

# CHAPTER 8

## SOLID WASTE MANAGEMENT

### BOARD OF HEALTH ROLE AT A GLANCE:

- Approve the siting of landfills and transfer stations and other waste handling facilities for municipal solid waste, organics and construction and demolition debris according to state criteria.
- Periodically inspect solid waste facilities to ensure they meet all applicable requirements and are posing no health risks or nuisances to the public.
- Regulate the collection, transportation and disposal of garbage, offal and other offensive substances within the community.
- Enforce state and local rules governing residential and commercial solid waste storage and disposal practices.
- Act upon complaints of illegal or improper solid waste disposal.

### OVERVIEW

Safe disposal and recycling of solid wastes have re-emerged as major public concerns for several reasons. Landfills, while reducing some of the hazardous side effects of open dumping and open burning; rodent infestation and air pollution, for example have in many cases created a new set of hazardous conditions, ranging from toxic leachates to explosive gas pockets. At the same time, burning solid waste in combustion facilities creates air pollution that must be controlled. Combustion facility processes also create ash that needs to be landfilled.

Many materials previously buried in municipal landfills are now known or suspected to have adverse effects on health, either in their original form or when they decompose. For example, plastics, petrochemicals, metal containers and acids which may be harmless or inert in a household trash barrel may interact in a landfill and, over time, with or without exposure to water and air, create potentially hazardous conditions.

In addition, it is only in the last twenty-five years that the labeling, transportation and disposal of wastes known to be hazardous have come under strict regulation. Therefore, amounts and locations of hazardous wastes disposed before 1980 may be unknown.

Many communities still face escalating local expenditures for closing unlined landfills, cleaning up the pollution they have caused and pursuing sometimes costlier waste management alternatives, such as disposal contracts with private companies. While consumer products may seem cheap to buy, they are not cheap to get rid of and the cost of disposal ultimately falls upon taxpayers.

Massachusetts boards of health have long had primary responsibility for regulating solid waste

management and disposal on the local level. Although state and federal regulations also apply to solid waste facilities, boards of health have extensive control over whether a particular solid waste disposal facility will be allowed to operate within their jurisdiction.

Over the last fifteen years, Massachusetts has made great progress in recycling, as most municipalities now provide recycling services to their residents. And, the state recycling rate has more than tripled over the past decade with the establishment of these programs. In the *Beyond 2000 Solid Waste Master Plan*, Massachusetts established a new policy framework that emphasizes waste reduction, recycling and composting, and safe disposal of remaining waste. In this plan, Massachusetts established a 70 percent waste reduction goal by 2010. New priority areas include increasing diversion of commercial organics, especially food waste, and construction and demolition debris. This plan also sets goals to increase collection and safe management of hazardous products from households and small businesses.

### Waste Reduction

Waste Reduction includes source reduction, recycling, and composting. Source reduction, that is reducing the amount of material that is used in the first place, is considered to be at the top of the waste management hierarchy. Although source reduction often happens without any government role because it makes good economic sense, state and local governments can also promote source reduction practices by local government, residents, schools and businesses.

Recycling and composting provide important economic and environmental benefits. In 2000, Massachusetts prevented the need for 16 new 1,500 ton per day disposal facilities through a combination of source reduction and recycling. Waste reduction slows global warming, conserves natural resources, saves energy, and prevents pollution. By recycling or composting municipal solid waste alone in 2000, Massachusetts is estimated<sup>1</sup> to have:

1. Reduced greenhouse gas emissions by more than 800,000 tons of carbon equivalent per year, equal to 14 percent of the state's industrial carbon dioxide emissions;
2. Conserved the equivalent of 350,000 tons of iron ore, 200,000 tons of coal and 17,000 tons of limestone, thereby reducing the need to mine these raw materials;
3. Saved 22 trillion BTUs of energy, or enough to power nearly 120,000 homes for a year; and
4. Reduced water pollution by more than 9,000 tons and smog-causing and acid rain-forming air pollution by more than 88,000 tons over and above the greenhouse gas reductions mentioned previously.

In addition, recycling bolsters the state's economy. Total direct and indirect economic activity from recycling businesses is estimated to generate more than \$142 million annually in revenues for Massachusetts.

All but a handful of the communities in Massachusetts now offer their citizens the opportunity to recycle, either through curbside collection or by operating one or more drop-off sites. Some communities are now consistently diverting one-third or more of their solid waste from landfills and combustion facilities, and many of them are realizing the benefits of avoided

---

<sup>1</sup> Source: "Estimating the Environmental Impacts of Recycling: A Spreadsheet Estimation Model", Northeast Recycling Council, August 1999.

disposal costs. Although recyclable markets will always have ups and downs, recycling can be made more cost-effective through more efficient collection approaches, increased participation, and increased market development.

To ensure a reliable and steady supply of recyclables and to reduce the state's reliance on landfills and combustion facilities. DEP has prohibited the disposal of certain recyclable and hazardous materials, including land-filling of whole tires and the disposal of leaves and yard wastes, automotive batteries, white goods (i.e. major household appliances), glass and metal containers, corrugated cardboard, office paper, newspapers, single-polymer plastics and cathode ray tubes (CRTs) found in computer monitors and televisions. In 2006, new waste bans on materials found in construction and demolition debris, including asphalt, brick, concrete, metal and wood will be enacted.

DEP also provides extensive municipal recycling grant programs to support the development of municipal recycling, composting, hazardous product collection, and other waste reduction programs. And, the state and many municipalities have worked hard to buy more recycled products to help build a sustainable market for recyclables.

### Special Wastes

Special wastes are defined as "any solid waste that is determined not to be a hazardous waste pursuant to 310 CMR 30.000 and exists in such quantity or in such chemical or physical state, or any combination thereof, so that particular management controls are required to prevent an adverse impact from the collection, transfer, storage, processing, treatment or disposal of the solid waste."

Disposal facilities may not handle or accept special wastes without obtaining special waste permits from DEP. Copies of all applications for these permits are also submitted to the board of health. Listed special wastes include asbestos-containing waste, infectious waste and sludges. Other wastes requiring special handling for disposal may be classified as special wastes. For additional information, see 310 CMR 19.061.

DEP has recommended that when asbestos is being removed from school buildings, boards of health work with local school committees to find suitable, permitted landfills so the work can proceed without delay.

### **Board of Health Responsibilities**

*Authority under M.G.L. c. 111, ss. 31, 31 A, 31 B and 150 A, M.G.L. c. 40, ss. 44 A through 44 F, Site Assignment Regulations for Solid Waste Facilities (310 CMR 16.00) and Regulations for the Disposal of Solid Wastes by Sanitary Landfill (310 CMR 19.000).*

The Board of Health is empowered to:

- Assign sites for solid waste management facilities according to state criteria. This includes certain processing facilities for composting organic materials and recycling construction and demolition debris. The board of health must provide due notice and schedule public hearing(s) after receipt of a site suitability report from DEP and prior to making a final decision. Site assignments may be appealed to the courts. The facility, if assigned, is then

subject to DEP approval of definitive plans and facility designs.

- Periodically inspect solid waste management facilities to ensure that they meet minimum requirements for operation, maintenance and supervision; proper management of surface runoff; upkeep of access roads and fences; and control of pests, dust and wind-blown debris.
- Adopt rules and regulations governing the removal, transportation and disposal of garbage, offal or other offensive substances; consider and act upon applications for permits to remove or transport refuse collected within the community; keep a registry of haulers who transport garbage or offensive substances through the community. (See M.G.L. c. 111, ss. 31 A and B).
- Ensure that all residential and commercial refuse storage and disposal practices meet local requirements and the state's applicable minimum standards for dwellings, food service establishments, retail food stores, mobile home parks, camps, motels and other establishments. (See the Sanitary and Environmental Codes.)
- Act upon complaints of illegal or improper solid waste disposal by conducting inspections and initiating enforcement actions, if necessary.
- Rescind, suspend or modify site assignments after due notice and public hearing where the board of health determines the facility represents a threat to public health, safety, or the environment.
- Cooperate with the regional refuse disposal planning board, committee or district as provided by M.G.L. 40:44A-F, if the town or city has voted to participate. These provisions of state law encourage inter-municipal planning and cooperative arrangements for solid waste management.

### **Board of Health Recommended Activities**

- Identify and map the locations of all old dumps and landfill sites, both public and private.
- Try to determine whether any hazardous materials disposal has taken place at any of these known locations.
- Check for patterns of excessive illness or mortality in the vicinity of potentially hazardous sites.
- Consider what action may be necessary to protect the public from further risk.
- Consider regulating private haulers to ensure that recycling services are provided to residents and businesses.
- Assess the community's existing solid waste disposal arrangements and future needs, then develop (together with public works and other relevant town or regional bodies) a long-term plan or list of alternatives, so major expenditures can be anticipated and addressed.

## State Responsibilities

*Carried out by the DEP Business Compliance Division, Regulatory Standards and Outreach, Division of Solid Waste Management, One Winter Street, 4th Floor, Boston, MA 02108, (617) 292-5960; fax (617) 556-1049, and by the four DEP regional offices. Authority under M.G.L. c. 111, s. 150 A, Site Assignment Regulations for Solid Waste Facilities (310 CMR 16.00) and Regulations for the Disposal of Solid Wastes by Sanitary Landfill (310 CMR 19.000).*

DEP is empowered to:

- Assign sites for landfills and transfer stations at sites owned by the state.
- Issue Site Suitability Reports that determine whether a proposed site for a solid waste facility (landfill, transfer station, etc.) meets the siting criteria of 310 CMR 16.00.
- Advise the board of health, upon request, on site assignments for landfills and transfer stations, and on issuing permits for the disposal of special wastes, including sludge, asbestos and infectious wastes.
- Review and approve proposed uses, plans and designs for landfills and transfer stations, and ensure that site preparation and construction are done in compliance with the solid waste regulations (310 CMR 19.000). No facility may begin operations without specific authorization from DEP.
- Periodically inspect landfills and transfer stations to ensure they are posing no public health nuisances or dangers. If violations are found, DEP notifies the operator in writing and orders corrective measures.
- Rescind, suspend or modify the permit of any solid waste management facility determined to be posing a nuisance or danger to public health. DEP must provide due notice and hold a public hearing before taking this action.
- Refer complaints of illegal disposal to the board of health for local followup and work with board of health upon request to enforce against the operators of illegal disposal sites.