

**INFORMATION COLLECTION REQUEST SUPPORTING STATEMENT
PART B**

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA)

**PUBLICLY OWNED TREATMENT WORKS (POTW) INFLUENT
PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS) STUDY**

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PART B OF THE SUPPORTING STATEMENT

1. QUESTIONNAIRE RATIONALE

The questionnaire and subsequent sampling program will provide information essential to identify and quantify sources of PFAS to POTWs so that the EPA can make informed decisions on appropriate actions to control PFAS. Through this collection, the EPA will obtain data essential to identify and quantify sources of PFAS to POTWs and prioritize industrial categories for potential regulation. Additionally, the data collection activities described in this ICR will provide a robust data set that will characterize the type and quantity of PFAS in POTW influent, effluent, and sewage sludge/biosolids as well as total organic carbon, metals, total solids, fixed solids, and volatile solids in sewage sludge/biosolids to inform future Agency actions to control PFAS.

The collection effort is consistent with the Agency's October 2021 [PFAS Strategic Roadmap](#) commitment to address PFAS through investment in scientific research to fill gaps in understanding of PFAS and to prevent PFAS from entering the environment. This data collection effort is necessary because there is limited publicly accessible data on PFAS discharges from many industrial categories to POTWs; the relative PFAS contributions from residential, commercial, and industrial sources to POTWs; and the fate and transport of PFAS in POTW influent and sewage sludge/biosolids. As announced in the EPA's [Effluent Guidelines Program Plan 15](#), published in January 2023, the EPA is conducting several rulemakings to address PFAS discharges from PFAS manufacturers, chromium finishing facilities, and landfills; however, there are over 50 industrial categories regulated by Effluent Limitations Guidelines and Standards (ELGs) that do not have any PFAS requirements and additional industries that the EPA has determined historically or currently use PFAS but for which insufficient PFAS monitoring data has been identified. In addition, the EPA is interested in quantifying PFAS discharges from industrial users in sectors not currently regulated by ELGs and those for which PFAS monitoring data do not exist.

1(a) Population of Interest

The population of interest for the POTW Influent PFAS Study is POTWs operated in the United States. In 40 CFR §403.3, the term POTW is defined as follows:

Publicly Owned Treatment Works or POTW and individual wastewater treatment plant as defined by Section 212 of the Clean Water Act, which is owned by a state or municipality (as defined by Section 502(4) of the Clean Water Act). 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 only if they convey wastewater to a POTW. The term also means the municipality as defined in Section 502(4) of the Clean Water Act, which has jurisdiction over the Indirect Discharges to and the discharges from such a wastewater treatment plant. [40 CFR §403.3 \(General Pretreatment Regulations for Existing and New Sources of Pollution\)](#).¹

The EPA estimates that there are approximately 14,700 POTWs in the United States. POTWs provide essential services to residential, commercial, and industrial users by collecting and treating wastewater. POTWs are "passive receivers" of PFAS and other pollutants, since they do not produce or manufacture PFAS but receive these chemicals through the wastewater that arrives at the treatment plant. POTWs that administer pretreatment programs for industrial users serve as a centralized data source for indirect industrial wastewater

¹ To simplify and provide clarity throughout this questionnaire, the population of interest includes wastewater treatment plant which store, treat, recycle, or reclaim municipal sewage or liquid industrial wastes and are owned or operated by a state, local government, municipality, or Tribal group. The population of interest does not include federally-owned or privately-owned facilities, and does not include dedicated flow control entities such as Combined Sewer Overflows (CSOs) and Sanitary Sewer Overflows (SSOs).

discharges. The EPA will therefore use POTWs as a proxy for collecting discharge data on industrial dischargers across industrial categories. The EPA does not intend for this data collection to be a statistically representative sample of the entire population of POTWs or industrial users in the United States.

As described in Section 2, the sample scheme for this data collection will only include a small percentage of the total population of POTWs in the United States. The EPA plans to administer a questionnaire to approximately 400 (2.7 percent) of the largest POTWs based on effluent flow rates. The subsequent sampling program will require a subset of POTWs that complete the questionnaire to also collect and analyze samples from no more than 10 industrial users (effluent only); domestic wastewater; and POTW influent, effluent, and sewage sludge/biosolids. The total number of industrial users sampled will not exceed 2,000.

1(b) Response Rate/No Response

The EPA's Office of Water plans to administer the data collection, including a one-time questionnaire and sampling program, under the authority of Section 308 of the Federal Water Pollution Control Act, 33 USC, Section 1318 (Clean Water Act). All recipients of the questionnaire and subsequent sampling request will be required to participate and submit a complete response. Since the data collected will be required under the authority of Clean Water Act Section 308, the EPA estimates that all POTWs selected to complete the electronic questionnaire and sampling program will respond (i.e., the POTW response rate will be 100 percent). The EPA will employ several measures to reduce no response. The notification letter and instructions delivered to each recipient will explain the legal authority, responsibility to respond, reasons for the questionnaire, and penalty for no response. Delivery or non-delivery of notification letters will be tracked using Federal Express; thus, signatures of the recipients will be required to confirm receipt. The EPA will conduct outreach with selected POTWs, trade associations, and regulatory authorities before and during the data collection period to summarize the nature and requirements of the questionnaire and sampling program. The EPA anticipates a complete understanding of the data collection will reduce, if not eliminate, the no response rate. Additionally, email and phone helplines will be operated while the questionnaire is in the field so that technical and administrative questions pertaining to the questionnaire and sampling program requirements can be addressed. Recipients that do not respond to the questionnaire by the deadline date may be phoned or notified again by mail or email to encourage response, answer questions, and determine the reason(s) for the no response.

To minimize no response, the EPA solicited comments on a draft list of questions and worked closely with industry experts to refine questions so that they are easy to understand with clearly defined and familiar terms, are formatted in a logical sequence, and request data that are readily available within the industry. In this manner, the EPA expects to minimize inaccurate or incomplete responses to questions that can occur due to misunderstanding or misinterpretation.

The design and implementation of the questionnaire will employ several quality assurance techniques to reduce the frequency of such errors. These techniques include the following:

- Reviewing question language for ambiguity and clarity.
- Using an easily followed sequence of questions and stopping points.
- Avoiding questions requiring an open-ended response.
- Providing a limited number of carefully considered responses to each question.
- Providing clear definitions of units of measurement and of technical terms.
- Providing clear instructions with references to the definitions.
- Providing helplines via email and a toll-free number to assist respondents.
- Reviewing responses to obtain missing information and resolve problems and inconsistencies.
- Using a web-based questionnaire platform (Qualtrics).

- Requiring specific response formats (e.g., numeric values where a number is requested) and acceptable value ranges.

2. DATA COLLECTION DESIGN

The POTW Influent PFAS Study data collection is designed to be a screening assessment of PFAS in industrial wastewater discharges; domestic wastewater; and POTW influent, effluent, and sewage sludge/biosolids to inform future actions to address PFAS. The EPA does not intend for the data collection to be a complete or statistically representative assessment of all industrial facilities or POTWs in the United States and it would be technically challenging, if not infeasible, to collect such a comprehensive data set. The EPA therefore plans to administer this data collection as a sample of selected individual POTWs to create a diverse data set of industrial users across the United States that the EPA can draw from to identify sampling locations and industrial categories of interest to the EPA's ELGs program. The EPA determined that a census of the POTWs is not necessary to fulfill the objectives of the study and would result in significantly higher burden to the industry. Further, the EPA will not use the information and data collected via the questionnaire and sampling program to generalize the whole population of POTWs in the United States. The EPA determined that the sample size should be determined based on the number of industrial users that need to be sampled to create a sufficiently diverse and robust national data set. The EPA determined that collecting wastewater samples from a total of 2,000 industrial users from a cross-section of up to 60 industrial categories will be sufficient to achieve the study objectives. These industrial categories may or may not have existing ELGs or requirements applicable to wastewater discharges to POTWs (indirect discharges).

The EPA developed a sampling scheme for the questionnaire and sampling program based on the estimated quantity of PFAS monitoring data it will need to achieve the objectives of the POTW Influent PFAS Study and available data on POTW characteristics of interest. The sample frame, sample size, stratification variables, and sampling method are described below.

2(a) Sample Frame

The sample frame is the set of potential respondents from which the sample will be drawn (i.e., target population, population of interest). The EPA developed the sample frame for the questionnaire and sampling program based on 2012 [Clean Watersheds Needs Survey \(CWNS\)](#) data. The EPA used information and data from the 2012 CWNS, the most recent CWNS data set publicly available, to identify the population of POTWs in the United States and to estimate daily flow rates for each POTW.² CWNS is an assessment of capital investment needed nationwide for publicly-owned wastewater collection and treatment facilities to meet the water quality goals of the Clean Water Act. As there are likely more unmet capital investment needs at larger POTWs, and the POTW Influent PFAS Study data collection is focused on the largest POTWs, the EPA determined CWNS data provides the best available data on which to base the sample frame. Based on the 2012 CWNS, the EPA identified 14,691 POTWs operating in the United States and used this population as the sample frame for the data collection. The list of POTWs included in the sample frame is available on the EPA's [CWNS 2012 Data and Reports website](#). The EPA is aware that this sample frame does not include all POTWS in the United States; however, as discussed above it is not necessary to identify all POTWS in the United States to focus this data collection on the POTWs with the largest flow rates.

² The EPA completed data collection for the newest iteration of the CWNS on April 28, 2023. This data set has not yet been presented to Congress or the public in a final report. For this data collection, the EPA used the most recent, publicly available CWNS data.

2(b) Sample Size

The sample size is the actual number of units/respondents to be included in the data collection. To capture 2,000 industrial users in the data collection, the EPA will need to administer the questionnaire and sampling program to a population of POTWs that represent a large number and broad range of industrial users. The number of industrial users covered by a POTW varies site-to-site; however, POTWs located in large metropolitan locations with higher flow rates tend to have a higher number of industrial users and more diversity in types of industrial discharges received. The EPA estimated that administering the questionnaire to a population of 400 large POTWs across the United States will generate sufficient data to capture the required number of industrial users and a cross-section of industrial categories.

Based on information and data collected via the questionnaire, the EPA would identify 200 to 300 POTWs to conduct sampling of industrial user effluent; domestic wastewater; and POTW influent, effluent, and sewage sludge/biosolids. For each POTW selected, the EPA will identify no more than 10 industrial users for which the POTW will collect and analyze wastewater effluent samples. The total number of industrial users sampled as part of the sampling program will not exceed 2,000 facilities.

2(c) Stratification

Stratification is the method used to segment a population into homogeneous groups. The goal of stratification is to reduce the sampling error or, looked at another way, to increase the precision of estimates derived from sample data. Since the POTW Influent PFAS Study is a screening assessment of PFAS in industrial user discharges/POTW influent and the EPA will not use data generated from the data collection to derive national estimates for POTW discharges, the EPA determined that stratification will not increase the precision of data collected and is not warranted to achieve the objectives of the POTW Influent PFAS Study. The EPA is selecting the POTWs with the greatest flow rates not to identify a homogeneous group of POTWs but to ensure that a diverse and robust data set of industrial users is created.

2(d) Sampling Method

The sampling method is the set of rules or procedures for selecting the individuals, or “sample,” for the data collection from the population of interest, or “sample frame.” From the 2012 CWNS population of 14,691 POTWs, the EPA will select approximately 400 POTWs to complete the questionnaire and a subset of 200 to 300 questionnaire respondents to conduct sampling. The EPA will select which POTWs are required to complete the questionnaire based on the total daily flow rate reported in the Existing Total Flow field of the 2012 CWNS. Based on the 2012 CWNS, there are more than 500 POTWs that report a daily flow rate that is equal to or greater than 10 million gallons per day (MGD) and have a service population greater than or equal to 50,000 persons. The EPA anticipates that all POTWs with a flow rate exceeding 10 MGD and service populations of at least 50,000 persons will have sufficient resources to complete the data collection and that this approach will reduce or eliminate the burden to small businesses and small entities.

The EPA will select POTWs from a range of geographic areas to ensure information collected reflects all regions of the United States and accounts for potential geographic differences in industrial activities and wastewater characteristics (e.g., industries that support automotive manufacturing are clustered in Michigan). The EPA will prioritize POTWs with the largest daily flow rates because these facilities will collectively capture the largest number of industrial users and diversity in types of industrial users.

The EPA will determine the specific POTWs to participate in the sampling program and industrial users to be sampled based on technical information collected through the questionnaires. The EPA’s selection of the 200 to 300 POTWs to conduct sampling will be driven by the number and type of industrial users and suspected or known sources of PFAS discharges reported by the POTWs. The EPA will exercise best judgement to determine

the number of facilities in each industrial category to sample as part the sampling program. In selecting facilities, the EPA's goal will be to capture a sufficient cross-section of the types of industrial discharges to POTWs and fill data gaps for industries which do not currently have sufficient data. The EPA will then select a group of 200 to 300 POTWs that collectively represents the distribution of industrial users the EPA wishes to sample. POTWs that receive wastewater discharges from multiple industrial categories of interest to the EPA are more likely to be selected for the sampling program. In assessing specific POTWs for potential sampling, the EPA will also consider factors such as geographic location (i.e., ensuring that POTWs are selected for different states and regions of the United States), potential burden on operating entities (i.e., minimizing the number of POTWs selected for each municipal authority), and availability of existing PFAS monitoring data (i.e., whether sampling would be duplicative with permitting requirements or previous PFAS source assessments).

The EPA will exercise best judgement and coordinate with industry trade associations in selecting specific POTWs to complete the questionnaire and conduct sampling. The EPA acknowledges the sampling method may not result in a statistically representative sample of POTWs across the United States. A statistically representative sample is not required in order to meet the stated goals of the study.

3. ESTIMATION PROCEDURE

As described in Section 2, the EPA determined that collecting wastewater samples from a total of 2,000 industrial users from a cross-section of industrial categories will be sufficient to achieve the study objectives. More specifically, the EPA will focus the sampling program on industrial users in categories for which the EPA does not have sufficient PFAS monitoring data to determine the type and quantity of PFAS discharged and whether ELGs are warranted to control such PFAS discharges. Large POTWs, such as those required to complete the questionnaire, have dozens to hundreds of industrial users per facility; therefore, inclusion of 200 to 300 POTWs in the sampling program will allow the EPA to achieve sampling of 2,000 industrial users across lesser-researched categories. The EPA estimated that selecting 400 POTWs to complete the questionnaire and ultimately receiving responses from all selected POTWs (will provide sufficient data and flexibility to the EPA to select 200 to 300 specific POTWs and industrial facilities to conduct sampling.

Although the EPA will not have a complete picture of all industrial facilities discharging to POTWs in the United States, the sample design for this data collection will produce sufficient information to achieve the objectives of the study. If the EPA determines that regulatory action is warranted based on the findings of the POTW Influent PFAS Study, the EPA will likely pursue industry-specific data collection efforts to support those future rulemaking efforts.

4. ACCURACY/PRECISION

Accuracy measures how close the result is to the actual value of the measure. Precision measures how closely estimates made from the sample data approximate the characteristics of the population of interest. Information and data collected via the questionnaire and sampling program will support a screening assessment of PFAS in industrial wastewater discharges; domestic wastewater; and POTW influent, effluent, and sewage sludge/biosolids to fill existing data gaps and inform future EPA actions to address PFAS. The EPA evaluated accuracy of the data collection design and has taken steps to ensure information and data collected are suitable for use to achieve the objectives of the POTW Influent PFAS Study.

Accuracy. The questionnaire will not require questionnaire respondents to complete non-routine tests or measurements. As described in Section 1(a), the design and implementation of the questionnaire will employ several quality assurance techniques to reduce the frequency of errors and minimize inaccurate or incomplete responses. For the sampling program, all aqueous and sewage sludge/biosolids samples collected will be analyzed by accredited laboratories using consistent, EPA-approved analytical methods. Further, all sampling results will undergo quality assurance review prior to compilation and submission to the EPA. POTWs will be

required to certify that information and data submitted for the questionnaire and sampling program are, to their knowledge, accurate and complete. The design and requirements of this data collection will minimize the impact of potential non-sampling errors.

Precision. Because the POTW Influent PFAS Study is a screening assessment and the EPA will not use data generated from the data collection to derive national estimates of POTW or industrial user demographics and discharges, the EPA did not establish precision targets and is not concerned with precision for this data collection.

5. SPECIALIZED SAMPLING PROCEDURES

No special sampling procedures are planned for the questionnaire or sampling program.

6. DATA COLLECTION

This will be a single incident data collection; no periodic data collection is planned at this stage. Under this ICR, the EPA intends to administer a mandatory questionnaire and conduct a mandatory sampling program for approximately 2.7 percent of POTWs in the United States. Additionally, the EPA will develop a public-facing, web-based data collection portal which will allow states, municipal authorities, and POTWs (including those not selected to complete the questionnaire) to voluntarily submit existing data characterizing PFAS in industrial user effluent; domestic wastewater; and POTW influent, effluent, and sewage sludge/biosolids. The collection methods for each of these efforts are described further in Section 2 of Part A of this ICR supporting statement.

7. RESPONSE RATE/NO RESPONSE/DATA UTILITY

7(a) Response Rate

The EPA expects that the response rate will be 100 percent for this mandatory questionnaire and sampling effort, which will be conducted under the authority of Section 308 of the Clean Water Act. The sample size for the questionnaire is 400 facilities.

7(b) No Response

The EPA recognizes that some no response is unavoidable, and in past questionnaire efforts, the EPA has waived the duty to respond in extreme and rare cases (e.g., natural disasters) which also might occur for this data collection effort. As noted throughout this supporting statement, the EPA will conservatively assume that all POTWs which are selected for the questionnaire and sampling program provide a complete response so that the burden to industry is not underestimated. The EPA will implement efforts to reduce no response, including use of an easy-to-use format, operating helplines, and following up with potential nonrespondents.

7(c) Burden Reduction

The EPA designed the questionnaire to include burden-reducing features. The questionnaire will contain terminology and questions familiar to the POTWs, allowing for easy interpretation and completion. The questionnaire will allow for upload of existing documents, such as wastewater treatment diagrams and annual biosolids reports, instead of requiring respondents to manually enter this information into question responses or produce new documents. The questionnaire also groups similar topic questions together and will offer drop-down menus and checkbox selections to simplify responses, thus minimizing the number of text responses requiring input.

The questionnaire consists of 21 questions and should not require a burden of more than 23 hours (on average) for each facility's respondents to complete, verify, and submit. The EPA will implement the questionnaire online

which will facilitate access and completion. The EPA therefore concludes that completing the questionnaire does not represent an overly burdensome task. The questionnaire and sampling program will also serve as a response to EPA's National Sewage Sludge Survey (NSSS). Combining these objectives reduces an individual POTW's burden to submit the same information to EPA multiple times.

7(d) Data Utility

The data collected through this data collection will serve to identify and quantify sources of PFAS to POTWs and fill existing data gaps so that the EPA can make informed decisions on appropriate actions to control PFAS. Subsequently, if the EPA pursues a rulemaking for a certain industrial category, the data collected for the category may be used to conduct further analyses of the point source category and support proposed and/or final rulemaking analyses.

8. TESTS OF PROCEDURES

The EPA does not intend to pre-test the questionnaire. For more than 40 years, the EPA has conducted surveys of numerous industrial sectors to collect information to support regulation development activities in the effluent guidelines program. While the EPA develops different questionnaires for each industry, there are common elements for all industries. The questionnaires collect the same basic data such as information about general facility and permit information, wastewater generation and management, and discharge. Thus, when the EPA develops a questionnaire for a particular industry, it generally tailors the questions for specific terms and processes used by that industry. In past years, the EPA has administered electronic (Qualtrics-based) questionnaires and has relied on active participation by trade groups and their members in reviewing the questionnaires. In the EPA's experience, such collaboration generally tends to better reflect the industry at large than pre-tests. As discussed in Part A of this supporting statement, the EPA has already engaged trade associations and industry experts regarding this data collection. The EPA expects to continue to discuss and refine this questionnaire with industry experts prior to implementation. For this reason, the EPA considers additional review through the pre-test process to be unnecessary for this industry.

9. CONTACT INFORMATION

Sean Dempsey
EPA Headquarters
1200 Pennsylvania Ave., N.W.
Mail Code: 4303T
Washington, DC 20460
dempsey.sean@epa.gov