

# **NPDES PQR Core Review Checklist Companion FY24-FY28 PQR Cycle**

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## Introduction

This document is a companion to the *NPDES Core Review Checklist*, providing instructions and additional details for each of the checklist's sections and questions. The checklist is a tool to help determine whether a permitting authority's permits are developed in a manner consistent with applicable requirements in the Clean Water Act (CWA) and federal regulations that apply to the National Pollutant Discharge Elimination System (NPDES) program. PQRs also consider EPA guidance, policies, and other best practices. The checklist was developed using the [Central Tenets of the NPDES Permitting Program](#), and discussions between the U.S. Environmental Protection Agency (EPA) Headquarters and Regions. Additional guidance for NPDES permit development is provided in [EPA's 2010 NPDES Permit Writers' Manual](#) (PWM).

The checklist is designed to assist in the comprehensive review of NPDES permits and accompanying materials such as fact sheets or statements of basis ("fact sheet" in this document includes both types of documents), attachments such as maps and line drawings of the wastewater treatment process, completed applications, discharge monitoring reports (DMRs), correspondence between the permitting authority and the facility operator, and the supporting administrative records (required for EPA-issued permits and for most state-issued permits under state legal requirements).

The checklist is intended to be completed electronically. Reviewers will select an answer for each question from the drop-down list (shown as "Choose an item") alongside each question. Reviewers who cannot clearly answer the question with "Yes" or "No" should select "Uncertain" and explain the reasoning in the comment field for that section. During the PQR, reviewers may find they are able to update the response from "Uncertain" to "Yes" or "No" following interviews with the state or review of additional permit records. If a particular question does not apply, select "N/A" rather than leave the answer blank.

## 1. General Information

This section of the checklist gathers general information about the permit.

### 1. Name of facility

Enter the full name of the facility as it appears on the permit's cover page. Ideally, the cover page will clearly distinguish the facility name from the permittee name.

### 2. NPDES permit number

Enter the EPA NPDES permit number. This number is usually found near the top of the cover page and consists of a two-letter state abbreviation followed by 7 digits. If the state also has a separate numbering system, make note of this number.

### 3. Facility information

Check one box per row (for a total of three) to characterize the facility.

#### *a) Permit issuance status: New or Reissued*

A facility may either be a new facility, for which this is the initial NPDES permit, or an existing facility with a reissued permit.

#### *b) Facility designation: Major or Non-major*

A facility may be designated as either a major facility, as defined at 40 CFR 122.2, or a non-major facility. This information is typically found in the permit's fact sheet, often in the facility description. The PWM provides additional information on the designation of a facility as major or non-major. EPA has established a working definition of major facility as a facility that meets any of the following criteria:

- A publicly owned treatment works (POTW) with a design flow of one million gallons per day (mgd) or greater.
- A POTW serving a population of 10,000 or more.
- A POTW causing significant water quality impacts.
- A non-POTW that scores as a major on the [NPDES Permit Rating Worksheet](#).

A facility that is not designated as major is considered a non-major facility. Check the box for major *or* non-major facility and, if necessary, indicate any concerns in the comment field regarding how this designation was determined.

### ***c) Facility type: POTW or Non-POTW***

A facility may either be a POTW, as defined in 40 CFR 403.3(q), or a non-POTW facility.

A POTW is a treatment works that is owned by a state or municipality. This definition includes any devices and systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes, and other conveyances if they convey wastewater to a POTW. The term also means the municipality, which has jurisdiction over the discharges to and from such a treatment works.

A privately owned treatment works (PrOTW) is any device or system which is: (a) used to treat wastes from any facility whose operator is not the operator of the treatment works and (b) not a "POTW" (40 CFR 122.2). Treatment works that are not publicly owned (i.e., that are federally or privately owned), and commercial facilities that discharge only nonprocess wastewater (e.g., nursing homes, campgrounds, casinos) should be categorized as non-POTWs. A permit writer could apply limits identical to secondary treatment standards to such facilities, but only as the result of a best professional judgment (BPJ) analysis.

### **4. Permit writer or other state contact**

If the permit record identifies the permit writer or other state contact responsible for the permit, typically in the fact sheet or the public notice, record their contact information.

### **5. Core permit reviewer(s)**

Identify and provide contact information for the reviewer(s) who performed the core permit review, and provide the date(s) of the desktop review.

## **2. Permit and Facility Information**

This section of the checklist gathers the permit dates, discharge authorizations, and basic facility and receiving water information. This information is usually on the permit cover page.

### **2.1 Basic Permit Information**

This section of the checklist includes information typically found on the permit cover page.

#### **1. Did the permit identify the issuance, effective, and expiration dates?**

Select "Yes," "No," or "Uncertain" to indicate whether the permit contained all three dates. If the permit is missing a date, select "No" and note in the comments which date is missing.

#### ***a) What was the permit issuance date?***

The permit issuance date is the date that the permit was signed and issued by the permitting authority. The permit issuance date is often found with the signature.

**b) What was the permit effective date?**

The permit effective date is the date the permit became effective. The date may be stated explicitly, but it may also be found in narrative form (e.g., “effective on the first day of the calendar month immediately following 60 days after signature”). EPA recommends that the permit state the date explicitly to avoid ambiguity in permit coverage dates.

**c) What was the permit expiration date?**

The permit expiration date is the date the permit expires. The date may be stated explicitly, but it may also be found in narrative form (e.g., “expires at midnight, five years from the last day of the month preceding the effective date”). EPA recommends that the permit state the date explicitly to avoid ambiguity in permit coverage dates.

**i. Was the permit term 5 years or less?**

CWA section 402(b)(1)(B) and the regulations at 40 CFR 122.46 require permit duration to be for a fixed term not to exceed 5 years. In some cases (for example, when a permitting authority is implementing a watershed approach), the permit term might be less than 5 years.

**2. Did the permit contain specific authorization-to-discharge information (from where, to where, by whom)?**

The NPDES program requires a permit that authorizes the discharge of pollutants from any point source into waters of the United States (CWA section 402(a)-(b); 40 CFR 122.1(b)(1)). Example language for the authorization includes: [PERMITTING AUTHORITY NAME] authorizes [OPERATOR OF FACILITY NAME] to discharge at [NAME OF FACILITY] from [OUTFALL NUMBER(S)] to [NAME OF RECEIVING WATER].

**3. Did the record indicate that the permit was issued by an appropriate official (e.g., signed permit cover page, transmittal letter)?**

Per 40 CFR 124.15, the permitting authority must issue a final permit decision to the applicant. This is typically expressed with a permit cover page or transmittal letter/memo to the applicant signed by an appropriate official (e.g., manager, chief, or director of the state permitting program) or otherwise formally issued to the applicant. A signed permit also helps to identify the permit as a final permit and differentiate it from earlier drafts.

**4. Note any other program areas applicable to the discharger (e.g., pretreatment, stormwater, CAFO, biosolids, 316).**

A permit often reflects regulatory requirements that are specific to the type of discharger. Examples include stormwater conditions associated with industrial activity and municipal separate storm sewer systems (MS4s) and additional monitoring and special studies (including toxicity identification evaluation/toxicity reduction evaluation (TIE/TRE) and mixing studies). For POTWs, specific special conditions apply, including pretreatment, sewage sludge (biosolids), combined sewer overflows (CSOs), and sanitary sewer overflows (SSOs). CWA section 301(h) variances may also apply.

The reviewer should identify any requirements associated with specific program areas that are included in the permit. Often these other program areas are included in a special conditions section of the permit.

**2.2 Facility and Receiving Water Information**

This section of the checklist evaluates whether the permit includes basic facility and receiving water information. This information is often found on the cover page of the permit and in the beginning of the fact sheet.

**1. Did the permit or fact sheet describe the physical location of the facility (e.g., address, latitude/longitude)?**

EPA recommends that the permit or fact sheet indicate the location of the facility so the permitting authority and the public can identify the facility or activity responsible for the discharge. In most cases, this is the physical address for the facility. If there is not a specific address, the permit might indicate the nearest cross streets, latitude/longitude coordinates, or other locational information.

**2. Did the fact sheet include a description of the type of activities and wastewater treatment processes at the facility?**

Under 40 CFR 124.8(b)(1), the fact sheet must include a brief description of the type of permitted facility or activity, such as whether the facility is a POTW or a specific type of industry. The type of industrial category might be identified in its own section of the fact sheet or with the discussion about effluent limitations guidelines. Wastewater treatment processes might be described in a separate section or as a line drawing that is required as part of the application and could be included in the permit record.

**3. Were all active outfalls identified in the record authorized in the permit (including stormwater and/or combined sewer overflow outfalls, if appropriate)?**

An outfall (or “permitted feature”) is the location where a point source releases a pollutant to a water of the United States. Authorized outfalls are often identified on the cover page or might be specified in the effluent limitations section with a separate sentence (e.g., “During the period beginning on [PERMIT EFFECTIVE DATE] and lasting through midnight on [PERMIT EXPIRATION DATE], the permittee is authorized to discharge treated wastewater from [OUTFALL NUMBER].”

The reviewer should refer to the permit application and other supporting materials to identify active outfalls, including stormwater and CSO outfalls (if appropriate), and confirm that each active outfall is authorized in the permit.

**a) Did the permit or fact sheet identify the physical location of each outfall (e.g., address, latitude/longitude)?**

The discharger is required to specify the outfall location in the permit application (40 CFR 122.21). When appropriate, the fact sheet must also include a sketch or detailed description of the location of each discharge or regulated activity described in the application (40 CFR 124.56(c)). EPA recommends that the permit or fact sheet include a section describing the outfall location, including latitude and longitude coordinates.

**4. Did the record clearly identify the name of the receiving water(s)?**

EPA recommends that the permit or fact sheet identify the waterbody into which the permittee discharges, for each outfall identified in the permit. The receiving water name is often identified on the cover page or in a separate section in the fact sheet.

**a) Did the record discuss the specific location within the receiving water (e.g., stream segment, HUC)?**

EPA recommends that the fact sheet include a description of the specific location of the discharge within the receiving water. The specific location within the receiving water is useful for permit writers and reviewers to identify whether the receiving water is impaired or whether total maximum daily loads (TMDLs) have been established. The U.S. Geological Survey (USGS) uses hydrologic unit codes (HUCs) to catalog watersheds, as does EPA’s [How’s My Waterway?](#) web tool. States might have their own assessment unit IDs and online mapping tools used to identify waterbody segments for use attainability analyses.

### 3. Permit Application

This section of the checklist gathers information on the NPDES permit application. Chapter 4 of the PWM provides additional information about the NPDES permit application process.

#### 1. Were the appropriate application forms submitted for the type of facility?

The appropriate application form for a discharger depends on the type of facility discharging. The following table lists the application forms required for specific types of facilities reviewed under a PQR.<sup>1</sup> If a state has not adopted the use of EPA's NPDES application forms in its program, then the state-developed application forms must include all of the application requirements in 40 CFR 122.21(a)-(b), (c)(2), (e)-(k), and (m)-(r), per 40 CFR 123.25(a)(4). Alternatively, a coordinated review of all the state permit application forms can be conducted separately, rather than individually by each reviewer for each permit.

**Table 1. Application Forms and Required Components**

Type of facility or program area	Type of discharger, forms and reg. cites	Required components
<b>Municipal facilities</b>	<b>New and existing</b>  Form 2A  40 CFR 122.21(a)(2)(i)(B) 40 CFR 122.21(j)	<b>Form 2A</b> Section 1: Facility information; applicant information; existing environmental permits; collection system and population served; Indian Country; flow; discharge points; outfalls and other discharge/disposal methods; variance requests; contractor information. Section 2: (POTWs $\geq$ 0.1 mgd only): Inflow and infiltration; topographic map; process flow diagram or schematic; scheduled improvements and schedules. Section 3: Outfalls; seasonal/periodic discharges; diffusers; receiving waters; treatment; effluent testing data. Section 4: SIU/NSCIU discharges; pretreatment program; hazardous waste. Section 5: Combined sewer overflows. Section 6: Checklist and certification.

<sup>1</sup> Application requirements for stormwater dischargers are not included in Table 1 since the *PQR Core Review Checklist* is primarily designed for use in reviewing core components of individual POTW and non-POTW permits.

Type of facility or program area	Type of discharger, forms and reg. cites	Required components
<b>Treatment works treating domestic sewage (TWTDS) (sewage sludge use/disposal)</b>	<b>New and existing</b>  Form 2S  40 CFR 122.21(a)(2)(i)(H) 40 CFR 122.21(q)	<b>Form 2S</b> Part 1: Limited Background Information (sludge-only facilities) Section 1: Facility information Section 2: Applicant information Section 3: Sewage sludge amount Section 4: Pollutant concentrations Section 5: Treatment provided Section 6: Sewage sludge sent to other facilities Section 7: User and disposal sites Section 8: Checklist and certification  Part 2: Permit Application Information (NPDES applicants) Section 1: General information Section 2: Generation of sewage sludge or preparation of material derived from sewage sludge Section 3: Land application of bulk sewage sludge Section 4: Surface disposal Section 5: Incineration
<b>Concentrated animal production facilities</b> Concentrated animal feeding operations Concentrated aquatic animal production facilities	<b>New and existing</b>  Form 1 and Form 2B  40 CFR 122.21(a)(2)(i)(A) and (C)  40 CFR 122.21(f) and (i)	<b>Form 1</b> Section 1: Activities requiring an NPDES permit Section 2: Name, mailing address, location Section 3: SIC and NAICS codes Section 4: Operator information Section 5: Indian Land Section 6: Existing environmental permits Section 7: Map Section 8: Nature of business Section 9: Cooling water intake structures Section 10: Variance requests Section 11: Checklist and certification  <b>Form 2B</b> Section 1: Facility/business type; operational status Section 2: CAFO owner operator contact information Section 3: CAFO location and contact information Section 4: CAFO topographic map Section 5: CAFO characteristics Section 6: CAFO nutrient management plans Section 7: CAAP facility characteristics Section 8: Checklist and certification



Type of facility or program area	Type of discharger, forms and reg. cites	Required components
<p><b>Industrial facilities</b>  Manufacturing facilities  Commercial facilities  Mining activities  Silvicultural activities</p>	<p><b>Existing (process wastewater)</b></p> <p>Form 1 and Form 2C</p> <p>40 CFR 122.21(a)(2)(i)(A) and (D)  40 CFR 122.21(f) and (g)</p>	<p><b>Form 1</b></p> <p>Section 1: Activities requiring an NPDES permit  Section 2: Name, mailing address, location  Section 3: SIC and NAICS codes  Section 4: Operator information  Section 5: Indian Land  Section 6: Existing environmental permits  Section 7: Map  Section 8: Nature of business  Section 9: Cooling water intake structures  Section 10: Variance requests  Section 11: Checklist and certification</p> <p><b>Form 2C</b></p> <p>Section 1: Outfall location  Section 2: Line drawing  Section 3: Average flows and treatment; system users  Section 4: Intermittent flows  Section 5: Applicable ELGs; production-based limits  Section 6: Upgrades and improvements  Section 7: Effluent and intake characteristics  Section 8: Used of manufactured toxics  Section 9: Biological toxicity tests  Section 10: Contract analyses  Section 11: Additional information  Section 12: Checklist and certification</p>

Type of facility or program area	Type of discharger, forms and reg. cites	Required components
	<p><b>New (process wastewater)</b></p> <p>Form 1 and Form 2D</p> <p>40 CFR 122.21(a)(2)(i)(A) and (E)</p> <p>40 CFR 122.21(f) and (k)</p>	<p><b>Form 1</b></p> <p>Section 1: Activities requiring an NPDES permit</p> <p>Section 2: Name, mailing address, location</p> <p>Section 3: SIC and NAICS codes</p> <p>Section 4: Operator information</p> <p>Section 5: Indian Land</p> <p>Section 6: Existing environmental permits</p> <p>Section 7: Map</p> <p>Section 8: Nature of business</p> <p>Section 9: Cooling water intake structures</p> <p>Section 10: Variance requests</p> <p>Section 11: Checklist and certification</p> <p><b>Form 2D</b></p> <p>Section 1: Expected outfall location</p> <p>Section 2: Expected discharge date</p> <p>Section 3: Average flows and treatment</p> <p>Section 4: Line drawing</p> <p>Section 5: Intermittent or seasonal flows</p> <p>Section 6: Production</p> <p>Section 7: Effluent characteristics</p> <p>Section 8: Engineering report</p> <p>Section 9: Other information</p> <p>Section 10: Checklist and certification</p>
	<p><b>New and existing (nonprocess wastewater)</b></p> <p>Form 1 and Form 2E</p> <p>40 CFR 122.21(a)(2)(i)(A) and (F)</p> <p>40 CFR 122.21(f) and (h)</p>	<p><b>Form 1:</b> Facility Information; SIC and NAICS codes; operator information; Indian Land; existing environmental permits; topographic map; nature of business; cooling water intake structures; variance requests; and certification</p> <p><b>Form 2E</b></p> <p>Section 1: Outfall location</p> <p>Section 2: Discharge date</p> <p>Section 3: Waste types</p> <p>Section 4: Effluent characteristics</p> <p>Section 5: Flow</p> <p>Section 6: Treatment system</p> <p>Section 7: Other information</p> <p>Section 8: Checklist and certification statement</p>

Type of facility or program area	Type of discharger, forms and reg. cites	Required components
Cooling water intake structures	<b>New facilities (other than offshore oil and gas extraction facilities)</b>	Cooling water intake structures do not have application forms. Rather, 40 CFR 122.21(r) lists specific application requirements that vary by facility type. Depending on the type of facility, application information could include: <ul style="list-style-type: none"> <li>• Source water physical data</li> <li>• Cooling water intake structure data</li> <li>• Source water baseline biological characterization data</li> <li>• Cooling water system data</li> <li>• Chosen method(s) of compliance with impingement mortality standard</li> <li>• Entrainment performance studies</li> <li>• Operational status</li> <li>• Entrainment characterization studies</li> <li>• Comprehensive technical feasibility and cost evaluation study (including peer review)</li> <li>• Benefits valuation study (including peer review)</li> <li>• Non-water quality environmental and other impacts study (including peer review)</li> <li>• Chosen compliance method for new units</li> </ul>
	<b>New offshore oil and gas extraction facilities</b>	
	<b>Existing facilities</b>	
	No Form	
	40 CFR 122.21(r)	

***a) If a state application form was used, did the form contain all required elements of 40 CFR 122.21?***

If the state form did not meet all requirements in 40 CFR 122.21 (outlined in Table 1 above), make note of those inconsistencies here.

**2. Was the most recent version of the application form submitted?**

In addition to submitting the correct application form, the applicant must submit the most recent version. EPA promulgated revisions to its NPDES permit application requirements on February 12, 2019 (84 FR 3324) and published corresponding revisions to its application forms in March 2019. Use of the revised forms for EPA-issued permits became mandatory starting June 12, 2019. The following table identifies the revision history for EPA NPDES application forms, so the reviewer can determine if the applicant submitted the form that was the most recent at the time of submittal. If the state uses its own application form, the reviewer should confirm with the state when the forms were last updated.

**Table 2. Application Form Revision History**

EPA NPDES Application Form	Previous Version	Current Version
1	August 1990	March 2019
2A	January 1999	March 2019
2B	February 2002	March 2019
2C	August 1990	March 2019
2D	August 1990	March 2019
2E	August 1990	March 2019
2F	January 1992	March 2019
2S	January 1999	March 2019

The table lists the most recent revision dates for the application forms as of Fall 2023. Since application forms are subject to change, the reviewer should also check [NPDES Applications and Forms-EPA](#)

[Applications](#) for information on whether any EPA forms have been revised since the release of this document.

**3. Was the permit application submitted at least 180 days prior to either: permit expiration (for reissued permits), or the date on which the discharge is to commence (for new permits)?**

The regulations at 40 CFR 122.21(c) and (d) require that applications for EPA-issued permits be submitted at least 180 days prior to commencement of discharge (for new permits) or 180 days prior to permit expiration (for reissued permits), respectively. Most states have adopted the provisions at 40 CFR 122.21(c) and (d), or otherwise have similar application deadlines in their EPA-approved programs, and therefore must require permit applicants to comply with the stated application deadlines. If the state has not adopted these provisions, EPA recommends the use of these deadlines to ensure that permit writers have sufficient time to draft a permit.

**a) If no, did the record contain documentation that the state granted permission for a later date?**

The regulations at 40 CFR 122.21(c) and (d), which apply to EPA-issued permits, allow the Director to grant permission for applications to be submitted at a later date, but for permit reissuances, may not be later than the expiration date of the existing permit. EPA recommends the fact sheet or permit record include a discussion demonstrating that the Director provided the permittee permission to submit the application at a later date, or describe the process specified in the state regulation to grant permission.

**b) Date application submitted?**

Provide the date the application was submitted. This might be recorded as the date on which the application was signed by the permittee, the date on which the application was postmarked, or the date the application was received by the state.

**c) (For reissued permits) Date of previous permit expiration?**

Provide the date the previous permit expired.

**4. Was the permit application signed by the appropriate official?**

The regulations at 40 CFR 122.22 specify the signatory and certification requirements for all permit applications. For a corporation, the signatory is a responsible corporate officer. For a partnership, the signatory is a general partner. For a sole proprietorship, the signatory is the proprietor. For a municipality, the signatory is the principal executive officer or ranking elected official.

**5. Was the permit application administratively complete (including all attachments, diagrams, etc.)?**

The PQR reviewer should evaluate the application form and note whether all applicable spaces are filled in and any necessary attachments included.

**a) POTWs**

**i. Did the permit application include the results of at least 3 pollutant scans performed within the existing permit term?**

Regulations at 40 CFR 122.21(j)(4)(ii) through (v) require sampling for the following pollutants for all new and existing POTWS:

- *All POTWs:* Pollutants listed in Table 1A of Appendix J to Part 122, which are 5-day biochemical oxygen demand (BOD<sub>5</sub>) or 5-day carbonaceous biochemical oxygen demand (CBOD<sub>5</sub>), fecal coliform, design flow rate, pH, temperature, and total suspended solids (TSS). (EPA Form 2A, Table A)
- *POTWs with a design flow rate equal to or greater than 0.1 mgd:* Pollutants listed in Table 1 of Appendix J to Part 122, which are ammonia, chlorine, dissolved oxygen, nitrate/nitrite, kjeldahl nitrogen, oil and grease, phosphorus, and total dissolved solids. (EPA Form 2A, Table B)
- *POTWs with a design flow rate equal to or greater than one mgd, POTWs with approved pretreatment programs or required to develop pretreatment programs, and other POTWs as required by the Director:* Pollutants listed in Table 2 of Appendix J to Part 122, which are hardness; metals (total recoverable), cyanide and total phenols; volatile organic compounds; acid-extractable compounds; and base-neutral compounds. (EPA Form 2A, Table C)
- *All POTWs:* Sampling for additional pollutants required by the Director, as appropriate, on a case-by-case basis. (EPA Form 2A, Table D)

The regulations at 40 CFR 122.21(j)(4)(vi) require a minimum of 3 samples taken within 4.5 years prior to the date of the permit application.

If EPA application forms are not used, equivalent information must be contained in state application forms (40 CFR 122.21(a)(2)(iv)).

**ii. Was the POTW required to provide the results of at least 4 quarterly whole effluent toxicity (WET) tests or 4 years of annual data?**

The regulations at 40 CFR 122.21(j)(5)(ii) and (iv) specify that POTWs with design rates equal to or greater than 1 mgd, all POTWs that have approved pretreatment programs or that are required to develop pretreatment programs, and other POTWs as required by the Director must submit the results of at least 4 quarterly WET tests for a year, from the year preceding the permit application, or results from four annual tests performed in the 4.5 years prior to the application, provided the results show no appreciable toxicity using a safety factor determined by the permitting authority.

**If so, did the application provide this information?**

If the applicant was required to submit WET data, select “Yes”, “No”, or “Uncertain” to indicate whether the permit application provided the required data.

**iii. Was the POTW required to complete Form 2A Table F (or state application equivalent), which requires identification of industrial user discharges per 40 CFR 122.21(j)(6)(i) and (ii)?**

POTW applicants must submit certain application information regarding industrial discharges to the POTW (40 CFR 122.21(j)(6)(i) and (ii)). The Director may waive the required information if the applicant has submitted substantially identical information in an annual report submitted within one year of the application or in a pretreatment program (40 CFR 122.21(j)(6)(iii)).

EPA application Form 2A, Table F is not required if the POTW answers “no” to Form 2A Question 4.1 (POTW does not receive discharges from SIUs or NSCIUs), or answers “yes” to Form 2A Question 4.4 (the permittee has an approved pretreatment program and submitted an annual report within one year of application that contains substantially identical information, or the permittee has submitted a pretreatment program for approval and the documentation contains substantially identical information) and provides the title and date of the annual report or pretreatment program in Question 4.5.

If the applicant was not required to complete Table F or equivalent, check the box indicating the reason for exemption:

- POTW does not receive discharges from SIUs or NSCIUs
- Permittee has an approved pretreatment program and submitted an annual report within one year of application that contains substantially identical information
- Permittee has submitted a pretreatment program for approval and the documentation contains substantially identical information

If the applicant was required to complete Table F or equivalent, indicate whether the information was provided and whether any components were missing or incomplete.

## ***b) Non-POTWs***

### ***i. (New dischargers) Based on the industrial category, were the correct Form 2D analytical requirements met?***

Regulations at 40 CFR 122.21(k)(5) require the following pollutant data for all new manufacturing, commercial, mining, and silvicultural dischargers:

- Estimated daily maximum, daily average, and source of information for:
  - BOD<sub>5</sub>, chemical oxygen demand (COD), total organic carbon (TOC), TSS, flow, ammonia (as N), temperature (winter and summer), and pH. (EPA Form 2D, Table A)
  - Certain conventional and nonconventional pollutants identified in Table IV of Appendix D to 40 CFR Part 122, if known or believed present or if limited by an ELG or NSPS either directly or indirectly through limitations on an indicator (EPA Form 2D, Table B)
  - Toxic pollutants (metals and cyanide) and total phenols identified in Table III of Appendix D to 40 CFR Part 122, if believed present (EPA Form 2D, Table C)
  - Organic toxic pollutants identified in Table II of Appendix D to 40 CFR Part 122, which includes volatiles, acid compounds, bases/neutrals, and pesticides, if believed present. Excludes bis (chloromethyl) ether, dichlorofluoromethane and trichlorofluoromethane, and may be waived under certain conditions (EPA Form 2D, Table D)
- Report that 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) may be discharged if known or believed to be present, or if certain compounds are manufactured by the facility (EPA Form 2D, Question 7.12)
- Report certain toxic pollutants and hazardous substances identified in Table V of Appendix D to 40 CFR Part 122, if believed present. No quantitative estimated required unless already available (EPA Form 2D, Table E)

If EPA application forms are not used, equivalent information must be contained in state application forms (40 CFR 122.21(a)(2)(iv)).

### ***ii. (Existing dischargers) Based on the industrial category, were the correct Form 2C analytical requirements met?***

Regulations at 40 CFR 122.21(g)(7) require sampling for the following pollutants for all existing manufacturing, commercial, mining, and silvicultural dischargers:

- *All applicants:* BOD<sub>5</sub>, COD, TOC, TSS, ammonia (as N), temperature (both winter and summer), and pH (40 CFR 122.21(g)(7)(iii)). (EPA Form 2C, Table A)

- *Applicants with processes in one or more primary industry category (see appendix A of Part 122) contributing to a discharge must provide quantitative data for:*
  - Organic toxic pollutants identified in Table II of Appendix D to 40 CFR Part 122, which includes volatiles, acid compounds, bases/neutrals, and pesticides; and other toxic pollutants (metals and cyanide) and total phenols identified in Table III of Appendix D. (EPA Form 2C, Table B)
- *All applicants: Must indicate whether each pollutant is believed present or absent and provide at least one analysis if believed present:*
  - Organic toxic pollutants identified in Table II of Appendix D to 40 CFR Part 122 for which quantitative data are not otherwise required by 40 CFR 122.21(g)(7)(v), which includes volatiles, acid compounds, bases/neutrals, and pesticides; and other toxic pollutants (metals and cyanide) and total phenols identified in Table III of Appendix D. (EPA Form 2C, Table B)
  - Certain conventional and nonconventional pollutants identified in Table IV of Appendix D to 40 CFR Part 122. (EPA Form 2C, Table C)
- Certain toxic pollutants and hazardous substances identified in Table V of Appendix D. (EPA Form 2C, Table D)
- Qualitative data for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) if believed to be present or certain compounds are manufactured by the facility. (EPA Form 2C, Table E)

If EPA application forms are not used, equivalent information must be contained in state application forms (40 CFR 122.21(a)(2)(iv)).

**iii. (New and existing nonprocess wastewater dischargers) Were the correct Form 2E (or state application equivalent) analytical requirements met?**

Regulations at 40 CFR 122.21(h) require the following pollutant data for all new and existing manufacturing, commercial, mining, and silvicultural dischargers which discharge only nonprocess wastewater not regulated by an effluent limitations guideline or new source performance standard (except stormwater discharges):

- *For new dischargers:* estimated maximum daily value, average daily value, and source of information. *For existing dischargers:* actual maximum daily value, average daily value, and number of samples taken.
  - BOD<sub>5</sub>, TSS, fecal coliform (if believed present or if sanitary waste is or will be discharged), total residual chlorine (TRC), oil and grease, COD (if non-contact cooling water is or will be discharged), TOC (if non-contact cooling water is or will be discharged), ammonia (as N), discharge flow, pH, temperature (winter and summer). (EPA Form 2E, Section 4.2)

If EPA application forms are not used, equivalent information must be contained in state application forms (40 CFR 122.21(a)(2)(iv)).

**iv. For facilities subject to CWA 316(b) requirements, was the application information at 40 CFR 122.21(r) submitted?**

NPDES regulations at 40 CFR 122.21(r) list the application requirements for facilities with cooling water intake structures. A permit application must contain all the information required by 40 CFR 122.21(r), which includes at a minimum, source water physical data and cooling water intake structure data. The

applicant may also be required to submit source water baseline characterization data, cooling water system data, method for compliance with the impingement mortality standard, entrainment performance studies, and operational status for each unit that uses cooling water.

**6. (New dischargers) If analytical data were not provided in the initial application, did the record indicate that the permittee submitted analytical data within 24 months of the discharge commencing?**

For POTWs applying for a permit prior to commencement of discharge, the required application data must be submitted no later than 24 months after the commencement of discharge (40 CFR 122.21(j)(4)(i), including WET data (40 CFR 122.21(j)(5)(i)).

For non-POTWs applying for a permit prior to commencement of discharge, the applicant must submit items V and VI of EPA's application Form 2C (or equivalent in 40 CFR 122.21(g)) no later than 24 months after the commencement of discharge (122.21(k)(5)(vi)). Requirements in item V are exempt if the applicant has submitted equivalent data in DMRs.

**7. Did the permit record document that the permit application was complete?**

After receiving the application, the permit writer reviews the application for completeness and accuracy, requesting additional information from the applicant, if necessary. EPA recommends the permit record document whether and when the permit writer considered the application to be complete. This may be noted in the facility history portion of the fact sheet, in a tracking or routing slip in the permit record, or other similar documentation.

Note that the answer to this question might be different from the answer to question 5 of this section (i.e., Was the permit application complete?). If the permit writer documented that the application was complete, but the PQR review observed that the application on file was missing information, this should be noted in the comments section.

## **4. Effluent Limitations**

This section of the checklist summarizes the discharger's effluent limitations and the state's record of limitation development.

### **4.1 Technology-Based Effluent Limits (TBELs)**

This section of the checklist evaluates the TBELs for POTW and non-POTW facilities and the basis for the TBELs. The regulations at 40 CFR 125.3 require that permits contain technology-based treatment requirements, by the deadlines promulgated under the section.

#### **4.1.1 POTWs**

The secondary treatment requirements at 40 CFR Part 133 describe the level of effluent quality attainable through the application of secondary or equivalent treatment. Section 5.1 of the PWM includes additional information about technology-based effluent limitations for POTWs.



**1. Did the permit contain numeric limits in accordance with secondary treatment (40 CFR 133.102) or equivalent to secondary treatment (40 CFR 133.105) for the following parameters:**

- a) *BOD<sub>5</sub> (or CBOD<sub>5</sub>) and TSS, expressed as both 30-day (monthly) average and 7-day (weekly) average limits?*
- b) *Percent removal requirements for BOD<sub>5</sub> (or CBOD<sub>5</sub>) and TSS?*
- c) *pH?*

The secondary treatment standards (40 CFR 133.102) and the equivalent-to-secondary standards (40 CFR 133.105) are as follows:

**Table 3. Secondary and Equivalent to Secondary Standards for POTWs**

	Secondary Treatment (40 CFR 133.102)		Equivalent to Secondary Treatment (40 CFR 133.105)	
	30-day average	7-day average	30-day average	7-day average
BOD <sub>5</sub> and TSS	30 mg/l	45 mg/l	45 mg/l	65 mg/l
CBOD <sub>5</sub> (as alternative to BOD <sub>5</sub> )	25 mg/l	40 mg/l	40 mg/l	60 mg/l
Percent removal (BOD <sub>5</sub> or CBOD <sub>5</sub> , and TSS)	Not less than 85%	NA	Not less than 65%	NA
pH	6.0 – 9.0 standard units	6.0 – 9.0 standard units	6.0 – 9.0 standard units	6.0 – 9.0 standard units

If “Yes,” select the box to indicate which of the standards were applied.

**2. If the permit contained equivalent to secondary treatment standards, did the fact sheet describe how the facility was eligible for those standards?**

Some biological treatment technologies, such as trickling filters and waste stabilization ponds, are capable of achieving significant reductions in BOD<sub>5</sub> and TSS but might not consistently achieve the secondary treatment standards. Under 40 CFR 133.101(g), treatment works are eligible for equivalent to secondary treatment standards only if the following three conditions are met:

- (1) the BOD<sub>5</sub> and TSS effluent concentrations are consistently achievable through proper operation and maintenance of the treatment works and exceed the minimum level of the effluent quality set forth in the secondary treatment standards,
- (2) a trickling filter or waste stabilization pond is used as the principal process, and
- (3) the treatment works provides significant biological treatment of municipal wastewater.

**3. If secondary or equivalent to secondary treatment standards were not implemented in the permit, did the permit contain adjusted standards in accordance with 40 CFR 133.103?**

The regulations in 40 CFR 133.103 identify special considerations that allow for adjustments to secondary and equivalent to secondary standards, listed in 3.a below.

**a) If yes, which of the special considerations in 40 CFR 133.103 were the standards adjusted for?**

- 133.103(a): Combined sewers
- 133.103(b): Industrial flow
- 133.103(c): Waste stabilization ponds
- 133.103(d): Less concentrated waste and excess infiltration/inflow (I/I);
- 133.103(e): Less concentrated waste due to combined sewers and during dry weather

If the secondary or equivalent to secondary standards were adjusted, identify the applicable special consideration.

**b) If yes, did the fact sheet contain appropriate information and calculations as the basis for the adjustments?**

The fact sheet should describe how the POTW qualified for a special consideration under 40 CFR 133.103 and provide calculations for how the adjusted limits were derived, per 40 CFR 124.56.

**4. If the permit does not reflect 40 CFR 133.102, 133.103, or 133.105, does the fact sheet identify the basis of the limits?**

If the permit does not appear to require secondary treatment standards (40 CFR 133.102), equivalent to secondary standards (40 CFR 133.105), or special considerations (40 CFR 133.103), indicate whether the fact sheet provides a rationale for any BOD<sub>5</sub> (or CBOD<sub>5</sub>), TSS, and pH limits included in the permit as required by 40 CFR 124.56. Describe the rationale.

**5. Did the permit require influent monitoring for BOD5 (or alternative) and TSS?**

To enable determination of compliance with the percent removal requirements for BOD<sub>5</sub> (or alternative) and TSS under the secondary treatment standards, permits for POTWs or other facilities that use secondary treatment standards for the basis of BPJ limitations should include influent monitoring. Influent monitoring is necessary for calculating percent removal. This requirement is supported by 40 CFR 122.44(i), which requires that monitoring be sufficient to assure compliance with all permit limitations.

**If yes, describe how the requirement is incorporated:**

Provide a description of the influent monitoring requirements. They might be expressly stated in the permit limits and monitoring table, provided as a footnote to the table, or described elsewhere in narrative conditions. EPA recommends that to be most effective, the monitoring requirement should be incorporated into the permit limits and monitoring table.

**4.1.2 Non-POTWs**

This section of the checklist evaluates TBELs for industrial (non-municipal) dischargers, which are based on effluent limitation guidelines (ELGs) or the permit writers' best professional judgment (BPJ) for industrial facilities with no ELG. ELGs are national in scope and establish performance standards for all facilities within an industrial category or subcategory.

Sections 5.2.1 and 5.2.2 of the PWM provide an overview of ELGs and development of TBELs in NPDES permits using the ELGs. Section 5.2.3 of the PWM discusses the development of TBELs in the absence of ELGs (i.e., case-by-case limitations developed using BPJ).

## 1. Was the facility subject to one or more ELGs?

EPA's [Effluent Guidelines Program Website](#) provides information on existing ELGs, current ELG rulemakings, and the ELG planning process. ELGs are promulgated for various industrial categories in 40 CFR Parts 400-471 (see current [Industrial Effluent Guidelines](#)). In promulgating ELGs, EPA may divide an industrial point source category into subcategories to address variations between products, raw materials, processes, and other factors that result in distinctly different characteristics.

The fact sheet describes which ELG(s), if any, apply to a facility, as well as any subcategory that further characterizes the discharge (40 CFR 124.56(a)).

### *a) If yes, what categories and subcategories applied?*

If the facility is subject to an ELG, enter the ELG categories and subcategories, as described in the fact sheet.

#### *i. Indicate whether the facility is a New source or an Existing source*

A new source is any building, structure, facility, or installation from which there is or may be a "discharge of pollutants," where construction commenced after promulgation of applicable New Source Performance Standards (NSPS) in the ELGs, or after proposal of applicable NSPS in ELGs (if promulgated within 120 days of proposal, per 40 CFR 122.2).

An existing source is any building, structure, facility, or installation from which there is or may be a discharge of pollutants that is not a new source or a new discharger (40 CFR 122.29(a)(3)). A new discharger is any building, structure, facility, or installation from which there is or may be a discharge of pollutants that did not commence the discharge of pollutants at a particular site prior to August 13, 1979, which is not a new source, and which never received a finally effective NPDES permit (40 CFR 122.2).

#### *ii. Did the fact sheet explain how the categorization and performance levels (BPT, BCT, BAT, NSPS) were determined?*

If the facility was subject to an ELG, the fact sheet should explain how the facility was categorized and subcategorized and how performance levels were determined for limit development (40 CFR 124.56(a)).

#### *iii. Did the fact sheet adequately document the calculations used to develop ELG-based effluent limits?*

If the facility was subject to an ELG, the fact sheet should clearly document the calculations based on the ELGs and the actual flow or production per 40 CFR 124.56(a).

#### *iv. Were all limits based on TBELs as stringent as required by applicable ELGs?*

Any final TBEL-based limits in the permit should be as stringent as required by applicable ELGs.

#### *If no, list parameters for which final limits were not as stringent:*

If the final limits are less stringent than required by applicable ELGs, then list the parameters.

#### *Specify the basis in the record:*

If the final limits are less stringent than required by applicable ELGs, the fact sheet should explain the basis for the more lenient limits (40 CFR 124.56(a)).

***b) If the facility was not subject to an ELG (or if it included processes or waste streams that were not subject to an ELG), did the permit include technology-based limitations based on BPJ for all conventional, nonconventional, and toxic pollutants in the discharge?***

The regulations at 40 CFR 125.3(c)(2) allow for technology-based limits to be established on a case-by-case basis using BPJ, and 40 CFR 125.3(d) establishes the factors that must be considered when establishing limits using BPJ.

***If yes, specify which were based on BPJ.***

If the permit included limits based on BPJ, then specify which parameters were based on BPJ.

***i. For limits developed based on BPJ, did the fact sheet indicate that the limits were developed considering all the criteria established at 40 CFR 125.3(d)?***

If the limits were developed based on BPJ, the fact sheet (124.56(a)) should document that BPJ-based limits were developed considering:

- 40 CFR 125.3(d)(1): For Best Practicable Control Technology Currently Available (BPT) requirements, the total cost of application of technology in relation to the effluent reduction benefits to be achieved from such application; the age of equipment and facilities involved; the process employed; the engineering aspects of the application of various types of control techniques; process changes; and non-water quality environmental impact (including energy requirements).
- 40 CFR 125.3(d)(2): For Best Conventional Pollutant Control Technology (BCT) requirements, the reasonableness of the relationship between the costs of attaining a reduction in effluent and the effluent reduction benefits derived; the comparison of the cost and level of reduction of such pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources; the age of equipment and facilities involved; the process employed; the engineering aspects of the application of various types of control techniques; process changes; and non-water quality environmental impact (including energy requirements).
- 40 CFR 125.3(d)(3): For Best Available Technology Economically Achievable (BAT) requirements, the age of equipment and facilities involved; the process employed; the engineering aspects of the application of various types of control techniques; process changes; the cost of achieving such effluent reduction; and non-water quality environmental impact (including energy requirements).

***ii. For limits developed based on BPJ, did the fact sheet adequately document the calculations used to develop BPJ technology-based effluent limits?***

If limits were developed based on BPJ, the fact sheet should document calculations used to develop BPJ TBELs (40 CFR 124.56(a)).

***List and describe any technology-based limits that were not based on an ELG or BPJ:***

If the permit includes technology-based limits not based on an ELG or BPJ, specify those parameters and describe the basis of the limits.

**2. For all limits that were based on production or flow, did the fact sheet indicate that the calculations were based on a “reasonable measure of actual production” for the facility (not design)?**

Production based limitations for facilities, except for POTWs, are established based upon a reasonable measure of actual production of the facility. For new sources or new dischargers, actual production is estimated using projected production. The time period of the measure of production corresponds to the time period of the calculated permit limits; for example, monthly production is used to calculate average monthly discharge limitations (40 CFR 122.45(b)(2)(i)). If the limits were based on production or flow, the fact sheet should adequately document the calculations, including that the calculations were based on reasonable measure of actual production (40 CFR 124.56(a)).

**3. If the permit contained “tiered” limits that reflect projected increases in production or flow, did the permit require the facility to notify the permitting authority when alternate levels of production or flow were attained?**

If significant increases or decreases in production are expected during the permit term, the permit may include a condition establishing alternate permit limitations, standards, or prohibitions based upon anticipated increased (not to exceed maximum production capability) or decreased production levels (40 CFR 122.45(b)(2)(ii)(A)(1)). Tiered TBELs would apply to mass-based effluent limitations and would become effective when production or flow (or some other measure of production) exceeded a threshold value, such as during seasonal production variations. Generally, up to a 20 percent fluctuation in production is considered to be within the range of normal variability, while changes in production higher than 20 percent could warrant consideration of tiered limitations. Section 5.2.2.7 of the PWM discusses additional information about tiered limits.

## **4.2 Water Quality-Based Effluent Limits (WQBELs)**

This section of the checklist evaluates the WQBELs in the permit and the permit writer’s documentation of the basis for the WQBELs. The regulations at 40 CFR 122.44(d) and Chapter 6 of the PWM provide information about water quality standards (WQS), state requirements, and WQBELs.

### **4.2.1 Receiving Water Characterization**

**1. Did the fact sheet describe the designated uses of the receiving water(s) to which the facility discharges (e.g., contact recreation, aquatic life use)?**

EPA recommends the fact sheet describe the receiving waters’ designated use(s). A state’s WQS include a classification system for waterbodies based on the uses of those waterbodies. The uses in this system are called designated uses. The regulations at 40 CFR 131.10(a) describe various uses of waters that must be considered when establishing WQS. Those uses include public water supplies, propagation of fish, shellfish, and wildlife, recreation in and on the water, and agricultural, industrial, and other purposes including navigation. Page 6-3 of the PWM provides additional information about designated uses.

Often, the designated use is included in the receiving water discussion in the fact sheet. In some states, the receiving water might be characterized by a letter or tier that lists the respective designated uses in the WQS. In these cases, the reviewer should verify that the [state WQS](#) identifies the designated use.

**2. Was an EPA-approved water quality standards (WQS) variance applicable to this discharge?**

A WQS variance is a “time-limited designated use and water quality criterion, for a specific pollutant(s) or water quality parameter(s), that reflects the highest attainable condition during the term of the WQS variance” (40 CFR 131.3(o)). Under 40 CFR 131.14, a WQS variance allows progress toward attaining a designated use and criterion that is not currently attainable. The variance only applies to the permittee(s)

or waterbody/waterbody segment(s) specified in the variance. Once adopted by the state and approved by EPA as a WQS under CWA 303(c), a WQS variance serves as the applicable WQS for implementing NPDES permitting requirements pursuant to 40 CFR 122.44(d) for the term of the variance. Any limitations and requirements necessary to implement the WQS variance, such as activities associated with a Pollutant Minimization Program, shall be included as enforceable conditions of the NPDES permit.

***a) If yes, did the fact sheet contain justification for the variance?***

The fact sheet must include reasons why any requested variances or alternatives to required standards do or do not appear justified (40 CFR 124.8(b)(5)).

**3. Did the fact sheet contain a description of the 303(d) status of the receiving water(s)?**

EPA recommends the fact sheet provide the receiving waters' assessment status under CWA section 303(d), which requires states to develop lists of impaired waters. Impaired waters are those that do not meet WQS, even after point sources of pollution have installed the minimum required levels of pollution control technology. The law requires that those jurisdictions establish priority rankings for waters on their CWA section 303(d) list and develop TMDLs for those waters.

***a) If yes, was the receiving water(s) impaired for any uses?***

Select "Yes", "No", or "Uncertain" to indicate whether the permit or fact sheet identified any designated uses applicable to the receiving water as impaired.

***b) If yes, complete the following table.***

In the table provided, list each pollutant parameter identified as impairing the receiving water(s), and complete the table for each of the following:

**Impairing Pollutant**

List all pollutants identified as causing an impairment of the receiving water.

**TMDL approved?**

A TMDL is a calculation of the maximum amount of a pollutant that can be present in a waterbody and still allow attainment of WQS, and an allocation of that amount to the pollutant's sources. If a TMDL was completed (i.e., allocations were calculated and approved by EPA) for a pollutant discharged to the receiving water by the facility, the TMDL specifies the wasteload allocation assigned to the discharge. Page 6-13 of the PWM and EPA's [Impaired Waters and TMDLs website](#) provide additional information. EPA's website for [Impaired Waters and TMDLs Program in your EPA Region, State or Tribal Land](#) can be used to identify EPA-approved TMDLs.

**Facility Discharged Pollutant of Concern?**

If the receiving water is impaired, identify whether each pollutant causing the impairment is known to be discharged by the facility. Pollutants discharged by the facility can typically be identified by the application data or from the existing permit limits and monitoring conditions.

**Permit included WQBELs consistent with the TMDL?**

A wasteload allocation (WLA) is the portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution, often (but not always) through a TMDL. Regulations at 40 CFR 122.44(d)(1)(vii)(B) require that NPDES permits include effluent limitations developed consistent with the assumptions and requirements of any WLA that has been assigned to the discharge as part of an approved TMDL. If the permit's WQBEL's were developed consistent with the assumptions of any WLAs that an EPA-approved or EPA-established TMDL has assigned to the discharge, the fact sheet should discuss how the WQBELs were developed from the TMDL WLAs, per 40 CFR 124.56(a).

**4. Were there any other concerns in the receiving waterbody or downstream of the discharge (e.g., downstream impairments with or without TMDLs, downstream WQS, other indicators of concerns such as fish kills)?**

Identify whether the permit record indicated any other water quality concerns for the receiving water, as well as any considerations for downstream water quality. If so, describe.

**4.2.2 Reasonable Potential (RP) Analysis and WQBEL Development**

**1. Did the fact sheet appropriately identify pollutants of concern for which RP analysis would be necessary?**

The fact sheet should describe how pollutants of concern were identified for reasonable potential analysis (40 CFR 124.56(a)). Section 6.1 of the PWM describes five categories of pollutants of concern for WQBEL development: pollutants with applicable TBELs, pollutants with a WLA from a TMDL, pollutants identified as needing WQBELs in the previous permit, pollutants identified from applications or DMRs as present in the effluent, and pollutants otherwise expected to be present in the discharge. Permit writers might also choose to consider any pollutant associated with an impairment of the receiving water regardless of whether an approved TMDL has been developed, and might evaluate industrial contributors to POTWs to identify pollutants of concern.

**2. Did the permit writer assess whether the discharge would cause, have the reasonable potential to cause, or contribute to an excursion above any applicable numeric or narrative WQS for each pollutant of concern (including WET and nutrients) at each outfall?**

After identifying the applicable state WQS and characterizing the effluent and receiving water, the permit writer determines whether WQBELs are needed. EPA regulations at 40 CFR 122.44(d)(1)(i) state, "Limitations must control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any [s]tate water quality standard, including [s]tate narrative criteria for water quality." Because of this regulation, EPA and many authorized NPDES states refer to the process that a permit writer uses to determine whether a WQBEL is required in an NPDES permit as a reasonable potential analysis (RPA). In other words, an RP analysis is used to determine whether a discharge, alone or in combination with other sources of pollutants to a waterbody and under a set of conditions arrived at by making a series of reasonable assumptions, could lead to an excursion above an applicable state WQS. Section 6.3 of the PWM provides additional information about the RPA.

**a) If no, which pollutants of concern were not evaluated for RP?**

List all pollutants of concern that were omitted from the RPA.

**3. Where RP was assessed, did the fact sheet include sufficient documentation of the analysis (e.g., summary tables, calculations, spreadsheets)?**

If an RPA was conducted, the fact sheet should provide documentation of any RPAs conducted (40 CFR 124.56(a)). The analysis could look like a spreadsheet, database printout, or other table. The documentation should identify the data used in the analysis (e.g., DMR data, application date), any data excluded from analysis, how the data were analyzed, and the results of the analysis.

**a) If no, list all pollutants of concern for which the fact sheet did not include documentation.**

List all pollutants of concern for which documentation of an RPA is not provided.

#### 4. Did the permit contain WQBELs for all pollutants that will cause, have the reasonable potential to cause, or contribute to an excursion of applicable WQS?

If a permit writer has determined that a pollutant or pollutant parameter is discharged at a level that will cause, have reasonable potential to cause, or contribute to an excursion above any state WQS, the permit writer must develop WQBELs for that pollutant parameter (40 CFR 122.44(d)(1)(i)).

Section 6.4 of the PWM presents the approach recommended by EPA's 1991 [Technical Support Document for Water Quality-Based Toxics Control](#) (TSD) for calculating WQBELs for toxic (priority) pollutants, including calculating parameter-specific WQBELs from aquatic life and human health criteria and determining WET requirements. Many permitting authorities apply those or similar procedures to calculate WQBELs for toxic pollutants and for a number of conventional or nonconventional pollutants with effluent concentrations that tend to follow a lognormal distribution. The permitting authority's policies and procedures identify the methodology, including the approach for pollutants with effluent concentrations that do not follow a lognormal distribution.

##### *a) If no, identify all pollutants for which there was RP but no final limit.*

Identify any pollutants that were determined to have RP but which did not have a WQBEL.

#### 5. Did the fact sheet indicate that dilution or a mixing zone was provided?

Many state WQS have general provisions allowing some consideration of mixing of effluent and receiving water when determining the need for and calculating WQBELs. Depending on the state's WQS and implementation policy, such a mixing consideration could be expressed in the form of a dilution allowance or regulatory mixing zone. A dilution allowance typically is expressed as the flow of a river or stream, or a portion thereof. A regulatory mixing zone generally is expressed as a limited area or volume of water in any type of waterbody where initial dilution of a discharge takes place and within which the WQS allow certain water quality criteria to be exceeded. Section 6.2.5 of the PWM provides additional information about dilution allowances and mixing zones.

Indicate whether dilution or a mixing zone was applied and if applicable, check the box to indicate which.

##### *a) If yes, did the fact sheet describe how the dilution allowance or mixing zone was determined?*

When a mixing zone or dilution allowance is reflected in the permit, the fact sheet should provide information on dilution allowances or mixing zones for any WQBELs (40 CFR 124.56(a)), in accordance with 40 CFR 122.44(d)(1)(ii), including a discussion of how ambient pollutant concentrations were considered in the water quality analysis (or explanation of why such data are not applicable or available). The fact sheet should document the state's mixing zone policy and how the mixing zone was calculated using the state's policy. The fact sheet should also indicate whether the discharge has rapid and complete mixing or incomplete mixing and the determination of mixing zone size.

In some cases, the fact sheet will indicate a dilution ratio (e.g., 4:1) or a percentage (e.g., 70 percent of the 1Q10 flow). In some cases, mixing zones might be allowed by the state's WQS but not appropriate in a specific situation, and should be considered on a case-by-case basis. The fact sheet should document the reasoning for selecting the allowable dilution, including how the pollutant reacts with the receiving water and any upstream contributions and downstream conditions.

##### *b) If yes, did the fact sheet indicate that actual background data for the receiving water was used in limit development calculations?*

When developing WQBELs, the steady-state mass-balance equation requires background data to support the determination of the upstream contribution of the pollutant. In accordance with 40 CFR 124.56(a), the fact sheet should document any calculations of limit development, including background or ambient



pollutant concentration and upstream flow conditions. Section 6.2.4.2 of the PWM provides additional information about receiving water characteristics.

**i. If yes, for what parameters?**

If the fact sheet indicates that background data were used in limit development, list the applicable parameters.

**ii. If default background data was used, what was the basis?**

In some cases, the permit writer might not have background data for all pollutants for which WQBELs were developed and would need to make assumptions. The state might have procedures for estimating background values (e.g., to use zero or ½ minimum detection limit [MDL]), although EPA encourages permitting authorities to collect and use actual ambient data, where possible.

If default background data were used for limit development instead of actual background data, describe the basis for the default value (e.g., to use zero or ½ MDL). In accordance with 40 CFR 124.56(a), this information should be documented in the fact sheet.

**6. Did the fact sheet indicate the permit writer considered applicable narrative water quality criteria in developing WQBELs?**

The fact sheet should describe the derivation of any applicable WQBELs (40 CFR 124.56(a)), which includes how any WQBELs ensure compliance with applicable state narrative water quality criteria. In many cases, the WQS discussion or effluent limitations section of the fact sheet will document narrative criteria applicable to the receiving water. Reviewers can also check EPA's [State-Specific Water Quality Standards Effective under the Clean Water Act \(CWA\)](#) to determine narrative criteria for the permit's receiving water to verify applicable narrative criteria. Under 40 CFR 131.11(b), states should develop numeric criteria where possible and narrative criteria where numeric criteria cannot be established or to supplement numeric criteria. All states have adopted narrative water quality criteria to supplement numeric criteria. Narrative criteria are statements that describe the desired water quality goal for a waterbody. Narrative criteria, for example, might require that discharges be "free from toxics in toxic amounts" or be "free of objectionable color, odor, taste, and turbidity." Narrative criteria can be the basis for limiting specific pollutants for which the state does not have numeric criteria (40 CFR 122.44(d)(1)(vi)) or they can be used as the basis for limiting toxicity using WET requirements where the toxicity has not yet been traced to a specific pollutant or pollutants (40 CFR 122.44(d)(1)(v)). For toxic pollutants, EPA's WQS regulation at 40 CFR 131.11(a)(2) requires states to develop implementation procedures for toxics narrative criteria that address how the state intends to regulate point source discharges of toxic pollutants to water quality-limited segments.

Toxicity testing requirements in NPDES permits protect aquatic life from the aggregate toxic effect of a mixture of pollutants in an effluent or ambient sample by measuring the degree of response of exposed aquatic test organisms to a sample. The WET approach is useful for complex effluents where it might be infeasible to identify and regulate all toxic pollutants in the effluent, or where parameter-specific effluent limitations are set but the combined effects of multiple pollutants may result in an adverse risk to aquatic life. The WET approach allows a permit writer to implement numeric criteria for toxicity included in a state's WQS or to be protective of a narrative "no toxics in toxic amounts" criterion. Like the parameter-specific approach, the WET approach allows permitting authorities to control toxicity in effluents before toxic impacts occur or may be used to help return water quality to a level that will meet designated uses.

### 4.3 Final Effluent Limitations

This section of the checklist evaluates the permit writer's documentation of effluent limitation development, anti-backsliding evaluation, and antidegradation analysis.

**1. Did the fact sheet include limit development calculations for each pollutant with a numeric pollutant limit or a rationale for each pollutant with a BMP or other non-numeric limit?**

The fact sheet must contain any calculations or other necessary explanation of the derivation of effluent limitations and conditions, per 40 CFR 124.56(a).

BMPs may be implemented when numeric effluent limitations are infeasible (i.e., cannot be calculated), or the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA (40 CFR 122.44(k)). If the permit contains a BMP, the fact sheet should discuss why BMPs are necessary, and when BMPs are implemented in place of a WQBEL, the fact sheet should provide an explanation as to why it is infeasible to calculate a numeric limit (40 CFR 124.56(a)).

***a) If no, which pollutants did not have documentation of calculations or rationale?***

If the fact sheet does not provide documentation of effluent limitation calculations for specific pollutants, list the pollutants without calculations or other explanation.

**2. Were final effluent limitations protective of all applicable CWA standards, including both technology and water quality standards?**

When determining the final effluent limitations for a permit, the permit writer must ensure that all applicable statutory and regulatory requirements, including technology and water quality standards, are fully implemented. The permit writer determines the calculated limitations (TBELs, WQBELs, or some combination of the calculated limitations) that will ensure that all applicable CWA standards are met.

***a) Did the fact sheet correctly describe the basis (technology or water quality) for each of the final effluent limits?***

Fact sheets must contain a summary of the basis for the draft permit conditions (40 CFR 124.8(b)(4)) and any other necessary explanation of the derivation of specific effluent limitations and conditions (40 CFR 124.56(a)). The permit writer should clearly explain in the fact sheet whether the final limitation is technology- or water quality-based. Often the fact sheet includes a table listing each pollutant limit and its basis.

**3. Were permit limitations expressed as both short-term (daily maximum or average weekly) and long-term (average monthly) limitations, consistent with 40 CFR 122.45(d)?**

All effluent limitations for continuous discharges must be expressed, unless impracticable, as both average monthly limits (AMLs) and maximum daily limits (MDLs) for non-POTWs, and average monthly limits (AMLs) and average weekly limits (AWL) for POTWs (40 CFR 122.45(d)).

In TSD Section 5.2.3, EPA recommends establishing an MDL, rather than an AWL, for discharges of toxic pollutants from POTWs. Section 6.4.1.4 of the PWM provides additional information about calculating average monthly limitations and maximum daily limitations for WQBELs. Note that for the secondary treatment standards, the 30-day and 7-day averages would still apply.

For discharges that are not continuous, the permit writer must consider the following factors from 40 CFR 122.45(e), as appropriate:

- (1) Frequency (e.g., a batch discharge shall not occur more than once every 3 weeks);
- (2) Total mass (e.g., not to exceed 100 kg of zinc and 200 kg of chromium per batch discharge);
- (3) Maximum rate of discharge of pollutants during the discharge (e.g., not to exceed 2 kilograms of zinc per minute); and

- (4) Prohibition or limitation of specified pollutants by mass, concentration, or other appropriate measure (for example, shall not contain at any time more than 0.1 mg/l zinc or more than 250 grams of zinc in any discharge).

**a) If no, for which pollutants:**

List any pollutants for which short-term and long-term limits were not applied.

**b) If no, did the fact sheet provide justification for the alternate limit basis?**

Select “N/A” if short-term and long-term limits were appropriately applied for all pollutants. Select “Yes”, “No”, or “Uncertain” to indicate whether the fact sheet described the basis for any alternate limits (40 CFR 124.56).

If yes, describe the rationale provided.

**4. Were final permit limits expressed in appropriate units of measure (i.e., concentration, mass, standard units)?**

The regulations at 40 CFR 122.45(f)(1) require that all permit limitations, standards, or prohibitions be expressed in terms of mass except in any of the following cases:

- For pH, temperature, radiation or other pollutants that cannot appropriately be expressed by mass limitations.
- When applicable standards and limitations are expressed in terms of other units of measurement.
- If in establishing permit limitations on a case-by-case basis under 40 CFR 125.3, limitations expressed in terms of mass are infeasible because the mass of the pollutant discharged cannot be related to a measure of operation, and permit conditions ensure that dilution will not be used as a substitute for treatment.

*For POTWs:* Secondary treatment standards require that pH be expressed in standard units. BOD<sub>5</sub> (or an alternative) and TSS must be concentration-based (e.g., mg/l), though permit writers might choose to include mass-based limits (e.g., lbs/day) for BOD<sub>5</sub> and TSS as well. Section 5.1.3.2 of the PWM provides additional information about appropriate units of measure for POTWs.

*For non-POTWs:* Limitations based on ELGs can be expressed various ways, such as mass- or concentration-based numeric limits (e.g., lbs/day, mg/l), numeric limits established at minimum levels, other expressions for numeric limitations (e.g., pH, temperature, radiation), and nonnumeric effluent limits (e.g., BMPs). The limitations as expressed in an ELG might need to be translated into an appropriate form to be included in an NPDES permit. Section 5.2.1.3 of the PWM discusses the types of limitations in ELGs.

The type of limitation (i.e., mass, concentration, or standard units) calculated for a specific pollutant at a facility depends on the type of pollutant and the way limitations are expressed in the applicable WQS or ELGs.

**5. (For reissued permits) Were all limits at least as stringent as those in the previous permit?**

With limited exceptions (described below in 5.b), the anti-backsliding statutory (CWA section 402(o)(1)) and regulatory (40 CFR 122.44(l)(1)) provisions prohibit the renewal, reissuance, or modification of an existing NPDES permit that contains effluent limitations, standards, or conditions that are less stringent than those established in the previous permit. The anti-backsliding statutory and regulatory provisions apply to different types of permit terms: 1) CWA section 402(o) applies to WQBELs and other effluent limitations based on state standards and technology-based effluent limits developed on a BPJ-basis that

are subsequently revised based on a promulgated ELG, and 2) 40 CFR 122.44(l) applies to all other effluent limitations, including effluent limitations based on federal effluent guidelines (TBELs); standards; or conditions (e.g., BMPs).

The PQR reviewer should compare the effluent limits from the current permit to those in the previous permit to determine whether those limits are at least as stringent in the reissued permit. A stringency comparison of standards or conditions between permits is not required, just effluent limitations.

***a) If no, which limits were not as stringent:***

If the comparison indicates that a current limit is less stringent than in the previous NPDES permit, then the PQR reviewer should specify which parameters have less stringent limits.

***b) If no, did the fact sheet discuss whether “anti-backsliding” provisions were met?***

If backsliding occurred, the fact sheet should include information showing how less stringent effluent limitations are consistent with the provisions that allow backsliding (40 CFR 124.8(a) and 124.8(b)(4)). Examples of circumstances that allow backsliding include:

- Material and substantial alterations or additions to the permitted facility (for WQBELs or TBELs developed on a BPJ-basis modified based on a subsequently promulgated effluent guideline under CWA section 402(o)(2)(A), or for other effluent limitations, standards or conditions under 40 CFR 122.44(l)(1) and 40 CFR 122.62(a)(1)).
- Availability of new information that was not available at the time of permit issuance and that would have justified a less stringent effluent limitation (for WQBELs or TBELs developed on a BPJ-basis modified based on a subsequently promulgated effluent guideline under CWA section 402(o)(2)(B)(i), or for other effluent limitations, standards or conditions under 40 CFR 122.44(l)(1) and 40 CFR 122.62(a)(2)).

CWA sections 402(o)(2) and 303(d)(4), 40 CFR 122.44(l), and Section 7.2 of the PWM provide more information about backsliding.

***i. If yes, was the discussion sufficient?***

Fact sheets must provide the significant factual, legal, methodological and policy questions considered in preparing the draft permit (40 CFR 124.8(a)). This would include identifying precisely which of the anti-backsliding provisions at CWA sections 402(o)(2) or 303(d)(4), or 40 CFR 122.44(l) were applied to allow backsliding. As a general guide:

- 1) **WQBEL Backsliding:** For WQBELs, and all other limits based on a state standard, a less stringent limit is allowed if an exception is met under CWA section 402(o)(2) or if the limit is in compliance with CWA section 303(d)(4). The fact sheet anti-backsliding discussion should discuss one of these CWA sections to justify backsliding. Additionally, the requirements of CWA section 402(o)(3)—that the limit is not less stringent than applicable ELGs and will not result in a violation of water quality standards—will need to be met and discussed. Note, the analysis cannot justify a less stringent WQBEL based on the regulatory provisions under 40 CFR 122.44(l)(1) or (2).
- 2) **TBEL Backsliding:** For TBELs based on BPJ that are modified based on a subsequently promulgated ELG, an uncommon occurrence, the limit can be made less stringent only if there is an applicable exception under CWA section 402(o)(2). For all other TBELs, 40 CFR 122.44(l)(1) provides that a less stringent limit is allowed if “the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued and would constitute

cause for permit modification . . . under [40 CFR 122.62].” Thus, for any such less stringent TBEL, the fact sheet discussion should reference 40 CFR 122.44(l)(1) and one of the causes for modification under 40 CFR 122.62(a). For such TBELs, the analysis cannot justify a less stringent TBEL based on the statutory provisions under CWA sections 402(o)(2) or 303(d)(4).

In addition to referencing the specific provisions that allow backsliding, the fact sheet should elaborate on how the provisions were satisfied. For example, if the “new information” provision was applied, the fact sheet should describe what information became available that affected the new permit limits. As another example, if there were substantial alterations to the facility, the fact sheet should specify how the facility was altered and how those alterations affected permit conditions. It is not sufficient to provide a general or boilerplate statement that anti-backsliding was evaluated, and all provisions were met.

**Specify:**

Describe how the fact sheet discussed anti-backsliding.

**6. (For reissued permits) Did the permit restrict pollutant loadings to levels at or below those in the previous permit?**

If the permit indicated that limits in the current permit were not as stringent as in the previous permit (i.e., “No” on previous above), then pollutant allowable loadings were increased. Additionally, if the discharge volume increases but the concentration limits remain the same, then pollutant loadings have increased.

Select “Yes”, “No”, or “Uncertain” to indicate whether the permit showed that there would be new or increased loadings.

**a) If no, did the fact sheet indicate that an “antidegradation” review was performed in accordance with the state’s approved antidegradation policy?**

If permits did not restrict pollutant loading to levels at or below those in the previous permit, fact sheets should include information showing how effluent limitations are consistent with the state’s antidegradation requirements (40 CFR 124.8(a) and 124.8(b)(4)). The reviewer should determine whether the record indicated that an antidegradation review was performed and whether it was in accordance with the state policy.

Each state must develop, adopt, and retain a statewide antidegradation policy regarding WQS and establish procedures for its implementation through the water quality management process (40 CFR 131.12). The state’s antidegradation implementation procedures specify how it will determine on a case-by-case basis whether, and to what extent, water quality may be lowered.

All water bodies are classified under three categories for purposes of protection under a state’s antidegradation policy (40 CFR 131.12(a)(1)-(3)), and are generally referred to as Tier 1, Tier 2, and Tier 3 waters. Under Tier 1, an NPDES permit must include limits sufficient to maintain and protect water quality necessary to protect existing uses – i.e., uses actually attained at any time on or after November 28, 1975. Tier 2 protects high-quality waters, where water quality exceeds the minimum levels necessary to protect fish and wildlife propagation and recreation in and on the water. Water quality in Tier 2 waters may only be lowered after the state follows an antidegradation review process, described in 40 CFR 131.12, that such a lowering is necessary and important and that existing uses will be protected. Under Tier 3, water quality may not be lowered in high quality waters that constitute an Outstanding National Resource Water (ONRW), such as waters of national and state parks, wildlife refuges and waters of exceptional recreational or ecological significance. Section 6.1.1.3 of the PWM includes additional information about state antidegradation policies.

A permit writer should check the state's antidegradation policy and implementation methods to determine what tier(s) of protection, if any, it has assigned the receiving water. If it is determined that an antidegradation review is necessary and one is conducted, this review should be discussed in the fact sheet. Section 6.6 of the PWM includes additional information about antidegradation reviews.

**Specify:**

Specify how the fact sheet and the permit record indicated that an antidegradation review was performed in accordance with the state's approved antidegradation policy and implementation procedures.

**7. Did the permit contain novel/innovative approaches or provisions to control pollution (e.g., water quality trading, watershed-based permitting, adaptive management, plant optimization)?**

Examples for different novel/innovative approaches or provisions are briefly described below. If the permit incorporates any of these approaches or provisions, identify the approach and describe how it was incorporated into the permit. Also describe any other innovative permitting approaches not captured in the list below.

**Water Quality Trading.** Water quality trading involves the purchase of pollutant reduction credits, typically by a point source discharger from other point source dischargers and/or nonpoint sources, to provide flexibility in meeting water quality-based permit limits. For example, a credit buyer might purchase water quality improvements (e.g., reduction in pounds of a nutrient discharge) from a credit seller instead of installing additional treatment technology at its own facility.

EPA's 2009 [Water Quality Trading Toolkit](#) provides detailed information about how trading programs can be designed and implemented and how trading provisions can be reflected in NPDES permits. Additional information can be found on EPA's [Water Quality Trading webpage](#).

The PQR reviewer should note whether the permit describes water quality trading as a mechanism to meet the WQBEL, and if so, whether the permit file describes provisions of the trading program such as the trading baseline, trade and offset ratios applied, and program participants.

**Watershed-based permitting.** Watershed-based permitting is an approach to NPDES permitting that results in permits that are issued on a watershed basis, focused on multiple point sources, and targeted to achieve watershed goals. This approach integrates permit development with monitoring, WQS, TMDL, nonpoint sources, source water protection and other programs. Watershed-based permitting may include a variety of activities, ranging from synchronizing permits within a basin to developing WQBELs using a multiple discharger modeling analysis. Additional information can be found on EPA's [Watershed-Based Permitting webpage](#).

The three main types of watershed-based permits include:

- **Integrated municipal permits.** A single permit issued to a municipality or multiple municipalities that bundle permit requirements for a number of point sources within a watershed, or cover multiple watersheds.
- **Multisource watershed-based permits.** A single permit issued to multiple entities to address specific pollutant parameter(s) from multiple sources within the same watershed (e.g, a permit for only Total Nitrogen). Entities would still be issued separate individual permits for any other pollutants or conditions.

- **Coordinated individual permits.** Multiple individual permits with WQBELs and other conditions developed using a holistic analysis of the watershed conditions, and sometimes include synchronized expiration and reissuance or effective dates.

Characteristics of a watershed-based permit may include the following:

- Defined geographic focus within a watershed or watersheds
- Permit limits developed based on a model, watershed analysis, or TMDL
- Synchronized permits by basin or watershed
- Requirements for multiple facilities owned by a single entity that would otherwise be subject to separate permits
- Has water quality trading provisions
- Permit is for multiple permittees as co-permittees, or as a compliance association
- Permit is for only one or two pollutant parameters
- Overlay permit requires permittee to have another individual permit for other pollutant parameters in addition to the watershed permit

**Adaptive Management Implementation.** While EPA does not have a specific regulatory definition for what “adaptive management” is, it can be described in the NPDES context as a compliance option that allows owners of point and nonpoint sources to work together to improve water quality and meet WQS. Adaptive management recognizes that some pollution, like nitrogen and phosphorus, is the result of a variety of activities and sources; both point and nonpoint source reductions are often needed to achieve WQS.

NPDES permits should specify what the conditions of the adaptive management program require, which would depend on how the state set up their adaptive management program. For example, if special reporting requirements or ambient monitoring is required, the permit should specify when and how the monitoring and reporting should be conducted, and who is responsible for the information. The permit may also include information on how progress will be measured. The permit or fact sheet may also reference an “adaptive management plan”, TMDL, or other watershed plan driving the permit limits. If there are special limits under the adaptive management portion of the permit, this information should be clearly stated in the permit as the basis for any requirements related to the implementation of an adaptive management program.

**Plant Optimization.** Optimization refers to the implementation or improvement of operation and maintenance practices at POTWs to achieve nutrient removal that do not require large capital costs. Some states include permit conditions requiring optimization for POTWs and/or provide guidance to POTWs on achieving low-cost nutrient reductions to meet permit requirements. Additionally, some states include permit conditions requiring POTWs to evaluate pollution prevention measures to reduce nutrient loading into their facilities (e.g., from industrial users). A few states directly incentivize optimization through funding and grant opportunities.

## 5. Pretreatment Questions for POTWs

CWA section 402(b)(8) requires that certain POTWs receiving pollutants from significant industrial sources (subject to CWA section 307(b) standards) establish a pretreatment program to ensure compliance with these standards. The pretreatment program was developed to control industrial (non-domestic) discharges to POTWs and to meet the following objectives:

- To prevent pass through: a discharge from a POTW into waters of the United States in quantities or concentrations which (alone or in conjunction with other discharges) causes a violation of any requirement of the POTW's NPDES permit.
- To prevent interference: a discharge which (alone or in conjunction with other discharges) interferes with POTW processes, including interference with the use or disposal of municipal sludge.
- To improve opportunities to recycle and reclaim municipal and industrial wastewater and sludges.

As prescribed at 40 CFR 403.8(c), 403.8(d) and 403.8(e) and the NPDES regulations at 40 CFR 122.44(j)(2), the requirements to develop and implement a POTW pretreatment program are included as enforceable conditions in the POTW's NPDES permit or biosolids permit.

Section 9.2.1 of the PWM provides an overview of the national pretreatment program. Additional information can be found on the [National Pretreatment Program](#) website and in [Introduction to the National Pretreatment Program](#).

**1. Did the permit contain the requirement at 40 CFR 122.44(j)(1) to identify, in terms of character and volume of pollutants, any SIUs subject to pretreatment standards?**

POTWs are required to identify, in terms of character and volume of pollutants, any Significant Industrial Users discharging into the POTW subject to Pretreatment Standards under section 307(b) of CWA and 40 CFR part 403 (per 40 CFR 122.44(j)(1)). This ongoing requirement is typically included verbatim in the permit. Compliance with this condition ensures that the POTW must collect the required data that would be reported on the permit application, in the pretreatment annual report, and as required by additional standard conditions for POTWs under 40 CFR 122.42(b).

**2. Did the fact sheet identify and characterize any existing industrial dischargers (including hauled industrial waste)?**

A description of existing industrial dischargers in the fact sheet helps ensure that pollutants of concern are appropriately identified from all sources of toxic pollutant discharge. EPA recommends including this information to help explain the applicability of permit conditions and limitations on toxic pollutants.

If yes, provide a description or summary of the information from the fact sheet.

**3. Did the NPDES permit require the POTW to develop or implement an approved pretreatment program?**

The general pretreatment regulations at 40 CFR 403.8(a) require all large POTWs (total design flow greater than 5 mgd) receiving pollutants from IUs which pass through or interfere with the operation of the POTW or are otherwise subject to Pretreatment Standards, and smaller POTWs that accept wastewater from IUs that could affect the treatment plant or its discharges, to establish local pretreatment programs. These local programs must enforce all national pretreatment standards and requirements in addition to any more stringent local requirements necessary to protect site-specific conditions at the POTW.

***a) If yes, did the fact sheet describe the rationale for requiring a pretreatment program?***

EPA recommends the fact sheet describe the rationale for requiring a pretreatment program, because this information also helps to explain the rationale for any permit conditions associated with the pretreatment.



If yes, provide a description or summary of the rationale from the fact sheet.

***b) If yes, did the NPDES permit require the POTW to submit an annual pretreatment report?***

POTWs with approved pretreatment programs must submit an annual report that briefly describes the POTW's program activities, including activities of all participating agencies, if more than one jurisdiction is involved in the local program (40 CFR 403.12(i)).

***i. If yes, did the condition require the applicable data in Appendix A to 40 CFR part 127?***

The annual pretreatment report must include, at a minimum, the applicable required data in Appendix A to 40 CFR part 127, as required by 40 CFR 403.12(i). In Appendix A, requirements for annual pretreatment program reports are identified by all data in Table 2 (Required NPDES Program Data) that apply to NPDES group 7 (Pretreatment Program Reports). In addition to basic facility and permit information, this includes compliance monitoring activity information, such as data on inspections, sampling, enforcement actions taken, penalties assessed, and IU permit status.

***ii. If yes, did the condition require a summary of changes to the pretreatment program that have not been previously reported, and any other relevant information requested by the approval authority?***

The annual pretreatment report must include a summary of changes to the POTW's pretreatment program that have not been previously reported to the approval authority and any other relevant information requested by the approval authority (40 CFR 403.12(i)).

***4. If developing a new program, was a due date of one year or less included?***

After July 1, 1983, any POTW identified as being required to develop a POTW Pretreatment Program must develop and submit the program for approval as soon as possible, but no later than one year (40 CFR 403.8(b)).

***5. If implementing an existing program:***

***a) Did the NPDES permit record identify the approval and most recent modification date(s) of the approved pretreatment program?***

The NPDES permit record should include a history of the NPDES pretreatment program for the POTW, including the approval date for the approved pretreatment program and modification dates, if applicable. EPA recommends that a brief summary of the pretreatment program history be included in the fact sheet. This information helps ensure that the correct version of the pretreatment program is being implemented.

***b) Did the NPDES permit require the POTW to prepare, maintain, and/or implement the following 40 CFR 403.8(f)(1)-(6) requirements:***

- i. Legal authority for the POTW to apply and enforce pretreatment conditions of the CWA.
- ii. Procedures to ensure compliance with the requirements of a Pretreatment Program.
- iii. Sufficient resources and qualified personnel to carry out the authorities and procedures.
- iv. Development of local limits.
- v. An enforcement response plan for IU noncompliance.
- vi. A list of its IUs meeting the criteria in 40 CFR 403.3(v)(1), which must be made available to the Pretreatment Approval Authority.

A POTW pretreatment program must include the six program elements identified in 40 CFR 403.8(f)(1-6), which are paraphrased in this question. These authorities and procedures shall at all times be fully and effectively exercised and implemented (40 CFR 403.8(f)). Indicate, for each provision, whether the permit required the POTW to prepare, maintain, and/or implement the required condition.

***c) Did the NPDES permit require a written technical evaluation of the need to revise previously adopted local limits, following permit reissuance/modification, in accordance with 40 CFR 122.44(j)(2)(ii)?***

POTWs must develop and enforce local limits as part of their pretreatment programs (40 CFR 403.8(f)). Because the issuance or reissuance of a new NPDES permit may include new requirements, POTWs must evaluate the need to revise local limits (40 CFR 122.44(j)(2)(ii)) to ensure that the local limits address those new requirements.

***i. If yes, did the permit include a submission date for the evaluation and local limits revisions?***

NPDES regulations do not specify a deadline for submitting a written technical evaluation of the need to revise previously adopted local limits, but EPA recommends an enforceable deadline be included in the permit.

***ii. If yes, was the submission date within 1 year from the permit issuance/modification date?***

EPA recommends a deadline of one year from the permit reissuance/modification date for submitting a written technical evaluation of the need to revise previously adopted local limits, the same deadline required by 40 CFR 403.8(b) for submitting a pretreatment program for approval.

***6. If the POTW has chosen to receive electronic documents, does the NPDES permit require the POTW to satisfy the electronic reporting requirements of 40 CFR part 3?***

Per the pretreatment program requirements at 40 CFR 403.8(g), a POTW that chooses to receive electronic documents must satisfy the electronic reporting requirements of 40 CFR part 3. The electronic reporting requirements identify procedures for obtaining authority to allow electronic document submission and outlines electronic reporting system requirements.

***7. For POTWs without a pretreatment program: Did the record identify a history of interference and/or pass through due to industrial discharges?***

POTWs with one or more SIUs must identify, in the permit application, whether any problems at the POTW (e.g., upsets, pass through, interference) have been attributed to the SIU in the past four and one-half years (40 CFR 122.21(j)(6)(ii)(G)). Additionally, it is recommended that the fact sheet identify any interference and/or pass through history.

***a) If yes, did the NPDES permit require development and submittal of local limits?***

For POTWs not required to develop or implement a pretreatment program, and for which pollutants contributed by an IU have caused or will likely cause interference or pass through, the POTW must develop and enforce specific effluent limits on the IU (40 CFR 403.5(c)(2)). These limits are considered local limits and deemed Pretreatment Standards (40 CFR 403.5(d)).

***b) If yes, did the permit include a submission date for local limits?***

NPDES regulations do not specify a deadline for submitting local limits when development or implementation of a pretreatment program is not required, but EPA recommends an enforceable deadline be included in the permit.

***c) If yes, was the submission date within 1 year from the permit reissuance/modification date?***

EPA recommends a deadline of one year from the permit reissuance/modification date for submitting local limits, the same deadline required by 40 CFR 403.8(b) for submitting a pretreatment program for approval.

## **6. Monitoring and Reporting Requirements**

This section of the checklist summarizes the permit requirements for monitoring and reporting, and the basis of those requirements.

The NPDES regulations at 40 CFR 122.44(i) and 122.48, as well as the standard conditions at 40 CFR 122.41(j), require facilities discharging pollutants to waters of the United States to evaluate compliance with the effluent limitations established in their permits and provide the results to the permitting authority. Inappropriate or incomplete monitoring requirements can lead to inaccurate compliance determinations. Chapter 8 of the PWM provides additional information about monitoring and reporting. Specific state procedures often vary and should be consulted to ensure that the permit is developed consistent with state requirements. State monitoring and reporting requirements must be at least as stringent as those in the NPDES regulations.

Generally, monitoring and reporting requirements are either incorporated into the effluent limitations table for each parameter or in a separate monitoring table for each parameter in the permit.

### **1. Did the permit identify monitoring location(s)?**

The NPDES regulations do not prescribe exact monitoring locations; rather, the permit writer is responsible for determining the most appropriate monitoring location(s) and specifying them in the permit. Ultimately, the permittee is responsible for providing a safe and accessible sampling point that is representative of the discharge (40 CFR 122.41(j)(1)). Monitoring locations should be specified, as applicable, for influent, effluent, source water, internal flows, and receiving waters. Effluent monitoring must be included for each outfall to enable assessment of compliance with effluent limitations (40 CFR 122.41(i)).

### **2. Were any monitoring requirements (type, interval, frequency) insufficient to assess compliance with an effluent limitation?**

Permits must contain monitoring requirements including the type, intervals, and frequency sufficient to yield data that are representative of the monitored activity (40 CFR 122.48(b)). The monitoring requirements should be sufficient to characterize the effluent quality and to detect events of noncompliance.

The permit writer must specify the monitoring type (sample collection method) for all parameters required to be monitored in the permit on the basis of the characteristics of each specific discharge. Certain sample collection and storage requirements are identified as part of the analytical methods specified in Part 136. The two most frequently used sampling methods are grab and composite. Certain types of sampling may require different sampling intervals, such as sequential composite samples (e.g., samples collected every 15 minutes, composited into separate containers each hour) or flow-proportional composite samples (e.g., 200 milliliters sample collected for every 5,000 gallons of flow). Section 8.1.4 of the PWM and Chapter 5 (Sampling) of the [NPDES Compliance Inspection Manual](#) provide additional information about sample types.

Monitoring frequency for each parameter should be determined on a case-by-case basis. Some states have their own monitoring guidelines that can help a permit writer determine an appropriate monitoring frequency. Considerations for monitoring frequencies include: the design capacity of the treatment facility, type of treatment, location of discharge, frequency of discharge (batch, continuous), compliance history, nature of pollutants, number of monthly samples used in developing permit limits, tiered limits,

correlated parameters, and cost of monitoring relative to the permittee's capabilities. Common monitoring frequencies are continuous, daily, five times a week, three times a week, weekly, monthly, quarterly, semi-annually, semi-annually (specified seasons), and annually. Section 8.1.3 of the PWM provides additional information about monitoring frequencies.

EPA recommends that the fact sheet discuss the basis of the monitoring requirements.

### **3. Did the permit require toxicity testing for WET?**

If there are WET limits in the permit, monitoring for compliance with those limits and reporting of the data to the permitting authority is required (40 CFR 122.44(i) and (j), 40 CFR 122.48). Including WET monitoring in permits even when a limit is not required supports the reasonable potential analysis (RPA) process by ensuring data are available for a WET RPA.

Toxicity tests measure the degree of response of aquatic test organisms exposed to an effluent or ambient sample mixed in some proportion with control water (e.g., laboratory water or a non-toxic receiving water sample). Sections 6.5 and 8.2.4 of the PWM, EPA's TSD, EPA's [WET Guidance](#) documents (WET Guidance), and EPA's [Whole Effluent Toxicity Methods](#) manuals (Toxicity Test Methods Manuals) provide additional information about toxicity testing.

#### ***a) If yes, identify the type of testing (check all that apply):***

If the permit includes toxicity testing for WET, then indicate which type of test is required: acute, chronic, or both.

#### ***b) If yes, did the permit include specific toxicity testing requirements (e.g., test species, test endpoints)?***

There are multiple EPA toxicity test methods available for use in NPDES permits (40 CFR Part 136). Selection of the appropriate test species and certain test details not directly specified in the regulations (e.g., dilution water type, dilution series, statistical endpoint) are to be determined based on facility information; applicable state regulation, policy, and procedures; and testing requirements and recommendations from EPA's Toxicity Test Methods Manuals.

#### ***c) If yes, did the fact sheet include information indicating the consideration of species sensitivity when selecting the WET test to be conducted?***

Organisms used in toxicity tests are indicators or surrogates for the aquatic community to be protected under applicable WQS, and a measure of the actual biological impact from exposure to toxic pollutants. Regulations at 40 CFR 122.44(d)(1)(ii) for reasonable potential procedures require that species sensitivity be considered for WET testing. As stated in Section 3.3.3 of EPA's TSD, conducting toxicity tests using three species (for example, a vertebrate, an invertebrate, and a plant such as an algae) quarterly for one year is recommended to adequately assess the variability of toxicity observed in effluents. The fact sheet should include information indicating the permit writer considered the species sensitivity when selecting the WET test to be conducted (40 CFR 124.8(b)(4)).

#### ***d) If yes, did the permit include necessary follow up actions to take if WET tests do show toxicity (e.g., accelerated monitoring, TIE/TRE)?***

Toxicity testing only identifies that there is toxicity and not the cause of toxicity. If toxicity is observed in a WET test that results in non-compliance with the permit's WET limits or indicates an excursion of the applicable WET WQS, accelerated monitoring and toxicity identification evaluations/toxicity reduction evaluations (TIE/TRE) requirements may be used to identify the cause of toxicity. EPA's TSD Section 5.8.3 and EPA's WET Guidance documents provide additional information about TIE/TRE procedures.

#### 4. Did the permit require use of sufficiently sensitive 40 CFR Part 136 methods capable of quantifying pollutants at concentrations equal to or less than the permit limits?

Permit monitoring regulations at 40 CFR 122.44(i)(1)(iv) require that, when available, permittees use sufficiently sensitive test procedures approved under Part 136 for compliance monitoring. An analytical method is sufficiently sensitive when:

- (1) The method minimum level (ML) is at or below the level of the effluent limit established in the permit for the measured pollutant or pollutant parameter; or
- (2) The method has the lowest ML of the analytical methods approved under 40 CFR part 136 or required under 40 CFR chapter I, subchapter N or O for the measured pollutant or pollutant parameter.

The analytical methods in Part 136 are established for conventional, toxic (priority), and some nonconventional pollutants. If an analytical method cannot be identified from Part 136, the permit should specify the analytical method(s) to be used (40 CFR 122.44(i)(1)(iv)(B)). There are also procedures to apply for approval of alternative test methods in accordance with 40 CFR 136.4.

#### 5. Did the permit specify the method, frequency, and timing of submission of discharge monitoring reports (DMRs) and other required reports to the permitting authority?

The NPDES regulations require the permittee to maintain records and report on monitoring activities. The regulations at 40 CFR 122.41(l)(4)(i) require that monitoring results be reported on a DMR. The permittee must report data required by the permit and any additional data it has collected consistent with permit requirements.

##### *a) Did the permit require at least annual reporting for all limited parameters?*

All facilities must submit reports (on discharges and sludge use or disposal) at least annually, though frequency is dependent on the nature and effect of the discharge or sludge use or disposal, as required by 40 CFR 122.44(i)(2). Thus, the permit writer can require reporting more frequent than annually.

##### *b) Did the permit require the permittee to submit DMRs electronically?*

EPA's NPDES Electronic Reporting Rule became effective December 21, 2015. The rule requires NPDES permittees to submit DMRs to the permitting authority electronically. Permittees were required to submit DMRs electronically starting December 21, 2016 (one year after the effective date of the final rule).

##### *c) If any of the following reports were required by the permit, did the permit require the permittee to submit the reports electronically, no later than December 21, 2025, regardless of whether a tool for electronic submission is currently available?*

- i. Sewage Sludge/Biosolids Annual Program Reports
- ii. Concentrated Animal Feeding Operation (CAFO) Annual Program Reports
- iii. Municipal Separate Storm Sewer System (MS4) Program Reports
- iv. Pretreatment Program Reports
- v. Sewer Overflow/Bypass Event Reports
- vi. CWA Section 316(b) Annual Reports

On November 2, 2020, EPA published the "[Phase 2 Extension Rule](#)," which provides states and EPA additional time to implement electronic reporting for certain NPDES requirements. The final rule extended the compliance deadline by five years (from December 21, 2020 to December 21, 2025) for implementation of Phase 2 of the 2015 NPDES Electronic Reporting Rule. The reports listed above are subject to the Phase 2 electronic reporting requirements. As described in 40 CFR 127.26(f), permits must contain requirements to submit all of these reports electronically by December 21, 2025, including any

permit issued before December 21, 2025 with a coverage period that includes December 21, 2025. This requirement must be included, even if a specific tool for electronic reporting has not yet been developed.

#### 6. POTWs: Did the permit require monitoring and/or reporting for combined sewer overflows (CSOs), sanitary sewer overflows (SSOs), or blending?

Permitting authorities might want to require monitoring for overflows.

*If yes, specify.*

If the permit required monitoring for CSOs, SSOs, or blending, specify the requirements documented in the record.

#### 7. Non-POTWs: If the monitoring frequency was less than annual for ELG-based limits, did the record indicate that the facility applied for and was granted a monitoring waiver?

Monitoring waivers for certain guideline-listed pollutants can be provided if a discharger has demonstrated through sampling and other technical factors that the pollutant is not present in the discharge or is present only at background levels from intake water and without any increase in the pollutant due to activities of the discharger. This waiver is good only for the term of the permit and is not available during the term of the first permit issued to a discharger. Any request for this waiver must be submitted when applying for a reissued permit or modification of a reissued permit (40 CFR 122.44(a)(2)(i)-(iii)).

##### *a) If yes, did the permit specifically incorporate this waiver?*

Any grant of the monitoring waiver must be included in the permit as an express permit condition (40 CFR 122.44(a)(2)(iv)) and the reasons supporting the waiver must be documented in the permit's fact sheet or statement of basis (40 CFR 124.56(b)(1)(vi)).

## 7. Standard and Special Conditions

This section of the checklist evaluates the inclusion of the standard conditions required by 40 CFR 122.41 and 122.42 (discussed in Chapter 10 of the PWM), as well as special conditions for best management practices (BMPs) and compliance schedules (discussed in Chapter 9 of the PWM).

### 1. Did the permit contain all 40 CFR 122.41 standard conditions?

The regulations at 40 CFR 122.41 specify the standard conditions applicable to all NPDES permits. The list of standard conditions from 40 CFR 122.41 is included in full in Appendix A of this companion and paraphrased with checkboxes below.

List of Standard Conditions

- |  |  |
|--|--|
| <input type="checkbox"/> (a) Duty to comply                                | <input type="checkbox"/> (l) Reporting requirements  |
| <input type="checkbox"/> (b) Duty to reapply                               | <input type="checkbox"/> (1) Planned change  |
| <input type="checkbox"/> (c) Need to halt or reduce activity not a defense | <input type="checkbox"/> (2) Anticipated noncompliance   |
| <input type="checkbox"/> (d) Duty to mitigate                              | <input type="checkbox"/> (3) Transfers   |
| <input type="checkbox"/> (e) Proper operation and maintenance              | <input type="checkbox"/> (4) Monitoring reports  |
| <input type="checkbox"/> (f) Permit actions                                | <input type="checkbox"/> (5) Compliance schedules  |
| <input type="checkbox"/> (g) Property rights                               | <input type="checkbox"/> (6) Twenty-four-hour reporting  |
| <input type="checkbox"/> (h) Duty to provide information                   | <input type="checkbox"/> (7) Other non-compliance  |
| <input type="checkbox"/> (i) Inspections and entry                         | <input type="checkbox"/> (8) Other information   |
| <input type="checkbox"/> (j) Monitoring and records                        | <input type="checkbox"/> (9) Identification of the initial recipient for NPDES electronic reporting data |
| <input type="checkbox"/> (k) Signatory requirements                        | <input type="checkbox"/> (m) Bypass  |
|  | <input type="checkbox"/> (n) Upset   |

If the reviewers are confident that identical standard conditions are included in each of the permits subject to review, a full review of these permit conditions can be conducted once and the findings can be deemed applicable to all of the permits reviewed.

## **2. Was the standard condition language at least as stringent as 40 CFR 122.41?**

Standard conditions shall be incorporated into a permit either expressly (verbatim from the regulations) or by reference to the regulations (40 CFR 122.41). EPA recommends that the standard conditions be listed expressly to ensure that the permittee can reference them easily. Many states have developed an attachment for NPDES permits that includes the federal standard conditions. In some permits, standard conditions are included as a separate section in the permit; in others, they might be woven throughout. Some states provide additional standard conditions or more stringent variations of the federal requirements.

The reviewer should compare the permit's standard conditions to the requirements in 40 CFR 122.41 to ensure they are at least as stringent. If a separate attachment is used to incorporate standard conditions into permits, a full review of the separate attachment can be conducted once and the findings can be deemed applicable to all of the permits reviewed.

### ***a) If no, specify.***

If the permit language for any of the standard conditions at 40 CFR 122.41 is less stringent than that in EPA's regulations, then specify which.

## **3. POTWs: Did the permit contain the additional standard conditions at 40 CFR 122.42(b)(1)–(3) regarding notification of changes in pollutants discharged to the POTW?**

According to the federal regulations at 40 CFR 122.42(b), all POTWs must provide adequate notice to the Director of any new introduction of pollutants into the POTW from an indirect discharger and any substantial change in the volume or character of pollutants being introduced into the POTW. The notice shall include information on the quality and quantity of effluent introduced into the POTW, and any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW. The standard condition language is included in full in Appendix A of this companion.

This condition is in addition to (and is not superseded by) any pretreatment program requirements, as it provides notice to the NPDES Permitting authority of potential new or increased pollutants which might affect the RPA, as well as potential need for pretreatment program development and local limits reevaluation.

If the permit authorizes a POTW to discharge, the permit must provide this standard condition expressly or by reference. The state might include it with its other standard conditions or provide it separately.

## **4. Non-POTWs: Did the permit contain the additional standard conditions at 40 CFR 122.42(a)(1)–(2) regarding notification levels?**

According to the federal regulations at 40 CFR 122.42(a), all existing non-POTWs (manufacturing, commercial, mining, and silvicultural dischargers) must notify the Director as soon as they know or have reason to believe that any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit. The Director must be notified of such a discharge if that discharge will exceed specified "notification levels." The condition specifies different notification levels for discharges on a routine or frequent basis and for discharges on a non-routine or infrequent basis. The standard condition language is included in full in Appendix A of this companion.

If the permit authorizes a non-POTW to discharge, the permit must provide this standard condition expressly or by reference. The state might include it with its other standard conditions or provide it separately.

**5. Did the permit require specific best management practices (BMPs) and/or development of a BMP plan? (Check all that apply)**

Specific BMPs       BMP Plan

In general, BMPs are actions or procedures to prevent or reduce the discharge of pollution to waters of the United States. The definition of BMPs includes schedules of activities, prohibitions of practices, maintenance procedures, treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, and drainage from raw material storage areas (40 CFR 122.2).

Permits may include BMPs to control or abate the discharge of pollutants when:

- Authorized under CWA section 304(e) to control toxic pollutants and hazardous substances from ancillary industrial activities (40 CFR 122.44(k)(1)). Where ELGs require BMPs or development of a BMP plan, permit writers must include such requirements in permits.
- Authorized under CWA section 402(p) to control storm water discharges (40 CFR 122.44(k)(2)).
- Numeric effluent limitations are infeasible (40 CFR 122.44(k)(3)).
- The practices are reasonably necessary to achieve effluent limitations and standards or to carry out the provisions of the CWA (40 CFR 122.44(k)(4)).

There are two ways a permit writer can include BMP requirements in a permit:

(1) Identifying specific BMPs that the permittee must comply with.

Common examples include management techniques that attempt to avoid contact between pollutants and water as a result of leaks, spills, and improper waste disposal, such as installing process control alarms, use of containment structures, and implementing good housekeeping practices.

(2) Requiring the permittee to develop their own BMP plan.

Examples include pollution prevention plans, pollution minimization plans, stormwater management plans, and nutrient management plans. If a permit writer requires a BMP plan, it is the facility's responsibility to develop, implement, and evaluate the success or shortfalls of its own plan. Often, a BMP committee (i.e., a group of individuals within the plant organization) is responsible for developing the BMP plan and assisting the plant management in implementing and updating the BMP plan.

EPA has identified several recommended components of effective BMP plans and detailed each component in the [Guidance Manual for Developing Best Management Practices](#). Some specific provisions the permit might require in the BMP plan include risk identification and assessment, good housekeeping, preventive maintenance, and employee training.

Section 9.1.2 of the PWM provides additional information about BMPs and BMP plans.



## 6. Did the permit include a compliance schedule?

Under CWA section 301(b)(1)(C) and the regulations at 40 CFR 122.47 permit writers can establish schedules of compliance in NPDES permits to give permittees additional time to achieve compliance with their WQBELs. However, a permit writer may not establish a compliance schedule in a permit for TBELs because the statutory deadlines have passed. Section 9.1.3 of the PWM provides additional information about compliance schedules.

### a) If yes, did the permit include the final compliance date?

NPDES compliance schedules must require compliance by the permittee as soon as possible, but may not extend the date for final compliance beyond compliance dates established by the CWA section 301(b)(1)(c) (40 CFR 122.47). Any compliance schedule, including schedules that extend past the expiration date of a permit, must include the final effluent limitations in the permit in order to ensure enforceability of the schedule as required by CWA section 502(17) and 40 CFR 122.2.

### b) If yes, was the schedule otherwise consistent with 40 CFR 122.47 (explanation of need for compliance schedule, interim milestones, compliance as soon as possible)?

In May 2007, the Director of EPA's Office of Wastewater Management issued a memorandum ([Compliance Schedules for Water Quality-Based Effluent Limitations in NPDES Permits](#)) to EPA Region 9, that clarified the requirements of 40 CFR 122.47. The permit writer should consider the principles in this memo when assessing whether a compliance schedule for achieving a WQBEL is consistent with the CWA and its implementing regulations and when documenting the basis for a compliance schedule in a permit. The memo outlines the following considerations:

- Demonstrate that the permittee cannot immediately comply with the new effluent limitation on the effective date of the permit.
- Include in the permit an enforceable *final* effluent limitation and a date by when this will be achieved.
- Justify and document the *appropriateness* of the compliance schedule; factors relevant to a determination that a compliance schedule is appropriate include how much time the discharger had to meet the WQBEL under prior permit(s), and whether there is any need for modifications to treatment facilities, operations, or other measures and, if so, how long it would take to implement such modifications.
- Justify and demonstrate that compliance with the final WQBEL is required *as soon as possible*; factors relevant to a determination that a compliance is required as soon as possible include the steps needed to modify or install treatment facilities, operations, or other measures and the time those steps would take.
- Include an enforceable sequence of events leading to compliance with interim milestones for schedules longer than one year.
- Recognize that a schedule solely to provide time to develop a TMDL or to conduct a use attainability analysis (UAA) is not appropriate.

## 8. Administrative Process

This section of the checklist evaluates the technical requirements and the public notice. This information is generally found in the draft permit, the fact sheet, and supporting attachments.

## 8.1 Revisions and Modifications

This section of the checklist evaluates the permitting authority's administrative processes associated with the issuance of a draft NPDES permit. Federal regulations at 40 CFR 124.2 define a draft permit as a document that indicates the Director's tentative decision to issue or deny, modify, revoke and reissue, terminate, or reissue a permit. After the permit is issued, the fact sheet and permit record are the primary support for defending the permit in the administrative appeals process. Chapter 11 of the PWM provides additional information about NPDES permit administration.

### 1. Was the permit revised between the draft and final permit?

After significant public interest (public comments or a public hearing), a permit might be revised to reflect resolution of issues. In some cases, the language of the final permit might differ from the draft due to correction of transcription errors or omissions.

The reviewer should compare the draft and final permit and the fact sheet to determine whether the permit was revised.

#### *a) If yes, did the record contain documentation of the changes and rationale?*

Fact sheets are required to contain a summary of the basis for the draft permit conditions (40 CFR 124.8) and necessary explanation of the derivation of specific effluent limitations and conditions (40 CFR 124.56). If any changes are made to permit conditions, the fact sheet should be revised to document the changes and provide the updated rationale for the revised conditions. EPA recommends that any other revisions to the permit that would not be addressed in the fact sheet should be described in the permit record.

### 2. After issuance, was the permit modified?

In most cases, a permit will not need to be modified (or revoked and reissued) during its term if the facility can fully comply with permit conditions. However, under certain circumstances, it might be necessary to modify the permit before its expiration date. A permit modification could be triggered in several ways. For example, a representative of the permitting authority might inspect the facility and identify a need for the modification (e.g., the improper classification of an industry), or information submitted by the permittee might suggest the need for a change. In addition, any interested person may make a request for a permit modification.

Except where the permittee consents to a minor modification under 40 CFR 122.63, permit modifications are limited to specific causes identified in 40 CFR 122.62(a) and 122.62(b). Modifications are further discussed in section 11.4.2 of the PWM.

Modifications are often identified on the cover page of the permit, in correspondence, or in the fact sheet.

#### *a) If yes, identify the type of modification:*

Minor Modification       Major Modification

In accordance with 40 CFR 122.63, minor modifications of permits may only:

- Correct typographical errors.
- Require more frequent monitoring or reporting.
- Change an interim compliance date in the schedule of compliance (provided the new date is not more than 120 days after the date specified in the permit and does not interfere with attainment of the final compliance date requirement).

- Allow for a change of ownership (provided no other change is necessary).
- Change the construction schedule for a new source discharger.
- Delete a point source outfall when that outfall is terminated and does not result in discharge of pollutants from other outfalls except in accordance with permit limits.
- Require electronic reporting (to replace paper reporting requirements).
- Incorporate conditions of a POTW pretreatment program that has been approved in accordance with the procedures in 40 CFR 403.11 (or a modification thereto that has been approved in accordance with the procedures in 40 CFR 403.18) as enforceable conditions of the POTW's permits.
- Incorporate changes to the terms of a CAFO's nutrient management plan that have been revised in accordance with the requirements of 40 CFR 122.42(e)(6).

In accordance with 40 CFR 122.62, a permit may only be modified for specific causes. These causes for modification are considered “major” and include:

- Material and substantial alterations to the permitted facility or activity that would justify new or different permit conditions.
- New information was received that was not available at time of permit issuance and would justify new or different permit conditions.
- New or revised regulations on which permit conditions are based.
- Modification of a compliance schedule if good cause exists or to reflect time lost during construction of an innovative or alternative facility.
- Adding a compliance schedule for a pretreatment program.
- Variance requests.
- Incorporating a more stringent toxic effluent standard or prohibition.
- “Reopener” condition is triggered.
- Addition or removal of net limits.
- Failure of a state to notify another state whose waters may be affected by a discharge.
- Non-limited pollutants exceed the level which can be achieved by the technology-based treatment requirements.
- To establish “notification levels”.
- To include MS4 minimum control measures.
- Correction of technical mistakes.
- Incorporate or revise a land application plan.
- Cause exists for termination.
- Notification of proposed transfer.

***b) If it was a major modification, was the modified permit public noticed?***

In accordance with 40 CFR 122.62 and 122.63, a major permit modification must go through the draft permit public notice process outlined in 40 CFR Part 124. Minor permit modifications are not required to undergo the public notice process for draft permits.

**8.2 Public Notice and Hearings**

The public notice is the vehicle for informing all interested parties and the general public of the contents of a draft NPDES permit, changes to a permit as a result of a major modification, or other significant actions with respect to an NPDES permit or permit application. This section of the checklist evaluates the public notice documentation. The regulations at 40 CFR 124.10 provide the requirements for public notice of permit actions and the public comment period. Sections 11.3.1 – 11.3.3 of the PWM provide additional information.

**1. Did the record include documentation of public notice?**

For preparation of a draft permit or major modifications to a permit after issuance, a public notice must be conducted in accordance with 40 CFR 124.10. EPA recommends that the permit record include documentation of public notice so that the record demonstrates that all public notice requirements were met during the permit administration process.

**2. Did the public notice include the content required by 124.10(d)?**

Federal regulations at 40 CFR 124.10(d) specify the information that must be included in NPDES permit public notices:

- a. The name and address of the office processing the permit action.
- b. The name and address of the permittee or applicant and, if different, of the facility or activity regulated by the permit.
- c. A brief description of the business conducted at the facility or activity described in the permit or application.
- d. The name, address, and telephone number of a contact from whom interested persons can obtain additional information.
- e. A brief description of the comment procedures required and the time and place of any hearing to be held including procedures to request a hearing.
- f. For EPA-issued permits, the location and availability of the administrative record and the times at which the record will be open for public inspection, and a statement that all data submitted by the applicant is available as part of the administrative record.
- g. A description of the location of each existing or proposed discharge point and the name of the receiving water and the sludge use and disposal practice(s) and the location of each sludge treatment works treating domestic sewage and use or disposal sites known at the time of permit application.
- h. Requirements applicable to cooling water intake structures under CWA section 316(b).

Indicate whether the public notice included each of the required components.

**3. If a 316(a) variance was requested, did the public notice include contents required at 40 CFR 124.57?**

Public notice of an NPDES draft permit for a discharge where a CWA section 316(a) request has been filed under 40 CFR 122.21(l) shall include:

- A statement that the thermal component of the discharge is subject to effluent limitations under CWA section 301 or 306 and a brief description, including a quantitative statement, of the thermal effluent limitations proposed under section 301 or 306;
- A statement that a section 316(a) request has been filed and that alternative less stringent effluent limitations may be imposed on the thermal component of the discharge under section 316(a) and a brief description, including a quantitative statement, of the alternative effluent limitations, if any, included in the request; and
- If the applicant has filed an early screening request under 40 CFR 125.72 for a section 316(a) variance, a statement that the applicant has submitted such a plan.

#### **4. Was the public notice period at least 30 days?**

Federal regulations at 40 CFR 124.10(b) require that the public notice period be at least 30 days. EPA recommends the public notice specify the date of the public notice publication or the date for which public comment opens, as well as the date for which public comment closes.

#### **5. Did the record indicate whether comments were received?**

EPA recommends the permit record indicate whether any public comments were received in response to a public notice. EPA also recommends that, if no comments were received, the permit record include documentation to note that no comments were received, so it is transparent that the public participation process was completed.

##### ***a) If yes, did the record identify or include all comments received?***

At a minimum, significant comments must be briefly described as part of the response to comments (40 CFR 124.17(a)(2)). However, EPA recommends that all original comments from the public notice be retained for a more thorough permit record.

##### ***b) If yes, did the record include a written response to all significant comments?***

The permitting authority must respond to all significant comments raised during the public comment period, or during any hearing, at the time a final permit decision is reached (in the case of EPA-issued permits) or at the time a final permit is actually issued (in the case of state-issued permits) per 40 CFR 124.17(a). The response must specify which provisions, if any, of the draft permit have been changed in the final permit decision, and the reasons for the change.

The response to comments shall be available to the public (40 CFR 124.17(c)). Therefore, EPA recommends that it be included directly in the fact sheet, or otherwise retained in the permit record for public accessibility.

#### **6. Did the record indicate if a public hearing was held?**

Any interested party may request a public hearing. A request for a hearing does not automatically necessitate that a hearing be held, and a permitting authority may also hold a public hearing without one being requested. A public hearing should be held when there is a significant amount of interest expressed during the public comment period or when it is necessary to clarify the issues involved in the permit decision (40 CFR 124.12). Thus, a decision to hold a public hearing is a judgment call, typically made by someone other than the permit writer. EPA recommends that the request for a hearing, whether a hearing was actually held, be documented in the permit record.

##### ***a) If yes, was the recording or transcript part of the record?***

When a public hearing is held for EPA-issued permits, a tape recording or written transcript of the hearing shall be made available to the public (40 CFR 124.12(d)) and the administrative record for any final permit

must include the tape or transcript of any hearings (40 CFR 124.18(b)(2)). While these are only requirements for EPA-issued permits, EPA also recommends these as best practices for state permitting authorities.

### 8.3 Administrative Record

Federal regulations require that EPA-issued permits have an administrative record containing specific elements (40 CFR 124.9 and 124.18), and most state legal requirements include similar provisions for an administrative record. While some of the content is specified by federal and state regulation, the remainder is dictated by good project management.

Maintaining permit records in a neat, orderly, complete, and retrievable manner allows personnel from the permitting agency to reconstruct the justification for a given permit and defend the permit during any legal proceedings regarding the permit.

#### 1. Note whether any supporting documentation was not available in the record for review (list documents).

Examples of files recommended for a complete administrative record include the permit application and supporting attachments (e.g., topographical map, wastewater flow diagram), previous permit, draft permit, fact sheet or statement of basis, all items cited in the fact sheet or statement of basis, copy of the public notice, comments received, response to comments, meeting reports, correspondence between the applicant and regulatory personnel, notes from telephone calls, whether the permit has been contested or appealed for review, and any other information relevant to the permit (e.g., pretreatment program information). Where EPA issues the permit, the administrative record should also document the Section 401 certification process and, for a new source, any environmental assessment, environmental impact statement, or finding of no significant impact.

If any documentation was not available for review in the record, list the documents in the comments section.

## 9. Selected EPA Priorities

The three topics addressed in this section were chosen for this PQR cycle because they were identified as agency priorities in the [FY2022-2026 EPA Strategic Plan](#) and/or the [FY2023-FY2024 National Water Program Guidance](#) (NWPG).

Although the NPDES regulations do not explicitly contain specific requirements for the three agency priorities in state-issued permits, the PQR process provides an opportunity for an EPA-state conversation about how state permitting authorities address agency priorities in their permitting processes. This information may be used to establish best practices to share among states or inform agency guidance or policy.

### 9.1 Climate Impacts and Resilience

EPA's expectations for climate adaptation are described in detail in its 2021 [Climate Adaptation Action Plan](#) and [Executive Order \(E.O.\) 14008: Tackling the Climate Crisis at Home and Abroad](#).

The NWPG and the Office of Water's [Climate Adaptation Implementation Plan](#) describe expectations for the water program's participation in climate change mitigation and adaptation activities. The plan identifies the eight overall objectives for the Office of Water's programs, including the following that have direct potential applicability to NPDES:

- Integrate Climate Considerations in CWA and SDWA Actions and Programs;
- Invest in Ecosystem Protection and Restoration;
- Support Assessment of Climate Risks and Climate-Informed Decision-making; and
- Improve Availability of Data and Information to Support Climate-Informed Decisions.

### 1. Did the fact sheet indicate that the permit writer considered climate impacts and resilience in developing permit conditions?

Climate impacts and resilience considerations might be reflected in various permit development factors likely to be impacted by current or future changes in precipitation or temperature, such as critical low flow evaluations, precipitation statistics, and ambient water temperature data. Special conditions may also be required for coastal facilities subject to potential sea level rise or to address water-reuse related discharges. For considerations related to stormwater discharges, permits may include asset management requirements, infrastructure resilience assessments, water reuse or recycling provisions, hazards and vulnerabilities plan, acres managed numeric limits, stormwater retention programs, green infrastructure (e.g., green roofs, rain gardens, green spaces, retrofitting gray infrastructure, tree canopy initiatives), public education and outreach regarding climate resiliency, and precipitation and temperature monitoring. Additionally, the state may have policies or guidance in place with other specific expectations on addressing climate and resiliency through the NPDES program. If the permit writer considered climate and resiliency in developing any of the permit conditions, EPA recommends this information be described in the fact sheet.

#### *a) If yes, describe whether (and if so, how) climate considerations impacted permit conditions.*

The PQR reviewer should not only indicate if climate change impacts were considered and documented, but if so, also provide a description of how those considerations were addressed in the permit.

## 9.2 Environmental Justice

EPA defines environmental justice ([EJ 2020 Glossary](#)) as “the fair treatment and meaningful involvement of all people regardless of race, color, culture, national origin, income, and educational levels with respect to the development, implementation, and enforcement of protective environmental laws, regulations, and policies.”

### 1. Did the permit writer evaluate the potential for adverse and disproportionate impacts to the community from the permit decision?

When permitting a facility in a community that is known or likely to be underserved, the permit writer is encouraged to conduct an environmental justice analysis of appropriate scope to inform permitting decisions. The permit writer can use the Environmental Justice Screening and Mapping Tool (EJScreen) or other suitable tools and data to ascertain whether a particular community may be disproportionately and adversely affected by environmental and human health risks.

On January 29, 2024, EPA released the [Program Policy Addressing Environmental Justice and Equity in NPDES Permitting](#), which encourages the use of existing CWA authorities and other federal laws to help mitigate potential adverse effects of a permitting action where the EPA is the permitting authority or where the EPA is supporting a state in issuing an NPDES permit. As described in the fourth principle (“Conduct a fit for purpose environmental justice analysis”), environmental justice analyses vary according to the specific circumstances of the permitting action, but may include evaluating:

- Demographic data indicating vulnerabilities in the potentially affected community;
- Input from stakeholders, including the potentially affected community;

- Existing environmental data relevant to the environmental justice concerns, including water monitoring, or, as appropriate, data from other media;
- The facility's compliance record;
- Existing public health data about the potentially affected community;
- The permitting action's potential health and non-health adverse effects (e.g., flooding, mosquito breeding, noise, odor, and traffic);
- The cumulative impact of the permitting action under consideration together with impacts from other regulated and non-regulated sources of pollution in the community;
- The potential effects of the permitting action under consideration on the health of a community and the distribution of those effects within the community; and
- Potential methods for minimizing or mitigating adverse effects on the community.

If the permit writer considered the potential for adverse and disproportionate impacts to the community in developing permit conditions, EPA recommends this information be described in the fact sheet.

Whether the EJ analysis was considered in development of permit conditions or otherwise affected the administrative process (e.g., enhanced public outreach, engagement), EPA recommends that the EJ analysis and results be included in the administrative record.

***a) If yes, describe how the analysis was conducted.***

Based on information available during the PQR, provide a summary description of how the permit writer conducted an EJ analysis.

**2. Did the evaluation find the potential for adverse and disproportionate impacts to the community?**

Indicate whether the results of the EJ analysis found potential for adverse and disproportionate impacts to the community.

***a) If yes, describe the results (e.g., how the community was impacted).***

Provide a summary of the results of the EJ evaluation.

***b) If yes, describe if/how any permit conditions were affected by the evaluation (e.g., if the permitting authority mitigated identified water quality impacts or other impacts, as appropriate).***

Provide a summary of any revisions to permit conditions or other actions taken by the permitting authority to address the results of the EJ evaluation.

**3. Was there enhanced outreach to, and involvement of, any population adversely and disproportionately affected by the permitting action?**

Engagement with the community could include, for example, a simple information sheet describing the facility being permitted, how the permit addresses pollutants in the discharge, and how the permitting action affects the community. Engagement could also include direct, targeted outreach to established community organizations to provide information describing the facility, the permit, the effects of the discharge, and how the public can meaningfully participate in the permit issuance process. Information documents and processes should be translated into the predominant languages spoken in the community.

***a) If yes, describe.***

Provide a summary of any enhanced outreach.



### 9.3 PFAS

The NPDES program interfaces with many pathways by which per-and polyfluoroalkyl substances (PFAS) travel and are released into the environment. As a step towards leveraging the NPDES program to restrict the discharge of PFAS at their sources, in December 2022, EPA released the memorandum [Addressing PFAS Discharges in NPDES Permits and Through the Pretreatment Program and Monitoring Programs](#) (December 2022 PFAS memo). It provides guidance to states and EPA Regions for addressing PFAS discharges when they are authorized to administer the NPDES permitting program and/or pretreatment program. These recommendations reflect the Agency's commitments in the [PFAS Strategic Roadmap](#). Additionally, EPA has released the fact sheet [Pollution Prevention Strategies for Industrial PFAS Dischargers](#) (PFAS BMP fact sheet) as a companion to the December 2022 PFAS memo. The questions below reflect the memorandum, BMP fact sheet, and steps permit writers can implement under existing authorities to monitor and reduce the discharge of PFAS.

#### 9.3.1 POTWs

##### 1. Did the permit require monitoring for PFAS for any of the following (check all that apply)?

Influent    Effluent    Biosolids    None

EPA recommends that all POTWs, including POTWs that do not receive industrial discharges, and industrial users in the industrial categories listed in question 1 in section 9.3.2, monitor for PFAS in influent, effluent, and biosolids.

##### 2. Did the permit require the POTW to update the industrial user (IU) inventory with industry categories expected or suspected of PFAS discharges?

Permits to all POTWs are required to identify, in terms of character and volume of pollutants, any Significant Industrial Users discharging into the POTW subject to Pretreatment Standards under section 307(b) of CWA and 40 CFR part 403 (per 40 CFR 122.44(j)(1)), and POTWs with pretreatment programs must identify and locate all possible Industrial Users which might be subject to the POTW Pretreatment Program (40 CFR 403.8(f)(2)). This information would be reported on the permit application, in the pretreatment annual report (40 CFR 403.12(i)), and as required by additional standard conditions for POTWs under 40 CFR 122.42(b). EPA recommends that permits for POTWs include a requirement to revise the IU inventory, as necessary, to include all IUs in industry categories expected or suspected of PFAS discharges.

##### 3. If the POTW receives industrial discharges expected or suspected of PFAS, did the permit utilize BMPs and/or pollution prevention to reduce PFAS discharges to the POTW?

If the POTW receives industrial discharges expected or suspected of PFAS, EPA recommends that the POTW permit utilize BMPs and pollution prevention to reduce PFAS discharges to the POTW. For example, where authority exists, develop IU BMPs or local limits and update IU permits/control mechanisms to require quarterly monitoring, including monitoring of biosolids if applicable, using analytical methods 1633 and 1621. See the December 2022 PFAS memo, section B, for additional information on recommendations for POTWs.

If "Yes", describe the permit conditions.

### 9.3.2 Non-POTWs

#### 1. Is the permit issued to an industry sector known or suspected to discharge PFAS?

Industry categories known or suspected to discharge PFAS as identified on page 14 of the PFAS Strategic Roadmap include: organic chemicals, plastics and 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, and airports. This is not an exhaustive list and additional industries may also discharge PFAS. For example, Centralized Waste Treatment facilities may receive wastes from the aforementioned sectors; in addition, remediation sites, chemical manufacturing not covered by OCPSF, and military bases may discharge PFAS. The state may have identified additional industries for which it regulates PFAS discharges.

##### *a) If yes, did the permit require monitoring for PFAS?*

Indicate whether or not the permit required monitoring for any PFAS parameters.

##### *b) If yes, did the permit include BMPs to reduce discharges of PFAS (e.g., BMP conditions based on pollution prevention/source reduction opportunities, or BMP permit special conditions)?*

Pursuant to 40 CFR 122.44(k)(4), EPA recommends that NPDES permits for facilities incorporate BMPs for discharges of PFAS, including product substitution, reduction, or elimination of PFAS when the practices are “reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.” See the December 2022 PFAS memo and PFAS BMP fact sheet for additional information and examples of recommended BMPs for discharges of PFAS.

If “Yes”, describe the permit conditions.

##### *c) If yes, did the permit contain numeric or narrative effluent limitations, where applicable?*

Site-specific TBELs for PFAS discharges developed on a BPJ basis may be appropriate for facilities for which there are no applicable effluent guidelines (40 CFR 122.44(a) and 125.3). Also, NPDES permits must include WQBELs as derived from state WQS, in addition to TBELs developed on a BPJ basis, if necessary to achieve WQS, including state narrative criteria for water quality (CWA section 301(b)(1)(C); 40 CFR 122.44(d)). If a state has established a numeric criterion or a numeric translation of an existing narrative WQS for PFAS parameters, EPA recommends that the permit writer apply that numeric criterion or narrative interpretation in permitting decisions, pursuant to 40 CFR 122.44(d)(1)(iii) and 122.44(d)(1)(vi)(A), respectively. The fact sheet must document the basis for the limitations, including any calculations (40 CFR 124.56).

### 9.3.3 All Permits

#### 1. If the permit included monitoring for PFAS:

Answer the following questions only if the permit included any PFAS monitoring. Otherwise, select “N/A.”

##### *a) Did the permit require use of CWA wastewater analytical methods? (check all that apply)*

Method 1633     Method 1621     Other methods     Method not specified

EPA recommends using [CWA Analytical Methods for PFAS](#), which were published in January 2024, to test for PFAS compounds in wastewater. These analytical methods include method 1633, and method 1621 in conjunction with method 1633, as applicable. While these methods are not nationally required for CWA compliance monitoring until EPA has promulgated them through rulemaking, EPA recommends the methods now for use in individual permits with the understanding that they may undergo revision during a rulemaking process.

i. If other methods, describe.

If any methods other than 1633 and 1621 are required for PFAS monitoring, describe the methods and the basis for selecting those methods, if such detail is provided.

**b) Did the permit require monitoring for each of the 40 PFAS parameters that are detectable by method 1633?**

EPA recommends (in the December 2022 PFAS memo) that monitoring include each of the 40 PFAS parameters detectable by method 1633, as specified in Table 1 of the method, and included in Table 4 below.

**Table 4. Names and Abbreviations for Target PFAS**

Target Analyte Name	Abbr.	Target Analyte Name	Abbr.
Perfluoroalkyl carboxylic acids		Perfluorooctane sulfonamides	
Perfluorobutanoic acid	PFBA	Perfluorooctanesulfonamide	PFOSA
Perfluoropentanoic acid	PFPeA	N-methyl perfluorooctanesulfonamide	NMeFOSA
Perfluorohexanoic acid	PFHxA	N-ethyl perfluorooctanesulfonamide	NEtFOSA
Perfluoroheptanoic acid	PFHpA	Perfluorooctane sulfonamidoacetic acids	
Perfluorooctanoic acid	PFOA	N-methyl perfluorooctanesulfonamidoacetic acid	NMeFOSAA
Perfluorononanoic acid	PFNA	N-ethyl perfluorooctanesulfonamidoacetic acid	NEtFOSAA
Perfluorodecanoic acid	PFDA	Perfluorooctane sulfonamide ethanols	
Perfluoroundecanoic acid	PFUnA	N-methyl perfluorooctanesulfonamidoethanol	NMeFOSE
Perfluorododecanoic acid	PFDoA	N-ethyl perfluorooctanesulfonamidoethanol	NEtFOSE
Perfluorotridecanoic acid	PFTTrDA	<b>Per- and Polyfluoroether carboxylic acids</b>	
Perfluorotetradecanoic acid	PFTeDA	Hexafluoropropylene oxide dimer acid	HFPO-DA
<b>Perfluoroalkyl sulfonic acids</b>		4,8-Dioxa-3H-perfluorononanoic acid	ADONA
Perfluorobutanesulfonic acid	PFBS	Perfluoro-3-methoxypropanoic acid	PFMPA
Perfluoropentanesulfonic acid	PFPeS	Perfluoro-4-methoxybutanoic acid	PFMBA
Perfluorohexanesulfonic acid	PFHxS	Nonafluoro-3,6-dioxaheptanoic acid	NFDHA
Perfluoroheptanesulfonic acid	PFHpS	<b>Ether sulfonic acids</b>	
Perfluorooctanesulfonic acid	PFOS	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	9Cl-PF3ONS
Perfluorononanesulfonic acid	PFNS	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	11Cl-PF3OUdS
Perfluorodecanesulfonic acid	PFDS	Perfluoro(2-ethoxyethane)sulfonic acid	PFEESA
Perfluorododecanesulfonic acid	PFDoS	<b>Fluorotelomer carboxylic acids</b>	
<b>Fluorotelomer sulfonic acids</b>		3-Perfluoropropyl propanoic acid	3:3FTCA
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	4:2FTS	2H,2H,3H,3H-Perfluorooctanoic acid	5:3FTCA
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	6:2FTS	3-Perfluoroheptyl propanoic acid	7:3FTCA
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	8:2FTS		

i. If monitoring was not required for all 40 PFAS parameters, specify which were included.

If the permit did not require monitoring for all 40 PFAS parameters as recommended by the December 2022 PFAS memo, specify which parameters were included in the permit.

**c) Did the permit require that all PFAS monitoring be conducted at least quarterly?**

EPA recommends (in the December 2022 PFAS memo) that all monitoring for PFAS be conducted at least quarterly to ensure that there are adequate data to assess the presence and concentration of PFAS in discharges.

**2. If the permit contained PFAS conditions, was the public notice of the draft permit provided to potentially affected public water systems (PWS)?**

In addition to the requirements for public notice described in 40 CFR 124.10, EPA recommends that NPDES permitting authorities provide notification to potentially affected downstream public water systems of draft permits with PFAS-specific monitoring, BMPs, or other conditions, such as intakes located downstream of the NPDES discharge.

## Summary of Findings

The reviewer should summarize and compile findings from the checklist and note permit strengths, weaknesses, and clarification questions for the state visit.

### 1. Permit Strengths

This section should include the exceptional strengths of the permit. Notes can pertain to the basic permit and facility information, effluent limitation development, standard conditions, and administrative record. Language can be duplicated from comments in the checklist. Also, it may be helpful to indicate the location of specific language within the permit so others can refer to the permit or record for more information.

Examples include:

- Cover sheet of the permit and introduction of the fact sheet (on page x of x) clearly provided a concise description of the facility and receiving water.
- Effluent limitation development in section x of the fact sheet (on page x of x and Appendix x) was complete, with clear TBEL development, an RPA for WQBELs, and documentation of the comparison of WQBELs to TBELs.
- Record presented clear documentation for public notice (on page x of x of the permit) and documented all public comments (in Appendix x).
- Permit used a standardized attachment with all standard conditions (on page x of x of the permit).

### 2. Permit Areas for Improvement

This section should include the specific areas for improvement of the permit and record. Notes can pertain to the basic permit and facility information, effluent limitation development, standard conditions, or administrative record. Also, it may be helpful to indicate the location of specific language within the permit so others can refer to the permit or record for more information.

Examples include:

- Location of discharge within the receiving water was not specified in the record (see cover page on page x of x in the permit and receiving water description in the fact sheet on page x of x).
- The fact sheet referenced a water quality analysis in section x (on page x of x in the fact sheet); however reasonable potential analysis, WQBEL calculations and results, and the rationale for both (e.g., basis including data used or not used) were not provided.
- Units were not included for some of the effluent limitations in the permit. Specifically, pollutant x (in Table xx); pollutant y (in Table xx); and pollutant z (in Table yy).
- The permit provided a mixing zone (on page x of x in the fact sheet), but there was no discussion of the basis for the mixing zone or how it complied with state mixing zone regulations and policies.
- There were no monitoring or reporting requirements in the permit that were representative of the monitored activity and sufficient to yield data to assess compliance with narrative WQBELs and special conditions.
- Sections of the Duty to Comply standard condition were missing (on page x of x of the permit).

### 3. Clarifications Needed

This section should include any questions that could be answered during the state visit or virtual interviews. Questions can pertain to the basic permit and facility information, effluent limitation development, standard conditions, or administrative record. Also, it may be helpful to indicate the location of specific language within the permit record for easy reference.

Examples include:

- It wasn't clear from the spreadsheet provided how the WQBELs were calculated, could you please walk us through the process for calculating WQBELs?
- The permit referenced a public notice, but the PQR reviewers did not see it in the documents made available in the record. Was a public notice completed? If so, was it included as part of the permit record?

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## Appendix A: Standard Conditions

### 122.41. Conditions applicable to all permits.

122.41. The following conditions apply to all NPDES permits. Additional conditions applicable to NPDES permits are in 122.42. All conditions applicable to NPDES permits shall be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to these regulations (or the corresponding approved State regulations) must be given in the permit.

122.41(a). Duty to comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

122.41(a)(1). The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.

122.41(a)(2). The Clean Water Act provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed \$25,000 per day for each violation.

The Clean Water Act provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than 2 years, or both.

Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than 6 years, or both.

Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the Clean Water Act, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.

122.41(a)(3). Any person may be assessed an administrative penalty by the Administrator for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to



- exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000.
- 122.41(b). Duty to reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.
- 122.41(c). Need to halt or reduce activity not a defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- 122.41(d). Duty to mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.
- 122.41(e). Proper operation and maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.
- 122.41(f). Permit actions. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.
- 122.41(g). Property rights. This permit does not convey any property rights of any sort, or any exclusive privilege.
- 122.41(h). Duty to provide information. The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Director upon request, copies of records required to be kept by this permit.
- 122.41(i). Inspection and entry. The permittee shall allow the Director, or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon presentation of credentials and other documents as may be required by law, to:
- 122.41(i)(1). Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- 122.41(i)(2). Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- 122.41(i)(3). Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- 122.41(i)(4). Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the CWA, any substances or parameters at any location.
- 122.41(j). Monitoring and records.
- 122.41(j)(1). Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
- 122.41(j)(2). Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at

least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.

122.41(j)(3). Records of monitoring information shall include:

- (i) The date, exact place, and time of sampling or measurements;
- (ii) The individual(s) who performed the sampling or measurements;
- (iii) The date(s) analyses were performed;
- (iv) The individual(s) who performed the analyses;
- (v) The analytical techniques or methods used; and
- (vi) The results of such analyses.

122.41(j)(4). Monitoring must be conducted according to test procedures approved under 40 CFR Part 136 unless another method is required under 40 CFR subchapters N or O.

122.41(j)(5). The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both.

122.41(k). Signatory requirement.

122.41(k)(1). All applications, reports, or information submitted to the Director shall be signed and certified. (See 122.22)

122.41(k)(2). The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

122.41(l). Reporting requirements —

122.41(l)(1). Planned changes. The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

- (i) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 122.29(b); or
- (ii) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 122.42(a)(1).
- (iii) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;

122.41(l)(2). Anticipated noncompliance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

122.41(l)(3). Transfers. This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Clean Water Act. (See 122.61; in some cases, modification or revocation and reissuance is mandatory.)

- 122.41(l)(4). Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit.
- (i) Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Director for reporting results of monitoring of sludge use or disposal practices.
  - (ii) If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR Part 136, or another method required for an industry-specific waste stream under 40 CFR subchapters N or O, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Director.
  - (iii) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.
- 122.41(l)(5). Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.
- 122.41(l)(6). Twenty-four hour reporting.
- (i) The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
  - (ii) The following shall be included as information which must be reported within 24 hours under this paragraph.
    - (A) Any unanticipated bypass which exceeds any effluent limitation in the permit. (See 122.41(g).)
    - (B) Any upset which exceeds any effluent limitation in the permit.
    - (C) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in the permit to be reported within 24 hours. (See 122.44(g).)
  - (iii) The Director may waive the written report on a case-by-case basis for reports under paragraph (l)(6)(ii) of this section if the oral report has been received within 24 hours.
- 122.41(l)(7). Other noncompliance. The permittee shall report all instances of noncompliance not reported under paragraph (l) (4), (5), and (6) of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (l)(6) of this section.
- 122.41(l)(8). Other information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.
- 122.41(l)(9). Identification of the initial recipient for NPDES electronic reporting data. The owner, operator, or the duly authorized representative of an NPDES-regulated entity is required to electronically submit the required NPDES information (as specified in appendix A to 40 CFR part 127) to the appropriate initial recipient, as determined by EPA, and as defined in § 127.2(b) of this chapter. EPA will identify and publish the list of initial recipients on its Web site and in the Federal Register, by state and by NPDES data group [see § 127.2(c) of this chapter]. EPA will update and maintain this listing.
- 122.41(m). Bypass —
- 122.41(m)(1). Definitions.

- (i) Bypass means the intentional diversion of waste streams from any portion of a treatment facility.
- (ii) Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

122.41(m)(2). Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraph (m)(3) and (m)(4) of this section.

122.41(m)(3). Notice —

- (i) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.
- (ii) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in paragraph (l)(6) of this section (24-hour notice).

122.41(m)(4). Prohibition of bypass.

- (i) Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:
  - (A) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
  - (B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
  - (C) The permittee submitted notices as required under paragraph (m)(3) of this section.
- (ii) The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in paragraph (m)(4)(i) of this section.

122.41(n). Upset —

122.41(n)(1). Definition. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

122.41(n)(2). Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of paragraph (n)(3) of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

122.41(n)(3). Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

- (i) An upset occurred and that the permittee can identify the cause(s) of the upset;
- (ii) The permitted facility was at the time being properly operated; and
- (iii) The permittee submitted notice of the upset as required in paragraph (1)(6)(ii)(B) of this section (24 hour notice).
- (iv) The permittee complied with any remedial measures required under paragraph (d) of this section.

122.41(n)(4). Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

## 122.42. Additional conditions applicable to specified categories of NPDES permits<sup>2</sup>

122.42. The following conditions, in addition to those set forth in 122.41, apply to all NPDES permits within the categories specified below:

122.42(a) **Existing manufacturing, commercial, mining, and silvicultural dischargers.** In addition to the reporting requirements under § 122.41(1), all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:

122.42(a)(1) That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:

- (i) One hundred micrograms per liter (100 µg/l);
- (ii) Two hundred micrograms per liter (200 µg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;
- (iii) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with § 122.21(g)(7); or
- (iv) The level established by the Director in accordance with § 122.44(f).

122.42(a)(2) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:

- (i) Five hundred micrograms per liter (500 µg/l);
- (ii) One milligram per liter (1 mg/l) for antimony;
- (iii) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with § 122.21(g)(7).
- (iv) The level established by the Director in accordance with § 122.44(f).

122.42(b) **Publicly owned treatment works.** All POTWs must provide adequate notice to the Director of the following:

122.42(b)(1) Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of CWA if it were directly discharging those pollutants; and

122.42(b)(2) Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.

122.42(b)(3) For purposes of this paragraph, adequate notice shall include information on (i) the quality and quantity of effluent introduced into the POTW, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

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<sup>2</sup> Only 40 CFR 122.42(a) and (b) are included for reference since the PQR checklist is primarily designed to review industrial and POTW permits. 40 CFR 122.42 also contains additional conditions for permits for municipal separate storm sewer systems, storm water discharges, CAFOs, and CSO discharges to the Great Lakes Basin.