

# **Appendix E**

## **Impact of Biosolids Regulations**

Biosolids disposal and reuse is very heavily impacted by regulations. The majority of agencies require off-site options for disposal/reuse, increasing the number of stakeholders interested and concerned about the actions taken. This section briefly discusses some of the regulations affecting the Multi-Agencies.

### **REGULATIONS AND POLICIES AFFECTING CALIFORNIA AGENCIES**

In 1995, the Central Valley Regional Water Quality Control Board (CVRWQCB) created a General Order to streamline the permit process for the land application of biosolids. In April of 1996, the State Water Resources Control Board (SWRCB) overturned the CVRWQCB's General Order due to the lack of an Environmental Impact Report (EIR), but allowed for the continued land application on General Order sites that applied for a permit on or before April 1, 1996. In May 1996, a lawsuit was filed basically seeking that all of the General Order sites permitted be terminated, and that no additional General Order sites be permitted unless an EIR is prepared.

In May 1996, a lawsuit was filed in Sacramento Superior Court to rescind biosolids land application permits for approximately 40,000 acres of General Order sites in California's Central Valley since an EIR was not prepared. In June 1997, the court ruled that an EIR should have been prepared and gave interested parties 90 days to solicit funding, establish an administrative process, and prepare a schedule to prepare an EIR. California Publicly Owned Treatment Works (POTWs), through agency associations including Tri-TAC (a technical advisory committee consisting of wastewater treatment agencies that deals with multi-media impacts – land, air, and water) and the California Association of Sanitation Agencies (CASA), responded to the court's request. Over \$450,000 was pledged by POTWs to prepare a statewide EIR. The judge found that the amount of funds pledged was adequate and gave his approval of the preparation of an EIR to be completed within three years. During this time, biosolids can continue to be land applied to these permitted sites. CASA agreed to be the administrator of this EIR process, and entered into a Memorandum of Understanding (MOU) with the SWRCB. The SWRCB, as the lead agency, will submit an EIR preparation schedule.

CASA and the SWRCB with a consultant, Jones and Stokes, agreed to the scope of work for the EIR and entered into a contract to prepare the EIR. The SWRCB, with the help of the Technical Advisory Group (TAG), are in the process of developing the statewide General Order for the land application of biosolids that will be the subject of the Jones and Stokes EIR. The TAG consists of entities interested in the use and regulation of biosolids. These entities include representatives from the Farm Bureau, Delta Protection Commission, California Integrated Waste Management, Department of Toxic Substances Control, POTWs, biosolids contractors, water agencies, and environmentalists. The TAG was established to assist the SWRCB in drafting the statewide General Order. The TAG will facilitate communication in order to resolve issues related to important regulatory requirements, including monitoring and tracking. Four TAG meetings will be held prior to the release of the Statewide General Order as required for the

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EIR Notice of Preparation in November 1998. More stringent monitoring and reporting requirements are expected to be included in the Statewide General Order, including regulation of Class A Exceptional Quality biosolids. Please note that the SWRCB, as the lead agency, will have the responsibility of preparing the final draft of the General Order and it responsible for defense of the EIR and litigation costs.

In December 1996, Kern County officials responsible for biosolids oversight requested a meeting with the Southern California Biosolids Generators to discuss the future direction of biosolids land application in Kern County. Kern County believes that independent oversight is needed especially since both of the Regional Water Quality Control Boards (RWQCBs) in Kern County have recently expressed a desire to opt out of the biosolids land application oversight unless a threat to ground water exists. Kern County does not want to create onerous regulations, but they do want to be aware of biosolids related activities in order to respond to their constituent's concerns. OCSD staff provided a report containing information of the origin, quantity, quality, and specific site destination of all biosolids being land applied in Kern County.

In order to become the regulatory authority, Kern County is in the process of adopting an ordinance to regulate biosolids land application. It is the intent of Kern County to develop an ordinance with "cautious but deliberate steps on a factual basis." Kern County officials responsible for the development of the biosolids land application ordinance formed the Biosolids Ordinance Advisory Committee (BOAC). The BOAC consists of representatives from Kern County, the Farm Bureau, biosolids land appliers, local environmentalists, interested parties, and POTW representatives, including OCSD staff. POTW representatives were assured with respect to the advisory group participation, that non-factual information would not be tolerated. The BOAC held several meetings to review and comment on a draft ordinance. Five public workshops were held throughout Kern County. A revised draft ordinance was released in June 1998.

On July 7 1998, in response to a road damage issue on the Kern County Board of Supervisors' (Board) agenda, the Board directed staff to prepare a biosolids urgency ordinance. The biosolids urgency ordinance was to be drafted to restrict biosolids land application to Class A material, ban Class B biosolids, and to develop a fee schedule for road maintenance. OCSD produces Class B biosolids. On August 18, after substantial testimony by biosolids advocates and support from Kern County staff, the Board adopted an interim biosolids urgency ordinance that allowed for the continued land application of Class B biosolids and included an initial road mitigation fee of \$5 per ton. This fee would amount to an annual cost of about \$900,000 to OCSD. The regulatory portion of the urgency ordinance is substantially similar to the draft ordinance that was being developed by Kern County staff prior to the July 7 directive. OCSD has consistently agreed with a comprehensive ordinance that assures appropriate management of Class A and Class B biosolids.

Because the fee ordinance was adopted on an urgency basis, statute required the Board to reenact the fee portion of the ordinance at their September and October Board meetings. At the September Board meeting, the Board removed the \$5 per wet ton mitigation fee at the advice of County Counsel, pending a traffic study. The study was to be used to determine an appropriate mitigation fee for the final ordinance. Staff from OCSD, the Los Angeles County Sanitation Districts, the City of Los Angeles (Agencies), the Agencies' consultants, and counsel have been

working with Kern County staff to establish a fair and reasonable road mitigation fee. An independent Kern County engineering firm was hired by the Agencies to assist Kern County in performing the road survey prior to the October Board meeting.

The Board has also stresses that public education and outreach to “those expected to testify against Class B biosolids” is an important part of efforts to keep the land application of Class B biosolids viable in Kern County. In August, the Agencies’ staff met with the two major carrot packagers and three of the large water agencies in Kern County. Many more educational efforts will be made during the next several months with these important stakeholders as well as continuing contact with the Farm Bureau, additional water agencies, and other interested parties. Additional public workshops and advisory committee meetings will be held prior to the Board’s final consideration of the ordinance in January 1999. This regulatory issue affecting OCSD’s biosolids management strategic plan has yet to be concluded.

(Note: As of January 1, 2000, Kern County has issued a three-year moratorium on Class A and B biosolids application / reuse. After three years, only “Exceptional Quality” (Class A pathogens and Table 3 Heavy Metals requirements) will be allowed for land application / reuse.)

Southern California POTWs have elevated their level of effort to keep biosolids land application in Kern County viable. Numerous other counties in California have passed ordinances or permitting requirements that either ban Class B biosolids land application or have such onerous restrictions as to make application of Class B biosolids prohibitive. These counties include Glenn, Colusa, Yuba, Sutter, Yolo, San Joaquin, Stanislaus, San Benito, Monterey, San Luis Obispo, Tulare, Ventura, San Bernardino, and Imperial.

At SRCSD, the presence of high levels of nitrates in the groundwater, the disposal of biosolids onsite will require relining of the DLDs. The existing lagoons are being renovated, and will continue to operate in their current fashion.

## **REGULATIONS AND POLICIES AFFECTING KING COUNTY AGENCIES**

Elements of King County’s Biosolids Environmental Management System include:

- Council policies on biosolids management;
- Following the Washington State Environmental Policy Act, which addresses potential environmental impacts of each project;
- Membership in regional and national biosolids organizations to remain abreast of current and potential biosolids issues;
- Annual and long-term objectives for distribution, back-up, and other management issues;
- Written land application plans or operations plans for each project based upon common performance guidelines – each contractor also follows these guidelines (site selection, site management, permitting);
- Defined roles/responsibilities;
- Ongoing staff training;
- Various communications avenues;
- Formal emergency preparedness plan;

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- Formal record keeping; and
- An independent auditing mechanism for projects and contractors.

King County is currently examining which elements may need improvement and which to pursue further.

## REGULATIONS AND POLICIES AFFECTING PORTLAND

Biosolids and biosolids compost production, bulk Class B biosolids land application, and bulk Class A (exceptional quality) compost distribution activities are regulated by both the DEQ and EPA Region X. Portland solids handling operations comply with applicable DEQ (OAR Chapter 340, Division 50) and EPA (40 CFR Part 503), regulatory requirements. The DEQ approved Portland's biosolids management and land application plans on May 18, 1987 and December 24, 1996, respectively (Appendix B). Portland's biosolids land application operations are conducted under site specific, DEQ issued authorization letters.

Portland routinely monitors solids production, processing and use operations at the TCWTP, CBWTP, and Madison Farms to assure compliance with state and federal pollutant standards [required under OAR 340-50-026(2)(a) and 40 CFR Part 503.13]; pathogen reduction criteria [required under OAR 340-50-026(2)(b) and 40 CFR Part 503.32]; vector attraction reduction standards [required under OAR 340-50-026(2)(c) and 40 CFR Part 503.33]; and management practices and site restrictions [required under OAR 340-50-026(2)(d) and 40 CFR Part 503.14 and 503.32(b)(5)].

Raw thickened primary and secondary solids production levels are monitored at the TCWTP (Section 6). First and second-stage primary solids digesters at the TCWTP were out of service pending repair throughout 1997. When digesters are reactivated (anticipated in late March 1998), mean cell residence time and operating temperature during first-and second-stage digestion will be tracked to determine agreement with pathogen and vector attraction reduction criteria. Semi-annually, TCWTP influent and effluent silver, arsenic, cadmium, copper, chromium, mercury, molybdenum, nickel, lead, zinc, selenium, cyanide and total phenols composition are monitored under pretreatment program criteria to help determine the influence that industrial sources have on wastewater treatment processes and solids quality (data not shown). Raw thickened primary and secondary solids from the TCWTP were integrated with solids produced at the CBWTP in 1997. Thus, their ultimate quality and stability are reflected in the quality of solids generated by the CBWTP. During 1998, the City intends to monitor DEQ regulated trace inorganics, classicals and nutrients in primary digested biosolids generated at the TCWTP on a semi-annual basis. In addition, Portland intends to test primary digested solids for priority pollutants annually.

CBWTP bulk Class B biosolids directed to land application, biosolids used to make bulk Class A exceptional quality compost, and biosolids compost are periodically monitored for total Kjeldahl nitrogen, nitrate-nitrogen, ammonia-nitrogen, total phosphorous, potassium, pH, total solids, volatile solids and other parameters. The City also monitors fecal coliform, PCBs, dioxin-like-compounds and Thorium 232 levels in biosolids applied at Madison Farms; fecal coliform in biosolids used to make compost; and biosolids compost *Salmonella* sp. and dioxin-like compound concentrations. Priority pollutant scans of biosolids used to make compost and land

applied biosolids are conducted quarterly. Further, solids amended areas at Madison Farms are monitored for trace pollutants as required under 40 CFR Part 503.13, Thorium 232, dioxin-like-compounds and nitrate-nitrogen.

Both the City and its contract applicer (K & S Madison, Inc.) maintain records, including site application logs, which indicate the location, quantity and quality of biosolids applied daily at Madison Farms. Recorded information is used in part to assure that site access and reapplication, restrictions related to cattle grazing operations, soil nitrate-nitrogen testing and other stipulations listed under DEQ's March 8, 1995 site authorization letter have been followed. Site logs and data characterizing solids handling operations are available for DEQ review. In addition, records are maintained which identify the quantity of biosolids compost sold and the location of the product's purchaser. Compost purchasers are also provided instructions on appropriate and non-recommended product uses (Appendix B).

Solids spills are to be reported to DEQ within 24 hours of occurrence and summarized in annual biosolids activity reports. Primary digested solids priority pollutant scans required under the City's industrial pretreatment program are reported in annual pretreatment and biosolids management program reports.

In the past, data describing primary solids volatile solids reduction and trace pollutant quality have been submitted to DEQ monthly with CBWTP DMRs. The CBWTP's NPDES permit (renewed November 24, 1997) eliminated monthly submittal of this data with DMRs. It will continue to be integrated into annual management plan/activities reports and directed to DEQ by February 19 of the year following the reporting period.

Reports on biosolids production, quality, use activities, monitoring, record keeping, and reporting requirements required by EPA Region X, pursuant to 40 CFR Parts 503.16 through 503.18, are submitted annually by February 19 of the year succeeding the reporting period. The City will continue to report this data and information to EPA pending delegation of federal program administration to DEQ.

Quality assurance/quality control procedures and chain of custody procedures are closely followed by City, contract sampling (Cascade Earth Sciences, Ltd. (CES)), and analytical staff. Field blanks, rinsate blanks, and blind duplicate samples are used to make QA/QC checks when sampling and analytical work occur.

## **PUBLIC PERCEPTION**

The King County Biosolids Management Program operated under the guidance of the King County Council, which has established biosolids policies. These biosolids policies include the beneficial use of wastewater solids while maximizing program reliability and minimizing risk. The County shall continue to provide Class B biosolids and explore technologies that will enable the County to generate Class A biosolids, cost-effectively or for better marketability. (Future decisions shall be based on marketability of biosolids products.) In addition, policies include:

- Consideration of new and innovative technologies for wastewater solids processing, energy recovery, and beneficial uses, and use methane as beneficially as possible;
- Research and demonstration products;

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- Compliance with state and federal laws;
- Producing the highest quality biosolids economically and practically achievable;
- The use of local sponsors at out of county sites; working cooperatively with statewide organization on biosolids issues (Northwest Biosolids Management Association);
- Minimize the noise and odor impact associated with processing, transporting, and applying of biosolids; and
- The use of biosolids in projects funded by King County.

OCSD does no composting on-site, as part of “good neighbor” policy