

Guarino, Terri

From: Lisa Gianelly <lgianelly@clf.org>
Sent: Wednesday, January 26, 2022 12:08 PM
To: Health
Cc: Guarino, Terri
Subject: In the matter of the Proposed Site Assignment Major Modification of the Town of Bourne ash landfill
Attachments: Transmittal letter to Bd of Health re CLF comment letter 1.26.22.docx; Bourne Landfill MassDEP Site Suit Comments, Exh 11.03.21 (1).docx

To: Town of Bourne
Board of Health
Town Hall
24 Perry Avenue
Buzzard's Bay, MA 02532

Attached are a transmittal letter from Conservation Law Foundation and a copy of comments to be delivered to the Board of Health for review in connection with the hearing on the Proposed Site Assignment Major Modification proposed by Bourne Department of Integrated Solid Waste Management of the Town of Bourne Ash Landfill.

Please let me know if you have any difficulty accessing these materials, or if you have any questions or concerns.

Best,

Lisa Gianelly
Senior Fellow
Conservation Law Foundation

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For a thriving New England

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January 26, 2022

BY ELECTRONIC MAIL

Town of Bourne
Board of Health
Town Hall
24 Perry Avenue
Buzzard's Bay, MA 02532
health@townofbourne.com

Re: Initial Comments to Proposed Site Assignment Major Modification proposed by Bourne Department of Integrated Solid Waste Management of the Town of Bourne Ash Landfill

Dear Sir or Madam:

I attach a copy of a comment letter delivered by Conservation Law Foundation and others to the Massachusetts Department of Environmental Protection ("MassDEP") relating to the Town of Bourne's Application for Major Modification to Site Assignment (the "Application") with respect to the ash landfill located at 201 MacArthur Boulevard, Bourne, MA (the "Site"). MassDEP has issued a Site Suitability Report for the Site.

I submit the attached comment letter for review by the Board of Health to assist with its independent evaluation of the Application for any potential dangers to the public health, safety or environment, pursuant to 310 CMR 16.20(10)(k)(2).

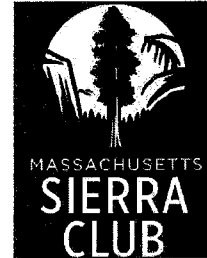
Sincerely yours,

Lisa L. Gianelly
Senior Fellow

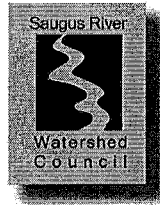


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MASSPIRG



November 3, 2021

Via Electronic Mail

Mark Dakers
Section Chief
Commonwealth of Massachusetts Department of Environmental Protection
Bureau of Air and Waste
Southeast Regional Office
20 Riverside Drive
Lakeville, MA 02347

Re: Town of Bourne (Bourne), Department of Integrated Solid Waste Management, Integrated Solid Waste Management Facility (ISWM), BWP SW 38 – Application for Site Suitability for a Major Modification of an Existing Site Assignment for the Phase 7, Phase 8, and Phase 9 Landfill Expansion

Dear Section Chief Dakers:

Conservation Law Foundation (CLF), Beyond Plastics, Clean Water Action, Community Action Works, the Global Alliance for Incinerator Alternatives, MASSPIRG, the Saugus Action Volunteers for The Environment, the Saugus River Watershed Council, Sierra Club, South Coast



Neighbors United, and Sustainable Practices respectfully submit these comments requesting a negative Determination of Site Suitability in response to the application submitted by the Town of Bourne's Department of Integrated Solid Waste Management ("ISWM") for the Phase 7, 8, and 9 Integrated Solid Waste Management Facility ("Landfill") expansion.

CLF is a nonprofit, member-supported, environmental organization working to conserve natural resources, protect public health, and promote thriving communities for all in the New England region, including Massachusetts. CLF has a long history of advocating for clean air, clean water, and healthy communities, including addressing the environmental and community impacts of solid waste disposal, and advocating for waste management strategies focused on waste reduction and recycling as opposed to landfilling and incineration. Other signatory organizations share CLF's commitment to protecting environmental resources and public health.

For the reasons set forth herein, ISWM's proposed expansion of 25-acres and 5,175,000 cubic yards, or *over 2.4 million tons*, of capacity to its current facility poses a potential danger to public health and the environment and does not meet all the siting criteria listed in 310 CMR 16.40(3)(a), 16.40(4) and 16.40(5).¹ Therefore, the Massachusetts Department of Environmental Protection should issue a Site Suitability Report to the Town of Bourne Board of Health with a negative determination.

I. Introduction

A. Commonwealth of Massachusetts Department of Environmental Protection's ("MassDEP")'s Authority

In November 2020, ISWM submitted a Single Supplemental Environmental Impact Report (SSEIR) for the development of Phases 7, 8, and 9 of the Landfill, in accordance with the Massachusetts Environmental Policy Act (MEPA).² Because the proposed expansion required the preparation of an EIR, the expansion also underwent a mandatory Development of Regional Impact ("DRI") review by the Cape Cod Commission ("CCC").³ The CCC approved the DRI on September 29, 2021. ISWM submitted an application for a Determination of Site Suitability to the MassDEP on May 12, 2021 and submitted supplemental information on April 21, 2021. MassDEP determined that the application was administratively complete on May 12, 2021. After the public notice requirements were met, the 21-day public comment period commenced.⁴

¹ 310 CMR 16.00.

² See Town of Bourne website, <https://www.townofbourne.com/integrated-solid-waste-management/pages/landfill-expansion-permitting-documents>

³ Cape Cod Commission, *Chapter A: Enabling Regulations Governing Review of Developments of Regional Impact*, § 2(d)(i) (amended May 13, 2020).

⁴ Email from Alison Cochrane, MassDEP, dated October 13, 2021 5:10 PM, to Erica Kyzmir-McKeon and Kirstie Pecci, Subject: Bourne Landfill Site Suitability Application.

Pursuant to M.G.L. c.21A, Sections 2 and 8, c. 21H, Section 7, and c.111, Sections 150A and 150A1/2, the MassDEP has the authority to establish a process for Determinations of Site Suitability which are set out at 310 CMR 16.40(3)(a), Facility Specific Site Suitability Criteria for landfill Facilities and 310 CMR 16.40(4), General Site Suitability Criteria. The applicable criteria must be met if for MassDEP to issue a positive Determination of Site Suitability and the MassDEP must “issue a report stating whether the proposed site meeting the criteria established under Section 150 A ½ “for the protection of public health and safety and the environment.”⁵ If MassDEP issues a negative Determination of Site Suitability, ISMW may not apply to the Town of Bourne Board of Health or receive a Major Modification to their Site Assignment to expand the Landfill.⁶

B. The Bourne Landfill’s History and Development

The Bourne Landfill is comprised of a 111-acre parcel located at 201 MacArthur Boulevard in Bourne, Massachusetts.⁷ Landfill operations began at the Facility in 1967 with Phase 1 (approximately 31 acres).⁸ In 1998, ISWM was created and began overseeing the management and operation of the Landfill.⁹ The current Facility operations include the active lined landfill, construction and demolition debris transfer station, residential recycling center, single stream recyclable collection and transfer, and composting.¹⁰

The Facility contains both lined and unlined waste disposal areas. The oldest portion of the landfill is comprised of Phases 1A, 1B, 1C and 1D, all of which are unlined cells.¹¹ Phases 1A, 1B, and 1C (approximately 23 acres) have been closed and capped. Phase 1D (5.7 acres) was excavated under a pilot landfill reclamation project with MassDEP in order to create additional landfill space.¹² Phase 2 (approximately 7.3 acres) is a closed, lined, and capped landfill cell, and Phase 3 (approximately 12 acres) is a closed, double composite lined landfill cell. Both Phase 2 and 3 have leachate collection systems.¹³ Phase 2A/3A (approximately 17.1 acres) is an inactive double composite lined landfill area. Phase 4 (approximately 9.9 acres) is a currently active landfill area and is located in the area previously occupied by Phase 1D. Phase 5 consists of a vertical expansion over Phases 1A, 1B, and 1C.¹⁴ MassDEP issued Authorization to Construct (ATC) and Authorization to Operate (ATO) Permits in 2019 for Phase 6, which is currently under construction.¹⁵ Phase 6 is the last phase in a progressive filling plan first discussed in

⁵ M.G.L. c.111, Section 150A, paragraph 10.

⁶ M.G.L. c.111, Section 150A, paragraph 12.

⁷ Town of Bourne ISWM, *Final Comprehensive Site Assessment*, 2 (June 5, 2017).

⁸ *Id.* at 3.

⁹ *Single Supplemental Environmental Impact Report*, *supra* note 3, at 2.

¹⁰ *Final Comprehensive Site Assessment*, *supra* note 7, at 2.

¹¹ Massachusetts EEA, *Expanded NPC Certificate*, 3 (Apr. 24, 2020).

¹² *Id.*

¹³ *Id.*

¹⁴ *Id.*

¹⁵ *Id.*



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ISWM's 1998 Environmental Impact Report (EIR), which will complete the horizontal expansion of landfill operations on the original 74-acre site.¹⁶

In 2001, ISWM purchased a 25-acre parcel immediately abutting the landfill to the south.¹⁷ This parcel has been site-assigned for solid waste handling and transfer operations.¹⁸ Thus far, this parcel has only been used for recycling and transfer operations.¹⁹ In 2016, Bourne purchased an approximately 12-acre parcel to the south of the 25-acre parcel.²⁰ ISWM intends to relocate the handling facility onto a portion of the 12-acre parcel so that Phases 7 and 8 can be fully developed on the 25-acre site and, subsequently, Phase 9 can be developed atop previously landfilled areas.²¹

C. Waste Disposal and Capacity

Prior to 1998, the Landfill accepted residential and commercial waste from Bourne and the immediate surrounding area.²² From 1998 through 2014, the Landfill operated as a large regional disposal facility accepting residential and commercial solid waste that was largely Municipal Solid Waste (MSW) but with an increasing percentage comprised of municipal waste combustor ash.²³

In 2015, ISWM signed a long-term contract with Covanta SEMASS (SEMASS), a municipal waste combustor located in Rochester, MA, which shifted the Facility's waste stream to predominantly ash.²⁴ Under the contract, approximately 86% of the landfill's permitted annual capacity (189,000 tons out of 219,000 tons per year) is reserved exclusively for ash through 2021.²⁵ The remaining capacity is available for MSW disposal for Bourne and for Falmouth under a ten-year contract.²⁶ Any further remaining capacity will either be held in reserve or be utilized for soils or other difficult-to-manage waste streams.²⁷ ISWM and Covanta are currently in active negotiations to extend their contract. Under ISWM's "Preferred Alternative" approach, the contract will extend, and ISWM will continue to accept up to 230,000 tons per year of ash, significantly more than the allowable 189,000 tons as further discussed below,²⁸ plus 30,000 tons per year of MSW from Bourne and Falmouth.²⁹

¹⁶ *Single Supplemental Environmental Impact Report*, *supra* note 3, at 3.

¹⁷ *Id.*

¹⁸ *Id.*

¹⁹ *Id.*

²⁰ *Id.*

²¹ *Id.*

²² *Id.* at 21.

²³ *Id.*

²⁴ *Id.*

²⁵ *Id.*

²⁶ *Id.* at 11.

²⁷ *Id.*

²⁸ *See infra* Part III.C.

²⁹ *Single Supplemental Environmental Impact Report*, *supra* note 3, at 10.

D. Actual Disposal Practice

Using the guise of landfill “cover” designation, ISWM functionally ignores its capacity limits. ISWM has reported to MassDEP that it landfills much more than 219,000 tons of waste each year, and the Application states that the yearly capacity will be “219,000” tons.³⁰ This is untrue. Every year 43,478 tons of “Bottom” Ash, and as much as 50,000 tons of contaminated soil and “other” materials, are disposed of at the Bourne Landfill as “cover.”³¹ For a predominantly ash landfill to use that much cover is ridiculous – until one remembers that ISWM can charge for cover materials and bury more ash than allowed under the permit. In 2019 about a third of what was landfilled was cover (96,324 tons of cover for 207,987 tons of permitted waste, for a total of over 300,000 tons).³² ISWM is ignoring capacity limits and instead filling this Facility with incinerator ash and other materials as quickly as possible. As further discussed below, it is deeply concerning that the cover includes almost exactly 44,000 tons of Bottom Ash every year. If this is the case, the 189,000 tons of permitted ash buried at the Bourne Landfill each year may have a higher percentage of Fly Ash, which is the more toxic of the two types of incinerator ash discussed in ISWM’s MEPA filings.

The MassDEP should require ISWM to resubmit their application to reflect the actual amount of ash to be buried at the landfill each year, and not allow any more additional material be buried at the landfill under the guise of “cover.”

E. The Proposed Expansion

As described in ISWM’s Application,³³ the proposed Project consists of the phased expansion (Phases 7, 8, and 9) of the ISWMF.³⁴ ISWM is proposing a 25-acre vertical and horizontal landfill expansion and the relocation of the solid waste handling facility and other offices and facilities on the property. The three-phase expansion will provide a total of 5,175,000 cubic yards (cy), or over 2.4 million tons, of disposal capacity through 2040.³⁵ Phases 7 and 8 are a 25-acre horizontal expansion that will result in an additional 3,920,000 cy of disposal capacity through 2040. Phase 9 is a 40-foot vertical expansion over the entire footprint of the currently permitted landfill that will provide approximately 1,255,000 cy, or approximately

³⁰ The Application, BWP SW 38, page 4 of 42, A. Site Location and Project Description.

³¹ The Bourne Landfill buries almost exactly 43,500 tons of Bottom Ash as “cover” each year. *Annual Solid Waste Facility Reports: Landfill Summary for Calendar Years 2015-2019*.

³² Landfill cover is usually soil, contaminated soil, ash, or ground material used to cover municipal solid waste to contour and stabilize the landfill cell and reduce odors and pests. There is no need for additional cover when almost all of the material being buried is ash, as it is at Bourne.

³³ *Id.* at 1. The Secretary of the Executive Office of Energy and Environmental Affairs (EEA) issued a Final Certificate on the SSEIR on December 30, 2020, granting Bourne’s request to submit an SSEIR.

³⁴ Town of Bourne ISWM, *Expanded Notice of Project Change* (Feb. 18, 2020).

³⁵ *Expanded NPC Certificate*, *supra* note 11, at 2.

600,000 tons,³⁶ of disposal capacity through 2040.³⁷ In other words, the proposed expansion would allow the Facility to bury about 250,000 tons of toxic SEMASS incinerator ash and/or municipal solid waste each year, for an additional 20 years.

The MassDEP should require ISWM to resubmit their application to reflect the actual amount of ash to be buried at the landfill each year, and not allow any more additional material be buried at the landfill under the guise of “cover.”

II. Under M.G.L. Chapter 30, Section 62, as Amended by Chapter 8, An Act Creating a Next-Generation Roadmap for Massachusetts Climate Policy (Roadmap Law), The Proposed Expansion Is Subject to Heightened Scrutiny.

MassDEP must not only evaluate whether proposed expansion meets the criteria set out in 310 CMR 16.40, but also only issue a positive Determination of Site Suitability if the proposed expansion will support the surrounding environmental justice populations' ability to enjoy a clean and healthy environment.

As required by law, in June 2021, the Executive Office of Energy and Environmental Affairs updated the Environmental Justice Viewer mapping tool to identify the populations designated by the Roadmap Law.³⁸ The Environmental Justice Viewer shows that there is a community designated as an environmental justice population based on the low-income criterion. The location is Joint Base Cape Cod and is identified as Block Group 1, Census Tract 141, Barnstable County, Massachusetts.³⁹ The EJ block group has a total area of roughly 17 square miles and a population of 949. In addition, the Environmental Justice Viewer shows three other EJ Populations located approximately 1.6 miles west of the Landfill, 3 miles north/northeast of the Landfill, and 2 miles southwest of the Landfill.

The Roadmap Law establishes new substantive environmental review requirements for projects, such as the Bourne Landfill Expansion, that potentially impact environmental justice populations. When the MEPA Office reviewed the Bourne Landfill expansion project, the Roadmap Law requirements were not yet effective. Therefore, there was no enhanced public participation or enhanced analysis. Now that the Roadmap Law is in effect, MassDEP has an obligation to integrate environmental justice considerations into the review.

M.G.L. 30, Section 62 was amended earlier this year by the passage of the Roadmap Law, which reads:

The secretary shall consider the environmental justice principles, as defined in section 62, in making any policy or determination, or taking any action relating to a project review,

³⁶ We do not know the exact amount of ash in tonnage disposed of at the landfill because ISWM has presented capacity in cubic yards.

³⁷ *Id.*

³⁸ St. 2021, c. 8, § 56.

³⁹ Email from Alison Cochrane, MassDEP, dated October 13, 2021 5:10 PM, to Erica Kyzmir-McKeon and Kirstie Pecci, Subject: Bourne Landfill Site Suitability Application, See Email's Attached Fact Sheet.

undertaken pursuant to sections 61 through 62J, inclusive, to reduce the potential for unfair or inequitable effects upon an environmental justice population.

To further the environmental justice principles the secretary shall direct its agencies, including the departments, divisions, boards and offices under the secretary's control and authority, to consider the environmental justice principles in making any policy, determination or taking any other action related to a project review, or in undertaking any project pursuant to said sections 61 through 62J, inclusive, and related regulations that is likely to affect environmental justice populations.

In addition, the secretary shall establish standards and guidelines for the implementation, administration and periodic review of environmental justice principles by the executive office of energy and environmental affairs and its agencies.⁴⁰ (*Emphasis added*)

Furthermore, "Environmental justice principles" as amended by Chapter 8 are now defined in Chapter 30, Section 62 as:

principles that support protection from environmental pollution and the ability to live in and enjoy a clean and healthy environment, regardless of race, color, income, class, handicap, gender identity, sexual orientation, national origin, ethnicity or ancestry, religious belief or English language proficiency, which includes: (i) the meaningful involvement of all people with respect to the development, implementation and enforcement of environmental laws, regulations and policies, including climate change policies; and (ii) the equitable distribution of energy and environmental benefits and environmental burdens.⁴¹

This is the first Determination of Site Suitability MassDEP is considering since this standard was imposed.

MassDEP must take this opportunity to consider how the environmental justice principles would be achieved by issuing a negative Determination of Site Suitability. Further, MassDEP has an obligation to launch a new, more protective and equitable era of siting solid waste facilities. Or in this case, not siting them.

III. 310 CMR 16.40(5)(b): The Proposed Landfill Expansion does not Promote Integrated Solid Waste Management

310 CMR 16.40(5)(a)2 requires MassDEP, when determining whether a site is suitable, to consider:

The extent to which the proposed site use(s), alone or in conjunction with other sites, provides or affords feasible means to maximize diversion or processing of

⁴⁰ Chapter 8, "An Act Creating a Next-Generation Roadmap For Massachusetts Climate Policy."
<https://malegislature.gov/Laws/SessionLaws/Acts/2021/Chapter8>

⁴¹ *Id.*

each component of the anticipated waste stream in order to reduce potential adverse impacts from disposal and utilize reusable materials and only thereafter extract energy from the remaining solid waste prior to final disposal.

Under 16.40(5)(a)3, MassDEP must also consider:

The extent to which the proposed use(s) of the site, alone or in conjunction with other sites, will contribute to the establishment and maintenance of a statewide integrated solid waste management system which will protect the public health and conserve the natural resources of the Commonwealth.

Finally, MassDEP shall also consider:

. . . the extent to which the proposed use of the site directly incorporates recycling and composting techniques or is otherwise integrated into recycling and composting activities for the geographic area(s) which the site will serve. 310 CMR 16.40(5)(b)

Expanding this ash landfill will do nothing but further entrench Massachusetts in a burn and bury system, inimical to the goals of the 2020-2030 Solid Waste Master Plan and 310 CMR 16.40(5). ISWM erroneously asserts that the proposed expansion is necessary; however, the expansion would be unnecessary if Zero Waste programs were enforced and expanded.

A. The Proposed Expansion Would Be Unnecessary if Zero Waste Programs Were Enforced and Expanded

ISWM is asserting that there is a need for additional capacity at the Bourne Landfill due to future reductions in regional capacity. Expanding disposal capacity without any attending expansion of composting or recycling programs runs counter to MassDEP's 2020-2030 Solid Waste Master Plan goals to reduce solid waste disposal.⁴² The Commonwealth failed to meet MassDEP's 2020 goals, and disposal actually increased from 5,430,000 tons per year in 2010 to 5,510,000 tons per year in 2019.⁴³ Since 2010, permitted combustion of waste, and the resultant ash, has not changed at all in Massachusetts.⁴⁴ Increasing the acreage of the Bourne Landfill so that it is large enough to accept up to 230,000 tons of ash and 30,000 tons of MSW per year for twenty more years (for a total of 4.6 million tons of ash and 600,000 tons of MSW) guarantees that the disposal numbers of 2019 will remain unchanged in 2030 and 2040. This is unacceptable.

If MassDEP enforced existing state regulations, SEMASS and the expansion of the Bourne Landfill would be unnecessary. In Massachusetts, the following are Waste Ban Items, meaning that they are not allowed to be buried in a landfill or burned in an incinerator (310 CMR 19.00):

⁴² MassDEP, *Draft for Public Comment: Massachusetts 2030 Solid Waste Master Plan*, 6-7 (Sept. 2019), available at <https://www.mass.gov/doc/draft-2030-solid-waste-master-plan/download>. Exhibit 1.

⁴³ Solid Waste Advisory Committee, MassDEP, *2019 Solid Waste & Waste Reduction Data*, slide 6 (Oct. 2020), available at <https://www.mass.gov/doc/presentation-2019-solid-waste-waste-reduction-data/download>. Exhibit 2.

⁴⁴ *Id.* at slide 12.



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- Asphalt pavement, brick, and concrete;
- Cathode ray tubes;
- Clean gypsum wallboard;
- Commercial food material (recently revised to include producers of more than half a ton per week – not promulgated yet);
- Ferrous and non-ferrous metals;
- Glass and metal containers;
- Lead acid batteries;
- Leaves and yard waste;
- Recyclable paper, cardboard, and paperboard;
- Single-resin narrow-necked plastic containers;
- Treated and untreated wood and wood waste (banned from landfills only);
- White goods (large appliances);
- Whole tires (banned from landfills only; shredded tires acceptable); and
- Textiles and Mattresses (added in 2021)

These materials are banned from disposal because it has been determined that: (a) disposal of the material presents a potential adverse impact to human health, safety or the environment; (b) a restriction or prohibition will result in the extension of the useful life or capacity of a facility or class of facilities or reduce its environmental impact; or (c) a restriction or prohibition will promote reuse, waste reduction, or recycling.⁴⁵ Unfortunately, according to MassDEP, almost 40%, or over 2 million tons, of disposed items in Massachusetts are Waste Ban Items.⁴⁶ There are not enough dedicated Waste Ban inspectors at MassDEP, and enforcement has been spotty at best. ***No disposal facility should be expanded in Massachusetts until MassDEP reduces disposal by enforcing existing Waste Ban regulations.***

The expansion of the Bourne Landfill is not just about landfill capacity – it is about allowing Covanta SEMASS in Rochester, Massachusetts to burn up to 1.25 million tons per year of MSW.⁴⁷ Burning MSW is dangerous, polluting, expensive, a waste of resources, an inefficient manner to generate electricity, and horrible for the climate. If Massachusetts is to meet any of its long-term climate goals, then its seven incinerators, including SEMASS, will have to be shut down. Attached as Exhibit 1, please find a letter that provides further facts and resources explaining why Massachusetts' immediate goal should be to phase out incinerators, including SEMASS, as soon as possible, rather than to enable their continued operation through expanded landfill capacity.

⁴⁵ 310 CMR 19.017; see also MassDEP, *Massachusetts Waste Bans as a Tool to Drive Waste Reduction* (June 2016), available at <https://www.mass.gov/guides/massdep-waste-disposal-bans>.

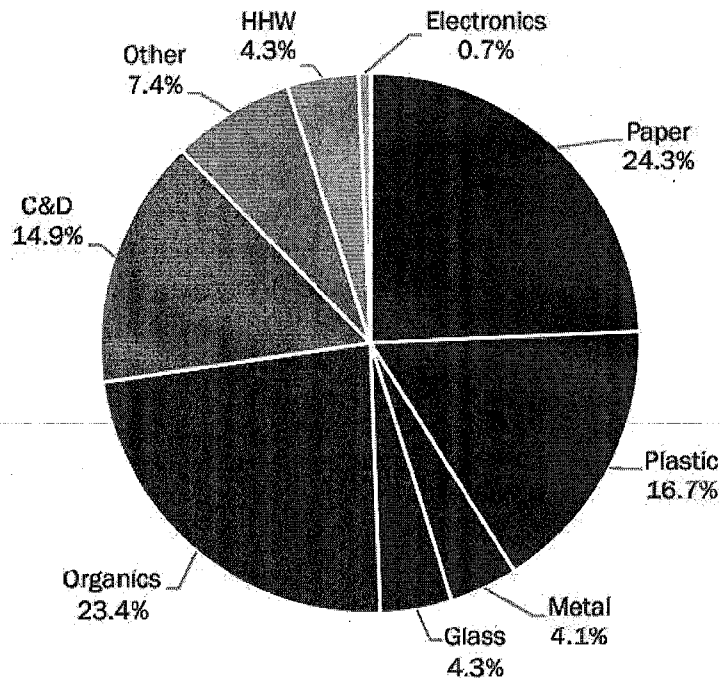
⁴⁶ MassDEP, *Massachusetts Waste Bans as a Tool to Drive Waste Reduction* (June 2016), available at <https://www.mass.gov/guides/massdep-waste-disposal-bans>.

⁴⁷ *Id.*

Much of the waste burned at SEMASS – paper/cardboard, metal, glass, some plastic, some construction and demolition material, and some organics, are also Waste Ban Items. If the Waste Ban materials alone were diverted from the incinerator, SEMASS could burn at least 40% less and extend the life of the landfill where it buries its ash.⁴⁸

Expanding the Bourne Landfill enables SEMASS and other facilities to shirk their responsibility to reduce solid waste disposal. For example, SEMASS burned over 1.1 million tons of waste in 2019,⁴⁹ producing more than 250,000 tons of ash. As can be seen from the chart below, which SEMASS submitted as part of a report to MassDEP in February of 2020, almost 80% of what SEMASS is burning could be recycled and composted. Rather than needing to bury 250,000 tons of ash, SEMASS would then only need to dispose of 50,000 tons of ash each year.

Figure 3-1 Overall Waste Composition by Material Group



Similarly, the 30,000 tons of MSW buried each year at the Bourne Landfill could be sharply reduced – by as much as 80%, if the Waste Bans were enforced and composting and recycling systems put in place. If this were done, the combined yearly disposal at the Bourne Landfill would be 50,000 tons of ash and 6,000 tons of MSW – a fraction of what it is now. Minimizing the ash and MSW going into the Bourne Landfill would extend its life and render expansion moot. For these reasons, we recommend that the Waste Bans be enforced, and

⁴⁸ See SAK Environmental, LLC, *Covanta SEMASS 2019 Waste Characterization Study in Support of Class II Recycling Program*, 2-11 (Feb. 11, 2020), available at <https://www.mass.gov/doc/class-ii-recycling-program-waste-characterization-study-april-2020-3/download>. Exhibit 5.

⁴⁹ *Id.*

comprehensive recycling and composting programs be instituted rather than expanding the Bourne Landfill.

ISWM has not demonstrated a need for the proposed expansion and the expansion is not consistent with 310 CMR 16.40(5)'s requirements to increase diversion, integrate solid waste systems to protect public health and conserve the natural resources of the Commonwealth, or integrate composting and recycling with the landfill. Therefore, the MassDEP should issue a negative Determination of Site Suitability.

IV. 310 CMR 16.40(3)(a) The Proposed Landfill Expansion Would Create an Area of Waste Disposition Over the Recharge Area of a Sole Source Aquifer

The importance of Cape Cod's groundwater preservation cannot be overstated. The region gets 100% of its drinking water from the Cape Cod Aquifer.⁵⁰ Indeed, the EPA designated the aquifer a "Sole Source Aquifer," requiring federally funded projects to assess project impacts to the aquifer.⁵¹

ISWM's application fails to establish that the proposed landfill expansion would be protective of this aquifer, especially considering that there will be waste buried above the Sole Source Aquifer. Instead, ISWM makes the argument that that wells have been shut down and new wells are prohibited, ignoring that this Landfill is contaminating the aquifer, and expanding it will cause the aquifer to become even more polluted.

A. The Leachate and Groundwater at the Bourne Landfill is Likely Contaminated with PFAS

i. Leachate

Per and poly fluorinated alkyl substances (PFAS) are persistent organic pollutants that are found in virtually all landfills and are a serious public health concern. PFAS, or "forever chemicals," have been going into landfills for over sixty years,⁵² and recent studies have identified PFAS in both fly ash and bottom ash from municipal waste incinerators at part-per-billion levels.⁵³ These chemicals are toxic in small concentrations and cause a variety of adverse health effects, including kidney and testicular cancer; impaired liver, pancreatic, and immune system function; thyroid disease; fertility and pregnancy issues; high blood pressure; and growth and learning problems in infants and children.⁵⁴ They are found in many of the products we use

⁵⁰ *Id.* at 28.

⁵¹ *Id.*

⁵² A.H. Huset, M.A. Barlaz, D.F. Barofsky, & J.A. Field, *Quantitative Determination of Fluorochemicals in Municipal Landfill Leachates*, 82 *Chemosphere* 1380-1386 (2011). Exhibit 6.

⁵³ Dennis Wohlin, *Analysis of PFAS in Ash from Incineration Facilities from Sweden* (June 2020), Örebro University, School of Science and Technology. Exhibit 7. The Commonwealth of Massachusetts regulates 6 PFAS substances in drinking water and under the Massachusetts Contingency plan at part-per-trillion level concentrations.

⁵⁴ See MassDEP, *Per- and Polyfluoroalkyl Substances (PFAS)*, available at <https://www.mass.gov/info-details/per-and-polyfluoroalkyl-substances-pfas#what-are-pfas-and-why-are-they-a-problem?>. Exhibit 8.

in our homes every day, including non-stick cookware, water-repellant clothing, stain resistant fabrics and carpets, dental floss, and food packaging. PFAS are a public health perfect storm because they are so numerous and widespread, cause adverse health effects at extremely low concentrations, are highly mobile in the environment, and are persistent both in the environment and in human bodies, causing bioaccumulation.⁵⁵

It is almost certain that the leachate at the Bourne Landfill is contaminated with PFAS. When products containing PFAS enter landfills, as either MSW or incinerator ash waste, they inevitably leach into the air, soil, and water.⁵⁶ Landfill leachate is formed when water comes into contact with buried waste and draws out chemicals from the waste. Because of the prevalence of PFAS in buried waste, landfill leachate is often highly contaminated with PFAS. For example, the Michigan Waste & Recycling Association and Michigan Department of Environmental Quality recently conducted a statewide study on PFOS and PFOA in landfill leachate and detected these toxic chemicals in *all* of the leachate samples taken in the study.⁵⁷ The PFOA levels ranged from 240 to 3,200 ppt and the PFOS levels ranged from 100 to 710 ppt.⁵⁸ Notably, the state only tested for two of the over 9,000 PFAS compounds. In another statewide study, the Michigan Department of Environment, Great Lakes, and Energy tested 42 wastewater treatment plants for PFOA and PFOS and found that “the detection frequency of PFOA and PFOS in 54 influents of [the tested] WWTPs was 76% for both compounds and the detection frequency in 80 effluents of [the tested] WWTPs was 94% for PFOA and 88% for PFOS.”⁵⁹ PFAS that enters WWTPs generally ends up in the sludge, which is often used as a soil amendment, landfilled, or incinerated, creating the potential for downstream contamination of soil or groundwater.

Moreover, ISWM has functionally admitted the existence of a significant amount of PFAS present in the leachate. The facility recently secured \$500,000 to launch a leachate pretreatment pilot program specifically designed to handle PFAS. Daniel Barrett, ISWM general manager, explained that the purpose of the program is to open up more opportunities with more wastewater facilities to dispose of the Bourne Landfill’s leachate.⁶⁰ Noting increasing PFAS regulations on wastewater facilities and improvements in technology that enable better detection of PFAS, Barrett argued that the pilot program would allow ISWM to stay ahead of the regulatory curve.⁶¹ Thus, Bourne Landfill almost certainly produces leachate contaminated with PFAS, and ISWM already knows it exists at potentially unacceptable concentrations.

⁵⁵ United States EPA, *Basic Information on PFAS*, available at <https://www.epa.gov/pfas/basic-information-pfas>. Exhibit 9.

⁵⁶ Landfill liners themselves contain PFAS chemicals.

⁵⁷ Michigan Waste & Recycling Association, *Statewide Study on Landfill Leachate PFOA and PFOS Impact Technical Report*, 21 (Mar. 1, 2019). Exhibit 10.

⁵⁸ *Id.*

⁵⁹ AECOM, *Evaluation of PFAS in Influent, Effluent, and Residuals of Wastewater Treatment Plants (WWTPs) in Michigan*, 26 (Apr. 2021) (prepared for Michigan Department of Environment, Great Lakes, and Energy), available at https://www.michigan.gov/documents/egle/wrd-pfas-initiatives-statewide-full-report_722902_7.pdf. Exhibit 11.

⁶⁰ Michael J. Rausch, *ISWM Head Seeks \$500,000 for Wastewater Treatment Program* (Nov. 4, 2020), available at https://www.capenews.net/bourne/news/iswm-head-seeks-500-000-for-wastewater-treatment-program/article_c7f7832b-aaf8-5ec1-83b9-545e667bafef.html. Exhibit 12.

⁶¹ *Id.*



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ii. Groundwater

All landfills leak toxic chemicals and contaminate the environment. If Bourne Landfill's leachate is contaminated with PFAS, the groundwater is as well. The landfill's leachate is almost certainly contaminated with PFAS,⁶² and the region's groundwater is especially sensitive to contamination. As the Cape Cod Regional Policy Plan noted, "Cape Cod groundwater is derived solely from precipitation and is stored in sandy glacial deposits that comprise Cape Cod's aquifer as the groundwater flows to the coast. The aquifer deposits are generally very permeable, making them ideal for development of high yielding water supplies, but simultaneously *vulnerable to contamination from land uses in their watersheds.*"⁶³ Moreover, while one or two composite liners may delay the release of leachate into the environment and groundwater contamination, they do not prevent it, and the failure of these double liner systems is not only inevitable, but often rapid. EPA has itself stated that, "no liner... can keep all liquids out of the ground for all time. Eventually liners will either degrade, tear, or crack and will allow liquid to migrate out of the unit."⁶⁴

Leachate generation can continue for thousands of years, long after a landfill's operations have ceased.⁶⁵ Once a landfill cell is full, it is covered with gravel, a flexible plastic cap, and some sod. Landfill operators are then required to monitor the closed landfill for 30 years.⁶⁶ Unfortunately, the plastic caps develop holes over time, letting in more rain and snow, which leads to the production of more leachate and soil and groundwater contamination.

As described in ISWM's SSEIR, the Facility's leachate collection and storage systems for Phases 3-9 include double composite geosynthetic clay liners and 60-mil HDPE geomembranes.⁶⁷ Phases 1A, 1B, and 1C have no liner, and Phase 2 has a single composite liner.⁶⁸ This system is not sufficient to prevent toxic chemicals such as PFAS from leaking and contaminating the soil and water, and there is evidence that this contamination has already started to occur. ISWM's own report indicates that the groundwater surrounding the facility has been contaminated:

⁶² *Supra* Part III.A.i.

⁶³ *Cape Cod Regional Policy Plan*, *supra* note 2, at 27.

⁶⁴ Unites States EPA, *Hazardous Waste Management System: Permitting Requirements for Land Disposal Facilities*, 47 Fed. Reg. 32274, 32284 (July 26, 1982). Exhibit 13. For example, a geomembrane compacted clay composite liner system that was used to contain MSW landfill leachate was evaluated for 14 years and "field observation of the geomembrane revealed many defects, including holes, patches, and cracks," and "contaminant modelling of the entire lagoon liner suggest[ed] that the geomembrane liner most likely stopped being effective as a contaminant barrier to ionic species sometime between 0 and 4 years after the installation." R. Kerry Rowe, Henri P. Sangam & Craig B. Lake, *Evaluation of an HDPE Geomembrane After 14 Years as a Leachate Lagoon Liner*, 40 Canadian Geotechnical Journal 536 (June 2003), available at https://www.researchgate.net/publication/233524743_Evaluation_of_an_HDPE_geomembrane_after_14_years_as_a_leachate_lagoon_liner. Exhibit 14.

⁶⁵ Landfills developed by the Roman Empire 2,000 years ago are still producing leachate. *See also* G. Fred Lee & Associates, *Flawed Technology of Subtitle D Landfilling of Municipal Solid Waste*, 6 (Jan. 2006). Exhibit 15.

⁶⁶ 40 C.F.R. § 264.117. Exhibit 16.

⁶⁷ *Single Supplemental Environmental Impact Report*, *supra* note 3, at 8.

⁶⁸ *Id.*

The nature of the groundwater contamination at the Facility is nitrates, volatile organic compounds and heavy metals. Historically, eight compounds (arsenic, cadmium, lead, benzene, 1,2-dichloroethane, 1,4-dichlorobenzene, naphthalene and vinyl chloride) have been detected in groundwater samples at concentrations exceeding the GW-1 standards. Historically, four compounds (iron, manganese, total dissolved solids, and chloride) have been detected in groundwater samples at concentrations exceeding Secondary Maximum Contaminant Levels (SMCL). Sodium has been detected at concentrations exceeding the Massachusetts Drinking Water Guideline.⁶⁹

Additionally, Phase 9 of the expansion will be constructed above portions of the Landfill that will receive an intermediate cover system instead of a permanent cover system.⁷⁰ These areas will remain uncovered for several years before the Phase 9 filling occurs on them, increasing the likelihood of leakage and soil and groundwater contamination. Further, ISWM intends to utilize the existing 22+ year old leachate collection system to manage leachate from Phase 9 – expected to operate until 2040, and, indeed well into the distant future. The integrity and adequacy of the existing aging leachate collection system is questionable, as is the system's ability to manage these wastes adequately.

B. Incinerator Waste Buried at the Bourne Landfill is Extremely Toxic and Contaminates the Leachate and Groundwater, Endangering the Aquifer

ISWM's contract to accept ash from SEMASS runs through to the end of 2021, with options to extend.⁷¹ As a result, if the Phase 7, 8, and 9 expansion is permitted, 86% of the Facility's waste stream will continue to be comprised of toxic incinerator ash.⁷² Incinerator ash is dangerous to human health, public safety, and the environment. The incineration process produces two types of ash: fly ash from the air pollution control equipment, and bottom ash, which is the non-combustible residue remaining after combustion. Fly ash in particular has a high concentration of toxic compounds, and over the years has become more contaminated as improved air filtration equipment effectively removes more pollutants prior to emission.⁷³ These toxic compounds include dioxins, polychlorinated biphenyls (PCBs), polychlorinated

⁶⁹ *Final Comprehensive Site Assessment*, *supra* note 7, at 5-6.

⁷⁰ *Single Supplemental Environmental Impact Report*, *supra* note 3, at 5.

⁷¹ *Single Supplemental Environmental Impact Report*, *supra* note 3, at 1.

⁷² Bourne accepts approximately 44,000 tons of bottom ash each year. Therefore, the total amount of ash accepted by Bourne is over 230,000 tons every year, significantly more than the stated 189,000 tons.

⁷³ Global Alliance for Incinerator Alternatives, *Incinerators Trash Community Health*, 5 (June 2008), available at <https://www.no-burn.org/wp-content/uploads/Incinerators-Trash-Community-Health.pdf>; Exhibit 21. IPEN, *After Incineration: The Toxic Ash Problem* (Apr. 2005), available at https://ipen.org/sites/default/files/documents/ipen_incineration_ash-en.pdf. Exhibit 22.

naphthalenes (PCNs), and heavy metals, including lead, mercury, cadmium, and arsenic.⁷⁴ Dioxins have been described as the most toxic chemicals known to mankind and are recognized human carcinogens. Lead is known to cause cognitive and behavioral development in children. Mercury is known for its adverse impacts on the central nervous system, kidneys, and developing fetus. All of these compounds are known to be toxic to humans and animals.⁷⁵

Ash generated by municipal solid waste incinerators constitutes hazardous waste. However, EPA allows for the highly toxic fly ash to be diluted prior to toxicity testing by mixing it with bottom ash and lime.⁷⁶ Diluting the fly ash allows incinerators to avoid hazardous waste regulations, but the ash itself is no less dangerous – the same toxic chemicals are merely spread out over a larger volume of combined ash. Further, incineration increases the mobility and bioavailability of toxic metals compared with raw municipal waste.⁷⁷ The potential for leaching is also greatest under acidic conditions, which occur when solid waste breaks down into organic acids.⁷⁸ Given that the Bourne Facility was originally used for solid waste, soil acidification has already likely occurred and may continue to do so, which will increase the risk of leaching and contaminating water resources. Ultimately, the larger the Bourne Landfill is, the more dangerous and toxic incinerator ash it will store - permanently.

Similar to the process by which PFAS contaminates the leachate and groundwater, the other toxics in incinerator ash likely seep into these water resources. Given ISWM's current practice of abusing the allowance of landfill "cover," the known negative consequences of toxics present in the ash, and the likelihood that the toxics seep into the leachate and groundwater, the proposal is inconsistent with the Water Resources goal and objectives. An expansion of ISWM's already flawed practices should be out of the question.

V. The Proposed Expansion Does Not Meet the Goals Adopted in M.G.L. Chapter 30, Section 62, as Amended by Chapter 8, An Act Creating a Next-Generation Roadmap for Massachusetts Climate Policy (Roadmap Law).

Climate change driven by human activity resulting in the atmospheric accumulation of greenhouse gases poses existential threats to Cape Cod based on this landform's origin as a remnant of previous climate conditions. Recognizing this, the Cape Cod Regional Policy Plan was amended earlier this year to integrate a new emission reduction goal and related regional performance measure:

⁷⁴ Jeremy Thompson & Honor Anthony, *The Health Effects of Waste Incinerators*, 4 Report of the British Society for Ecological Medicine, 42-44 (2d ed. 2008), available at <https://www.ipcn.nsw.gov.au/resources/pac/media/files/pac/project-submissions/2018/04/eastern-creek-energy-from-waste-facility-ssd-6236/20180521t165555/incinerator-report-health-effects-british-society-for-medicine.pdf>. Exhibit 23.

⁷⁵ *Id.*

⁷⁶ Global Alliance for Incinerator Alternatives, *supra* note 80, at 5.

⁷⁷ *Id.*

⁷⁸ Michelle Allsopp, Pat Costner & Paul Johnston, *Incineration and Human Health: State of Knowledge of the Impacts of Waste Incinerators on Human Health*, Greenpeace Research Laboratories (Mar. 2001), available at <https://www.greenpeace.to/publications/euincin.pdf>. Exhibit 24.

- **Climate Mitigation Goal:** “To support, advance and contribute as a region to the Commonwealth’s interim and long-term greenhouse gas reduction goals and initiatives, including a state-wide net zero carbon target by 2050.”
- **Regional Performance Measure:** “Total metric tons of carbon dioxide equivalent (MTCO_{2e}) of greenhouse gas emissions: Greenhouse gas emissions are contributing to climate change, which threatens the natural, built and community systems on Cape Cod. The Commission developed a baseline greenhouse gas emissions inventory for the region. The inventory estimates emissions from Barnstable County for the Stationary Energy, Transportation, Industrial Processes and Product Use, Agriculture, Land Use, Land Use Change, Forestry, and Waste sectors. The inventory is reproducible through a documented methodology, and changes in each identified sector’s emissions can be tracked. Decreases in emissions will contribute to slowing the rate of climate change.”

According to the Commission’s baseline inventory, the Bourne Landfill is one of the largest single sources of greenhouse gas emissions on the Cape, contributing 10,064 MTCO_{2e} annually according to the facility’s state reporting.⁷⁹ This substantial carbon footprint is attributable largely to historical operations. As ISWM acknowledges in its SSEIR, Phases 7, 8, and 9 will result in the emission of significant additional quantities of landfill gas,⁸⁰ including heat-trapping methane and carbon dioxide.⁸¹

Despite this, ISWM has not acknowledged this mitigation goal and the Application is not responsive to the critical regional need to rapidly reduce near-term emissions consistent with the Commonwealth’s “50% by 2030” goal while ensuring progress toward the 2040 target and its net zero goal by 2050.

This is problematic for many reasons. Landfill gas contributes significantly to climate change and is a serious public safety and health concern because it is flammable, includes toxic and heat-trapping gases, migrates through soil, accumulates in confined spaces, causes very strong odors, and leads to asthma and other serious health problems.⁸² Methane, the leading constituent, is a potent greenhouse gas.⁸³ Methane is also known to contribute to smog, aggravate asthma, and cause permanent lung damage and other serious health effects.⁸⁴ Carbon dioxide, which accounts for much of the remaining fraction, is the leading greenhouse gas.

⁷⁹ Cape Cod Commission, *Cape Cod Climate Action Plan – Draft for Public Comment*, 65 (Apr. 2021).

⁸⁰ Landfill gas is produced by anaerobic bacteria that consume organic matter in municipal solid waste and is comprised of methane (50-55%), carbon dioxide (45-50%), and small amounts of oxygen, nitrogen, and dangerous gases such as volatile organic compounds and hydrogen sulfide. United States EPA, *Basic Information About Landfill Gas*, available at <https://www.epa.gov/lmop/basic-information-about-landfill-gas>. Exhibit 25.

⁸¹ *Single Supplemental Environmental Impact Report*, *supra* note 3, at 16.

⁸² Erica Gies, *Landfills Have a Huge Greenhouse Gas Problem. Here’s What We Can Do About It*, ENSIA, (Oct. 26, 2016), available at <https://ensia.com/features/methane-landfills/>. Exhibit 26.

⁸³ “Methane is a potent greenhouse gas 28 to 36 times more effective than CO₂ at trapping heat in the atmosphere over a 100-year period.” *Basic Information About Landfill Gas*, *supra* note 87.

⁸⁴ *Id.*



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The Bourne Landfill is the only active municipal solid waste disposal facility on the Cape, and it includes a number of closed cells. MSW landfills are the third-largest source of human-related methane emissions in the United States, accounting for approximately 15.1 percent of these emissions in 2018.⁸⁵ Although the Bourne Landfill accepts primarily ash waste, it also accepts up to 30,000 tons per year of MSW. Every additional ton of organic material buried results in future production of landfill gas.

To mitigate the dangerous effects of landfill gas generated at the Facility, ISWM uses a gas collection system and flare for thermal destruction.⁸⁶ Additionally, ISWM plans to deploy new collection infrastructure in the expanded facility. However, these measures are not sufficient to prevent the emission of toxic and climate-warming landfill gases. Methane and other dangerous constituents of landfill gas *always* escape the landfill, even if utility flares are utilized or there is a gas-to-energy system.

Further, and despite ISWM's claim that they capture 95 percent of all gas generated at the Landfill, it is impossible to accurately determine how much methane is produced by a landfill or what percentage of it is ultimately captured in a flare or landfill to energy system. According to Kerry Kelly, Senior Director of Federal Affairs for Waste Management, "it's simply not possible to accurately assess methane leakage. You can measure how much gas you're collecting. You can't measure how much gas the landfill actually generates."⁸⁷ In fact, estimates by USEPA and scientists outside of the waste industry run from 10 to 90 percent gas capture over the life of the landfill – a large margin for error, especially when every ton of methane emitted matters.

ISWM's proposed landfill expansion will inevitably increase greenhouse gas emissions because the larger the landfill, and the more waste it accepts (particularly organics, which make up more than half of MSW), the more methane it will produce and release into the environment. Landfill gas contributes significantly to climate change and is a serious threat to our environment.⁸⁸ In fact, landfills are the fourth largest contributors to climate change.⁸⁹ A study released in February 2016 indicates that, because of climate change, sea levels along the Massachusetts coastline and other areas of New England are expected to continue rising and that sea level rise in our region will outpace other parts of the world.⁹⁰ The study found that while the global sea level rose by about 5.4 inches between 1900 and 2000, the water rose 9.3 inches in Revere, MA.

Throughout New England and beyond, coastal management agencies and public officials are working diligently to identify and minimize environmental and public health risks associated

⁸⁵ *Id.*

⁸⁶ *Single Supplemental Environmental Impact Report, supra* note 3, at 2.

⁸⁷ Erica Gies, *supra* note 89.

⁸⁸ Relevantly, Bourne relies on a report from 2003 to assert that the proposed Facility will not constitute a danger to the public health, safety, or the environment from anticipated emissions. *Single Supplemental Environmental Impact Report, supra* note 3, at 53.

⁸⁹ *How Do Landfills Contribute to Global Warming?*, Greentumble (Aug. 23, 2016), available at <https://greentumble.com/how-do-landfills-contribute-to-global-warming/>. Exhibit 27.

⁹⁰ Matt Rocheleau, *The Sea Levels are Rising Fast – and Even Faster in Massachusetts*, The Boston Globe, (Feb. 25, 2016), available at <https://www.bostonglobe.com/metro/2016/02/25/sea-level-rise-here-was-quicker-century-than-elsewhere-and-that-bodes-ill-for-future/t7XOCWqGsnW1kPKH84W5BJ/story.html>. Exhibit 28.



with facilities and infrastructure that could be negatively impacted by climate change and sea level rise. Efforts to mitigate emissions and protect public health, the environment, and coastal infrastructure from impacts of climate change are also well underway across Cape Cod. The proposed expansion of the Bourne Landfill is completely out of step with these efforts.

To reduce harmful methane emissions from continued operations, ISWM should be required to implement programs that maximize diversion of all types of organic waste and minimize the quantity of methane-generating materials going into the Landfill. For example, ISWM should continue to work with MassDEP to eliminate all food, yard waste, textiles, cardboard, and paper from this facility⁹¹ while offering curbside pickup of organics in communities contracted to deliver solid waste to the Landfill. ISWM could also generate methane safely, with minimal environmental releases, through the low-heat anaerobic digestion of diverted organic materials or biogas-to-energy, as suggested in its SSEIR.⁹² These actions would drastically reduce the amount of methane produced at the Bourne Landfill and also extend its existing capacity, thereby eliminating the need for the proposed expansion.

Further, ISWM should provide a full accounting of current and projected annual greenhouse gas emissions associated with landfill operations based on present capacity and each individual proposed phase of expansion through its projected lifetime. The analysis should cover anticipated and alternative scenarios for the incoming waste stream, including possible destinations for waste from southeastern Massachusetts other than SEMASS and the Bourne Landfill. Additionally, on-site and off-site mitigation options capable of supporting ISWM operation with emissions declining toward net zero or net negative by 2050 should be identified.

MassDEP should issue a negative Determination of Site Suitability unless and until ISWM takes the above actions and demonstrates that the proposed expansion is consistent with the climate change mitigation goal in the amended Roadmap Bill and Cape Cod Regional Policy Plan.

VI. 310 CMR 16.40(c) The Proposed Landfill Expansion Will Have an Adverse Impact on a Species of Special Concern

The entire 12-acre parcel and portions of the 25-acre parcel are located within mapped habitat of the Eastern Box Turtle, which is state-listed as a species of Special Concern.⁹³ This species and its habitat are protected pursuant to the Massachusetts Endangered Species Act (MESA; MGL c.131A) and its implementing regulations (321 CMR 10.00).⁹⁴

The landfill expansion is anticipated to result in a taking of Eastern Box Turtle habitat and will require a Conservation and Management Permit (CMP) pursuant to 321 CMR 10.23.⁹⁵ In order for the Project to qualify for a CMP, ISWM must demonstrate that the Project has “avoided, minimized and mitigated impacts to state-listed species consistent with the following

⁹¹ These materials should also not be burned at SEMASS, but rather similarly diverted.

⁹² *Single Supplemental Environmental Impact Report*, *supra* note 3, at 22.

⁹³ *Expanded NPC Certificate*, *supra* note 11, at 6.

⁹⁴ *Id.*

⁹⁵ *Id.*



performance standards: (a) adequately assess alternatives to both temporary and permanent impacts to the state-listed species, (b) demonstrate that an insignificant portion of the local population will be impacted, and (c) develop and agree to carry out a conservation and management plan that provides a long-term net benefit to the conservation of the state-listed species."⁹⁶

ISWM has not sufficiently demonstrated that the Project meets these performance standards. Although ISWM is working with the Natural Heritage and Endangered Species Program (NHESP) to submit a CMP that will address the affected areas, this plan is only in its conceptual stages.⁹⁷ ISWM has identified land for potential mitigation but has not definitively determined that this land is suitable, nor has it purchased this land or placed it under permanent protection.⁹⁸ *Therefore, the proposed expansion will have an adverse impact on a species of special concern and ISWM's application should be disapproved.*

VII. Conclusion

Thank you for the opportunity to provide these comments. For the reasons discussed above, the signatories oppose the Landfill expansion and ask that MassDEP issue a negative Determination of Site Suitability.

Respectfully submitted,

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⁹⁶ *Id.*

⁹⁷ *Single Supplemental Environmental Impact Report, supra* note 3, at 13.

⁹⁸ *Id.*



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EXHIBIT 1



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Joint Environmental Comments on Proposed Changes to Waste Incineration Regulations in the Renewable Energy Portfolio Standard (225 C.M.R. 14.00 and 225 C.M.R. 15.00)

Conservation Law Foundation; Global Alliance for Incinerator Alternatives; Acadia Center; Alliance for Health and Environment; Berkshire Environmental Action Team; Clean Water Action; Climate Action Now Western Massachusetts; Cooperative Energy, Recycling, and Organics; Environmental League of Massachusetts; Institute for Local Self Reliance; Massachusetts Sierra Club; MASSPIRG; No Fracked Gas in Mass; Partnership for Policy Integrity; Sustainable Wellesley; Toxics Action Center; Judith Enck, founder Beyond Plastics, former EPA Regional Administrator; Mike Ewall, Esq., Executive Director Energy Justice Network

Thank you for the opportunity to provide comments regarding the proposed changes to Massachusetts' Renewable Portfolio Standard ("RPS") Class I and RPS Class II Regulations. These comments were prepared by the Conservation Law Foundation ("CLF")¹ and are being submitted on behalf of the groups and individuals listed above (collectively "Commenters").

In the RPS Class II "waste-to-energy" section of the proposed changes, DOER proposes increasing the amount of energy our utilities must purchase from qualifying facilities from 3.5% to 3.7% for 2019 through 2025. DOER also proposes increasing the RPS Class II waste-to-energy rate to align with the RPS Class II Renewable Energy alternative compliance rate, effective this year.

The Commenters oppose both the proposed increase in energy to be purchased from incinerators, and proposed increase in rate because:

- 1) Incinerators do not produce renewable energy, and should not benefit from programs meant to support renewable energy;**
- 2) Incinerators' toxic emissions and ash are bad for the environment, public health, and the economy;**

¹ Portions of these comments were previously published on CLF's website in a blog post authored by Ahmina Maxey, the U.S. and Canada Regional Coordinator with Global Alliance for Incinerator Alternatives. See Ahmina Maxey, *What's Wrong with Burning Our Trash, Anyway?* So very, very much, <https://www.clf.org/blog/whats-wrong-with-burning-our-trash-anyway/>.



3) Incinerators in Massachusetts are disproportionately located in already overburdened Environmental Justice Communities;

4) The RPS should not be adjusted to prop up and extend the life of outdated, aging incinerators;

5) Incinerators are more expensive and provide fewer jobs than the alternatives;

6) Any changes to the RPS should be made after the 2020-2030 Solid Waste Master Plan is adopted.

RPS and programs like it are meant to support and stimulate the sustainable energy field and to protect the environment, yet as analyzed in a recent Boston College Law Review article, incineration is neither economically sound nor environmentally sustainable:²

Because [Waste-To-Energy] superficially appears to be renewable, it was able to become a thriving industry by taking government subsidies that should have been reserved for wind, solar, and geothermal energy. Thus this “dirty” industry has continued to benefit under federal and state programs, while they simultaneously expel persistent, bioaccumulative toxics into the environment.³

1. Incinerators do not produce renewable energy, and should not benefit from programs meant to support renewable energy.

Incineration, often referred to as “waste-to-energy” by the industry, is a high-heat waste treatment technology that involves burning municipal solid waste (“MSW”), a.k.a. the combination of commercial, residential, and industrial wastes. Massachusetts’ MSW comprises primarily food, yard waste, cardboard, paper, textiles, metals, glass, construction and demolition materials, plastics, household hazardous waste, and electronics.⁴ High-heat incineration converts these materials into bottom ash, fly ash, combustion gases, air pollutants, wastewater, wastewater treatment sludge, and heat.

Municipal Solid Waste comprises many materials that are not “renewable.” Incineration of MSW that contains fossil fuels, such as plastics and rubber, releases the bound carbon stored in those

² Hale McAnulty, *A Dirty Waste – How Renewable Energy Policies Have Financed the Unsustainable Waste-To-Energy Industry*, 60 B.C.L. Rev. 385 (2019), <https://lawdigitalcommons.bc.edu/bclr/vol60/iss1/9>.

³ *Id.* at 412.

⁴ See Massachusetts DEP, Overall Waste Composition By Primary Material Category—Winter and Fall 2016 Sampling, <https://www.mass.gov/doc/summary-of-waste-combustor-class-ii-recycling-program-waste-characterization-studies-includes/download>.

fossil fuels.⁵ According to the U.S. Environmental Protection Agency (“EPA”), in 2016, MSW incineration released 11.0 million metric tons of carbon dioxide equivalent (“CO₂e”) greenhouse gases.⁶ Per unit of electricity generated, waste incineration emits more carbon dioxide (2,988 lbs/MWh) than coal-fired power plants (2,249 lbs/MWh).⁷

Moreover, according to EPA, zero waste practices such as source reduction, recycling, and composting provide a significant net life-cycle reduction in greenhouse gas emissions compared to incineration.⁸ And in fact, these zero waste practices conserve significantly more energy than can be generated via incineration.⁹ Source reduction, recycling, and composting can conserve three to five times more energy, per ton of waste, than can be generated by incinerating that same ton of waste.¹⁰ Tellus Institute, in its “Assessment of Materials Management Options for the Massachusetts Solid Waste Master Plan Review” submitted to the Massachusetts Department of Environmental Protection (“DEP”), estimated that waste diversion through recycling saves 1,665 kWh over incineration per ton of solid waste.¹¹ According to another estimate, the amount of energy wasted by not recycling aluminum and steel cans, paper, printed materials, glass, and plastic equals the annual output of 15 medium-sized power plants.¹²

In 2016, more than 70% of the MSW incinerated in Massachusetts was paper, plastic, metal, glass, or organic material,¹³ most of which could have been recycled or composted. In terms of

⁵ Tellus Institute, Assessment of Materials Management Options for the Massachusetts Solid Waste Master Plan Review 9, 11 (2008), https://www.tellus.org/pub/Final_Report-Materials_Management_Options_for_MA_SW_Master_Plan_Review_-_With_Appendices_-_12-08.pdf. See also U.S. EPA, Solid Waste Management and Greenhouse Gases, a Life-Cycle Assessment of Emissions and Sinks 76 (3d ed. 2006) (“Combustion of plastics results in substantial net [greenhouse gas] emissions..... This result is primarily because of the high content of nonbiomass carbon in plastics.”).

⁶ EPA, Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990–2016, 3-51–3-53 (2018).

⁷ Morris, Jeffrey, Bury or Burn North America MSW? LCAs Provide Answers for Climate Impacts & Carbon Neutral Power Potential, Environmental Science & Technology, Volume 44, NO. 20, September, 2010. See also Energy Justice Network, Trash Incineration More Polluting Than Coal, <http://www.energyjustice.net/incineration/worsethancoal> (when “biogenic” emissions are included in the calculus, incineration releases carbon dioxide “at a rate 2.5 times that of coal power plants”).

⁸ U.S. EPA, *supra* note 5, at 116–19.

⁹ Marie Donahue, Institute for Local Self-Reliance, Waste Incineration: A Dirty Secret in How States Define Renewable Energy 11 (2018), <https://ilsr.org/wp-content/uploads/2018/12/ILSRIncinerationFinalDraft-6.pdf>.

¹⁰ *Id.*

¹¹ Tellus Institute, *supra* note 5, at 3, 51–52.

¹² Recycling Investment Saves Energy, S. 3654, 109th Cong. § 2 (2006).

¹³ See Massachusetts DEP, *supra* note 4.



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greenhouse gas generation and energy production, even rudimentary zero waste alternatives are far more advantageous than using these materials to generate non-renewable energy.¹⁴

2. Incinerators' toxic emissions and ash are bad for the environment, public health, and the economy.

Waste incineration not only emits greenhouse gases at a much higher rate than other non-renewable energy sources, but it also releases significant levels of toxic pollutants to nearby communities. On average, to produce the same amount of energy as a coal power plant, waste incinerators release:

- 28 times as much dioxin;
- twice as much carbon monoxide;
- three times as many nitrogen oxides;
- 6–14 times as much mercury;
- nearly six times as much lead; and
- 70% more sulfur dioxides.¹⁵

Incinerators are also significant sources of particulate matter emissions.¹⁶ Inhalation of particulate matter, from a variety of sources, has been linked to respiratory and cardiovascular problems and may cause approximately 2 million excess deaths worldwide each year.¹⁷ And a 2011 study published in the *American Economic Review* found that among U.S. industries, waste incineration has the highest ratio of negative economic impacts from air pollution compared to the financial value added by the industry.¹⁸

¹⁴ See Tellus Institute, *supra* note 5, at 1 (“From a lifecycle environmental emissions and energy perspective, source reduction, recycling, and composting are the most advantageous management options for all (recyclable/compostable) materials in the waste stream.”).

¹⁵ Energy Justice Network, *supra* note 7; see also Environmental Integrity Project, *Dirtying Maryland’s Air by Seeking a Quick Fix on Renewable Energy?* 3–8 (2011), http://www.environmentalintegrity.org/wp-content/uploads/2016/11/FINALWTE_INCINERATORREPORT-101111.pdf (Maryland’s two major incinerators release mercury, lead, nitrogen oxides, and carbon monoxide at significantly higher rates than Maryland’s four coal-fired power plants).

¹⁶ The New School, *U.S. Municipal Solid Waste Incinerators: An Industry in Decline* 34 (2019), https://tishmancenter.org/wp-content/uploads/2019/05/CR_GaiaReportFinal_05.21.pdf.

¹⁷ Howard, C. Vyvyan, *Statement of Evidence, Particulate Emissions and Health, Proposed Ringaskiddy Waste-to-Energy Facility* 4–5 (2009).

¹⁸ Muller, Nicholas Z., Robert Mendelsohn, and William Nordhaus, *101 Environmental Accounting for Pollution in the United States Economy*, *American Economic Review* 5, 1649, 1664–69 (2011).



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Some newer incinerators are equipped with air pollution control devices such as air filters, but these filters do not efficiently prevent the escape of ultrafine particular matter.¹⁹ And in any event, filters do not eliminate pollutants; they merely capture those pollutants and transfer them to incinerator by-products such as ash and wastewater treatment sludge.²⁰

Incineration is often touted as a landfill alternative, but after incineration, roughly 25% of the weight of incoming waste remains in the form of residual ash.²¹ This ash, which contains high levels of dioxin, mercury, lead, polychlorinated biphenyls (“PCBs”), and polychlorinated naphthalenes (“PCNs”),²² is disposed of in landfills. Dioxins have been described as the most toxic chemicals known to mankind and are recognized human carcinogens; mercury and lead impair cognitive and behavioral development in children and impact the central nervous system, kidneys, and developing fetuses. When incinerator ash is deposited in landfills, these pollutants eventually leach out and pose an immediate threat to groundwater, drinking water, and surface water bodies.²³ In 2004, Massachusetts’ waste incinerators produced approximately 790,000 tons of combustion ash, 700,000 tons of which was deposited in landfills.²⁴

3. Incinerators in Massachusetts are disproportionately located in already overburdened Environmental Justice Communities.

The impacts of incinerators’ emissions and toxic ash are disproportionately borne by already overburdened environmental justice (“EJ”) communities. Most waste incinerators in the U.S. are located in EJ communities,²⁵ and incinerators in Massachusetts are no exception.

In 2002, Massachusetts established an Environmental Justice Policy (“EJ Policy”), revised most recently in 2017, to help address the disproportionate share of environmental burdens

¹⁹ Vyvyan, *supra* note 17, at 21–22.

²⁰ Global Alliance for Incinerator Alternatives, *Incinerators: Myths vs. Facts 1* (2010), https://www.weal.org/ARCHIVE%20Waste/Incinerator_Myths_vs_Facts.pdf.

²¹ U.S. EPA, *Municipal Solid Waste in the United States: 2011 Facts and Figures 143–44* (2013), https://archive.epa.gov/epawaste/nonhaz/municipal/web/pdf/mswcharacterization_fnl_060713_2_rpt.pdf.

²² Global Alliance for Incinerator Alternatives, *supra* note 20, at 1; Jindrich Petrlik and Ralph Anthony Ryder, *After Incineration: The Toxic Ash Problem 4–6* (2005), https://ipen.org/sites/default/files/documents/ipen_incineration_ash-en.pdf; Michelle Allsopp, Pat Costner, and Paul Johnston, *Incineration and Human Health 11–12* (2001).

²³ Allsopp, *supra* note 22 at 54–56.

²⁴ Massachusetts DEP, *Solid Waste Master Plan: 2006 Revision 43* (2006), <https://www.mass.gov/files/documents/2016/08/vo/swmprev.pdf>.

²⁵ The New School, *supra* note 16, at 4 (“58 incinerators, or 79 percent of all MSW incinerators in the U.S. are located in environmental justice communities.”).



experienced by lower-income families and communities of color.²⁶ The EJ Policy is designed to help protect these communities from environmental pollution and promote community involvement in planning and environmental decision-making to maintain and/or enhance the environmental quality of their neighborhoods.²⁷

The EJ Policy defines an EJ community as a neighborhood (or “block group”) in which either 25 percent of the households have an annual median household income less than or equal to 65 percent of the statewide median, 25 percent of the population is minority, or 25 percent of the population identifies as a household that has English isolation.²⁸ The following table identifies Massachusetts municipalities in which there are active incinerators,²⁹ and lists whether the municipality comprises an EJ population, and, if applicable, the specific EJ criteria met and the percentage of the municipality population that meets the EJ criteria.³⁰ Six of the seven incinerators in Massachusetts are located in EJ communities:

Active Incinerators	Maximum Permitted Tonnage per Year	EJ Populations Present	EJ Criteria Met	Percent of Population in EJ Block Groups
Agawam ³¹	148,920	Yes	Income	4.3%
Haverhill	602,250	Yes	Minority, Income	35%
Millbury	547,500	Yes	Income	7.2%
North Andover ³²	547,500	Yes	Minority, Income	14.6%
Pittsfield	87,600	Yes	Minority, Income	36.8%
Rochester	1,095,000	No	--	--
Saugus	547,500	Yes	Income	7.0%

²⁶ Environmental Justice Policy of the Executive Office of Energy and Environmental Affairs 2 (2017), https://www.mass.gov/files/documents/2017/11/29/2017-environmental-justice-policy_0.pdf.

²⁷ *Id.*

²⁸ *Id.* at 3.

²⁹ See Municipal Waste Combustors, <https://www.mass.gov/guides/municipal-waste-combustors>.

³⁰ Massachusetts DEP, 2010 Environmental Justice Populations, <http://www.mass.gov/anf/docs/itd/services/massgis/ej-2010-communitystatistics.pdf>.

³¹ The Agawam incinerator is located near the border with Springfield, which meets Minority, Income, and English Isolation EJ criteria, and in which 89.6% of the population is in an EJ block group.

³² The North Andover incinerator is located within one mile of Lawrence, which meets Minority, Income, and English Isolation EJ criteria, and in which 100% of the population is in an EJ block group.

For those forced to live near these facilities, the effects are dire. Throughout the U.S., many of the incinerators with the highest total emissions of lead, mercury, nitrogen oxides, sulfur dioxides, and particulate matter are located in EJ communities.³³ Exposure to these pollutants can cause a wide range of cardiovascular, respiratory, and neurological damage, and can lead to decreased life expectancy.³⁴ EJ communities face a multitude of social vulnerabilities and are often confronted with many sources of dangerous pollution.³⁵ Throughout Massachusetts and the U.S., these communities should not be forced to endure the negative impacts of other communities' waste.

4. The RPS should not be adjusted to prop up and extend the life of outdated, aging incinerators.

The proposed changes to the RPS would provide unwarranted life support to the outdated, unsafe, and unreliable incinerator facilities that disproportionately impact the Commonwealth's most vulnerable communities. Each of the incinerators in Massachusetts is at least 30 years old: the oldest, Saugus, began operating in 1975,³⁶ and the youngest, Haverhill, began operating in 1989.³⁷

Incinerators typically have a lifespan of 20–30 years,³⁸ and require increasing capital investments as they age.³⁹ Many aging incinerators in the U.S. have been unable to keep up with maintenance requirements and/or emissions limits and have been forced to shut down as a result. For example, a Detroit incinerator, operating since 1986 and increasingly unable to comply with emissions limits,⁴⁰ recently announced that it would shut down in the face of a Clean Air Act lawsuit that would have forced the incinerator to spend tens of millions of dollars to upgrade its pollution control equipment.⁴¹ A 33-year-old Wheelabrator incinerator in Baltimore, which has received an estimated \$10 million in renewable energy subsidies, emits nitrogen oxides at twice the rate of newer Maryland facilities, and would need to invest millions of dollars to comply with

³³ The New School, *supra* note 16, at 39–41.

³⁴ *Id.*

³⁵ *Id.* at 14.

³⁶ See <https://www.wtienergy.com/plant-locations/energy-from-waste/wheelabrator-saugus>.

³⁷ See <https://www.covanta.com/Our-Facilities/Covanta-Haverhill>.

³⁸ The New School, *supra* note 16, at 22; National Research Council, *Waste Incineration and Public Health* 29–30 (The National Academies Press 2000).

³⁹ The New School, *supra* note 16, at 22–23.

⁴⁰ See Rebecca Stoner, *Why Communities Across America Are Pushing to Close Waste Incinerators*, *Pacific Standard*, Dec. 12, 2018, <https://psmag.com/environment/why-communities-across-america-are-pushing-to-close-waste-incinerators>.

⁴¹ See The New School, *supra* note 16, at 15.



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new, stricter, emissions limits.⁴² An aging incinerator in Hartford, Connecticut, has been unable to afford necessary equipment upgrades and shut down for more than two months between November 2018 and January 2019 because of a mechanical failure.⁴³

Massachusetts' incinerators are, again, no exception. The Wheelabrator Saugus incinerator, operating since 1975, has suffered from regular shutdowns and outages in recent years.⁴⁴ During 2018, according to emissions data reported to DEP by Wheelabrator, either or both of the waste furnaces at the Saugus incinerator were shut down for all or part of 89 separate days.⁴⁵ These shutdowns are particularly problematic because the furnaces often emit much higher concentrations of pollutants such as carbon monoxide, sulfur dioxide, and nitrogen oxides during shutdown and startup than during normal operation. For example, during shutdown operations on December 2, 2018, the Saugus incinerator emitted average concentrations of 1,127.4 parts per million ("ppm") of carbon dioxide and 113.5 ppm of sulfur dioxide over two separate one-hour periods.⁴⁶ These average emissions significantly exceed the incinerator's Air Quality Operating Permit emissions limits of 100 ppm for carbon dioxide and 29 ppm for sulfur dioxide.⁴⁷

Shutdowns and maintenance can also blanket nearby communities with disruptive and dangerous noise pollution. During a three-week period in June and July, 2019, Wheelabrator Saugus shut down one of its steam turbines to perform necessary maintenance, resulting in loud steam venting that forced neighbors indoors and kept them awake at night.⁴⁸

⁴² See Rebecca Stoner, *supra* note 40.

⁴³ See The New School, *supra* note 16, at 24; Cole Rosengren and Rina Li, Connecticut WTE facility partially back online after double turbine failure, Waste Dive (Jan. 31, 2019), <https://www.wastedive.com/news/Materials-Innovation-Recycling-Authority-wte-double-turbine-failure/545359/>.

⁴⁴ See, e.g., Mike Gaffney, Fire Ignites in Wheelabrator Saugus boiler, Wicked Local Saugus (Sept. 30, 2015), <https://saugus.wickedlocal.com/article/20150930/news/150939906>; Mike Gaffney, Firefighters douse trash fires at Wheelabrator Saugus, Wicked Local Saugus (Aug. 2, 2017), <https://saugus.wickedlocal.com/news/20170802/firefighters-douse-trash-fires-at-wheelabrator-saugus>.

⁴⁵ Emissions data can be retrieved at <http://eeaonline.eea.state.ma.us/DEP/MWC/facilityReport.aspx>.

⁴⁶ See *id.*

⁴⁷ See Final Air Quality Operating Permit MBR-95-OPP-011A5 at 5, <https://www.mass.gov/files/documents/2019/06/27/op-wheels.pdf>.

⁴⁸ See Kristina Rex, 'No One Sleeps': Revere, Saugus Residents Frustrated By Noise From Waste Plant, CBS Boston (July 2, 2019), <https://boston.cbslocal.com/2019/07/02/revere-saugus-wheelabrator-residents-frustrated-loud-noise-waste-plant/>; Mike Gaffney, Wheelabrator Saugus temporarily stops processing waste to address noise complaints, Saugus Wicked Local (June 26,

Moreover, Wheelabrator has stated that its aging Saugus incinerator cannot comply with revised nitrogen oxides emissions limits without major modifications.⁴⁹ RPS subsidies, intended to support and spur innovation in renewable energy, should not prop up these aging, polluting incinerators.

5. Incinerators are more expensive and provide fewer jobs than the alternatives.

In part owing to the capital costs of aging facilities, waste incineration is a losing financial proposition for state and local governments. As both a means of energy generation and waste disposal, incineration is more expensive than available alternatives. According to 2010 estimates by the U.S. Energy Information Administration, both capital costs and operations and maintenance costs are higher for MSW incineration than for all other forms of electricity generation, including coal, natural gas, nuclear, biomass, solar, geothermal, and hydroelectric.⁵⁰ In light of this imbalance, incineration facilities typically derive a much larger portion of their revenue from tipping fees⁵¹ than from electricity sales.⁵²

These tipping fees are significantly more expensive than alternatives such as recycling or composting. Baltimore, for example, pays approximately \$18 per ton for recycling, but \$50 per ton in incineration tipping fees.⁵³ Hennepin county, Minnesota, pays more than \$80 per ton in incineration tipping fees, but charges only \$25 per ton for organics composting.⁵⁴ And because incineration facilities rely on tipping fees to stay financially viable, municipalities are often

2019), <https://saugus.wickedlocal.com/news/20190626/wheelabrator-saugus-temporarily-stops-processing-waste-to-address-noise-complaints>.

⁴⁹ Mike Gaffney, Proposed Wheelabrator Saugus emission control plan modification riles officials, Wicked Local Saugus (Dec. 13, 2018), <https://saugus.wickedlocal.com/news/20181212/proposed-wheelabrator-saugus-emission-control-plan-modification-riles-officials>.

⁵⁰ U.S. Energy Information Administration, Updated Capital Cost Estimates for Electricity Generation Plants 7 (2010), <http://large.stanford.edu/courses/2018/ph241/wang-k2/docs/eia-nov10.pdf>.

⁵¹ “Tipping fees . . . are charged by a waste disposal site, such as an incinerator or landfill, to a municipality or private waste hauler for each tonnage of waste deposited at the site.” The New School, *supra* note 16, at 25.

⁵² *Id.* (“Municipal solid waste incinerators rely primarily on tipping fees and secondarily on electricity sales for revenues. As an example, Covanta (which owns 22 facilities and operates 39 facilities in the U.S.), on average, derives its revenues: 71 percent from tipping fees, 18 percent from electricity sales, 5 percent from metal recycling and 6 percent from ‘other’ (i.e. revenues derived from construction revenues, resale of purchased energy, fees from operating transfer facilities, etc.).”).

⁵³ Donahue, *supra* note 9, at 14.

⁵⁴ *Id.*



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forced to enter into “put or pay” contracts with incinerators—these clauses require the municipalities to supply a minimum amount of waste or pay a penalty.⁵⁵

And despite the higher costs of incineration, incinerators generate fewer jobs than alternatives such as recycling and composting facilities. In a 2011 report, Tellus Institute estimated that composting generates five times as many jobs as incineration—and recycling twenty times as many jobs—per ton of waste disposed.⁵⁶ The Institute for Local Self Reliance has similarly estimated that composting facilities can create more than three times as many jobs as incinerators per ton of waste.⁵⁷ Tellus also estimated in its 2011 report that the implementation of “an aggressive recycling and composting program” resulting in the diversion of 75% of overall MSW by 2030, could result in the creation of 739,000 additional jobs in the U.S. compared to the status quo.⁵⁸

RPS subsidies should not support an expensive system that generates fewer jobs than zero waste alternatives.

6. Any changes to the RPS should be made after the 2020–2030 Solid Waste Master Plan is adopted.

DEP has begun holding Solid Waste Action Committee meetings of stakeholders to develop the new Solid Waste Master Plan. DEP expects to release a draft plan in the fall of 2019, and to publish a final plan by the end of 2020.⁵⁹ Goals under consideration include a 33% reduction in waste disposal by 2030 compared to 2017 waste totals.⁶⁰ In light of potentially drastic changes to the waste stream in Massachusetts, DOER should not alter RPS subsidies to waste incinerators until after the final 2020–2030 Solid Waste Master Plan is adopted.

Conclusion

Increasing the amount of energy to be purchased from aging, polluting, and expensive incineration facilities or increasing the waste-to-energy Class II rate would only serve to direct more money to existing generators without any benefit to the people of Massachusetts. Indeed, as discussed above, incinerators significantly disadvantage the Commonwealth’s people, in particular those that live in EJ communities. The RPS should not be adjusted to prop up and

⁵⁵ The New School, *supra* note 16, at 25.

⁵⁶ Tellus Institute, *More Jobs, Less Pollution: Growing the Recycling Economy in the U.S.* 34–35 (2011), https://www.nrdc.org/sites/default/files/glo_11111401a_0.pdf.

⁵⁷ Donahue, *supra* note 9, at 15.

⁵⁸ Tellus Institute, *supra* note 56, at 36.

⁵⁹ John Fischer, MassDEP, *MassDEP Updates 5* (2019), <https://recyclingworksma.com/wp-content/uploads/2019/05/MassDEP-2019-Spring-WasteWise-Forum.pdf>.

⁶⁰ John Fischer, MassDEP, *2030 Solid Waste Master Plan Discussion of Goal and Capacity Data 4* (2019), <https://www.mass.gov/files/documents/2019/06/19/swmp519.pdf>.



extend the operation of aging incineration facilities, nor should it be used to facilitate the development of new trash-burning plants, at the expense of the health and lives of residents of the Commonwealth.

Thank you again for the opportunity to comment on the proposed changes to Massachusetts' Renewable Portfolio Standard ("RPS") Class I and RPS Class II Regulations.

Very truly yours,

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Conservation Law Foundation

Global Alliance for Incinerator Alternatives

Acadia Center

Alliance for Health and Environment

Berkshire Environmental Action Team

Clean Water Action

Climate Action Now Western Massachusetts

Cooperative Energy, Recycling, and Organics

Environmental League of Massachusetts

Institute for Local Self Reliance

Massachusetts Sierra Club

MASSPIRG

No Fracked Gas in Mass

Partnership for Policy Integrity

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