



May 12, 2015

Ms. Jaclyn Winkel  
Senior Environmental Planner  
Bay Area Air Quality Management District  
939 Ellis Street  
San Francisco, CA 94109

SUBJECT: FEEDBACK REGARDING THE DRAFT WATER SECTOR GAP ANALYSIS

Dear Ms. Winkel,

The Air Issues and Regulations (AIR) Committee is a coalition of San Francisco Bay Area Publicly Owned Treatment Works (POTWs) working cooperatively to address air quality and climate change issues, under the guidance of the Bay Area Clean Water Agencies (BACWA). Many of our member agencies also manage potable water treatment, distribution systems, recycled water treatment, and biosolids residual programs. The BACWA AIR Committee has 15 member agencies, including large metropolitan facilities such as East Bay Municipal Utility District, the City and County of San Francisco, Central Contra Costa Sanitary District, and the City of San Jose. Together, BACWA AIR Committee member agencies treat over ninety percent of the municipal wastewater in the Bay Area.

The Bay Area Air Quality Management District (BAAQMD) is developing a Regional Climate Protection Strategy for the Bay Area. As part of this effort, BAAQMD has prepared sector-specific gap analyses, intended to identify the magnitude of greenhouse gas (GHG) emission reductions needed to meet the State's and BAAQMD's goal of reducing GHG emissions 80 percent below 1990 levels by 2050. The BACWA AIR Committee supports the BAAQMD's intent to reduce GHG emissions in the Bay Area. However, efforts to reduce GHG emissions should be based on trends and data specific to the Bay Area and should not contradict other emissions reduction efforts in the municipal wastewater treatment sector, as described in this letter.

Per your request, the BACWA AIR Committee has reviewed the BAAQMD's Draft Water Sector Gap Analysis, and had the following comments for your consideration.

#### 1. GHG Emissions Targets

The Draft Water Sector Gap Analysis focuses on the State's and BAAQMD's goal of reducing GHG emissions 80 percent below 1990 levels by 2050. However, the First Update to the Climate Change Scoping Plan<sup>1</sup> acknowledges the Environmental Justice Advisory Committee's

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<sup>1</sup> Available at [http://www.arb.ca.gov/cc/scopingplan/2013\\_update/first\\_update\\_climate\\_change\\_scoping\\_plan.pdf](http://www.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf).

recommended interim goals of reducing GHG emissions to 40 percent of 1990 levels by 2030 and 60 percent of 1990 levels by 2040. These recommended interim goals are not mentioned in the Draft Water Sector Gap Analysis, but should be considered critical when considering the State's ability to achieve the 2050 target. Legislation<sup>2</sup> has also been recently proposed to establish interim targets based upon the Environmental Justice Advisory Committee's recommendations. Therefore, BACWA AIR Committee recommends that BAAQMD work with the California Air Resources Board (CARB) to ensure both agencies' GHG emission reduction goals are complementary.

## 2. GHG Emissions Estimation Methodology

The BACWA AIR Committee appreciate the level of detail regarding the calculation of indirect GHG emissions, as presented in Appendix A of the Draft Water Sector Gap Analysis. However, direct emissions are shown as the largest contributor to the water sector's total GHG emissions and are expected to be the target of future emissions reduction measures within the Bay Area. Without more information on the methodology, stakeholders cannot give input as to its validity. The BACWA AIR Committee recommends that BAAQMD provide reference to the protocol used as the basis for estimation, include units of measure in the sample calculations, and include the same level of detail for the calculation of direct GHG emissions.

The BACWA AIR Committee would also like to review the methodology used to estimate GHG emissions from wastewater collection systems and nitrous oxide emissions from nitrification and denitrification processes. As BAAQMD considers direct and indirect emissions sources for both water and wastewater, it is important that there is consistency with CARB's evolving efforts, including establishing a system boundary in order to identify relevant sources that are within the jurisdiction of the sector.

Finally, many water and wastewater agencies have already developed detailed estimates of their indirect GHG emissions. The BACWA AIR committee urges BAAQMD to make use of these reports where they are available, rather than using generic estimates. BACWA would be willing to facilitate gathering such reports from our member agencies for use in this analysis.

## 3. Emissions Assigned to POTWs

Page 6 of the Draft Water Sector Gap Analysis loosely describes potential strategies for reducing GHG emissions from the water sector. Specifically, BAAQMD states the following:

*"However, there are also some GHG's being emitted within water/wastewater treatment facilities that are not being controlled by current Air District rules/regulations, such as methane emissions as well as fugitive emissions from anaerobic digester lagoons and individual septic systems. Therefore emission reduction opportunities within the Air District's legal authority and jurisdiction may exist (i.e., new rules or regulations to control these emissions could be adopted and implemented)."*

Similarly, page 1 of the Draft Water Sector Gap Analysis states the following, in reference to some of the methane emissions that are not currently controlled by BAAQMD regulations:

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<sup>2</sup> Proposed legislation includes Assembly Bill 21 and Senate Bill 32.

*“Methane is emitted from wastewater when it is treated in anaerobic conditions.”*

Although the above is true, with regards to methane emissions, few processes are allowed to reach anaerobic conditions at POTWs, thus minimizing the contribution of this emissions source.

With regards to fugitive emissions, the BACWA AIR Committee recommends removing the reference to anaerobic digestion lagoons, since there are no such lagoons associated with San Francisco Bay Area POTWs. Note that this recommendation may result in fewer GHG emissions reductions than currently projected by the BAAQMD.

The BACWA AIR Committee would like to understand how BAAQMD proposes to control GHG emissions from septic systems. POTWs do not own and/or operate septic systems, although some do receive septic tank sludge for treatment. Therefore, the GHG emissions associated with septic systems should be assigned to the individual owners of the septic systems, typically residents, rather than the POTWs, as is shown in the U.S. Environmental Protection Agency’s emissions and sinks inventory. The BACWA AIR Committee suggests this alignment because the emissions associated with septic systems occur onsite within the septic tanks, and not during treatment of the sludge at the POTW.

#### **4. Use of Biogas**

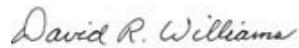
As noted above, the Draft Water Sector Gap Analysis indicates that the BAAQMD may have an opportunity, and the authority, to begin regulating process and/or fugitive emissions from POTWs that are not currently regulated. While the BACWA AIR Committee agrees that these emission sources should be better understood, they should not be the focus of future BAAQMD regulation. Instead, the BACWA AIR Committee encourages the BAAQMD to focus future GHG reductions by encouraging the complete combustion of biogas (i.e., digester gas) to generate electricity, thereby offsetting the use of fossil fuels. Current air quality regulations requiring combustion units meet Best Available Control Technology (BACT) provide a disincentive for maximizing biogenic fuel use, and encourage flaring of excess biogas. If BAAQMD could provide leniency on emission limits for biogas-fueled units, biogenic emissions would increase while decreasing fossil emissions. The desire to promote the use of biogas is further discussed in the cross-media issues comment letter submitted by BACWA to BAAQMD on June 6, 2014.

#### **5. Nutrient Removal Requirements**

As described in BACWA’s June 6, 2014 cross media issues comment letter to BAAQMD, POTWs that discharge to the San Francisco Bay are party to a nutrient watershed permit, and in the future may be required to implement reductions in nutrient loads to the San Francisco Bay. As part of the nutrient watershed permit, POTWs are required to perform studies to evaluate alternatives for optimizing and upgrading their facilities to remove nutrients from their effluent. These studies will quantify this increase in GHG emissions for the different nutrient removal alternatives to be considered. BACWA can make the results of these studies available to BAAQMD when they are completed.

Given the concerns from the Bay Area wastewater treatment sector at large, it could be beneficial to meet with you or your staff to discuss our concerns in greater detail and collaborate on a solution that meets the needs of both the BAAQMD and BACWA agencies. Please contact the BACWA AIR Committee project manager, Elyse Engel (669-800-1012), with any questions.

Sincerely,



David R. Williams  
BACWA Executive Director

Cc: Nohemy Revilla, BACWA AIR Committee Co-Chair  
Randy Schmidt, BACWA AIR Committee Co-Chair  
Elyse Engel, BACWA AIR Committee Project Manager