State of Texas Biosolids Program Perspectives

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Topics for Discussion

Background on state authority and state rules

The Biosolids Program in Texas
  • Staff

Permits and Registrations
  • Statistics
  • Locations

Requirements - State vs. Federal
  • Legislative Action

Recent Rule Changes (2014)

Trends
In the Beginning...

- 40 CFR Part 503 effective February of 1993

- TCEQ updates the TAC Chapter 330 rules to incorporate Part 503

- TCEQ is authorized to administer the EPA biosolids program in Texas

- 30 TAC Chapter 312 (Sludge Rules) become effective October of 1995
TCEQ Biosolids Coordinators

Central Office - Austin

- **Wastewater Permitting**
  - Review and draft permits and registrations
  - Provide technical assistance with the permitting and registration program

- **Legal**
  - Provide expertise on both state and federal regulations to permitting staff, the regulated community, and the public

Regional Offices – 16 Throughout State

- **Field Ops Investigators**
  - Conduct site assessment evaluations for proposed sites
  - Inspect sites annually
  - Investigate complaints made by public
Permitting and Registration Program

**State – TCEQ**

- Permit
  - Class B Biosolids

-Registrations
  - Domestic Septage
  - Water Treatment Plant Residuals

- Notification
  - Exceptional Quality Marketing and Distribution

**Federal - TPDES**

- Biosolids Processing
- Disposal of Sludge
- Incineration
Current Statistics

- 32 Class A and AB Marketing and Distribution
- 65 Class B Land Application
- 141 WTP Residual Land Application
- 48 Domestic Septage Land Application
- 10 Biosolid Processing
- 7 Disposal
**Ways Texas Cities Handle Biosolids**

- **Houston** – Class B Land Application, Class A Heat Pelletizing, Landfill
- **Dallas** – Monofill
- **San Antonio** – Compost and Landfill
- **Austin** – Class A compost (bag and sell) and Class B Land Application
- **Fort Worth** – Class AB Land Application
- **El Paso** – Off-site Monofill
- **Corpus Christi** – Landfill
- **Waco** – Class A Heat Pelletizing
30 TAC 312 same as 40 CFR 503

- Pollutant Limits
- Pathogen & Vector Attraction Reduction
- Site Management Practices

- Class B Land Application Sites Convert from Registration to Permit after 9/1/2003
  - More Stringent Notice Requirements
  - Opportunity for Contest Case Hearing

- Application Fees
  - $1,000 - $5,000 based on quantity of sludge to be applied

- Display all Hydrologic Characteristics within ¼ Mile of the Site
Legislation - House Bill 2546

- Even More Stringent Notification Requirements
  - Public Notice to Owners of Land ¼ mile from land application site

- Quarterly Reporting
  - Computer Generated Report
  - Available for Public Viewing
  - Source, Quantity and Quality
  - Dates of Delivery and Application

- Nutrient Management Plan
  - Prepared by Nutrient Management Specialist in accordance with NRCS Practice Code 590
Additional State Requirements for Class B Land Application Sites

Legislation - House Bill 2546 (continued)

- Commercial Liability and Environmental Impairment Insurance (Private Companies Only)
  > $3 million
  - TCEQ Additionally Insured

- Post a Sign at Land Application Site

- Transport in Covered Container

- Prohibit Land Application in Coastal Counties within 500 feet of well or surface water
Effect of Legislation

- 312 rules change takes place immediately after legislation passes

- All new legislative items included and rules are officially updated in October of 2005

- 45% decline in Class B sites

- Due to insurance requirements, individual “Mom and Pop” operations drop off while the larger companies continued to under new permit process
Recent Rule Changes in 2014

Bulk Sewage Sludge Rule Petition and Stakeholder Meetings

Rule Petition – Filed by the Citizens of Ellis County (South of DFW Area)

- Prohibit land application of bulk sewage sludge in or within 3 miles of a city limit in counties 140,000+ and located adjacent to a county between 2 and 4 million.

- TCEQ Commissioners instructed staff to:
  - examine the issues raised in the petition
  - initiate the rulemaking process by obtaining stakeholder input
Examsining the Issues

- Stakeholder meetings were held where land application of both Class A and B Biosolids is prevalent
  - Pro-Petition based on Odor concerns
  - Anti-Petition based on Economic Benefits
- Site evaluations were conducted by staff at processing and land application sites
- Proposed recommendations for the rule to Commissioners
  - State-wide rulemaking to address nuisance odors and other conditions rather than prohibition
- Recommended rulemaking process based on stakeholder comments
  - relief from odors
  - vectors
  - unauthorized discharges
  - tracking of material on roadways
Stakeholder concerns driven toward Land Application of Bulk Class A Biosolids

Establish a new sewage sludge classification structure with corresponding requirements based on pathogen treatment processes

- Class A
- Class AB
- Class B
Revised Classifications of Biosolids

Class A – Exceptional Quality Pathogen Requirements

Fecal Coliform <1,000 MPN per gram of total solids or Density of Salmonella <3 MPN per 4 grams of total solids

• Alternative 1 – Time and Temperature

• Alternative 5 – Process to Further Reduce Pathogens (PFRP)
  ➢ Composting
  ➢ Heat Drying
  ➢ Heat Treatment
  ➢ Thermophilic aerobic digestion
  ➢ Pasteurization

• Alternative 6 – Equivalent to PFRP with EPA approval
Class AB - Exceptional Quality Pathogen Requirements

Fecal Coliform <1,000 MPN per gram of total solids or Density of Salmonella <3 MPN per 4 grams of total solids

- Alternative 2 - High pH, high temperature and time

- Alternative 3 - Concentrations of enteric viruses and helminth ova – known process

- Alternative 4 - Concentrations of enteric viruses and helminth ova - unknown process
New Management Practices

Core Requirements applicable to bulk Class A, AB and B:

• Clarify TCEQ authority to require an Odor Investigation and Control Plan

• Prohibit land application during rain or on saturated soils

• Require cover on trucks

• Nuisance condition prohibition

• Submittal of an Adverse Weather and Alternative Plan
New Management Practices

Additional requirements for Class AB and B biosolids

- Post signage at application sites
- Buffer zones to odor receptors
- Staging of biosolids away from odor receptors
- BMPs to address tracking biosolids off-site
Trends

- Very recent incline in applications for Class B BLU sites

- Treatment and land application of waste from “Man Camp” drilling sites

- Cities moving towards zero waste initiatives

- County ordinances prohibiting use of biosolids

- Proposed Legislation
  - Give each county the authority over biosolids activity
Contacts and Assistance

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https://www.tceq.texas.gov/permitting/wastewater/wastewater/sludge