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Anaerobic Digestion: MA Permitting Overview

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Organics ban requires workable siting and permitting regime

- Organics ban has appeal:
  - Conserve landfill space
  - Hopefully reduce GHG emissions
- But existing management facilities are insufficient
  - Existing facilities are too small, too remote, and too uncontrolled to be a complete solution
  - Average MA composting facility capacity is 5 tpd, mostly far from population centers)
- Advanced composting or “converting” care attractive, but
  - Economics are tough, particularly for small, rural facilities
  - Market is emerging at best
  - Improperly managed can have bad effects
- Ban won’t have desired effect unless low impact facilities can be designed, easily permitted, and then sited

Categories of MA Local and State Environmental Permits

- Site Assignment (310 CMR 16)
- Solid Waste (310 CMR 19)
- Air (310 CMR 7)
- Wastewater (314 CMR 3,5,7)
- Wetlands (310 CMR 10)
- Endangered Species (321 CMR 10)
- MEPA (301 CMR 11)
- Local Zoning, Board of Health, Wetlands, Aquifer Protection Bylaws
- And more..

MA Solid Waste Regulations pre-2012

- AD facilities were subject to the same rules as traditional solid waste facilities (landfills, transfer stations incinerators)
- Required local Board of Health Approval and DEP permits, even as the environmental issues diverged from traditional facilities
- No meaningful exemption programs or relief for smaller facilities
- Existing AD facilities at POTWs unable to accept non-sanitary organics
- Net effect: nascent market for AD had nowhere to go,

2012 Regulatory Amendments

DEP amendments open up at least the possibility of meaningful organics management in MA:

- **Significant revisions to Solid Waste (310 CMR 16), Site Assignment (310 CMR 19) and POTW Regulations (314 CMR 12)**
- **Applies to source separated organics**
- **Certain very small facilities completely exempt**
- **General Permit for certain composting and "converting" facilities (100 tpd max)**
- **More explicit and tailored requirements for facilities not eligible for general permit**

Post 2012 Site Assignment Rules

- General Permit
  - Available for composting facilities <105 tons/week
  - Available for aerobic or anaerobic digestion <100 tons/day
- Conditions even in General Permit
  - Many nuisance and environmental impact control requirements
    - Many organics must be transported by sealed truck
  - Conditions to ensure quality of feedstock and products
    - Products must be “marketable”
    - Residuals at 5%
- Facilities not eligible for General Permit are subject to detailed individual review and required to get “Recycling Converting or Composting” permit (RCC).
- No exemption from local or non-solid waste permitting requirements

2012 Solid Waste and POTW Rules

- Solid Waste (310 CMR 19)
  - no permit required when materials “recycled, composted or converted” in compliance with Site Assignment Rules
  - No permit required when organics are handled at a POTW
- POTW Standards (314 CMR 12)
  - POTWs may accept source separated organic material, including fish and animal material, in AD, with explicit DEP approval

So far so good but…

- Streamlining effect of GP limited by stringent conditions
- Are facilities large enough to truly make a difference eligible?
- No exemption from host of other state permits
  - Air
  - Wetlands, wastewater, MESA, etc.
- Local boards still retain significant control
- Requirement of source separation increases costs and hurts economics
- Are only bigger facilities near population centers financially viable?
- Are only smaller facilities far from population centers feasible to site?

Conclusions

- Regulations help but do not make it “easy” to site a facility in MA
- Source separation requirement and parallel infrastructure imposes significant costs on collection system but also works to ensure no end-run around solid waste rules
- Development of farm based facilities, demonstration facilities at landfills, assessment of existing POTW infrastructure, and others ongoing.

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