



COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY

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Ms. Rachel Tornek
California Climate Action Registry
523 West Sixth Street, Suite 428
Los Angeles, CA 90014

Dear Ms. Tornek:

Comments on Draft Local Government Operations Protocol

The Sanitation Districts of Los Angeles County (Sanitation Districts) appreciate this opportunity to comment on the Draft Local Government Operations Protocol (Draft Protocol). Our comments are divided into two main headings: comments on the Draft Protocol itself and comments on the wastewater methodology. The Sanitation Districts provide environmentally sound, cost-effective wastewater and solid waste management for about 5.3 million people in Los Angeles County and, in the process, convert waste into resources such as reclaimed water, energy, and recycled materials. The Sanitation Districts' service area covers approximately 800 square miles and encompasses 78 cities and unincorporated territory within the County through a partnership agreement with 24 independent special districts. Through this vast service network, the Sanitation Districts have a good understanding of the issues that are important to local governments regarding waste management.

The Sanitation Districts have advanced critical technologies that the wastewater industry is now adopting to mitigate climate change. Specifically these achievements include:

- Effective energy recovery systems ranging from combined cycle power generation, renewable fuels for vehicles, and the use of clean, efficient microturbines and fuel cells.
- The Sanitation Districts are identified by the EPA as one of the nation's top 25 "Green Power Partners." Three local governmental entities are on the list, and the Sanitation Districts are the only one of the three generating its own green power.
- We are currently investigating novel biosolids conversion technologies to produce usable, carbon-neutral fuels, and have partnered with Water Environment Research Foundation (WERF) researchers to quantify greenhouse gas emissions from wastewater nutrient removal processes.

- The Sanitation Districts, along with other wastewater treatment agencies in California, have formed a statewide group looking at climate change issues and how they impact POTWs; we are active in the development of methodologies to inventory greenhouse gas emissions from POTWs with that group.

As a result of this history and California's AB32 (The Climate Solutions Act of 2006), the Sanitation Districts are well aware of the heightened concerns surrounding climate change issues in California and in the industry.

With our long history of advancing innovative technologies and the use of carbon-neutral fuels, it was initially with great anticipation that we sought to participate in the Draft Protocol development and saw opportunities through that process to advocate measures certain to realize significant reductions in greenhouse gas emissions. Unfortunately, the Draft Protocol strays from both its initial goals and the California Climate Action Registry's (CCAR) own precepts in protocol development; and thus we feel that a great opportunity has been lost right at the moment when early actions are so critical to the effort. We are, nevertheless, encouraged that this Draft Protocol is not the final say on the matter, and look forward to further participation with CCAR on Protocol updates and modifications to the wastewater methodology.

General Comments

Please consider these critical themes that we would like to have addressed dealing with the procedural aspects of the Protocol development and the Draft Local Government Protocol itself:

- i) We commend CCAR's efforts assembling this ambitious, near comprehensive document with a very constrained deadline. We wonder, though, if the pressures to complete this task compelled CCAR to make rushed choices. In the effort to speed things along, important representatives of local governments such as special districts were frozen out of the important early discussions. Their participation was limited to the far less frequent public workshops after many important decisions were already cast in stone. We hope that special districts can be afforded a seat at the table from the start in future revisions of the Protocol.
- ii) The construction of the Draft Protocol ensures that only the most obvious approaches to effect emissions reductions will be revealed. It is difficult to use the Draft Protocol to reveal potential synergies between the operations of one local government with another that may, when combined, result in net emissions reductions. It is also difficult to develop best management practices (BMPs). Such opportunities include the use of reclaimed water, biosolids-based soil amendments and recycling measures to name a few. As a start, the Draft Protocol could suggest that reporters list those activities much like they do for water use, etc., as per

section 13.1.2.3. The Draft Protocol could also suggest that local governments wishing to make a stronger statement highlighting their emission reduction actions or offset generation projects contract with CCAR to generate an ad hoc Project Protocol. Ultimately, the best solution is to allow for the numeric accounting in the Protocol.

- iii) The temptation may exist for local governments to cross-compare their emissions when promoting their green credentials. Comparisons should be made on an “apples to apples” basis. One of the best approaches to effect that kind of comparison would be to ask that core services be addressed in this Protocol.
- iv) There was considerable confusion on our part regarding organizational boundaries. We believe the goal as stated on page 18 is for a local government to report emissions from operations over which it has control. However, in the case of a large special sanitation district serving many cities for example, all of which contribute fees toward capital and maintenance upkeep but none of which have either direct financial or operational control. This ambiguity between financial and operational control leaves open the question of whether emissions should be reported or not. Please consider the following statements:
 - Page 18: a local government “does not account for GHG emissions from operations in which it owns an interest but has no control.”
 - Page 19: “emissions from joint ventures where partners have joint financial control are accounted for *proportionally* based on the [sic] each partner’s interest of the joint venture’s income, expenses, assets and liabilities.”
 - Pages 19-20, “If the operation itself will introduce and implement its own operating policies, the partners with joint financial control over the operation will not report any emissions under operational control.”
 - Table 3.1 on Page 20: “none of the emissions are to be reported by the respective local government in the absence of direct financial or operational control.”
 - Page 21: “emissions from JPAs should not be reported as part of a local government’s inventory regardless of control approach being used by the local government.”

This last statement seems to lead JPAs and special districts down the path of reporting on their own. The third paragraph of Section 10.1 acknowledges that many local governments use regionally serving wastewater treatment plants, and that only the local government that has operational and /or financial control over the facility should report the fugitive emissions. However, this conclusion is inconsistent with the Definition of Local Government found on Page 132 which

defines local government as a *general purpose* government at the town, city or county level and not a special district or similar agency.

Simply stated, what guidance does the special districts and JPAs follow and where do they report? Also, please add some more language to clarify these inconsistencies within the Draft Protocol before the document is finalized.

- v) How will the Local Government Protocol interface with the proposed community-scale protocol to follow? Specifically, how will the two protocols avoid double counting emissions? It seems inevitable that there will be reporting overlap since many local government activities will be included in the various community reports. Ultimately, CCAR will need to referee the many inventories prepared to paint a clearer picture of the emissions profile of local governments.
- vi) One of the stated purposes of this Protocol is to harmonize the different GHG inventories for multiple programs. This Protocol, however, only adds to an ever-increasing list of inventories and, more importantly, is not a harmonization effort. The guidance for this Protocol should better explain what is meant by harmonization and how that is to be achieved. Avoiding duplicative reporting would be a great boon for the users of this Protocol.
- vii) The Sanitation Districts firmly believe that early actions taken to reduce greenhouse gas emissions must be appropriately credited and protected from potential negative actions taken on the federal level. The Protocol should better explain how California's inventory and reporting protocols will blend into potential federal programs.
- viii) Page 25: The definition of Scope 1 is inconsistent with the definition given on page 148. The p. 148 definition is more appropriate given the true nature of biogenic emissions.
- ix) Page 27: Biogenic emissions also occur outside the realm of combustion. For example, carbon dioxide from the short-term cycle can be released during the aerobic process of sewage treatment or composting. These examples are just other forms of biological respiration; nevertheless, they serve to complete the short-term carbon cycle of atmosphere-plant-human and back to atmosphere, creating no net gain of CO₂ in the process.
- x) The temptation for inexperienced users to collapse the various Scope 1 through Scope 3 emissions results to yield a simple, easy to understand, overarching emissions number may prevail over admonitions to keep those results separate. The Protocol should be physically structured to discourage such a possibility, i.e., more

clearly separate out as different “books” (collections of chapters) within the Protocol methodologies for Scope 1, etc.

- xi) Page 28: Box 4.1 The Life Cycle Impact of Biofuels, should reference the Low Carbon Fuel Standard Calculation methodologies, which will show that many alternative fuels are not as greenhouse gas friendly as once thought.
- xii) Pages 45 and 46: The Protocol should allow for the deduction of Green Power and Renewable Energy Certificates from Scope 2 emissions to reflect the commitment of those communities in promoting those efforts, often at considerable expense over more conventional, fossil-fuel based alternatives. A mere mention as supplemental information is not enough recognition for these progressive actions.
- xiii) Pages 49 and 50: The effort to properly attribute emissions from CHP facility heat and power generation may be too complicated a task for local government staffers to calculate on their own. Please keep in mind that these staffers may not be experts in the thermodynamic properties of steam, or heating-degree days for example. They will likely need consulting expertise; increasing the cost burden to submit their inventories and further complicating the verification process. The Protocol should be constructed so that expensive experts need not be hired to complete it nor so complicated as to significantly increase the burdens of verification.
- xiv) Page 94: The discussion on composting should include statements from both EPA and CARB indicating the strong possibility that compost application to agricultural soils results in net carbon sequestration when compared to commercial fertilizers on a life-cycle basis.
- xv) Page 110: Under Local Government Profile Information, peak population and number of part-time or seasonal employees should be included to paint a more complete picture. For some communities, temporary surges in population may be significant due to seasonal industrial output, tourism, etc. that place a big GHG burden on the community.
- xvi) In Section 15.3, page 132, CCAR is requiring all its local government members to use this Protocol. This requirement is unfortunate given that sinks, offsets and early actions are not worked into the emissions accounting. Until these “debits” can be numerically balanced against Scope 1 or 2 emissions, the requirement to use this Protocol by CCAR members should be relaxed.

Comments on Local Government Protocol, Section 9: Solid Waste Facilities

The Sanitation Districts appreciate the efforts of CARB and CCAR to establish a Solid Waste Technical Sub-Group to help guide the writing of Section 9, *Solid Waste Facilities*. Although in many instances we “agreed to disagree,” it provided an opportunity for all viewpoints to be aired. We also appreciate the recognition in Section 9.2 that methodologies presented are “conservative” and that future versions of the Protocol should provide considerable changes.

Methane emissions from landfills in California are currently estimated by CARB to only be about 1.16% of the total GHG emissions. However, the landfill industry believes this to be an overestimate, with the real emissions numbers at least 50% lower. In developing the Local Government Protocol, Section 9, values were chosen that rely on CARB defaults used in the state greenhouse gas inventory for collection and management of landfill gas (75%) and methane oxidation in the cover/cap materials (10% of fugitives or 2.5% overall). The landfill industry believes that the use of these defaults lead to significant overestimates of fugitive landfill gas emissions in California for the following reasons:

- California has regulated the capture and controlled management of landfill gas longer and more extensively than any other state. In fact, by numbers developed by the CIWMB, 94% of the waste in place in California is under vacuum (gas control and management) with approximately 85% of the waste in place, regulated by stringent regulations such as the federal NSPS. Also, a significant amount of the waste in place is under the jurisdiction of the SCAQMD and Bay Area AQMD agencies, having much more stringent regulations than any other part of the United States.
- The higher level of regulation controlling landfills in California leads to much higher collection efficiencies. In a recent White Paper produced by the Solid Waste Industry for Climate Solutions (SWICS) group, it is reported that landfill gas collection efficiencies have been measured up to 99% and cover oxidation, up to 70%. In fact, studies produced here at the Sanitation Districts have shown collection efficiencies at our landfills are generally in excess of 95%.
- California’s generally dryer climate results in lower methane production levels than other portions of the country that also help contribute to higher collection efficiencies.

Specific Comments

- i) The landfill gas emissions methodology presented does not account for the level of carbon that is sequestered in landfills, which can be quite substantial. Carbon

sequestration is real and documented resulting from wood and lignin bearing waste that does not readily degrade in an anaerobic environment. Essentially, the landfill becomes a carbon sink for these sources which can significantly lower the net emissions of GHG emitted from a landfill. In fact, CARB in its 2005 inventory estimates approximately 77% of the incoming carbon to landfills is sequestered. The Sanitation Districts recommend that estimates of carbon sequestration be allowed in the solid waste emissions calculations.

- ii) The default factor recommended for collection efficiency is 75% regardless of which cover type is used. For cover oxidation, the recommended default factors are 10% for soil and 0% for synthetic covers. We in the landfill industry recognize that landfills with synthetic covers provide a greater degree of landfill gas control than those with soil/clay caps. Therefore, if the Protocol is recommending a default oxidation of 0% for synthetic covers, it should concurrently recognize their enhanced collection efficiency by increasing the default factor by the same amount to place both covers on an equal footing.
- iii) In Section 9.3.4 it is stated that the total emissions through the surface of the landfill should be summed from several sources, including "diffuse sources such as poor quality capping", "leaking gas wells", and "faulty pipes." Including these sources is incorrect. With regard to capping, intermediate or final caps on landfills must be done under very prescriptive regulations, therefore it is unlikely that there will be "poor quality capping." Also, with regard to gas well leaks or faulty piping, it should be realized that the gas collection system operates under vacuum. Therefore, gas wells do not leak out. In fact, the landfill industry struggles with ways to prevent air intrusion into wells that short circuits around the perimeter of the well. The same would apply to faulty piping (piping under vacuum would become a source of air intrusion) as long as the piping is under vacuum.
- iv) We appreciate the recognition that composting, when performed poorly, can be a source of methane and nitrous oxides. We strongly recommend that future updates provide a greater emphasis on the potential for these emissions since composting, as a solid waste management option, is likely to increase in coming years, and thus be a greater contributor to greenhouse gas emissions from this sector.

Comments on Local Government Protocol, Section 10: Wastewater Facilities

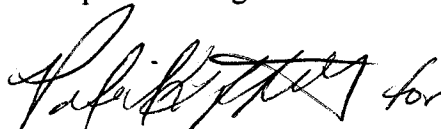
The Sanitation Districts greatly appreciate the efforts made thus far by CCAR to work with us individually as well as with the CWCCG. Although this Protocol does not reflect our understanding of the emissions, we are encouraged by CCAR's willingness to continue this discussion beyond the Protocol's initial issuance. As such, please keep in mind the following comments, observations and suggestions:

- i) It was the understanding of many in the CWCCG that CCAR would help facilitate the acceptance of the National Association of Clean Water Agencies (NACWA) efforts with ARB and EPA as discussed with you and Mr. Gero on January 29th at our office. This understanding was important in getting the initial agreement between the many wastewater agencies throughout the state back then. As you are aware from your work on other protocols, questions of which approach or methodology to adopt need to be based on the science supporting the approach, and not be compromises balancing differing opinions. The science and weight of evidence supporting the NACWA factors far outweighs that of the EPA/IPCC approaches in our view. The final methodology, however, is not that much different from the existing IPCC/EPA protocols. We ask that CCAR make a more concerted effort to consider the breadth of knowledge that the wastewater experts bring to this discussion for future revisions, and give more weight to approaches based on sound science and not unverifiable opinions made years ago.
- ii) Page 97. Box 10.1 The California Wastewater Climate Change Group. Please re-write the text within the box as follows: “In a proactive approach to meeting future potential GHG regulatory requirements, over forty California wastewater agencies...To that end, the CWCCG is working to develop an emissions quantification protocol for wastewater treatment plants in California that will allow an operator to estimate its GHG profile of all six major GHGs. For the more conventional GHG pollutants like CO₂ from combustion and power importation, the document will reference and steer the operator toward a variety of existing general reporting protocols for most of the GHG pollutants. For other pollutants like N₂O for example, the CWCCG intends to use Water Environment Research Foundation (WERF) on-going research on N₂O from activated sludge plants, which through a combination of direct measurements and refinement of mathematical modeling, should provide quantification tools for the industry. Other pollutants such as methane and other potential fugitive emissions and/or different release points will also be incorporated as part of later WERF study programs or other study programs, so that a complete wastewater industry emission profile can be obtained. For more information, refer to...”
- iii) There are numerous formatting misalignments between variables in equations and their associated explanations in Chapter 10 that should be corrected.

Thank you for the opportunity to comment on this Protocol, please do not hesitate to contact Mr. Patrick Griffith at (562) 908-4288, extension 2117.

Very truly yours,

Stephen R. Maguin

A handwritten signature in black ink, appearing to read "G. Adams for".

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