

# CALIFORNIA WASTEWATER CLIMATE CHANGE GROUP

1737 North First Street, Suite 300, San Jose, California 95112

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## Core Steering Committee

Randy Schmidt, P.E.  
*Central Contra Costa Sanitary  
District*

Daniel McGivney  
*Eastern Municipal Water  
District*

Vicki Fry  
*Sacramento Regional County  
Sanitation District*

Ms. Lucille Van Ommering  
Cap and Trade Program Manager  
California Air Resources Board  
1001 "I" Street  
P.O. Box 2815  
Sacramento, CA 95812

Dear Ms. Van Ommering:

## Wastewater Industry Participation in a "Cap and Trade" Program

## Steering Committee

*Central Contra Costa  
Sanitation District*

*City of Fresno*

*City of Los Angeles Bureau of  
Sanitation*

*City of San Diego –  
Metropolitan Wastewater  
Department*

*East Bay Municipal Utilities  
District*

*Eastern Municipal Water  
District*

*Inland Empire Utilities  
Agency*

*Los Angeles County  
Sanitation Districts*

*Orange County Sanitation  
District*

*Sacramento Regional County  
Sanitation District*

*San Francisco Public Utilities  
Commission*

*San Jose/Santa Clara Water  
Pollution Control Plant*

The California Wastewater Climate Change Group (CWCCG) is a statewide coalition of wastewater treatment agencies. CWCCG member agencies treat approximately 90% of the municipal wastewater in the state of California. The primary purpose of CWCCG is to respond to climate change and forthcoming regulations and to provide a unified voice for the California wastewater industry. Our members are very proactive in climate change issues. In 2008 we worked directly with the California Climate Action Registry (CCAR) and the California Air Resources Board (ARB) to develop the wastewater treatment methodology in Chapter 10 of the Local Government Operation Protocol for the quantification and reporting of greenhouse gas (GHG) inventories. We are also working with Columbia University, the Water Environment Research Foundation and other international entities to further develop the accuracy of estimating GHG emissions from wastewater treatment processes.

## Background

CARB is proceeding with development of a "cap and trade" program under AB 32, and held a workshop on February 18, 2009, to discuss program design – *Greenhouse Gas Reporting in a Cap-and-Trade Program*. The purpose of that meeting was to identify issues related to greenhouse gas emissions reporting for the cap-and-trade regulatory development process. The meeting purpose was further expanded to include the reporting of "biomass" emissions. Finally, later in the meeting, the audience was asked to provide, in writing, feedback on the definition of "biomass". The wastewater industry will provide input on the definition of biomass in a separate submittal.

The wastewater industry, represented by the CWCCG, has requested clarification on whether they would be capped under the AB32 Scoping Plan Cap-and-Trade program. Both CARB and the Western Climate Initiative responses have been inconsistent. It is important to define terms such as “biomass: and “biogenic emissions”, however, these definitions only support the larger question of whether our sector is in a cap-and-trade program. We appreciate the burden CARB staff is under to formalize complex programs under very tight schedules, however, the important issues posed here are crucial to our industry and ultimately to the proper functioning of the Cap and Trade Program.

### **Characterization of the Wastewater Industry**

1. Wastewater is a “must manage” product of society that, for public health and safety reasons, has long been considered an essential public service.
2. The management of wastewater involves processes for collecting and moving wastewater, treatment of wastewater, and management of the byproducts of wastewater treatment, e.g., biosolids. These processes vary greatly among facilities as a result of different discharge requirements, points of discharge (ocean discharges versus natural water streams), reuse demands and unique requirements specific to any given regional water basin.
3. Overall wastewater generation can increase or decrease over time due to many factors including changes in population, economics, consumer habits, regulatory mandates, etc. These changes are often not predictable. An example of this is the current downturn in the economy that has resulted in a significant decrease in wastewater generation at many wastewater facilities that has a direct impact on greenhouse gas (GHG) emissions<sup>1</sup>. Also, the “strength” of wastewater components, such as ammonia, will vary diurnally throughout the day and seasonally throughout the year, which will affect the mass of GHG emissions.
4. Wastewater management can provide a valuable alternative energy source in the form of biogas and a waste-derived biomass (biosolids). Compared to fossil-derived fuels, these energy sources have low carbon intensities and fit well within the realm of the Low Carbon Fuel Standard (LCFS) alternative fuels crediting mechanism.
5. The combustion of biogas and waste-derived biomass results in the emissions of biogenic CO<sub>2</sub> which is part of the natural short-term carbon cycle that should not be a regulated or capped commodity.
6. Composting of biosolids can result in carbon storage, offsetting the use of commercial fertilizers, a significant source of N<sub>2</sub>O emissions.

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<sup>1</sup> Primarily reducing pumping energy and N<sub>2</sub>O generation from ammonia removal.

7. While wastewater management generates biogenic CO<sub>2</sub> emissions, it also can result in some direct anthropogenic emissions:
- a. N<sub>2</sub>O emissions in wastewater treatment, although considered anthropogenic, comes in large part from wastewater substrates, such as biologically derived nitrogen, interacting with naturally occurring biota and biota that is the result of specially controlled processes.
  - b. The level of wastewater treatment is largely dictated by federal, state and regional water regulations. A process, such as nitrification/denitrification (NDN), has the potential to result in greater amounts of N<sub>2</sub>O than conventional treatment. In order to meet state regulations to reduce ammonia discharge to receiving waters, the use of this process, when necessary, is beyond the control of the facility owner/operator. [The California Wastewater Industry strongly encourages coordination on this issue within Cal-EPA especially between the Air Resources Board and the State Water Resources Control Board.]
  - c. Determination of N<sub>2</sub>O emissions from wastewater treatment is difficult to be done directly or routinely, but must rely on default emission factors that presently are inaccurate and which can result in estimates that vary by orders of magnitude.
  - d. Use of *fossil* fuels, typically natural gas, is unavoidable for operators who reliably provide essential public services and to optimize utilization of *biogases* for energy recovery. Examples of natural gas usage include: 1) operation of engine-driven pumps in remote areas where electrical service is not adequate; 2) operation of boilers when sufficient biogas is not available, to provide heat for the digestion process; and 3) supplementing biogas in energy recovery equipment so that no biogas is wastefully flared. The supplemental use of these fossil fuels within these applications is variable and not predictable.

## Cap and Trade Issues

**The CWCCG believes that the wastewater management sector should not be capped under a cap and trade program but instead should be regulated under a traditional command and control approach.**

One of the basic elements of a cap-and-trade system is the ability to provide accurate measurement of emissions to assure accountability and integrity of allowances. As discussed above, it is difficult to provide accurate estimates of GHG emissions or sinks for the wastewater industry. The continuously changing wastewater flows and changing diurnal and seasonal “strength” of wastewater equates to variable emissions that would be difficult to predictably offset.

The wastewater industry operates under the regulatory scrutiny of federal, state, and regional authorities that ultimately establish the level of wastewater treatment provided and, directly or indirectly, the level of GHG emissions.

Wastewater management is an essential public health-protecting service. If constrained as a capped sector under a cap-and-trade program, the industry's only choice would be to eventually purchase allowances/credits on the open market. This would result in making these vital health-protective services slave to the credit variations and vulnerabilities of the marketplace. In addition, essential public services are at a fundamental competitive disadvantage in the marketplace as they cannot move as fast as a private industry because spending public funds involves such things as competitive bidding processes that justifiably and necessarily requires more approval steps. Budget processes and budget cycles of essential public services, especially where user fees are involved, cannot accommodate volatile price swings and price changes in the credit market. As you recall, an example of just how volatile the swings could be occurred in SCAQMD's RECLAIM program in the 2000-2001 timeframe. There, prices jumped from cents per pound for a RECLAIM trading credit to over \$60 per pound in a very short period of time, a two-order magnitude of change. Luckily, SCAQMD, with CARB concurrence, had the foresight to exclude essential public services from the RECLAIM market for these very reasons.

In summary, the wastewater management sector should not be included as a capped sector under a cap-and-trade program, but instead be allowed to participate as an uncapped sector, as a source of offsets (above and beyond command and control obligations, of course). This should be a design element of the cap and trade program. Along with offset opportunities, the wastewater sector will reduce GHG through direct means. The AB 32 Scoping Plan has six water sector measures proposed to reduce GHG emissions, some of which impact the wastewater sector. Innovations in this industry have the potential to lead to further GHG reductions if funds are available, through an offset program, for instance. In this way a portion of the GHG reduction required by AB 32 can be obtained from wastewater, but only if it remains uncapped.

We thank you for this opportunity to provide you this information about our industry and look forward to discussing these issues with you further. We respectfully urge you to consider our comments. If you have any questions or comments, please contact Daniel McGivney at (951) 928-3777 ext. 6329 or Randy Schmidt at (925) 229-7333. Thank you for your consideration.

Sincerely,



California Wastewater Climate Change Group

cc: Chuck Shulock  
Kevin Kennedy  
Richard Bode