Using Clean Water Act Discharge Permits to Protect Drinking Water Sources

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This Comment Guide was developed by authors, contributors, and reviewers who volunteered their time. Their collective knowledge and experience working with regulators and partners across the country has been an invaluable resource.

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Comment Guide Disclaimer and Purpose

DISCLAIMER:

This guide is not a regulation or a regulatory document. It does not carry any legal force.
Nor is it endorsed by the U.S. Environmental Protection Agency (EPA) or any other permitting agency.

PURPOSE:

This guide is designed to provide fundamental information for Public Water Systems (PWSs) and stakeholders to understand the content of Clean Water Act (CWA) National Pollutant Discharge Elimination System (NPDES) permits. It includes tips, tools, examples, and a template for providing meaningful comments on different types of these permits. The guide is simplified and uses more general terms than an official government regulatory or guidance document, so that it is more understandable for PWSs and a public audience that is unfamiliar with CWA regulations. It is expected that PWSs and stakeholders may only use parts of the guide where it is relevant to their purpose. It is not expected that all portions of the guide will be relevant to every PWS.

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Table of Contents

1. Introduction

A. What is the Goal of Source Water Protection?

The goal of source water protection is to prevent contamination and water quality degradation in rivers, lakes, and groundwater aquifers that currently serve, or may serve in the future, as sources of drinking water. Protecting sources of drinking water is an efficient way to reduce risks to public health, instill customer confidence, and help control water treatment costs. Preventing pollution from entering drinking water sources is more effective and much less expensive than removing them once the water is contaminated. Protecting drinking water sources — and thus preventing contamination — is essential for sustaining safe drinking water supplies, protecting public health and the economy, reducing energy and chemical inputs for water treatment, and providing many other environmental benefits.

B. How To Use This Comment Guide

The CWA has many tools that can be used to address sources of pollution that impact drinking water sources. The 2014 guide, Opportunities To Protect Drinking Water Sources And Advance Watershed Goals Through The Clean Water Act, developed by the Association of State Drinking Water Administrators, the Association of Clean Water Administrators, the Ground Water Protection Council, and Environmental Protection Agency (EPA) provides a good overview of these tools.

This current guide focuses on how Public Water Systems (PWS) can use Clean Water Act (CWA) National Pollutant Discharge Elimination System (NPDES) pollution permits, which control surface water pollution by regulating point sources that discharge into surface waters, to improve and protect the quality of drinking water sources. Specifically, this guide aims to help drinking water utilities in:

- Understanding which upstream industrial, wastewater, stormwater, and nonpoint-source pollutant discharges are impacting or have the potential to impact the quality of their drinking water sources (raw water) and associated treatment processes; and
- Learning how to provide comments, data, and information on the CWA NPDES permits for these sites and facilities to affect changes in monitoring, pollution discharge limits, and notifications to the drinking water utility.

2. The Clean Water Act and Permitting

The federal CWA was passed in 1972 with the objective "to restore and maintain the chemical, physical and biological integrity of the nation's waters." This law safeguards rivers, streams, lakes, and other surface water bodies by limiting the amount of pollution that flows into them. Key to the CWA is its requirement, with some specific exceptions, that all discharges of pollutants from a point source to a federal water need a permit.

EPA and states share responsibility to meet the requirements of the CWA. For permits, EPA develops many of the foundational requirements, like Effluent Guidelines, which are technology-based limits established for different industrial sectors, and national water quality criteria for pollutants, which establish how much of a particular pollutant can be present in surface water before it is likely to harm human health or aquatic life. States use EPA's water quality criteria to establish, review, and revise their own water quality standards for different pollutants to protect specific uses of water, like aquatic life, agriculture, and drinking water systems.

Most states issue their own NPDES water pollution permits, though as of February 2024, EPA issues NPDES permits for Massachusetts, New Hampshire, New Mexico, the District of Columbia, federal territories, and some states' federal facilities.[1] States are delegated the federal authority to issue NPDES permits through state-specific memorandums of agreement. In all states, EPA can object to state permits and ask the state to make changes.

NPDES permits are often described as "where the rubber meets the road" in the CWA. They are enforceable legal documents that authorize the release of restricted amounts and concentrations of pollutants to federal waters. All NPDES permits contain pollutant limits, monitoring requirements, reporting, recordkeeping, and operational rules. State permits must comply with federal rules.[2] Violations of permit requirements trigger civil and even criminal penalties against the permittees.

Legally, permits must be written to ensure that water quality standards will be achieved, including water quality standards established to protect water used for drinking water sources.[3] More specifically, permits must control all pollutants or pollutant parameters which "may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard."[4] The permitting authority (either the state or EPA) may deny a permit if there is no way for a facility to discharge in a way that will achieve water quality standards. When EPA is the permitting authority, states can add conditions to the permit or deny it under CWA Section 401 to ensure that the permitted activities will be conducted in a manner that will comply with applicable State water quality standards.[5]

3. Permit Notification and Comment Submission

A. Finding out about the Draft Permit

As a PWS, it is important for you to request that your CWA program permitting agency (which is usually your state) notify you about any draft NPDES permits for facilities located upstream of your drinking water intake or within your source water protection area. Your permitting agency can be found here. You can also add yourself to the appropriate agency's permit notification list.

In most states and with EPA permits, you can review the draft permit online. Here is a list of state public notice sites, which often have links to the draft permits. If they do not, you can email the state permitting agency to request the draft permit. Make sure to request the current permit (if available), the current fact sheet (if available), the new draft permit, the new draft fact sheet, and the permit application.

You may also want to track, and potentially comment on, major permit modifications. These can include plant expansions or big changes in treatment processes. Major permit modifications are also released as drafts, are generally available on EPA and state public notice sites, and have a comment period.

B. Comment Logistics

Submitting your comments by the deadline is particularly important; your state may reject your comments or refuse to consider them if they come in late. Most states provide a 30-day comment period for draft permits. If you need more time, email the permit writer or the agency with an explanation as to why you need more time. In most states, if you can offer a good reason, they will extend the comment period by up to another 30 days, but a comment period extension should never be assumed to be granted until it is provided in writing.

Some states have specific formats they would like you to use for your comments. For instance, Colorado requests you use a specific template and submit your comments as a Word document, rather than in "portable document format" (PDF). Even if a permitting agency does not provide any specifications, in cases when your comments are lengthy, you may want to submit them as a Word document as well as in PDF as a courtesy to the permit writer.

When writing your comments, it is recommended you do the following to minimize any misunderstandings and to make your comments as effective as possible:

- Keep your introduction (which does not require a response) clearly separate from your comments. Describe your PWS with at least the following information: (i) name of PWS; (ii) PWS System ID Number; (iii) location of PWS (town/city and state); (iv) how many people it serves; (v) approximate location of drinking water intake(s); and (vi) contact information for PWS. (More information about what to include about your system is available in the sample template letter below at Appendix A). Number each comment and ask for a separate response to each comment. Consider using a chart.
- Include a citation to pinpoint where the language or requirement you are talking about is located in the draft permit and draft fact sheet.
- Try to be as specific as possible. For instance, instead of saying you would like stricter effluent limits for a pollutant, tell the agency exactly what limits you would establish at specific outfalls (points at which the facility discharges pollutants to surface waters) and why you believe that those limits are warranted. You can also describe the anticipated impact that the authorized discharge is expected to have on your PWS.
- If you have specific technical expertise on an issue, identify it in your comments. It is important that the permitting agency understand how qualified you are so that they can give your comments sufficient weight.
- When requesting additional permit requirements, write out the proposed language and rationale for inclusion in the permit if you can.

4. Deciding What Permits to Focus On

The decision as to which NPDES permits are of greatest concern to your source waters is likely to depend on a handful of factors. The section below describes how to determine: what surface waters affect your source water, the location of discharging facilities, the condition of those waterbodies, the pollutants you are concerned about, and what facilities discharge those pollutants.

A. Determining the Location of Facilities that Will Affect Your Source Water

To begin, you will want to determine what waters affect your source water, and what facilities are discharging pollution there.

An existing source water assessment and protection plan (if available) is a great starting point to establish your area of concern and which facilities are likely to be located within that area of concern. If you do not have an updated source water assessment, good rules of thumb include focusing on facilities that discharge upstream of your PWS intake(s) if you use a freshwater river or small lake for your source water and looking more broadly at facilities in the watershed as a whole if you use a tidal river, a bay, or a large lake. And while pollutants regulated by NPDES permits are more likely to impact your source water if your system depends upon surface waters, they could also affect groundwater systems under the direct influence of surface waters (GWUDI) and, in drier or geologically unusual areas, systems depending on recharging groundwater via dry streambeds.

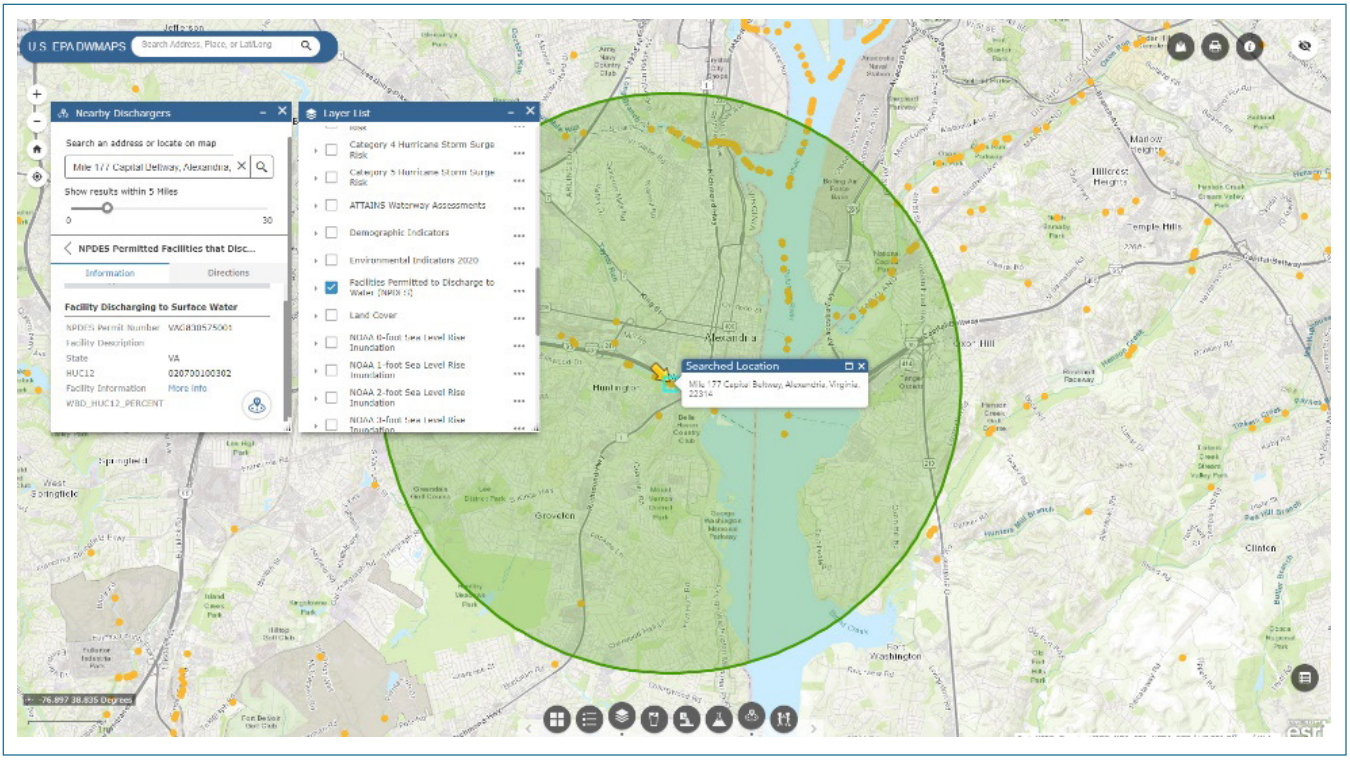
How far upstream or how large an area you include in your area of concern depends in part on the types of pollutants you are concerned about and the existing conditions of your source water. Permitted discharges far upstream can still affect your source water quality. Think about looking at permits up to 50 miles upstream of your intake(s), especially if: your water comes from a small water body; if the pollutants you are concerned about are of high risk even in low concentrations, such as bromide or other halogens; or if your source water already has elevated levels of any pollutants of concern.

Once you know the geographic area of concern, you can locate the facilities that discharge pollutants into those waters. One of the best ways for you to locate existing facilities with NPDES permits is by using Drinking Water Mapping Application to Protect Source Waters (DWMAPS). DWMAPS is an online mapping tool that provides relevant data and information for water utilities and other users to locate potential sources of contamination and polluted waterways in relation to drinking water facilities. You can use the widget buttons at the bottom of the map in DWMAPS to locate and find more information on facilities with NPDES permits and existing instream conditions (e.g., finding existing water quality assessments).

Upstream facilities with NPDES discharge permits that can degrade the source water quality at your drinking water intake can be identified using the following directions in DWMAPS *(Based on May 2024 directions, see next page)*:

- Click on the widget at the bottom of the map (second button from right) for “Nearby Dischargers.”
- Click on the map to set the location or put in the name of the city and state.
- Click on the widget at the bottom of the map (third button from left) for “Layer List.”
- Scroll down to check the box for “Facilities Permitted to Discharge to Water (NPDES).”
- Check the box for “NPDES Permitted Facilities that Discharge to Water.”
- Click the point on the map for the NPDES Facility and it will pop up in the “Nearby Discharges” window. Scroll down and click on “More info” next to “Facility Information.”

You may also want to comment on permits for new facilities. New facilities may apply for permits before the facilities are actually built, so you may want to start tracking these projects early. One good source for tracking future oil and gas, plastics, and fertilizer projects in your watershed is the Oil and Gas Watch database.[6]



Example screenshot of a DWMAPS search for upstream facilities with NPDES discharge permits (Nearby Dischargers).

B. Assessing Existing Instream Conditions (Water Quality Assessments)

Before commenting on a facility's draft permit, you will want to understand the current state of your source water and the waters that affect it. States are required to conduct water quality assessments to determine if the water body is supporting a specific use, such as a drinking water source. If a waterbody is not supporting that use because of too much pollution, it is considered "impaired." These assessments are public and can be found through:

- DWMAPS: To view the waterbody assessment in DWMAPS, click on the widget (third from right) for "Assessed Waterways." Then click on the segment of the waterway to see more information about impairments associated with various pollutants.
- EPA's How's My Waterway: In the DWMAPS "Assessed Waterways" window, scroll down and click on "View Waterbody Report," which will take you to the How's My Waterway website with more information about the assessments and impairments for specific uses as related to that specific waterbody.
- State-specific lists of "303(d)," or impaired waters. Each state compiles these lists and posts them on their own website. EPA also maintains a list of state TMDLs, which are plans to fix impaired waters.

C. Determining Your Pollutants of Concern

Some pollutants are of common concern to all downstream drinking water utilities. For example, contaminants regulated under the Safe Drinking Water Act (SDWA) or contaminants that may be regulated soon. Others may be more specific to your drinking water system. As a starting point, below is a table of common water pollutants that have posed concerns for drinking water systems in the last few years.

Pollutant	May be associated with the following kinds of facilities and activities
Benzene	Petroleum activities — refineries, cleaning and repairing oil or gas tanks/pipelines
Bromide	Steam electric power plants (esp. coal), energy extraction and utilization, flame retardants, agricultural herbicides, municipal waste incinerators, landfill leachate, potash mining, road deicers.
Cadmium	Discharges from metal refineries; stormwater runoff from waste batteries and paints, other industrial facilities.
Manganese	Manufacture of iron and steel alloys, batteries, glass, fireworks, various cleaning supplies, fertilizers, varnish, fungicides, cosmetics, and livestock feeding supplements.
Mercury	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills and croplands; coal and coal-fired power plants.
Nickel	Industry, the use of liquid and solid fuels, municipal and industrial waste.
Nutrients (Nitrogen and Phosphorus)	Runoff from fertilizer use; leaching from septic tanks; wastewater treatment plants (sewage); erosion of natural deposits.
Per and polyfluoroalkyl substances (PFAS) (multiple)	Metal plating, organic chemical manufacturing, landfills, contaminated groundwater, refineries, airports and other places using Class B firefighting foam, large domestic Wastewater Treatment Plants (WWTP).
Pesticides	Pesticide manufactures, agricultural runoff, industrial wastewater.

When reviewing a draft permit, consider what pollutants you are most concerned about and why. You can use the information in your source water assessments and protection plans (if available), along with both raw and finished water quality monitoring data to consider and determine concerns about contaminant levels and treatment processes that may be affected by upstream NPDES permitted facilities.

- Pollutants related to existing problems. Examples: Is your source water already impaired for any drinking water-related pollutants or pollutants that affect your treatment processes, like metals or sediment? Are you already having trouble with upstream algae blooms?
- Pollutants outside of your current treatment. Examples: Does the facility discharge drinking water-related pollutants that are not being removed by your current treatment processes or are your processes already close to their removal capacities? A specific example for many locations would be per- and polyfluoroalkyl substances (PFAS) or anything that increases salinity.
- Pollutants that may increase because of changing weather conditions. Examples: Are you having to adjust your treatment processes because of unusual or extreme weather events such as highly intensive rainstorms or long-term drought that contribute to high or low flows and may lead to upstream accidental spills (e.g., inundation of industrial loading areas) and unintended discharges (e.g., sewage overflow), or lessen flows to dilute pollutants at the intake?
- Disinfectant byproducts. Examples: Does the facility discharge pollutants such as bromide that pose challenges with disinfection byproducts by increasing precursors or requiring additional disinfection?

- Cyanobacterial blooms. Examples: Is the discharging facility a significant source of nutrient-related pollutants, like nitrogen or phosphorus, that can then lead to cyanobacterial blooms and generation of cyanotoxins?
- Pollutants Causing Disposal Problems. Examples: Does the facility discharge pollutants that, though treatable, could lead to your backwash or waste becoming more difficult to dispose of? Disposal of granulated activated carbon (GAC) filters for PFAS treatment is one example.

D. Additional Tools for Determining Pollutants of Concern

To understand the pollutants discharged from a facility that could affect your finished drinking water in more depth, you can develop a spreadsheet (e.g., crosswalk or matrix) that cross-references the drinking water contaminants of concern with federal and state drinking water requirements (e.g., Maximum Contaminant Levels [MCLs] or Health Advisory Levels [HALs]), and numeric or narrative water quality criteria for pollutants within state CWA water quality standards. To make a cross-referenced matrix:

1. Develop an inventory or list of drinking water contaminants and provide the associated federal and state specific MCLs or HALs, as well as numeric or narrative water quality criteria within state standards to show whether the pollutant is covered by existing CWA requirements or guidelines. Here are two examples of existing matrices:

   a. Oregon Drinking Water Prevention Contaminants Matrix

   b. CWA-SDWA Toolkit, Appendix A

2. Inventory and describe available data for each drinking water contaminant (e.g., monitoring and epidemiological data), along with the associated treatment challenges and public health concerns.
3. Locate permitted outfalls (using GIS mapping if possible) in relation to the PWS surface water intake(s).
4. Develop an approach to crosswalk the "pollutants of concern" with drinking water contaminants in an upstream NPDES permittee's discharge.
5. Review the effluent limitations and conditions in the permit for the pollutants of concern in relation to the drinking water standards. Consider options to request that the state modify or add limits or conditions to the NPDES permit to help prevent harmful amounts or concentrations of pollutants of concern from reaching the utility's intake such as:
   - Adding or changing technology-based or water quality-based effluent limits.
   - Requiring additional monitoring to collect the data necessary to quantify and model the fate and transport of the pollutant(s) of concern in the receiving water.
   - Adding language to permits with outfalls (or biosolid/manure or pesticide/herbicide application sites) to provide 24-hour notification (or in the absence of a permit, asking producers and operators to provide 48-hour notification) to the drinking water utility.

E. Finding More Information About the Facilities that Discharge Pollutants You are Most Concerned About

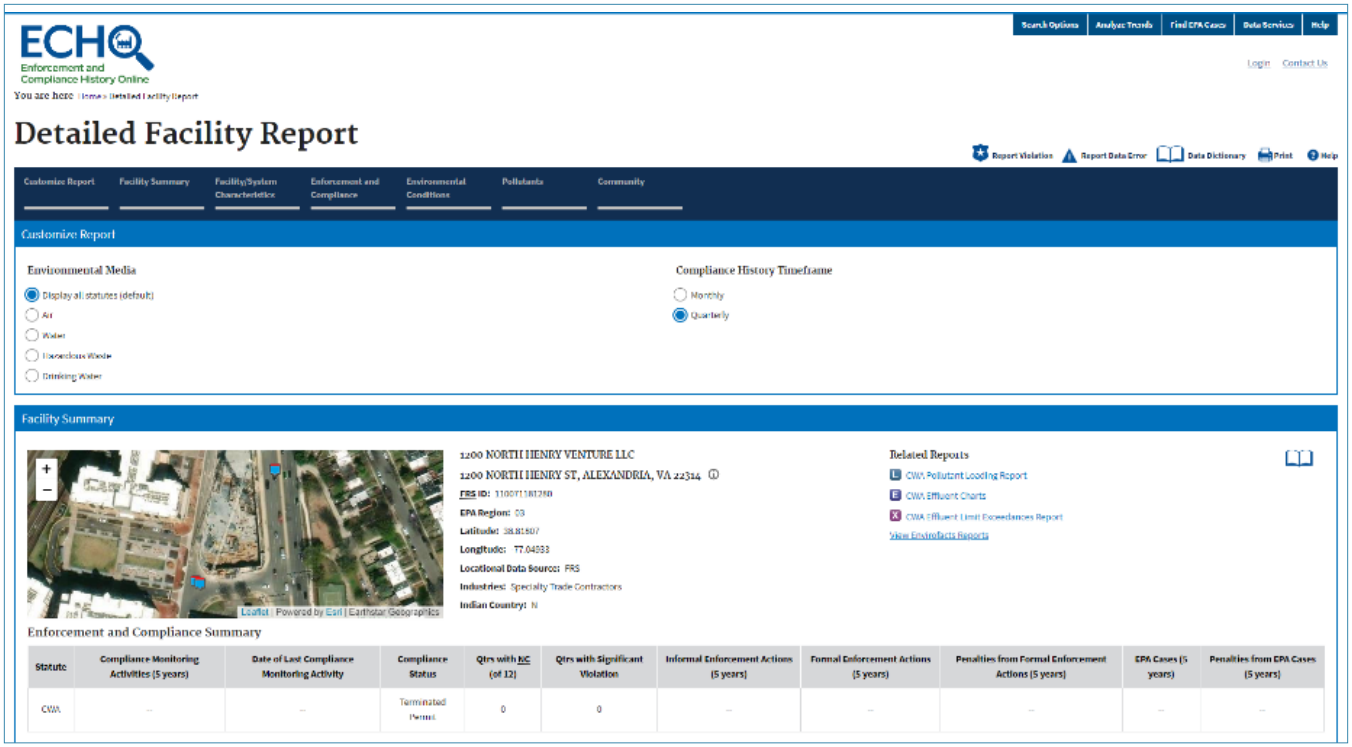
Given your limited resources, you may want to prioritize commenting on draft permits for facilities that discharge the pollutants of greatest concern to you. There are several different EPA tools available to identify

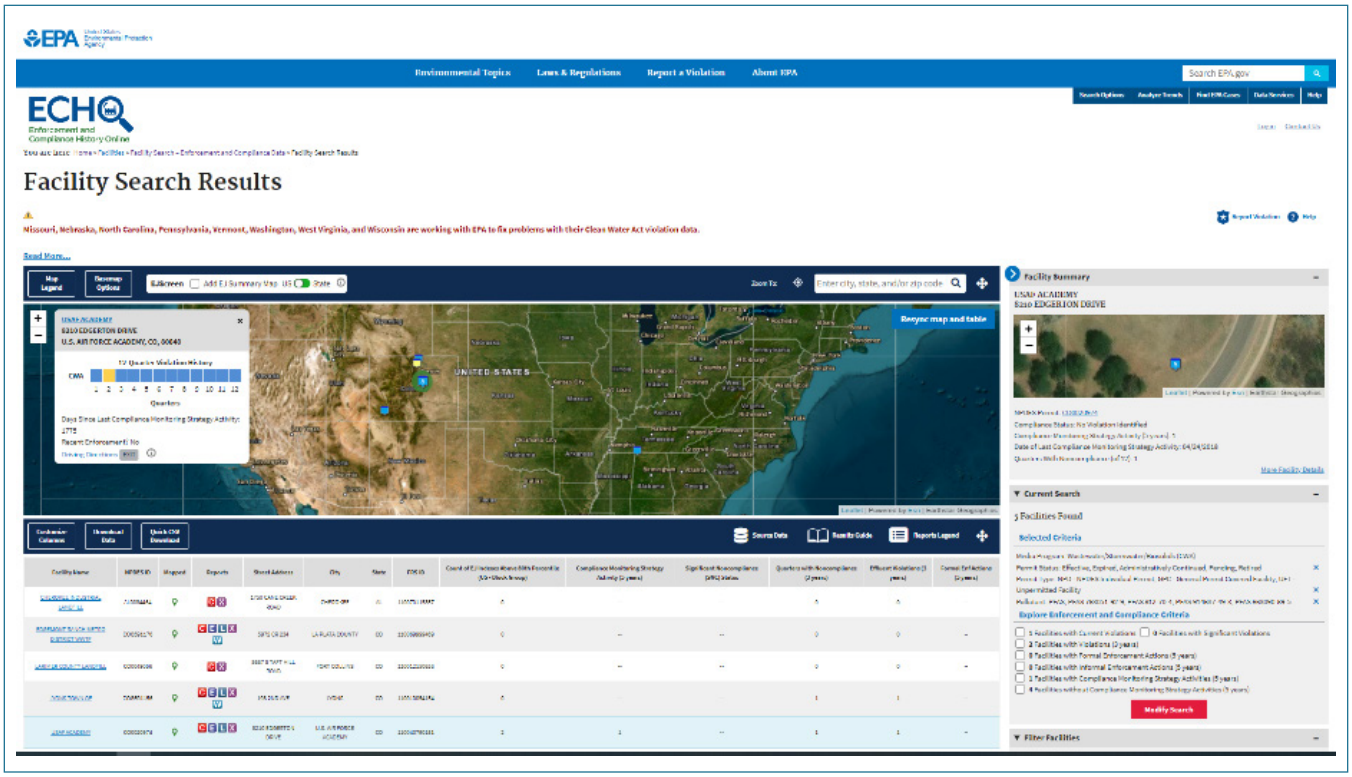
facilities that discharge pollutants you are concerned about. These tools provide integrated data about reporting, testing, and known occurrences of PFAS and other pollutants throughout the country. The following section provides more information about how to use EPA's ECHO Database, EPA's Toxics Release Inventory Data and Tools, and EPA's ECHO PFAS Analytic tools to get reports and extract data by facility, chemical, geographic area, industry (North American Industry Classification System or NAICS code) or reporting years. You may also wish to look for similar resources offered by the state in which your PWS is located, as some states maintain their own databases of information similar to that offered by EPA's ECHO database.

Additional Resource for Bromide: If you are concerned about bromide in your source water, you may want to prioritize commenting on upstream facilities that discharge elevated levels of bromide, even if it is in lower quantity or concentration than other pollutants from an upstream discharging facility. The American Water Works Association's (AWWA) report "Methods to Assess Anthropogenic Bromide Loads from Coal-fired Power Plants and Their Potential Effect on Downstream Drinking Water Utilities" is an additional resource that helps to assess impacts of NPDES permitted discharges.

i. EPA Tools: ECHO

You can filter for specific pollutants in EPA's ECHO Database in a general area to find facilities discharging those pollutants. If you know the name of a facility, you can look up a facility by its permit number in the database and pull up its Detailed Facility Report. The Detailed Facility Report provides all of the current monitoring information and whether a facility is complying with its current permit. It will also provide information about facility violations, characteristics, compliance monitoring, water quality impairments, and assessments for different uses. Note that facilities may not always be required to monitor for all pollutants you are concerned about.



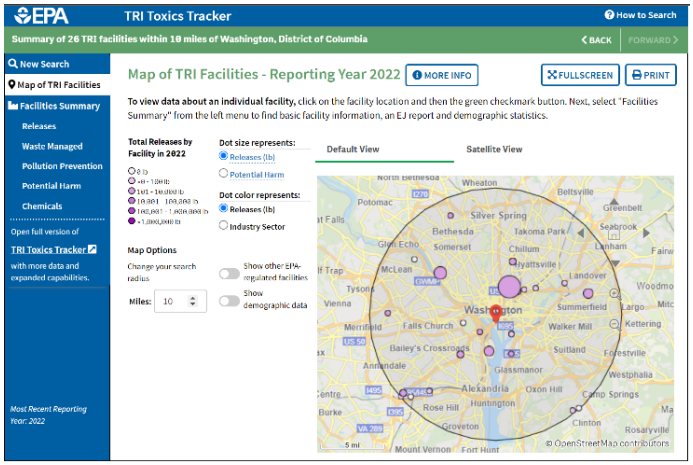


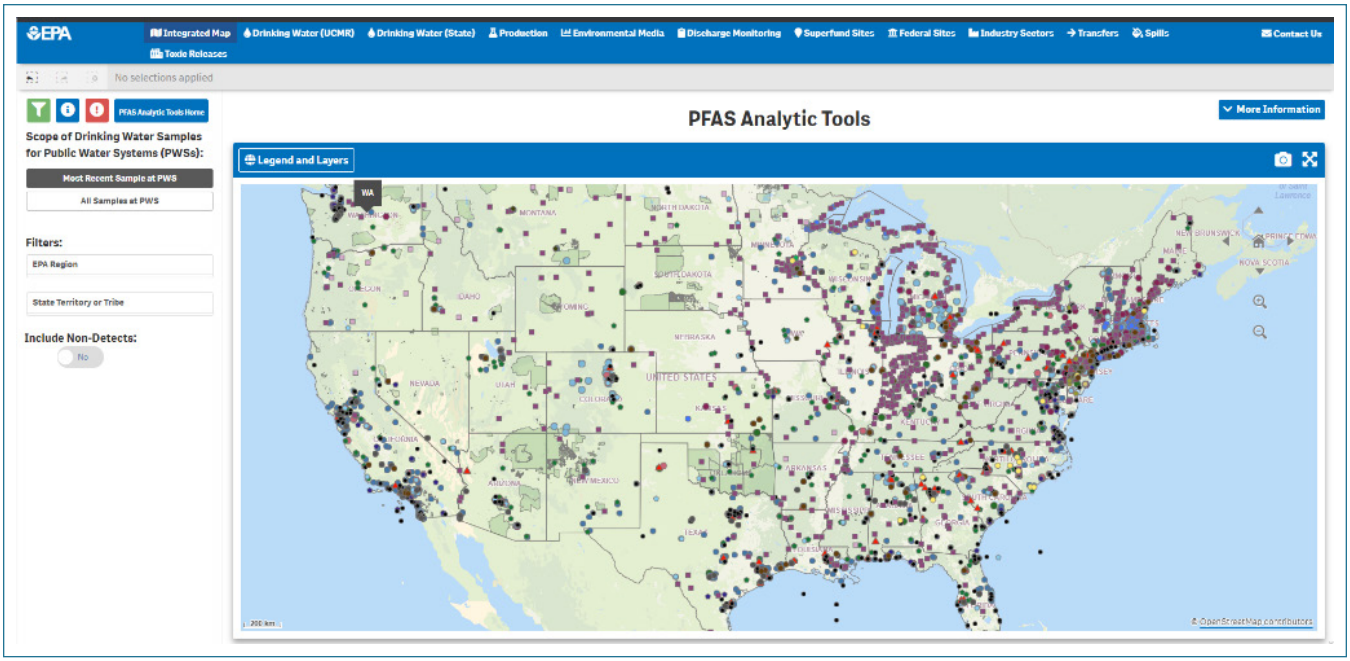
ECHO also has more information about the facility in the system database. In the Facility Summary box at the top of the Detailed Facility Report, there are Related Reports that include:

- CWA Pollutant Loading Report
- CWA Effluent Charts
- CWA Effluent Limit Exceedances Report
- View Envirofacts Reports
- Facility Registry Service (FRS) Facility Detail Report
- ICIS-NPDES Report (Integrated Compliance Information System)

ii. EPA Tools: TRI

EPA's Toxics Release Inventory (TRI) Data and Tools can also be a useful source of information for larger facilities that are subject to TRI reporting requirements. Multiple TRI data and tools on this website can be used for generating reports on releases, transfers, and waste management. The TRI Toxics Tracker, TRI Explorer and Envirofacts Reports allow users to extract data by facility, chemical, geographic area, industry (North American Industry Classification System or NAICS code) or reporting years.





iii. EPA Tools: PFAS Information

EPA's ECHO PFAS Analytic Tools can identify potential PFAS sources and locations. The tools include information on CWA PFAS discharges from permitted sources, reported spills containing PFAS, facilities manufacturing or importing PFAS, federal PFAS investigation sites, PFAS waste transfers, and fish tissue, surface water and drinking water sampling results. Some of the following tabs may help locate facilities that could have PFAS in their NPDES discharges.

- **Production:** PFAS Chemical Manufacturer and Importer Data from Toxic Substances Control Act (TSCA) Chemical Data Reporting (CDR)
- **Environmental Media:** This tab provides PFAS Multimedia Environmental Sampling Data from the Water Quality Portal that integrates publicly available water-quality monitoring data from the United States Geological Survey (USGS), the EPA, and over 400 state, federal, tribal, and local agencies.
- **Discharge Monitoring:** This tab shows the PFAS Discharge Monitoring Report Data from CWA NPDES permits. However, NPDES permittees are not federally required to monitor for PFAS, so there is little data provided from across the US.
- **Industry Sectors:** Sites can be filtered by area and sector (e.g., airports, selective types of manufacturing, mining, and refining, national defense, oil and gas, paper mills and products, and waste management) and the extracted data can be further refined by:
    - NAICS Codes (by type of business)
    - Standard Industrial Classification (SIC) codes
    - Facility Name

5. Understanding Permits

Every permitting authority (state or EPA) NPDES permit will look a little different. But there are some basics that tend to be the same.

A. Basic Categories of Permits

i. Individual v. General Permits

An individual permit is designed for an individual facility. An individual permit is written based on information submitted by the facility in a permit application and is unique to that facility. Individual permits typically cover large scale activities, such as many mines, large industrial facilities, and major domestic wastewater treatment plants.

A general permit is used to cover multiple facilities in a specific category of similar operations and types of discharge, for example, stormwater from construction sites. A general permit is not issued to a specific facility, like an individual permit, but rather covers multiple facilities that fall under the general permit eligibility and provisions. Issuance under a general permit is usually faster than an individual permit and does not require public notice. General permits are sometimes issued upon application submission, while issuance of individual permits can take up to six months or several years.

ii. Permits for Different Kinds of Waste

Another fundamental question for a permit is what kind of waste is being discharged. Many permits include multiple kinds of waste. Some common kinds of waste include:

- **Waste from a Publicly Owned Treatment Works (POTW).** This can be a combination of sewage (domestic waste) and industrial waste. Larger POTWs are more likely to take waste from nearby industries. This waste from industrial facilities can create treatment challenges for POTWs. To address these challenges, the CWA requires certain POTWs to establish a pretreatment program. Industrial pretreatment programs require industrial dischargers to reduce or eliminate the discharge of harmful pollutants to POTWs. This infographic from the State of Michigan is a helpful illustration of how industrial pretreatment programs work.
- **Process water from an industrial facility.** This is the water that runs through the plant and is often the most polluted and the most regulated.
- **Runoff from outside operations of certain kinds of industries and industrial facilities.** This is called industrial stormwater and is often covered under a general permit, though a big facility may have an individual permit. The general permits for industrial stormwater often have monitoring “benchmarks” rather than numeric limits that do not automatically trigger enforcement.
- **Runoff from medium and large cities.** This stormwater is regulated under municipal stormwater (MS4s) permits. These permits often do not have numeric limits and instead require cities to control runoff pollution from construction, new development, and their own city facilities “to the maximum extent practicable” (MEP).
- **Contaminated or “remediation” groundwater.** This category includes contaminated groundwater from underground petroleum storage tanks and hazardous waste sites. This is often covered by a general permit with numeric limits.

- **Runoff from construction sites.** This runoff is generally covered under a general permit for construction stormwater. These permits usually require that the site develop a plan to manage and treat stormwater runoff, and then stick to the plan.
- **CAFOs.** Concentrated animal feeding operation (CAFOs) are large animal facilities. CAFO permits have requirements around the management of animal waste. These permits have requirements around the management of animal waste, and they often prohibit any discharge except in large storms.

B. Kind of Permit Limits

NPDES permits can include both numeric and "practice-based" limits. These limits are intended to protect receiving waters and downstream users.

i. Technology-Based Pollution Limits (TBELs)

There are three kinds of technology-based pollution limits in NPDES permits:

- **Secondary treatment limits.** These are limits for publicly owned domestic wastewater owned treatment works plants (POTWs).[7]
- **Federal Effluent Limitations Guidelines (ELGs).** These ELGs are limits set in federal regulations for specific categories of industries.[8] In our experience, most permits do include these ELGs, although it is always wise to check. Also, many ELGs are limited in scope and outdated because most were last updated in the 1980s. For instance, most discharger categories do not have limits for nutrients, many toxic pollutants, and more newly discovered pollutants, like dioxins and PFAS. Moreover, most industrial categories ignore stormwater, because they were enacted before EPA established stormwater regulations in 1990.
- **Case-by-case Best Professional Judgement (BPJ) Limits.** When the federal limits do not apply to the pollutant or waste stream, the permitting agency must set their own case-by-case limits.[9] This means the agency should include case-by-case technology limits for pollutants that are not included in the ELGs but are associated with the facility, such as nutrients, dioxins, and PFAS, or pollutants in stormwater. States and EPA are not as consistent about adding these limits to permits as ELGs and you may need to ask the agency to add them. Case-by-case technology limits should be based on "the best available technology."[10] Generally, this means if other facilities in the same industrial category use more advanced technology, the agency should set case-by-case limits based on that more advanced technology.

ii. Water-Quality Based Pollution Limits

With a few exceptions described below, NPDES permits must ensure that water quality standards, including narrative water quality standards, will be achieved.[11] This means if the receiving water is classified as a source of drinking water and has numeric and narrative water quality standards for different pollutants to protect that use, the permit should control pollution enough to still achieve those water quality standards. This usually means that the permitting agency will develop "WQBEL" permit limits — Water Quality-based Effluent Limitation (WQBEL) permit limits — i.e., pollution limits based on water quality standards.

These WQBELs can be much higher than the water quality standards themselves if the water body is in good shape and there is a lot of dilution. If the facility is discharging to a small stream or a water body already has elevated levels of a pollutant, however, the WQBEL may be the same as or close to the water quality standard.

iii. Practice-Based Limits (Best Management Practices, or BMPs)

Many permits, especially those for stormwater, require specific practices to protect water quality, like buffer zones, inspecting ponds, street sweeping, or maintaining a stormwater management plan. These are commonly referred to as best management practices, or BMPs, and are usually narrative in nature, i.e., they do not contain numeric limits or requirements.

C. Permit Structure

Draft permits are based in part on an application submitted by the discharger, or permittee, and also come with a fact sheet, which should explain the reasons for the decisions made in the permit. Sometimes it is helpful to start with a review of both the application and the fact sheet.

Key things to find in permit applications, draft permits, and fact sheets:

- **What pollutants are likely to be discharged from the facility (including the amounts and concentrations of those pollutants).** These must be identified in the permit application.
- **Whether this is the only permit for the facility**. Some facilities have multiple permits — like one for a plant's process water, another for its industrial stormwater, and another for discharges of contaminated groundwater. This is usually discussed in the fact sheet.
- **Outfalls.** These are points at which the facility discharges pollutants to surface waters or (for internal outfalls that usually separate different kinds of waste inside a plant) where pollutants are measured. Many large facilities will have multiple outfalls. Some fact sheets have helpful charts listing all of the outfalls and wastestreams.
- **Numeric pollutant limits for each outfall.** These are usually listed in a chart at the beginning of the permit, with a chart for each outfall.
    - There are typically two kinds of numeric limits: concentration-based limits (like mg/L) and quantity-based limits (like pounds of pollution).
    - Often there are "daily maximum" limits to protect against acute pollution risks and "monthly average" limits to protect against chronic pollution risks.
    - In addition to these numbers, the sampling frequency is important — for instance, if a pollutant is only measured once a year, that may not be frequent enough to really protect the receiving waters.
    - Check if there is a flow limit (design flow, average, or daily max). Without a flow limit, the facility could discharge much more pollution than it has estimated and still meet concentration-based limits.
    - Note that some permits, like stormwater and CAFO permits, may not have numeric limits.
- **Compliance schedules.** These are delays for some pollution limits in order to give the facility time to take steps to meet the limit (like installing treatment). They are only supposed to be only as long as is absolutely necessary.
- **Any additional monitoring requirements.** Permits will often require that certain pollutants be monitored even if they do not have limits. It is important to look at the frequency for these

requirements as well. Usually monitoring requirements are listed in the same chart as the pollution limits, but in California and a few other states they may be listed in an appendix.

- **Best Management Practices (BMPs).** These are "practice-based" pollution limits.
- **Special studies or additional requirements**, like notification to drinking water systems or identifying sources of PFAS.

6. Common Permit Comments

A template comment letter can be found here that includes common requests. In addition, EPA's Region 3 has publicly posted its permit review criteria. Some things you may want to request in comments are discussed below:

A. Nutrient Limits

Nutrient pollution — excess nitrogen and/or phosphorus in air or water — is an increasing concern for drinking water systems. Excess nutrients in surface waters can lead to algae blooms. Certain types of algae blooms are associated with toxic cyanobacteria that can release cyanotoxins such as microcystin or cylindrospermopsin. If cyanotoxins are consumed via drinking water, they can harm human health in the form of liver or kidney failure, nervous system damage, paralysis, and/or gastrointestinal illness. Not all algae and cyanobacteria produce toxins, but they can still produce unpleasant taste and odors in drinking water. They can also interfere with the drinking water treatment process, including increasing the occurrence of potentially harmful disinfectant byproducts.

Point sources of nutrient pollution include discharges from sewage treatment plants (POTWs), meat and poultry processing plants, CAFOs, fertilizer manufacturers, and other industrial facilities. Drinking water systems can advocate for more rigorous effluent limits for nitrogen and/or phosphorus in individual NPDES permits. For example, setting stringent effluent limits for nitrogen and phosphorus discharged from sewage treatment plants can significantly reduce nutrient loading to downstream water bodies, thus protecting drinking water sources.

Nutrient limits can be more complicated than other limits. For instance, many states do not have specific numeric water quality standards but only narrative standards providing that nitrogen or phosphorus cannot cause "objectionable" algal densities. Some states have nutrient limits that are only triggered when algae blooms are already present. But that may be too late for drinking water systems.

You may want to consider requesting numeric nitrogen and phosphorus limits in upstream permits to prevent the development of objectionable algal densities and toxic cyanobacteria. As part of an argument for these kinds of limits, you may want to explain the profound consequences of an up-stream cyanobacteria bloom on your drinking water operations.

If the draft permit in your state does not have ***any*** numeric limits for nutrients, you may want to request, at a minimum, the limits found to be achievable through basic treatment by the Water Research Foundation and relied upon by EPA in its 2020 Review of Nutrients in Industrial Wastewater Discharge. *(See table next page)*.

Note these limits may not be strict enough to protect waters from algae blooms. In states with nutrient water quality standards, these standards can be much lower. For instance, Wisconsin's water quality standard for phosphorus in open and nearshore waters of Lake Superior is .005 mg/L.

Treatment Level	Nutrient Removal Mechanism	Treatment Objectives	
		Total Nitrogen	Total Phosphorus
Level 2	Nitrification/Denitrification and Biological Phosphorus Removal	8 mg/L	1 mg/L
Level 4	BNR, Nitrification/Denitrification and Biological Phosphorus Removal, High Rate Clarification and Denitrification Filtration	3 mg/L	0.1 mg/L
Level 5	Nitrification/Denitrification and Biological Phosphorus Removal, High Rate Clarification and Denitrification Filtration, Microfiltration/Reverse Osmosis on about Half the Flow	< 2 mg/L	< 0.02 mg/L

Source: WERF, 2011

EPA has many resources available to address nutrient pollution in NPDES permits, including an online training, a list of states that have developed numeric nutrient criteria for nitrogen and phosphorus, and a compendium of state and regional NPDES nutrient permitting approaches.

B. PFAS

Numerous industries and facilities are known or suspected of discharging PFAS in their wastewater, including but not limited to metal finishing, electroplating, organic chemical manufacturing, landfills, petroleum refineries, textile mills, paper and pulp mills, airports and military bases using Class B firefighting foam, as well as large domestic Wastewater Treatment Plants (WWTPs or POTWs) that take industrial wastewater. Despite the considerable number of industries discharging PFAS to surface waters, there are no federal water pollution standards to control these sources, though EPA is in the initial stages of revising ELGs for some types of industrial facilities.

States do not have to wait for EPA to finalize additional PFAS ELGs to address PFAS in water pollution permits. In December 2022, EPA issued a guidance memo directing states to use NPDES permits to limit discharges of PFAS to surface waters. The memo makes specific recommendations for permit conditions (like monitoring requirements, BMPs, effluent limits, etc.) which states should require for industrial permittees known or suspected of discharging PFAS. For all industrial, municipal, and stormwater draft permits containing proposed conditions to address PFAS, EPA expects state permit writers to notify "potentially affected" downstream drinking water systems and to assist them in accessing discharge monitoring data for these permits. You should consult with your state permit writing authority to ensure they are following EPA's NPDES-PFAS guidance memo.

States like North Carolina, Michigan and Colorado are already using their existing authorities to require industries to limit their PFAS discharges. A valuable resource for tracking these changing limits is the Environmental Council of the States (ECOS).

C. Pesticides

If you are concerned that an upstream industrial facility is discharging pesticides into your source water, remember that discharges of biological and chemical pesticides are required to comply with NPDES requirements. The California Department of Pesticides Regulation has developed this factsheet that could be a useful resource in challenging discharges of pesticides that affect drinking water sources.

D. Requesting Other Pollution Limits Based on Existing Numeric Water Quality Standards

Under 40 CFR § 122.44(d)(1)(i), permits must control all pollutants or pollutant parameters which "may be discharged at a level which will cause, have the *reasonable potential* to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality." But what "reasonable potential" means can vary. Sometimes states or EPA will assume that there is not reasonable potential for a pollutant to violate a water quality standard based on only a few samples, and thus not include a limit for that pollutant in the permit.

When you are reviewing a draft permit and observe that there is only limited data about a pollutant, you may want to urge the permitting authority to be cautious and include a limit for that pollutant because not enough is known about the facility's pollutant discharges to say that there could never be a reasonable potential to cause, or contribute to a violation of a state water quality standard.

E. Requesting Pollution Limits Based on Existing Narrative Water Quality Standards

Sometimes you may be concerned about a pollutant that can affect drinking water, but which does not have a specific water quality standard or technology-based limit. For instance, many states lack a water quality standard for PFOA or 1,4 dioxin-dioxane even though these pollutants can harm human health. However, a permit can still limit those pollutants using the "narrative" water quality standard. Narrative standards can be different across states, but the general rule of thumb is that the waters of a state may not be polluted by toxic substances that interfere directly or indirectly with designated uses, such as drinking water sources, or are harmful to human health. You can use this narrative standard and rationale to ask that a numeric limit be included for a pollutant that could interfere with the water's designated use as a drinking water source.

F. Requesting Pollution Limits Based on Case-by-Case Technology-based Limits

Another way to include additional pollution limits for industrial facilities (not POTWs) is to request case-by-case technology-based limits. Under 40 CFR § 125.3(c), permitting agencies must include technology-based treatment requirements on a case-by-case basis when the federal limits do not apply to the pollutant or waste stream. When setting these case-by-case limits, the permit writer should consider what the best available treatment technology can do. It may be appropriate to include a comment asking for technology-based limits for pollutants or waste streams on a case-by-case basis when no other limits apply.

G. Requesting Limits to Protect Impaired Waters

The CWA section 303(d) program requires states to identify surface waters or sections of surface waters that are impaired, or not meeting state water quality standards. These waters are placed on the 303(d) list or Impaired Waters List. States then are supposed to develop Total Maximum Daily Loads (TMDLs) designed to bring them into attainment of their standards, but states are often behind on this responsibility.

If a facility is discharging a pollutant that the receiving water is impaired for and the draft permit does not contain a limit for that pollutant, you have a compelling argument that the permit should include a limit because the water needs to be cleaned up to protect your drinking water source.

H. Shorter Compliance Schedules

Compliance schedules are used to give facilities time to meet stricter or new water quality-based limits. This

essentially means that for the duration of the compliance schedule, the state has agreed that the facility will be discharging too much pollution to protect the water's uses, which is an exception to the general rule that permits cannot allow so much pollution that water quality standards are exceeded.

The extra time in a compliance schedule must be deemed necessary, appropriate, and able to achieve compliance with pollution limits as soon as possible. 40 CFR § 122.47. If the compliance schedule is for a limit based on a drinking water-related water quality standard, you could argue that a long compliance schedule is not appropriate because it will injure the quality of your source water.

I. Additional Terms to Prevent Future Noncompliance

If the facility frequently does not comply with its permit, you may want to ask for additional provisions to help ensure that the facility will comply with its permit in the future. After all, the best permit in the world offers no protection if the facility keeps violating that permit. These additional provisions could include:

- More frequent self-inspections if the facility is having operational and management challenges.
- Specific operations and maintenance requirements, like replacing old equipment.
- Adding a backup power source if the facility has spills when it loses power.
- More frequent sampling and monitoring. Under 40 CFR § 122.48, permits must include monitoring at a type, interval, and frequency sufficient to yield data representative of the facility's discharge.
- Making sure industrial facilities pretreat their wastewater before sending it to a POTW. Industrial pretreatment can involve installing treatment technology to remove pollutants prior to discharging to a POTW, minimizing or eliminating the use of pollutants of concern, or other BMPs to achieve source reduction. Michigan has successfully used its Industrial Pretreatment Program to drastically reduce discharges of PFAS to POTWs.

You may also want to ask the permitting agency to conduct an inspection before it issues the final permit so that the state or EPA can add any additional measures to help ensure future compliance.

J. Notification to Drinking Water Systems

A permit provision requiring direct notification to downstream or affected drinking water systems to alert them of any spills, upsets, and/or bypasses by a discharger is a key water quality protection. These notifications allow your drinking water system to implement a contingency plan, if needed, or to make treatment adjustments upon such notification.

The fact sheet or permit may include identification of the nearest downstream drinking water intake. If that information is included, check to make sure that information is correct, especially if it crosses state jurisdictional boundaries.

K. Reporting

You may want to ask for specific reporting provisions so that you can always understand what is happening at the facility. For instance, while regular pollution monitoring can be found in EPA's ECHO system, some facilities conduct stormwater monitoring through an Annual Report that is difficult to publicly access. You could ask for that monitoring to be conducted through Discharge Monitoring Reports (DMRs), which permittees are required to submit on a periodic basis, so you can review it on ECHO instead.

L. Environmental Justice and Disproportionately Impacted Communities

If your drinking water system is in or close to a disadvantaged community or an environmental justice community (like an area with an EPA EJScreen score of above 80), it is important to identify such community characteristics in your comments on draft permits. (Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.) If there are many polluting facilities in the area upstream of your drinking water system, you may also want to request a cumulative impacts analysis of their collective pollution. You may want to note how pollution from this facility has increased and/or could increase your current or future treatment costs or contribute to various health impacts in your community.

M. Mixing Zones

As noted above, generally, NPDES permits must include pollution limits that will not lead to exceedances of water quality standards. One exception is when permits include "mixing zones." These are areas of the receiving water where water quality standards *can* be exceeded, meaning that the facility will get higher WQBEL pollution limits. If a facility relies on a mixing zone, this will be discussed in the fact sheet.

To obtain authority for using a mixing zone, facilities must submit a mixing zone study. This study must show that the mixing zone won't impair the use of the receiving water (like as a drinking water source) and is not too large. States often have mixing zone regulations or policies that set out additional mixing zone study requirements.

Many mixing zone studies were done in the 1990s and could be outdated because stream flows and water quality could be very different now. If the permit relies on an old mixing zone study, you may want to request that the agency require the facility conduct a new mixing zone study or verify that the old study is still accurate.

N. Supportive Comments

If you support the permit, or support certain parts of the permit, it is important to express that support in your comments. Others, like the permittee, may be submitting comments to weaken the provisions that you value, and the permitting agency will have to decide whether to make the requested changes. The fact that an affected drinking water system does not want the provisions weakened or changed may sway the permitting agency to maintain protective language in permits.

O. Other Possible Comments

- The potential cost to the PWS of treating the pollutants, potential harmful algal blooms ("HABs"), etc., even if it is an estimate. Many permitting agencies will track such costs carefully because they are required to conduct a cost-benefit analysis when establishing limits to permits.
- Consideration of a mechanism for downstream water utilities to seek reimbursement in case of pollution that affects drinking water treatment.
- A condition in the permit to modify effluent limitations outside the permit renewal cycle based on new information, if appropriate, to protect human health. This is often called a "reopener" clause.
- Requests to correct the points of compliance, meaning the place where pollution limits are measured.

  - For most limits, and all WQBELs, this should be where the discharge hits the state/federal water — NOT downstream or after an instream treatment pond.
  - For ELGs and other technology-based limits, this should be before dilution with other waste streams.
- Requests to tighten up enforcement language and remove loopholes.
  - Make sure the permit states that these are the only outfalls that the facility can use to discharge. This is missing in some permits.
  - Some permits have included a loophole for small "de minimis" waste streams, which is not allowed.
- Permit conditions to address weather-related risks, like flooding or drought, especially given the anticipated impacts of climate change.
- Depending on the age of the NPDES permit application, request that the permittee submit revised data relating to operations and the discharge. Permit applications are required to be submitted about six months before the current permit expires. However, sometimes a state or EPA may take years to issue a new permit, even if the discharger applied for a new one on time, so that permit application data may be quite old by the time it is used in a draft permit.

7. After Permit Issuance

The permitting process does not necessarily end with the issuance of the final permit. You or other parties can appeal the final permits. If the permit does not protect water quality standards and could affect your facility's drinking water treatment or is otherwise legally flawed, you may want to consider appealing the permit. If another party challenges the permit, like the permittee, the permit could be weakened in a settlement, and you may want to continue to participate in the permit appeal process to defend the existing permit. You can usually do this by intervening, filing an "amicus" (friend of the court) brief (for non-parties who still have an interest in the proceedings), or sending in public comments. If you do want to participate in the permit appeal process, research it carefully — EPA and each state has a different process and requirements.

Permits may also be significantly modified over their five-year term. You may want to continue to track any permit modifications for the facility.

8. Resources

- American Water Works Association, Report on Bromide from Coal Plants and Potential Impacts on Drinking Water, https://www.awwa.org/Portals/0/AWWA/ETS/Resources/17861ManagingBromideREPORT.pdf?ver=2020-01-09-151706-107
- ASDWA, ACWA, GWPC, and EPA Report on Opportunities to Protect Drinking Water Sources Using the Clean Water Act, https://tinyurl.com/CWASDWAToolkit
- Comment Letter Template: https://docs.google.com/document/d/1T7P5g1R6YgzrJXQ5_ar1lkedoW5lPOaDvBqMoY2I6D8/edit
- EPA ECHO Database, https://echo.epa.gov/
- EPA, NPDES webpage, https://www.epa.gov/npdes

- EPA, Addressing PFAS Discharges in NPDES Permits and Through the Pretreatment Program and Monitoring Programs (Dec. 5, 2022), https://www.epa.gov/system/files/documents/2022-12/NPDES_PFAS_State%20Memo_December_2022.pdf
- EPA, Drinking Water Mapping Application to Protect Source Waters, https://www.epa.gov/sourcewaterprotection/drinking-water-mapping-application-protect-source-waters-dwmaps
- EPA, How's My Waterway Interactive Tool, https://www.epa.gov/waterdata/hows-my-waterway
- EPA, NPDES Permit Checklist Questions, https://www3.epa.gov/npdes/pubs/pqr_attd.pdf
- EPA, NPDES Permit Writer's Handbook, https://www.epa.gov/sites/default/files/2015-09/documents/pwm_2010.pdf
- EPA, List of State Impaired Waters/TMDLs, https://www.epa.gov/tmdl/impaired-waters-and-tmdls-program-your-epa-region-state-or-tribal-land
- EPA Water Contaminant Information Tool (WCIT), https://www.epa.gov/waterlabnetwork/access-water-contaminant-information-tool
- Agency for Toxic Substances and Disease Registry (ATSDR) Toxicological Profiles (Tox Profiles), https://www.atsdr.cdc.gov/toxprofiledocs/index.html
- CAMEO Chemicals, https://cameochemicals.noaa.gov/
- State of Michigan, PFAS information related to NPDES, https://www.michigan.gov/egle/about/organization/water-resources/npdes/pfas-related-to-npdes
- List of State Websites with Public Notices of Draft Permits, https://docs.google.com/spreadsheets/d/1HXc1spQAjDKxyLPz1MEVh5TTK8alqMvYM8TYQBLqA2w/edit#gid=0
- Water Research Foundation, Drinking Water Source Protection Through Effective Use of TMDL Processes, https://www.waterrf.org/research/projects/drinking-water-source-protection-through-effective-use-tmdl-processes
- Oil and Gas Watch, Database of upcoming oil and gas, petrochemical, and fertilizer projects, https://oilandgaswatch.org/project-index?sort=text:1:asc&page=1

9. Glossary

BMPs. Best Management Practices, which are practice-based limits and generally narrative only, i.e., non-numeric.

ELGs. Federal technology-based limits for certain industries, which are in federal regulations. These were often first issued in the 1980s and may or may not have been updated since that time.

EPA. U.S. Environmental Protection Agency.

NPDES permits. National Pollutant Discharge Elimination System (NPDES) permits authorize discharges of pollution to federal waters under the Clean Water Act.

Outfalls. These are points at which the facility discharges pollutants to surface waters or (for internal outfalls that usually separate different kinds of waste inside a plant) where pollutants are measured.

Point source. Any discernible, confined, and discrete conveyance to federal waters. Includes but is not limited to pipes, wells, tanks or trucks, spray irrigation, bulldozers, and seeps.

POTWs. Publicly-owned treatment works, like municipal wastewater treatment plants.

TBELs. Technology-Based Effluent Limitations are pollution limits based on available treatment technologies, and may include secondary limits for POTWs, ELGs and/or case-by-case limits.

WQBELs. Water Quality-based Effluent Limitations (WQBELs) are pollution limits based on water quality standards.

Endnotes

1. EPA has a website of permitting authorities, https://www.epa.gov/npdes-permits
2. 40 CFR Part 122.
3. 40 CFR § 122.44(d)(1).
4. 40 CFR § 122.44(d)(1)(i).
5. Clean Water Act Section 401, 33 USC §1341.
6. https://oilandgaswatch.org/project-index?sort=text:1:asc&page=1
7. 40 CFR Part 133.
8. 40 CFR Subchapter N.
9. 40 CFR § 125.3(c)
10. 40 CFR § 125.3(d)(3).
11. 40 CFR § 122.44(d)(1)

Appendix A: Comment Letter Template

This template can also be found online.

[Note that items highlighted in yellow are to be considered and completed by your PWS as they will vary among different systems.]

[Address of Agency]
[Email of Agency]
[EPA Contact]

[Date]

Re: Comments on Draft Permit ####

Dear Agency,

Thank you so much for the opportunity to comment on Draft Permit #### for [Facility Name]. I am writing on behalf of [PWS name].

[Describe PWS — how many people does it serve, approximate location of drinking water intake.]

[Example — West Virginia American Water (WVAW) operates several water systems, including the Huntington water system, which draws its water from the Ohio River to provide public drinking water service in the area. Our Huntington system serves approximately 39,000 direct customers plus the communities of Lavalette, W.Va. and Chesapeake, Ohio. These communities rely on the quality of the Ohio River for their everyday needs — homes, businesses, universities, hospitals, and more.]

Protecting drinking water systems' source water from upstream pollution has multiple, important benefits. It helps reduce health risks by preventing exposures to contaminated water, saves the public money by reducing drinking water treatment costs and potentially avoiding or deferring the need for complex treatment, and protecting the availability and quantity of water supplies.[1]

Explanation of your interest in the permit

[PWS Name] has a direct interest in [Facility Name].

[Explain how far downstream the facility is and how it could affect the drinking water supplies.]

Example — The Huntington water system is located approximately 115 miles downstream from the Chemours facility, and is the first of many water utilities downstream of this facility that use the Ohio River as a source of supply for drinking water. Water suppliers and the communities we serve rely on water pollution control permits to provide protections from discharges that could negatively impact water quality. We have an important interest and stake in the referenced permit.

Waste materials generated from the Chemours facility manufacturing process are discharged to the Ohio River and consequently have the potential to impact water quality of a major source of drinking water supply. Perfluorinated compounds, specifically perfluorooctanoic acid (PFOA) and HFPO-Dimer Acid (HPFO-DA), have been identified as substances that may lead to adverse human health effects with exposure over certain Levels.]

Requests for Additional Analyses

We request that [state agency] evaluate all drinking water-related pollutants that are pollutants of concern for the [Facility Name], including [specific pollutants that there is no information about in the draft permit

or fact sheet (for example, PFAS)]. Please include this evaluation in the final response to comments or final fact sheet, with an explanation of why or why not limits and/or monitoring are needed for each pollutant in the permit.

We request that [state agency] include an evaluation of past noncompliance by [Facility Name], how it was addressed, and whether the new permit any new terms to address past noncompliance, like increased monitoring frequency.

Please also include a summary of the most recent site inspection in the response to comments or fact sheet, with an explanation for how any issues identified at the inspection have been addressed. If [state agency] has not conducted a full site inspection of [Facility Name] within the last two years, we request that the agency conduct an inspection prior to issuing the final permit.

Please add language to the permit to provide notification within 48-hours to the [PWS] of any spills, upsets, bypasses, and any time the facility exceeds the limits for [specific pollutant(s) you are concerned about].

Support of Permit Provisions

[Portions of the permit that you support]

Requests for New Limits and New Monitoring Requirements

[Areas of the permit where you are requesting a change]

[If you want to use a chart, consider using this format:]

REQUESTS FOR NEW LIMITS AND NEW MONITORING REQUIREMENTS		
Part of the Draft Permit	**Request: Specific change you are asking for**	**Reasons why you are requesting the change**
Part 1, Table #	Add limits for nitrogen and phosphorus at [Outfall #]	Nutrient pollution is one of America's most widespread, costly and challenging environmental problems, and is caused by excess nitrogen and phosphorus in the air and water.[2] Most industries are sources of nutrients,[3] and even small sources of nutrients to water should be limited in both process water and stormwater.
Part 1, Table #	Add limits for [pollutant] at [Outfall #] to protect a numeric water quality standard for drinking water supplies	Under 40 CFR § 122.44(d)(1), state permits must achieve water quality standards. More specifically, under 40 CFR § 122.44(d)(1)(i), permits must control all pollutants or pollutant parameters which "may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard." Here, there is reasonable potential for the facility's pollution to cause or contribute to an exceedance of the water quality standard for [pollutant] because [Name of Facility]: 1. discharges in measurable amounts that could increase over time to cause or contribute to an exceedance of the water quality standard; OR 2. could be discharging [pollutant] in amounts to cause or contribute to an exceedance of the water quality standard, but [without monitoring/with only a small number of data points], we do not know; OR 3. The receiving body is already impaired for [pollutant]. [To find this out, look at https://mywaterway.epa.gov/]

Part 1, Table #	Add limits for [pollutant] at [Outfall #] to protect the quality of the water needed for drinking water supplies	Under 40 CFR § 122.44(d)(1), state permits must achieve water quality standards, including narrative water quality standards. More specifically, under 40 CFR § 122.44(d)(1)(i), permits must control all pollutants or pollutant parameters which "may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality." Limits for [pollutant] should be included in the permit in order to ensure that the permit will not lead to exceedances of the state's narrative water quality standard, which requires that the waters of this State may not be polluted by toxic substances which interfere directly or indirectly with designated uses, like drinking water sources, or are harmful to human life. [Explain why the pollutant harms drinking water supplies — see chart]
Part 1, Table #	Add limits for [pollutant] at [Outfall #] as a case-by-case technology-based limit. [This one is ONLY for industrial facilities, not POTWs]	Under 40 CFR § 125.3(c), states must include technology-based treatment requirements in permits in two ways: federal effluent limitations (ELGs), see 40 CFR Subchapter N (Effluent Guidelines and Standards); AND on a case-by-case basis when the federal limits do not apply to the pollutant or waste stream. When setting these case-by-case limits, the permit writer shall consider the appropriate technology for [Facility Name's industrial category] and any unique factors relating to [Facility Name]. Case-by-case technology-based limits are needed here because the federal ELGs do not apply and [pollutant] is associated with [Facility Name's industrial category]. Here, other facilities in [Facility Name's industrial category] use [advanced technology] so limits should be based on how much [advanced technology] can treat the [pollutant].
Part 1, Table #	Increase the required monitoring frequency for [pollutant]	Under 40 CFR § 122.48, states must include in permits monitoring at a type, interval, and frequency sufficient to yield data representative of the [Facility Name] discharge. [Explain why draft permit frequency is not enough — for instance, annual monitoring can tell you nothing because it could capture an anomaly]
Part 1, Table #	Add monitoring requirements for [pollutant]	Under 40 CFR § 122.48, states must include in permits monitoring at a type, interval, and frequency sufficient to yield data representative of the [Facility Name] discharge. [Pollutant] is associated with [Facility Name's industrial category]. In order to yield data representative of the [Facility Name], monitoring for [pollutant] is needed.

Special Optional Section — Stormwater

[If you are asking for pollution limits or monitoring for stormwater outfalls]

Industrial stormwater is a significant source of pollution nationally, whereby rainfall or snowmelt carries pollutants, including heavy metals and chemical-laden sediment from industrial sites. Federal technology-based pollution limits (ELGs) were often last updated before 1990, when EPA first established comprehensive stormwater regulations. 55 Fed. Reg. 47,990 (Nov. 16, 1990). This means that federal technology-based limits are probably inadequate to control stormwater pollution from [Name of Facility] and the state must establish case-by-case technology-based stormwater pollution limits under 40 CFR § 125.3(c). In addition, permits must control all pollutants in stormwater to achieve water quality standards under 40 CFR § 122.44(d)(1)(i).

The state should establish, at a minimum, limits for the pollutants that are most likely to be in the [Name of Facility] stormwater, like total suspended solids, nutrients and [list pollutants that are known to be present at high levels in the main process water — like metals]. The state should also include monitoring limits for other pollutants that could be in the stormwater, like [other pollutants you are concerned about].

Special Optional Section – Environmental Justice

[Name of Facility]'s pollution impacts communities that are already bearing a disproportionate load of industrial pollution. [Choose one:

Specifically, [Name of Facility] is located within one mile of areas at the 80th or higher national percentile for one or more of the environmental justice indexes of EJScreen, EPA's environmental justice mapping and screening tool.[4]] OR

[[PWS name] is located within one mile of areas at the 80th or higher national percentile for one or more of the environmental justice indexes of EJScreen, EPA's environmental justice mapping and screening tool.[5]]

We ask that the state carefully consider the cumulative impacts of the pollution from [Name of Facility] and its neighbors. One of those impacts is water affordability. Low-income communities like [community] are less likely to be able to afford expensive drinking water bills to treat contaminated water supplies.[6] This makes protecting our source water all the more important.

Special Optional Section — Large Wastewater Treatment Plants with Many Indirect Industrial Dischargers

[Name of Facility] accepts waste from [kind of industries]. These industries include many pollutants that are not typically in domestic wastewater, like [Example of pollutant] that can impact the suitability of the water for use as source water for [the PWS]. This permit should include limits, or at a minimum, monitoring, for these pollutants.

Special Optional Section — Request for Hearing

Given the significant public interest in this draft permit, we request a public hearing so that the public can provide additional comments on the draft permit. Please publicize the hearing not just in the newspaper, but on your website, social media, and through a press release. Please also do the following so that the maximum number of affected people can participate. [Options: make it a remote hearing, hold it at a certain place in the neighborhood, schedule it in the evening or a weekend, provide Spanish translation, provide childcare.]

Special Optional Section — PFAS Limits, Monitoring, and/or BMPs

[Name of Facility] is known or suspected to discharge PFAS. PFAS are a group of manufactured chemicals that have been used in industrial products since the 1940s. Research involving humans suggests that high levels of certain PFAS may lead to the increased cholesterol levels; decreased vaccine response in children; changes in liver enzymes; increased risk of high blood pressure or pre-eclampsia in pregnant women; small decreases in infant birth weights; and increased risk of kidney or testicular cancer.[7]

[Name of Facility] is known or suspected to discharge PFAS because: *[Choose:*

- *the facility is in a category that EPA has identified as known or suspected to discharge PFAS or it is a WWTP that accepts discharges from one of these categories, like organic chemicals, plastics & synthetic fibers (OCPSF); metal finishing; electroplating; electric and electronic components; landfills; pulp, paper and paperboard; leather tanning & finishing; plastics molding & forming; textile mills; paint formulating, airports, military bases, remediation sites, and chemical manufacturing;*[8] *OR*
- *The receiving water body has high levels of PFAS. [Add data]; OR*
- *Site-specific data.]*

Following the EPA's December 2022 memo,[9] this permit should include, at a minimum, [PFAS limits/PFAS monitoring/PFAS BMPs] to control the discharge of PFAS to waters that we rely on as the source of drinking water.

- *PFAS Limits — Request state MCL, EPA health-based advisories, or other health-based limits. Sampling should use EPA Draft Method 1633.*[10]
- *PFAS Monitoring — The state should require monthly monitoring for all PFAS substances included in EPA Draft Method 1633.*

The permit should also include EPA's recommended Best Management Practices (BMPs)[11] for discharges of PFAS, including [Keep those that apply:

- Prohibiting the use of Aqueous Film Forming Foam (AFFF) other than for actual firefighting.
- Eliminating PFOS- and PFOA-containing AFFFs.
- Requiring immediate clean-up in all situations where AFFFs have been used, including diversions and other measures that prevent discharges via storm sewer systems.
- Product elimination or substitution when a reasonable alternative to using PFAS is available in the industrial process.
- Accidental discharge minimization by optimizing operations and good housekeeping practices.
- Equipment decontamination or replacement where PFAS products have historically been used to prevent discharge of legacy PFAS following the implementation of product substitution.]

The permit should also require that [Name of Facility]:

- Conduct a PFAS pollution prevention/source reduction evaluation within six months of the effective date of the permit, the facility shall provide an evaluation of whether the facility uses or has historically used any products containing PFAS, whether use of those products or legacy contamination reasonably can be reduced or eliminated, and a plan to implement those steps.
- Implement the plan within twelve months.
- Submit an annual status report, which includes a list of potential PFAS sources, summary of actions taken to reduce or eliminate PFAS, any applicable source monitoring results, any applicable effluent results for the previous year, and any relevant adjustments to the plan, based on the findings.

The pollution prevention/source reduction evaluation and annual report shall be submitted to EPA via EPA's electronic reporting tool for DMRs.

Thank you so much for considering our comments. Please specifically respond to each comment and request for changes with the issuance of the final permit. Please email me with the final permit and response to comments at the email below. In addition, please feel free to reach out with any questions or if you would like to meet.

Best,

NAME
ADDRESS
EMAIL

Notes — Appendix

[1] https://www.epa.gov/sourcewaterprotection/basic-information-about-source-water-protection

[2] https://www.epa.gov/nutrientpollution/issue

[3] EPA, EPA's Review of Nutrients in Industrial Wastewater Discharge (Dec. 2020) https://www.regulations.gov/document/EPA-HQ-OW-2018-0618-0659

[4] U.S. Environmental Protection Agency, https://echo.epa.gov/facilities/facility-search

[5] U.S. Environmental Protection Agency, https://echo.epa.gov/facilities/facility-search

[6] Patricia A. Jones & Amber Moulton, The Invisible Crisis: Water Unaffordability In The United States, 6, 21 (May 2016), https://uswateralliance.org/sites/uswateralliance.org/files/Invisible%20Crisis%20-%20Water%20Affordability%20in%20the%20US.pdf

[7] https://www.atsdr.cdc.gov/pfas/health-effects/index.html

[8] https://www.epa.gov/pfas/pfas-strategic-roadmap-epas-commitments-action-2021-2024

[9] https://www.epa.gov/system/files/documents/2022-12/NPDES_PFAS_State%20Memo_December_2022.pdf

[10] https://www.epa.gov/system/files/documents/2021-09/method_1633_draft_aug-2021.pdf

[11] https://www.epa.gov/pfas/pfas-strategic-roadmap-epas-commitments-action-2021-2024