



AIR ISSUES & REGULATIONS COMMITTEE
A Committee of the Bay Area Clean Water Agencies

**Spring
2012**

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CARB Adopts Mandatory Reporting Modifications

By Jim Sandoval/CH2M HILL

On December 14, 2011, the California Air Resources Board (CARB) adopted modifications to its Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (Division 3, Chapter 1, Subchapter 10, Article 2, sections 95100 to 95133, title 17, California Code of Regulations) in order to align with the Federal Mandatory Reporting Regulation (title 40, Code of Federal Regulations, Part 98) adopted by USEPA, and to support California’s new cap and trade program. The changes with the greatest potential impacts (positive and negative) to wastewater agencies are as follows:

- CARB is lowering the reporting threshold for general stationary combustion (GSC) emissions from 25,000 mton/year (mton/yr) of CO₂ to 10,000 mton/yr of carbon dioxide equivalents (CO₂e), including both biomass and fossil fuel combustion emissions. Note that the reporting thresholds are now in units of CO₂e, which includes emissions from methane, nitrous oxide and other potent GHGs converted to CO₂e.
- Those facilities with emissions between 10,000 and 25,000 mton/yr of CO₂e will be able to file an abbreviated report and will not be required to undergo 3rd party verification.

Under the new regulation, CARB has done away with the cogeneration category. Therefore, any facility that previously reported because its cogeneration system was greater than 1 MW and emitted more than 2,500 mton/yr CO₂, no longer has to report emissions if their facility’s GSC emissions are less than 10,000 mton/yr CO₂e.

These changes kick in for the emissions of the 2011 operating year, which are reported to CARB in 2012. If your facility is subject to the modified mandatory reporting requirements, the reporting deadlines are as mentioned below.

For additional information on dates, please visit: <http://www.arb.ca.gov/cc/reporting/ghg-rep/ghg-rep-dates.htm>.

General information on the mandatory reporting program can be found at: <http://www.arb.ca.gov/cc/ccei.htm>

Reporting Deadlines for Modified Mandatory Reporting

- **April 10, 2012:** Reports are due for facilities and suppliers of fuels and carbon dioxide, except when subject to Abbreviated Reporting
- **June 1, 2012:** Reports are due for Electric Power Entities, and current reporters subject to Abbreviated Reporting. Facilities that have not previously reported to CARB do not have to file reports until June 1, 2013 (per Title 17, CCR 95103(a)(7))
- **September 1, 2012:** Final verification statements due (emissions data and product data)

BACWA AIR Committee Roundtable with Brian Bateman of BAAQMD, January 25, 2012 By: Divya Bhargava/CH2M HILL

On January 25th the BACWA AIR Committee met with Brian Bateman, Director of Compliance and Enforcement at the Bay Area Air Quality Management District (BAAQMD). The purpose of the meeting with Brian was to get an overview of proposed or existing BAAQMD regulations that may impact your facilities. Overall the dialogue with him was good, and we had a useful discussion on air issues and regulatory updates at the local, State, and Federal levels. We hope to have a continued future dialogue with the BAAQMD through these roundtable meetings. The key topics discussed included:

- EPA Tailoring Rule (Title V and PSD Permit)
- Federal Plan for GHG control
 - Mandatory Reporting Regulation
 - Cap and Trade Regulation
 - Stationary Refrigeration Management Regulation
- BAAQMD 2010 Clean Air Plan
 - BAAQMD NSR/PSD Rule Amendments
 - BAAQMD Composting Rule
 - BAAQMD Diesel Backup Generator rule
- Ozone NAAQS update
- PM_{2.5} NAAQS Planning Activities
- BAAQMD CEQA Guidelines
- OEHHA Health Risk Assessment Guideline revisions

Fuel Cell Tour at Next BACWA AIR Committee Meeting

The next BACWA AIR Committee meeting will be conducted on May 16, 2012, at the San Jose/Santa Clara Water Pollution Control Plant, and will include a tour of their new fuel cell facility. *Stay tuned for additional details about this meeting!*

- May 2011 BAAQMD “boiler rule” amendments (Regulation 9, Rule 7)
- Boiler MACT update
- Sewage Sludge NSPS/EG
- Reciprocating IC Engine rules
- Portable Equipment Registration Program (PERP)
- BAAQMD “Production System” update
- BAAQMD Budget update
- BAAQMD Cost Recovery Policy / Permit fee amendments

For details on the topics discussed, AIR committee members can see the meeting summary in the BACWA AIR web page and nonmembers may request a copy from Divya Bhargava at divya.bhargava@ch2m.com or Jim Sandoval at jim.sandoval@ch2m.com.

BACWA AIR Committee – Year in Review

By: Divya Bhargava/CH2M HILL

The AIR Committee focuses on air quality and climate change related issues, research, and regulations that affect sanitation agencies, including Local, State and Federal regulations relating to greenhouse gas emissions regulation, stationary source rule development, climate change adaptation, and grant funding opportunities.

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- Randy Schmidt, Committee Chair, rshmidt@centralsan.org
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Meeting Information:

- Meets quarterly on the third Wednesday of the month, at 10:00 a.m.
- Scheduled 2012 dates are May 16, July 18, and October 17

2011-2012 Highlights:

- An in-person discussion with BAAQMD Director of Compliance and Enforcement, Brian Bateman at the January 2011 and 2012 Committee Meeting
- The AIR Committee 2011 and 2012 Annual Spring Newsletters
- An on-site meeting at SFPUC’s Oceanside Wastewater Treatment Plant in July 2011 that included a presentation/tour of SFPUC’s FOG and bio-energy/fuels renewable programs, which showed how they convert FOG from restaurants & households into biodiesel using a patented technology
- Workshop attendance and comment letters to the California Bay Conservation Development Commission regarding the Bay Plan Amendment to address climate change
- Continuous tracking of regulatory issues affecting large and small POTWs through regular committee-wide emails, keeping the AIR website updated, and the AIR Issues matrix. The regulatory issues include:
 - Changes to BAAQMD Rules regulating engines and boilers
 - Changes to CARB’s in-use, off-road diesel regulation
 - Final Federal air toxic standards for industrial, commercial, & institutional boilers & process heaters
 - Workshop attendance on behalf of AIR to track the revisions to BAAQMD New Source Review and Title V Permitting Programs (i.e., amendments to District Regulation 2 – Rules 1, 2, 4 & 6)
- Coordination with CWCCG to track State and National climate change issues including:
 - CARB Mandatory GHG Reporting and Cap-and-Trade Programs
 - EPA GHG Tailoring Rule, which regulates GHGs under the Clean Air Act
 - Renewable energy advocacy for the POTW community working with the California Public Utilities Commission and California Energy Commission

Reporting Tool for California GHG Emissions

By: Jim Sandoval/CH2M HILL; Adapted from information provided by CARB on February 3, 2012, at <http://www.arb.ca.gov/cc/reporting/ghg-rep/tool/ghg-tool.htm>

If your facility's general stationary combustion GHG emissions exceed 10,000 mton CO₂e/year, then you will need to utilize the new California Electronic Greenhouse Gas Reporting Tool, or Cal e-GGRT, which was deployed in February. "Designated Representatives" will receive an email from the reporting tool providing information needed to create a primary facility user account and assign other users. The tool must be used for submitting 2012 reports on 2011 data, and all subsequent data submissions.

The Cal e-GGRT reporting framework and "look and feel" is similar to the U.S. EPA e-GGRT system. However, Cal e-GGRT includes numerous modifications to support cap-and-trade, verification, and other CARB programs. Because of the differences between CARB and U.S. EPA reporting requirements, data submitted to U.S. EPA will not meet CARB reporting requirements. Therefore, separate reporting to Cal e-GGRT is required.

Presentation material for Cal e-GGRT trainings held in March and other reporting information are published on CARB's website: <http://www.arb.ca.gov/cc/reporting/ghg-rep/tool/ghg-tool.htm>. Because of similarities between the U.S. EPA and CARB reporting tools, knowledge of the EPA tool is beneficial. U.S. EPA training materials are located at the link below: <http://www.epa.gov/climatechange/emissions/training.html>.

CARB also has a Cal e-GGRT training site that can be used for learning about the new system without entering actual facility data. This site can be accessed at <https://ssldev.arb.ca.gov/Cal-eGGRT/login.do>. If you do not have an account to Cal e-GGRT, you'll need to register at this site. The previous CARB reporting tool will remain active for generating reports and approved data revisions, but it will no longer accept new data. All data from 2011 onward will be reported via Cal e-GGRT.

Mandatory Reporting of GHGs – What's next for Cogen Facilities?

By: Jim Sandoval/CH2M HILL

At the last BACWA AIR meeting the question was raised about whether former cogeneration reporters that emitted less than 10,000 metric tons CO₂e of general stationary combustion (GSC) emissions in 2011 need to keep reporting for any specific period to prove they are under this new 10,000 metric ton threshold. On February, 7, 2012, I spoke to Patrick Gaffney, the responsible staff person of CARB's Climate Change Reporting Section. In summary he said the following:

- Facilities within this category do not need to report or contact CARB at this time, and it is unlikely in the future
- However, the issue of cessation for facilities in this category is under review within CARB
- If CARB staff determine that further reporting is required for these facilities, they will notify the facility's designated manager
- When the new reporting webtool rolls out on February 22nd, facilities with cogeneration emissions greater than 8,000 metric tons of CO₂e in prior years may get notices indicating that they may be subject to reporting to confirm the facility emissions do not exceed the new GSC threshold

Other Recommended Measures for Former Cogen Reporters

If your facility no longer needs to report under the modified mandatory reporting regulation, it is recommended that you take the following measures to ensure continued compliance with the regulation at minimal costs.

1. Document Retention and Record Keeping Requirements

Retain CARB GHG reporting records in accordance with the provisions of 17 CCR §95105 of the *pre-modified* regulation. 17 CCR §95105(a) states the following:

"Reporting entities with a compliance obligation under the cap-and-trade regulation in any year of the current compliance period must maintain all records specified in 40 CFR §98.3(g), and records associated with revisions to emissions data reports as provided under 40 CFR §98.3(h), for a period of ten years from the date of emissions data report certification. The retained documents, including GHG emissions data and input data, must be sufficient to allow for verification of each emissions data report. Reporting entities that do not have a compliance obligation under the cap-and-trade regulation during any year of the current compliance period must maintain such records for a period of five years from the date of certification." (CCR, 2012)

2. Continue to Informally Estimate GSC GHG Emissions

Under the updated CARB mandatory reporting regulation, cogeneration facilities no longer have to enter emissions into the CARB's reporting webtool if their GSC GHG emissions are less than 10,000 mtons CO₂e/year. To be prudent, it is recommended that facilities in this category do an annual informal emissions inventory to verify total GSC emissions do not exceed the threshold. If this estimate is less than the threshold, the emissions would not be reported to CARB but simply utilized as a documented internal record in case CARB chooses to verify your facility's GSC emissions in the future. Accordingly, it is recommended that facilities continue to measure and document the fuel consumption at the facility.

3. High Heat Value (HHV) Measurements

If your facility is substantially below the threshold, you may want to forego the expense of monthly HHV measurements and simply utilize the highest monthly measured HHV recorded for your facility's biogas. Or to be conservative, you can use the Tier 1 reporting default HHV of 841 Btu/scf from Table C-1 of 40 Code of Federal Regulation §98, which is now utilized by CARB in their updated mandatory reporting regulation.

If your facility is projected to have an increase in GSC emissions in a future calendar year that could result in CO₂e emissions exceeding 10,000 mtons/year, then you should highly consider reverting back to doing monthly HHV measurements.

Cap and Trade

By: Jim Sandoval/CH2M HILL; Adapted from CARB's website <http://www.arb.ca.gov/cc/capandtrade/capandtrade.htm>

The California Air Resources Board (CARB) adopted the California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms, otherwise known as "cap and trade" on October 20, 2011. The program became effective January 1, 2012, and will have an enforceable compliance obligation beginning with the 2013 greenhouse gas (GHG) emissions generated at facilities. Cap and trade is a market-based regulatory framework in which regulated entities can trade permits ("allowances") for their CO₂ emissions.

The AB 32 Scoping Plan identifies a cap and trade program as one of the strategies California will employ to reduce the GHG emissions that cause climate change. This program will help put California on the path to meet its goal of reducing GHG emissions to 1990 levels by the year 2020, and ultimately achieving an 80% reduction from 1990 levels by 2050. Under cap and trade, an overall limit on GHG emissions from capped sectors will be established by the cap and trade program and facilities subject to the cap will be able to trade permits to emit GHGs.

California is working closely with British Columbia, Ontario, Quebec and Manitoba through the Western Climate Initiative (WCI) to develop harmonized cap and trade programs that can deliver greater GHG emission reductions at lower costs than could be realized through a California-only program. WCI has formed a non-profit corporation, WCI, Inc., to provide coordinated administrative and technical services for the state and provincial emissions trading program.

Most wastewater treatment agencies in California will not have a compliance obligation because emissions from combustion of biomass do not count toward the 25,000 metric tons CO₂e/year emissions threshold. This means that emissions associated with burning landfill or digester gas are excluded, and there is currently only one wastewater treatment plant in California that emits more than the threshold based on fossil fuel combustion alone. The program also excludes methane and nitrous oxide emissions from wastewater treatment processes from the compliance threshold.

For details on the cap and trade program, go to <http://www.arb.ca.gov/cc/capandtrade/capandtrade.htm>.

LAO Report: "Evaluating the Policy Trade-Offs in ARB's Cap-and-Trade Program"

By: Jim Sandoval/CH2M HILL

The California's Legislative Analyst's Office (LAO), California's non-partisan fiscal and policy advisor, published a report on February 9, 2012, that analyzes the design of the cap and trade program as adopted by CARB. It examines the policy choices made by CARB in the design of the program, some specific policy trade-offs inherent in those decisions, and options for program design changes that the Legislature may wish to make depending on its policy priorities. It recommends to the Legislature the following modifications to the program with "little downside from a policy standpoint": "(1) make producers of offset credits liable for offset project failures, (2) eliminate holding limits [on compliance instruments] to improve the way the carbon market functions, and (3) reduce uncertainty about how and if the cap-and-trade program would operate after 2020." The report is available at:

<http://www.lao.ca.gov/laoapp/PubDetails.aspx?id=2559>.

California Wastewater Climate Change Group – 2011 Year in Review

By: Kris Flaig/City of LA; Republished from the Southern California Alliance of POTWs (SCAP) December 2011 Newsletter

2011 has been a year that required continuous efforts by the California Wastewater Climate Change Group (CWCCG) to monitor and participate in the on-going rule and regulation activities by the California Air Resources Board (CARB), California Public Utilities Commission (CPUC), and California Energy Commission (CEC) in regards to regulation of greenhouse gases (GHG) and renewable energy. As during the past few years, several CWCCG member agencies contributed significant talent to that of our consultant in submitting comments, attending and participating in workshops, meeting with regulator staff, and updating CWCCG members. These contributors include staff of our CWCCG partners in the Bay Area Clean Water Agencies (BACWA), Central Valley Clean Water Association (CVCWA), and California Association of Sanitation Agencies (CASA); as well as several of our SCAP members, especially Frank Caponi and Vlad Kogan.

2011 could have been a very challenging year with the unexpected hand-off by our consultant (CH2M HILL) from Jackie Kepke to Zeynep Erdal, except that all involved worked with dedication to make this transition relatively seamless. I want to make special mention of Zeynep with her efforts to maintain significant contact during her first month on the job, even though she was on a previously planned trip overseas. Zeynep also took early opportunities to meet with me and others to gain a sense of CWCCG member needs and desires. While there have been occasional hiccups, Zeynep and CH2M HILL have made an appreciated effort to make this a seamless transition. So, while we sincerely miss Jackie's dedication and personable approach, we are growing to admire Zeynep's similar talents.

Earlier in the year, CWCCG's efforts revolved around several issues, with which you may now be familiar:

- Comments submitted on implementation of USEPA's Tailoring Rule
- Testimony for a full exemption for wastewater from the Cap & Trade rule
- Comments submitted to CPUC requesting incentives for utilization of biogas, and incentives to make the renewables markets more cost-effective for POTWs
- Discussions with CARB staff on Offset Protocols.
- Comments to CARB on the Cap and Trade Program, and GHG Mandatory Reporting Requirements
- Communications with USEPA regarding the RTI (USEPA) report that misrepresented POTW GHG emissions
- Comments and discussions with regulators on the Sewage Sludge Incinerator (SSI) rule and the solid waste definition

[Continued on Page 5]

Those efforts resulted in:

- USEPA's deferment for 3 years of permitting requirements (Tailoring Rule) for biogenic CO₂ emissions
- Some favorable language in regards to biogas and biomass definitions on the State level
- Reconsideration by the CPUC of rules that could have significantly reduced POTW ability to eventually qualify for renewable energy incentives
- Verbal promises from CARB staff that 15-day notices on the adopted Cap and Trade Program will include favorable biogas or wastewater language
- Intent expressed by USEPA to consider biomass fuel combustion as BACT for GHGs
- USEPA recently relabeled the RTI non-peer reviewed report as "Draft" with a request by USEPA for comments

It is important to re-list our earlier accomplishments in light of the significant additional efforts required by CWCCG to regain ground that we once tentatively held, then lost, due to lobbying by other interested parties. Most significant are the rival priorities of NGOs and utilities in regards to GHG and renewable energy, respectively. These entities, and even CARB and CPUC, seem to be working from a different set of criteria, data, and studies. Certainly, CWCCG and its members must expend significant effort to appreciate our adversaries' positions, but also to educate regulators and adversaries on good science and economic realities of our essential public services.

Hence, CWCCG's efforts during the last half of 2011 are split between those following directly from earlier work and several more recent activities. The following are major issues addressed during the past several months through letters and meetings:

- CPUC on SB2 1X (R11-05-005) on RPS requirements for utilities, including:
 - RPS Portfolio Categories
 - Feed-in Tariff
 - REC valuation
- CPUC on Rule 21 requirements for interconnection to the Grid by electricity generators
- CARB continuing revisions
 - Mandatory Reporting Requirements
 - Cap & Trade Program

While the CWCCG and member agencies are making some headway, we face the limited priorities of the necessity to reduce GHG emissions with severely limited budgets and adversarial initiatives that do not fully appreciate the essential public services of POTWs, particularly our ability to provide reliable baseload electricity through utilization of biogas/biomass. Continuing efforts of adversarial utilities and NGOs have wrought us the following challenges and tasks:

- CARB, CPUC, and CEC reluctance to fully recognize biogas/biomass as a full partner in renewable energy
 - Clarify and correct misinformation on biogas reliability and sufficiency
- CPUC current favoring limiting POTW biogas and biomass energy to Category Three
- CPUC Feed-in Tariff pricing and market:
 - Address market proposals that put POTWs at a disadvantage
 - ✓ Renewable Auction Mechanism (RAM) by CPUC staff.
 - ✓ Market Price Referent (MPR) by others
- CPUC development of Rule 21 interconnection requirements
- CARB up-coming revisions for MRR and C&T

While GHG emissions affect everyone, NGOs and other interested parties continue to lobby CARB to make it more difficult for POTWs to follow what seems to be good science and good economics (e.g., life-cycle evaluations). If NGOs and others are successful, POTWs may be forced to pursue plant modifications or other expensive operational alternatives.

While renewable energy issues affect the larger agencies, the trend is that rival interests are doing everything they can to persuade regulators to adopt rules and regulations that favor only their industries. The result may be that non-favored industries are excluded by regulation from sharing in incentives to develop renewable energy or other benefits. If CWCCG and its member agencies are not successful in the coming year, all POTWs may suffer, no matter how little biogas we produce.

While the meteorological weather may call for progressively warmer weather in decades to come, the regulatory climate does not favor POTWs, with tempests rising and falling on the East Coast, and alternating sun and drizzle prompting few helpful evaluations and results in Sacramento.

As SCAP Air Quality Committee Chair, I would like to thank the agencies who have contributed to the CWCCG effort. Our accomplishments and on-going struggles are an indication that regulators do listen. At the same time, I am respectfully requesting all other agencies to consider contributing even the smallest sum to this effort.

Self-Generation Incentive Program Modifications

By: by Andre Schmidt/LACSD; Republished from the Southern California Alliance of POTWs (SCAP) December 2011 Newsletter

The California Public Utilities Commission (CPUC) approved final modifications to the Self-Generation Incentive Program (SGIP) on September 8, 2011. The modifications institute legislative changes mandated in Senate Bill 412, most notably that technology eligibility be based on greenhouse emissions reductions. SCAP was active with CWCCG in filing comments with the CPUC during the rulemaking process advocating for the wastewater industry. The new SGIP Handbook, which describes the terms of the new SGIP, was issued on October 10, 2011 and can be found at the following website: http://asset.sce.com/Documents/Shared/2011_SGIPHandbook.pdf.

The CPUC began accepting applications for the new SGIP on November 15, 2011. The most notable change for the modified program was the eligibility of IC engines and microturbines.

The SGIP now provides the following incentives:

- Wind Turbine - \$1.25/watt
- Pressure Reduction Turbine (micro-hydro) - \$1.25/watt
- Conventional Combined Heat and Power (CHP)
 - IC Engine with CHP - \$0.50/watt
 - Microturbine with CHP - \$0.50/watt
 - Gas Turbine with CHP - \$0.50/watt
- Emerging technologies
 - Advanced Energy Storage - \$2.00/watt
 - Biogas - \$2.00/watt (this is an adder that may be used in conjunction with fuel cells or any conventional CHP technologies)
 - Fuel Cell (CHP or Electric Only) - \$2.25/watt

Other terms of the SGIP include:

- System Size - No minimum or maximum size restrictions given that project meets onsite load
- Payment Structure – 50% upfront payment, 50% performance-based payment based on actual kWh generation over the first five years of operation
- Tiered Incentive Rates – 100% incentive for projects under 1 MW, 50% for 1 to 2 MW, 25% for 2 to 3 MW
- Incentive Decline – 10% decline in incentive levels per year for emerging technologies and 5% for other technologies, beginning January 1, 2013
- Maximum Project Incentive - \$5 million
- Minimum Customer Investment – 40% of eligible project costs
- Energy Efficiency Audit – Is mandatory for participation. Any measures with a payback period of two years or less shall be implemented prior to receipt of the upfront incentive payment

SGIP funds are available on a first-come, first-served basis throughout the calendar year (January 1 through December 31, 2012). Reservations received after total funds have been committed for a calendar year will be placed on a wait list.

POTW Case Studies in Net Energy Production Webcast

By: Andre Schmidt/LACSD; Republished from the Southern California Alliance of POTWs (SCAP) February 2012 Newsletter

The Water Environment Federation (WEF) National Biosolids Partnership recently held a webcast entitled *Renewable Green Energy from Wastewater and Biosolids - POTW Case Studies Attempting to Achieve Net Energy Production*. The webcast included a presentation entitled *East Bay MUD's Journey to Become a Net Energy Producer*.

A link to the webcast is available at: <https://www1.gotomeeting.com/register/427613080>. When prompted, enter your email address and then hit submit. You will then be taken to the registration page. Complete the form and then hit register now. You will then be able to view the audio/video link by clicking on the View Recorded Webinar button.

The following people presented during the webcast; their PDF Power Point slides are available at the following link: http://www.wef.org/NBPIntegratedWebcast_120711.

- Bob Forbes - *WEF Renewable Energy Generation from Wastewater Position Statement Overview*
- Alicia Chakrabarti - *East Bay MUD's Journey to Becoming a Net Energy Producer*
- Robert Ostapczuk - *From a Liability to an Asset, Co-digestion and Achieving Zero Net Energy at a NY Wastewater Treatment Facility*

CPUC Decides Against High Values for Unbundled RECs

By: Jim Sandoval/CH2M HILL; Adapted from articles by Andre Schmidt/LACSD in the January and February 2012 SCAP Newsletters

During the December 15, 2011 California Public Utilities Commission (CPUC) business meeting, a Final Decision was approved on the Portfolio Content Categories for the new 33 percent Renewables Portfolio Standard (RPS). This Decision implements rules for Senate Bill 2 (1x), which was signed by the Governor in April 2011, and legislated the increase of California's RPS, which mandates electric utilities to increase their renewably generated electricity to 33 percent by 2020.

This law also established three portfolio content categories that define the types and quantities of eligible renewable energy that retail electricity sellers must use to meet the 33 percent requirement. The bundled renewable energy products were placed under "Category 1" and the "unbundled RECs" were placed under "Category 3."

RECs, i.e., renewable energy credits, are certificates issued for the renewable attributes associated with renewable energy production. Bundling RECs is a means of tethering renewably generated electricity to its environmental attributes so that the renewable energy can be tracked after it is commingled with other conventionally generated power on the grid. When RECs are sold or procured separately from the energy associated with them, they become "unbundled" RECs. Specifically for POTWs, unbundled RECs can be claimed for renewable generation that is consumed onsite at the treatment plant.

The CPUC's decision to place all unbundled RECs in Category 3 is of importance to POTWs because this category is the least valuable and it faces a decreasing cap, with utilities being limited to meeting no more than 10 percent of their RPS obligations from it by 2020. CWCCG and SCAP had sought for the law to be interpreted as allowing unbundled RECs from in-state generators that use the energy onsite (e.g., numerous California POTWs generating power from biogas) to be included in Category 1, which is for generation that is in-state or directly delivered to California, and is the most valuable of the three categories because 1) it is uncapped, 2) utilities must supply at least 75 percent of their RPS obligations from it by 2020, and 3) the market value of Category 1 RECs is about ten times greater than Category 3 RECs.

Unbundled RECs can be created from renewable generation at POTWs that is produced and consumed onsite at the treatment plant. Sale of these RECs can create an additional revenue stream for onsite generation facilities. Unfortunately the value of these unbundled RECs will be severely limited based on this Decision. CPUC Commissioners expressed a desire for a wide and deep market for RECs; however they felt that the exact wording of the statute did not allow for this. Commission President Peevey stated that the placement of all unbundled RECs in Category 3 will unnecessarily increase the cost of RPS compliance. However, he stated that the statute is ambiguous regarding the placement of unbundled RECs and advised that if the legislature introduces a cleanup bill, it should clarify if some unbundled RECs belong in Category 1.

This issue is a priority for California POTWs. CASA is seeking to introduce a legislative amendment that would allow for unbundled RECs from onsite generators fueled by digester gas and landfill gas to be included in Category 1. Additionally, the SCAP Energy Management Committee is finalizing a white paper that details the history and status of the issue.

Federal Report Provides Update on Key Energy Issues and Financial Opportunities in California

By: Andre Schmidt/ LACSD; Republished from the Southern California Alliance of POTWs (SCAP) February 2012 Newsletter

The US Department of Energy has published the *California Energy Incentive Programs* report for 2011. This report is an annual update on key energy issues and financial opportunities for Federal sites in California. It offers a good synopsis of key legislation, incentives, and opportunities across energy efficiency, renewable energy, and demand response programs. While the report is written for Federal sites, most of the information is applicable to POTWs. The report is available at www.femp.energy.gov/pdfs/2011_ca_incentives.pdf.

EPA Energy Management Webcast

By: Andre Schmidt/LACSD; Republished from the Southern California Alliance of POTWs (SCAP) February 2012 Newsletter

US EPA recently held a webinar titled: *Energy Management Webcast Series for Water and Wastewater Utilities: Reducing Operating Costs with Energy Use Assessments and Auditing*. A recording of the webcast including a copy of the slides is available at the following website: http://cfpub2.epa.gov/npdes/courseinfo.cfm?program_id=0&outreach_id=618&schedule_id=1145. Many useful resources are mentioned during the webcast. Below is a list of some of these resources and web links:

- Maine DEP Sample RFP: http://www.epa.gov/npdes/outreach_files/webcast/dec12011/maine_dep_modelenergyaudit_rfp.doc
- Radar graph: http://www.epa.gov/npdes/outreach_files/webcast/dec12011/assessment_ems_spider_tool.xls
- DSIRE: www.dsireusa.org
- Portfolio Manager: www.energystar.gov/benchmark
- Portfolio Manager training webinar: www.energystar.webex.com
- EPA Office of Water Energy Use Assessment Tool (in pilot phase): email EnergyUseTool@epa.gov
- NYSERDA: www.water.nyserda.org
- EPRI audit guide: www.cee1.org/ind/mot-sys/ww/epri-audit.pdf
- DOE Industrial Assessment Centers (IAC): http://www1.eere.energy.gov/industry/bestpractices/about_iac.html
- Massachusetts Energy Insight Tool: www.massenergyinsight.net/

- EPA Office of Water website: <http://water.epa.gov/infrastructure/sustain/energyefficiency.cfm>
- EPA Region 1: <http://www.epa.gov/region1/eco/energy/mitigation-efforts-epane.html#EnergyWaterInfrastructure>
- EPA Region 9: Home page: <http://www.epa.gov/region9/waterinfrastructure/index.html> and energy audit page: <http://www.epa.gov/region9/waterinfrastructure/audit.html>

You also may check www.epa.gov/npdes/training for updates regarding upcoming EPA webcasts.

Fats, Oil & Grease (FOG) Handling at the Oceanside Water Pollution Control Plant

By: Alexandre Miot and Bonnie Jones/San Francisco Public Utilities Commission

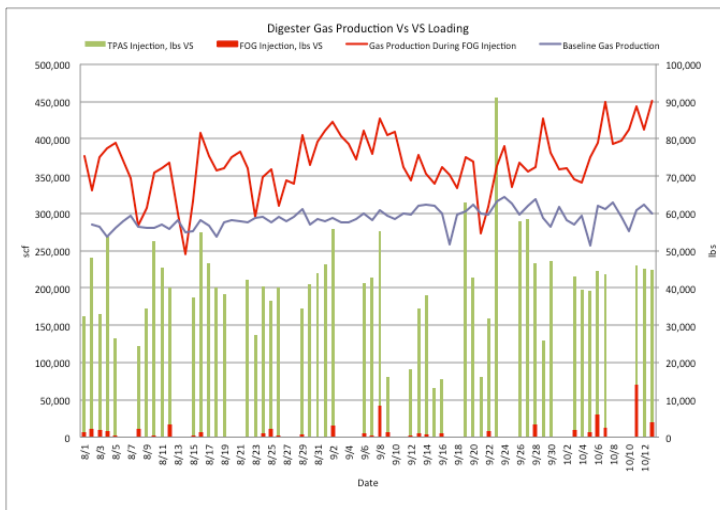
As part of the San Francisco Public Utilities Commission FOG-to-biodiesel project¹, the Oceanside Water Pollution Control Plant hosted a Brown Grease Dewatering Pilot capable of processing up to 10,000 gallon of restaurant trap waste per day. The goal of the pilot was to generate an estimated 300 gallons of brown grease daily to be used as a feedstock for biodiesel production or sold as fuel oil #4 or #6 replacement.

Because of the relatively low brown grease recovery of the system (20-50%) and because trap waste was not continuously dewatered, there was a significant amount of FOG in the process by-products. The average total volatile solids concentration of the stream would range between 1 and 25% with an average concentration of approximately 4.5%.



A preliminary FOG co-digestion pilot study conducted in two 30-gallon anaerobic digesters show no toxicity effect and a significant increase in methane production at equivalent loading. As a result the Oceanside management team decided to experiment full-scale co-digestion starting November 2010.

The figure below shows that an average increase in digester volatile solids (VS) loading from FOG of 3% between August 1st 2011 and October 13th 2011 resulted in an average gas production increase of 25% (compare to baseline production without FOG injection) in acclimated digesters. This significant gas production yield can be explained by the facts that digestion of lipids generates more methane than equivalent mass of proteins and carbohydrates found in primary and secondary sludge. FOG VS are also reduced to a greater extent.



Based on these results it was estimated that 25,000 gallons of trap waste would be sufficient to produce 420 kW of electricity (existing co-generation engine capacity) and additional heat for the plant.

Moving forward, the team will conduct lab experiments to: 1) support full-scale findings, 2) model OSP digesters gas production and 3) evaluate maximum loadings.

The Brown Grease Dewatering pilot was also converted in a permanent facility and the team will continue receiving trap waste and working on improving process recovery. SFPUC understands that brown grease production is more difficult to operate but present even greater advantages than co-digestion alone in terms of energy conversion and carbon footprint reduction potentials.

¹ Founded by SFPUC, DOE, CEC PIER and EPA with SFPUC and URS as Co-PI.

EPA Releases Document on Energy Efficiency in Local Government Operations

Republished from Feb 7, 2012, U.S. EPA email press release

EPA's State and Local Climate and Energy Program has released a final version of the document 'Energy Efficiency in Local Government Operations: A Guide to Developing and Implementing Greenhouse Gas Reduction Programs. This document can be found at the link below:

http://www.epa.gov/statelocalclimate/documents/pdf/ee_municipal_operations.pdf

This guide describes how local governments can lead by example and achieve multiple benefits by improving the energy efficiency of their new, existing, and renovated facilities and their day-to-day operations. It is designed to be used by facility managers, energy and environment staff, other local government agencies, and mayors and city councils.

Readers of the guide will come away with an understanding of options to improve the energy efficiency of municipal facilities and operations, and how to motivate the private sector and other stakeholders to follow suit. Readers will also understand the steps and considerations involved in developing and implementing these energy efficiency improvements, as well as an awareness of expected investment and funding opportunities.

This document is part of the [Local Government Climate and Energy Strategy Series](#), which is designed to help policy makers and program staff plan, implement, and evaluate cost-effective climate and energy projects that generate economic, environmental, social, and human health benefits.

State and local officials interested in additional information about developing and implementing cost-effective climate and energy strategies that help further environmental goals and achieve public health and economic benefits may visit:

<http://www.epa.gov/statelocalclimate>.

WESTWeb Water Energy Sustainability Tool

By: Jim Sandoval/CH2M HILL

UC Berkeley has developed the following three tools on life-cycle energy & environmental impacts of water and wastewater systems:

- *WEST (Water-Energy Sustainability Tool)*: evaluates the life-cycle energy and environmental effects of potable and recycled water systems
- *WWEST (Wastewater-Energy Sustainability Tool)*: evaluates infrastructure and chemical manufacturing and energy production
- *WESTWeb (a streamlined, web-based tool)*:
 - specifically focuses on the life-cycle effects of manufacturing major infrastructure components, producing treatment chemicals, providing energy from electricity, natural gas, gasoline, and diesel, and specifically for wastewater, sludge disposal and methane generation in the treatment process directly
 - provides results for energy consumption and greenhouse gas emissions, as well as other environmental impacts
 - can be used to answer a variety of questions about wastewater systems including water source selection, process selection, operational optimizations, energy source selection, disposal options

These tools are publicly available and are free of charge.

To obtain copies of the tools, email the developers at ucbwaterlca@gmail.com and include your name, email, phone number, employer, the tool(s) you are using, and the purpose for which you intend to use the tool.

For details on the tools, visit <http://west.berkeley.edu/>.

BCDC's Climate Change Bay Plan Amendment

By: Divya Bhargava/CH2M HILL

On October 6, 2011, the San Francisco Bay Conservation and Development Commission (BCDC) modified its coastal management program for the San Francisco Bay segment of the California coastal zone. The San Francisco Bay Plan contains the policies that the BCDC uses to determine whether permit applications can be approved for projects within the Commission's jurisdiction. BCDC updated the 22-year-old sea level rise findings and policies in the Plan and added a new section dealing more broadly with climate change and adapting to sea level rise. This Bay Plan Amendment (No. 1-08) incorporates the findings of climate change adaptation to protect the Bay and critical infrastructure from the potential impacts of sea level rise.

Specifically, the Commission amended the Bay Plan as follows:

- amended the Tidal Marshes and Tidal Flats findings and policies
- added a new Climate Change findings and policies section at the beginning of Part IV "Developing the Bay and Shoreline Findings and Policies"
- amended the Safety of Fills findings and policies
- amended the Protection of the Shoreline findings and policies
- amended the Public Access findings and policies

The California Office of Administrative Law approved this amendment on December 20, 2011, and it is now effective for State permitting purposes. CH2M HILL had been tracking the progress of the BCDC climate change Bay Plan amendment and advocating for policies that offer protection to POTWs from the potential impacts of climate change. We believe this amendment provides this protection.

Below are some of the key points and language in the amendment that protect the infrastructure and ongoing operational activities of POTWs:

- "important public shoreline infrastructure, such as wastewater treatment facilities are at risk of flood damage that could require costly repairs, or result in the interruption or loss of vital services or degraded water quality."
- "...protecting infrastructure that is crucial to public health or the region's economy, such as wastewater treatment facilities."
- "...specific types of projects that have regional benefits, including critical infrastructure that is necessary for existing development should be encouraged."
- "...protecting and minimizing risks to critical infrastructure by using effective and innovative adaptation approaches."
- "...specific types of projects should be encouraged if they do not negatively affect the Bay, which includes repairs of an existing facility."

What is the Extent of BCDC's Jurisdiction?

By: Jim Sandoval/CH2M HILL; Adapted from BCDC's website <http://www.bcdc.ca.gov/>

As we began tracking the Bay Conservation and Development Commission's (BCDC) Bay Plan Amendment, some AIR Committee members became curious about BCDC's role and geographic jurisdiction. This article provides a summary.

What is BCDC's role?

BCDC is a State agency created by the California Legislature in 1965 with the mission to protect and enhance the San Francisco Bay and encourage responsible use of the Bay. Its 27 commissioners are appointed from local, State and Federal agencies, including five gubernatorial appointees that include a chair and vice chair.

BCDC permits are typically needed for planning a project along the shoreline of San Francisco Bay in the following counties: Alameda; Contra Costa; Marin; Napa; San Francisco; San Mateo; Santa Clara; Solano; Sonoma. The following activities within BCDC's jurisdiction require a permit.

- Placing solid material, building or repairing docks, pile-supported or cantilevered structures, disposing of material or mooring a vessel for a long period in San Francisco Bay or in certain tributaries that flow into the Bay
- Dredging or extracting material from the Bay bottom
- Substantially changing the use of any structure or area
- Constructing, remodeling or repairing a structure
- Subdividing property or grading land

For more specifics on the types of projects requiring a BCDC permit, visit http://www.bcdc.ca.gov/permits/obtain_permit.shtml.

Where is the Commission's jurisdiction?

BCDC's approval is needed prior to undertaking any of the activities listed and referenced above in any of the following geographic areas:

- The open water, marshes and mudflats of greater San Francisco Bay, including Suisun, San Pablo, Honker, Richardson, San Rafael, San Leandro and Grizzly Bays and the Carquinez Strait
- The first 100 feet inland from the shoreline around San Francisco Bay
- The portion of the Suisun Marsh-including levees, waterways, marshes and grasslands- below the ten-foot contour line
- Portions of most creeks, rivers, sloughs and other tributaries that flow into San Francisco Bay
- Salt ponds, duck hunting preserves, game refuges and other managed wetlands that have been diked off from San Francisco Bay

For specific information on BCDC's jurisdiction, go to the following link and see section 66610 of the McAteer-Petris Act: http://www.bcdc.ca.gov/laws_plans/laws/mcateer_petris.shtml#2.

REMINDER--BAAQMD Reg. 9, Rule 8 Limits for 50 bhp Stationary ICEs Now in Effect By: Divya Bhargava/CH2M HILL

As of January 1, 2012, smaller stationary internal combustion engines (ICEs) with an output of 50 brake horsepower (bhp) or greater are being regulated. In addition, no specific fuel type will be exempted. Previous to 2012, engines fired exclusively by liquid fuels were exempt. Emergency standby engines will remain exempt.

Below are the changes to the regulation that went into effect on January 1st:

*Spark-Ignited, Fossil Fuel**

	Effective January 1, 2012
Rich Burn Engines, NO _x	70 ppmv
Lean Burn Engines, NO _x	70 ppmv
CO	2000 ppmv (remains unchanged)

*Spark-Ignited, Waste-Derived Fuels or
Combination of Fuels**

	Effective January 1, 2012
Rich Burn Engines, NO _x	25 ppmv
Lean Burn Engines, NO _x	65 ppmv
CO	2000 ppmv (remains unchanged)

*Compression-Ignited, Effective January 12, 2012**

	Effective January 1, 2012
Engines ≤ 1000 bhp	All engines that operate less than 100 hours in a 12-month period
Engines > 1000 bhp	All engines that operate less than 100 hours in a 12-month period

**All emissions levels as corrected to 15% oxygen, dry basis*

Low Use Limited Exemption

	Effective January 1, 2012
Engines ≤ 1000 bhp	All engines that operate less than 100 hours in a 12-month period
Engines > 1000 bhp	All engines that operate less than 100 hours in a 12-month period

Emergency Standby Engines for Essential Public Services

- May operate for emergency use for an unlimited number of hours
- Effective January 1, 2012, reliability-related activities may not exceed 100 hours per calendar year or limitations contained in permit, whichever is lower.

During the AIR Committee's roundtable on January 25, 2012, with Brian Bateman, BAAQMD's Director of Compliance and Enforcement, he indicated that no facilities to date have formally expressed any limitations or concerns with meeting the requirements of this rule. Delayed compliance until 2016 is an option for some qualifying engines if they are reported.

See the following website for further details:

<http://www.baaqmd.gov/~media/Files/Planning%20and%20Research/Rules%20and%20Regs/reg%2009/rg0908.ashx>

BAAQMD Regulation 9, Rule 7: Effective January 1, 2013, Updated NO_x and CO Limits for Boilers, Steam Generators & Process Heaters

By: Divya Bhargava/CH2M HILL

Regulation 9, Rule 7 requires manufacturers to pre-certify new, natural-gas fired devices rated between 2 – 10 million BTU per hour (MM BTU/hr) for sale in the Bay Area. However, by January 2011, no manufacturer had certified to the standards and therefore no manufacturer-certified devices were available locally. Since no one was able to comply with this rule, BAAQMD extended the compliance dates for devices rated >2 to <10 MM BTU/hr.

The updated deadlines are the following:

- NO_x and CO emission limits compliance date for new & existing devices rated > 2 – 5 MM BTU/hr: January 1, 2013 (extended 2 years)
- NO_x and CO emission limits compliance date for new & existing devices rated > 5 - 10 MM BTU/hr: January 1, 2013 (extended 1 year)
- Stack temperature limits compliance date for new & existing devices: January 1, 2013 (extended 2 years)
- Certification deadline for all new devices sold or installed: January 1, 2012

These changes were accepted by BAAQMD in May 2011. However, meeting the new requirements of Regulation 9, Rule 7 may prove to be a challenge for some municipal wastewater treatment facilities.

For more information on this rule, please visit the following website:

http://www.baaqmd.gov/?sc_itemid=D39A3015-453E-4A0D-9C76-6F7F4DA5AED5.

Revisions to BAAQMD New Source Review and Title V Permitting, District Regulation 2: Rules 1, 2, 4, & 6

By: Jim Sandoval/CH2M HILL; Adapted from BAAQMD Rules Workshop Website

On behalf of the BACWA AIR Committee, CH2M HILL attended a public workshop and follow-on technical working group on February 22nd and 28th respectively, held by BAAQMD District staff, to discuss proposed amendments to Regulation 2, Rules 1, 2, 4 and 6. The District is proposing to amend the regulations for permitting stationary sources to incorporate recent U.S. EPA mandated requirements for nitrogen dioxide (NO₂), particulate matter less than 2.5 micrometers (PM_{2.5}), and Greenhouse Gases (GHG) Prevention of Significant Deterioration (PSD) and Title V permitting.

BAAQMD is amending Regulation 2 to make it consistent with recent changes in Federal requirements. Regulation 2 must be consistent with these Federal requirements in order for BAAQMD to issue PSD and New Source Review (NSR) permits; and so BAAQMD can obtain approval of its State Implementation Plan (SIP). The Clean Air Act requires SIPs for areas in non-attainment of air quality standards.

The major amendments include:

- Revise the New Source Review Rule (Regulation 2-2) to incorporate new Federal PSD requirements, including the National Ambient Air Standard (NAAQS) for NO₂ (1-hour) and PM_{2.5} (24-hour and annual) and GHG PSD review requirements.
- Incorporate EPA PM_{2.5} requirements for NSR (i.e., BACT requirement for PM_{2.5} at a 10 lb/day threshold) and emission banking.
- Incorporate EPA Title V permitting requirements for Major Sources of GHGs (Tailoring Rule)
- Clarifying language has been added to match the Statewide Portable Equipment Registration Program (PERP).
- Clarifying language has been added to permit exemptions that may have been previously misinterpreted or where clarification is needed.
- Clarifying language has been added to further detail the procedure of determining a modified source and the calculation of emission increases.

Tailoring Rule Summary

- **Title V applicability**
 - GHG's must be included in all "Title V anyway" permits
 - GHG emissions > 100,000 ton/yr (tpy) CO₂e and 100 tpy mass basis trigger Title V for GHGs and other regulated pollutants for "non-anyway" sources
- **PSD Applicability for New projects*:**
 - GHG potential to emit (PTE) > 100,000 tpy CO₂e or "PSD anyway" sources > 75,000 tpy CO₂e
- **PSD Applicability for Modified sources*:**
 - "PSD anyway" source with GHG PTE > 75,000 tpy CO₂e,
 - Existing PTE > 100,000 tpy and increase and net increase both > 75,000 tpy CO₂e, or
 - Existing minor source** with GHG PTE > 100,000 tpy CO₂e
- **Rule of thumb:** facility that has the potential to use a bit more than 1,700,000 MM BTU/year of natural gas would generate > 100,000 short tons CO₂e. If the USEPA decides to include biogenic GHG emissions from biogas or landfill gas (LFG) in the Tailoring Rule in the future, all CO₂e generated from natural gas, biogas and LFG that is utilized as fuel at your POTW would be factored into the Title V or PSD thresholds.

*Sum of GHGs on a mass basis must also exceed certain triggers – relevant mostly to projects with large fluorinated gas emissions

**Loophole in regulations versus guidance may negate this trigger – not recommended to pursue it!

Statewide Portable Equipment Registration Program (PERP): New Fleet Emission Requirements Effective January 1, 2013

By: Jim Sandoval/CH2M HILL; Adapted from CARB's PERP/ATCM website <http://www.arb.ca.gov/portable/perp/2013changes.pdf>

Beginning January 1, 2013 portable diesel engines registered in PERP or operating under air district permits must comply with weighted particulate matter (PM) emission fleet averages expressed as grams per brake horsepower-hour (g/bhp-hr). These requirements are part of the Airborne Toxic Control Measure (ATCM) for diesel PM from portable engines. You can have up to three different fleets depending on the size of the engines in your inventory. The ATCM has emission standards for each fleet depending on engine size range. The table below shows the standards effective January 1, 2013.

Engine Size Category in Fleet	50 to less than 175 hp	175 to 750 hp	Greater than 750 hp
Weighted PM Fleet Average	0.3 g/bhp-hr	0.15 g/bhp-hr	0.25 g/bhp-hr

How to Determine Compliance?

Determine the weighted PM emissions averages for all the engines within each of the three categories to check if the emissions comply with the applicable standard (exclude engines below 50 hp). This can be done by using CARB's Fleet Calculator (on line or downloadable) or by calculating the weighted PM emissions yourself. You will need engine family name and horsepower of each engine. Refer to your registration or district permit. Other exemptions such as emergency engines and low use engines may apply. Refer to the ATCM.

To use the CARB Fleet Calculator or to calculate weighted PM fleet average yourself, see the second page of the following link: <http://www.arb.ca.gov/portable/perp/2013changes.pdf>

What if your fleet average emissions are above the standard?

You must clean up your fleet by using the following options:

- Replace older, dirtier engines with newer, cleaner engines
- Replace diesel engines with electric power
- Install add-on controls to engines such as an approved diesel particulate filter (DPF)

Report the following information to CARB by March 1, 2013

- Statement of compliance by responsible official
- Summary of each engine in fleet with the emission rate
- Engine make, model, serial # and year
- Low use and emergency engines
- PERP registration number or district permit numbers

Important Information

- Fleet emission requirements apply to portable engines registered with PERP or operating under air district permits.
- Be proactive-check compliance with fleet emission requirements promptly. This will allow time to adjust your fleet before the **January 1, 2013** deadline.
- Fleet emission requirements will become more stringent in January 2017 and 2020. Plan accordingly.
- Obtain PERP/ATCM information at www.arb.ca.gov/portable/portable.htm.
- If you need help, call (916) 324-5869 or e-mail portable@arb.ca.gov

One of the most helpful sites to understand PERP background information and basics is CARB's Frequently Asked Questions site: <http://www.arb.ca.gov/portable/perp/perpfaq.pdf>.

Upcoming training courses can be found at the link below:

<http://www.arb.ca.gov/training/courses.php?course=302>.

Stationary Refrigerant Management Program Regulation

By: Divya Bhargava/CH2M HILL; Adapted from CARB's website <http://www.arb.ca.gov/cc/reftrack/reftrack.htm#new>

Leaking refrigeration systems are California's single largest source of high-Global Warming Potential (GWP) gases such as chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), hydrofluorocarbons (HFCs), and perfluorocarbons (PFC). In December 2009, the ARB adopted a regulation (known as the Refrigerant Management Program [RMP]) to reduce greenhouse gas (GHG) emissions from stationary sources through refrigerant leak detection and monitoring, leak repair, system retirement and retrofitting, reporting and recordkeeping, and proper refrigerant cylinder use, sale, and disposal. This regulation became effective on January 1, 2011, and requires facility registration, leak detection and monitoring, leak repair, retrofit or retirement, and recordkeeping for any facility owner or operator with a stationary, non-residential refrigeration system using more than 50 pounds of a high-GWP refrigerant. This regulation applies only to systems used wholly or in part for refrigeration and process cooling. It does not apply to systems used exclusively for comfort cooling, i.e. air conditioning.

Although this regulation has been adopted, it has not yet been enforced. ARB is trying to defer enforcement of this regulation to the local Air Districts, and the Air Districts may either adopt a rule of equivalent emission reduction benefit under local authority, or may enforce Statewide regulation under agreements with the ARB. Under this regulation, refrigeration systems are classified as Large (systems using 2000 pounds or more of a high GWP-refrigerant), medium (using 200 pounds or more), and small (using 50-200 pounds). Registration and reporting for large facilities with are due by April 1, 2012; and by March 1, 2014, for medium facilities. Also, the annual implementation fee is \$370 and \$170, for large and facilities, respectively. Facilities with small systems are not required to register until 2016; there are no annual reports or fees for facilities with small systems.

CARB recently developed a web-based tool for implementing the registration, reporting, and fee payment provisions of this regulation. The online tool is known as the "Refrigerant Registration and Reporting System (R3)" and can be accessed at www.arb.ca.gov/rmp-r3. In addition, R3 offers the public a means to view select preformatted reports of refrigerant emissions.

Climate Change Handbook for Regional Watershed Planning

By Divya Bhargava/CH2M HILL; Adapted from DWR's website <http://www.water.ca.gov/climatechange/CCHandbook.cfm>

The California Department of Water Resources (DWR), USEPA, the Resources Legacy Fund, and the U.S. Army Corps of Engineers have cooperatively developed the Climate Change Handbook for Regional Water Planning. This handbook provides a framework for considering climate change in water management planning, and serves as a guide to resource managers and planners to develop means of adapting their programs to a changing climate.

The handbook uses the DWR's Integrated Regional Water Management (IRWM) planning framework as a model into which analysis of climate change impacts and planning for adaptation and mitigation can be integrated. In addition, the handbook provides a checklist for identifying and prioritizing the vulnerability of local watersheds. The handbook includes topics such as evaluating the energy-water connection and greenhouse gas emissions, assessing regional vulnerability to climate change, measuring regional impacts, evaluating projects, resource management strategies, and IRWM Plans with respect to climate change. The handbook can be viewed at the following link: <http://www.water.ca.gov/climatechange/CCHandbook.cfm>.

SAVE THE DATE, May 30th -- Digesting Urban Organics Residuals: A Forum on Technology, Economics, & Permitting

Republished from January 25, 2012, CalRecycle Conversion Technology Listserv email press release

On May 30, 2012, from 8:30 AM to 5:00 PM, CalRecycle will be hosting a full day event designed for jurisdictions considering Anaerobic Digestion (AD) projects for the organic fraction of their urban waste stream and other stakeholders. The event will be located at the Cal/EPA Building at 1001 I Street in Sacramento, California. The forum will showcase project implementation progress in California, and highlight the benefits and challenges of AD technology. Building on successful AD workshops in November 2009 and April 2010, the program will include case studies, permitting pathways, technology options and financing. The event is organized collaboration with the California Biomass Collaborative, the California Organic Recycling Council, and the City of San Jose. The forum agenda and additional details are posted at <http://www.calrecycle.ca.gov/Organics/Conversion/Events/Digesting12/default.htm>.

Status Update on CalRecycle's proposal to Regulate Anaerobic Digestion at POTWs

By: Greg Kester/CASA Biosolids Program Manager

The California Integrated Waste Management Board (CIWMB now CalRecycle) published a guidance document in September 2009 titled "[How Anaerobic Digestion Fits Current Board Regulatory Structure](#)". This was based in large part on an earlier guidance document from December 2007 entitled "[How Conversion Technologies Fit Current Board Regulatory Structure](#)". The 2009 document defines compost by temperature rather than process and includes anaerobic digesters operating in the thermophilic temperature range (>50 degrees C) as compost facilities. Moreover, the guidance document opines that anaerobic digesters (1) operating at lower temperatures, as most POTW digesters do and (2) that receive any hauled in waste that would normally be conveyed through the sewerage system (i.e., Fats, Oils and Grease (FOG) or food waste) may, at the discretion of the Local Enforcement Authority (LEA), need to obtain a solid waste Transfer Station/Process Facility (TSPF) permit. CASA has been in direct communication with CalRecycle since the document's publication to educate CalRecycle about the current regulatory scheme for POTWs and to persuade CalRecycle to reconsider these positions. POTWs are already effectively regulated in all respects by permits issued by the Regional Water Quality Control Boards, local air districts, and the United States Environmental Protection Agency.

EPA Proposes Rules & Reconsideration of Boiler Emission Standards

By: Cynthia Finley/NACWA Director of Regulatory Affairs, and Jim Sandoval/CH2M HILL

EPA published two proposals in the December 23, 2011 Federal Register on the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for area source and major source boilers that would reconsider and clarify aspects of the final rules that were published on March 21, 2011. After publication of the final rules, EPA announced its intention to reconsider parts of the rules, and later also postponed the effective dates of the final rule for major source boilers until either the Agency's reconsideration or judicial review was completed. The December 23rd proposals asked for public comment by February 21, 2012, on specific portions of the final rules for area and major source boilers, and also propose amendments and technical corrections to clarify the final rules. Neither NACWA nor BACWA AIR received any comments from their members about the proposed boiler standards amendments, and no comment letters were submitted to EPA.

In January 2012, EPA Administrator indicated that EPA will not enforce rules at this time and will issue a "No Action Letter", and that the rules will become effective three years after adoption.

All background information, related information and sequence of events related to the rules can be found at the link below: <http://www.epa.gov/ttn/atw/boiler/boilerpg.html#DOC>

The Issuance of a Stay and Delay of Effective Date can be found at the link below: <http://www.gpo.gov/fdsys/pkg/FR-2011-05-18/pdf/2011-12308.pdf>.

Major sources emit 10 TPY of any air toxic (HAP) or 25 TPY of any combo of air toxics. Area sources emit < 10 TPY of any air toxic or < 25 TPY of any combination of air toxics. The area source rule DOES NOT apply to boilers that burn gaseous fuels or solid waste, including biogas.

NACWA Confirms Regulatory Status of Biogas

By: Jim Sandoval/CH2M HILL; Adapted from the February 24, 2012, NACWA Cleanwater Currents

In addition to commenting on the EPA's reconsideration of, and proposed revisions to its March 21, 2011 final Non-Hazardous Secondary Materials (NHSM) rule (76 *Fed. Reg.* 80452; December 23, 2011), NACWA's letter to EPA supported the Agency's clarification that it did not intend to change its previous statements and interpretations regarding contained gases. Background materials associated with revisions to the commercial and industrial solid waste incinerator rules suggested that EPA was changing its interpretation of contained gas, which had the implication of including the biogas generated during the anaerobic digestion process used to treat biosolids in the category of solid waste. Specifically, EPA stated in the December 23rd proposed revisions, that "the burning of gaseous material, such as in fume incinerators (as well as other combustion units, including air pollution control devices that may combust gaseous material) does not involve treatment or other management of a solid waste (as defined in RCRA section 1004(27))." Based on this clarification and discussions with EPA staff, NACWA understands that digester gas or biogas generated during the treatment of sewage sludge that is burned for energy recovery and any gaseous material that is flared as an air pollution control measure is not subject to the requirements for combustion or treatment of a solid waste. NACWA also requested and received direct confirmation of this from EPA in a policy letter received on February 15, 2012.

NACWA Provides Input on Solid Waste Rulemaking

By: Jim Sandoval/CH2M HILL; Adapted from the February 24, 2012, NACWA Cleanwater Currents

In February, NACWA commented on EPA's reconsideration of, and proposed revisions to, its March 21, 2011 final Non-Hazardous Secondary Materials (NHSM) rule (76 *Fed. Reg.* 80452; December 23, 2011). While the Association disagrees with EPA's finding that all sewage sludge is a solid waste when combusted, and has filed a judicial challenge of that decision, the rule remains in effect. NACWA is optimistic that some of the rule's provisions can be modified to reduce barriers to using biosolids as a renewable fuel. The proposed revisions to the NHSM rule do not impact EPA's determination that sewage sludge is a solid waste when burned, and will not benefit sewage sludge incinerators.

The additional clarification and proposed categorical non-waste determination process, however, could make it easier for utilities interested in burning dried solids or pellets as a fuel or fuel substitute. Utilities who wish to dry and burn their own biosolids for energy recovery can do so through the self-implementing provisions of 40 CFR 241.3 by demonstrating that their biosolids have been sufficiently processed and can meet EPA's legitimate fuel criteria. The proposed revisions to 241.3 help to clarify elements of EPA's legitimate fuel criteria and should make it easier to make this demonstration. For utilities that want to provide their sludge to a third party for use as a fuel, a petition for a non-waste determination must be filed with the appropriate EPA Regional Administrator. NACWA was encouraged to learn that a community in Michigan has already successfully gone through the petition process. EPA's formal non-waste determination letter is posted on the EPA website at <http://www.epa.gov/epawaste/nonhaz/define/pdfs/delhi-charter.pdf>.

Speciation and Ozone Forming Potential of VOCs from Biosolids Composting Facilities: A Report by WERF and CASA

By: Divya Bhargava/CH2M HILL; Adapted from CASA's website <http://www.casaweb.org/biosolids/research/volatile-organic-compounds>

Many volatile organic compounds (VOCs) react with Oxides of Nitrogen (NOx) in the presence of sunlight to form ozone, a Clean Air Act criteria pollutant with significant negative impacts on human health and on plants. The reactivity of any given VOC influences its ozone formation potential. Researchers have classified most common VOCs using a reactivity index, and the USEPA has exempted certain very low reactivity compounds from Clean Air Act regulations.

Biosolids co-composters have come under scrutiny from air quality officials because of the emission of VOCs during the natural decomposition processes of composting piles of feedstocks. Research was recently conducted by Dr. Peter Green at UC Davis, which examined different VOCs emitted during the biosolids composting process to determine each one's reactivity or ability to act as precursor to the ground level formation of ozone. A report has been published jointly by WERF and CASA documenting this research on speciation and ozone forming potential of VOCs from biosolids composting facilities, and assessing their similarity to those from green waste composting.

This report concerns assessment of biosolids co-composting which is the combined composting biosolids with green waste. Because of the low overall ozone formation potential of the VOC emissions profile from green waste composting operations, it is expected that reducing biosolids co-composting pile emissions would be similar. The report concludes that more than 95% of the emissions were of three alcohols which were all of low reactivity and thus not significant contributors to ground level ozone formation. Here is a link to the final report: http://casaweb.org/documents/2011/werf2c10_web.pdf.

CASA met with the Air Division, along with the Water Division, at USEPA Region 9 and will continue the dialogue to allow flexibility when meeting permit limits.

EPA's New Tool to Access Greenhouse Gas Emissions Data

By: Divya Bhargava/CH2M HILL; Adapted from the EPA's January 11, 2012, Press Release at <http://yosemite.epa.gov/opa/admpress.nsf/0/8890DDDC08B1B82785257982005CCACD>

For the first time, comprehensive greenhouse gas (GHG) data reported directly from large facilities and suppliers across the country are now easily accessible to the public through EPA's GHG Reporting Program. The 2010 GHG data includes public information from facilities in nine industry groups that directly emit large quantities of GHGs, as well as suppliers of certain fossil fuels and high global warming gases. This information can be used by communities to identify nearby sources of GHGs, help businesses compare and track emissions, and provide information to State and local governments.

EPA's online data publication tool allows users to view and sort GHG data from over 6,700 facilities in a variety of ways—including by facility, location, industrial sector, and the type of GHG emitted. The tool displays data in two distinct sections - "Direct emitters" (facilities that combust fuels) and "Suppliers" (entities that supply certain fossil fuels which, when combusted, released or oxidized emit greenhouse gases into the atmosphere). EPA's Data Publication Tool can be accessed from: <http://epa.gov/climatechange/emissions/ghgdata/>.

California also publishes the GHG emissions reported by facilities through the Mandatory Reporting Program—see http://www.arb.ca.gov/cc/reporting/ghg-rep/reported_data/ghg-reports.htm. These emissions represent approximately 40 percent of the State's GHG emissions. California also publishes facility emissions for criteria and toxic air pollutants at <http://arb.ca.gov/ei/disclaim.htm>.

EPA Regulatory Relief Act of 2011

By Divya Bhargava/CH2M HILL

The House of Representatives Energy and Commerce Committee approved the H.R.2250 Bill, also known as the “EPA Regulatory Relief Act”, on September 26, 2011. It is currently being read by the Senate. The purpose of the Bill is to provide additional time for the Administrator of the EPA to issue achievable standards for industrial, commercial, and institutional boilers, process heaters, and incinerators, and for other purposes.

The Bill, if passed, would block EPA from issuing revised air pollution and solid waste rules for boilers and incinerators. It would provide a legislative stay of four interrelated EPA rules, commonly referred to as the “Boiler MACT rules,” that govern emissions of mercury and other hazardous air pollutants from approximately 200,000 boilers and incinerators nationwide. These rules are:

- National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters
- National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers
- Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units
- Identification of Non-Hazardous Secondary Materials That Are Solid Waste

The Bill would also provide for the replacement of the Boiler MACT rules, and would stop the EPA from issuing the proposed rules for 15 months after the bill is passed, and would give regulated industry five years to comply rather than the three years included in the Clean Air Act.

Current Status: On October 18, 2011 the Bill was read for the second time by the Senate and has been placed on the Senate Calendar. CH2M HILL will continue to track the status of the bill and keep members updated.

EPA’s Clean Energy Financing Decision Tool and Guide

By: Divya Bhargava/CH2M HILL; Adapted from EPA’s website: <http://epa.gov/statelocalclimate/state/activities/financing.html>

States and communities are increasingly investing in energy efficiency and renewable energy to achieve their air quality, economic, and energy goals. They can do this by adopting clean energy financing programs that can make efficiency and renewable energy more affordable for their residential, commercial, and municipal sectors.

EPA’s State and local Climate and Clean Energy Program is supporting these efforts with the launch of a new online Financing Program Decision Tool and a Financing Program Decision Guide. These financing Web pages are designed for State and local government staff working to encourage clean energy improvements, either in their own facilities or in their residential and commercial sectors.

Financing Program Decision Tool

The Financing Program Decision Tool will help State and local staff identify clean energy financing programs suited to their target market and available resources. It is an ideal place to start designing or revising a clean energy financing program. The tool requires answers to some simple questions, and it the most promising program options for the State or local jurisdiction’s specific needs.

Financing Program Decision Guide

This Guide complements the Tool, and includes the basics on financing-program options, as well as key considerations and factors for States and communities to weigh as they start up or expand their clean energy financing programs.

For more information about these tools, please visit:

<http://epa.gov/statelocalclimate/state/activities/financing.html>

California Financing Coordinating Committee Funding Fairs

By: Divya Bhargava/CH2M HILL; Adapted from CFCC press release: [http://cfcc.ca.gov/res/docs/FINAL_2012_CFCC_Flyer\(2\).pdf](http://cfcc.ca.gov/res/docs/FINAL_2012_CFCC_Flyer(2).pdf)

The California Financing Coordinating Committee (CFCC) is holding free funding fairs at six locations to educate the public about the financial and technical resources available for eligible critical infrastructure projects, including wastewater, solid waste and energy efficiency. The fairs will provide opportunities for public works, local government, and economic development professionals to obtain information about grant, loan and bond financing options that are available. The fairs will occur between March and May in San Diego, Riverside, Fresno, Santa Cruz, Redding, and Sacramento. For more info about these Funding Fairs, visit the web link above.

The CFCC was formed in 1998 and is made up of eight State and Federal funding members: State Water Resources Control Board, California Department of Public Health, United States Department of Agriculture, California Department of Housing and Community Development, California Department of Water Resources, United States Environmental Protection Agency, California Infrastructure and Economic Development Bank (I-Bank), and the Bureau of Reclamation. CFCC Members facilitate and expedite the completion of various types of infrastructure projects helping customers combine the resources of different agencies. Project information is shared between members so additional resources can be identified.

EPA's FY 2013 Budget Proposal Focuses on Core Environmental and Human Health Protections

By: Divya Bhargava/CH2M HILL; Adapted from the EPA's February 13, 2012, Press Release at <http://yosemite.epa.gov/opa/admpress.nsf/0/D38E604EF465557A852579A3005F4630>

The Obama Administration proposed a FY 2013 budget of \$8.344 billion for the U.S. Environmental Protection Agency (EPA) on February 13, 2012. This budget reflects a government-wide effort to reduce spending and find cost-savings. The FY 2013 budget is the result of EPA's ongoing efforts to carefully consider potential cost savings and reductions while continuing its commitment to core environmental and health protections safeguarding Americans from air, water, and other types of pollution. Two of the key 2013 budget highlights that support the infrastructure of clean water agencies include:

Supporting State Governments: The budget proposes \$1.2 billion in categorical grants for states that are on the front lines implementing environmental statutes such as the Clean Air Act and the Clean Water Act, and includes nearly \$66 million for State and Tribal Air Quality Management grants, nearly \$27 million for Pollution Control (Clean Water Act Section 106) grants, and about \$29 million for the Tribal General Assistance Program.

Protecting America's Waters: The proposal provides \$2 billion for Clean Water and Drinking Water State Revolving funds (SRFs). This will allow the SRFs to finance over \$6 billion in wastewater and drinking water infrastructure projects annually. EPA will work to target assistance to small and underserved communities with limited ability to repay loans, while maintaining State program integrity.

State Water Board's Clean Water State Revolving Fund Program

By: Divya Bhargava/CH2M HILL; Adapted from the State Water Board's website: http://www.waterboards.ca.gov/water_issues/programs/grants_loans/srf/expanded_use.shtml

The Clean Water State Revolving Fund (CWSRF) program was established under the Clean Water Act and is available to fund a wide variety of water quality projects including all types of nonpoint source, watershed protection or restoration, and estuary management projects, as well as more traditional municipal wastewater treatment projects. Under this program, the EPA provides grants to all 50 states to capitalize State loan funds. The States, in turn, make loans to communities, individuals, and others for high-priority water-quality activities.

The CWSRF program offers low interest financing agreements for water quality projects. Annually, the program disburses between \$200 and \$300 million to eligible projects. Eligible projects include construction of publicly-owned facilities, including wastewater treatment, local sewers, sewer interceptors, water reclamation facilities, and stormwater treatment. Any city, town, district, or other public body created under State law is eligible for this program. Applications for this program are being accepted on a continuous basis, and can be submitted by completing the State Water Board's on-line Financial Assistance Application Submittal Tool (FAAST): <https://faast.waterboards.ca.gov/help/FAASTUserManual.htm>.

Carl Moyer On-Road Voucher Incentive Program

By Divya Bhargava/CH2M HILL

The On-Road Voucher Incentive Program (VIP) provides funding opportunities for fleets with 10 or fewer vehicles to quickly replace or retrofit their older heavy-duty diesel vehicles. VIP is a part of ARB's Carl Moyer Program Fleet Modernization program. The Carl Moyer Memorial Air Quality Standards Attainment Program provides incentive grants for cleaner-than-required engines, equipment and other sources of pollution providing early or extra emission reductions. The VIP provides a streamlined approach to reduce emissions by replacing existing, high-polluting vehicles with newer, lower-emission vehicles or by installing retrofits.

Fleet owners that operate vehicles with 2002 or older model year diesel engines may be eligible for funding towards the purchase of a replacement vehicle that has a 2007 or newer engine. Fleet owners that operate vehicles with 1994-2006 model year diesel engines may be eligible for funding towards the purchase of an exhaust retrofit. The following heavy-duty vehicle projects are eligible for funding:

- New Replacement Vehicle Purchase: The purchase of a new 2007 model year or later vehicle with a certified engine
- Used Replacement Vehicle Purchase: The purchase of a used 2007 model year or later vehicle with a certified engine
- Retrofit Purchase and Installation: The purchase and installation of a qualifying retrofit device that is verified by the ARB for the specific engine family in the existing vehicle

VIP funding is now available Statewide. For more information on the VIP, please visit:

<http://www.arb.ca.gov/msprog/moyer/voucher/voucher.htm>

Revisions to BAAQMD New Source Review and Title V Permitting, District Regulation 2: Rules 1, 2, 4, & 9 (Contd. From Page 12)

- Removed permit exemption for space heaters
- Reorganize Regulation 2 and Rules 1, 2, 4 and 6 so that it is easier to read; applicable definitions are now located in Rule 1 and standards are now located in the most appropriate rules
- Add public noticing requirements for new facilities and modifications to existing facilities that may result in a significant increase of criteria pollutants

Most of the changes will affect major facilities, such as refineries and power plants. In addition, facilities that apply for new or modified permits for sources of PM_{2.5} will be subject to a new Best Available Control Technology (BACT) trigger level. Sources of PM_{2.5} are generally sources which combust fuel (e.g., boilers, steam generators, engines, turbines) and/or handle solid materials (e.g., quarries, asphalt plants, landfills and refineries). In general, the proposed rule changes will incorporate existing PSD requirements and codify existing District procedures and practices. Smaller facilities that are not applying for new or modified permits will not be affected by the rule changes.

BAAQMD staff will take the final proposed amendments to Regulation to the Board for approval this summer. The amendments will be fully adopted after they are approved by the California Air Resources Board in December 2012 and the USEPA in 2013 or later.

Additional details regarding the proposed Regulation 2 amendments can be found at <http://www.baaqmd.gov/Divisions/Planning-and-Research/Rule-Development/Rule-Workshops.aspx>.

Status Update on CalRecycle's proposal to Regulate Anaerobic Digestion at POTWs (Contd. From Page 14)

The patch quilt regulatory landscape that would result would create a disincentive for POTWs to receive this waste even though the waste greatly enhances renewable energy production, reduces solids production, and provides an excellent repository for this organic waste stream.

CASA has worked successfully with the State Water Board to craft language to be included in a permit, permit application or a permit application addendum describing and explicitly regulating this activity. State Water Resources Control Board Executive Director Tom Howard sent a letter on December 6, 2011 to new CalRecycle Director Carol Mortensen seeking cooperation between the agencies and requesting that CalRecycle issue a blanket exemption for this activity.

He included as an appendix the language to be inserted into permits as they are reissued. On December 20th, Greg Kester and Mike Dillon of CASA met with new CalRecycle Director Carol Mortensen. During the meeting with Director Mortensen, Kester addressed the issue of solid waste handling at POTWs and explained how POTWs handle solid waste daily via bar screens at lift stations, screening at the headworks, grit removal, etc., and noted that virtually every POTW accepting hauled in waste for injection into their digester would first have a screening step of some kind (screen, rock trap, chopper pump, etc.) and that the wastewater agencies are adept at properly handling organic waste in compliance with existing State and Federal standards and permits. According to Greg, she totally understood the position of the wastewater community and appeared to agree that a blanket exemption would be the best path forward. Dialogue continues with CalRecycle and the SWRCB and CASA will continue to provide updates.

For more information on this issue, please contact Greg Kester at gkester@casaweb.org.

Important Dates

Next BACWA AIR Committee Meetings:

- May 16th, 2012
- July 18th, 2012
- October 17th, 2012

Other important dates:

Next BACWA Executive Board Meeting is scheduled for Thursday, April 26, 2012 from 9:00 a.m. - 12:00 p.m. at the EBMUD Treatment Plant Operations Center, 2020 Wake Avenue, Oakland, CA

About Our Organization

BAY AREA CLEAN WATER AGENCIES (BACWA)

BACWA agencies are the day to day urban water resource managers and the stewards of the San Francisco Bay estuary. As such, it is the goal of BACWA to ensure that local and regional decisions makers understand and use scientifically sound data to make management decisions that will result in improvements and enhancement of the Bay estuary.

It is the goal of BACWA that all resource managers and decision makers understand the watershed dynamics and embrace a regional approach to water quality issues recognizing that regional problems call for regional solutions.

AIR ISSUES & REGULATIONS COMMITTEE (AIR)

The Air Issues and Regulations Committee (AIR) develops, analyzes and distributes scientific information regarding air pollution and climate change issues related to operation and maintenance of publicly owned treatment works.

A BIG THANKS to our Contributing Authors

ALEXANDRE MIOT & BONNIE JONES (SFPUC)

Alexandre and Bonnie authored an article about SFPUC's progressive approach to FOG waste collection and digestion. Thanks to both of you!

ANDRE SCHMIDT (LACSD)

Andre authored several articles on renewable energy and energy-related webcasts, including self-generation incentive program modifications. Thank you Andre!

CYNTHIA FINLEY (NACWA)

Cynthia co-authored an article about EPA's reconsideration of boiler emission standards. Thank you Cynthia!

GREG KESTER (CASA)

Greg authored an article about the status update on CalRecycle's proposal to regulate anaerobic digestion at POTWs. Thank you Greg!

KRIS FLAIG (City of Los Angeles)

Bob authored an article about the year in review for the California Wastewater Climate Change Group, describing the efforts and accomplishments of the group. Thank you Kris!

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