



WWTF Sampling Program for PFAS Statement of Work

Wastewater treatment facilities may receive PFAS from residential and/or commercial sources, resulting in PFAS presence in the discharges of wastewater effluent and solids. The best solution currently available for reducing PFAS in a wastewater treatment facility is source reduction because current PFAS treatment technologies are generally not available at a large scale for municipal systems. The Town of Nantucket (the Town) has recognized the need to develop a voluntary, yet comprehensive, sampling program to identify and assess PFAS sources being received at the Surfside Wastewater Treatment Facility (WWTF), as well as to understand the PFAS concentrations in the wastewater influent. This elective sampling program will provide an initial set of information as to the PFAS compounds present in the wastewater and provide a baseline of PFAS concentrations in the Town's wastewater and related solids. The scope and budget proposed herein is for planning and conducting these sampling efforts.

The sampling program described in this statement of work was developed based on the previous work CDM Smith has done for the Town regarding PFAS and corresponds to Steps 1 and 2 of the recently developed Wastewater Decision Matrix (copy attached). Specifically, the sampling locations for the program include, but are not limited to, the Surfside WWTF's combined influent, the Town's major pump stations, septage haulers to the Surfside WWTF, leachate from the Town's landfill, and sludge from the Siasconset WWTF. CDM Smith proposes to sample these locations four times, with the exact dates to be determined at the project kickoff. The sampling program proposed will enable CDM Smith to identify the levels of PFAS present in the Island's wastewater treatment systems, and to build a baseline of PFAS concentrations for use in future decision making.

Outlined below is the Scope of Work, identifying the specific tasks to be executed, schedule for implementation, and proposed fee.

Scope of Work

The specific scope of work by task is outlined below.

Task 1 – Develop PFAS Influent Source Sampling Program and Protocol

CDM Smith will develop a written sampling program identifying all sampling logistics and procedures unique to Nantucket. This will include sample locations, methods for collecting each sample, personal protection equipment (PPE) for use when sampling, sample volume, materials

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to be used, sample preparation and shipping instructions, sample labeling details, recommended testing laboratory, and analytical method(s) to be used by the selected laboratory, etc. Sample QAQC requirements will also be included, to include a paired duplicate and field blank per sample round. The sampling program will be developed according to the latest industry accepted standard practices, as well as any standard operation procedures and analyte list adopted or recommended by the Massachusetts Department of Environmental Protection (MassDEP) at the time of this sampling program development. The proposed sampling program protocol will be utilized by CDM Smith for the four PFAS sampling events outlined in Task 4, and will provide the framework and procedures for any future, independent sampling events to be undertaken by the Town.

The sampling program protocol will also include developing a detailed record keeping template for Sewer Department staff to complete as septage and outside material are delivered to the Surfside WWTF for treatment. Having such information will enable the identification of potential PFAS source materials. Sewer Department staff will be responsible for filling out the template and record keeping for each load of material delivered to the Surfside WWTF for the duration of this sampling program. It is recommended that this practice of information collection be continued into the future as the Town progresses beyond Steps 1 and 2 in the Wastewater Decision Matrix.

One virtual meeting will be conducted with the Town. This meeting will serve as a project kickoff meeting with the focus being development of the sampling plan and specific details. The sampling program document is intended to identify the procedures and steps taken by the CDM Smith team.

Milestone Submittal: PFAS Influent Source Sampling Program document.

Task 2 – Coordination and Communication with Laboratories

The CDM Smith team will coordinate the sampling efforts described herein with a laboratory approved by MassDEP to perform the PFAS analyses needed as part of this scope of work. Every effort will be made to procure all analyses through a single laboratory for consistency. CDM Smith will coordinate shipping of sample bottles and associated coolers to the Surfside WWTF, where Sewer Department staff will accept delivery and store the materials until needed. At the conclusion of sampling events completed by CDM Smith staff, the cooler will be packaged and ready for shipment by parcel delivery service (e.g. UPS, FedEx, etc.) and our staff will complete all necessary chain of custody paperwork prior to shipping. Alternatively, if the Town elects to complete sample collection themselves, coordination with the Laboratories (inclusive of packaging, shipping, and chain of custody preparation) will also become the responsibility of the Town for those respective sample events.

The CDM Smith team will maintain communication with the selected laboratory throughout the four sampling events to address any questions and ensure appropriate quality control procedures are followed. Data from each sampling event completed as part of this project will be collected from the identified laboratory and reviewed, for analysis in tasks below.

Milestone Submittal: Laboratory coordination and reports for each of four sample rounds.

Task 3 – Sampling Events

Two CDM Smith staff will identify and collect samples at the following locations:

- Combined wastewater influent
- Up to four pump stations in the collection system (4 pump stations pump directly to the facility: Surfside PS, Sea St. PS, Monomoy South PS and South Valley PS.)
- Up to six septage haulers
- Siasconset WWTF sludge
- Landfill leachate from each of the three leachate collection locations
- One duplicate pair and one field blank per sample round

Samples will be prepared for shipment to the selected laboratory. Analytical results provided by the laboratory will be collected and evaluated by CDM Smith staff. Any observations at the time of sample collection will be recorded. Data from each sampling event will be assembled, combined, and condensed to a single summary report at the conclusion of all sampling events. The summary report will include any previous relevant data and/or comparison for context to current standards or benchmarks including relevant data from the State of Michigan’s statewide study of PFAS in WWTPs, Maine soil screening limits, or other more current and relevant data.

A Sewer Department staff member will be required to accompany CDM Smith staff throughout all the sampling event(s) and provide transportation to assist with access to each sampling location, and sample collection as needed. Sample collection events of the locations listed above will be completed over a maximum two-day period.

Task 3.1 – Sampling Event No. 1

Sampling Event No. 1 will be implemented according to the sample collection scope and procedures set out in Task 1.0. Budget assumes up to two CDM Smith engineers working on-site for three days (two days for sample collection and one day for preparation and travel).

Task 3.2 – Sampling Event No. 2

Sampling Event No. 2 will be implemented following the sample collection scope and procedures set out in Task 1.0. Budget assumes up to two CDM Smith engineers working on-site for three days (inclusive of travel).

Task 3.3 – Sampling Event No. 3

Sampling Event No. 3 will be implemented following the sample collection scope and procedures set out in Task 1.0. Budget assumes one CDM Smith engineer working on-site for up to three days (inclusive of travel).

Task 3.4 – Sampling Event No. 4

Sampling Event No. 4 will be implemented following the sample and collection scope and procedures set out in Task 1.0. Budget assumes one CDM Smith engineer working on-site for three days (inclusive of travel).

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It has been assumed that the sampling events will be conducted sequentially, one time per month over a four month period (specific dates to be determined). However, the Town may elect to perform the sampling events over a different longer schedule (i.e., every other month or quarterly).

The Town may elect to perform field Sampling Events No. 3 and/or No. 4 on their own without the assistance of CDM Smith staff (provides a labor and expense reduction). In this circumstance, laboratory services will still be coordinated and paid for directly by CDM Smith. Analytical results will be emailed to CDM Smith (and shared with the Town) for review, evaluation, and inclusion in the final report. The Town will need to notify CDM Smith at least three weeks prior to any sampling event they elect to complete themselves such that CDM Smith travel arrangements can be canceled, and the laboratory can be notified of any changes to the chain of custody.

To ensure data quality and usability, CDM Smith will confirm conformance with the sampling program protocol. One duplicate pair sample and one field blank will be collected per sampling event. The parent-duplicate results and laboratory data package will be reviewed by an analytical chemist to identify any data quality and usability issues. The SOP and laboratory analytical methods will be in accordance with current state and federal PFAS guidance and protocols. Third-party data validation is not included herein.

Milestone Submittals: Completion of four sample events, receipt of data from the laboratory along with a review of the results and QA/QC findings. Laboratory reports will be forwarded to the Town as received and include any data quality and usability concerns identified for needed action.

Task 4 – Summary Report

Prepare a brief technical report summarizing and documenting the wastewater sampling program as conducted. The report will include the sampling program documents developed under Task 1 and provide results of all four sample events, with laboratory analytical data reports attached. Focused evaluation will be presented on the various media types to identify the types of PFAS and where the greatest PFAS concentrations are entering the WWTF. As appropriate, review trends over time for the four sample events by the various media types, to assess potential impacts of the seasonal population changes. Data will be presented in graphical and tabular format. Based on the results, develop conclusions, and provide recommendations for future sampling, parameters, media type, and frequency. Recommendations will also focus on the next steps toward PFAS source identification, source reduction/control and future actions by the Town. Recommendations will generally follow the stepped process presented in the wastewater decision matrix, while also meeting the current regulatory environment.

The summary report will include any previous relevant data and/or comparison for context to current standards or benchmarks. The report will summarize any laboratory data quality and usability concerns.

Nantucket staff will be provided with a draft summary report for review and comment. Comments will be incorporated into a final version that will be made available and posted on the Town's website.

Conduct one virtual meeting with the Town to review the report and discuss any comments.

Major Deliverable: Summary report presenting results of the four sample rounds, conclusions, comparisons, and recommendations.

Task 5 – Project Management

The Project Manager will lead the day-to-day scheduling and budget tracking of the project and its various components to ensure that client objectives are met. Tasks include:

- Set-up and establishment of new project on CDM Smith’s system.
- Day-to-day management to administer, coordinate, and manage work efforts.
- Management of the technical and editorial review process to meet CDM Smith’s Quality Management Program.
- Ensure assignment of appropriate technical experts, both for execution and review.
- Milestone deliverables to be placed on the PFAS project SharePoint library.
- Prepare monthly invoices and narrative status reports.
- Perform project scheduling to meet deadlines.
- Identify potential change orders and inform the Town, along with associated scope, budget, and cost. Change orders shall not be implemented until written authorization is received from the Town.
- Subcontractor management and invoicing review.

Schedule

Assuming that the four Sample Events are performed sequentially, one time per month over a four month period, the final report will be delivered within nine months following receipt of a Notice to Proceed. This schedule allows 1-2 months for preparation and finalization of the PFAS Influent Source Sampling Program (Task 1), followed by four months of sampling. The draft report will be issued 60 days after receipt of all data.

For planning purposes and to account for any potential variability in the sample schedule, a contract end date of June 30, 2023 is suggested. Should the sample program be extended, the schedule may be adjusted by Amendment.

Costs

The fee for the WWTF Sampling Program for PFAS Statement of Work presented herein is a not-to-exceed upper limit of \$151,800. Invoicing will be on a Cost-Plus method based on Direct Labor Cost (salaries) plus Indirect Labor Cost plus a Fee. The Indirect Labor Cost will be based on an Indirect Cost Rate Factor of 176.3 percent (includes overhead and fringe to be multiplied by direct labor). A fee of 10 percent will be applied to the sum of the Direct Labor and Indirect Labor combined. Invoicing will be monthly based on the work completed. Other direct expenses and any subcontract/laboratory costs will be invoiced at actual cost.