

Colby, Jaime

From: Eric Steinhauser <esteinhauser@sanbornhead.com>
Sent: Wednesday, June 5, 2024 3:23 PM
To: DES: Solid Waste Management Bureau Rules
Subject: Written Input to Env-Sw 800 Landfill Requirements (March 8, 2024 Initial Proposal)
Attachments: 20240605 Env-Sw 800 comment ltr.pdf

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Thank you for the opportunity to provide input/feedback on the NHDES's initial proposal for Env-Sw 800 (Landfill Requirements) dated March 8, 2024.

Attached are our comments based on our industry knowledge and experience from working in the solid waste industry in New Hampshire, New England, and nationally. We trust that you will find the comments informative and useful in developing the formal proposed new rules for Env-Sw 800.

We welcome the opportunity to speak with you about our comments and how we can collectively make the new Solid Waste Rules environmental protective, technical applicable, practical, constructable, and current with technology and industry practice.

Please contact me should you require additional information.

Regards,
Eric

Eric S. Steinhauser, PE, CPESC, CPSWQ
Senior Vice President

Licensed: PE in AL, CT, DE, IA, MD, ME, MI, NH, NJ, NY, OH, PA, RI, VA, VT, WV

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Ms. Leah McKenna, Administrator
Solid Waste Management Bureau (Bureau)
New Hampshire Department of Environmental Services (NHDES)
29 Hazen Drive
Concord, NH 03302-0095

June 5, 2025

Transmitted via email
to swmbrules@des.nh.gov

Re: Public Input to – Env-Sw 800 – Landfill Requirements
Initial Proposal dated March 8, 2024
NHDES Notice Number 2024-74

Dear Ms. McKenna:

Sanborn Head & Associates, Inc. (Sanborn Head) prepared this letter to transmit our written comments relative to the proposed changes to the New Solid Waste Management Rules, specifically section Env-Sw 800 (Landfill Requirements) as presented in the March 8, 2024 Initial Proposal under Notice Number 2024-74. Our comments reflect the professional experience and judgement of our engineers and hydrogeologists who have been practicing in the solid waste management field in New Hampshire and other states since the promulgation of the 40 CFR 258 in 1991 and the issuance of the NH Solid Waste Rules that same year.

We understand and appreciate the huge task before the NHDES Solid Waste Bureau (Bureau) as it navigates the rulemaking process and to the degree allowed, we, as fellow professionals in this field, want to provide the Bureau with our insight and professional opinions that are based on our direct and relevant project experience and extensive training. Our comments reflect the realities of the solid waste industry from our work with our private and public clients in New Hampshire, across New England, and nationally.

Sanborn Head is committed to the protection of the environment and human health and safety. As licensed professionals, we are bound by our professional codes of ethics and wish to advance our profession in the siting, design, construction, and operation of technically sound and environmentally protective solid waste disposal facilities. Solid waste landfills continue to represent important technologies for responsibly handling our waste.

Based on our industry knowledge and experience, we trust you will find the comments informative and useful in developing the new rules for Env-Sw 800. For ease of transmitting our comments, please see Exhibit A enclosed, which includes our comments to the March 8, 2024 Initial Proposal to the Env-Sw 800 rules.

While we understand and support the NHDES's intention for increasing the environmental protection standards associated with landfills, we identify several areas where word changes may be helpful to clarify, correct, and strengthen the intent of the regulation.

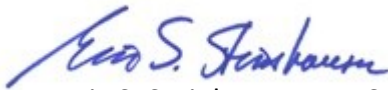


As you know, solid waste related matters have become contentious in recent years. As such, many of our comments address issues that we consider may become points of contention and the subject for future permit appeals. As professionals working in the solid waste industry, we wish to help the NHDES avoid permit appeals by better defining certain aspects of rules that could otherwise be subject to multiple interpretations.

We strongly encourage the Bureau to review terms used in the proposed rules for consistency within and between the rule statements. Furthermore, the NHDES should consider preparing policy and/or guidance documents for some of the proposed rules to help landfill owners/operators and the general public and to avoid permit appeals to the NHDES's decisions.

Thank you for considering our comments.

Very truly yours,
SANBORN, HEAD & ASSOCIATES, INC.



Eric S. Steinhauser, PE, CPESC, CPSWQ
Senior Vice President and Principal

ESS:ess

Enclosure: Exhibit A – Comments to Initial Proposal, Env-Sw 800 – Landfill Requirements.

S:\CONDATA\SWCSA\NHDES Solid Waste Rulemaking\2024 Env-Sw proposals\Mar 2024 initial proposal\20240605 Env-Sw 800 comment ltr.docx

EXHIBIT A

COMMENTS TO INITIAL PROPOSAL ENV-SW 800 – LANDFILL REQUIREMENTS

General Comments

- Recommend that references to specific ASTM standards in **Env-Sw 805.16** (Quality Assurance/Quality Control (QA/QC) Standards for Liner and Capping Systems) be removed as these standards change over time. The NHDES should require that the QA/QC plans include the appropriate and applicable ASTM, GRI, and other relevant standards/guidance and hold applicants accountable to using the current and active standards/guidance.
- **Env-Sw 804.02** (Groundwater Protection Standards) should allow for the option of constructing the equivalent of a 5-foot thick layer of 5×10^{-3} centimeters per second soil. Construction of such a layer would be subject to oversight and testing and hence would effectively be more protective than a natural soil layer.
- **Env-Sw 805.06(c)** should acknowledge that existing piping need not be upgraded to the new standard.
- **Env-Sw 806.08(d)(3)** – It should be clearly acknowledged that leachate measurements may be obtained through electronic/telemetric means.
- **Env-Sw 806.08(k)** requires landfill operators to prepare and submit an annual odor control evaluation that is overly burdensome and does not add value to the landfill operation nor the environment. The proposed rule is clearly intended for landfills that have odor issues, which should not be applied ad hoc to every site. Rather, a more effective and meaningful annual evaluation requirement for a landfill that is not experiencing odor issues would be as follows:
 - Facility Description, including a description of the gas collection and control system (GCCS), and system changes since the previous reporting year;
 - Odor Control / Complaint Evaluation, consisting of a summary of odor control practices and measures employed by the facility during the reporting period that includes the location(s) of the practices and their effectiveness as evidenced by odor complaints;
 - Anticipated Landfill Gas Collection System Changes, summaries anticipated GCCS expansion for the next year;
 - Action Items, including planned physical and operational changes deemed necessary based on the previous year's performance and anticipated landfill development; and
 - Supporting Information, including current, next year, and final depictions of the GCCS, a figure showing odor complaints by location, figure depicting landfill cover types, summary of current year's surface emissions monitoring results, and logs of odor complaints and waste loads rejected due to odors.

The above does not prevent the NHDES from requiring additional information from landfills that have significant odor issues.

Env-Sw 806.08(l)(3) decreases the reporting threshold of the average secondary leachate flow rates from 100 to 50 gallons per tributary acre per day. While this change may appear to be environmentally protective, in reality, the associated increase in water thickness that over a liner system is negligible. Because of this, a change in the rule is unnecessary as it would result in an increase in incident reports (and an increased burden on the operator and the NHDES) for a condition that has no environmental impact.

Env-Sw 808.02 (Pre-requisites for Landfill Reclamation) – Landfill reclamation projects have demonstrated considerable environmental benefits and are anticipated to be a viable solution for many sites, and therefore should be encouraged, not discouraged. As such, if any revision to this section of the rules is made, the revision should help simplify and streamline the reclamation process. Please revise to describe the procedure for obtaining approval of a feasibility scope of work – is it a permit modification? Permit modifications should be limited to approval of the landfill remediation work plan. A permit modification shouldn't be needed for submitting a request for a feasibility study.

Recommended Alternative Text to Excerpts of the Proposed Rule

Env-Sw 804.02 Groundwater Protection Standards

(c) Undisturbed in-situ soils for 5 feet immediately beneath the footprint shall have an average saturated hydraulic conductivity of 5×10^{-3} centimeters per second (cm/sec) or less.

The above proposed rule is confusing when related to statements in Env-Sw 805 relative to landfill subgrade and subbase. A definition of the landfill liner system would be helpful (i.e., soil/geosynthetic layers as appropriate). We propose that the NHDES consider revising the above proposed rule as follows to provide clarity.

Env-Sw 804.02 Groundwater Protection Standards.

(c) Where present, undisturbed in-situ soil within 5 feet below the landfill liner system shall have an average saturated hydraulic conductivity of 5×10^{-3} centimeters per second (cm/sec) or less.

Env-Sw 805.03 Landfill Subgrade and Base Grade Standards

(a) The landfill subgrade shall:

(1) Be graded and prepared for landfill construction; and

(2) Have sufficient structural integrity to support the facility under all anticipated loading conditions during all phases of construction, operation, and closure.

(d) For geomembrane lined facilities, the base below the liner and above the subgrade shall:

(f) Facility base grades shall be sloped to facilitate compliance with Env-Sw 805.06 and Env-Sw 806.05.

The statements in the above proposed rule are confusing when related to statements in Env-Sw 804 relative to landfill subgrade and subbase. We propose that the NHDES consider revising the above proposed rule as follows to provide clarity.

Env-Sw 805.03 Landfill Subgrade Standards.

(a) The landfill subgrade shall:

- (1) Be the layer of soil directly below the bottom liner;
- (2) Be graded and prepared for landfill construction; and
- (3) Have sufficient structural integrity to support the facility under all anticipated loading conditions during all phases of construction, operation, and closure.

(d) For geomembrane lined facilities, the soil layer directly below the bottom liner shall:

(f) Landfill liner grades shall be sloped to facilitate compliance with Env-Sw 805.06 and Env-Sw 806.05.

Env-Sw 805.06 Leachate Collection and Removal System Design Standards

(f) Leachate collection and removal systems shall be designed to maintain one foot or less of hydraulic head on all portions of the liner, excluding the leachate collection sumps if any, during routine operations plus the 25-year storm event with a duration equivalent to the time of concentration of the drainage area of the component being sized, plus 20 percent.

(g) Leachate collection and removal systems shall be designed to manage the quantity of leachate to be generated by the 100-year storm event with a duration equivalent to the time of concentration of the drainage area which contributes to leachate generation, in a manner which shall:

(h) Leachate collection and removal systems which are not directly connected to a permitted wastewater treatment facility shall provide capacity for storing leachate as follows:

- (1) At least 15% of the 100-year storm event storage volume, as specified by (g) above, shall be provided in primary storage units located outside the waste deposition area or in sumps located within the waste deposition area*
- (3) Containment for the volume of leachate produced by the 100-year storm event which exceeds the volume of the primary storage units shall be provided:*

In the above, certain statements in the proposed rule are confusing specifically as to how/where the 20 percent requirement is to be accounted for and the reference to time of concentration, which would yield a lower than intended rainfall amount. We propose that the NHDES consider revising the above proposed rule statements as follows to provide clarity and to be consistent with other related calculations.

Env-Sw 805.06 Leachate Collection and Removal System Design Standards.

(f) Leachate collection and removal systems shall be designed to maintain one foot or less of hydraulic head on all portions of the liner, excluding the leachate collection sumps if any. This condition shall be met during routine operations and the precipitation from 25-year, 24-hour storm event that is increased by 20 percent.

(g) Leachate collection and removal systems shall be designed to manage the quantity of leachate to be generated by the 100-year, 24-hour storm event in a manner which shall:

(h) Leachate collection and removal systems which are not directly connected to a permitted wastewater treatment facility shall provide capacity for storing leachate as follows:

- (1) At least 15% of the 100-year, 24 hour storm event storage volume, as specified by (g) above, shall be provided in primary storage units located outside the waste deposition area or in sumps located within the waste deposition area
- (3) Containment for the volume of leachate produced by the 100-year, 24-hour storm event which exceeds the volume of the primary storage units shall be provided:

Env-Sw 805.09 Stormwater Management System Design Standards

(b) Stormwater management systems shall be designed to accommodate the 50-year storm event of a duration equivalent to the time of concentration of the drainage area being served.

(g) Peak surface run-off from the landfill site during the 50-year storm event shall be controlled and maintained at the pre-development discharge rate, in accordance with RSA 485-A

We propose that the NHDES consider revising the above proposed rule statements as follows to provide clarity and to be consistent with other related calculations.

Env-Sw 805.09 Stormwater Management System Design Standards

(b) Stormwater management systems shall be designed to accommodate the 50-year, 24-hour storm event.

(g) Peak surface run-off from the landfill site during the 50-year, 24-hour storm event shall be controlled and maintained at the pre-development discharge rate, in accordance with RSA 485-A

Env-Sw 806.05 Leachate Management Requirements

c) A leachate management plan shall be developed, included in the facility's operating plan, and implemented at all lined landfills, based on the following criteria:

(1) Routine facility operations, including operations during the 25-year storm event, plus 20 percent, shall not result in more than one foot of hydraulic head on the liner system(s);

(7) If approved by the department, the practice of leachate recirculation shall:

(2) Not cause the facility to operate in excess of 12 inches of hydraulic head on the liner under routine operations including the 25-year storm event, plus 20 percent;

(g) Storage capacity shall be required to contain the leachate generated by the precipitation from the 100-year storm event in accordance with Env-Sw 805.06.

In the above, certain statements in the proposed rule are confusing specifically as to how/where the 20 percent requirement is to be accounted for. We propose that the NHDES consider revising the above proposed rule statements as follows to provide clarity and to be consistent with other related calculations.

Env-Sw 806.05 Leachate Management Requirements

c) A leachate management plan shall be developed, included in the facility's operating plan, and implemented at all lined landfills, based on the following criteria:

(1) Routine facility operations, including operations during the 25-year, 24-hour storm event, increased by 20 percent, shall not result in more than one foot of hydraulic head on the liner system(s);

(7) If approved by the department, the practice of leachate recirculation shall:

(2) Not cause the facility to operate in excess of 12 inches of hydraulic head on the liner. This condition shall be met during routine operations and the precipitation from 25-year, 24-hour storm event increased by 20 percent.

(g) Storage capacity shall be required to contain the leachate generated by the precipitation from the 100-year, 24-hour storm event in accordance with Env-Sw 805.06.

S:\CONDATA\SWCSA\NHDES Solid Waste Rulemaking\2024 Env-Sw proposals\Mar 2024 initial proposal\20240305 Exhibit A.docx

From: ["Reichert, Anne" <areicher@wm.com>](mailto:areicher@wm.com)

To: ["DES: Solid Waste Management Bureau Rules" <swmbrules@des.nh.gov>](mailto:swmbrules@des.nh.gov)

Date: 11/7/2023 8:58:18 PM

Subject: Waste Management of New Hampshire, Inc. - Comments to Proposed Revisions - SWR
Env-Sw 800 Landfill Requirements

Attachments: Env-Sw Ch 800 Proposed Rules Response (FINA) 11.7.23.pdf

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With Return Receipt Added. Attachment did not change.

Thank you!!

From: Reichert, Anne

Sent: Tuesday, November 7, 2023 3:56 PM

To: DES: Solid Waste Management Bureau Rules <swmbrules@des.nh.gov>

Cc: Poggi, Steve <spoggi@wm.com>; Howard, Bill <bhoward@wm.com>; DesMarais, Brian <BDesMara@wm.com>;
Richer, Peter <pricher@wm.com>; Lynch, Gail <glynch@wm.com>; Trierweiler, Garrett <GTrierwe@wm.com>

Subject: Waste Management of New Hampshire, Inc. - Comments to Proposed Revisions - SWR Env-Sw 800 Landfill
Requirements

Good Afternoon,

Please find enclosed a letter containing comments provided by Waste Management of New Hampshire, Inc. (WMNH)
regarding the proposed revisions to the NH DES Solid Waste Rules (SWR) for requirements in Env-Sw 800 – Landfill
Requirements

Please let me know if you have any questions on the information presented in this letter.

Regards, Anne

Anne Reichert, P.E.

Construction Project Manager

Waste Management of New Hampshire, Inc.

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November 7, 2023

Transmitted via email
to swmbrules@des.nh.gov

Ms. Leah McKenna, Administrator
Solid Waste Management Bureau
New Hampshire Department of Environmental Services
29 Hazen Drive
Concord, NH 03302-0095

Re: Public Input to Env-Sw 800 Solid Waste Program

Dear Ms. McKenna,

With this correspondence Waste Management of New Hampshire, Inc. (WMNH) is providing written comments to proposed changes to the Solid Waste Rules (SWR), specifically section Env-Sw 800 – Landfill Requirements. Our comments are provided in response to the NHDES's issuance of proposed changes to Chapter Env-Sw 800 Landfill Requirements of the New Hampshire Code of Administrative Rules on October 16, 2023. Our comments reflect WMNH's collective experience operating our Turnkey Recycling & Environmental Enterprises facility and our transfer stations located throughout New Hampshire. WMNH also draws from experience developing and operating landfills across New England and nationally. WMNH appreciates the Department's willingness to solicit public input on the proposed changes early in the rulemaking process.

It is WMNH's understanding that many of the proposed changes are intended to make the SWR more protective. However, for many of the proposed changes, there is no basis provided for how the Department arrived at the changes, making many seem arbitrary in nature. Increases to permitting requirements should be based on performance analysis, reliable scientific studies, and sound engineering practice, and should provide a demonstrable environmental benefit commensurate with the direct and indirect cost to implement them. Many of the proposed changes to property development restrictions, design factors, and operation and monitoring requirements will result in a substantial cost burden for private and municipal landfill operators, which will ultimately result in higher disposal rates and a greater cost for solid waste management for municipalities and New Hampshire residents. As part of the rulemaking process, the Department should provide supporting scientific and engineering basis that demonstrate the benefits of the proposed changes and associated cost-benefit analysis.

COMMENTS

WMNH is providing comments on specific sections of the proposed October 16, 2023 changes to Env-Sw 800 provided by the NHDES. For the proposed rule changes that WMNH is providing comment on, the NHDES's proposed additions are in "***bold italic font***" and deletions represented as

“strike through”. WMNH’s comments and specific recommendations to be considered in revising the existing rules follow the NHDES proposed changes.

*Env-Sw 804.02 (b) A landfill and all associated **stormwater**, ~~leachate storage units~~, and **decomposition gas infrastructure** shall be located only in areas where groundwater monitoring for release detection, characterization and remediation can be conducted prior to a release having an adverse ~~effect~~**impact** on **groundwater quality at the property line or a water supply**.*

The inclusion of stormwater and landfill gas infrastructure to the scope of the facility to be within the groundwater monitoring network should be implemented only in areas where this is warranted due to previous events at a facility, such as a spill or release. This requirement should be location specific and implemented in areas of the site where the Department finds cause to monitor these type of infrastructure.

*Env-Sw 804.02 (c) **Subgrade materials shall have an undisturbed in-situ saturated hydraulic conductivity of 1×10^{-3} centimeters per second (cm/sec) or less.***

The landfill subgrade standard in Env-Sw 805.03 should allow a permittee to remove and replace some portion of the subgrade and replace it with material that of the desired lower permeability. If this proposed by a permittee, then the Department may choose to confine this to a limited portion of the landfill footprint, such as less than 25%. This would allow the permittee to address an existing condition that is more limited in size without removing an entire site from consideration for development.

*Env-Sw 804.02 (d) **The base of the bottom liner system, or the base of the facility if unlined, shall be a minimum of 6 feet above the seasonal high groundwater table and the confirmed bedrock surface.***

WMNH proposes to remove ‘confirmed bedrock surface’ from this rule section as there are known situations where perched groundwater in bedrock is not representative of the underlying regional seasonal high groundwater table. By including ‘confirmed bedrock surface’, an applicant would be required to apply for a waiver to this rule to consider removal of bedrock outcrops not associated with the seasonal high groundwater table. NH is known to have bedrock outcrops or rises throughout the state and this limitation would limit available land for potential development causing a restriction in possible developed disposal capacity for NH generated solid waste ultimately increasing disposal fees for NH municipalities and citizens. Also bedrock outcrops can be unexpected and discovered during construction as the hydrogeologic investigation borings may not be located in a bedrock high and engineering is used to interpret the boring information and determine the expected bedrock contours for the facility.

*Env-Sw 804.03(d) The footprint of a landfill shall not be located within ~~200~~**500** feet of any perennial surface water body, measured from the closest bank of a stream and closest shore of a lake, as applicable.*

The addition of this increase for the landfill footprint setback will restrict land available for use at potential solid waste facilities. Increases to setback requirements should be tied to site specific hydrogeologic conditions.

This proposed rule change will result in increased economic burden on NH municipalities and citizens by causing less appropriately zoned land to be available for solid waste disposal facilities by restricting future disposal units to be 500 feet from a perennial surface water body.

Env-Sw 804.03(g) The footprint of a landfill shall not be located within the ~~100~~**500**-year flood~~plain~~
~~hazard zone~~.

The addition of this increase in setback for the landfill footprint will restrict land available for use at potential solid waste facilities. The elevation of the landfill liner anchor trench should be a factor in the setback criteria. For example, if a landfill is within the 500-year flood plain area, but its liner anchor trench is 10 feet above the flood plain elevation, then DES should allow the set back as proposed.

This proposed rule change increases the economic burden on NH municipalities and citizens by causing less appropriately zoned land to be available for solid waste disposal facilities by making the location of the disposal unit outside the 500-year floodplain.

Env-Wm 804.03(h) Identification of the areas cited above shall be based on a thorough hydrogeological investigation to demonstrate the following:

- (1) Compliance with the siting requirements of Env-Sw 804.02 and Env-Sw 804.03;***
- (2) That engineering design measures can be incorporated to control erosion, sedimentation and siltation; and***
- (3) The potential release of contaminants to surface waters can be prevented, attenuated or otherwise remediated.***

No additional comments on this other than those above for Env-Sw 804.02 and Env-Sw 804.03.

Env-Sw 804.04(a) There shall be a minimum ~~100~~**150**-foot ~~buffer strip~~**setback** between the property line and the footprint of the landfill, ***of which the 100 feet nearest the property line shall be vegetated.***

The addition of this increase in setback for the landfill footprint will restrict land available for use at potential solid waste facilities. The requirement that 100 ft be vegetated effectively increases the setback by more than 50 ft since it limits support activities such as access roads, earthen berms, and stormwater control structure from the 100 ft vegetated set back requirement.

This proposed rule change unfairly increases the economic burden on NH municipalities and citizens by causing less appropriately zoned land to be available for solid waste disposal footprints by making the disposal unit be 150 feet from a property line and requiring the nearest 100 feet to the property line to be vegetated.

Env-Sw 804.04(dc) ~~For facilities approved after the 2014 effective date of this chapter and sited on a parcel of land on which no landfill having a standard permit exists,~~ ***There shall be*** a minimum 500-foot vegetated buffer ~~shall be established and maintained as provided in Env Sw 805.11 between the footprint of the landfill and all properties not owned by the applicant or its affiliates that either contain residences,~~ ***residential care facilities, nursing homes, prisons, or that*** are zoned for residential use.

This proposed rule should be amended to include 'existing at time of permit application submission' prior to the word residences as the solid waste facility does not have control over the development of adjacent property after the facility is permitted.

Env-Sw 804.04(d) There shall be a minimum 1,000 foot setback, of which the 500 feet nearest the property line shall be vegetated, for properties containing public schools, licensed day care facilities, and hospitals.

This proposed rule should be amended to include 'existing' prior to the word public and include the words 'at time of permit application submission' after the word hospitals. This change in wording is proposed as the solid waste facility does not have control over the development of adjacent property. In addition, this proposed rule with a new setback for the landfill footprint to public schools, licensed day care facilities and hospitals will restrict land available for use at potential solid waste facilities.

This proposed rule change unfairly increases the economic burden on NH municipalities and citizens by causing less appropriately zoned land to be available for solid waste disposal footprints by making the disposal unit be 1,000 feet from one of these facilities although this type of facility is allowed to be within 500 feet of a residence with these same proposed rule revisions.

Env-Sw 804.04 (f) New MSWLFs subject to the requirements of Section 503 of the Wendell H. Ford Aviation Investment and Reform Act of the 21st Century (Ford Act), Pub. L. 106-181 (49 U.S.C. 44718 note) shall not be sited within six miles of certain smaller public airports as identified in the FAA Advisory Circular 150/5200-34, dated August 26, 2000.

This requirement has the potential to limit future landfill permits. A permittee should be allowed to operate a facility within this set back if certain mitigation efforts are put in place to control birds. These mitigation efforts should be submitted for review and approval by the NHDES and FAA prior to permitting.

Env-Sw 805.03(d)(1) Be prepared to a depth of not less than 24 inches and which provides a uniform and consistent bedding layer which shall be stable under loading

This proposed rule will require the use of more natural soil resources in the State of NH that have a low hydraulic conductivity. This is unnecessary for double lined landfills and will increase landfill development costs that will be passed on to facility users. The proposed rule revision would require a 100% increase in the thickness of this soil layer resulting in the use of 1,613 cubic yards more of soil per acre of landfill liner system requiring excavation and transportation to the project site. This increase in thickness will result in up to 94 more truckloads of this material per acre to be hauled to the project increasing the use of natural soil resources and increasing truck emissions and traffic in NH communities.

A more preferred approach that would not be impactful to the environment like the above proposed rule change would be to require owners and permittees to complete electrical leak location testing of the primary geomembrane using the soil-covered dipole method (ASTM D8265). This test confirms the integrity of the primary geomembrane after placement of the primary leachate collection system. This method would detect any defects in the primary geomembrane either from manufacturing, installation, or placement practices of the primary leachate collection layer.

This proposed rule change increases the economic burden on NH municipalities and citizens by increasing the use of a limited natural resource for limited gain in liner system performance. This

change will cause an increase in cost to the industry (along with increased truck traffic and emissions) that will be transferred to municipalities and citizens in increased disposal fees. This proposed change is not in keeping with latest industry published geomembrane testing practices for construction of landfill liner systems.

Env-Sw 805.04(d)(4) Consist of a soil with a saturated hydraulic conductivity of 1×10^{-5} cm/sec or less.

This proposed rule of the base course soil material hydraulic conductivity by a factor of 10x will utilize more natural soil resources in the State of NH that is difficult to source within the state boundaries and that is unnecessary for double lined landfills and will increase landfill development costs. The proposed rule revision would require a 10x lower of the hydraulic conductivity of this soil layer resulting in the need to source and truck this material from likely out of state soil borrow sources.

A more preferred approach to liner system construction would be to require owners and permittees to complete electrical leak location testing of the primary geomembrane using the soil-covered dipole method (ASTM D8265). This test confirms the integrity of the primary geomembrane after placement of the primary leachate collection system. This method would detect any defects in the primary geomembrane either from manufacturing, installation, or placement practices of the primary leachate collection layer.

Env-Sw 805.04(a)(2) The liner shall be free from stones greater than one inch in diameter and stones having an angular surface;.

WMNH is not providing comment as use of just soil liners is an industry outdated practice.

Env-Sw 805.04(c)(2) A soil component as specified by (a) above or a manufactured geosynthetic clay liner (GCL) with a hydraulic conductivity of not less than 5×10^{-9} cm/sec

The addition of a geosynthetic clay liner material under the secondary geomembrane liner system for a landfill that receives municipal solid waste per Env-Sw 805.12(a) presents challenging design components to ensure stability of the waste containment system because of the published internal strengths of these GCL materials. These design challenges will affect the final design capacity of the facility reducing airspace available for NH generated refuse. It should be noted the hydraulic conductivity proposed for this material is the known published *maximum* performance of currently distributed GCL products and its long term availability may be limited by manufacturers.

Env-Sw 805.05(j) Liner systems shall not be penetrated by any appurtenances ~~including pipes in low areas or in any location where leachate might collect.~~

This restriction of not penetrating the liner system will eliminate the potential of landfill over liner designs. Penetrations can be engineered and installed in a manner that is protective of the liner system with fitting systems engineered and fabricated with high density polyethylene material (the same material as the geomembrane) that would allow for a safe alternative other than an outright ban. These systems can be engineered and manufactured in a manner to allow integrity testing during installation. This restriction should be limited to the landfill base liner at the bottom of a landfill where leachate may collect.

Env-Sw 805.09(b) Stormwater management systems shall be designed to accommodate the ~~2550~~-year storm event of a duration equivalent to the time of concentration of the drainage area being served.

This should apply for new infrastructure and not for existing infrastructure previously constructed at sites.

Env-Sw 805.09(f) Permanent sedimentation ponds and detention ponds shall be sized to handle the ~~2550~~-year/24-hour storm event with no less than one foot of freeboard below the emergency spillway invert.

This should apply for new infrastructure and not for existing infrastructure previously constructed at sites.

Env-Sw 805.09(g) Peak surface run-off from the landfill site during the ~~2550~~-year storm event shall be controlled and maintained at the pre-development discharge rate, in accordance with RSA 485-A.

Env-Sw 805.09(o) Stormwater design reports prepared to demonstrate compliance with this section shall be prepared in accordance with the requirements of Env-Wq 1500.

Suggest correcting spelling of accordance.

Env 805.10 e(2)(~~eb~~) Consist of ***at least*** 12 inches of sand with 100% passing the one inch sieve and with no more than 12% passing the number 200 sieve on a weight basis if for a facility without an active gas extraction system or 6 inches of soil with 100% passing the one inch sieve if for a facility with an active gas extraction system; and ***soil meeting the requirements of (1) through (3) below, or at least 6 inches of soil meeting the requirements of (1) through (3) below and a manufactured GCL meeting the requirement of (4) below***

(1) Soil shall be a recompacted natural soil with uniform and consistent characteristics, or a uniform and consistent natural soil blended with an admixture, such as bentonite;

(2) Soil shall have a compacted hydraulic conductivity of 1×10^{-7} cm/sec or less;

(3) Soil shall pass on a weight basis 100% through a one inch sieve;

(4) GCL shall have a hydraulic conductivity of not less than 5×10^{-9} cm/sec; and

~~(de) Be constructed in accordance with a quality assurance/quality control plan established pursuant to Env-Sw 805.16~~ ***protected from damage due to frost, desiccation and differential movement;***

The requirement for clay to be used in the final cap provides little benefit based on actual field experience due to freeze-thaw impacts and the settlement of the underlying solid waste. Historical results of a clay cap installed at a NH landfill with compacted hydraulic conductivity of 1×10^{-7} cm/sec or less, did not result in reduced leachate generation after a few years following the effects of waste settlement. Specifically, the amount of leachate from the area where a 2-foot-thick clay cap was used for a final cap returned to levels approaching an active area after years of settlement and freeze thaw. This was the case for the Turnkey Landfill of Rochester (TLR)-I landfill in Rochester. Conversely, at the TLR-II landfill areas where 40 mil HDPE geomembrane are

installed over sand bedding material significantly reduced leachate generation, and this continues for years after installation. The TLR-II landfill has 40 mil HDPE over a sand bedding for the entirety of 3 of the 4 phases for a total of 37 acres. This entire 37-acre area is producing only 113 gallons per day and a portion of this leachate flow is likely related to waste decomposition and not infiltration. The addition of a GCL would provide little benefit and is also likely to impact the stability of the final cap on the slopes.

Protection the clay from the impacts of freeze-thaw cycles would require at least 4 feet to be placed over the clay cap. This additional soil would not mitigate the effects of settlement from the underlying waste mass that can result in the top of closed landfills settling multiple feet. Clay soils are not able to withstand the effects of settlement and therefore do not provide lasting value in final caps.

Collectively these proposed changes would provide little to no environmental benefit over the current requirements for final cap and would only serve to increase cost and impact the stability of the final caps on closed landfills. These increase costs will be passed on to facility users.

Env-Sw 805.12(a) Landfills receiving municipal solid waste (MSW) shall be designed as double-lined facilities pursuant to Env-Sw 805.05 ***and the bottom most liner shall be a composite liner pursuant to Env-Sw 805.04(c).***

The addition of a geosynthetic clay liner material under the primary and secondary geomembrane liner system for a landfill that receives municipal solid waste presents challenging design components to ensure stability of the waste containment system because of the published internal strengths of these GCL materials. The Rules should require that a clay layer or GCL be provided under the primary geomembrane, but not both primary and secondary to avoid the compounding effects of the factor of safety. These design challenges will likely affect the final depths and design capacity of the facilities reducing airspace available for NH generated refuse.

This proposed rule change unfairly increases the economic burden on NH municipalities and citizens. This change will cause an increase in cost that will be transferred to municipalities and citizens in increased disposal fees.

A more preferred approach that would be to require owners and permittees to complete electrical leak location testing of the primary geomembrane using the soil-covered dipole method (ASTM D8265). This test confirms the integrity of the primary geomembrane after placement of the primary leachate collection system. This method would detect any defects in the primary geomembrane either from manufacturing, installation, or placement practices of the primary leachate collection layer.

Env-Sw 805.15(a) Landfills for any waste type(s) not specifically identified in Env-Sw 805.12 through Env-Sw 805.14 shall be designed as double lined facilities ***pursuant to Env-Sw 805.05 and the bottom most liner shall be a composite liner pursuant to Env-Sw 805.04(c)***, except as provided by (b) below and subject to the landfilling prohibitions in Env-Sw 806.12.

See comment above regarding the proposed change to Env-Sw 805.12 (a).

Env-Wm 805.15(b) Landfills which receive only stumps and brush or only asbestos ***waste*** or only inert ***construction and*** demolition debris, as assured through the provisions of the facility's operating plan, may be designed as unlined landfills pursuant to Env-Sw 805.02(b).

The Department should consider requiring construction and demolition debris landfills be constructed with at least single liner. Company experience has shown that construction and demolition debris may contain materials that can impact groundwater and for that reason a liner should be required.

Env-Sw 806.03(f) *A demonstration project shall be conducted for a period of no less than 120 days.*

Alternate daily cover (ADC) material may take the form of impacted soil from a remediation project or site clean-up event. These are often of short duration and 120 days will be longer than the time period the material is being generated. A shorter duration of time such as 30 days, should be allowed. Also, the rules need to allow facilities to have a site established specific analytical limits for which the material can be tested, and if the soil meets those limits, then it can be used as an ADC.

Not allowing this will result in significant cost increases for cleanup projects, as well as municipalities and waste generators that rely on these disposal facilities. Replacing thousands of tons of impacted soil received at a lower tipping fee with clean soil that needs to be purchased and trucked into the sites will drive costs up considerably. These costs will be passed on to waste generators and municipalities who may view these changes as unfunded mandates.

Env-Sw 806.03 (g) *The demonstration project required by (f) above shall include the following information:*

- (1) The proposed cover material type and name;***
- (2) Specifications for the material and, if available, a safety data sheet (SDS);***
- (2) Test methodology, including procedures for placement and evaluation;***
- (4) A contingency plan for the use of natural soils or geosynthetic tarps in the event that the alternate material cannot be used, is not available, or is not performing adequately;***
- (5) Analytical characterization testing;***
- (6) Any available documentation of the material's use at other landfills which addresses the material's performance and regulatory status.***

These requirements would be applicable for off-specification products from a manufacturer. Often these alternate materials do not have a prepared SDS available for them.

Env-Sw 806.03 (i) *At landfills receiving MSW, an intermediate cover consisting of at least 12 inches of soil or 6 inches of soil and a temporary geomembrane cap, shall be placed over all waste no less frequently than 30 days following the last day waste was added to the area.*

The Department should allow the use of 6 inches of impacted soil covered with 6 inches of clean soil in areas with intermediate cover.

Env-Sw 806.03 (j) *At landfills receiving MSW, a final cap system designed pursuant to Env-Sw 805.10, shall be constructed within one year of achieving final grade, unless an alternative schedule is approved by the department via the permit or permit modification provisions in Env-Sw 300.*

If intermediate cover has been placed in accordance with the Rules, then it is preferred to not require installation of the final cap in the first year. Allowing additional time prior to final cap construction will allow for initial waste consolidation that will result in more stable conditions for cap installation. It will also allow for some limited additional waste placement in the area following the initial waste consolidation and prior to cap construction, extending valuable site life.

Env-Sw 806.08(d)(6) Analytical characteristics, based on representative samples taken from the primary leachate collection system in July, shall be determined for the following additional parameters:

- a. Per- and Polyfluoroalkyl Substances (PFAS) as determined by EPA Method 1633;***
- b. Total Solids (TS);***
- c. Total Volatile Solids (TVS);***
- d. Total Suspended Solids (TSS);***
- e. Volatile Suspended Solids (VSS);***
- f. Five-day Biochemical Oxygen Demand (BOD5);***
- g. Total Kjeldahl Nitrogen (TKN);***
- h. Ammonia-nitrogen (NH₃-N);***
- i. Total Phosphorous***
- j. Alkalinity;***
- k. Grease; and***
- l. Linear alkylbenzene sulfonate (LAS); and***

The requirements for leachate analysis should be dictated by the receiving facility that is accepting the material. These additional requirements will increase the cost for operation of a solid waste disposal facility that will be transferred to facility users. A cost benefit analysis of this rule change should be completed before finalizing this proposed regulation and the value it provides for characterizing leachate for facilities receiving municipal solid waste.

Env-Sw 806.08(i) The leachate analytical data required pursuant to (d)(5) ***and (d)(6)***, above, shall be ***compiled, evaluated and*** filed in accordance with Env-Sw 303, no later than 30 days following receipt of analytical results.

The length of time for this evaluation should be longer and we request this be extended to 60 days to provide sufficient time to evaluate the data.

Env-Sw 806.08(j)(2)(d) A trend analysis of statistically significant changes in contaminant concentrations in the primary and secondary leachate systems.

Providing trend analysis by specific analyte for changes in concentrations in the primary and secondary leachate systems is problematic. The nature of landfill leachate changes from when a

new phase has just started receiving refuse to later when the anaerobic conditions are established. Leachate composition is also influenced by variability in wastes received, periods of leachate recirculation, and the influences of infiltration from precipitation. All of these variables will cause the fluctuation of leachate chemistry with variable response times, making trend analysis an unnecessary exercise.

This proposed change will generate excessive amounts of data that will require substantial manpower to reduce and analyze and that likely will not yield meaningful or actionable information. Consider multiple individual landfill phases being sampled for hundreds of analytes and a trend analysis being done for each analyte for each phase, for both the primary and secondary leachate systems. Given the above concerns with age affecting leachate quality and then the possibility of leachate recirculation either occurring or not occurring, this exercise would generate data that could not be relied on because of these variables and the ever-changing landfill environment. Conditions in a landfill are not static throughout the operating and post-closure life of the facility.

Env-Sw 806.08(m) Response action(s) listed in the proposed action plan of (l)(2)b. in this section may include any or a combination of the following actions:

- (1)Increasing monitoring and reporting;***
- (2)Instituting operational changes to limit hydraulic head on the overlying liner;***
- (3)Locating and repairing leak(s);***
- (4)Retrofitting the overlying liner; or***
- (5)Closing part or all of the facility***

Confirmation that the source of the increase in flow is from the primary leachate system needs to be done. This may include analytical testing to of the primary leachate and the liquid from the secondary leachate collection system.

Env-Sw 806.08 (p) Proof of notification of filing pursuant to (o) above shall be provided to the department by the permittee with the submission of record drawings pursuant to Env-Sw 1104.07

Coupling this effort with submissions of record drawings from construction of a facility is not appropriate. Env-Sw 806.08(o) indicates the property deed must be modified within 30 days of starting to operate a facility. The construction drawing would have already been provided to the Department to receive approval to operate the facility.

Env-Sw 806.08 (q) Notification pursuant to (o) shall include the following information:

- (1)A statement that a landfill exists on this property;***
- (2)Identification of the registry of deeds, book and page numbers where title to the property is recorded;***
- (3)Identification of the property tax map and lot numbers as identified by the political subdivision in which the facility is located;***
- (4)Latitude and longitude of a known fixed point at the landfill site;***

(5)Description of the facility, including size, type of wastes received, and type of liner and cap, if any;

(6)Description of closure plan and schedule requirements as outlined in the permit issued by the department under which closure will occur, including a statement that the permit might contain certain legal obligations regarding the site;

(7)A statement that any future change in post-closure use shall be subject to review and approval by the department pursuant to Env-Sw 807.06 below;

(8)A statement that post-closure use of the property shall not disturb the integrity of the final cover, liners, or any other components of the containment systems or the function of the monitoring systems unless approved by the department; and

(9)A statement that access shall be assured to department inspection personnel and the permittee for monitoring and maintenance purposes.

This section is confusing and should be revised for clarity. Specifically, having to identify the size of the facility at the initial start of operation. This may change over time as the facility evolves but the deed will reference the original facility size. Also including a description of the facility closure plan and schedule requirements in the deed seems extensive when reference to the facility permit would connect the two documents. The facility permit number and issuance date should be required to be recorded and will assisting with items 7-9.

Env-Sw 807.06(f) Residential and commercial buildings shall be prohibited on top of or within 100 feet of the landfill footprint.

The clarification of residential buildings developed on land owned or subdivided from the original landfill parcel would improve this proposed rule change. Implementation of this proposed rule at an older facility sited within 100 feet of the property line would be problematic as the abutting parcel may be owned by an entity separate from the landfill property owner.

Also, a definition for commercial buildings should be provided to not exclude structures associated with landfill activities. Maintenance garages and support structures for operations owned and occupied by the facility owner or operator should be allowed. These can be monitored for explosive gases, if that is the department's concern, and they should not be precluded from the 100-foot distance. Also, including the word occupied, with a definition would reduce future confusion of the implementation of this rule. The need for leachate vaults and pump stations and structures associated with solar arrays and landfill gas treatment and control devices are typically located within 100 feet of the landfill footprint.

Env-Sw 808.07 Landfill Footprint Reduction. If reclamation activities result in a landfill footprint reduction, the areas from which wastes were not removed shall meet the closure requirements of Env-Sw 807.

WMNH suggests the Department consider instead of having to close the landfill footprint area exposed during reclamation that the proposed rules be adjusted to allow the landfill footprint liner and leachate collection system be upgraded to current Env-Sw 800 requirements and be allowed to be filled with new refuse after the necessary permitting and construction to comply with Env-Sw 800 occurs. The current wording would restrict the reuse of prior areas utilized for

a landfill and would require the continued development of 'greenfield' sites instead of the potential re-use of a land used for landfilling prior.

CLOSING

WMNH appreciates the NHDES' request for review of the proposed revisions to its existing SWR. WMNH believes involvement by all stakeholders early in the rule writing process will ensure an effective and workable set of regulations in the end. WMNH restates the importance of basing increased restrictions within the regulations upon rigorous scientific and engineering reasoning, such that the increased costs of implementation are justified by discernable environmental benefits. It is recommended that the Department reach out to key stake holders that have submitted comments to these proposed SWR to understand the full impact that implementing the proposed changes will have and the associated cost that will ultimately be passed to municipalities, businesses, and residents of the State. Municipalities that see increased costs as a result of these rule changes may view them as unfunded mandates.

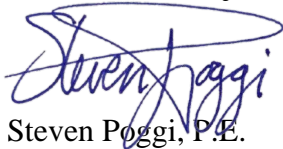
Thank you for considering our comments. Should you require additional information, please contact us.

Sincerely,

WASTE MANAGEMENT OF NEW HAMPSHIRE, INC.



Anne Reichert, P.E.
Construction Project Manager



Steven Poggi, P.E.
Area Director of Disposal Operations

cc: Bill Howard
Peter Richer
Brian DesMarais
Gail Lynch
Garrett Trierweiler



The State of New Hampshire
Waste Management Council

Daniel Sweet, Vice-Chairman

February 23, 2024

Robert R. Scott, Commissioner,
Michael Wimsatt, Director, Waste Management Division,
New Hampshire Department of Environmental Services
29 Hazen Drive
Concord, NH 03302

RE: Proposed Changes to N.H. Admin. Rules, Chapter Env-Sw 800.

Gentlemen:

On behalf of the New Hampshire Waste Management Council (the “Council”), please accept these comments¹ regarding the changes to the New Hampshire Code of Administrative Rules, Chapter Env-Sw 800 (collectively, the “Proposed Rules”) offered by the Waste Management Division (the “Division”) and presented to the Council for consideration² during its regularly scheduled meeting on February 15, 2024³.

Many of the Proposed Rules affecting landfill construction and control systems fundamentally change existing regulatory requirements and industry practices without identifying a compelling statutory, regulatory, or scientific justification for discarding those long-established rules. Although some may complain that the current regulations are not user-friendly, those rules have performed well and have protected the environment for years, as evidenced by any lack of documented landfill containment failures while those existing rules have been in effect.

Equally concerning, the Proposed Rules will negatively affect current and future operations at the state’s privately owned solid waste handling facilities without providing a corresponding, demonstrable environmental benefit. In the Council’s view, and based on the public comment received by the Council, the Proposed Rules:

- Will increase the construction costs of landfill liner and leachate management systems;
- Will unreasonably limit the future expansion potential of the state’s few remaining facilities;
- May decrease the stability of the state’s landfills; and

¹ See RSA 21-O:9, VI (Supp. 2023).

² *Id.*

³ See Council Agenda, February 15, 2024, Item 5: “Rules Update Env-Sw 100, 300 & 800.”
<https://www.nhec.nh.gov/sites/g/files/ehbemt606/files/documents/2024-02/20240215-agenda.pdf> (last accessed February 22, 2023).

- Fails to adequately address the review process for pending permit applications submitted under the existing rules.

The Council recognizes that the current N.H. Admin. Rules, Chapter Env-Sw 800, will expire on July 1, 2024, and acknowledges that the Division has made significant efforts to draft the Proposed Rules with input from several different stakeholder groups, including industry, non-governmental organizations, the public, and the Council. The Council suggests that the Division continue to encourage diverse stakeholder participation in the rulemaking process and consider increased public involvement through a series of public information meetings around the state.

The Proposed Rules differ significantly enough from the current N.H. Admin. Rules, Chapter Env-Sw 800, that their possible adoption should not be rushed solely to meet an artificial deadline of July 1, 2024. Accordingly, the Council strongly urges the Division to readopt the current Chapter Env-Sw 800 rules. At the same time, the Division should continue to gather input from the public and stakeholder groups and work on the Proposed Rules to ensure their technical accuracy, protectivity of human health and the environment, and economic feasibility while still meeting the goals of the state's Solid Waste Management Plan.

Enclosed with the Council's comments, please find the written objection of Waste Management of New Hampshire, Inc. ("WMNH") to the Proposed Rules. WMNH delivered its objection during the Council's public meeting on February 21, 2024. The WMNH objection raises several issues the Council would like the Division to address directly. Should the Division choose to respond to WMNH's objection in writing, the Council would appreciate a courtesy copy of any such response.

The Council appreciates this opportunity to comment and provide feedback to the Division regarding its Proposed Rules. It looks forward to working with the Division to resolve the Council's concerns and any concerns from interested stakeholders and the public.

Sincerely,

A handwritten signature in black ink, appearing to read 'Daniel Sweet', with a stylized flourish at the end.

Daniel Sweet

Acting Chair on behalf of The NH Waste Management

DS/mwd

ENCLOSURE

Cc: Mark C. Rouvalis, Esq., McLane Middleton, via email.
Mark W. Dell'Orfano, Assistant Attorney General, Department of Justice, via email.
WMC council members via email.



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February 21, 2024

Via Hand Delivery and Email (Pamela.Werner@des.nh.gov)

Daniel Sweet, Vice Chairman
Waste Management Council
29 Hazen Drive
PO Box 95
Concord, NH 03302-0095
Attn: Waste Council Clerk (Pamela Werner)

**Re: WMNH Statement Regarding DES's Proposed Env-Sw 800 Rule Changes
and Request that Council Object to Rules as Proposed**

Dear Mr. Sweet:

I write on behalf of Waste Management of New Hampshire, Inc. ("WMNH") to object to the February 15, 2024 Draft Solid Waste rules. WMNH respectfully requests that the Waste Management Council (the "Council") seek more time from DES to review them to address their intended and unintended consequences. Such consequences potentially include unnecessary disruption to solid waste disposal in New Hampshire and the imposition of extraordinary financial burdens on businesses and municipalities throughout the State without any scientifically based demonstration of the need for, or any significant benefit derived from, them.

For these and the reasons discussed below, WMNH recommends that the Council object to the proposed rules, as authorized by RSA 21-O:9.

1. The Council, the public, or other important stakeholders have not had a meaningful opportunity to review and comment on DES's latest changes and the likely ramifications they will have for solid waste management in the State; and
2. The proposed rule changes, even with the February 15 revisions, would impose expensive, unnecessary, and redundant regulatory requirements. They are likely to have substantial cost ramifications on municipalities and businesses without any corresponding environmental benefit. The proposed rules also lack a scientifically based demonstration or rational basis for departing from well-proven, safe, and effective engineering practices.

In light of the serious issues that may remain, WMNH requests that the Council recommend to DES to re-adopt its existing rules on an interim basis for six months to allow sufficient time for

the Council, the regulated community, and the public to assess DES's proposed rule changes and for DES to address concerns before the rules are finalized.

ADDITIONAL CONCERNS ABOUT THE FEBRUARY 15TH PROPOSED RULES:

The February 15th draft rule changes still do not go far enough to reduce the onerous siting, design, and construction regulations applicable to all landfills, and lack any demonstration of corresponding environmental or public benefit.

To illustrate some of the problems with the proposed rule changes, WMNH attaches as Exhibit 1 to this letter, examples of rules that, if not changed, will have significant negative implications for WMNH and on solid waste management in the State. For example, and without limitation, the February 15th version of the rules continue to¹:

1. Subject WMNH's 2018 permitted landfill expansion to substantially changed design and construction requirements on a retroactive basis. Those new requirements will increase costs and potentially reduce permitted airspace and disposal capacity (Exhibit 1, ¶¶1-3, e.g.);
2. Require increased thickness of the landfill liner system with thicker, 24-inch soil layer and the addition of Geosynthetic Clay Liner (GCL) that will reduce airspace and may cause instability of landfill layers built under different requirements (Exhibit 1, ¶3, e.g.);
3. Impose more restrictive siting requirements that will limit future expansion at existing permitted facilities on properties that were acquired for, and are zoned for, landfill development at WMNH Rochester facility. These boundary restrictions will likely reduce the availability of land for future expansion at the site beyond 2034 by, for example:
 - a. Restricting landfill development within 500 feet – twice the limits of shoreland protection under the State Shoreland Water Quality Protection Act, e.g. - of perennial surface water bodies that are not first or second order perennial streams;
 - b. Imposing restrictive in-situ (i.e., native) soil requirements that may preclude landfill siting in otherwise viable and suitable locations; and
 - c. Restricting landfill development within 200 feet of wetlands, whether upgradient or downgradient, limiting the beneficial uses of wetlands to filter surface and groundwater that may emanate from a landfill.
4. Include definitional uncertainty and ambiguity that, if not resolved, will result in confusion and potential litigation regarding the applicability of the new requirements. (Exhibit 1, ¶¶ 2 and 4, e.g.).

¹ Exhibit 1 identifies additional, specific problems with the February 15th draft rules.

Daniel Sweet, Vice-Chairman

February 21, 2024

Page 3

5. In addition, the currently proposed rules may effect a regulatory “taking” of landfill development property and rights without constitutional due process and adequate compensation.

For all of the foregoing reasons, and more that could be articulated if the Council and the public were afforded more time, WMNH requests that the Waste Council respond to DES as outlined above.

Very truly yours,

A handwritten signature in black ink, appearing to read "Mark C. Rouvalis". The signature is fluid and cursive, with the first name "Mark" being the most prominent.

Mark C. Rouvalis

MCR:VCF

cc: Steve Poggi, Area Director of Disposal Operations
Gail Lynch, Esq., Senior Counsel
Anne Reichert, P.E., Construction and Operations Manager
Gregory H. Smith, Esq.
Viggo C. Fish, Esq.

EXHIBIT 1

Preliminary Assessment of Certain Adverse Consequences of DES's February 15, 2024 Proposed Env-Sw 800 Rule Changes

1. Env-Sw 805.04(c) - The composite liner description requires providing Geosynthetic Clay Liner ("GCL") over the entire landfill footprint, including liner side slope conditions where leachate head does not exist. Requiring a GCL layer over the entire landfill footprint will influence landfill stability calculations and will require WMNH to redesign its 2018 permitted landfill expansion to meet the required engineered safety factors and other landfill operational requirements. The redesign will reduce WMNH's permitted landfill airspace, disposal capacity, and, possibly, longevity in contradiction to the terms of WMNH's 2018 Type I-A permit modification to expand the landfill and contrary to New Hampshire's 2023 NH Solid Waste Plan.
2. Env-Sw 805.17 – The proposed vertical expansion requirements are unclear regarding their applicability to the WMNH landfill, and other similarly situated operating landfills. The rules do not make clear whether the term "MSW landfill" in Env-Sw 805.17(a)(3) includes the WMNH facility that accepts predominantly municipal solid waste, as that term is defined in Env-Sw 103.47, but also accepts limited amounts of C&D debris and regularly accepts asbestos containing waste materials, contaminated soils, and ash. If the exemption in Env-Sw 805.17(a)(3) does not apply to the WMNH facility, the rule change would prohibit WMNH from vertically expanding in Phases 1-5 and Phases 9-14 in accordance with its 2018 permit unless such expansion was built to incorporate a liner system meeting the requirements of Env-Sw 805 including the placement of a double liner system over existing refuse. Such a requirement would add significant additional expense that would be passed on to businesses and municipalities, would reduce available airspace for disposal, and would not result in any environmental benefit.
3. Env-Sw 805.03 (d)(1), (2) and (3) – Requiring 24" of soil with a hydraulic conductivity of 1×10^{-4} cm/sec or less and a maximum particle size of one inch restricts flexibility to use available suitable on-site materials and requires use of significantly more natural resources in contrast to DES's statutory responsibilities and at significant expense. Optimum natural resource material management is planned years in advance for future construction at WMNH's facility. A change such as this creates a large imbalance and will result in sourcing material differently creating excess emissions from trucking material from off-site sources throughout the southern NH area.
4. Definitional vagueness and ambiguity:
 - a. Env-Sw 804.02(c) – Addition of the phrase "if present" in relation to the applicability of the undisturbed soils requirement is unclear.
 - b. Env-Sw 805.03(a)(1) – The term "permitted" should be defined as Standard Permits or Type I permit modifications, consistent with the language in Env-Sw 804.01(a).
 - c. Env-Sw 805.17 – Term "leakage" needs to be defined.
 - d. Env-Sw 806.03(d) is thought to now require a 6" soil cover AND geomembrane tarp for daily cover application.