April 4, 2017

Mr. Jack Broadbent
Executive Officer
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, CA 94105
Submitted via email to: jbroadbent@baaqmd.gov

SUBJECT: LETTER REPORT SUMMARIZING THE POTW PLANNING AND PROJECT IMPLEMENTATION PROCESS WITH REGARD TO PROPOSED RULE 11-18

Dear Mr. Broadbent:

The Bay Area Clean Water Agencies Air Issues and Regulations Committee (BACWA AIR) appreciates the opportunity to provide the Bay Area Air Quality Management District (BAAQMD) a summary of the planning and implementation process wastewater agencies must undertake when investing in projects, particularly with regard to the schedule and special factors public agencies must consider to satisfy stakeholders, ratepayers, and their elected (or appointed) Board or Council members. BACWA is a joint powers agency whose 46 members own and operate publicly-owned wastewater treatment works (POTWs) that collectively provide sanitary services to over 7.1 million people in the nine-county San Francisco Bay (SF Bay) Area. BACWA members are public agencies, governed by elected or appointed officials and managed by professionals who protect the environment and public health. The AIR Committee is a coalition of SF Bay Area POTWs working cooperatively to address air quality and climate change issues, under the direction of BACWA.

POTW Planning and Implementation Process

POTWs need at least six years to plan, design, and construct capital improvement projects. Figure 1 provides a summary of the POTW planning and project implementation process, and also highlights environmental review and financial considerations. The steps provided in Figure 1 are briefly described in this section.

The planning process begins with a Facility/Master Plan (Plan). This plan develops a long-term (i.e., 20-, 30-, sometimes 50-year) financing forecast to ensure reliable public service that protects public health and the environment. The result of a Facility/Master Plan (which typically takes one year or more to complete) is a Capital Improvement Program (CIP). The CIP provides a schedule of needed repairs and rehabilitation projects, as well as new capital investments that

are to be funded over the next 10 to 20 years to achieve the objectives set out in the Plan. These CIP projects are developed with several key factors in mind: projected growth in service area, existing and potential future regulations, aging infrastructure, and new local, state, or federal policies in development (e.g., climate related goals). The CIP is typically reviewed and updated annually, as capital and operations budgets are developed each fiscal year for approval by each agency's publicly elected or appointed Board/Council.

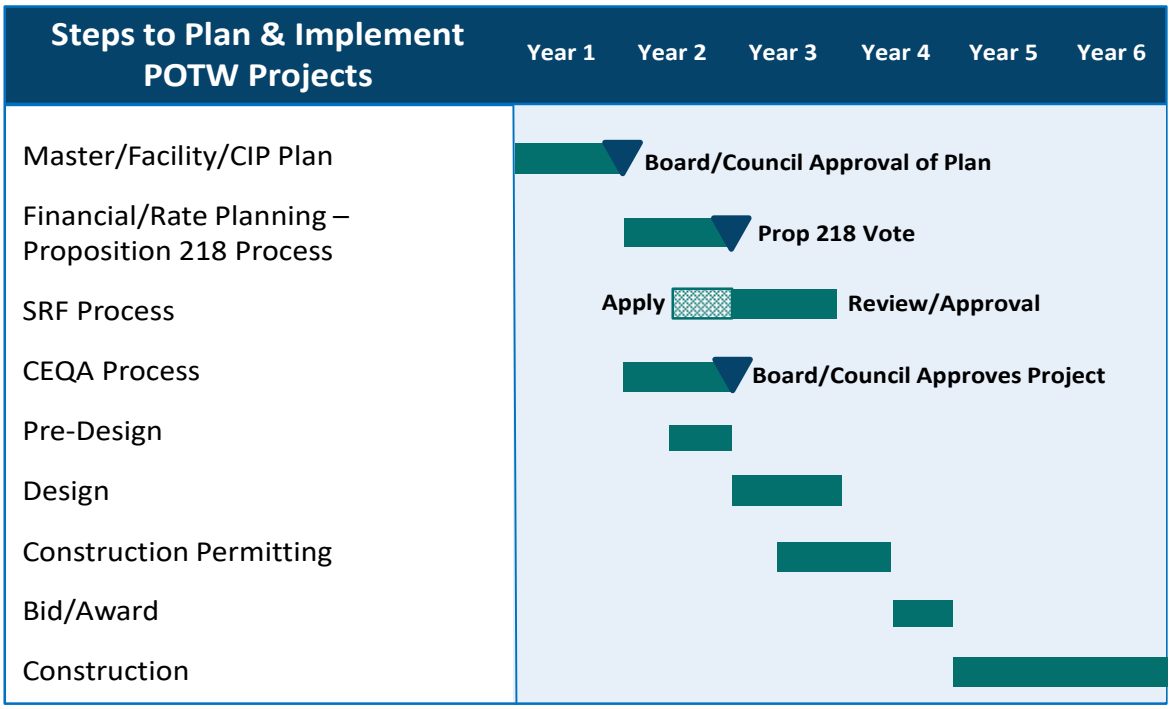


Figure 1. Timeline and Steps Necessary for Planning and Implementing POTW Projects.

Following approval of the Plan, POTWs begin financial planning to determine if and when to increase customer rates to support the CIP schedule. The financial planning process can take a year to complete and includes rate projections for funding the identified CIP projects. If there are any new charges and/or increases to existing charges/rates, then tax (rate) payers must be given the opportunity to vote to approve the rate increases as required by Proposition 218.

The environmental review process required by the California Environmental Quality Act (CEQA) can be performed concurrently with the financial planning process and typically requires up to a year to complete (may require additional time depending on the project elements). The environmental review process requires some pre-design work to provide specific information required for CEQA-Plus analysis. The pre-design work requires approximately six months and is typically undertaken toward the end of the CEQA-Plus process.

Following Board/Council approval of the Plan (within the last half of the CEQA-Plus environmental review process and concurrent with pre-design work), agencies begin the State Revolving Fund (SRF) application process. The SRF application process takes approximately six months to complete and requires CEQA-Plus documentation to be complete for submission. Once the application is submitted, the review and approval process begins and requires up to 12

months. Many POTWs apply for SRF to fund CIP projects. However, there is limited funding available through the SRF program at this time, resulting in more pressure on ratepayers to directly fund projects.

Following Board/Council approval of a project, POTWs begin the design process (approximately one year). About half way into the design, the construction permitting procedures begin (requiring up to one year depending on the project). Once the construction permitting activities are complete, the project can be opened for bid and awarded to a contractor - this process can take up to six months. Finally, project construction can begin and typically lasts approximately two years (including start-up procedures).

As Figure 1 shows, the entire process for planning and implementation of typical POTW projects takes a minimum of six years, assuming a project receives the necessary approvals at the various stages. More complex projects or controversial projects dealing with growth or environmental issues can take even longer. The implementation schedule for the Proposed Rule 11-18 is three years, with the potential to extend up to three more years. While this provides POTWs with a potential for six years for implementation, it leaves no flexibility for POTWs in the event there are issues with receiving Board/Council approval for the Plan, rate payer approval for rate increases, and Board/Council approval for the project, and assumes there are no delays with the environmental review or permitting processes.

Costs to Implement TBARCT

The draft cost estimates BAAQMD provided for the "Sewage Treatment Operations" Toxic Best Available Retrofit Control Technologies (TBARCT) are underestimating the true cost of TBARCT implementation costs (both capital and operating costs). Several BACWA member agencies have already estimated TBARCT costs for their POTW and those estimates are 2 to 10 times greater than BAAQMD estimates. BACWA members are willing to provide more detail on their cost estimates to ensure the accuracy of the costs considered by BAAQMD for satisfying TBARCT under Rule 11-18. It is important that these costs are accurate as they will be used to estimate the socio-economic impact of projects and determine the overall cost-benefit of projects. This information may reveal that projects to reduce TACs at POTWs are not as cost effective as initially estimated by BAAQMD staff.

Balancing Water Quality and Air Quality Objectives

The Regional Water Board is working to reduce nutrient loads in POTW effluent to receiving waters (specifically, the San Francisco Bay). One of the methods being considered at POTWs includes increasing aeration rates in secondary treatment to achieve additional nitrogen removal. While this process may effectively remove nitrogen to address a water quality objective, it may increase release of TACs and will increase energy demand. The BAAQMD staff should evaluate these types of competing regulatory objectives that may require additional flexibility to be built into Rule 11-18, and acknowledge existing regulatory requirements that POTWs have already taken into account in their CIP and regulatory compliance strategy.

Balancing TAC and GHG Reductions

While the intent of the proposed Rule 11-18 is to reduce TAC emissions from existing sources to protect the public, there is an urgent need to harmonize this rule with regulations targeting GHG reductions. Rule 11-18 may discourage beneficial use of renewable natural gas (biogas) for renewable energy production and result in a wasted (flared) resource. Additionally, the Draft 2017 Clean Air Plan proposes 100 percent diversion of organic waste from landfills by 2035 and promotes the increase in renewable natural gas production and use. As part of this effort, POTWs have been encouraged to accept the organic waste (specifically, food waste) to co-digest it with wastewater solids to increase generation and use of renewable natural gas and biosolids (as a soil amendment). Many facilities combust the renewable natural gas onsite to generate electricity, offsetting purchased fossil fuel based electricity and the associated GHG emissions. However, formaldehyde is released during the combustion of the renewable natural gas which may trigger noncompliance with the proposed Rule 11-18. Implementing additional controls may cause these resource recovery projects to be cost prohibitive or result in changes to existing permits (e.g., with regard to biogas production) that make it difficult to support resource recovery projects.

This type of barrier to GHG reducing projects and practices already exists. For example, there is a pilot project being considered at one of BACWA's member facilities that is partially funded by a state agency grant to receive food waste for co-digestion in their existing anaerobic digesters. The project is in direct response to, and supports, recent legislative mandates established in AB 32, SB 32, AB 341, AB 876, AB 1826, and SB 1383. The mandates require the diversion of organics from landfills to reduce methane emissions and anaerobic digestion of organics to generate renewable natural gas, and support the Governor's push to produce at least 50 percent of our energy needs from renewable sources and reduce the carbon content of transportation fuel, to mitigate climate change.

The project is also consistent with the 2017 Draft Clean Air Plan, the ARB 2030 Target Scoping Plan January Draft, and the Revised Proposed Short-Lived Climate Pollutant (SLCP) Reduction Strategy. Each document explicitly supports using existing infrastructure such as digesters at POTWs as part of the overall solution to mitigate climate change. However, the project is at a standstill while BAAQMD re-evaluates the permit limits initially recommended.

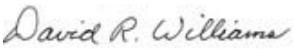
An example practice that may be at risk under the proposed Rule 11-18 is landfill gas use at Central Contra Costa Sanitary District (Central San). Central San treats an average of 32 million gallons of wastewater per day for discharge into Suisun Bay, and serves nearly 482,000 residents and 3,000 businesses in central Contra Costa County. Currently, Central San uses landfill gas from the nearby Acme Landfill to supplement the combustion of sewage sludge and generate steam through heat recovery. The steam drives the aeration turbine that supplies air to support the secondary wastewater treatment process. This practice minimizes the treatment plant’s dependence on fossil fuels, in turn reducing the resulting anthropogenic GHG emissions from combustion. The proposed Rule 11-18 may restrict landfill gas (renewable natural gas) combustion since it may contribute additional TAC emissions, potentially forcing Central San to condition the landfill gas to pipeline quality before use, or abandon landfill gas use completely (flaring a renewable resource), and resort to using natural gas in the sewage sludge combustion

process. Unfortunately, the use of natural gas contributes to anthropogenic GHG emissions and is in direct contradiction with the Governor's climate goals for 2020, 2030, and beyond. Without the use of landfill gas to supplement sewage sludge combustion, Central San will be required to participate in the Cap-and-Trade Program and incur a minimum annual cost of $250,000 in Cap-and-Trade allowances. Projects like these, which contribute toward achieving state and Bay Area climate goals, need flexibility built into Rule 11-18.

Additionally, because implementation of a rule like Rule 11-18 may discourage projects and practices that mitigate GHG emissions, staff must ensure the calculations of TAC emissions (used to estimate the prioritization scores) are based on realistic assumptions using current data. Gathering these data may take time, but is a critical step to ensure the balance between GHG and TAC reductions.

Thank you for the opportunity to provide information on POTWs that is crucial to the successful implementation of Rule 11-18. BACWA supports BAAQMD's goal to protect the Bay Area's air quality, and asks staff to work in conjunction with BACWA to address the stated concerns. We would be happy to discuss any questions regarding these comments. Nohemy Revilla and Randy Schmidt, BACWA AIR Committee Co-Chairs, can be reached at NRevilla@sfwater.org and RSchmidt@centralsan.org, respectively.

Sincerely,



David R. Williams
BACWA Executive Director

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