



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

Office of Water

JAN 05 2017

Mr. Peter LaFlamme
ACWA President
1634 EYE Street NW, Ste. #750
Washington, DC 20006

Dear Mr. LaFlamme:

I would like to thank the Association of Clean Water Administrators (ACWA) for their thoughtful comments on the Proposed Information Collection Request for the National Study of Nutrient Removal and Secondary Technologies. I appreciate ACWA's continued work with the EPA's Office of Science and Technology to ensure we conduct the most successful and useful study possible.

ACWA's comments raise a number of concerns that we have taken into account and will address in moving forward with the study. ACWA and other entities expressed concern over EPA's proposed use of Clean Water Act Section 308 authority for administration of the census. We will amend the study to instead administer a voluntary census. ACWA also raised concern over the hundreds of small communities that may not be able to answer the detailed questions in the draft questionnaire. To address this concern, we are implementing a series of questions at the beginning of the questionnaire for small facilities, which will result in an abridged version of the questionnaire for these facilities.

In order to administer a successful study, we are asking ACWA's help on some important aspects. First, in order to get the largest response possible to the voluntary census, we would like to include a letter of support from each facility's state clean water administrator with the questionnaire, encouraging them to complete it and respond. States could provide us with such a letter to include, or concurrently send out their own letter. Second, we would like to ask ACWA's help in correcting our facility mailing list to ensure its accuracy and completeness. Finally, we would like ACWA's help in refining the questionnaire, especially with respect to small plants. We spoke with several small plant operators during the comment period who made specific suggestions to simplify the questionnaire and minimize their burden. We would like to work with ACWA to develop these questions, as well as to reach out to small communities to ensure there is sufficient communication and understanding leading up to the administration of the census. We also have reason to believe that there will be some number of small POTWs that will be capable and interested in participating in this survey. So our goal is to provide options for small facilities

to skip questions, but not completely exclude them from answering. It is important for the goals of this study that we are able to adequately characterize the technologies in place in the POTW community across all facility sizes.

ACWA also voiced concern that public release of the data could result in enforcement actions from EPA or other parties. We intend to use the data collected from the census to develop a baseline of POTW treatment technologies and ultimately use that information to quantify the baseline discharge of nutrients from POTWs. We are also interested in capturing statistically representative data on types of treatment trains at secondary plants, in various parts of the country where temperature and other influent characteristics are expected to affect nutrient removal. We do not intend for this census to collect any data that could expose a violation nor do we intend to use this data to redefine secondary treatment. EPA is interested in working with ACWA to ensure that we can meet the goals of the study and avoid compromising POTWs.

In discussing our goals with ACWA leadership, I believe it would be beneficial to clarify the reasoning behind the study, and the benefits and products that will come out of it for the regulated community.

This study arose from an expressed need for information by multiple entities attempting to address significant issues regarding nutrient discharges and energy savings at POTWs. In some areas of the country, states, EPA and academic institutions have been working with POTWs to show that nutrient reduction improvements can be made without major capital investments, but rather with optimization of operation and maintenance (O&M). For example, collaborative efforts have been underway in EPA's Region 4 to optimize performance at POTWs to reduce energy usage, and coincidentally achieve significant nutrient reductions. Optimization involved modification of O&M through changes in aeration, configuration, process, chemical additions, etc. However, despite the individual successes, identification of candidate facilities has been impeded due to a lack of basic information about facilities in general such as capacity, types of primary treatment, aeration method, etc. Additionally, EPA looked at more than 80 different projects at POTWS that were identified as having optimized their operations to compile a report on low cost modifications to improve nutrient reduction¹. Out of these projects, EPA was able to use the information from only 12 facilities to document the ability to optimize secondary treatment to improve nutrient reduction. The remainder of the projects were not selected because they lacked monitoring or cost data or involved advanced wastewater treatment facilities. Therefore, in order to provide the POTW community and states with enough information to investigate adoption of optimization practices at secondary treatment on a national scale, we need baseline information on nutrient removal across varying geographic regions and varying secondary treatment trains, with and without optimized O&M.

The second main need for this study is to update information on nutrient removal performance at POTW facilities. Estimates on nutrient discharges from POTWs are outdated – up to 50 years old – and do not incorporate the process controls that many use today. Moreover, these estimates do not reflect variable attributes such as differential plant loadings or temperature effects. Regulatory entities, such as states,

¹ Case Studies on Implementing Low-Cost Modifications to Improve Nutrient Reduction at Wastewater Treatment Plants: DRAFT Version 1.0; https://www.epa.gov/sites/production/files/2015-08/documents/case_studies_on_implementing_low-cost_modification_to_improve_potw_nutrient_reduction-combined_508_-_august.pdf

rely on estimates of POTW nutrient removal capabilities when developing waterbody and watershed plans, Total Maximum Daily Loads, or estimates of nutrient contributions from the POTW sector. Discharge data for nutrients are only reported by facilities if they have nutrient effluent limits or monitoring requirements, and influent data are rarely reported if collected at all. Presently, only a small percentage of POTWs have these requirements for nutrients. Thus, the estimates of nutrient loading coming from POTWs remain a very rough estimate. As states proceed with plans to address nutrient pollution, it will be helpful for them to have the data on the nutrient contribution from the POTW sector at the local watershed, regional, and national levels. Whether or not facilities decide to incorporate optimization processes observed in the study, this nutrient loading information will provide states and POTWs with necessary information to set realistic, achievable nutrient reduction targets.

Before proposing the census, we first evaluated national databases, including the Integrated Compliance Information System (ICIS), the Enforcement Compliance History Online (ECHO) database, the Clean Watersheds Needs Survey database, state permit documents available online, and state permit fact sheets available online. None of these databases, nor their combination, provide nationwide coverage or data on nutrient removal capabilities at different secondary treatment facilities, or on the process or treatment attributes that would identify candidates for optimization. Information is particularly lacking for small and moderate sized POTWs. These databases also provide little to no information on current nutrient discharges from the majority of these facilities.

The census, as a first step in the study, will be used to generate a population, as comprehensive as possible, of POTWs. This provides the solid foundation we need for the remainder of the study. We will then use the responses from this census to focus on collecting more detailed information, including process and O&M information, from a subset of secondary treatment facilities of different sizes in different geographic regions, including facilities utilizing optimized procedures for nutrient removal. Eventually, we plan to collect paired influent and effluent data from a representative subset of facilities to understand nutrient removal at optimized and un-optimized POTWs. We also intend to collect influent and effluent data from a broader scope of POTWs to develop baseline nutrient removal and loading estimates to provide state permitting authorities for their potential use in watershed plans or in TMDL development. With each step in the process, we connect back to the foundation built by the baseline census to provide a study applicable to not only a few select facilities, but a study that can be used and applied nationally due to that solid baseline.

As a product of this study, we plan to make some information from the census available in an online database in a single, consistent format that would provide information on location and basic treatment information and attributes that have been found most useful in achieving optimization. Once the study is completed, we plan to update the database to include successful facility optimization stories, the changes in nutrient removal that can occur with optimization, and the attributes of those facilities.

We envision that many entities would benefit from the information collected from both the initial census and from the more detailed later phases of the study. For example, POTWs can use the information for peer-to-peer mentoring and sharing best practices for nutrient removal within the industry. States can use these data to estimate nutrient loads from POTWs when developing TMDLs, watershed plans, point and non-point source tradeoff analyses, etc. Federal agencies (e.g., US Geological Survey) can use baseline nutrient loads for modeling to inform and enhance river basin plans. Academics and contractors can use the information to identify candidate POTWs for optimization and site-specific studies.

Thank you again for taking the time to comment on the proposed census and the study in general. We are committed to conducting a study that gathers both accurate and useful information, while minimizing the burden on and concerns of both the POTW community and clean water administrators. We look forward to working with ACWA to help us obtain support letters from states, correct our facility mailing list, and refine the questionnaire. I appreciate your continued communication with us during this process, and your support in outreach to the POTW community to develop a successful study.

Sincerely,



Elizabeth Southerland
Director, Office of Science & Technology
U.S. Environmental Protection Agency