

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

305



FROM: Community Health Agency

SUBMITTAL DATE:
February 18, 2004

SUBJECT: Adoption of Ordinance No. 830, an Ordinance of the County of Riverside, State of California, Regulating the Land Application of Class A Sewage Sludge for Agricultural Activities.

RECOMMENDED MOTION:

1. That the Board introduce and set for public hearing the adoption of County Ordinance No. 830, an Ordinance of the County of Riverside regulating the Agricultural Use of Class A Sewage Sludge;
2. That the Board authorize the Clerk to place an advertisement for the Public Hearing in the appropriate local publications;
3. That upon the close of the Public Hearing the Board adopt Riverside County Ordinance No. 830.

BACKGROUND:

On June 3, 2003, the Board accepted the "Report and Recommendations from Class A Biosolids Land Application Committee" (Agenda Item 3.39). Included in the report was a recommended draft ordinance to regulate this activity in the County.
(continued)

Departmental Concurrence

GF:dm

Gary Feldman, M.D., Director

FORM APPROVED
COUNTY COUNSEL

FINANCIAL DATA	Current F.Y. Total Cost:	\$	In Current Year Budget:	N/A
	Current F.Y. Net County Cost:	\$	Budget Adjustment:	N/A
	Annual Net County Cost:	\$	For Fiscal Year:	

SOURCE OF FUNDS:	Positions To Be Deleted Per A-30	<input type="checkbox"/>
	Requires 4/5 Vote	<input type="checkbox"/>

C.E.O. RECOMMENDATION:

APPROVE

County Executive Office Signature

BY *William F. ...*
FEB 19 2004

- Dept't Recomm.:
- Per Exec. Ofc.:
- Consent:
- Policy:
- Consent:
- Policy:

Prev. Agn. Ref.: 3.39, 6/3/2003, District: ALL | Agenda Number:

**ATTACHMENTS FILED
WITH THE CLERK OF THE BOARD**

3.4

The recommended motion directed staff to complete the internal review and processing of the draft and submit for introduction and public hearing.

The Report was the result of a directive from the Riverside County Board of Supervisors on August 13, 2002, establishing a Class A Biosolids Land Application Committee. 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.

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 is 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."

¹ Process to Significantly Reduce Pathogens

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. The members were provided an overview of the current state of biosolids use in the County and advised of the goal of the Committee and Subcommittees.

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.

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. 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.

Neither this Agency nor the 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 jurisdictional 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 proposed Ordinance represents input by the Committee to the Ordinance "framework" initially distributed.

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."

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, 2001.
- 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.
- Benefits of Organic Amendments: Organic Amendments (including Class A Sewage Sludge) applied to horticultural and agricultural lands provide 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 (USEPA) Standards. It is designed to supplement them by addressing "quality of life" issues that do not appear to have been considered in that document.

The Ordinance establishes 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 Tiers (Attachment 1) 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.)

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.

BOARD DIRECTIVES ON REPORT

Pursuant to the comments received at the June 3, 2003, session of the Board the following revisions to the Draft Class A Sludge Ordinance have been made:

- Notifications. Staff has reintroduced language requiring the advisory posting of the fields to address the concerns expressed related to notification of people within the community. Posting was determined to be preferable to other options to ensure that all individuals having access to the sites are advised. Please be advised that this element was extensively discussed by the Committee and its inclusion was opposed by many Committee members, most especially the farming community.
- Monitoring. Staff has developed a random monitoring program (Attachment 1) to confirm conformance to the Ordinance, quality of material delivered to sites (including Tier 1) and the effectiveness of the buffers adopted.
- Clarification. Staff has revised the definitions to clarify that Tiers 1-3 are limited to Exceptional Quality (EQ) sludge, which includes more restrictive limits to heavy metal contaminants.

Other revisions:

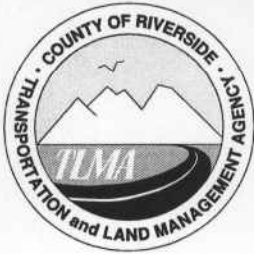
- The references to "land reclamation" sites have been deleted to be consistent with the "Purpose and Intent" identified for the Ordinance.
- Prohibition Areas. A new section has been added that will allow the Board to adopt further restrictions in specific areas upon petition by a public agency with public health and water quality responsibility and jurisdiction.

- Fees. The fee schedule was adjusted to reflect the costs of monitoring (inspections and sampling) as noted above.

The Planning Department has prepared a Notice of Exemption from CEQA (attached) for this Ordinance. This notice is to be filed with the Clerk of the Board and the California State Office of Planning and Research for posting for a period of 30 days.

FINANCIAL

The cost to enforce the provisions of this proposed Ordinance will be recovered through fees established in the Ordinance.



COUNTY OF RIVERSIDE
*TRANSPORTATION AND
LAND MANAGEMENT AGENCY*



Planning Department

Richard K. Lashbrook
Agency Director

Robert C. Johnson
Planning Director

Notice of Exemption

PROJECT CASE NO./TITLE: Adoption of New Ordinance No. 830

PROJECT SPONSOR: Riverside County

PROJECT LOCATION: Unincorporated areas of Riverside County

PROJECT DESCRIPTION: The new ordinance will establish the local regulatory framework to identify, track, and monitor the application of Class A sewage sludge within the unincorporated area of Riverside County.

The Planning Department has found that the project is exempt from the provisions of CEQA based on the following:

State EIR Guidelines: Section 15308. Class 8 consists of actions taken by regulatory agencies, as authorized by state or local ordinance, to assure the maintenance, restoration, enhancement, or protection of the environment where the regulatory process involves procedures for protection of the environment. Construction activities and relaxation of standards allowing environmental degradation are not included in this exemption.

Findings:

1. *The proposal is located within the unincorporated areas of Riverside County.*
2. *The proposed will not have adverse effects upon the environment.*
3. *The proposal will not individually or cumulatively have an adverse effect on wildlife resources.*

RIVERSIDE COUNTY PLANNING DEPARTMENT

Robert C. Johnson, Planning Director

Robert C. Johnson, Planning Director

Y:\ATM2\KBROWNE\Ordinances\BOS\Miscellaneous\Ord.812.NOE.FRM

FOR COUNTY CLERK'S USE ONLY

Please charge deposit fee case #: *EA FIELD(E.A. No.)*

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
Public Notification via posted signs	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 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

Class A Sludge Monitoring

Pursuant to the comments received at the June 3, 2003 session of the Board, the Department of Environmental Health (DEH) has developed the following monitoring program for implementation of the proposed Ordinance regulating the land application of Class A Sewage Sludge. This monitoring program uses inspections and laboratory testing to evaluate compliance with the conditions of the Ordinance, validate the data supplied by the generators and users of the material, and to confirm the effectiveness of the buffers established for the various tiers.

Inspections

Tier 1 Application Sites

At least one site inspection to be conducted during the delivery/spreading process: to visually verify the quantities being applied and to evaluate the level of off site odors. Per the Ordinance, Tier 1 material is "Bulk Class A EQ Material for which the generator has demonstrated minimal nuisance (fly attraction and odor) generating characteristics as determined by the Product Review Panel."

When sludge or soil testing is required, per the testing regimen that follows, samples shall be taken as part of these inspections.

Tier 2, 3, and 4 Application Sites

At least three site inspections will be made. Site inspections shall be conducted:

- Prior to approval of the site for application, or additional applications if previously used, to confirm information supplied as part of the approval process,
- During application and incorporation process to confirm quantities applied, incorporation and effectiveness of buffers established for the respective tiers, and
- After application, to confirm the completion of all requirements and again evaluate the effectiveness of the buffers.

When sludge or soil testing is required, per the testing regimen that follows, samples shall be taken as part of these inspections.

Testing Regimen

The Department of Environmental Health will conduct a spot sampling program of sewage sludge material to ascertain that applications meet the requirements as specified in the US EPA monitoring plans (United States Code of Regulations [CFR] 40 CFR Part 503).

After the first year of application, a similar spot check program will be initiated to ascertain that the cumulative loading for heavy metals meets the requirements as specified in the US EPA monitoring plans, and that the nitrate levels are maintained within agronomic levels.

Pathogens

Samples will be collected at the application site. The samples will be tested for total and fecal coliform. Some samples will be also analyzed for the enteric pathogens of *Escherichia coli* and *Klebsiella* spp. The results from these enterics will be compared with the results from the Total and Fecal Coliform analyses.

The sampling results will be compared to the results certified by the wastewater treatment plant. Each wastewater treatment plant will be assessed individually and the sampling frequency will be adjusted to gain the confidence of Environmental Health of their self-reported results.

Procedure

One site per year will be randomly selected and sampled for each generator/processor. Staff will collect a sludge sample from five different trucks delivering the material to the field. A form will be completed with the following information: date, time, name of wastewater treatment plant producing the material, and truck number. The samples shall be collected from the upper half of the pile of the material after it has been deposited onto the ground. Sample collection and preservation shall be as described in the Standard Methods for the Examination of Water and Wastewater.

Analyses

- Total & Fecal Coliform
- *Escherichia coli*
- *Klebsiella* spp

Analytical results for Coliform will be evaluated per EPA 503 standards. Enterics will be analyzed to determine any relationship to coliform levels.

Heavy Metals and Nitrates

Samples will be collected at the application site. The samples will be collected to confirm contaminant levels (Heavy Metals) consistent with EPA 503 Standards and data generated by the producer.

Procedure

One site per year will be randomly selected and sampled for each generator/processor. Staff will collect a sludge sample from five different trucks delivering the material to the field. A form will be completed with

the following information: date, time, name of wastewater treatment plant producing the material, and truck number. The samples shall be collected from the upper half of the pile of the material after it has been deposited onto the ground, before spreading and incorporation.

Analyses: Heavy Metals (EPA 503 Table 3)

Analytical results will be evaluated with regard to the maximum levels as specified in EPA 503 Table 3.

Cumulative Loading

After the first year of application, a similar spot check program will be initiated to ascertain that the cumulative loading for heavy metals meets the requirements as specified in the US EPA monitoring plans, and that the nitrate levels are maintained within agronomic levels.

Nitrate

All fields are to be sampled for Nitrate as part of the post application inspection.

Heavy Metals (EPA 503 Table 2)

10% of the fields with previous sludge applications will be selected annually for Heavy Metals testing.

Procedure

Staff will collect a sludge sample from five different locations in the field. A form will be completed with the following information: date, time, field name and location of sample collection, name of wastewater treatment plant producing the material, and truck number. The samples shall be collected from the top 6 inches of the soil. Sample collection and preservation shall as described in the Standard Methods for the Examination of Water and Wastewater.

Analyses

The results from the Nitrate analysis will be compared to nitrogen requirements for the proposed crop and the proposed application rate.

Analytical results for Heavy Metals will be evaluated with regard to the maximum cumulative levels as specified in EPA 503 Table 2.