



October 13, 2020

Via Email

Linda Butler, Project Manager
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Maine Department of Environmental Protection
17 State House Station
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Re: Waste Management Disposal Services of Maine's application for Landfill Expansion, Crossroads Landfill, Norridgewock, Maine (Somerset County), #S-010735-WD-YB-N

Dear Ms. Butler,

Conservation Law Foundation ("CLF") strongly opposes the Solid Waste Permit Application for Phase 14 Landfill ("Application") by Waste Management Disposal Services of Maine ("WMDSM") submitted to the Maine Department of Environmental Protection ("the Department"). While the Application is titled as an expansion of the existing Crossroads Landfill in Norridgewock, Maine, as made clear during the Department's recent hearings and as set forth below, the Application is more accurately described as one for a new landfill, albeit located one half mile from¹ the existing, operating, landfill.

As evidenced by the Department's own comments, WMDSM has not demonstrated that the new landfill, which it calls Phase 14², meets the requirements set forth in Chapters 400 and 401 of the Maine Solid Waste Management Rules ("Maine SWMR"), effective November 1998 (revisions effective 12 April 2015). Furthermore, this new landfill flies in the face of the law adopted in 1989, "This law established cornerstones that continue to guide the development of solid waste policies, planning, and facilities in Maine, including: . . . a ban on new commercial disposal facilities."³ The new landfill, coupled with a lack of restrictions on its operation,

¹ Waste Management Disposal Services of Maine, Inc., Crossroads Facility, Phase 14 Secure Landfill, Determination of Public Benefit Application, July 3, 2018, Attachment A. Measured using the key on the Site Plan shown at Figure 5, the edge of Phase 8 to the edge of the proposed Phase 14 is 2,650 feet, or one half mile.

² It is unclear why the Applicant jumps from Phase 12 to Phase 14 for the purpose of this Application. Unless numbering phases of landfills follows the convention of numbering floors in hotels and office buildings, it would appear that WMDSM has as yet undisclosed plans for another phase at the site of the existing landfill operations.

³ Maine Materials Management Plan, State Solid Waste Management and Recycling Plan 2019 Update, Maine Department of Environmental Protection, January 2019, p. 2.

undermines the State's Solid Waste Hierarchy and the goals set out in the 2019 Maine Materials Management Plan.⁴ Any large new landfill will undermine the State's need to responsibly manage waste through source reduction, recycling, and composting.

Under the terms stated by WMDSM in the Application, WMDSM would not provide a public benefit to the State of Maine.⁵ As described in the Application, WMDSM could continue to accept wastes from any of the same sources as they do now. The proposed new landfill would allow WMDSM to bury 450,000 tons a year, for 17 years, or *about 7.65 million tons of waste in Maine*.

- The 7.65 million tons could all be from out of state. In 2019 a third of what was buried at Crossroads Landfill was from out of state.⁶
- The 7.65 million tons could be from anywhere and composed of any mixture of MSW, C&D, CDD/Alternative Daily Cover/Revenue Generating Cover, or Special Wastes. In 2019 Crossroads Landfill accepted MSW from Canada and C&D from Massachusetts.⁷
- The 7.65 million tons could be buried by WMDSM as quickly as practicable. In fact, if WMDSM buries waste at the rate it did last year (more than 550,000 tons, including alternative daily cover)⁸, the new landfill would be completely filled by 2036.
- Other than the alternative daily cover buried at the landfill, which is technically classified as recycling despite ending up in the landfill, there is little to no diversion, recycling, or composting currently going on at Crossroads Facility, nor will the new landfill change that.

The new landfill would not only put groundwater and surface water resources in the region at risk, but it would also destroy more than ten acres of wetlands, release copious amount of odorous, dangerous landfill gas, and negatively impact protected views in the region. Finally, the failure of WMDSM to locate the new landfill on land it owned prior to 1989 is fatal to the Application. Accordingly, the Department should deny the Application.

⁴ Maine Materials Management Plan, State Solid Waste Management and Recycling Plan 2019 Update, Maine Department of Environmental Protection, January 2019.

⁵ As the Department is aware, CLF supports the petition currently before the Board of Environmental Protection to add Environmental Justice and Equal Protection to the Chapter 400 rules, via a new, fifth public benefit determination standard that states: "The facility operation is not inconsistent with protecting the health and welfare of local communities and is not inconsistent with ensuring equal protection and environmental justice for communities where the waste facility is proposed or operating." Maine has a duty to avoid discriminatory practices against communities that may be located near a waste disposal facility. CLF asks that the Department consider delaying its review of this Application until that new Environmental Justice standard is put in place, or at least consider the negative impact the new landfill would have on E.J. communities in the region.

⁶ 2019 Annual Report, Crossroads Landfill, Norridgewock, Maine, February 2020, Appendix A, Wastes Managed Within On-Site Secure Landfill.

⁷ Id.

⁸ 2019 Annual Report, Crossroads Landfill, Norridgewock, Maine, February 2020, Appendix A, Wastes Managed Within On-Site Secure Landfill.

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 Maine. 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, reuse, composting, and recycling as opposed to landfilling and incineration.

I. Background

A. Crossroads Landfill Facility

WMDSM owns and operates the 933 acre parcel known as the Crossroads Facility.⁹ The Crossroads Facility includes a recycling transport center, a community transfer station, a tire beneficial reuse processing facility, a woodwaste recycling program, a landfill gas energy plant, and three separate landfills (“Crossroads Facility”). WMDSM also manages the waste and recyclables collected at the Airport Transfer Station.¹⁰

The first landfill is comprised of a 4.5 acre Asbestos Landfill, as well as Phases 1-5, an 11.7 acre landfill, Phase 6 (which is located on top Phases 1-5), Phase 7 which is 4.5 acres, Phases 8A which is 13.9 acres (as well as 9.8 acres located on top of Phases 1-6), 8B with a 9.8 acre base layer, 8C which has 15.7 acre base layer (8.B and 8C will both be expanded to be built on top of Phases 7 and 9, as well), Phase 9A-C which totals 10.9 acres, and 10A-B which are 5.8 acres (as well as 2.3 acres on top of Phases 4 and 5). It is unclear from the Application, but the footprint of Phases 1-10 seems to cover about 64.8 acres. Only portions of Phase 8 (the “Operating Landfill”) is open and active. Phases 7, 9 (constructed 2001), and 10 (constructed 1995) are all double composite lined landfills.¹¹

The second landfill, or Phase 11, is a closed landfill of 18.3 acres to the southeast of the first landfill, with a double composite liner system constructed in 1998, separated from the first landfill by the Commercial Transfer Station and the Material Recovery Facility. The third landfill, or Phase 12, is a closed landfill of 7.2 acres southeast of the second landfill with a double composite liner system constructed in 2002. It is separated from the second landfill by the

⁹Determination of Public Benefit, Application, July 3, 2018, <https://www.maine.gov/dep/ftp/crossroadslandfill/application/Phase%2014%20PBD%20Application%207.2.18%20Final.pdf> page 1.

¹⁰ The Airport Transfer Station accepted a total of 6,148.3 tons in 2019. About two-thirds of the tonnage was waste, and about a third were recyclables. 2019 Annual Report, Appendices B and C.

¹¹ PHASE 14 SOLID WASTE PERMIT APPLICATION VOLUME V OF VI Site Operations Manual, Section III Leachate Management Plan, p. 4-8) https://www.maine.gov/dep/ftp/projects/crossroads-phase14/application/Ph14%20SW%20PermitApp_Vol.%20V%20Operations%20Manual.pdf

South Central Pump Station.¹² None of the three existing landfills are contiguous or connected to each other.¹³

WMDSM has operated the Crossroads Facility since 1990 after purchasing it from Consolidated Waste Solutions.¹⁴ In 2017, WMDSM increased the size of the Crossroads Facility by purchasing land to the east of the existing 3 landfills, as set forth in Appendix D to the Application for Determination of Public Benefit.¹⁵ In addition to residential, commercial and institutional MSW, WMDSM also buries front-end process residues (“FEPR”), Construction and Demolition (“CDD”) Debris and a range of special wastes including, municipal incinerator ash, wastewater treatment plant sludge, contaminated media, and light industrial solid waste, including asbestos at the Operating Landfill.¹⁶ According to WMDSM, the typical composition of waste buried each year at the Operating Landfill is 26.93% special waste, 24.1% Municipal Solid Waste, (“MSW”), 25.16% Alternative Daily Cover (“ADC,” also known as “RGC” or Revenue Generated Cover¹⁷)¹⁸, and 23.81% CDD.¹⁹ WMDSM estimates that these percentages will remain largely unchanged at the new landfill.²⁰

B. The New Landfill

WMDSM is seeking to add a new, fourth landfill at the Crossroads Facility, what it calls Phase 14.²¹ The project area for the new landfill would consist of a freestanding 48.6 acre landfill on a series of parcels technically contiguous to the Crossroads Facility, but the landfill itself would in no way be contiguous to any of the three existing landfills at Crossroads Facility, in fact it is about a half mile away from the operating portion of the first landfill.²² Once filled, the new

¹² Id., Appendix A, Figure 2.

¹³ PHASE 14 SOLID WASTE PERMIT APPLICATION VOLUME V OF VI Site Operations Manual, Section III Leachate Management Plan, p. 4-8)

https://www.maine.gov/dep/ftp/projects/crossroads-phase14/application/Ph14%20SW%20PermitApp_Vol.%20V%20Operations%20Manual.pdf

¹⁴ Waste Management Disposal Services of Maine, Inc., Crossroads Facility, Phase 14 Secure Landfill, Determination of Public Benefit Application, July 3, 2018, Executive Summary, p.i.

¹⁵ Determination of Public Benefit, Application, July 3, 2018, Appendix D.

<https://www.maine.gov/dep/ftp/crossroadslandfill/application/Phase%2014%20PBD%20Application%207.2.18%20Final.pdf>

¹⁶ Permit Application, Volume I, General Information, p. 10.

¹⁷ 2019 Annual Report, Section 2.1.

¹⁸ ADC includes boiler ash, auto shredder residue, urban fill, chips from treated utility poles, and other waste streams. 2019 Annual Report, Section 2.7.

¹⁹ Permit Application, Volume I, General Information, p. 10.

²⁰ Permit Application, Volume I, General Information, p. 10.

²¹ The development of Phase 14 is to include the following: “(1) excavation of topsoil and designated amounts of underlying soils; (2) construction of a liner and leachate collection system; (3) construction of perimeter berms and an access road; (4) construction of landfill gas and leachate transfer pipes to the existing on-site landfill gas and leachate management facilities; and (5) construction of stormwater management features including stormwater detention basins.” Permit Application, Volume I, General Information, p. 2.

²² Permit Application, Volume I, General Information, p. 2, 9.

landfill would loom up to 200 feet above the surrounding terrain.²³ The new landfill would allow 7.75 million cubic yards, or 7.65 million tons, of waste to be buried overall.²⁴ WMDSM did not suggest a cap on the number of tons it could bury a year, and this has not been specified in the Application as a permit condition.²⁵ The operating face of the landfill, where waste would be buried daily, would be approximately 3-4 acres at any time.²⁶ Despite the toxicity and dangerous nature of some of the waste to be buried at the new landfill, WMDSM proposes to build it *with only one composite liner system*.²⁷ The new landfill is projected to operate 17 years beginning in 2023 and ending 2040, though no guarantee or promised years of operation were given.²⁸

II. The New Landfill is Not, and Should Not, Be Permitted Under Chapter 400, Maine SWMR and is Counter to the State’s Prohibition on New Landfills

A. The New Landfill is Located On Parcels Purchased by Waste Management after 1989

The New Landfill would be part of a Commercial Solid Waste Disposal Facility as defined in Chapter 400 of the Department’s Solid Waste Management Regulations (“SWMR”). Section 2(F) of those SWMR provide in part the following requirements for applications seeking to expand commercially operated landfills:

Expansions of Commercial Solid Waste Disposal Facilities, states,

The Department may issue a license for the expansion of commercial solid waste disposal facility if:

- (1) The Department has previously licensed the facility prior to October 6, 1989;
- (2) The proposed expansion is contiguous with the existing facility and is located on property owned on December 31, 1989 by the licensee or by a corporation or other business entity under common ownership or control with the licensee; and
- (3) The Department determines, as provided in 38 M.R.S.A. §1310-N(3-A) that the facility provides a substantial public benefit.

Prior to submitting its application, WMDSM asked the Department to clarify sections (2)(F)(2) as there is no definition of “contiguous” in Chapter 400. WMDS also asked the

²³ MEDEP Public Hearing, WMDSM’s representatives, Scott Luettich and Nicholas Yafrate from Geosyntec Consultants, October 1, 2020.

²⁴ Permit Application, Volume I, General Information, p. 1-2.

²⁵ Id.

²⁶ MEDEP Public Hearing, WMDSM’s representatives, Scott Luettich and Nicholas Yafrate from Geosyntec Consultants, October 1, 2020.

²⁷ MEDEP Public Hearing, WMDSM’s representatives, Scott Luettich and Nicholas Yafrate from Geosyntec Consultants, October 1, 2020.

²⁸ Permit Application, Volume I, General Information, p. 1-2.

Department to clarify what constitutes an “existing facility” and which parcels of land are contiguous to the existing facility at the Crossroads Facility.²⁹ Finally, WMDS asked for confirmation that the new landfill is not required to be physically connected or contiguous to the existing landfills.

In its reply letter, dated March 14, 2017, the Department noted that the Crossroads Facility has been licensed by MEDEP since 1976 (satisfying the condition of (2)(F)(1)) and then turned to the issue of what constitutes “contiguous.” The Department also noted that in addition to the SWMR, “Title 38 M.R.S. Section 1310-X(3) allows for the expansion of a commercial solid waste disposal facility if the proposed expansion is ‘contiguous with the existing facility’” and the Department opined that the Crossroads Facility consisted of those parcels licensed and owned by Waste Management prior to 2005.³⁰ The Department also stated that it considered all parcels of the existing landfills at the Crossroads Facility were contiguous, based on the tax map of the property.

The Department also clarified in its letter that the new landfill at Crossroads would be on a lot contiguous to the licensed Commercial Solid Waste Disposal Facility. While CLF considers this an overly broad reading of the term “contiguous” what the Department did not consider is whether the proposed expansion met the second part of section (2)(F)(2) - that the expansion as planned is “*located on property owned on December 31, 1989 by the licensee or by a corporation or other business entity under common ownership or control with the licensee.*” The evidence submitted by WMDSM itself establishes at least a significant portion, if not all, of the new landfill would be on land that was not owned on December 31, 1989 by WMDS. Indeed, a significant portion of the new landfill would be on land only acquired by WMDS in 2017.

At almost 50 acres, the new landfill would be located on a number of parcels (See Exhibit A, attached hereto, a copy of Figure 5 of Appendix A, WMDS’ Public Benefit Application).³¹ Also see Exhibit B, attached hereto, the tax map of the area provided by WMDS as Appendix D of the Public Benefit Determination.³² For the purpose of understanding our argument, please see the site plan from Figure 5, Exhibit A, overlaid onto the Tax Map, Exhibit B, attached hereto as Exhibit C. The proposed new landfill would be located in part on the lot labeled as belonging to WMDS, Tax Map 14, Lot 20, recorded at Book 5174, Page 841 dated June 20, 2017. Finally,

²⁹ https://www.maine.gov/dep/ftp/projects/crossroads-phase14/2017_03_14%20DEP%20Advisory-Opinion-on-Expansion.pdf

³⁰ “More specifically, the Department defines WMDSM’s existing facility as the Phase 8 license #S010735-WD-UW-N, dated August 31, 2002 and borrow pit licenses issued by the Department including L-17176-80-A-N, dated Mach 28, 1991; L17176-80-B-N, dated August 24, 1992; L-17176-80-C-T, dated April 1, 1993; L-17176-80-E-M, dated May 18, 1993; L-20537-31-A-N, dated August 15, 2001; and L-18323-TG-J-M, dated April 21, 2005.”

³¹ Figure 5 of Appendix A, WMDS Public Benefit Determination, <https://www.maine.gov/dep/ftp/crossroadslandfill/application/Appendix%20A%20-%20Figures%201%20-%2006.pdf>

³² Appendix D to Public Benefit Determination, Application Form, second to last attachment. <https://www.maine.gov/dep/ftp/crossroadslandfill/application/Appendix%20D%20-%20Application%20for%20PBD%20Final.pdf>

that deed transfers at least 80 acres from Allison J. Keating to WMDS on June 20, 2017.³³ The Tax Map also indicates that the proposed new landfill would be located in part on lots labeled as belonging to WMDS, Tax Map 14, Lots 19 and 16-1, at Book 1871, Page 62 and Book 1861, Page 98 respectively, both of which were purchased by WMDS in 1998.³⁴ Accordingly, the new landfill would not be located on property owned on December 31, 1989 by Waste Management or its affiliates, and cannot be the location of a landfill expansion.

B. Definition of an Expansion of a Solid Waste Disposal Facility vs. a Landfill

CLF takes issue with MEDEP’s interpretation of landfill expansion. In Chapter 400, “Expand” is defined “as it applies to solid waste landfills, means to dispose of solid waste beyond the horizontal boundaries previously licensed by the Department for solid waste disposal. . .” And a Landfill is defined as a “discrete area of land or an excavation used for the disposal of solid waste.”

In contrast, a “Solid Waste Disposal Facility,” includes not only landfills, incinerators or processing facilities, but also any of the structures or equipment used in the handling of solid waste. As a policy matter, expanding commercial landfills that could accept out-of-state waste is a recognized negative outcome for the State of Maine, and once built, a landfill is forever. Properly siting or expanding new processing, recycling, or composting facility capacity would better allow the State to achieve its Solid Waste Plan goals. Those facilities could also be used differently in the future. Therefore, equating the expansion of landfills and the expansion of Solid Waste Disposal Facilities is sloppy policy that would allow for commercial landfill expansions far beyond the intent of the original prohibition. The MEDEP should refine its interpretation to differentiate between expanding “landfills,” and expanding, “solid waste facilities,” two substantially different outcomes that should be approached differently by the Department.

III. The New Landfill Would Not Support the Goals of the State of Maine Material Management Plan, or Solid Waste Hierarchy

A. Goals of the State of Maine Material Management Plan

The most recent five-year update to Maine Materials Management Plan states that its strategies and actions are focused on:

³³ See last deed of group of deeds shown at Appendix D of Waste Management’s Public Benefit Determination <https://www.maine.gov/dep/ftp/crossroadslandfill/application/Appendix%20C%20-%20Property%20Deeds.pdf>

³⁴ It is unclear whether the new landfill would also be on the lots shown as Tax Map 14, Lots 14 and 18, which were also purchased by WMDS in 1998.

³⁵ Appendix D to Public Benefit Determination, Application Form, second to last attachment. <https://www.maine.gov/dep/ftp/crossroadslandfill/application/Appendix%20D%20-%20Application%20for%20PBD%20Final.pdf>

- Increasing waste reduction and reuse initiatives;
- Building on recent successes in increasing the diversion of organics from disposal;
- Diverting materials from landfill disposal; and,
- Addressing current conditions and trends that create disincentives to managing waste further up the hierarchy.³⁶

CLF is hard pressed to imagine any way in which a brand new, 48.6 acre landfill would achieve any of these objectives, much less assist the State in achieving its goal of recycling or composting 50% of the State’s solid waste on an annual basis, a.k.a. recycling and composting an additional 897,163 tons each year.³⁷ Furthermore, landfilling is the absolute last resort under Maine’s Solid Waste Management Hierarchy. Building a new landfill does not incentivize reduction, prioritize reuse, or develop recycling or composting programs. In fact, the more cubic yards of landfill capacity there is in Maine, the more likely it is that waste will be buried.

B. The Department Must Require WMDSM to Clearly Identify What It Is Disposing Of, How Much Is From Out of State, and Stop Manipulating Numbers

While WMDSM states repeatedly that “Phase 14 Project fully promotes the State’s Waste Hierarchy,”³⁸ the numbers do not bear this assertion out. Over the life of this permit, WMDSM plans to bury 7,650,000 tons at a projected rate of 450,000 tons of waste and alternative daily cover per year. WMSDM states this is assuming the types of waste buried there continue to be similar to those filling the Operating Landfill, which WMDSM has stated is its intention.^{39,40}

In direct contradiction to this statement, WMDSM actually buried over 550,000 tons at Crossroads Facility in 2019. It is imperative that if the Department permits WMSDM to build the new landfill, the Department set a maximum fill rate for waste each year in order to preserve the life of the landfill for the State of Maine’s waste.

According to Waste Management, the typical composition of waste buried each year at the Operating Landfill is 26.93% Special Waste, 24.1% MSW, 25.16% ADC/RGC, and 23.81% CDD.⁴¹ Waste Management estimates that these percentages will remain largely unchanged at

³⁶ Maine Materials Management Plan, State Solid Waste Management and Recycling Plan 2019 Update, January 2019, p. 1.

³⁷ In 2017, the State of Maine disposed of 721,646 tons of MSW and incinerator ash, and 175,517 tons of Construction and Demolition Debris, or “CDD.” State of Maine Solid Waste Generation and Disposal Capacity Report, for Calendar Year 2017, January 2019 p. 2-3.

³⁸ Waste Management Disposal Services of Maine, Inc., Crossroads Facility, Phase 14 Secure Landfill, Determination of Public Benefit Application, July 3, 2018, p. 23.

³⁹ Permit Application, Volume I, General Information, p. 1-2.

⁴⁰ Permit Application, Volume I, General Information, p. 9.

⁴¹ Permit Application, Volume I, General Information, p. 10.

the new landfill.⁴² However, those numbers don't reconcile with the actual tonnages buried at the Crossroads Facility in 2019.

Between January 1 and December 31, 2019 Waste Management buried 550,802 tons at the Landfill, 366,065 if one subtracts the ADC/RGC (the covers totaled almost 195,000 tons):

- 101,656 tons of special waste, including asbestos-containing waste;
- 76,602 tons of construction/demolition debris;
- 187,807 tons of MSW; and,
- 184,737 tons of alternative daily cover consisting of approved special waste streams;⁴³

A third of what Waste Management buried in 2019 was daily cover, or it buried cover amounting to fifty percent of the waste buried. ADC is a way for Waste Management to get paid to bury waste while still claiming it is "recycling."⁴⁴ ADC counts towards recycling for the purpose of "alternative daily cover at landfills," however, does not count towards the Department's goal of recycling and/or composting at least 50% of MSW generated in Maine, because if it were not used for cover, it would be counted as Special Waste. If Waste Management is paid to bury ADC it should be counted as waste, not "recycling" or "cover." The Department should not only define ADC as part of that waste, but also limit how much ADC WMSDM is allowed to bury at the landfill each year. The current regulations state that if daily cover is used, it is required to be a minimum of 6 inches deep, and "alternative daily cover must not exceed 9 inches in depth after compaction."⁴⁵ WMSDM should be required to report how many tons of cover were spread over how many acres in 2019, and calculate how deep a layer it created prior to any further action on this Application.

The Department could, in the alternative, ban the use of ADC entirely. CLF recommends that if MEDEP allows the new landfill to be built that Waste Management be required to use movable impermeable covers on active cells, in the permit conditions.⁴⁶ WMSDM explained during the Public Hearing that the use of movable covers would prevent the creation of leachate, yet it is not clear from the Application if that is actually true, or to what extent. If movable covers are used, there should be little to no need to accept ADC.

⁴² Permit Application, Volume I, General Information, p. 10.

⁴³ Soil is approximately 75-100 pounds per cubic yard.

<https://www.thecalculatorsite.com/conversions/common/cubic-yards-tons.php>

⁴⁴ Ch. 401 N. **NOTE:** 06-096 CMR 409(2)(C) However, ADC does not

⁴⁵ Ch. 400(C)(8)(a) and (a)(ii).

⁴⁶ During the October 1, 2020 Public Hearing, Waste Management's engineers, Scott Luetlich and Nicholas Yafate from Geosyntec Consultants explained that there would be less dangerous leachate at the site due to the use of these movable covers. Yet, a third of what Waste Management plans to bury is daily cover. MEDEP should require Waste Management to limit leachate production and use movable covers as promised. Or require two composite liner systems if the precipitation will not be limited by these movable systems.

Again, WMDSM is currently in total control of what it buries at the Crossroads Facility.⁴⁷ If the construction market continues to boom in Massachusetts, Waste Management could decide not bury MSW, or serve local Maine businesses, cities and towns, at all. Waste Management claims it will provide a public benefit by providing disposal capacity for Maine residents at the new landfill⁴⁸, but that will not be true if the Department approves the Application as written. The Department should require WMDSM to reserve 200,000 tons of capacity a year for the people of Maine every year for a total of 3,400,000 tons of capacity over the life of the landfill.

Out of state Waste numbers should be reported to the Department by WMSDM. According to Jeff McGown, the Manager of WWDSM, Phase 8, accepted *on average 26-28% of out of state waste over many years, but only 17% from out of state for the last couple of months.* McGown stated WMDSM, “will probably do that for Phase 14.” That is not a binding promise. There is no evidence in the Application that that is how much WMDSM accepted from out of state in the past, nor is there any reason to believe they will do so in the future. The New Hampshire Department of Environmental Services requires Waste Management to report how much of the waste buried at Turnkey Landfill in New Hampshire each year is from out-of-state. WMDSM should do the same in Maine.

The Department should not only require reporting but limit the amount of out of state waste that WMDSM buries at Crossroads Facility. A third of the waste buried at Crossroads Facility in 2019, or 180,598 tons, was from out of state. While most of the MSW and CDD buried at Crossroads Landfill was generated in Maine, most of the ADC/RGC and Special Waste was from out of state. 104,000 tons of out of 185,000 tons of ADC/RGC were from out of state in 2019. As argued above, banning ADC would save a lot of landfill space, and decrease the toxicity of the waste in the new landfill. 76,000 tons out of 180,000 tons of Special Waste were from out of state in 2019. Special Wastes are some of the most toxic and dangerous waste buried at landfills, the Department should limit Special Wastes, if not ban them entirely from a landfill of this size.

C. What is Waste Management Actually Recycling?

While WMDSM purports to be reducing waste to the “maximum extent possible,”⁴⁹ before burying the remainder at the Crossroads Facility, nothing could be further from the truth. While WMDSM accepts waste from 55 Maine communities, they are clearly providing little or no reduction, recycling, or composting services to those communities.

⁴⁷ In 2019, WMSDM buried much more MSW at the landfill (187,000 tons) than in 2017 (87,548 tons). 2019 and 2018 Annual Reports, Appendix A.

⁴⁸ Waste Management Disposal Services of Maine, Inc., Crossroads Facility, Phase 14 Secure Landfill, Determination of Public Benefit Application, July 3, 2018, beginning on p.6.

⁴⁹ MEDEP Public Hearing, Jeff McGown, Manager of Crossroads Facility.

WMDSM claims to offer reduction, recycling, and educational resources, as well as waste disposal, to 55 Maine communities. However, in 2019, WMDSM only handled Single Stream Recycling from about 21 communities, about half of which also separated out cardboard for WMDSM to handle.⁵⁰ Obviously, WMDSM is charging an additional fee for recycling services, is not offering recycling to all 55, or WMDSM is not requiring most or all customers to separate out their recycling. The Department should require that WMDSM must collect and handle the recycling of any community that they are receiving waste from, unless it can prove that the community is already diverting almost all of its containers, cardboard, and paper out of the waste stream via another system.

Not only is WMDSM handling the recycling of very few Maine residents, it is not diverting much tonnage from those it does offer recycling to, and much of the diversion that is going on is not recycling.⁵¹ In 2019, WMDSM only handled a total of 2,986 tons of single stream recyclables, non-tire metal recycling, and cardboard, including the recyclables collected at the Airport Transfer Station.^{52, 53} In other words, in 2019 WMDSM actually recycled about 1.5% of the MSW it buried at Crossroads Facility, a percentage that is not moving Maine anywhere near the goal of recycling and composting 50% of its MSW. The Department should require that WMDSM handle more recyclables each year until the State meets its goal of composting and recycling 50% of its disposed MSW.

For example, about 1,233 tons WMDSM handled in 2019 were cardboard. If WMDSM handles the recycling for most or all of the communities it accepted MSW from, this number is abysmally low. Cardboard is at least 5% of MSW waste disposed of in states that have recently performed waste characterization studies.⁵⁴ WMDSM should have collected more like 10,000 tons of cardboard, not 1,233 tons.⁵⁵

WMDSM's other programs are also very limited. WMDSM only provides battery, E-waste, tire reuse and hazardous material drop off for 9 communities *once a year*. To decrease toxicity at the Crossroads Facility, as well as decrease the risk of fires, WMDSM should be providing community drop off events in situ at least four time a year for all 55 communities it

⁵⁰ 2019 Annual Report, Appendix B.

⁵¹ In 2019 WMDSM handled 62,179 tons of whole and shredded tires. While some (about 1,600 tons) of the components, like rims, were recycled, more than 56,000 tons were reclaimed for fuel, not recycled. 2019 Annual Report, Appendix B and C.

⁵² 2019 Annual Report, Appendix B and C.

⁵³ The 2019 are a lower than the 2017, 2016, or 2015 numbers, but only by 2-4,000 tons. Single stream recycling and corrugated cardboard collection at Crossroads are historically pathetic. Waste Management Disposal Services of Maine, Inc., Crossroads Facility, Phase 14 Secure Landfill, Determination of Public Benefit Application, July 3, 2018, p. 32.

⁵⁴ See Summary of Waste Combustor Class II Recycling Program Waste Characterization Studies, 2019 Data, Massachusetts Department of Environmental Protection, <https://www.mass.gov/guides/solid-waste-master-plan#waste-characterization-&-capacity-studies>

⁵⁵ WMDSM accepted over 187,000 tons of MSW in 2019, and if that represented 95%, or the remaining, non-cardboard MSW, 5%, the cardboard, would be over 10,000 tons.

serves. WMDSM pulls some of the wood and metal from the trucks once they arrive at the Crossroads Facility, but there is no evidence that WMDSM rejects loads, or that customers are required to keep food, yard waste, or recyclables out of their MSW.⁵⁶ WMDSM has done as little as possible to provide recycling in Maine.

D. What is WMDSM Actually Composting?

There is no composting at Crossroads Facility, and there is no certainty as to what WMDSM will actually deliver. WMDSM “plans” on developing a composting operation, which will also “directly promote the State’s recently enacted Food Recovery Hierarchy.”⁵⁷ That hierarchy promotes reduction, feeding people, feeding animals, composting/convertng food to fuel, and then as a last resort, landfilling. It is unclear how, as WMDSM is only perhaps doing some composting, WMDSM is supporting the hierarchy. There is no discussion of education programs to assist customers in reducing food waste, no funding for food rescue for hungry people, or collection programs to partner with local farmers to feed animals or process food through anaerobic digestion on a farm in the Application or Public Benefits Determination Application.⁵⁸ There are few, if any, details about the composting program, and nothing much is promised. However, WMDSM will, at some point, maybe, allow people and partner businesses to drop food scraps off at the Airport Road Transfer Station, free of charge. WMDSM will then move those materials to their compost facility, compost it, and store it. There will be some education of employees and customers, and some tours, and WMDSM will track the tonnage collected. Participants will be able to receive finished compost on “designated days” throughout the year. There are no metrics for success, no deadlines, and no real accountability of any sort.⁵⁹ An individual could go to a few training sessions, make some calls to potential customers, and allow their neighbors to drop off food scraps in their yard, and it would fulfill the terms of the Application, so long as the individual let a few neighbors pick up some compost a couple of times a year. This is nor an adequate effort, or is it diverting materials to the maximum extent practicable.

Given that WMDSM begins their composting discussion by noting that the 2014 Maine Materials Management Plan estimates that *38.41% of Maine’s disposed MSW is compostable*⁶⁰ and WMDSM buried over 187,000 tons of MSW in 2019, CLF suggests that the Department mandate a more concrete set of parameters if it permits WMDSM to build Phase 14. For instance, that:

⁵⁶ Id.

⁵⁷ Waste Management Disposal Services of Maine, Inc., Crossroads Facility, Phase 14 Secure Landfill, Determination of Public Benefit Application, July 3, 2018, p. 34.

⁵⁸ Id.

⁵⁹ Id. beginning at page 34.

⁶⁰ Waste Management Disposal Services of Maine, Inc., Crossroads Facility, Phase 14 Secure Landfill, Determination of Public Benefit Application, July 3, 2018, p. 24.

- WMDSM shall instruct its customers, residential and commercial, that no food scraps or other compostable materials are allowed in the MSW to be buried at the Crossroads Facility. This also has the added advantage of decreasing methane generation at the landfill, as described below.
- WMDSM shall construct a composting facility, permitted by, and in accordance with, the Department's rules and regulations, prior to beginning operations at Phase 14.
- The new composting facility shall be able to process at least 75,000 tons a year, or just over 38.41% of the 187,000 tons of MSW WMDSM buried last year.
- WMDSM shall collect or receive the compostables in the same way it collects or receives the MSW. It will not charge additional dollars for transporting the compostables, though it may charge a tipping fee up to half of that for the MSW.
- Customers may come and pickup finished compost, and communities may send a hauler to pick up compost on behalf of their community as well. Pick ups are allowed at least two days a week, one of which must be a weekend day.
- WMDSM may use or sell the excess finished compost.
- The Department may evaluate the success of the composting program and require new conditions to improve its operation yearly.

WMDSM is a landfill company. In Maine, tipping fees are about \$80 a ton for MSW⁶¹, possibly more for difficult to dispose of, especially toxic wastes like those Crossroads Facility specializes in. Over the life of Phase 14, WMDSM will gross over \$612 million in tipping fees alone. It is against WMDSM's interest to decrease or divert waste from their landfills. If the Department would like to see substantial reductions in MSW, the Department should set clear standards for WMDSM and the communities it serves to implement Save Money and Reduce Trash, or Pay As You Throw programs to aggressively reduce waste. Likewise, the Department should require that WMDSM meet increasingly aggressive recycling targets and develop a meaningful composting program. WMDSM will not do any of this or provide any meaningful public benefit to the State of Maine, unless it is required to do so.

IV. The New Landfill Would Pose a Threat to Natural Resources

A. The Waste Buried at Crossroads Facility Is and Would Be Extremely Toxic

The Phase 14 expansion is a threat to natural resources in the area. As referenced above, the wastes historically at Crossroads Facility are notoriously toxic. The waste accepted at the Crossroads Landfill consists of residential, commercial, institutional municipal solid waste, construction and demolition debris, special waste, and materials or waste used as alternate daily cover, much of which is not accepted at other New England landfills for good reason. The State

⁶¹ Analysis of MSW Landfill Tipping Fees – April 2018, p. 3. https://erefdn.org/wp-content/uploads/2017/12/MSWLF-Tipping-Fees-2018-Rev.ed_.2019.pdf

of Maine should not allow a new commercial landfill to be built simply to take the waste no one else will have.

According to WMDSM, “On average, since 2004, 26.93% of the wastes managed at the Crossroads Facility from Phases 8 and 11 have constituted special waste, 24.1% have constituted MSW, 25.16% have consisted Alternative Daily Cover (“ADC”) and 23.81% have constituted CDD, as seen in Figure 4. WMDSM projects these percentages to generally continue during its Phase 14 Project.”⁶² Below please find a description of the constituents of each of these categories, and the nature of their toxicity and danger to the environment and public health.

Special Wastes: The Crossroads facility accepts special waste for disposal. Special waste includes municipal incinerator ash, wastewater treatment plant sludge, contaminated media, light industrial solid waste, and asbestos-containing waste. On average, the Crossroads facility accepts 47,733.6 tons annually, excluding asbestos-containing waste. The average annual amount of special waste managed at the Crossroads Facility While Phase 8 has been active, the principal generators of special have been: Maine Energy Recovery Company (Ash); ReEnergy (Ash); Grimm Industries (Auto Shredder Residue); Pioneer Plastics (Plastic Pellet Dust); and City of Portland, Maine (Municipal Wastewater Sludge).⁶³ Special waste is also generated onsite at the Crossroads Facility, and includes materials such as absorbent pads used to clean up spills around the landfill and waste from underground holding tanks.⁶⁴

Asbestos: Asbestos-containing waste is especially dangerous, as asbestos can cause a variety of significant health issues, including scarring of the lung tissue and certain types of cancer.

Sewer Sludge: Wastewater treatments facilities process stormwater and wastewater entering the sewage system by separating the liquid wastes from the solid waste. These wastes are then processed into sewage sludge, which contain a variety of known and unknown toxic materials. These hazardous materials include all that is flushed into the sewer system, including: “household, medical, chemical, and industrial waste; chemicals and metals that leach from the sewer pipes themselves; and novel materials that are created in the wastewater treatment plant as a result of the combination of chemicals and organic compounds present.” Once treated, sewage sludge is then dried and in the Crossroads Facility case, added to a landfill.⁶⁵

Incinerator Ash: 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

⁶² WASTE MANAGEMENT DISPOSAL SERVICES OF MAINE, INC. CROSSROADS FACILITY PHASE 14 SECURE LANDFILL DETERMINATION OF PUBLIC BENEFIT APPLICATION JULY 3, 2018, p. 10-12.

⁶³ WASTE MANAGEMENT DISPOSAL SERVICES OF MAINE, INC. CROSSROADS FACILITY PHASE 14 SECURE LANDFILL DETERMINATION OF PUBLIC BENEFIT APPLICATION JULY 3, 2018, p. 10-12.

⁶⁴ WASTE MANAGEMENT DISPOSAL SERVICES OF MAINE, INC. CROSSROADS LANDFILL 2019 ANNUAL REPORT, p. 5-6.

⁶⁵ Center for Food Safety, *What is Sewage Sludge*, centerforfoodsafety.org/issues/1050/sewage-sludge/what-is-sewage-sludge.

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.⁶⁶ These toxic compounds include dioxins, which have been described as the most toxic chemicals known to mankind and are recognized human carcinogens. Heavy metals such as lead, which is known to cause cognitive and behavioral development in children, and mercury, which is known for impacts to the central nervous system, kidneys, and developing fetus, are also present in the ash. Other compounds and metals such as polychlorinated biphenyls (“PCBs”), polychlorinated naphthalenes (“PCNs”), cadmium, and arsenic have also been discovered in bottom and fly ash, all of which are known to be toxic to humans and animals.⁶⁷

Ash generated by municipal solid waste incinerators constitutes hazardous waste, but EPA allows for the highly toxic fly ash to be mixed with lime and bottom ash prior to toxicity testing.⁶⁸ 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.⁶⁹ The potential for leaching is also greatest under acidic conditions, which occur when solid waste breaks down into organic acids.⁷⁰

CDD: Commercial waste generators and municipalities throughout the State utilized the Crossroads Facility for disposal of CDD. During the past five years, the average annual amount of CDD managed within Phase 8 of the Crossroads Facility was 55,709.6 tons.⁷¹ CDD is a varied waste stream that includes concrete, asphalt, wood, gypsum, and asphalt shingles generated from the construction, renovation, and demolition of buildings, roads, bridges, and dams.

CDD is particularly dangerous due to the nature of the materials themselves. For example, CDD often has toxic solvents, adhesives, pigments and coatings present. Some of these chemicals include ethyl benzene, methylene chloride and toluene. Mercury is often a persistent

⁶⁶ Global Alliance for Incinerator Alternatives, *Incinerators Trash Community Health*, at 5 (June 2008), <http://www.no-burn.org/wp-content/uploads/Incinerators-Trash-Community-Health.pdf>.

IPEN, *After Incineration: The Toxic Ash Problem* (April 2005), http://ipen.org/sites/default/files/documents/After_incineration_the_toxic_ash_problem_2015.pdf.

⁶⁷ Jeremy Thompson and Honor Anthony, *The Health Effects of Waste Incinerators*, Report of the British Society for Ecological Medicine, 2nd ed, at 42-44, (June 2008), http://www.bsem.org.uk/uploads/IncineratorReport_v3.pdf.

⁶⁸ Global Alliance for Incinerator Alternatives, *Incinerators Trash Community Health*, at 5 (June 2008), <http://www.no-burn.org/wp-content/uploads/Incinerators-Trash-Community-Health.pdf>.

IPEN, *After Incineration: The Toxic Ash Problem* (April 2005), http://ipen.org/sites/default/files/documents/After_incineration_the_toxic_ash_problem_2015.pdf.

⁶⁹ Id.

⁷⁰ Michelle Allsopp, Pat Costner and Paul Johnston, *Incineration and Human Health: State of Knowledge of the Impacts of Waste Incinerators*, Greenpeace Research Laboratories (2001), <https://www.greenpeace.org/norway/Global/norway/p2/other/report/2001/incineration-and-human-health.pdf>.]

⁷¹ WASTE MANAGEMENT DISPOSAL SERVICES OF MAINE, INC. CROSSROADS FACILITY PHASE 14 SECURE LANDFILL DETERMINATION OF PUBLIC BENEFIT APPLICATION JULY 3, 2018, p. 12.

element in CDD, as it is found in fluorescent lamps, thermostats, smoke detectors and other security systems, sprinkler systems, elevator control panels, and old paint. In fact, many of the chemicals used by the construction industry may be considered hazardous waste, but unless carefully sorted could end up in regular CDD waste streams.⁷²

MSW: During the past five years, the average annual amount of MSW managed within Phase 8 of the Crossroads Facility was 82,153.2 tons, but in 2019 it was almost 190,000 tons.⁷³

The heterogenous nature of MSW results in a varied mix of metals and other organic compounds that pose serious potential human health risks. For example, plastics contribute significant quantities of cadmium, chromium, lead, manganese and mercury. Paper, on the other hand, contributes lead, manganese, mercury, copper and zinc. Organic matter in MSW also contains toxins, such as pesticides, herbicides, PCBs, VOCs, and SVOCs.⁷⁴ There are also high amounts of metals found in MSW, some of which include cadmium, chromium, mercury, lead and zinc.⁷⁵

VOCs in MSW present significant risk to human health as they are highly mobile as compared to other organic compounds. Generally, these VOCs includes benzene, dichloromethane, 1, 2-dichloroethylene, ethylene benzene, tetrachloroethylene, trichloroethylene, toluene, and vinyl chloride. These compounds are all recorded to pose cancer risks.⁷⁶

ADC or RGC: The Crossroads Facility also manages waste for use as ADC from commercial waste generators and municipalities throughout the State. WMDSM uses ADC materials, approved special waste streams, to spread over landfilled waste to minimize vectors, odors, and litter. Approved ADC may include reinforced synthetic tarps, unsaleable wood waste fines from the Wood Waste Facility, ground utility poles, ground Construction/Demolition Debris (C&D), Pioneer Plastics byproduct, approved fly-ash and bottom-ash, approved auto shredder residues, mill felt, and urban fill soils.⁷⁷ The most significant generators of ADC while Phase 8 has been active are: ReEnergy (Wood Ash); Gimmel Industries (Auto Shredder Residue); Pioneer Plastics

⁷² PDH Center, Hazardous Waste Generated by Construction and Demolition, 2012.

⁷³ WASTE MANAGEMENT DISPOSAL SERVICES OF MAINE, INC. CROSSROADS FACILITY PHASE 14 SECURE LANDFILL DETERMINATION OF PUBLIC BENEFIT APPLICATION JULY 3, 2018, p. 12.

⁷⁴ United States Environmental Protection Agency, *Analysis of the Potential Effects of Toxics on Municipal Solid Waste Management Options* (April, 1995), <https://nepis.epa.gov/Exe/ZyPDF.cgi/30003B84.PDF?Dockey=30003B84.PDF>, p. xii.

⁷⁵ The National Energy Administration and the National Swedish Environment Protection Board, *Energy from Waste*, 1987.

⁷⁶ United States Environmental Protection Agency, *Analysis of the Potential Effects of Toxics on Municipal Solid Waste Management Options* (April, 1995), <https://nepis.epa.gov/Exe/ZyPDF.cgi/30003B84.PDF?Dockey=30003B84.PDF>, p. 128-129.

⁷⁷ WASTE MANAGEMENT DISPOSAL SERVICES OF MAINE, INC. CROSSROADS FACILITY PHASE 14 SOLID WASTE PERMIT APPLICATION, VOLUME I, APPENDIX 8A: FUGITIVE PARTICULATE CONTROL PLAN, p.2

(Pellet Dust); Global (Utility Pole Chips); and Municipal Wood Waste (Chips). On average, the Crossroads Facility manages 76,134.2 tons.⁷⁸

Dust: Fugitive dust created by landfilling activities is a major migration path for metals and organic compounds into the air. While exposed waste may disperse VOCs and metal-containing dust, the processes to protect fugitive dust from escaping into the air actually may produce even more fugitive dust.^{79 80} For example, heavy machinery is used to spread ADC, and the activity of spreading the cover itself can cause fugitive dust.⁸¹ Where necessary, watering is conducted to control excess fugitive dust emissions that potentially occur during the spreading of these cover materials.⁸²

Utility Poles: Utility poles are particularly toxic, as they are treated with dangerous pesticides and wood preservatives. The chemicals that treat the wood are often banned for other uses (NYT). The Environmental Protection Agency is relying on a risk assessment analysis which took place in the mid-80's. The poles are treated with chemicals such as pentachlorophenol, creosote, arsenic and chromium. An EPA spokesperson stated that utility poles "contain some of the most hazardous toxic contaminants on the market," the report said.⁸³

Contaminants of Emerging Concern at Landfills: In addition, PBDEs and PFAS are both classes of persistent organic pollutants with potential major health consequences that are found in virtually all landfills.⁸⁴ PBDEs are flame retardants found in electronics likes cell phones and

⁷⁸ WASTE MANAGEMENT DISPOSAL SERVICES OF MAINE, INC. CROSSROADS FACILITY PHASE 14 SECURE LANDFILL DETERMINATION OF PUBLIC BENEFIT APPLICATION JULY 3, 2018, p. 12.

⁷⁹ United States Environmental Protection Agency, *Analysis of the Potential Effects of Toxics on Municipal Solid Waste Management Options* (April, 1995),

<https://nepis.epa.gov/Exe/ZyPDF.cgi/30003B84.PDF?Dockey=30003B84.PDF>, p. 115.

⁸⁰ WASTE MANAGEMENT DISPOSAL SERVICES OF MAINE, INC. CROSSROADS FACILITY PHASE 14 SOLID WASTE PERMIT APPLICATION, VOLUME I, APPENDIX 8A: FUGITIVE PARTICULATE CONTROL PLAN, p.2

⁸¹ WASTE MANAGEMENT DISPOSAL SERVICES OF MAINE, INC. CROSSROADS FACILITY PHASE 14 SOLID WASTE PERMIT APPLICATION, VOLUME I, APPENDIX 8A: FUGITIVE PARTICULATE CONTROL PLAN, p.2

⁸² WASTE MANAGEMENT DISPOSAL SERVICES OF MAINE, INC. CROSSROADS FACILITY PHASE 14 SOLID WASTE PERMIT APPLICATION, VOLUME I, APPENDIX 8A: FUGITIVE PARTICULATE CONTROL PLAN, p.2 This is concerning, because watering the landfill will increase the amount of methane it generates. As stated above, WMDSM should be required to reduce or stop accepting ADC and instead use movable covers.

⁸³ Reuters, "Utility Poles Cited uteuters. "Utility Poles Cited As Chemical Danger (Published 1997)." The New York Times, February 5, 1997, sec. U.S. <https://www.nytimes.com/1997/02/05/us/utility-poles-cited-as-chemical-danger.html>.

⁸⁴

computers, mattresses, couches, vehicle interiors, and clothing.⁸⁵ Some of the health consequences of exposure to PBDEs are neurological, reproductive, and cancer-related.⁸⁶

PFAS have been going to landfills for over sixty years.⁸⁷ They are used in many consumer products including electronics, microwave popcorn bags, carpet, upholstery, nonstick cookware (Teflon), dental floss, and textiles.⁸⁸

Finally, research by the United States Geological Service (USGS) has shown a variety of other chemicals of emerging concern (CECs) in landfill leachate, including, among others personal care products, nanoparticles, pharmaceuticals, and estrogen-like compounds.⁸⁹

Given the toxic nature and danger to the environment and public health presented by most of the waste buried at the Crossroads Facility, the Department should not approve the Application.

B. All Landfills Leak

Given the toxic and dangerous nature of the wastes accepted at Crossroads Facility, it is imperative that the Department recognize that all landfills ultimately fail to contain the hazardous leachate produced, and the best way to protect the environment around them.

The most recent theory behind Subtitle D Landfills, or Dry Tomb Landfills, is to entomb the landfill in plastic sheeting, thereby keeping water away from the MSW. This was meant to minimize leachate production and the migration of that leachate through the soil and groundwater surrounding the landfill. In theory it also would minimize the production of landfill gas, especially methane, which, in order to form, requires the presence of water (see more below). Another goal of the regulations was to prevent offsite groundwater pollution by landfill leachate. Subtitle D mandated the collection of leachate from the landfill. Subtitle D also required a groundwater monitoring program whereby the extent of the inevitable groundwater

⁸⁵ F. Oliaei, *Flame Retardants: Polybrominated Diphenyl Ethers (PBDEs) Background Paper*, Minnesota Pollution Control Agency, 31 (2005); International Joint Commission, *Background on Polybrominated Diphenyl Ethers (PBEs) Final Report* (Aug. 10, 2015), http://www.ijc.org/files/tiny_mce/uploaded/WQB/Appendix-B%20Background_PBDEs.pdf.

⁸⁶ Thomas A. McDonald, *A Perspective on the Potential Health Risks of PBDEs*, 46 *Chemosphere* 745-755 (Feb. 2002).

⁸⁷ 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).

⁸⁸ National Center for Environmental Health, *An Overview of Perfluoroalkyl and Polyfluoroalkyl Substances and Interim Guidance for Clinicians Responding to Patient Exposure Concerns*, Center for Disease Control (June 7, 2017), https://www.atsdr.cdc.gov/pfc/docs/pfas_clinician_fact_sheet_508.pdf; Johnsie R. Lang, B. McKay Allred, Jennifer A. Field, James W. Levis, and Morton A. Barlaz, *National Estimate of Per- and Polyfluoroalkyl Substance (PFAS)*

Release to U.S. Municipal Landfill Leachate, 51 *Environmental Science & Technology* 2197-2205 (2017).

⁸⁹ J. R. Masoner, D. W. Kolpin, E. T. Furlong, I. M. Cozzarelli, J. L. Gray, & E. A. Schwab, 2014, *Contaminants of emerging concern in fresh leachate from landfills in the conterminous United States*, 16 *Environmental Science--Processes and Impacts*, 2335-2354 (2014).

pollution could be detected, and the polluted groundwater remediated (cleaned up) before it migrated to adjacent properties.

Unfortunately, the failure of these double composite liner systems is not only inevitable, it can be rapid. Rowe et al. (2003) tested the life of liner systems using a lagoon. They stated:

A geomembrane – compacted clay composite liner system used to contain municipal solid waste landfill leachate for 14 years is evaluated. Field observations of the geomembrane revealed many defects, including holes, patches, and cracks... Contaminant modelling of the entire lagoon liner suggests 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.⁹⁰

While one or two composite liners may delay the release of leachate into the environment, they do not prevent it.

As acknowledged repeatedly by USEPA⁹¹, leachate generation potential will continue for thousands of years (landfills developed by the Roman Empire, 2,000 years ago, are still producing leachate).⁹² After the plastic cap is installed, and the landfill cell is closed, the landfill company is required under RCRA to monitor the site for 30 years. Unfortunately, the caps break down in the same manner as the plastic liners. As a result, the landfill company often walks away from the site, the cap fails, precipitation enters the landfill cell, and a whole new wave of leachate production begins, without the leachate collection or monitoring that took place while the cell was accepting waste.⁹³

Dr. Lee reports that John Skinner, Executive Director of the Solid Waste Association of North America and former USEPA official was quoted in the July/August 2001 MSW Management Journal as saying:

The problem with the dry-tomb approach to landfill design is that it leaves the waste in an active state for a very long period of time. If in the future there is a breach in the cap or a break in the liner and liquids enter the landfill, degradation would start and leachate and gas would be generated. Therefore, dry-tomb landfills need to be monitored and

⁹⁰ Id. at 12, citing Rowe, R. K.; Sangam, H. P. and Lake, C. B., "Evaluation of an HDPE Geomembrane after 14 Years as a Leachate Lagoon Liner," *Can. J. Geotech./Rev. Can. Geotech.* 40(3): 536-550 (2003) (emphasis added). <http://www.ingentaconnect.com/content/nrc/cgj/2003/00000040/00000003/art00004>.

⁹¹ Flawed Technology of Subtitle D Landfilling of Municipal Solid Waste, G. Fred Lee & Associates, Updated January 2015, Page 6.

⁹² Id. at Page 8.

⁹³ Id.

maintained for very long periods of time (some say perpetually), and someone needs to be responsible for stepping in and taking corrective action when a problem is detected.⁹⁴

As explained above, all landfill liners eventually leak. All landfills therefore release dangerous contaminants into the environment. For this reason, we ask the Department not to permit the new landfill at the Crossroads Facility.

C. Danger to Groundwater Specific to This

WMDSM asserts that Phase 14 poses a minimal risk to the quality of the underlying bedrock aquifer due to “(a) the thoroughly engineered multi-layered liner system that will be installed (b) the natural geologic conditions beneath Phase 14 (c) and the proposed groundwater monitoring program.”⁹⁵ However, we know that this cannot be the case. First, it is well established that all landfills leak. This inevitability is discussed above. Furthermore, WMDSM has not fully established that the natural geologic conditions nor the groundwater monitoring system function sufficiently in protecting the aquifer. In fact, these two elements have been specifically flagged for inaccuracies by the Department.⁹⁶

WMDSM has claimed in their application that the Phase 14 project land is “well-suited” for this type of development, as there is Presumpscot clay present throughout the entire footprint. This assertion is based on the fact that Presumpscot clay is very fine grained and has low permeability as a result.⁹⁷ MEDEP has expressed concern, however, that some of the areas underlying the projected Phase 14 landfill are made of stiff clay, prone to fractures, fissures, and joints.⁹⁸ The northern portion of Phase 14 is not underlain by the lower facies of the Presumpscot and the documented presence of sand seams in the Presumpscot formation in other portions of the WMDS site can provide contaminant transport pathways, short-circuiting the low-conductivity clays, as the Department has envisioned in its previous comments.⁹⁹ As a result, the Department has requested that WMDSM propose a method in which these areas will be addressed in accordance with ch. 401.1C(3)(b), or otherwise submit a variance.¹⁰⁰

WMDSM has further asserted that the direction of the groundwater flow is generally to the south, toward the existing landfill units and away from the public water supply and significant sand and gravel aquifers.¹⁰¹ “Significant” sand and gravel aquifers (as defined by Maine SWMR Chapter 400.1.Ddd) have been identified to the north and the east of the landfill

⁹⁴ Id.

⁹⁵ Permit Application, Volume I, General Information, p. 24-25.

⁹⁶ SEPT 23 WMDSM RESPONSE: https://www.maine.gov/dep/ftp/projects/crossroads-phase14/comments-and-response/2020-09-23_Ph14%20Vol1%20III_RTC%209%20Sept%202020%20MDEP%20Comments.pdf

⁹⁷ Permit Application, p. 24.

⁹⁸ MEDEP Comments, June 22, 2020.

⁹⁹ Supplemental Geologic and Hydrogeologic Report, Crossroads Landfill, Norridgewock, Maine. Golder. July 31, 2020.

¹⁰⁰ WMDSM Comments, September 23, 2020.

¹⁰¹ Permit Application, p. 24.

and of Phase 14.¹⁰² WMDSM claims that there is no hydraulic connection between groundwater in the Phase 14 area and the significant sand and gravel aquifers, due to the south-southwest direction of the groundwater flow.¹⁰³ Furthermore, WMDSM claims that Phase 14 is located in an area where the Maine Geological Survey identified surficial deposits with “less favorable aquifer characteristics”, which are described by the Maine Geological Survey as “areas with moderate to low or no potential groundwater yield.”¹⁰⁴

However, the Department has questioned placement of the location of water monitoring wells, alleging that any release would fail to be detected as a result of their planned location. The Department has pushed for additional sampling of bedrock wells before any waste is deposited on the site.¹⁰⁵ In fact, the Department has expressed that its concerns for this landfill expansion center on groundwater.¹⁰⁶ It was agreed upon on May 26, 2020 that WM would conduct a pumping test to address the Department’s concerns regarding hydraulic conductivity of the proposed Phase 14 site.¹⁰⁷

The pumping test was performed in July 2020; and documented in a Supplemental Geologic and Hydrogeologic report dated July 31, 2020. During the pumping test, a bedrock well was pumped at a continuous rate of 1 gallon per minute (gpm) for a period of 72 hours. Groundwater level elevations in wells screened in bedrock, till and clay were continuously monitored prior to, during and after the pumping test. The results of the pumping test revealed hydraulic connection in each of the hydrogeologic units: bedrock, till and clay, to an estimated distance of at least 1,500 ft from the bedrock well.¹⁰⁸ This suggests a hydrogeologic regime that is deeply integrated and very sensitive to small system changes. The impacts from the construction and operation of an almost 50 acre landfill on this delicate system are not adequately addressed or quantified by WMDSM. As such, the Department should deny WMDSM’s Application.

Reference was made in the Department’s comments to the historic use of upgradient property as an auto salvage operation. CLF questions whether groundwater impacts from that historic land use have been documented and whether landfill construction activities may impact the sensitive hydrogeologic regime to mobilize any existing contaminants.

¹⁰² Permit Application, Volume I, p. 25.

¹⁰³ Permit Application, Volume I, p. 25.

¹⁰⁴ Permit Application, Volume I, p. 25.

¹⁰⁵ MEDEP Comments, June 22, 2020.

¹⁰⁶ MEDEP Memo, p. 1.

¹⁰⁷ MEDEP Comments, May 26, 2020.

¹⁰⁸ Supplemental Geologic and Hydrogeologic Report, Crossroads Landfill, Norridgewock, Maine. Golder. July 31, 2020.

The Department should require greater baseline monitoring to document any contamination due to this historic use, and the impact landfill construction would have on that contamination, if it exists prior to issuing a decision on WMDSM's Application.

Finally, connection between groundwater and surface water at the site is clear. The presumed downgradient receptor to groundwater from the Phase 14 area, Mill Stream and its tributaries¹⁰⁹, meanders through extensive wetlands prior to discharging to the Kennebec River, discussed in detail, below. Allowing the new landfill, and failing to protect the groundwater, will also be a failure to protect the streams and river.

D. If the New Landfill is Allowed, the Department should require a Double Liner System

While if allowed, this landfill will eventually leak toxic leachate, if the Department permits the new landfill to be built, it should at least require WMSDM to built a double liner system. In the 1950s, landfills, or sanitary dumps, were just holes in the ground where the waste was covered by a layer of soil to reduce odors and vermin.¹¹⁰ In the 1970s compacted soil and clay liners were proposed for waste containment. This technology was ultimately abandoned as ineffective at preventing the leachate from escaping the landfill – a clay liner that is a foot thick will be breached in less than five years.¹¹¹

In the 1980s landfills had begun installing plastic liners. Over time, regulations evolved to require composite liner systems – originally in the form of a two-foot thick clay liner and a 60 mil-thick layer of plastic sheeting (about the thickness of paperboard). Today, most landfill developers are using a geosynthetic clay liner as a substitute for clay. A geosynthetic clay liner is approximately a quarter of an inch thick. While there are pipes to collect the leachate and landfill gas buried in the waste, and a second liner system is now also required in many states, with a second set of pipes to collect the leachate and gas.¹¹²

In 1991, the United States Environmental Protection Agency promulgated regulations for landfilling municipal solid waste (“MSW”) as part of the Resource Conservation Recovery Act (“RCRA”), Subtitle D. Originally Subtitle D required a single composite (plastic sheeting and compacted clay/geosynthetic) liner, but it was eventually amended by many states to require two liner systems for all new landfill cells. In fact, all of the states in New England would require a dual liner system for this new landfill. The Department is the only state agency that could choose

¹⁰⁹ Ibid.

¹¹⁰ Overview of Subtitle D Landfill Design, Operation, Closure and Postclosure Care, January 2004Page 2. <http://www.gfredlee.com/Landfills/LFOverviewMSW.pdf>

¹¹¹ Flawed Technology of Subtitle D Landfilling of Municipal Solid Waste, G. Fred Lee & Associates, Updated January 2015, Page 13.

¹¹² Id. at 10.

to allow a single composite liner over a layer of clay for a new landfill built to accept these most toxic forms of waste.¹¹³

WMDSM's representatives, Scott Luettich and Nicholas Yafrate from Geosyntec Consultants confirmed that there will only be one composite liner -- geosynthetic with a geomembrane -- at the new landfill.¹¹⁴ Alistair MacDonald, P.G., a hydrogeologist with Golder Associates testified on behalf of WSDMS at the Department's Public Hearing on October 1, 2020 regarding the geological and hydrological conditions at the site of the proposed new landfill. When asked about the thickness of the clay under the site, he stated that the clay layer ranged from 2 feet to 20 feet thick.

While all landfills are dangerous, two liner systems on top of the clay layer would be more protective and more sensible, and in fact, Phases 7, 9 (constructed 2001), 10 (constructed 1995), 11 (constructed 1998), and 12 (constructed 2002) are all double composite lined landfill cells.¹¹⁵ Only the very old landfill cells, and the cells constructed on top of other lined cells, have single liner systems at Crossroads Facility.¹¹⁶

Waste Management is currently in the process of expanding the Turnkey Landfill in New Hampshire. In their application, Waste Management proposed that the expansion have a dual liner system. Similar to this landfill, Turnkey Landfill accepts MSW and CDD. However, Turnkey Landfill accepts much less Special Waste than Crossroads Landfill. Why is Waste Management willing to invest in a more protective second landfill liner system in New Hampshire, yet not in Maine?

¹¹³ *State of Connecticut*, Title 22a Section 22a-209-14 (1) and (1)(C)(i) "The liner system shall be a dual synthetic liner system," <https://eregulations.ct.gov/eRegsPortal/Browse/getDocument?guid={F0DC9F57-0100-C7B7-BF07-DE0E453778A8}>; *Commonwealth of Massachusetts*, "Double composite liner" required at 310 CMR 19.110(4)(a) <https://www.mass.gov/doc/310-cmr-19000-solid-waste-management-facility-regulations/download>; *State of New Hampshire*, Chapter 800, 805.05 (b), where the number of liner systems required depends on the waste to be contained there, and Env-Sw 805.12 required that MSW landfills "shall be designed as double-lined facilities" as shall incinerator ash landfills (805.13), and landfills accepting "other solid waste types" (805.15). Construction and Demolition Debris landfills are only required to have a single liner system in New Hampshire, <https://www.des.nh.gov/organization/commissioner/legal/rules/documents/env-sw800.pdf>; *State of Rhode Island and Providence Plantations*, "Double composite liner" required at 250-RICR-140-05-2 A.1. <https://rules.sos.ri.gov/regulations/part/250-140-05-2>; *State of Vermont*, Section 6-606 Disposal Facilities (b)(2)(E)"All liner systems installed after February 7, 1989 shall be of double liner construction."

https://dec.vermont.gov/sites/dec/files/wmp/SolidWaste/Documents/SWRule.final_.pdf

¹¹⁴ MEDEP Public Hearing, WMDSM's representatives, Scott Luettich and Nicholas Yafrate from Geosyntec Consultants speaking on October 1, 2020.

¹¹⁵ PHASE 14 SOLID WASTE PERMIT APPLICATION VOLUME V OF VI Site Operations Manual, Section III Leachate Management Plan, p. 4-8)

https://www.maine.gov/dep/ftp/projects/crossroads-phase14/application/Ph14%20SW%20PermitApp_Vol.%20V%20Operations%20Manual.pdf

¹¹⁶ Id.

E. Even if All of the Leachate Were Collected, It Would Pollute the Kennebec River

As discussed above, leachate generated by the Crossroads Facility likely contains heavy metals, PBDEs, PFAS and other chemicals of emerging concern. Some of the landfill leachate inevitably escapes the landfill through unlined cells, or through leaks in liners or the pipe collections system. The landfill leachate that is collected and discharged via wastewater treatment facilities also poses risks to public health and the environment.

The leachate generated at the Landfill is pumped to on-site storage tanks prior to being loaded into tanker trucks and hauled off-site for disposal at wastewater treatment plants (“WWTPs”).¹¹⁷ Though a step in the right direction, WWTPs generally are not required or equipped to remove all types of leachate contaminants from wastewater prior to discharge into surface waters. Sewage treatment is primarily focused on reducing wastewater discharges of so-called conventional pollutants: oil, grease, organics like nitrogen and phosphorous, total suspended solids, and settleable matter. US EPA NPDES discharge permits for a municipal wastewater treatment facility do not require monitoring or set limits for the long list of contaminants in leachate—PFAS, PBDEs, and other chemicals of concern—that have been found to be highly toxic to humans and other species, and persistent in the environment. According to a USGS study, many leachate contaminants are therefore present after leachate is processed by a municipal wastewater treatment plant.¹¹⁸

WMDSM landfill leachate is currently collected and disposed of at one of two local waste water treatment facilities: SAPPI in Hinkley, Maine or the Anson-Madison Sanitary District.¹¹⁹ Both of these facilities discharge “treated” effluent to the Kennebec River.

In addition to residential, commercial and institutional MSW, WMDSM also accepts municipal WWTP sludge at the Crossroads Facility. WWTP sludge has been identified as a leading contributor of per and poly-fluorinated alkyl substances (PFAS) to the environment. PFAS are group of more than 4,000 chemicals identified as ‘emerging contaminant s’ which have been found to be toxic to human and ecological health at very low *part-per-trillion* levels. As the Department is well aware, farmland throughout the State of Maine has been ruined due to the previous land application of WWTP sludge. Communities throughout New England are struggling to break the cycle of this “forever chemical” from their waste streams.

PFAS is a good example of a toxicant that is definitely in Crossroads Facility’s leachate, and that will be discharged in dangerous amounts into the Kennebec River. The US EPA has

¹¹⁷ Id.

¹¹⁸ J.R. Masoner, D. W. Kolpin, E. T. Furlong, I. M. Cozzarelli, I.M., & J. L. Gray, J.L., *Landfill leachate as a mirror of today's disposable society: Pharmaceuticals and other contaminants of emerging concern in final leachate from landfills in the conterminous United States*, 35 Environmental Toxicology and Chemistry 906-918 (2015).

¹¹⁹ MEDEP Public Hearing, WMDSM’s representatives, Scott Luettich and Nicholas Yafrate from Geosyntec Consultants, October 1, 2020.

abdicated its responsibility to regulate PFAS under the SDWA or the CWA: there is no NPDES permitting criteria for PFAS and no current treatment technology to remove PFAS from either landfill leachate or municipal WWTP effluent. In the end, PFAS chemicals disposed of at the Crossroads Facility and released into its leachate will threaten the water quality of the Kennebec River – a river the State of Maine has spent nearly 50 years resuscitating -- and pose significant threat to the people and ecosystems who rely upon it. The impacts of the permitting of Phase 14 are significant to the community of Norridgewock, but also pose significant threats to communities and ecosystems far downstream.

Leachate is currently not pretreated at the Crossroads Facility, nor did the Application discuss it, as it is not required by the local wastewater treatment facilities that accept the Crossroads Facility's leachate (SAPPI in Hinkley, Maine and the Anson-Madison Sanitary District in Madison, Maine).¹²⁰ However, the Department should require WMDSM pretreat the leachate, given the toxic nature of the wastes buried at the site. Furthermore, Waste Management is required to pretreat the leachate at the Turnkey Landfill in New Hampshire. Again, Waste Management should protect the health of the people of Maine as rigorously as it does the people of New Hampshire.

F. Despite the LFGTE System and Flaring, the New Landfill Would Increase the Amount of Dangerous Gas Released Into the Environment

When food, clothes, paper and cardboard are buried in a landfill, and it rains or snows on the open landfill cells, the buried waste gets wet. Landfill cells produce methane because water and carbon are both present in the absence of air. The Landfill Gas that escapes all MSW landfills is made up of methane (about 55%), carbon dioxide (45%), and small amounts of oxygen, nitrogen, and other dangerous gases that adhere to the methane from the MSW, like volatile organic compounds and hydrogen sulfide.¹²¹ Landfill Gas smells terrible, and it is also very dangerous because it is flammable and has trace amounts of toxic gases, and it migrates through soils and accumulates in confined spaces.¹²² As such, it can cause asthma and other health problems.¹²³

Methane is 28 times more potent a greenhouse gas than carbon dioxide. Landfills are the largest manmade source of methane, and their methane emissions are significant. In 2014, U.S. landfills released about 163 million tons of carbon dioxide equivalent of methane.¹²⁴ Considering

¹²⁰ Permit Application, Volume IV, p. 19.

¹²¹United States Environmental Protection Agency, *Guidance for Evaluating Landfill Gas Emissions from Closed or Abandoned Facilities*, EPA-600/R-05/123a, September, 2005, p. 1-2.

¹²² *Id.*

¹²³ Erica Gies, *Landfills have a huge greenhouse gas problem. Here's what we can do about it.*, Ensia (Oct. 25, 2016).

¹²⁴ *Id.*

the shorter life span of methane (12-year atmospheric life¹²⁵), reducing the methane released from landfills should be a priority.

Methane and other dangerous constituents of Landfill Gas always escape the landfill, even if a flare manages the methane or landfill gas to energy system. It is impossible to know how much methane is produced by a landfill, or what percentage of it is captured in a flare or landfill gas to energy system (LFGTE). Kerry Kelly, senior director of federal affairs for Waste Management says 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," she said.¹²⁶

Estimates by U.S. EPA and scientists outside of the waste industry range from 10 to 90 percent gas capture over the life of the landfill—a large margin for error. Most landfills are certainly on the lower end of capture. Studies have shown that most methane production happens in the operational stage of the landfill, when the landfill isn't airtight.¹²⁷ Higher rates of capture are possible once the landfill is sealed, but sealing the landfill slows down methane production.

WMDSM plans to install and operate a Landfill Gas to Energy ("LFGTE") management system for the Phase 14. A conceptual landfill gas well layout and details are provided in APPENDIX IV(g) of Volume IV of this permit application.¹²⁸ WMDSM's representative, Lisa Wilkinson of SCS Engineers, stated at the Department's Public Hearing on October 1, 2020, that "gas production," or the production of energy from the gas, will begin after WMDSM buries waste for a year, and is updated, or built out to capture gas from new areas, yearly. This is a good example of the problems inherent in capturing landfill gas. The gas will begin to be produced almost immediately, however there will be months – up to a year – until the system is installed in new cells.

The only way to ensure that significant amounts of methane are not escaping the landfill is for the landfill not build the landfill in the first place, or barring that, to prevent methane production entirely. The best practice is to prohibit all organics—food, textiles, paper and cardboard—from the landfill. Food, paper, and cardboard are included in the Maine Materials Management Plan 2019 diversion goals. Properly diverting these organics would drastically reduce both the methane produced at the Crossroads Facility and the need for the landfill to be built.¹²⁹ For this reason, the Department should deny the Application, and barring that, prohibit WMDSM from disposing of any carbon based materials in the new landfill.

¹²⁵ U.S. Env'tl. Prot. Agency, Landfill Methane Outreach Program, Basic Information about Landfill Gas, <https://www.epa.gov/lmop/basic-information-about-landfill-gas> (last visited on July 19, 2018).

¹²⁶ Erica Gies, *supra* note 97.

¹²⁷ Hans Oonk, *Efficiency of landfill gas collection for methane emission reduction*, Greenhouse Gas Measurement and Management, 129-145 (2012).

¹²⁸ Permit Application, Volume I, p. 19.

¹²⁹ Universal Recycling Law (Act 148) (2012), 10 V.S.A. § 6601 et seq.

G. More than 10 Acres of Wetlands Would be Irreparably Damaged If This New Landfill Is Built

Thirty-nine wetlands were identified within the Phase 14 area.¹³⁰ The majority are forested, but some emergent and wetlands with a scrub-shrub component are also present.¹³¹ In the Phase 14 area, the only Wetlands of Special Significance (WoSS), as defined in Chapter 310(4)(A) of the Natural Resources Protection Act Wetlands and Waterbodies Protection Rules, identified are the portions of delineated wetlands located within 25 feet of a delineated intermittent stream.”¹³²

A total of 10.273 acres of wetlands are proposed to be permanently impacted by the Phase 14 project, and 0.005 acres of wetlands proposed to be temporarily impacted.¹³³ None of these wetlands to be impacted have been determined to be WoSS.¹³⁴ In order to construct the facility and access roads, the wetlands permanently impacted will be filled. Additionally, installation of an underground stormwater conveyance pipe will temporarily impact another portion of wetlands.¹³⁵ This impact will be mitigated through the in-lieu fee program and/or preservation.¹³⁶ (Full wetland descriptions can be found in Volume II, p. 5-11.)

The on-site surveys conducted during the appropriate seasonal window also identified nine vernal pools, although none were significant. Three pools will be impacted by the project and six will be avoided entirely.¹³⁷ Normandeau wetland scientists identified nine vernal pools within the Phase 14 project area. Seven of the nine pools, those identified in 2017 and 2018, were submitted to MEDEP for determination of significance; MEDEP reviewed the data forms and determined that none of vernal pools were “significant” and are therefore not regulated under NRPA. The two pools identified in 2019 have been submitted to MDIFW/MEDEP (July 2019) and are pending a determination of significance; however, neither pool is expected to be significant based on documented levels of indicator species and disturbance. MDIFW has recommended to MEDEP that the two pools be classified as “not significant”; however, to date Normandeau has not received a final letter from MEDEP.”¹³⁸ The Department should deny the

¹³⁰ Permit Application, Volume II, Site Condition Report- p. 5.

¹³¹ Permit Application, Volume I, General Information, p. 10. “*Wetland boundaries were delineated according to the 1987 U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual and Regional Supplement to the USACE Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0), which utilize the three-parameter approach (i.e., evaluating the site for the presence of hydric soils, hydrophytic vegetation and wetland hydrology) for identifying wetlands and determining their jurisdictional limits.*”

¹³² Permit Application, Volume II, Site Condition Report- p. 6.

¹³³ Permit Application, Volume II, Activity Description - p. 2.

¹³⁴ Permit Application, Volume II, Activity Description - p. 2.

¹³⁵ Permit Application, Volume II, Activity Description- p. 2.

¹³⁶ Permit Application, Volume I, General Information, p. 10.

¹³⁷ Permit Application, Volume I, p. 10.

¹³⁸ Permit Application, Volume II, p. 13.

Application because building the new landfill will destroy over ten acres of irreplaceable wetlands at the site.

H. Wildlife Habitat Will be Negatively Impacted if the New Landfill is Built

In their application, WMDSM asserts that there is no significant wildlife habitat within the Phase 14 footprint. A mapped Deer Wintering Area (DWA), however, overlaps portions of the area. This DWA is currently a candidate area, meaning it has not yet been surveyed or rated by Maine Department of Inland Fisheries and Wildlife (MDIFW). A WMDSM-conducted study, using the 1993 MDIFW guidelines, determined that the DWA would receive a “low” quality rating.¹³⁹ WMDSM does mention a few pages later, however, that deer are commonly seen on the property, grazing on the existing capped landfills.¹⁴⁰ Additionally, all of Maine’s eight bat species all have potential to be present in the Phase 14 area in the summer, based on known distribution and the habitat available. Roosting and/or foraging habitat will be disrupted for all eight species, all of which are either listed as Special Concern, State-Endangered Federally-Threatened, State Endangered, or State Threatened.¹⁴¹ Despite this, WMDSM alleges that no unreasonable, adverse impact is anticipated from Phase 14.¹⁴² WMDSM intends to limit the impact of the immediate loss of habitat using a phased approach to construction to lessen the extent and impact of the disturbance, and restricting clearing of trees to limit direct impact to any species of birds and/or bats that have the potential to be present in the area, but that will not adequately compensate for the devastation caused by clearing and excavating fifty acres.¹⁴³ The Department should deny the Application due to the loss of habitat the new landfill would cause.

V. **Visibility/Sight**

WMDSM asserts that the Phase 14 visual impact assessment concluded that based on design and operational policies, the regional landscape, large setback distances with prevalent vegetative screening, the project will not have an adverse effect on the current scenic character of the Norridgewock area.¹⁴⁴ However CLF agrees with concerns raised by the Department, which requested evaluation from additional vantage points and concerns over previously exposed black plastic from Phases 10 and 11.¹⁴⁵ During the October 1, 2020 Public Hearing, Mr. David Burns

¹³⁹ Permit Application, Volume I, p. 2.

¹⁴⁰ Permit Application, Volume I, p. 12.

¹⁴¹ Permit Application, Volume I, p. 11. “*The forest cover provides ample summer roosting habitat for the foliage-roosting species (eastern red, hoary, and silver-haired bat, all listed as Special Concern (SC) as well as a small amount of summer roosting habitat for the northern long-eared bat (State-Endangered, Federally-Threatened), which roosts under loose bark and tree trunk crevices and hollows. Forest edges and nearby semi-open wetlands also provide foraging habitat for these four species as well as little brown (State-Endangered) eastern small-footed (State-Threatened), tri-colored (SC), and big brown bats (SC). However, there are no known maternity roosts or hibernacula on or in the vicinity of the Crossroads property.*”

¹⁴² Permit Application, Volume I, p. 12.

¹⁴³ Permit Application, Volume I, p. 12.

¹⁴⁴ Permit Application, Volume I, p. 15

¹⁴⁵ MEDEP Comments, February 14, 2020, p.3.

of the Department asked if WMDSM had investigated the use of Mount Tom. If Mount Tom is used for recreations, the new landfill might be visible from its slopes. The Department should require WMDSM to investigate whether the new landfill would impact views from Mount Tom as well as other views raised during the Public Hearing on October 1, 2020.

VI. Conclusion

The Department should not approve WMDSM's permit Application to build a new landfill that will provide no definite public benefit to the State of Maine, inevitably negatively impact the public health of the region, negatively impact the environmental resources in the area, and run counter to the State of Maine's Waste Hierarchy and goals as stated in the 2019 Maine Materials Management Plans. Specifically:

1. The Department cannot grant the Application because the new landfill is not allowed to be built on a parcel of land purchased by Waste Management in 2017, and 1998.
2. The Department should refine its interpretation to differentiate between expanding "landfills," and expanding, "solid waste facilities," two substantially different outcomes that should be approached differently by the Department. Equating the expansion of landfills and the expansion of Solid Waste Disposal Facilities is sloppy policy that would allow for commercial landfill expansions far beyond the intent of the original prohibition.
3. The Department should deny the Application because building a new landfill does not provide a long term public benefit to the State of Maine in accordance with the State's Waste Hierarchy. A new landfill will not incentivize reduction, prioritize reuse, or develop recycling or composting programs. In fact, the more cubic yards of landfill capacity there is in Maine, the more likely it is that waste will be buried.
4. If the Department permits WMSDM to build the new landfill, the Department set a maximum fill rate for waste each year in order to preserve the life of the landfill for the State of Maine's waste.
5. If the Department permits WMSDM to build the new landfill the Department should require WMSDM to reserve 200,000 tons of capacity a year for the people of Maine's MSW, for a total of 3,400,000 tons of capacity over the life of the landfill.
6. If the Department permits WMSDM to build the new landfill the Department should not only define ADC as waste, but also limit how much ADC WMSDM is allowed to bury at the landfill each year.

7. If the Department permits WMSDM to build the new landfill the Department should require WMSDM to report how many tons of cover were spread over how many acres each year up until 2019, and all future years, and calculate how deep a layer it created each prior to any further action on this Application.
8. If the Department permits WMSDM to build the new landfill the Department should require Waste Management to use movable, impermeable covers. Waste Management's engineers claimed leachate at the site would be minimal due to the use of movable covers. The Department should hold the company to that promise in current and any future operations.
9. If the Department permits WMSDM to build the new landfill the Department should require WMSDM not to bury more than 25% out of state waste each year, including ACD or RGC.
10. The New Hampshire Department of Environmental Services requires Waste Management to report how much of the waste buried at Turnkey Landfill in New Hampshire each year is from out-of-state. The Department should require WMSDM do the same in Maine.
11. CLF asks that the Department consider delaying its review of this Application until that new Environmental Justice standard is put in place, or at least consider the negative impact the new landfill would have on E.J. communities in the region.
12. If the Department permits WMSDM to build the new landfill the Department must require that WMSDM must collect and handle the recycling of any community that they are receiving waste from, unless it can prove that the community is already diverting almost all (90%) of its containers, cardboard, and paper out of the waste stream via another system.
13. The Department should require that WMSDM handle more recyclables each year until the State meets its goal of composting and recycling 50% of its disposed MSW.
14. To decrease toxicity at the Crossroads Facility, as well as decrease the risk of fires, WMSDM should be providing community drop off events in situ at least four times a year for all 55 communities it serves.
15. If the Department approves the Application, and given that 38.41% of Maine's disposed MSW is compostable and WMSDM buried over 187,000 tons of MSW in 2019, CLF suggests that the Department require WMSDM to build a composting facility and implement a plan to divert food scraps and other compostables as outlined in the comments above with a concrete set of conditions and goals.

16. If the Department would like to see substantial reductions in MSW, the Department should set clear standards for WMDSM and the communities it serves to implement Save Money and Reduce Trash, or Pay As You Throw programs to aggressively reduce waste. Likewise, the Department should require that WMDSM meet increasingly aggressive recycling and composting targets.
17. We ask the Department not to permit the new landfill at the Crossroads Facility because all landfills release dangerous contaminants into the environment.
18. Given the toxic nature and danger to the environment and public health presented by most of the waste buried at the Crossroads Facility, the Department should not approve the Application.
19. The impacts from the construction and operation of an almost 50 acre landfill on this delicate system are not adequately addressed or quantified by WMDSM. As such, the Department should deny WMDSM's Application.
20. The Department should require greater baseline monitoring to document any contamination due to the historic facility use, and the impact landfill construction would have on that contamination, if it exists, prior to issuing a decision on WMDSM's Application.
21. If the Department permits the new landfill to be built, it should at least require WMDSM to build a double liner system as would be required in all five of the other New England states.
22. The Department should require WMDSM pretreat the leachate, given the toxic nature of the wastes buried at the site. Furthermore, Waste Management is required to pretreat the leachate at the Turnkey Landfill in New Hampshire. Again, Waste Management should be required protect the health of the people of Maine as rigorously as it does the people of New Hampshire.
23. The Department should deny the Application because the impacts of the permitting of Phase 14 are significant to the community of Norridgewock, but also pose significant threats to communities and ecosystems far downstream.
24. If the Department does approve the Application, the Department should prohibit WMDSM from disposing of any carbon based materials in the new landfill.
25. The Department should deny the Application because building the new landfill will destroy over ten acres of irreplaceable wetlands at the site.

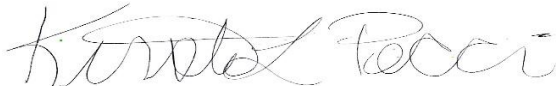
26. The Department should deny the Application due to the loss of habitat the new landfill would cause.
27. The Department should require WMDSM to investigate whether the new landfill would impact views from Mount Tom as well as other views raised during the Public Hearing on October 1, 2020.

For the reasons stated above, among others, the signatories respectfully request that MEDEP deny this permit application for Phase 14 at WMDS' Crossroads Facility. Thank you for the opportunity to comment on this proposal and your attention to this matter.

Very Truly Yours,

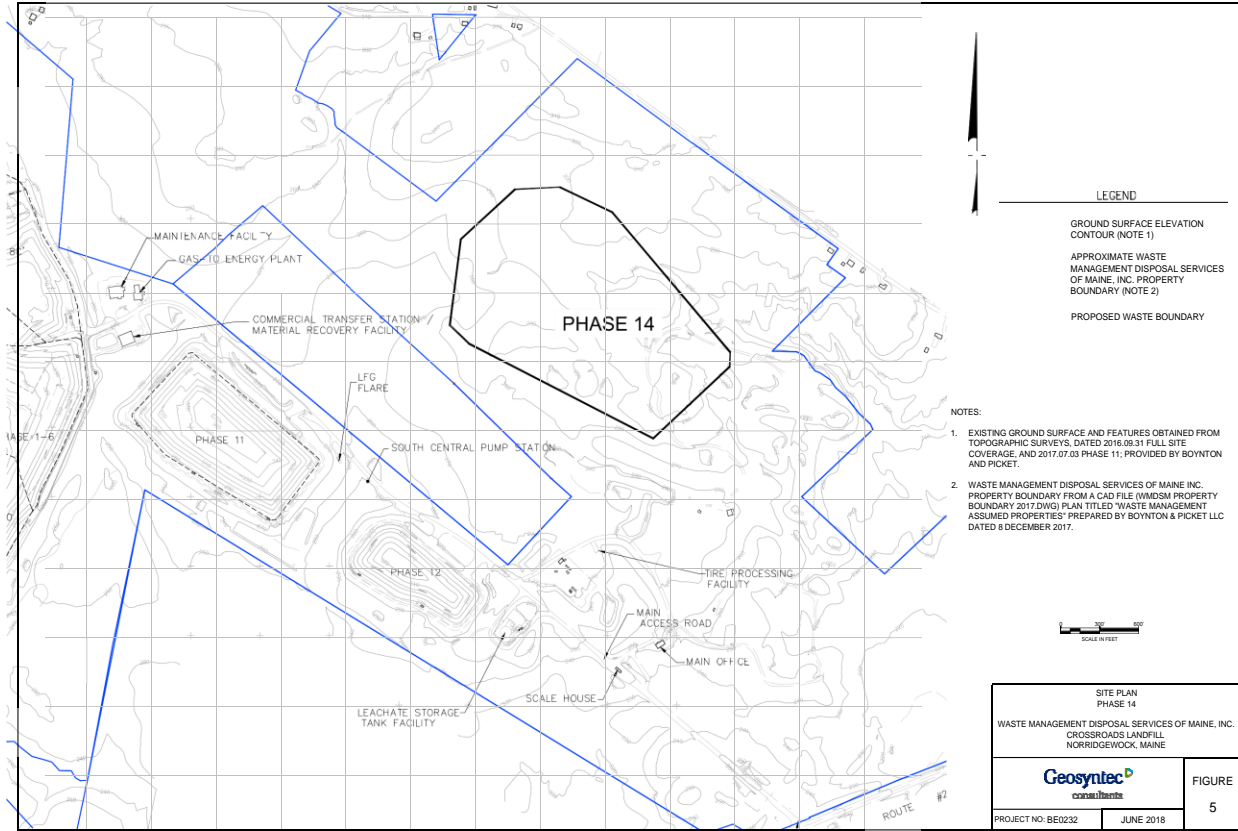


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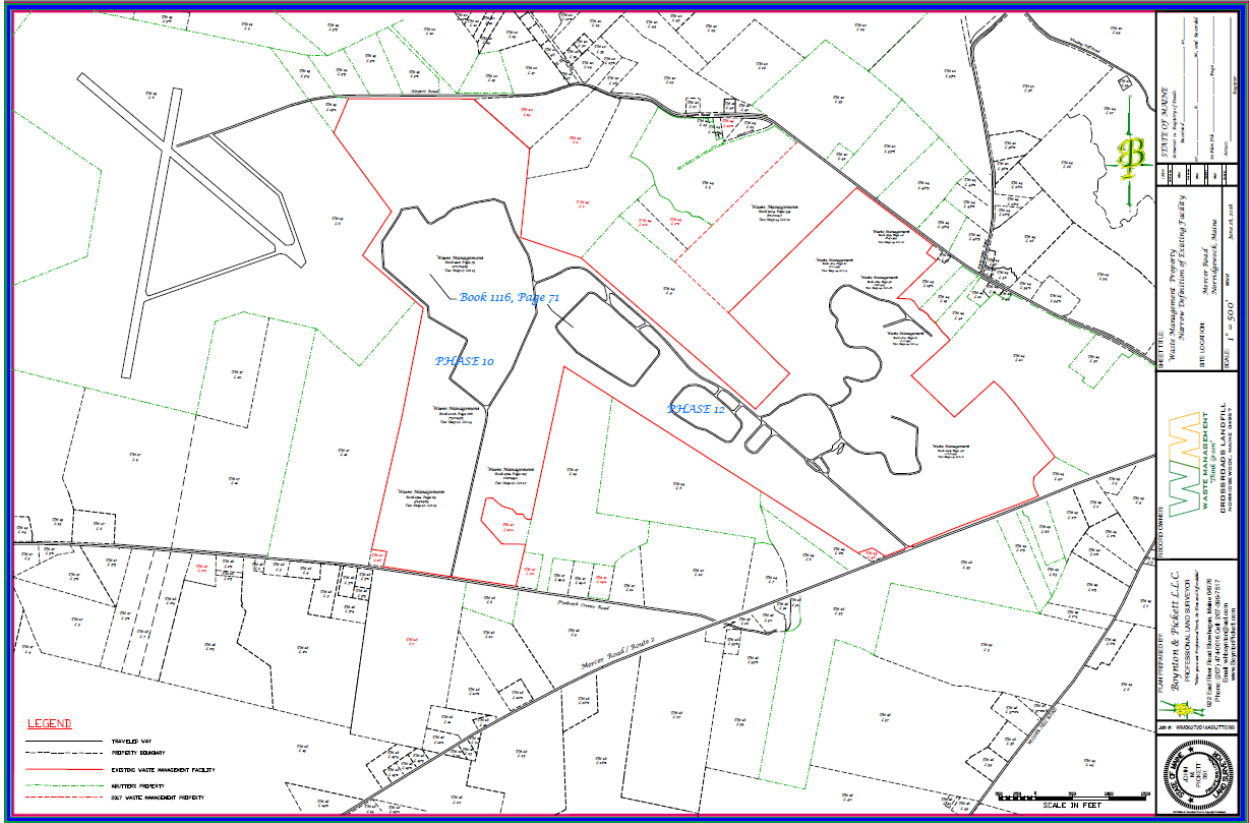
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EXHIBIT A



Also available [here](#).

EXHIBIT B



Also available [here](#).

EXHIBIT C

