6°C, neutralize Cl <sub>2</sub> , adj. pH to 4-5	14 days
Acrylonitrile	Grab	SW-846 8260B	Cool to 6°C, neutralize Cl <sub>2</sub>	14 days
Benzene	Grab	SW-846 8260B	Cool to 6°C, neutralize Cl <sub>2</sub> , HCl to pH < 2	14 days
Bromodichloromethane (dichlorobromo-methane)	Grab	SW-846 8260B	Cool to 6°C, neutralize Cl <sub>2</sub>	14 days
Bromoform	Grab	SW-846 8260B	Cool to 6°C, neutralize Cl <sub>2</sub>	14 days

Parameter	Sample Type <sup>a</sup>	Recommended Analytical Test Methods <sup>b</sup>	Preservation <sup>c</sup>	Maximum Holding Time <sup>c</sup>
Carbon tetrachloride	Grab	SW-846 8260B	Cool to 6°C, neutralize Cl <sub>2</sub>	14 days
Chlorobenzene	Grab	SW-846 8260B	Cool to 6°C, neutralize Cl <sub>2</sub> , HCl to pH < 2	14 days
Chlorodibromo-methane (dibromochloromethane)	Grab	SW-846 8260B	Cool to 6°C, neutralize Cl <sub>2</sub>	14 days
Chloroethane	Grab	SW-846 8260B	Cool to 6°C, neutralize Cl <sub>2</sub>	14 days
Chloroform	Grab	SW-846 8260B	Cool to 6°C, neutralize Cl <sub>2</sub>	14 days
Chloromethane (methyl chloride)	Grab	SW-846 8260B	Cool to 6°C, neutralize Cl <sub>2</sub>	14 days
1,2-Dichlorobenzene	Grab	SW-846 8260B	Cool to 6°C, neutralize Cl <sub>2</sub> , HCl to pH < 2	14 days
1,3-Dichlorobenzene	Grab	SW-846 8260B	Cool to 6°C, neutralize Cl <sub>2</sub> , HCl to pH < 2	14 days
1,4-Dichlorobenzene	Grab	SW-846 8260B	Cool to 6°C, neutralize Cl <sub>2</sub> , HCl to pH < 2	14 days
1,1-Dichloroethane	Grab	SW-846 8260B	Cool to 6°C, neutralize Cl <sub>2</sub>	14 days
1,2-Dichloroethane	Grab	SW-846 8260B	Cool to 6°C, neutralize Cl <sub>2</sub>	14 days
1,1-Dichloroethylene	Grab	SW-846 8260B	Cool to 6°C, neutralize Cl <sub>2</sub>	14 days
<i>cis</i> -1,2 Dichloroethylene	Grab	SW-846 8260B	Cool to 6°C, neutralize Cl <sub>2</sub>	14 days
<i>Trans</i> -1,2-Dichloroethylene	Grab	SW-846 8260B	Cool to 6°C, neutralize Cl <sub>2</sub>	14 days
1,2-Dichloropropane	Grab	SW-846 8260B	Cool to 6°C, neutralize Cl <sub>2</sub>	14 days
1,3-Dichloropropane	Grab	SW-846 8260B	Cool to 6°C, neutralize Cl <sub>2</sub>	14 days
1,1-Dichloropropylene	Grab	SW-846 8260B	Cool to 6°C, neutralize Cl <sub>2</sub>	14 days
<i>cis</i> -1,3-Dichloropropylene	Grab	SW-846 8260B	Cool to 6°C, neutralize Cl <sub>2</sub>	14 days
<i>Trans</i> -1,3-Dichloropropylene	Grab	SW-846 8260B	Cool to 6°C, neutralize Cl <sub>2</sub>	14 days
2,3-Dichloropropylene	Grab	SW-846 8260B	Cool to 6°C, neutralize Cl <sub>2</sub>	14 days
Ethylbenzene	Grab	SW-846 8260B	Cool to 6°C, neutralize Cl <sub>2</sub> , HCl to pH < 2	14 days
Methyl bromide (bromomethane)	Grab	SW-846 8260B	Cool to 6°C, neutralize Cl <sub>2</sub>	14 days
Methylene chloride (dichloromethane)	Grab	SW-846 8260B	Cool to 6°C, neutralize Cl <sub>2</sub>	14 days
1,1,2,2-Tetrachloroethane	Grab	SW-846 8260B	Cool to 6°C, neutralize Cl <sub>2</sub>	14 days
Tetrachloroethylene	Grab	SW-846 8260B	Cool to 6°C, neutralize Cl <sub>2</sub>	14 days
Toluene	Grab	SW-846 8260B	Cool to 6°C, neutralize Cl <sub>2</sub> , HCl to pH < 2	14 days
1,1,1-Trichloroethane	Grab	SW-846 8260B	Cool to 6°C, neutralize Cl <sub>2</sub>	14 days
1,1,2-Trichloroethane	Grab	SW-846 8260B	Cool to 6°C, neutralize Cl <sub>2</sub>	14 days
Trichloroethylene	Grab	SW-846 8260B	Cool to 6°C, neutralize Cl <sub>2</sub>	14 days
Vinyl Chloride	Grab	SW-846 8260B	Cool to 6°C, neutralize Cl <sub>2</sub>	14 days
<b>ACID EXTRACTABLE COMPOUNDS (Phenols)</b>				
2-Chlorophenol	24-hr. comp.	SW-846 8270C	Cool to 6°C, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
3-Chlorophenol	24-hr. comp.	SW-846 8270C	Cool to 6°C, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
4-Chlorophenol	24-hr. comp.	SW-846 8270C	Cool to 6°C, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
3-Methyl-6-chlorophenol	24-hr. comp.	SW-846 8270C	Cool to 6°C, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
2,3-Dichlorophenol	24-hr. comp.	SW-846 8270C	Cool to 6°C, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
2,4-Dichlorophenol	24-hr. comp.	SW-846 8270C	Cool to 6°C, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
2,5-Dichlorophenol	24-hr. comp.	SW-846 8270C	Cool to 6°C, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>

Parameter	Sample Type <sup>a</sup>	Recommended Analytical Test Methods <sup>b</sup>	Preservation <sup>c</sup>	Maximum Holding Time <sup>c</sup>
2,6-Dichlorophenol	24-hr. comp.	SW-846 8270C	Cool to 6°C, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
3,4-Dichlorophenol	24-hr. comp.	SW-846 8270C	Cool to 6°C, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
2,4-Dimethylphenol	24-hr. comp.	SW-846 8270C	Cool to 6°C, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
2,4-Dinitrophenol	24-hr. comp.	SW-846 8270C	Cool to 6°C, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
2,5-Dinitrophenol	24-hr. comp.	SW-846 8270C	Cool to 6°C, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
2-Methyl-4-chlorophenol	24-hr. comp.	SW-846 8270C	Cool to 6°C, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
3-Methyl-4-chlorophenol ( <i>para</i> -chloro- <i>meta</i> -cresol)	24-hr. comp.	SW-846 8270C	Cool to 6°C, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
2-Methyl-4,6-dinitrophenol (4,6-dinitro- <i>ortho</i> -cresol)	24-hr. comp.	SW-846 8270C	Cool to 6°C, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
2-Nitrophenol	24-hr. comp.	SW-846 8270C	Cool to 6°C, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
4-Nitrophenol	24-hr. comp.	SW-846 8270C	Cool to 6°C, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
Pentachlorophenol	24-hr. comp.	SW-846 8270C	Cool to 6°C, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
Phenol	24-hr. comp.	SW-846 8270C	Cool to 6°C, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
2,3,4,6-Tetrachlorophenol	24-hr. comp.	SW-846 8270C	Cool to 6°C, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
2,4,5-Trichlorophenol	24-hr. comp.	SW-846 8270C	Cool to 6°C, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
2,4,6-Trichlorophenol	24-hr. comp.	SW-846 8270C	Cool to 6°C, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
<b>BASE/NEUTRAL COMPOUNDS</b>				
Acenaphthene	24-hr. comp.	SW-846 8270C or 8310	Cool to 6°C, Store in the dark, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
Acenaphthylene	24-hr. comp.	SW-846 8270C or 8310	Cool to 6°C, Store in the dark, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
Benzidine	24-hr. comp.	SW-846 8270C	Cool to 6°C, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
Bis(2-chloroethoxy) methane	24-hr. comp.	SW-846 8270C	Cool to 6°C, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
Bis(2-chloroethyl) ether	24-hr. comp.	SW-846 8270C	Cool to 6°C, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
Bis(2-chloroisopropyl) ether	24-hr. comp.	SW-846 8270C	Cool to 6°C, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
Bis(2-ethylhexyl) phthalate	24-hr. comp.	SW-846 8270C	Cool to 6°C	7 days <sup>f</sup>
4-Bromophenyl-phenyl ether	24-hr. comp.	SW-846 8270C	Cool to 6°C, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
Butyl benzyl phthalate	24-hr. comp.	SW-846 8270C	Cool to 6°C	7 days <sup>f</sup>
2-Chloronaphthalene	24-hr. comp.	SW-846 8270C	Cool to 6°C	7 days <sup>f</sup>
4-Chlorophenyl-phenyl ether	24-hr. comp.	SW-846 8270C	Cool to 6°C, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
3,3'-Dichlorobenzidine	24-hr. comp.	SW-846 8270C	Cool to 6°C, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
Diethyl phthalate	24-hr. comp.	SW-846 8270C	Cool to 6°C	7 days <sup>f</sup>
Dimethyl phthalate	24-hr. comp.	SW-846 8270C	Cool to 6°C	7 days <sup>f</sup>
Di- <i>n</i> -butyl phthalate	24-hr. comp.	SW-846 8270C	Cool to 6°C	7 days <sup>f</sup>
2,4-Dinitrotoluene	24-hr. comp.	SW-846 8270C	Cool to 6°C, Store in the dark, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
2,6-Dinitrotoluene	24-hr. comp.	SW-846 8270C	Cool to 6°C, Store in the dark, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
Di- <i>n</i> -octyl phthalate	24-hr. comp.	SW-846 8270C	Cool to 6°C	7 days <sup>f</sup>
1,2-Diphenylhydrazine	24-hr. comp.	SW-846 8270C	Cool to 6°C, Store in the dark, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
Hexachloroethane	24-hr. comp.	SW-846 8270C	Cool to 6°C	7 days <sup>f</sup>
Isophorone	24-hr. comp.	SW-846 8270C	Cool to 6°C, Store in the dark, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
N-Nitrosodi- <i>n</i> -butylamine	24-hr. comp.	SW-846 8270C	Cool to 6°C, Store in the dark, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
N-Nitrosodiethylamine	24-hr. comp.	SW-846 8270C	Cool to 6°C, Store in the dark, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
N-Nitrosodimethylamine	24-hr. comp.	SW-846 8270C	Cool to 6°C, Store in the dark, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>

Parameter	Sample Type <sup>a</sup>	Recommended Analytical Test Methods <sup>b</sup>	Preservation <sup>c</sup>	Maximum Holding Time <sup>c</sup>
N-Nitrosodiphenylamine	24-hr. comp.	SW-846 8270C	Cool to 6°C, Store in the dark, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
N-Nitrosodi- <i>n</i> -propylamine	24-hr. comp.	SW-846 8270C	Cool to 6°C, Store in the dark, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
N-Nitrosopyrrolidine	24-hr. comp.	SW-846 8270C	Cool to 6°C, Store in the dark, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
Naphthalene	24-hr. comp.	SW-846 8270C	Cool to 6°C, Store in the dark, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
Nitrobenzene	24-hr. comp.	SW-846 8270C	Cool to 6°C, Store in the dark, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
1,2,4-Trichlorobenzene	24-hr. comp.	SW-846 8270C	Cool to 6°C	7 days <sup>f</sup>
<u>Chlorinated Hydrocarbons Requiring Specialized Testing</u>				
Hexachlorobenzene	24-hr. comp.	SW-846 8121 (GC)	Cool to 6°C	7 days <sup>f</sup>
Hexachlorobutadiene	24-hr. comp.	SW-846 8121 (GC)	Cool to 6°C	7 days <sup>f</sup>
Hexachlorocyclopentadiene	24-hr. comp.	SW-846 8121 (GC)	Cool to 6°C	7 days <sup>f</sup>
Pentachlorobenzene	24-hr. comp.	SW-846 8121 (GC)	Cool to 6°C	7 days
1,2,4,5-Tetrachlorobenzene	24-hr. comp.	SW-846 8121 (GC)	Cool to 6°C	7 days <sup>f</sup>
<u>Polynuclear Aromatic Hydrocarbons Requiring Specialized Testing</u>				
Anthracene	24-hr. comp.	SW-846 8310 (HPLC)	Cool to 6°C, Store in the dark, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
Benzo( <i>a</i> )anthracene	24-hr. comp.	SW-846 8310 (HPLC)	Cool to 6°C, Store in the dark, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
Benzo( <i>a</i> )pyrene	24-hr. comp.	SW-846 8310 (HPLC)	Cool to 6°C, Store in the dark, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
Benzo( <i>b</i> )fluoranthene	24-hr. comp.	SW-846 8310 (HPLC)	Cool to 6°C, Store in the dark, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
Benzo( <i>ghi</i> )perylene	24-hr. comp.	SW-846 8310 (HPLC)	Cool to 6°C, Store in the dark, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
Benzo( <i>k</i> )fluoranthene	24-hr. comp.	SW-846 8310 (HPLC)	Cool to 6°C, Store in the dark, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
Chrysene	24-hr. comp.	SW-846 8310 (HPLC)	Cool to 6°C, Store in the dark, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
Dibenzo( <i>a,h</i> )anthracene	24-hr. comp.	SW-846 8310 (HPLC)	Cool to 6°C, Store in the dark, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
Fluoranthene	24-hr. comp.	SW-846 8310 (HPLC)	Cool to 6°C, Store in the dark, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
Fluorene	24-hr. comp.	SW-846 8310 (HPLC)	Cool to 6°C, Store in the dark, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
Indeno( <i>1,2,3-cd</i> )pyrene	24-hr. comp.	SW-846 8310 (HPLC)	Cool to 6°C, Store in the dark, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
Phenanthrene	24-hr. comp.	SW-846 8310 (HPLC)	Cool to 6°C, Store in the dark, neutralize Cl <sub>2</sub>	7 days
Pyrene	24-hr. comp.	SW-846 8310 (HPLC)	Cool to 6°C, Store in the dark, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>
<u>PESTICIDES</u>				
Aldrin	24-hr. comp.	SW-846 8081A	Cool to 6°C, pH 5-9	7 days <sup>f</sup>
<i>Alpha</i> -BHC ( - hexachlorocyclohexane)	24-hr. comp.	SW-846 8081A	Cool to 6°C, pH 5-9	7 days <sup>f</sup>
<i>beta</i> -BHC ( - hexachlorocyclohexane)	24-hr. comp.	SW-846 8081A	Cool to 6°C, pH 5-9	7 days <sup>f</sup>
<i>Delta</i> -BHC ( - hexachlorocyclohexane)	24-hr. comp.	SW-846 8081A	Cool to 6°C, pH 5-9	7 days <sup>f</sup>
<i>Gamma</i> -BHC ( - hexachlorocyclohexane, Lindane)	24-hr. comp.	SW-846 8081A	Cool to 6°C, pH 5-9	7 days <sup>f</sup>
Chlordane	24-hr. comp.	SW-846 8081A	Cool to 6°C, pH 5-9	7 days <sup>f</sup>
4,4'-DDT	24-hr. comp.	SW-846 8081A	Cool to 6°C, pH 5-9	7 days <sup>f</sup>
4,4'-DDE	24-hr. comp.	SW-846 8081A	Cool to 6°C, pH 5-9	7 days <sup>f</sup>
4,4'-DDD	24-hr. comp.	SW-846 8081A	Cool to 6°C, pH 5-9	7 days <sup>f</sup>
Dieldrin	24-hr. comp.	SW-846 8081A	Cool to 6°C, pH 5-9	7 days <sup>f</sup>
<i>Alpha</i> -Endosulfan	24-hr. comp.	SW-846 8081A	Cool to 6°C, pH 5-9	7 days <sup>f</sup>
<i>beta</i> -Endosulfan	24-hr. comp.	SW-846 8081A	Cool to 6°C, pH 5-9	7 days <sup>f</sup>
Endosulfan sulfate	24-hr. comp.	SW-846 8081A	Cool to 6°C, pH 5-9	7 days <sup>f</sup>
Endrin	24-hr. comp.	SW-846 8081A	Cool to 6°C, pH 5-9	7 days <sup>f</sup>

Parameter	Sample Type <sup>a</sup>	Recommended Analytical Test Methods <sup>b</sup>	Preservation <sup>c</sup>	Maximum Holding Time <sup>c</sup>
Endrin aldehyde	24-hr. comp.	SW-846 8081A	Cool to 6°C, pH 5-9	7 days <sup>f</sup>
Heptachlor	24-hr. comp.	SW-846 8081A	Cool to 6°C, pH 5-9	7 days <sup>f</sup>
Heptachlor epoxide	24-hr. comp.	SW-846 8081A	Cool to 6°C, pH 5-9	7 days <sup>f</sup>
Toxaphene	24-hr. comp.	SW-846 8081A	Cool to 6°C, pH 5-9	7 days <sup>f</sup>
Chlorpyrifos	24-hr. comp.	SW-846 8141A	Cool to 6°C, pH 5-9	7 days <sup>f</sup>
Parathion, (ethyl)	24-hr. comp.	SW-846 8141A	Cool to 6°C, pH 5-9	7 days <sup>f</sup>
Parathion, (methyl)	24-hr. comp.	SW-846 8141A	Cool to 6°C, pH 5-9	7 days <sup>f</sup>
PCB-1016	24-hr. comp.	SW-846 8082	Cool to 6°C	7 days <sup>f</sup>
PCB-1221	24-hr. comp.	SW-846 8082	Cool to 6°C	7 days <sup>f</sup>
PCB-1232	24-hr. comp.	SW-846 8082	Cool to 6°C	7 days <sup>f</sup>
PCB-1242	24-hr. comp.	SW-846 8082	Cool to 6°C	7 days <sup>f</sup>
PCB-1248	24-hr. comp.	SW-846 8082	Cool to 6°C	7 days <sup>f</sup>
PCB-1254	24-hr. comp.	SW-846 8082	Cool to 6°C	7 days <sup>f</sup>
PCB-1260	24-hr. comp.	SW-846 8082	Cool to 6°C	7 days <sup>f</sup>
<b>DIOXINS AND FURANS</b>				
All dioxin and furan congeners including 2,3,7,8-Tetrachlorodibenzo- <i>p</i> -dioxin (TCDD) and 2,3,7,8-Tetrachloro-dibenzofuran (TCDF)	24-hr. comp.	EPA 1613 B	Cool to 6°C, neutralize Cl <sub>2</sub>	7 days <sup>f</sup>

**Notes on Table 1:**

<sup>a</sup> Grab sample means a single sample taken at one moment of time or a combination of several smaller samples of equal volume taken in less than a 2 minute period. Where the term is used in connection with monitoring temperature or pH it means a single measurement.

24 hour composite sample means a combination of individual samples taken at intervals of not more than one hour such that the volumes of each of the individual samples and of the combination are proportional to the volumes of flow during each interval and during the 24 hour period respectively.

<sup>b</sup> Each method recommendation assumes a commonly achievable sensitivity and the strictest regulatory level. If the recommended method, or one which is comparably sensitive, is used with reasonable care, a "not detected" result is generally considered sufficient demonstration of a pollutant's absence, even if the detection limit is above the regulatory level. Any other approved method may be used for analyses if sample results are comfortably in the range of quantitation of the method or if the method's detection limit is below the regulatory level. However, if a result from a less sensitive method is reported as "not detected" and the level of detection is above the regulatory level, the DNR may require the permittee to repeat the analysis using the more sensitive method. If there is no recommended method listed, any method approved in ch. NR 219, Wis. Adm. Code, may be used.

If preliminary limits are included with the permit application, the permittee, in conjunction with their lab, may use these limits to help decide if methods other than those recommended may be used (and to decide if additional sample results should be collected). If preliminary limits have not been provided for any substance, please use the recommended (or comparably sensitive) method. If a recommended method is not listed, any approved method in ch. NR 219, Wis. Adm. Code, may be used.

For many of the most toxic of the metals, we have listed inductively coupled plasma atomic emission spectrometry (ICP) as well as graphite furnace atomic absorption spectrometry (GFAA) because many labs report ICP sensitivities that rival those of GFAA. Labs should use preliminary limits to help decide which method is most appropriate for the required sensitivity.

We have avoided recommending the older EPA metals methods from Chemical Analysis of Water and Wastes, first published in 1979 with several subsequent versions. We anticipate these methods will be de-commissioned. Instead, we have recommended the methods from Methods for the Determination of Metals in Environmental Samples, 1991 (first version). Note that, the ICP method in this version, specifies use of CAL solutions with concentrations toward the lower end of the linear range.

For metals sample preparation (digestion), the older methods distinguished between "total" and "total recoverable" metals, while the newer versions drop the total designation. While the older definitions and methods are still listed in NR 219, we wish to move to the convention of only using the total recoverable designation and urge use of the total recoverable digestion detailed in method 200.2 from Methods for the Determination of Metals in Environmental Samples.

<sup>c</sup> See NR 219, Table F and associated footnotes for further details on sample preservation and holding times.

<sup>d</sup> Standard Methods 3113B may be substituted for EPA's AA furnace method.

<sup>e</sup> NR 106.145 requires that permittees perform field blanks and other data quality steps for mercury. We strongly recommend that any permittee that uses surface water as its water supply source performs side-by-side intake or background surface water monitoring whenever performing effluent testing for mercury.

While many laboratories are capable of testing for mercury, at this time, the DNR maintains a relatively short list of commercial laboratories that are certified to perform the low-level mercury testing needed to quantify levels in effluents. Method 1631 is performance-based (permittees and labs may use alternative procedures so long as those procedures are demonstrated to yield reliable results at the levels of interest). The DNR recognizes the capabilities of these labs to perform this low-level work because they have documented use of appropriate quality control steps for the level of sensitivity stated. The DNR has asked these labs to prepare special sampling instructions aimed at minimizing sample contamination for this low-level work. For a list of these labs see the spreadsheet for all certified labs at <https://dnr.wisconsin.gov/topic/labCert/certified-lab-lists>.

<sup>f</sup> The holding time is 7 days prior to extraction, 40 days after extraction.

## MONITORING PROCEDURES GUIDANCE

*A generalized procedure for obtaining chemical specific monitoring data follows. Use it to tailor your own procedure.*

- A. Review specific requirements of permit or application request.
- B. Hire a certified laboratory. Supply your laboratory with appropriate parts of your permit application, including the Effluent Monitoring Form, preliminary limits, if included in the application package, and associated instructions.
- C. Decide when to sample.
  1. Industrial discharges should be at normal to maximum levels, usually this means mid-week but avoid always sampling on the same day(s) of the week.
  2. The treatment plant should be operating normally.
  3. If unusual circumstances occur just before or during sampling, stop and start over after the situation has stabilized.
  4. Consider sample holding times and lab workload when scheduling sampling events. Consult your laboratory prior to initiating sampling to make sure that the dates you select do not conflict with the laboratory's scheduling.
  5. Consider sample transportation and laboratory arrival times.
- D. Determine proper sample location.
  1. The proper location is the plant effluent after all unit processes.
  2. Chlorination/dechlorination processes may affect samples for various substances. Keep this in mind if disinfection processes are in operation when sampling is performed. For example, if you need to sample for cyanide amenable to chlorination and you chlorinate seasonally, collect the grab sample prior to chlorination. Also, as indicated in Table 1, the presence of chlorine also affects sample preservation requirements for certain substances.
  3. The effluent stream should be well mixed at the point of sampling.
- E. Prepare for sampling.
  1. Obtain sample containers and proper preservation chemicals. (These items should be obtained from your laboratory.)
  2. Prepare equipment; clean sampler(s). If using an automatic sampler, adhere to sampler cleaning requirements given below. For "flow through" samplers, careful cleaning and acclimation to the wastewater may be appropriate.
  3. Coordinate routine testing to help serve as a measure of plant performance.
  4. Contact your laboratory again to make sure they are ready for your samples.
- F. Collect samples.
  1. Grab samples -- Collect according to precautions and preserve. (If doing composite sampling for other parameters, the grab samples should be taken during the composite sampling.)
  2. Composite sampling: NR 218 requires that composite samples be **flow-proportional**

G. Ship samples to a certified laboratory (most laboratory chain of custody forms should contain this information).

1. Ship with ice or refrigeration to maintain 4°C. If ice packs are used or if ice is not in direct contact with the sample containers, include a 250 ml. or larger temperature blank with the samples.
2. Make sure all sample containers are clearly marked with contents, including preservatives.
3. Enclose information regarding the exact date(s) and time(s) of sampling.
4. Remember sample holding time limits.

H. When data comes back from the laboratory, report data to the DNR.

1. Check data for errors. Does it look reasonable?
2. Assemble all information, including remarks on sampling and analysis.
3. Fill in all blanks on the Effluent Data Reporting Form(s)

### **Cleaning Automatic Samplers**

Special provisions should be considered if using automatic samplers to collect composite samples for priority pollutant analysis. The following cleaning procedures have been suggested for suction/tubing type samplers. Alternately, consider replacing tubing and cleaning before use.

A. Pump Tubing and Line Hose Cleaning

1. Rinse by pumping hot water through the tubing for at least 2 minutes.
2. Acid rinse the tubing by pumping 20 percent hydrochloric acid or 20 percent nitric acid through the tubing for at least 2 minutes. The acid rinse should be recirculated. The acid rinse may be reused up to 4 times.
3. Repeat Step 1.
4. Rinse by pumping distilled water through the hose for at least 1 minute. After 1 minute, stop the pump and allow water to stand in the hose for at least 1 minute. After 1 minute, continue pumping rinse water for 1 additional minute. The distilled rinse should not be recirculated.
5. For priority pollutants (organics and trace metals), the hose should be flushed with pesticide grade or redistilled acetone, then rinsed again with distilled water. (Note: hose must be Teflon for organics).
6. Beware of possible zinc contamination with silicon pump tubing.

B. Sampler Cleaning - General Washing

1. Flush assembled sampler (manual or automatic) with tap water.
2. Disassemble, submerge and/or rigorously scrub all parts, which contact the sample with hot tap water and a non-phosphorus detergent.
3. Rinse and drain all items three times with tap water, and then follow with three distilled water rinses.

**NOTE:** Sampler bottles can be glass or polyethylene for metals, but only glass for organics. Use glass sampler bottles if sampling for metals and organics simultaneously.