
**SUPPORTING STATEMENT
PART B**

**NATIONAL STUDY OF NUTRIENT REMOVAL AND SECONDARY
TECHNOLOGIES: POTW SCREENER QUESTIONNAIRE
FOR THE
U.S. ENVIRONMENTAL PROTECTION AGENCY**

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Appendix A: STUDY SCREENER QUESTIONNAIRE

1. QUESTIONNAIRE RATIONALE

EPA has chosen to conduct a survey of all wastewater treatment and/or water resource recovery facilities. The intended population of interest includes wastewater treatment plants (WWTPs), sewage treatment plants, water resource recovery facilities (WRRFs), and publicly owned treatment works (POTWs). Each of these terms is used here to refer to the same general type of facility. Throughout this supporting statement, wherever the text refers to POTW, the other terms are similarly implied. EPA has chosen to conduct a voluntary survey based on feedback from the intended recipients and the overall goals of the study. Technical voluntary surveys often have a low response rate. However, this voluntary questionnaire is expected to provide a sufficient number of responses to profile the industry because POTWs are interested in and will benefit from the information collection, and EPA will be working with states and industry trade groups to promote the completion of the screener questionnaire. This questionnaire is necessary to create a frame for future data collection efforts.

The primary objective of this questionnaire is to collect basic information from facilities, with an emphasis on characteristics, processes, and technologies that address nutrient removal. The questionnaire will serve to fill in the information gaps present in current databases. Questions will be designed to characterize these facilities in terms of size, discharge status, wastewater sources, and treatment technology in place.

1(a) Population of Interest

EPA intends to use this questionnaire to build a working database that will inform further and more detailed analyses in the future. EPA estimates the target population to consist of 16,500 facilities. The population of interest are those treatment facilities that meet the following criteria:

- A POTW is defined under 40 CFR section 403.3(q) as “a treatment works as defined by section 212 of the Act, which is owned by a State or municipality (as defined by section 502(4) of the 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 Treatment Plant.”
 - o CWA Section 502(3): The term "State" means a State, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, and the Trust Territory of the Pacific Islands.
 - o CWA Section 502(4): The term "municipality" means a city, town, borough, county, parish, district, association, or other public body created by or pursuant to State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 1288 of this title.
- Discharge from the treatment works is authorized under an individual or general NPDES permit (meaning the intention is to capture POTWs with regulated

discharges). A facility that does not discharge to waters of the U.S. would not be included in the population.

- Federally and privately-owned plants are **not** included in the population.
- Facilities that function solely as dedicated flow control entities such as Combined Sewer Overflows (CSOs) and Sanitary Sewer Overflows (SSOs) are **not** included in the population. A treatment works with one or more of these flow control functions would be considered as in the population.

More simply stated, the population of interest are all POTW facilities located in the United States that discharge to receiving waters. This includes tribally owned facilities but does not include federally owned or privately owned facilities and does not include dedicated flow control entities (i.e., CSOs and SSOs).

1(b) Response rate/Non-response

This questionnaire is a voluntary data collection. The cover letter and instructions for the questionnaire explain the reasons for the questionnaire. EPA will continue to work with POTWs, states, and the major industry associations in an effort to build cooperation and promote a high response rate. It is difficult to estimate the response rate. Voluntary surveys of a technical nature often have a low response rate. However, this voluntary questionnaire is expected to provide a sufficient number of responses to profile the industry because POTWs are interested in and will benefit from the information collection, and EPA will be working with states and industry trade groups to promote the completion of the screener questionnaire. EPA has received phone calls and comments to its webinars demonstrating support of the study by POTWs. For these reasons, EPA anticipates a 50 to 80 percent response rate, and to provide conservative estimates of the burden of this data collection, has used the 80 percent response rate as an upper bound.

To minimize item non-response, EPA solicited comments on a draft questionnaire 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, EPA expects to minimize inaccurate or incomplete responses to questions that can occur due to misunderstanding, misinterpretation, and/or the unintentional skipping of questions by respondents.

2. COLLECTION OF INFORMATION

2(a) Stratification/Sample Selection

As this questionnaire is being distributed as a census, no stratification or sampling scheme has been designed. The main data sources include:

- Integrated Compliance Information System-National Pollutant Discharge Elimination System (ICIS-NPDES) database as of November 2018.
- Partial mailing lists obtained from 39 states.
- Review of ICIS data by for states Regions 6 and 7.

Part A, Error: Reference source not found lists the available data sources in table format with greater detail.

3. ESTIMATION PROCEDURE

As this questionnaire is designed as a census, no estimation of parameters is needed.

4. ACCURACY/PRECISION

As this questionnaire is designed as a census, no estimation of parameters is needed. Accuracy and precision concerns are not an issue at this point in the study.

5. SPECIALIZED SAMPLING PROCEDURES

No special sampling procedures are planned for this questionnaire.

6. DATA COLLECTION

This will be a single incident data collection; no periodic data collection is planned at this stage. Under this ICR, EPA intends to conduct a POTW screener questionnaire, conduct site visits to POTWs and contact state and small municipality associations. The collection methods for each of these efforts are detailed below.

Screener Questionnaire

EPA will continue to collect information from the screener questionnaire online. The collection method included mailing of a cover letter and instructions to each POTW. The questionnaire instructions explain where and how to access the online questionnaire. The responses will be stored in an electronic database. For those respondents without internet access, the cover letter informs the respondent on how to request a paper survey that can then be completed and mailed to EPA's contractor for input into the questionnaire database. EPA may follow up with facility contacts if information provided by a respondent is unclear or appears incomplete.

Site Visits

EPA will conduct up to 50 additional site visits to POTWs located throughout the continental U.S. Information collected during the site visits will take the form of a treatment plant tour and discussions with the treatment plant operators about terms, treatment in-place, and technologies and/or operating procedures related to nutrient removal and control. Site visit follow up may include email or phone contact after the site visit as needed to clarify information. Each site visited will be given the opportunity to review EPA's site visit report for accuracy. EPA expects to coordinate with the industry in planning site visits, including obtaining industry and state suggestions of appropriate sites. Currently, all site visits are conducted remotely due to safety measures surrounding the COVID pandemic.

Contacts to Small Municipalities Associations

EPA or its contractor will conduct up to 100 phone or email contacts with various small municipalities associations to collect information that will support the development of the POTW universe and profile. EPA or its contractor may follow up with phone contacts to states or small municipality associations to clarify or confirm any previous statements or information provided.

Contacts to States to Develop POTW List

EPA will collect a list of POTWs, their mailing addresses, and facility contact information from each NPDES-authorized state or EPA Regional office (if the state does not have NPDES program authorization) to determine the population to receive the POTW questionnaire. This information will be compiled and collected under both the NPDES Program (Renewal) ICR (EPA ICR No. 0229.22) and this ICR.

7. RESPONSE RATE/NON-RESPONSE/DATA UTILITY

7(a) Response Rate

This questionnaire is a voluntary survey. The cover letter explained the reasons for the questionnaire and encouraged the recipient to respond. EPA is working with state and trade associations to foster cooperation and promote higher response rates. Due to the partnerships and industry involvement in developing this study, EPA projects a 50 to 80 percent response rate.

7(b) Non-response

To minimize item non-response, EPA's subject matter experts have worked closely with industry to develop questions that 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. EPA has conducted multiple webinars to demonstrate the survey and received 38 draft questionnaires and several phone calls from public entities that self-selected to test the survey. EPA received minimal questions on the technical content of the screener throughout the initial response period. EPA anticipates there is potential for non-response due to outdated or incorrect mailing addresses, minimal staff at small facilities, current strains on POTW staff due to ongoing pandemic, and lack of awareness of the overall project goals and potential benefits to POTWs. To help reduce the number of POTWs that choose not to complete the questionnaire, EPA is encouraging state certification boards to offer CEUs for operators completing the survey. After EPA has received responses, EPA will assess the non-response rate and determine whether there is any potential for bias into the subsequent data collection efforts and analysis.

7(c) Burden Reduction

EPA designed the questionnaire to include burden-reducing features. It contains initial screening questions that direct respondents that do not qualify as a POTW to indicate their status and then submit their response without the need to respond to the remaining questions. Those facilities that do not have a NPDES permit or do not discharge would be directed to skip the subsequent questions. The questionnaire also groups similar topic questions together and offers

drop down menu selection to simplify responses, thus minimizing the number of text responses requiring input.

The questionnaire consists of 28 questions and should not require a burden of more than 2 hours for each respondent to complete, verify, and submit (on average). EPA will implement the survey online which will facilitate access and completion. For those respondents without internet access, the cover letter and instruction packet will inform the respondent on how to request a paper survey that can then be completed and mailed to EPA's contractor for input into the questionnaire database. EPA therefore concludes that completing the questionnaire does not represent an overly burdensome task.

7(d) Data Utility

The data collected in this questionnaire will serve to update current information, fill in missing data, and profile the universe of POTWs with sufficient information to support future review and data collection.

8. TESTS OF PROCEDURES

EPA did not pre-test the questionnaire. For more than 30 years, EPA EAD has conducted surveys of numerous industrial sectors to collect information to support regulation development activities in the effluent guidelines program. While 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 processes, treatment, and financial status. Thus, when EPA develops a questionnaire for a particular industry, it generally tailors the questions for specific terms and processes used by that industry. For this questionnaire, EPA also relied on active participation by trade groups and their members in reviewing the questionnaire. In EPA's experience, such collaboration generally tends to better reflect the industry at large than pre-tests. Because this is an ICR renewal, EPA is actively administering this questionnaire and has found that respondents are able to work through the questionnaire with minimal need for clarification through the EPA helpline. This shows that EAD's survey experience combined with input from industry resulted in a screener that was appropriate for the targeted recipients.

9. CONTACT INFORMATION

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