

TRI-TAC LAND COMMITTEE
ISSUE SUMMARY
LAST UPDATED JANUARY 2009

1. AIR QUALITY REGULATIONS AND CROSS MEDIA IMPACTS

San Joaquin Valley Unified Air Pollution Control District Rule 4566

The San Joaquin Valley Air Pollution Control District (SJVAPCD), which is responsible for the air quality of a large portion of California's Central Valley, has been developing a rule that has garnered a lot of attention from the composting and agricultural industries. Structured in a fashion similar to the District's Rule 4565 (Biosolids Composting), the proposed Rule 4566 will seek to reduce emissions (VOCs) from organic waste operations, namely facilities that landfill, process, compost, or dispose of plant or plant-derived material (including green waste, food waste and wood waste). Public workshops were held in early 2008, and a technical workgroup was formed.

On December 18, 2008, the SJVAPCD held a public hearing to consider amending the SJVAPCD 2007 Ozone Plan. SJVAPCD staff will need additional time beyond the adoption deadline specified in the Ozone Plan to complete the technical and economic feasibility analysis for Rule 4566. SJVAPCD staff recommended that their Governing Board approve a State Implementation Plan (SIP) revision to the Ozone Plan in order to extend the adoption deadline for Rule 4566 from 1st Quarter of 2009 to 3rd Quarter of 2010, which was approved. The Committee will continue to monitor the rule development process as it may be approved in 2009.

Contact: Matt Bao, Los Angeles County Sanitation District (LACSD)
Last Updated: January 2009

Mojave Desert Air Quality Management District Rule 1133

On October 27, 2008, the Mojave Desert Air Quality Management District (MDAQMD) adopted Rule 1133 (Composting and Related Operations), to limit VOC and ammonia emissions from composting facilities and chipping and grinding facilities.

The rule requires composting facilities to implement several best management practices, such as establishing parameters for carbon to nitrogen ratio, material moisture content and pH. The rule also indicates that if the EPA designates that the air district is a "non-attainment" area for particulate matter (PM 2.5), then composting facilities accepting over 100,000 wet tons of compostable material would be required to be an enclosed operation with an emission control technology to reduce VOC and ammonia emissions by 80%.

Contact: Matt Bao, LACSD
Last Updated: January 2009

Cross Media Roundtable/Checklist

A biosolids cross media roundtable was held in May 2008 with representation of the State Water, Waste, and Air Boards, Regional Water Boards, Local Air Districts, Cal Trans, USEPA, CASA, SCAP, BACWA, CVCWA, CWEA, and Wastewater Treatment plants. Discussion focused on the unintended impacts that one body's regulations may have on programs under the purview of a different regulatory body and the need to better approach net environmental benefit holistically. A positive outcome of the meeting was an agreement that a checklist could serve to facilitate understanding of the issues early on in the rulemaking process and therefore foster better communication. A workgroup was formed and a draft checklist developed. It was introduced to high ranking officials at the State Water, Waste, and Air Boards in January 2009. Revisions will be made to the checklist after excellent input from the Cal EPA representatives. A two pronged approach consisting of a basic list of questions to be asked early in a regulatory process and a more formal checklist as an end of the process to check on whether those issues were adequately addressed, will be used. Cal EPA will assist in the final stages of development as all parties agree it is critical for any system to be usable and valuable to agency staff. It was noted in the recent meetings that the implementation of AB 32 is fostering better interaction between state agencies than has heretofore been seen.

Contact: Greg Kester, California Association of Sanitation Agencies (CASA)
Last Updated: January 2009

2. BAY AREA EFFORT ON DEVELOPING A REGIONAL FACILITY

Background

Seven wastewater treatment agencies (EBMUD, SFPUC, DDS, DSRSD, FSSD, USD, and Millbrae) in the San Francisco Bay Area are pursuing the feasibility of developing a regional biosolids facility. The main impetus for proceeding with this study is the increasingly restrictive environment throughout the state for recycling biosolids. Two preliminary feasibility studies were completed by the Bay Area Clean Water Agencies (BACWA) Biosolids Committee. The studies concluded there were three interested agencies to host a biosolids drying facility. From those studies, the seven agencies executed the Joint Exercise of Powers Agreement (JEPA) in July 2006 to further evaluate the costs and impacts of a facility. The JEPA provides the framework for cost sharing and decision making for the Phase 3 efforts which include facility planning and environmental documentation for the regional facility. The seven agencies went through a consultant selection process and retained Carollo Engineers to assist with engineering and environmental evaluation at the viable sites. Delta Diablo Sanitation District is the project coordinator and the project manager for the consultant contract.

The first task was completed in March 2007 and identified interim solutions with costs that could be implemented if land application solutions are significantly restricted by legislation or regulation. The second task evaluated a biosolids-to-energy option that was

excluded from Phase I and Phase II studies. Although originally assumed to be too difficult to permit in the Bay Area; the agencies wanted to confirm the project could be permitted, confirm the waste-to-energy costs as compared to the thermal dryer and understand the Greenhouse Gas Emissions as compared to the alternatives. Early analysis indicates a biosolids-to-energy facility could meet BAAQMD permit requirements with Best Available Control Technology to reduce emissions. The Steering Committee thus selected a biosolids-to-energy project as the designated project moving forward, believing that it will have the lowest net environmental impact of the technologies examined.

Update

Recently, the JEPA agencies have gone out to recruit more members; with several Bay Area agencies expressing interest in joining and a total of 17 agencies are now partners. New agencies signing on include Pacifica, Ironhouse, North San Mateo/Daly City, and Burlingame. Of the original seven agencies (EBMUD, SFPUC, DDS, DSRSD, FSSD, USD, and Millbrae), only EBMUD has dropped out. A new JEPA is being prepared to reflect the participation changes. It is anticipated that this agreement will be signed by the end of the calendar year. Commencement of EIR work is expected to begin in the early part of 2009.

Contact: Caroline Quinn, Delta Diablo Sanitation District; Natalie Sierra, San Francisco Public Utilities Commission (SFPUC)

Last Updated: January 2009

3. MAJOR RESEARCH INITIATIVES

National Science Foundation Water Quality Center Fall Meeting

- **EDCs in wastewater and biosolids** - This project will investigate the fate of EDCs in WWTPs and the fate of EDCs in biosolids when used for land application. This project will also develop an advanced oxidation process, such as combined UV treatment and hydrogen peroxide, to remove EDCs from WWTP effluent.
- **20-year Class B land application study** - Samples were collected after the twentieth year of land application. Surface soil samples were subjected to microbial analyses, with no bacterial or viral pathogens found in the biosolids amended soil. The analyses indicated an enhanced soil bacterial community following 20 years of land application. Subsurface soil samples were subjected to chemical analyses, which indicated that it did not appear that any chemical entity would likely limit land application. The study concluded that Class B land application has been sustainable with respect to a lack of adverse impacts on soil microbial and chemical properties.

- **Biosolids application onto mine tailings** - Biosolids were applied to two sites in 1998 and 2000, and have been monitored for HPC, vegetation, nitrates and TOC. Results include a maximum of 78% revegetation and indicate a continued potential for plant growth and normal soil microbial processes.
- **National Study on the incidence of pathogens and indicator organisms in Class B biosolids** - The scope of this project is to collect samples from approximately 30 WWTPs for bacteria, virus and helminth analyses. The last national study was performed in the early 1990s (pre 503s).
- **Sustainability of land application of Class B liquid biosolids** - This project includes an evaluation of previous research performed (bioaerosols, ARBs, endotoxins, virus transport, Salmonella regrowth, 20-year land application study, etc.). Results of all studies indicate that risks of infection from pathogens associated with Class B biosolids are low. Lastly, the study concludes that in Southwestern USA, land application of Class B liquid biosolids is sustainable.
- **Fate of prions in land applied biosolids** - The major objectives of this study is to determine the survival of prions in soil, in groundwater, and during composting of biosolids, and the inactivation of prions in lime treated biosolids. A new laboratory designed for working with prions has been outfitted and approved by the US Dept. of Agriculture.
- **PBDEs in biosolids** - This study has focused on the fate of PBDEs at WWTPs, during soil aquifer treatment and after land application, and the relative risk of indoor air PBDE exposure. Results so far show that PBDEs persist in agricultural soils with degradation half-lives of decades or longer.

Contact: Matt Bao, LACSD

Last Updated: December 2007

Emergency Fire Reclamation Resolution to use Biosolids Compost

The Santa Ana Regional Water Quality Control Board passed an emergency resolution on November 28th, 2008 in response to the Governor's declaration of portions of Orange, Riverside, and San Bernardino Counties as disaster areas due to the Freeway Complex Fires in mid-November. The emergency resolution facilitates and invites the use of biosolids compost to be used to reclaim the fire ravaged land. The main purpose of the biosolids compost application is to provide erosion control and slope stability. A meeting on December 17th, at the Santa Ana RWQCB in Riverside along with members of the CIWMB and a number of compost producers and municipalities affected by the fires. This is viewed as a tremendous opportunity to demonstrate the benefits of biosolids on fire ravaged land and we are working proactively to achieve this. Follow up meetings have been ongoing with affected jurisdictions and others. Issues remaining are a need for funding, a need for appropriate sites with willing ownership, and overall coordination.

CASA's Biosolids Program has worked with researchers at Utah State, UC – Riverside, the University of Washington, and EPA Regions 8 and 9, as well as professionals from the U.S. Forest service in California, Cal EPA, several wastewater agencies, and others to develop a research proposal to study the benefits of biosolids and biosolids compost for the purpose of reclaiming fire ravaged land. The work in the Santa Ana Region, if it proceeds, may be a full scale field application, or a smaller research study. In either case, it will be monitored and results quantified. It is hoped that success here will facilitate biosolids use for these purposes statewide. Also ongoing is separate fire reclamation research by UC-Riverside that will be conducted under a grant from CIWMB.

*Contact: Greg Kester, CASA
Last Updated: January 2009*

WERF Rapid Incident Response Research

At the Water Environment Research Foundation (WERF) biosolids research summit in 2003, key stakeholders were brought together to recommend and prioritize national research needs for the biosolids program. The number one need identified was an investigative protocol that could be used whenever a complaint of adverse health effects was received that the caller attributed to biosolids land application. WERF funded this project, with assistance from EPA and CASA's Biosolids Manager has been serving on the Project Sub Committee (PSC) since its formation. The project has been staged into three phases. Phase 1, which has now been completed by researchers at the University of North Carolina developed the investigative protocol; Phase 2 will pilot test the protocol in the field and modify it as necessary, and Phase 3 will make the protocol available nationally and include the development and distribution of communication tools. This project was the first "public partnering" effort by WERF which meant that interested members of the public were included on the PSC. This yielded both challenges and ultimately a better work product. The Phase 2 contract has been awarded to the Franklin County, Ohio Public Health Department. An initial meeting was held with them in November and reports were encouraging with high hopes for their final work product. Work should initiate early in 2009 and be completed by July 2010.

*Contact: Greg Kester, CASA
Last Updated: January 2009*

4. LOCAL ORDINANCES

Kern County - Update

Kern County appealed the Federal District Court's decision to the 9th Circuit Court of Appeals essentially arguing that Judge Feess erred in awarding summary judgment to the wastewater agencies on the Commerce Clause and Integrated Waste Management Act (IWMA) grounds.

Commerce Clause:

Kern County argues that the Commerce Clause does not apply to Measure E because there is no "out-of-state" Plaintiff or land applier directly impacted by Measure E, and hence no "interstate commerce" impacts. We are confident that Kern's view of the scope of the Commerce Clause is too narrow. As we previously argued, and as Judge Feess accurately stated in his summary judgment opinion, there is interstate commerce here because: (i) biosolids are articles in interstate commerce and (ii) the record shows that Kern's ban will in fact create significant impacts out of state, e.g., the likely diversion of biosolids to Arizona and other impacts on the interstate solid waste market. That is, Plaintiffs need not show out-of-state biosolids physically entering Kern County to fall within the protection of the Commerce Clause.

AB 939 - IWMA:

Overall, Kern County seeks to limit the effect of the State's recycling mandate by pointing to other provisions of AB 939, the IWMA, that purportedly constrain biosolids recycling. Several of these statutory and regulatory provisions were raised in the district court briefing. For example, Kern places emphasis on Section 40059 of the IWMA, which we previously argued applies to municipal garbage collection rather than the biosolids operations in this case. Kern also reiterates arguments pertaining to Plaintiffs' alleged lack of local waste management plans and diversion credits for land application.

No date for oral argument has been set for the 9th Circuit Court of Appeal. The earliest date would be in the 2nd half of 2009.

*Contact: Layne Baroldi, Orange County Sanitation District (OCSD)
Current as of: January 2009*

Kings County

On June 7, 2005, the Tulare County Superior Court adopted the Kings County's statement of decision as the decision of the Court, thus upholding the validity of the Ordinance allowing for the use of Class A/EQ compost as the only form of biosolids to be allowed in Kings County.

In April 2006, the Kings County Planning Commission granted a two-year extension for a permit to build a 500,000 ton/year biosolids composting facility near Kettleman City. The facility's output would then be land applied on 12,000 acres of nearby farmland owned by the Sanitation Districts of Los Angeles County. The Kings County Board of Supervisors approved the project in 2004.

*Contact: Layne Baroldi, OCSD
Current as of: September 2006*

Solano County

The Solano County revised ordinance permitting the continued land application of Class B biosolids has been in effect since Spring 2003, and was renewed with some changes in October 2007. The most significant change to the ordinance is that it requires those POTWs who wish to continue land applying Class B biosolids in Solano County to have “a portion of their biosolids produced as Class A Exceptional Quality biosolids, converting biosolids to energy, or otherwise diverting Class B biosolids away from landspreading or landfilling.” In addition, the POTWs must report annually to the Solano County Board of Supervisors on their progress towards this goal.

The annual reporting requirement has been successfully coordinated through the BACWA biosolids committee, to facilitate transmission/coordination of information. The report also includes updates on the Bay Area Regional Facility project, which would meet the intent of the ordinance for those agencies involved. The next report will be presented to the Solano County Board of Supervisors in February 2009. In addition, representatives of various POTWs, including San Francisco, Union Sanitary District, East Bay Municipal Utilities District, and Fairfield Suisun Sanitary District, continue to be engaged in a series of biosolids stakeholders meetings. These meetings, led by Solano County Department of Resource Management Staff, aim to have an open dialogue for all stakeholders with regards to biosolids regulation in the County. POTW participants have attested to quality management practices, concern for the community and public health, and a desire for continual improvement.

*Contact: Natalie Sierra, SFPUC
Current as of: January 2009*

Ventura County

The Ventura Regional Sanitation District (VRSD) was successful at the Los Angeles RWQCB hearing on December 6, as unanimous approval was given to the issuance of their WDR permit for their Class A drying process to be cited at their Toland Road landfill. The dried biosolids will be used as alternate daily cover (ADC) at the landfill. This approval followed unanimous approval of the project by the Ventura County BOS on September 11. Approvals were received through the excellent and diligent work of VRSD in overcoming a vocal, articulate, and well organized opposition group of neighbors. The biosolids will be used as alternative daily cover. Methane generated in the landfill will be utilized to power the dryers and excess energy will be sold to the grid. This will eliminate the need to flare landfill gas as is currently practiced. This project will also eliminate a million truck miles per year and an emission of 1800 tons of carbon dioxide to the atmosphere.

*Contact: Greg Kester, CASA
Current as of: December 2007*

Imperial County

In Imperial County, Measure X, also referred to as the “Health and Safety First Ordinance of 2007,” passed with more than 66% of the vote in February 2008. The measure amended the Imperial County Codified Ordinances by making it unlawful to import sewage sludge into Imperial County with the intention of disposing of it therein. According to the proposed ordinance, “Disposal” includes storage, incineration, chemically converted (sic), processing, land application, or dumping on private or public ground or facilities within Imperial County.

Contact: Matt Bao, LACSD

Last Updated: January 2009

San Luis Obispo

San Luis Obispo County has a draft “permanent” biosolids ordinance out for possible adoption in 2010. Comments were received until February 1, 2009 and CASA, among others, submitted comments opposing many aspects of the ordinance. The permanent ordinance would replace an existing temporary ordinance, but the draft includes additional restrictions and limitations. The draft would prohibit all but exceptional quality (EQ) biosolids from land application. It would limit application to the amount currently applied in the county (1607 cubic yards per year), with annual adjustments based on population growth. It would also preclude the introduction of any biosolids into compost operations as a feedstock unless the biosolids were already EQ, which would defeat the purpose of composting. Discussions are ongoing and a number of facilities in the County, along with others, are actively engaged in dialogue with the County in an effort to affect changes to the Ordinance.

Contact: Greg Kester, CASA

Last Updated: January 2009

Arizona State Land Department New Draft Policy on Biosolids

The Arizona State Land Department has released a new draft policy regarding the land application of biosolids to state owned land. The new policy would drastically limit what could be applied to state land. Of specific concern is whether the Arizona Department of Environmental Quality (AZDEQ) will need to modify their existing regulations to mirror this policy. Conversations with AZDEQ, have not indicated this is the case, but the Committee will continue to monitor the situation. The draft policy provisions of greatest concern include the following:

1. It would only allow exceptional quality biosolids to be land applied.
2. It sets cumulative loading rates for all regulated pollutants plus CR, MO, and PCBs at the residential soil remediation limits set by AZDEQ. This would appear to discount the exhaustive peer reviewed risk assessment conducted by EPA, in

- lieu of non-comparative soil limits. Many across the nation have had this argument many times. Soil remediation limits are totally inappropriate for use as a limit in a beneficial land application program; they create an apples to oranges comparison.
3. Insurance or surety bonds in the amount of \$5000 per acre would be required for any land application program.

*Contact: Greg Kester, CASA
Current as of: January 2009*

5. SENATE HEARINGS AND ASSOCIATED PRESS ARTICLES

Senate Environment and Public Works Committee Hearing on Biosolids

Since 2007, the Biosolids Committee has monitored the fallout of the Senator Barbara Boxer (CA-Democrat) letter that raised issues of concern over EPA's ongoing biosolids regulatory activities. Representatives from CASA met with the Senate Environment and Public Works (EPW) Committee staff in early March, and Sen. Boxer, chair of the EPW Committee, signaled her intention to conduct an oversight hearing regarding issues related to the land application of biosolids after the recent Associated Press articles (see below). The hearing later was downgraded to an oversight briefing scheduled for September 11th, but was subsequently canceled by the EPW Committee. Both the change to a briefing and the ultimate cancellation were related to ongoing litigation in which potential witnesses were engaged. Senator Boxer has since given any indication as to whether the hearing would be rescheduled for a future session of Congress, and the Committee will continue to actively monitor this issue.

*Contact: Greg Kester, CASA; Matt Bao, LACSD
Last Updated: January 2009*

Associated Press Articles on the Land Application of Biosolids

During the first half of 2008, the Biosolids Committee tracked two Associated Press (AP) articles related to biosolids. The first came after a federal court decision which ordered USDA to compensate a farmer for loss of crop production, despite scant evidence but in part due to a lack of adequate defense by attorneys representing USDA. The farmer had been engaged in ten years of continual litigation in the Augusta, Georgia area over land application that occurred between 1979 – 1990. It was the first substantial victory for him. Signaling a further lack of interest in pursuing the matter, and in spite of encouragement by many industry associations, USDA decided not to appeal the court decision. The second AP story was about the use of biosolids derived compost on urban soils with high lead concentrations. Biosolids compost was used to remediate poor urban neighborhoods in Baltimore in response to Johns Hopkins School of Public Health and the Kennedy Krieger Institute's findings of dangerously high lead levels in children. The

research was successful and demonstrated a reduced lead bioavailability after the compost application. However, the AP story sensationalized the research into an environmental justice story and greatly misrepresented the facts. In June the AP released as close to a retraction as possible for such a news organization, noting there was bias in the reporting.

*Contact: Greg Kester, CASA; Matt Bao, LACSD
Last Updated: January 2009*

6. NEW FACILITIES

TIRE – City of Los Angeles

The City of Los Angeles broke ground on the project in April 2007. The construction of two wells was completed in July 2007. The injection equipment was tested with brine and high pressure effluent in July 2008. Digest sludge was injected in August 2008 and the first biosolids was injected in September 2008. Injection of biosolids continues to date. Currently 150 tons of biosolids are being injected from Terminal Island and Hyperion Treatment Plants. The first project milestone was completed ahead of schedule and the second milestone is on target to be completed ahead of schedule. The well is performing well to the injection of biosolids and the results are favorable. For project update and photos go the City's biosolids EMS website:

http://www.lacity.org/SAN/biosolidsems/managing_biosolids/deep_well.htm

*Contact: Diane Gilbert, City of Los Angeles
Current as of: January 2009*

EnerTech

The 883 wet ton per day Rialto Regional Biosolids Processing Facility in Southern California reached substantial completion of construction at the end of September 2008. Initial start-up activities began in October. Several obstacles were encountered involving conveyance and instrumentation/control issues.

During the fall and early January, these problems were addressed. As of January 15, 2009, more than 2600 wet tons of biosolids have been received and dried producing a little more than 500 wet tons (@ 93% TS) of E-Fuel. About 100 tons of the E-Fuel have been shipped to Mitsubishi for storage pending a test burn in their cement kiln.

The SlurryCarb section has passed hydraulic pressure testing and will be heated with water during January. It is scheduled to start receiving biosolids by the end of January. Full scale operation is scheduled to begin in March or April.

*Contact: Ray Kearney, Enertech
Current as of: January 2009*