

**SUBMITTAL TO THE BOARD OF SUPERVISORS
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA**

843



FROM: Community Health Agency/ Environmental Health **SUBMITTAL DATE:** May 13, 2003
SUBJECT: Report and Recommendations from Class A Biosolids Land Application Committee

RECOMMENDED MOTION:

- 1) Receive and file; and
- 2) Direct Staff to complete the internal review and processing of the draft Ordinance and submit for introduction and public hearing.

BACKGROUND:

Pursuant to the directive of the Riverside County Board of Supervisors on August 13, 2002, the Class A Biosolids Land Application Committee was established. The Committee brought identified stakeholders representing the Community, Wastewater Treatment Plant Operators, Processors, Farmers, Academics and Government, together in a process to identify or develop reasonable, protective standards for the land application of Class A Sewage Sludge. The intent was to implement a structured review and evaluation process resulting in recommended standards, incorporating industry best practices and a good neighbor policy, to the Board of Supervisors by the spring of 2003.

(Continued)

Gary M. Feldman, M.D.
Health Officer, Community Health Agency
Director

GF:GR:DM

FINANCIAL DATA:

CURRENT YEAR COST: \$ 0
NET COUNTY COST: \$ 0

ANNUAL COST: \$ 0
IN CURRENT YEAR BUDGET: \$ 0
BUDGET ADJUSTMENT FY: 02/03 \$

SOURCE OF FUNDS: N/A

C.E.O. RECOMMENDATION:

APPROVE.

County Executive Officer Signature

Policy
 Policy

Consent
 Consent

Department Recommendation:
Per Executive Office:

Prev. Agn. ref. 3.6 2/11/2003 Dist. All AGENDA NO.

EXISTING REGULATIONS

Under existing Federal Standards, sewage sludge is categorized by the level of processing to eliminate harmful pathogens:

Class B Biosolids – (Roughly the Equivalent of PSRP¹ sludge as previously addressed in Riverside County Ordinance No. 696). This is a sludge product that was processed to reduce pathogenic loads to a specified level far below that of untreated sewage. Specified processing to reduce attractiveness to vectors is also required.

Class A Biosolids – This is a sludge product that has received additional processing, usually through composting, heat or chemical treatment, to eliminate 99.9% of the Pathogenic Bacteria remaining in Class B. There are seven general categories of processes identified in the Federal Standards for achieving Class A pathogen reduction, and numerous specific systems or methodologies being used or developed within the categories.

Riverside County Ordinance No. 696, codified as Section 8.128 et. seq. of the Riverside County Code, was enacted in 1991 to regulate the land application of sewage sludge equivalent to Class B Sludge. Due to public testimony regarding health and odor impacts as well as a recommendation by the Health Officer, the Board adopted Ordinance No. 812, which prohibited further applications of Class B Sludge effective November 25, 2001.

In July 2002, the National Research Council of the National Academy of Science completed an 18-month study of EPA regulations (Part 503) and issued a report entitled "Biosolids Applied to Land: Advancing Standards and Practices." The overarching findings of the report concluded that:

"There is no documented scientific evidence that the Part 503 Rule has failed to protect public health. However, additional scientific work is needed to reduce persistent uncertainty about the potential for adverse human health effects from exposure to biosolids."

The adoption of Ordinance No. 812 in 2001 banning Class B applications did not impact or address the land application of Class A Sludge, and currently there are no local standards for the regulation of this activity. Since that time, many sewerage agencies, which had previously shipped Class B Sludge to the County, have initiated activities to evaluate or implement conversions of their facilities to further process the sludge to Class A standards. There is some expectation that this material could be intended for land application, as was Class B. Therefore there is a potential for land application of Class A Sludge in the future in agricultural areas of the County.

COMMITTEE

The main Committee first met on October 8, 2002, and held seven additional meetings through this process. At that initial meeting the members (Attachment 1) were provided an overview of the current state of Biosolids use in the County and advised of the goal of the Committee and Subcommittees (Attachment 2). In addition to the Committee members, Dr. Marylynn Yates, from the University of California at Riverside, and Jay Witherspoon, from CH2M Hill, were invited to give presentations in their areas of expertise at later meetings.

¹ Process to Significantly Reduce Pathogens

Staff distributed a "Draft Ordinance to Regulate the Land Application of Class A Sewage Sludge" to serve as a beginning framework for discussion and consideration. This document represented staff efforts, since the prohibition of Class B applications in 2001, to address the enforcement deficiencies recognized in the Class B standards. Ordinance No. 427.3 (manure), approved by the Board in 2001, was also distributed as a possible model for a Class A Ordinance.

Three subcommittees were set up: Producers, Science, and Receivers (farmers), with each expected to provide analysis and data pertinent to the completion of the overall goal. Each of these subcommittees have met on numerous occasions and provided input to the product brought to the Board. While some of the Committee members retained personal positions that either no regulation is needed for Class A Sludge, or all future sludge applications should be banned completely, we did achieve near consensus with regard to the scope and structure of a regulatory process in which the Standards reflect reasonably safe practices, can be enforced and will be adhered to.

Clearly, neither this Agency nor the recently formed Committee was able to perform any of the experimental studies of the practice as recommended by the National Academy of Sciences² report that stimulated our current process. We do believe, by our evaluation of the existing standards (Federal, other jurisdiction and/or organizationally recommended) and review of existing research by the Science Subcommittee, that the land application of sewage sludge meeting Class A requirements does not pose a significant health risk. The draft Ordinance (Attachment 4) represents input by the Committee to the Ordinance "framework" initially distributed.

Committee Findings

- The USEPA adopted standards for various processes and uses of sewage sludge which reduces levels of pathogens depending on the pathogen reduction process as part of 40 CFR Part 503 in 1993. Within those standards, sewage sludge that may be land applied is identified as either Class A or Class B by virtue of specified pathogen and vector attraction reduction standards or processes.
- Riverside County Ordinance 696, codified as Section 8.128 et. seq. of the Riverside County Code, was enacted to regulate the land application of sewage sludge equivalent Class B Sludge in Riverside County.
- The adoption of Riverside County Ordinance No. 812, codified as section 8.129 et. seq. of the Riverside County Code, prohibited further applications of Class B Sludge Effective November 25, 2002.
- Agricultural activities using nitrogen sources for fertilization are implicated in excessive and unsafe nitrate levels in groundwater in many areas, including sites within Riverside County.

² Evaluated by this Agency in August 13, 2002 submittal to the Board "Report on July 2002 NAS Study of 40CFR 503 Standards and Implications Related to Land Application of Sewage Sludge in Riverside County."

- **Benefits of Organic Amendments:** Organic Amendments (including Class A Sewage Sludge) production and application to horticultural and agricultural lands provides benefits to the soil and the economy.
- While there is no verifiable evidence of clinical illness or disease related to the use of Class A Sewage Sludge, various forms of the material have, by their noxious nature (odor, dust generating capacity and vector attraction), the potential to impact comfort and well being in the vicinity of their use and warrant some level of regulation.

Regulatory Structure of Ordinance

Unlike the earlier Ordinance regulating Class B Sludge, this Ordinance does not address the same issues as the Federal Regulatory Standards. It is designed to supplement them by addressing quality of life issues that do not appear to have been considered in that document.

As drafted, the Ordinance will not regulate any Sewage Sludge applications for, horticultural, industrial, commercial, residential property development, golf courses, orchards or vineyards, or agricultural activities associated with public schools with a recognized agricultural training program or curriculum.

The Ordinance will establish regulations governing the land application of bulk quantities of Class A Sewage Sludge on commercial farm land that will:

- Identify the role and responsibilities of each entity involved in the land application process:
 - Producer (Sewage plant and other processor)
 - Transporter/ Applicator
 - Receiver (Farmer/land-owner)
- Acknowledge the variability of nuisance potential for the products of different Class A processes, and establish a process to categorize each into a regulatory tier. Material placed in Tier 1 would be virtually innocuous, with material in Tiers 2-4 representing increasing impact potential.
- Establish ranges of criteria and regulatory oversight based on the regulatory Tier (Attachment 3), with Tier 1 having the least amount of regulatory oversight. (The farming representatives on the Committee have indicated that they will only use Tier 1 material due to the additional regulatory burden of the other Tiers and the desire to minimize the impacts to their neighbors.)

Task Remaining for Introduction, Adoption and Implementation

Upon Board adoption of the recommended motion:

1. County Counsel will review the draft Ordinance for proper legal structure and language. We will also ask County Counsel to identify any and all avenues to maximize the available penalties to effectively discourage non-compliance.

2. The Planning Department will review the draft Ordinance for California Environmental Quality Assurance (CEQA) compliance. This process generally includes the preparation of an Environmental Assessment with circulation for public comment.
3. Initial standards for placement of varieties of regulatory tier placement will be developed and approved by the Health Officer. Staff intends to continue working with those members of the Committee and Subcommittees with expertise in this area.

Financial

Continued processing of this Ordinance will entail a nominal fee to the Planning Department for CEQA review. As this is a deposit-based fee, the actual amount is directly dependant on the time required for review. The cost to enforce the provisions of this proposed Ordinance will be recovered through fees established in the Ordinance.

COMMITTEE ROSTER

Dr. Feldman, Chairman	Health Officer, Riverside County	
Liz Ostoich	Gresham & Savage	Processor (Synagro)
Kathy Kellogg Johnson	Compost Packager	Processor (Kellogg)
Andy Domenigoni	Farm Bureau	Farming
Richard DeVuyst	Dry Land Farmer	Farming
Rick Bishop	WRCOG	Government
Mike Luker	EMWD	Producer
Dan Parks	CVWD	Producer
Michelle Randall		Citizen
Marc Miller		Citizen
David Ledbetter		Citizen
Dr. Ian Pepper	Unv. Of Az & NAS Panel	Science
Dr. Al Page	UC Riverside	Science
Borre Winckel	Building Industry Association	Development

COMMITTEE GOAL

Pursuant to a directive by the Riverside County Board of Supervisors on August 13, 2002, the Class A Biosolids Land Application Committee is established. The Committee brings identified stakeholders together in a process to identify or develop reasonable, protective standards for the continued land application of Sewage Sludge.

The Health Officer intends to implement a structured review and evaluation process to recommend standards to the Board of Supervisors by the spring of 2003.

The full Committee will meet monthly, with subcommittees representing generators, receivers, science, government & community established and provided tasks integral to the process. It is expected that each subcommittee will meet once, or hopefully twice, before the second meeting of the whole, and that meeting schedules for the duration of the process be established as soon as possible. Each subcommittee shall elect a Chairperson from its' membership and will be facilitated by Environmental Health staff.

Currently, there are no local standards for the regulation of the land application of Class A Sewage Sludge. Any standards developed must result in significant confidence levels that:

1. The Standards reflect reasonably safe practices, and
2. The Standards can be enforced and will be adhered to.

Given the nature of the issue before the Committee, the only potential for unanimous agreement lies in the establishment of such standards. Absent the identification of such acceptable standards the available recommendations to the Board of Supervisors are limited to either 1) adopt a prohibition or, 2) continue as non-regulated. Either option can be expected to negatively impact one or more of the identified stakeholder groups.

CHARGE TO THE COMMITTEE

To develop an approach to the use/disposal of Class A Sewage Sludge by either the prohibition of land application for some or all of the products or other acceptable alternatives. Any alternatives shall include:

- 1) Set standards for the application of biosolids, reflecting logic and reasonable criteria to protect the community and the environment. Parameters should at least include:
 - Pathogen levels
 - Heavy metal limitations
 - Organics limitations, including
 - i) Amines,
 - ii) Dioxins,
 - iii) PCBs etc.
 - Agronomic rates
 - Effective criteria for sample collection
- 2) Establish "Good Neighbor" behaviors in the areas of:
 - Transportation
 - i) Leakage
 - ii) Odor
 - iii) Traffic
 - iv) Noise
 - Flies & other vector issues
 - Soil incorporation
 - Climatic conditions
 - Notification
- 3) Establish or identify:
 - Area restrictions, via zoning or land uses or other
 - Site restrictions, including Buffer Zones around application areas
 - Quantity limitations
- 4) Establish Enforcement/Compliance mechanisms that will assure all stakeholders of their protection under the standards.
 - Establish respective roles and responsibilities for all stakeholders involved in this process
 - Establish appropriate fees
- 5) Establish both medical and non- medical complaint processes
 - Collection and evaluation of medical impacts
 - Sludge specific Medical Form development

Selected Criteria and Regulatory Oversight for Tiers

	Tier 1	Tier 2	Tier 3	Tier 4
Producer pre-registration	Yes	Yes	Yes	Yes
Transporter pre-registration	Yes	Yes	Yes	Yes
Site pre-registration	No	Yes	Yes	Yes
Notification prior to delivery to site	Yes	Yes	Yes	Yes
Distance (buffer) to:				
Potable water well	100 ft	100 ft	100 ft	100 ft
Residence, school business, place of worship or entertainment area	0 ft	500 ft	1000ft	½ mile
Public roads and property lines	50 ft	50 ft	50 ft	50 ft
Incorporation to soil				
Within 1/4 mile of school; before school is back in session	Yes	Yes	Yes	NA
Within 24 hours	No	Yes	Yes	Yes
At sites of less than 20 acres: within 48 hours of delivery	Yes	No	No	No
For sites of 20 acres or more, incorporation shall commence no less than seven (7) days after the first delivery of manure and shall be completed within seven (7) days of the final delivery to the site	Yes	No	No	No
Application amounts limited to Agronomic Rate	Yes	Yes	Yes	Yes
Road spillage clean up by transporter	Yes	Yes	Yes	Yes
Site remediation for substandard loads by generator	Yes	Yes	Yes	Yes