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May 17, 2011

Chairwoman Anne M. Gobi
Joint Committee on Environment, Natural Resources and Agriculture
State House, Room 473F
Boston, MA 02133

Chairman Marc R. Pacheco
Joint Committee on Environment, Natural Resources and Agriculture
State House, Room 312-B
Boston, MA 02133

Re: H1998: An Act to Reinstate the Landfill Moratorium

Dear Chairwoman Gobi and Chairman Pacheco,

Thank you for providing this opportunity to offer our comments on H1998: An Act to Reinstate the Landfill Moratorium, which would instruct the Department of Environmental Protection to reinstate the moratorium on siting and permitting of solid waste landfills.. We wish to express our strong support in favor of this proposed legislation.

The Sierra Club is the oldest and largest environmental organization in the country. With over a forty year history in this chapter, the Massachusetts Sierra Club represents about 22,000 members throughout the state and nearly one million nationwide. We fight for clean air, clean water, the preservation of the Commonwealth's most precious natural spaces, and healthy, vibrant communities.

Need for a moratorium

It is indisputable that landfilling endangers public health, safety and the environment, as well as wastes material and energy resources. Harm from landfilling includes destruction of habitat and natural systems; vectors (e.g. rats, gulls); pollution of air, surface water, and groundwater; landslides; fire; methane explosions; and global warming. Even the most updated design and equipment cannot eliminate landfill impacts. As problems arise, required interventions only mitigate harm, so that environment is progressively degraded.

The Sierra Club's MSW Landfilling Advisory¹ warns,
Lined municipal solid waste (MSW) landfills, like their open dump predecessors, are a failed technology for handling the discards of our society. Burying unsorted garbage in these facilities takes an unacceptable toll on public health, safety, and our environment, not only because of damage landfills cause when they are built, operated and abandoned, but because landfilling removes

products from circulation so that virgin resources have to be mined or harvested to replace them.

It is well recognized that the theoretical basis for the safety of Subtitle D landfills is flawed, because all landfill liners eventually fail,² whereas the landfilled waste remains a threat for hundreds of years, some say for perpetuity. It must be acknowledged that there is no guarantee--in fact no reason to believe--that Massachusetts landfills will be properly maintained after the 30 years post-closure period for which the operator is responsible for maintenance. Who will perform this maintenance for hundreds of years, and at what cost? John Skinner, Executive Director of SWANA, has asked these same questions.³

Increasing the amount of landfilled waste by siting or expanding landfills also increases the threats inherent in landfilling, and therefore should not be undertaken.

In addition, it is increasingly recognized that decomposition of food and "green waste" in landfills—with or without energy recovery-- causes volumes of fugitive methane emissions.⁴ Methane is a greenhouse gas that is 23 to 103 times more heat-trapping than carbon dioxide, depending on the time frame considered. Products are buried along with the methane-producing organics, generating hazardous air pollutants (HAPs), such as vinyl chloride, benzene and dimethyl mercury, which affect the central nervous system and cause cancers, are generated in landfills.

Because of the fugitive methane that escapes from landfills, and the waste of the energy embodied in landfilled products, any energy production salvaged from the methane in landfill gas is a net loss. Our rate of production and disposal is not sustainable, particularly as world population grows and more countries adopt US customs and consumer patterns. One of the drivers of our "disposable" culture is the option of landfilling, which is deceptively inexpensive because environmental costs are postponed.

For all the above reasons, the siting of new landfills or expansion of existing subtitle D landfills should be prohibited.

Recommendations for phasing out landfilling of MSW

The waste policy of Sierra Club is Zero Waste, which calls for waste reduction, reuse, remanufacturing, recycling, diversion of organic material to composting, and Extended Producer Responsibility for products and packaging.

Conservation of existing landfill space by recycling and composting is clearly a safer course than expansion of disposal capacity. Diversion from landfilling is also in keeping with the policy shift toward stronger waste reduction measures that was announced by Ian Bowles, then Secretary for Energy and Environmental Affairs, in a release on December 11, 2009 that called for "less landfills and incineration." This policy is also reflected in the MassDEP Draft Solid Waste Master Plan, 2010-2020, which was released on July 1, 2010.

Fortunately Massachusetts does not have to pioneer conservation of landfill space, as there are numerous successful models. For example, the Zanker Road landfill in San Jose, projected to have five more years of capacity, extended the projection an additional 35 years using a variety of Zero Waste strategies.⁵ For an example on a smaller scale in our own state, in 1988 when the Sturbridge landfill was projected to fill in five years, the volunteer Board of Health implemented a vigorous recycling program;

now, seventeen years after the landfill was projected to close, it still has not reached capacity.⁶

DEP has already embarked on a course to increase capacity for processing organics in the Commonwealth by establishing a task force to look at obstacles to siting facilities and how to overcome those obstacles. DEP's goal of mandatory separation of discarded food from waste at businesses and institutions by the year 2014 could divert 380,000 tons of material per year.⁷ Regarding products and packaging waste, Extended Producer Responsibility is one of the five pillars of the waste reduction plan for the next decade. Eleven municipalities have adopted resolutions calling for a statewide EPR program for multiple products. All of these efforts indicate momentum for reducing both waste streams: organics and products and packaging waste.

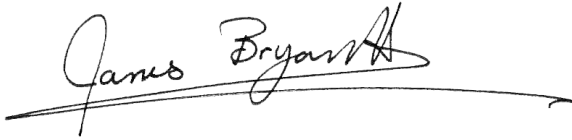
The title of the draft Master Plan is Pathway to Zero Waste. Regarding conservation of landfill space as the Commonwealth proceeds down that pathway, the Sierra Club MSW Landfill Advisory offers the following guidelines:

- To curtail methane release, organic materials (e.g. food scraps, yard trimmings, soiled paper) should be banned from landfills, as in the European Union and in many North American municipalities, and diverted to local, controlled composting operations or controlled anaerobic digestion facilities that maximize greenhouse gas capture and energy production from wastes that contain organics.
- Other waste should receive mechanical/ biological treatment (MBT) so that any organic portion is biologically inert when landfilled.
- As MSW landfilling is phased out, landfill disposal bans should be implemented, enforced, and expanded. Local bans should include a recommendation for state Extended Producer Responsibility legislation that prohibits the use of certain toxins, and holds brand-owners responsible for collection and safe recycling of their products as a condition of sale in the state. Disposal bans should be implemented in the following order of priority:
 1. Organic (methane-producing) material—yard trimmings, food scraps, soiled paper.
 2. Electronics and other toxic products.
 3. Materials such as paper, glass, metal, most plastic.
 4. Other products for which recycling programs may be lacking, including toxic products and some plastics.
- The jurisdiction should manage materials and energy according to this order of priority: reduce waste of energy and materials and use of toxins; repair and reuse products and materials; recycle, conserving as much embodied value as much embodied value as possible. All discards should be put to their highest and best use.
- All materials entering the landfill should be inspected, and monitored.
- Waste disposal should be pay-as-you-throw. If bags are used, they should be translucent so banned materials can be readily visible to waste handling personnel and inspectors.

In summary, we urge the Commonwealth to abandon the policy of burying the mixed discards of our “disposable” society in the ground. We need a moratorium on landfilling as it is presently defined, regulated, and practiced, and a commitment to waste reduction, Extended Producer Responsibility, reuse, recycling, and composting, all of which will provide multiple benefits, for the environment, public health, and the economy.

Because this proposed legislation would have significant positive impacts for the citizens of the Commonwealth, the Sierra Club fully endorses H1998 and respectfully requests a favorable report.

Respectfully,

A handwritten signature in black ink that reads "James McCaffrey". The signature is written in a cursive style and is underlined with a long horizontal line that extends to the right.

James McCaffrey
Director
Massachusetts Sierra Club

¹ See <http://www.sierraclub.org/committees/zerowaste/policies/>

² US EPA Federal Register, August 30, 1988, Vol.53, No.168.

Also, on April 10, 2008, at a landfill site assignment hearing before the Board of Health in Southbridge, Massachusetts, David Bonnett, Civil Engineer, Landfill Site Professional, and Expert Witness for Casella Waste, testified under oath that, "All liners leak." See Vol.3, p.447.

³ "Given the many difficulties of ensuring and funding perpetual care by the landfill operator, the responsibility of responding to long-term problems at dry-tomb landfills will fall on future generations, *and the funding requirements could likely fall on state and local governments* [emphasis added]." John Skinner, "Composting and Bioreactors," *MSW Management* (July/August 2001), at p. 16.

⁴ See <http://www.sierraclubmass.org/issues/conservation/zw/zero1.html>

⁵ For details contact Gary Liss of Loomis CA, formerly Solid Waste Program Manager for San Jose, and now a Zero Waste consultant at www.garyliss.com.

For more information about the Zanker Road Landfill and San Jose's diversion goals see [http://sjsearch.sanjoseca.gov/search?q=Zanker+Road+Landfill%2C+San+Jose&btnG=City+Search&site=default_collection&client=City_frontend&output=xml_no_dtd&proxystylesheet=City_frontend&filter=p&getfields="](http://sjsearch.sanjoseca.gov/search?q=Zanker+Road+Landfill%2C+San+Jose&btnG=City+Search&site=default_collection&client=City_frontend&output=xml_no_dtd&proxystylesheet=City_frontend&filter=p&getfields=)

⁶ Phone interview, March 20, 2010, with George Berry, Sturbridge Board of Health member, 1983-2009.

⁷ John Fischer (DEP), email response to Lynne Pledger, February 11, 2010; Paul Emond (DEP), email response to Lynne Pledger, March 9, 2010.