January 25, 2025

Chair Aron and House E&A Committee Members:

Thank you for allowing me the opportunity to provide my input in SUPPORT of HB566, *requiring permit applications for new landfills to contain a detailed plan for leachate management*.

I urge the Committee to vote OTPA in SUPPORT of HB566, primarily because this requirement already exists within the rules; however, it appears the Department has chosen to not enforce this. Please allow me to explain, and provide the attached documentation which supports the need for this bill to become law.

On September 24, 2024, the department sent a "Request For More Information" (RFMI) letter to Mr. John Gay, Engineer, North Country Environmental Services, relative to a permit modification to update the facility operating plan as it related leachate management, following the NCES Landfill "Leachate Hauling Emergency Circumstance of April 19, 2024", see attached. I have highlighted item one of the Department's request for "written agreements of no less than two locations for leachate treatment or disposal to manage the quantity of leachate generated by the facility during its active life ***consistent with Env-Sw 806.05(b)(3), pursuant to Env-Sw 1105.11".***

On October 14, 2024, I submitted a 91-A RTK request, seeking a copy of such written agreements for the NCES Landfill, which according to the department, is a requirement. You can imagine my surprise when the response I received to my request was that the **department had no records** responsive to my request!

Env-Sw 806.05(b)(3) requires that *"No less than 2 locations for leachate treatment or disposal shall be available by written agreement to manage the quantity of leachate generated by the facility during its active life."*

Furthermore, **Env-Sw 1105.10(b)** requires that *"A facility shall obtain and maintain access to at least 2 authorized locations where adequate capacity exists to handle the type and quantity of all residual waste, excluding landfill decomposition gas, that the facility shall regularly generate during its operating and post-closure periods."*

I have also attached “Estimated Post-Closure Monitoring/Maintenance Costs” for both the NCES Landfill and the proposed Granite State Landfill (GSL), as provided to the department by Casella Waste Systems. As you can read in both documents, leachate generation is estimated for 30 years post closure for each facility. Thus, according to the rules cited by the Department in the September 24, 2024 letter, the NCES Landfill is required to have two written agreements for leachate treatment or disposal during active life, which it doesn’t, AND, during its post-closure period, which it doesn’t.

The same applies for the proposed GSL landfill development in Bethlehem at Douglas Drive, next to Forest Lake State Park in Dalton.
(see January 7, 2025 Department response, attached)

What is the point of having rules if they are not to be enforced by the Department? It would appear that these amendments to RSA 149-M:9,V and RSA 149-M:9, IX are needed in order for the existing rules to be enforced by the Department.

I would like to point out that at the bottom of the bill text, it is noted:

METHODOLOGY:

This bill requires permit applications for new landfills to contain a detailed plan for leachate management.

The New Hampshire Department of Environmental Services (NHDES) states this bill would impact the Department by prohibiting the approval of permits for new landfills, excluding expansions, unless applicants submit a leachate management plan meeting the bill's requirements. It also requires long-term contractual agreements between applicants, leachate haulers, and wastewater treatment facilities, covering the landfill's entire operating life, including post-closure periods spanning decades. NHDES interprets "type of disposal processing" as referring to the technologies used by wastewater treatment facilities for leachate treatment. The bill would require rulemaking and additional administrative resources from NHDES.

The NHDES indicates the potential additional expenditures associated with this bill are indeterminable. Costs would only be incurred by the State, a county, or a municipality if such an entity decided to submit a permit application for a new landfill. In that case, the Department estimates potential additional expenditures of $10,000-$100,000 by the State, county, or municipality.

In response, and as previously stated, **THIS is ALREADY in the rules**, it's just NOT BEING ENFORCED by the Department!

I would also include within the bill a provision that any future, unknown costs and liabilities associated with the required and necessary disposal of their leachate be borne by the permittee as a cost of doing business. I also object to the exclusion of existing landfill expansions in the bill, since this requirement already exists within the rules. Furthermore, Casella's NCES Landfill in Bethlehem could potentially seek another expansion at that troubled facility, should they fail in their bid to obtain permitting for their GSL landfill project in Dalton. Thus, existing landfill expansions should NOT be exempted under HB566.

Therefore, I urge the Committee to vote **OTPA** in SUPPORT of HB566, since the proposed amendments to RSA 149-M:9 already exist within the Env-Sw 800 and Env-Sw 1100 rules, with an amendment to HB566 removing "*excluding the expansion of existing landfills*" from the bill.

Lastly, I would respectfully request that the Committee inquire of Director Michael Wimsatt why the Department has chosen to not enforce **Env-Sw 806.05(b)(3)** and **Env-Sw 1105.10(b)**, particularly since the Department itself raised the issue in its September 24, 2024 letter to North Country Environmental Services.

Thank you,

Jon Swan

Jon Swan
Dalton, NH
603-991-2078

*In order to not get sued a third time by Casella, I need you to understand that all of this is my opinion, based on my research and experience.

The State of New Hampshire
Department of Environmental Services

Robert R. Scott, Commissioner

VIA EMAIL ONLY

September 24, 2024

John Gay, Engineer
North Country Environmental Services, Inc.
1855 VT Route 100
Hyde Park, VT 05655
Email: john.gay@casella.com

SUBJECT: **North Country Environmental Services, Inc. Landfill, Bethlehem, NH**
Permit No. DES-SW-SP-03-002

Incomplete Application – Request for Additional Information
Application for Type II Permit Modification to update Facility Operating Plan; initially received June 26, 2024; and assigned Application No. 2024-70547

Dear John Gay:

The New Hampshire Department of Environmental Services, Waste Management Division (NHDES) has reviewed the above-cited application by which North Country Environmental Services, Inc. (NCES) seeks approval of an updated operating plan to include provisions for hauling leachate outside normal operating hours during extenuating circumstances at the NCES landfill in Bethlehem, NH. In accordance with the requirements of the New Hampshire Solid Waste Rules, Env-Sw 100 et seq. (Rules), NHDES has determined that the application is **incomplete**.

Please address the following comments to satisfy the provisions of Env-Sw 300, and clarify aspects of the application in support of making a technical review pursuant to Env-Sw 304.07:

1. As an attachment to the operating plan, provide the written agreements of no less than two locations for leachate treatment or disposal to manage the quantity of leachate generated by the facility during its active life consistent with Env-Sw 806.05(b)(3), pursuant to Env-Sw 1105.11.

2. In accordance with Env-Sw 1105.08(b), provide information that demonstrates the facility will not successfully operate within the normal window of 6 a.m. to 6 p.m., and the proposed alternative hours will not result in problems relating to safety, access control, or nuisances (e.g., noise, spills, vectors, odors, insects, litter, dust). Note that the information is to be part of the application, and not necessarily embedded in the operating plan.

Please address the above comment and submit your response by concurrently submitting one hardcopy and one electronic copy to NHDES. Submit the electronic version through the NHDES OneStop Data Provider portal using the site code "123456789." Please also designate "Application No. 2024-70547" on both the e-submittal and the paper copy.

Pursuant to Env-Sw 304.04, *Incomplete Applications*, review of your application is suspended until the additional requested information is received. Note that, pursuant to Env-Sw 304.05(d), you must submit all of the information required to complete the application within one year of the date of the application was initially determined to be incomplete to avoid having the application become dormant and be deemed denied by rule. This letter serves as the initial determination that the application is incomplete.

Please provide the requested information as soon as practicable.

STATE OF NEW HAMPSHIRE

INTRA-DEPARTMENT COMMUNICATION

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

TO: File

FROM: Austin Mills, SWMB, NHDES

SUBJECT: Phone Call with Samuel Nicolai of Caselle RE: Leachate Hauling Emergency Circumstance April 19, 2024 Occurring at NCES, NHDES Permit # DES-SW-SP-03-002

DATE: April 22, 2024

At 9:43 AM, Samuel Nicolai from Casella returned my phone call. I had left a voice message asking him to call me back so that I could gather more information about the situation. He said that they had an unforeseen leachate disposal capacity reduction. I asked Samuel which facilities they had historically shipped to, and he said Concord and Frankin. I asked clarifying questions and identified the facilities as Concord NH Wastewater Treatment Facility and the Winnipesaukee River Basin Program, located in Franklin NH.

Samuel said that he had heard from the Concord WWTF that NHDES had issued a notice relative to ammonia level reductions and that Concord would only be able to accept 2 deliveries per day from NCES, down from 10-12. He also said that that Concord had also allowed Casella's Coventry Landfill to retain a 2 delivery per day capacity. He said that they had internally allocated the capacity from Coventry to NCES to allow for 4 total deliveries per day.

Samuel said that Franklin (Winnipesaukee River Basin Program) currently accepts 3 deliveries per day. I asked if anyone had contacted them to see if there was additional capacity that could be used there. Samuel said he thinks that Kevin Roy of NCES may have contacted them but will reach out to confirm.

Samuel then spoke about what they had done to rectify the situation. He said that they had entered into a written agreement with the Manchester NH WWTF to accept 150k gallons of leachate over a two-week period. He said they were also in talks with the Allenstown NH WWTF and Anson Madison WWTF in Maine, though he did not know at what point in the process either facility was with an agreement.

He said that their current disposal capacity was 7 truckloads at approximately 8000 gallons each. He said that this is inadequate and that they are currently at capacity in the leachate storage tanks and are managing leachate into these tanks by pump cycling to prevent overflow. I asked what the actual limitation was, and Samuel said that it is the opening hours of the

current WWTFs and the number of trucks and drivers to be able to deliver during those hours.

I told him that I would speak to the engineering section at Solid Waste and get back to him shortly with any other questions.

ASM

New Hampshire Department of Environmental Services Public Records Center
From: nhdes@govqa.us
To: saveforestlake@yahoo.com

Mon, Nov 4 at 3:17 PM

--- Please respond above this line ---

Re: Public Records Disclosure Request No. R005689-101424

Dear Jon Swan,

New Hampshire Department of Environmental Services received a public records request from you on October 14, 2024. Your request described the following records:

"I write in response to the department's September 24, 2024 letter to Mr. Gay of Casella Waste Systems, relative to the NCES Landfill, attached, with the subject line:

"Incomplete Application – Request for Additional Information
Application for Type II Permit Modification to update Facility Operating Plan; initially received June 26, 2024; and assigned Application No. 2024-70547"

In that letter, you wrote:

"In accordance with the requirements of the New Hampshire Solid Waste Rules, Env-Sw 100 et seq. (Rules), NHDES has determined that the application is incomplete.

Please address the following comments to satisfy the provisions of Env-Sw 300, and clarify aspects of the application in support of making a technical review pursuant to Env-Sw 304.07:

1. As an attachment to the operating plan, provide the written agreements of no less than two locations for leachate treatment or disposal to manage the quantity of leachate generated by the facility during its active life consistent with Env-Sw 806.05(b)(3), pursuant to Env-Sw 1105.11."

Being that you cite Env-Sw 806.05(b)(3) and Env-Sw 1105.11 as conditions required for the department to make a determination on the permit application for the modification of the NCES Landfill facility operating plan, I would ask whether or not the facility CURRENTLY meets those conditions?

I have copied and pasted, as well as attached and highlighted, verbiage from Env-Sw 806.05(b)(3), which requires a facility to have no less than 2 locations for leachate disposal available by written agreement to manage leachate generated during its active life. According to Casella's Granite State Landfill (GSL) wetlands permit application, page 13 of section 3.3 Project Summary, attached, they inform the department that the NCES Landfill is to be "filled in 2027/2028".

Does the department have two current, written agreements for NCES leachate disposal through 2027/2028?

If so, might I obtain copies for my records? If not, is this not a current violation of Env-Sw 806.05(b)(3)?

Env-Sw 806.05 Leachate Management Requirements
(b) As part of a facility's operating plan, a leachate management plan shall be developed and implemented at all lined landfills, based on the following criteria:
(3) No less than 2 locations for leachate treatment or disposal shall be available by written agreement to manage the quantity of leachate generated by the facility during its active life

Also, according to Env-Sw 1105.10, it would appear that leachate disposal agreements need to be in place for the NCES Landfill through 2057/2058, since Env-Sw 1105.10(b) includes POST-CLOSURE periods. I have attached an excerpted copy of the NCES "Estimated Post-Closure Monitoring/Maintenance Costs" report, dated March 17, 2023, highlighting those portions dealing with leachate generation, estimated over a 30-year period following closure in 2027/2028, attached.

Does the department have two current, written agreements for NCES leachate disposal through 2057/2058?

If so, might I obtain copies for my records? If not, is this also not a current violation of Env-Sw 1105.10(b)?

Env-Sw 1105.10 Management of Residual Waste.
(a) Facility operations shall include provisions to properly manage residual waste.
(b) A facility shall obtain and maintain access to at least 2 authorized locations where adequate capacity exists to handle the type and quantity of all residual waste, excluding landfill decomposition gas, that the facility shall regularly generate during its operating and post-closure periods.

Lastly, Env-Sw 1105.11, which was cited in the department's September 24, 2024 RFMI letter to Mr. Gay, requires the NCES Landfill to have a "residual waste management plan", which is to include the information required in Env-Sw 1105.10, as stated above.

According to the NCES Operating Plan, Section 4.0, Residual Waste Management, attached, it is simply stated:
"Leachate management is conducted consistent with New Hampshire Solid Waste Rules Env-Sw 806.08"

However, according to Env-Sw 806.08, the requirements specified within Env-Sw 1100 are to be met by the facility. Nowhere within the NCES Residual Waste Management Plan, nor in the appendices, is documentation provided which satisfies the requirements of Env-Sw 1100, as detailed above.

It is also stated within the NCES Residual Waste Management plan that "Leachate which is pumped into tankers for off-site disposal will be disposed of at one or more of the permitted facilities listed below, which may be amended from time to time." This seemingly implies that no such agreements exist and leachate disposal arrangements are fluid.

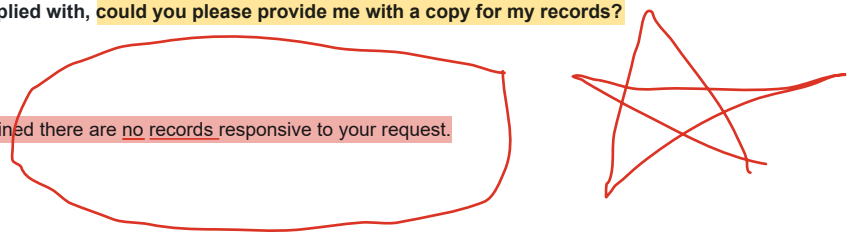
Env-Sw 806.08 Inspections, Maintenance, Monitoring and Reporting Requirements.
(a) This section establishes requirements, in addition to those requirements specified in Env-Sw 1000 and Env-Sw 1100, for inspecting, maintaining and monitoring landfills

Env-Sw 1105.11 Operating Plan Content and Format.
e. The procedure by which the quantity and destination of all outgoing waste and certified waste-derived products shall be determined and recorded;
(4) Section 4, titled "residual waste management plan," shall provide a detailed description of how all residual waste, if any, shall be managed by the facility, including the information specified in a. through d. below
c. Information to demonstrate how the provisions of Env-Sw 1105.10 shall be met; and
d. Quality assurance/quality control provisions, to assure that the wastes to be transferred shall be acceptable to the receiving facility

In closing, it would appear that the NCES facility is not currently in compliance with Env-SW 806.05(b)(3) nor Env-Sw 1105.11, unless the department already has "written agreements of no less than two locations for leachate treatment or disposal to manage the quantity of leachate generated by the facility during its active life consistent with Env-Sw 806.05(b)(3), pursuant to Env-Sw 1105.11" for the NCES facility. I would add Env-Sw 1105.10, which includes the post-closure period, unless, of course, the department has written agreements provided by Casella/NCES, covering NCES leachate disposal through 2057/2058.

On a related note, I would assume the same standard will apply to the Casella-proposed Granite State Landfill (GSL) in Dalton and Bethlehem. However, I have not seen any written agreements for leachate disposal for the proposed GSL facility within the various permit applications submitted. If the department happens to have such agreements for GSL leachate disposal, which should be at a minimum of 18 years, through 2046, or through 2076, if Env-Sw 1105.10(b) is to be complied with, could you please provide me with a copy for my records?

I appreciate your attention to this matter and hope you had a wonderful weekend!"



New Hampshire Department of Environmental Services has reviewed its files and has determined there are no records responsive to your request.

If you have questions you may contact my office at (603)271-2919.

Sincerely,

Sarah Chance
File Review Coordinator
Commissioner's Office
(603)271-2919

NHDES would greatly appreciate your feedback and wants to hear from you. Please take a moment to fill out our short (5-question)

https://onlineforms.nh.gov/app/?allowAnonymous=true#/formversion/8ec9787c-f388-4634-a077-d86312c318f3?formtag=NHDES-C-07-010

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b. Contribute to the deterioration of leachate quality at lined landfills;

c. Cause groundwater contamination at unlined landfills; or

d. Pose a hazard to human health through skin contact or respiration; and

(3) The material itself:

a. Is not a hazardous waste;

b. Is physically and chemically consistent in nature; and

c. Contains no free liquids.

(c) At landfills receiving MSW, cover material shall be placed over all exposed waste no less frequently than at the end of each operating day.

(d) Subject to the requirements in (b) above, the following materials shall be approved as working face cover material:

(1) Natural soils; and

(2) The following alternate materials, provided that use of the material is approved as part of the facility operating plan or approved as a type III permit modification pursuant to Env-Sw 315:

a. Geosynthetic tarps;

b. Casting sands;

c. A waste certified for distribution and use as landfill cover pursuant to the provisions of Env-Sw 1500; and

d. Contaminated soil, subject to the requirements of Env-Sw 903.05.

Source. #5172, eff 7-1-91; ss by #6535, INTERIM, eff 7-1-97, EXPIRES: 10-29-97; ss by #6619-B, eff 10-29-97; ss by #6894-B, eff 12-1-98; (See Revision Note at chapter heading for Env-Sw 800); ss by #8459, eff 10-28-05 (formerly Env-Wm 2506.03); ss by #10597, eff 7-1-14

Env-Sw 806.04 Operating Standards for Groundwater and Surface Water Monitoring. A water quality monitoring program shall be implemented at all landfills, if required pursuant to the provisions of RSA 485-C.

Source. #5172, eff 7-1-91; ss by #6535, INTERIM, eff 7-1-97, EXPIRES: 10-29-97; ss by #6619-B, eff 10-29-97; (See Revision Note at chapter heading for Env-Sw 800); ss by #8459, eff 10-28-05 (formerly Env-Wm 2506.04); ss by #10597, eff 7-1-14

Env-Sw 806.05 Leachate Management Requirements.

(a) Leachate generated at a lined landfill shall be managed either:

(1) By collecting and removing it from the liner system(s) to an approved treatment or disposal facility as described in (b) through (e), below; or

(2) Pursuant to an approval to use an innovative alternative leachate management system as described in (f) through (l), below.

(b) As part of a facility's operating plan, a leachate management plan shall be developed and implemented at all lined landfills, based on the following criteria:

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

(2) The quantity of leachate generated at the facility shall be limited to the extent possible, by properly planning the sequenced development of the facility, properly managing stormwater infiltration and inflow, minimizing the active area of the landfill and applying cover in accordance with Env-Sw 806.03;

(3) No less than 2 locations for leachate treatment or disposal shall be available by written agreement to manage the quantity of leachate generated by the facility during its active life, except as provided in (4) below;

(4) Facilities that are directly connected to permitted wastewater treatment facility need only to provide one location for leachate management, other than the treatment facility;

(5) The recirculation of leachate shall be prohibited at ash monofills;

(6) At MSW landfills, leachate recirculation shall be allowed if approved by the department subject to (7) below, as part of the facility's operating plan prepared pursuant to Env-Sw 1105; and

(7) The practice of leachate recirculation shall:

a. Not adversely affect the quality of the leachate so as to preclude its acceptance at waste water treatment facilities listed in the leachate management plan;

b. 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;

c. Not result in a loss of structural stability;

d. Not be adversely affected by weather conditions, such as freezing temperatures or periods of heavy rainfall; and

e. Provide a benefit to facility operations, exclusive of any short or long-term economic benefit which may be associated with postponing leachate collection and removal.

(c) 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.

(d) A pumping and removal schedule shall be incorporated into facility operations to assure the availability of storage capacity.

(e) Regularly-scheduled inspections and routine maintenance of the leachate collection and removal systems shall be established as part of the facility's operating plan to limit clogging of the systems and to otherwise assure the functional integrity of the systems.

(f) The permittee of a landfill having a leachate collection system designed and constructed to maintain less than a 30-cm depth of leachate on the liner may apply for approval to use innovative alternative leachate management methods which vary from the requirements of (a) through (e), above, and the run-on control systems in 40 CFR 258.26(a)(1), July 1, 2009, or the liquids restrictions in 40 CFR 258.28(a), July 1, 2009, or both.

Source. #6619-B, eff 10-29-97; (See Revision Note at chapter heading for Env-Sw 1100); ss by #8459, eff 10-28-05 (formerly Env-Wm 2805.09); ss by #10598, eff 7-1-14

Env-Sw 1105.10 Management of Residual Waste.

(a) Facility operations shall include provisions to properly manage residual waste.

(b) A facility shall obtain and maintain access to at least 2 authorized locations where adequate capacity exists to handle the type and quantity of all residual waste, excluding landfill decomposition gas, that the facility shall regularly generate during its operating and post-closure periods.

(c) A residual waste shall not be distributed for use unless certified for distribution and use in accordance with Env-Sw 1500.

Source. #6619-B, eff 10-29-97; (See Revision Note at chapter heading for Env-Sw 1100); ss by #8459, eff 10-28-05 (formerly Env-Wm 2805.10); ss by #10598, eff 7-1-14

Env-Sw 1105.11 Operating Plan Content and Format.

(a) A facility operating plan shall provide sufficient detail to allow the certified operator and other trained facility personnel to operate the facility in compliance with RSA 149-M, the permit and the solid waste rules without further explanation or guidance.

(b) The operating plan shall be prepared as a loose leaf document to facilitate amendment as specified in Env-Sw 315.

(c) Each page of the operating plan shall bear the date of preparation or last revision, as applicable, and the facility name, location and permit number, if a permit is issued for the facility at the time that the operating plan or a modification thereto is prepared.

(d) The content and organizational format of the operating plan shall be as follows:

(1) Section 1, titled “facility identification,” shall identify:

a. The facility name, mailing address, location by street address and municipality, and permit number;

b. The type of the facility;

c. The capacity of the facility;

d. The facility service type;

e. The facility service area; and

f. The name, address and telephone number of the permittee, property owner, and operator;

(2) Section 2, titled “authorized and prohibited waste,” shall provide a list of:

a. The specific waste types the facility which shall be authorized to receive; and

b. The specific waste types the facility shall not be authorized to receive;

(3) Section 3, titled “routine operations plan,” shall provide a detailed description of how the daily operations of the facility will be conducted to assure that the facility will be operated in accordance with the solid waste rules, including a description of:

a. Hours of operations;

b. Facility access control and on-site traffic patterns;

c. Waste acceptance and rejection procedures, including unloading, sorting and inspection procedures;

d. The procedure by which the quantity and source(s) of all wastes received by the facility shall be determined and recorded;

e. The procedure by which the quantity and destination of all outgoing waste and certified waste-derived products shall be determined and recorded;

f. The storage time and capacity limits for all wastes received by the facility and the procedures by which the limits shall be monitored to assure compliance therewith;

g. All collection, storage, transfer, processing, treatment and disposal methods and procedures employed by the facility for managing waste following receipt; and

h. For facilities that process or treat waste, the methods or procedures for managing bypass waste and the quality assurance/quality control procedures relating to the management of processed or treated waste;

(4) Section 4, titled "residual waste management plan," shall provide a detailed description of how all residual waste, if any, shall be managed by the facility, including the information specified in a. through d. below, or if the facility will not generate any residual waste, a statement so indicating:

a. The type and estimated quantity of all residual wastes to be generated by the facility;

b. How such wastes shall be managed at the facility prior to removal;

c. Information to demonstrate how the provisions of Env-Sw 1105.10 shall be met; and

d. Quality assurance/quality control provisions, to assure that the wastes to be transferred shall be acceptable to the receiving facility;

(5) Section 5, titled "facility maintenance, inspection and monitoring plan," shall identify all routine maintenance, inspection and monitoring requirements necessary to assure the integrity of facility operations, including a description of the measures to be undertaken to monitor and inhibit the following:

a. Spontaneous combustion;

b. Other fire hazards;

c. Vector production;

d. Generation of methane, hazardous, or explosive gases;

e. Odors;

f. Dust;

g. Windblown litter;

h Leachate; and

i. Spills;

(6) Section 6, titled "contingency plan," shall:

a. Identify all reasonably foreseeable emergencies, such as fire, explosion, operator injury, and the like, based on the type of facility and wastes being handled;

NHDES-S-05-056

8. Estimated Quantity of Waste Stored at the Facility as of December 31, 2023

Type of Waste	Quantity Onsite as of Dec. 31		Type of Waste	Quantity Onsite as of Dec. 31
Ash	tons		Infectious Waste	tons
Asbestos	tons		Municipal Solid Waste	tons
Bulky Waste	tons		Recyclable Materials	tons
C&D Debris	tons		Scrap Metal	tons
Contaminated Soil	tons		White Goods	tons
Electronic Waste	tons		Other: no materials stored	
Food Waste	tons		Other: on site as this is an	operating landfill

9. Bypass and Residual Waste

Note: Please refer to the instructions for applicability of this section, and definitions of bypass waste and residual waste. Not Applicable ☐

Waste	Total Quantity Generated	Quantity Shipped to NH Destination(s)	Quantity Shipped to Out-of-State Destination(s)	Quantity Stored Onsite as of December 31
Bypass Waste	tons	tons	tons	tons
Residual Waste	tons	tons	tons	tons
Leachate	gallons	11,509,156 gallons	0 gallons	174,065.15 gallons

10.Facilities Producing Certified Waste-Derived Products

Type of Waste-Derived Product Produced	Quantity Produced	Quantity Distributed for Use	Estimated Quantity Stored Onsite as of December 31
	tons	tons	tons
	tons	tons	tons
	tons	tons	tons
	tons	tons	tons

☐ I certify that all waste-derived products distributed by the facility for use met the applicable standards for distribution and use pursuant to Env-Sw 1500; OR

☐ I CAN NOT certify that all waste-derived products distributed by the facility for use met the applicable standards for distribution and use pursuant to Env-Sw 1500, and have attached a detailed explanation of the situation and actions taken or being taken to remedy the problem; OR

☒ The facility does not produce certified waste-derived products.

11. Other Activities Taking Place at the Facility

☐	Burn Pile	☐	Refrigerant Removal	☐	Other:
☐	Household Hazardous Waste Collection	☐	Swap Shop	☐	Other:
☐	Leaf & Yard Waste Composting	☐	Collection of Used Oil for Recycle	☐	Other:
☐	Used Oil Burner: EPA ID No. NHD				
Universal Waste Collection					
☐	Antifreeze	☐	Batteries (Rechargeable)	☐	Fluorescent Lamps
☐	Batteries (Automotive)	☐	Cathode Ray Tubes (CRTs)	☐	Mercury-Containing Devices

Table 1
Estimated Post-Closure Monitoring/Maintenance Costs
North Country Environmental Services, Inc.
Mar-23

Task		Annual Cost Years 1-5	Annual Cost Years 6-10	Annual Cost Years 11-20	Annual Cost Years 21-30
I-a	Water Quality Monitoring	$ 45,000.00	$ 36,000.00	$ 26,000.00	$ 26,000.00
I-b	Repair of Monitoring Wells	$ 500.00	$ 500.00	$ 500.00	$ 500.00
II-a	Landfill Gas Migration Monitoring	$ 10,000.00	$ 10,000.00	$ 10,000.00	$ 10,000.00
II-b	Landfill Gas Collection System O&M	$ 154,110.00	$ 91,810.00	$ 44,810.00	$ 30,810.00
II-c	Replacing 20% of the Active Gas Collection System	$ 15,900.00	$ 15,900.00	$ 15,900.00	$ 15,900.00
III	Settlement Monitoring	$ 3,000.00	$ 3,000.00	$ 3,000.00	$ 700.00
IV-a	Leachate/Condensate Disposal	$ 230,200.00	$ 159,100.00	$ 107,300.00	$ 87,200.00
IV-b	Leachate Monitoring	$ 4,800.00	$ 4,800.00	$ 3,200.00	$ 3,200.00
IV-c	Leachate Pump Station O&M	$ 25,300.00	$ 18,100.00	$ 15,700.00	$ 14,100.00
V	Air Quality Monitoring	$ 125,300.00	$ 63,000.00	$ 33,000.00	$ 18,000.00
VI	Repair & Site Maintenance Costs	$ 12,800.00	$ 11,000.00	$ 7,750.00	$ 6,000.00
VII	Inspections	$ 12,500.00	$ 8,500.00	$ 8,500.00	$ 8,500.00
VIII	Other	$ -	$ -	$ -	$ -
IX	10% Contingency	$ 64,000.00	$ 42,200.00	$ 27,600.00	$ 22,100.00
	TOTAL	**$ 703,410.00**	**$ 463,910.00**	**$ 303,260.00**	**$ 243,010.00**

Notes:
A summary of the assumptions made in developing the estimate is attached
Costs presented are in 2023 dollars
Costs are based on our experience and data and information provided by NCES. Actual costs may vary.

Supporting Documentation for 2023 Post-Closure Costs

March 2023

The following assumptions were made in developing the post-closure cost estimate. The estimated initial annual cost is summarized in the NHDES Post-Closure Cost Estimate form and the estimated annual costs for the entire 30-year post-closure period are summarized in Table 1 with the present value for the annual costs presented in Table 2. The costs were developed based on information provided by North Country Environmental Services, previous cost estimates developed for the facility, and our experience.

Item Ia – Water Quality Monitoring

Years 1 – 5

- Annual Costs for sampling and reporting were estimated to be **$45,000**. These costs will remain unchanged in the first five years of the post-closure monitoring program.

Years 6 - 10

- We have assumed that after the first five years of monitoring, that a reduction from tri-annual to bi-annual sampling will be allowed by NHDES, based on our experience at many unlined landfill closure sites. This will reduce the annual costs by approximately $9,000 to an annual cost of **$37,000**.

Years 11 – 30

- We have assumed that after ten years of monitoring that a further reduction in sampling parameters or locations will be allowed by NHDES. This will reduce the annual sampling costs to an estimated **$27,000**

Item Ib – Repair of Monitoring Wells

Years 1 - 30

- Carry an annual cost of $500, which provides additional funds for minor repairs.

Item IIa - Landfill Gas Migration Monitoring

- The annual costs of **$10,000** for the quarterly monitoring of landfill gas migration will be required to be completed throughout the post-closure monitoring period. It is possible that NHDES may permit some reductions to the frequency and locations, after several years of monitoring and data gathering, but this is not relied upon in the estimate.

Years 11 - 20

Assume that starting in year 11, the LFG collection system operates on one blower and one flare. Assume the electricity cost, in 2023 dollars, would be 40 percent of the current total electricity cost, or about **$28,000 per year for 10 years.**

Years 20 - 30

Assume that the one blower and one flare operate on a part-time basis with a 50 percent duty cycle. Therefore, the annual electricity cost would be about **$14,000 per year for the last 10 years of the period.**

Item IIc – Replacing 20% of the Active Gas Collection System

This item is to replace 20% of the active landfill gas system per Env-Sw 1403.02(g)(7) within the footprint of the landfill through Stage VI. This cost is presented as an annual value with the full replacement cost spread out over 30 years. **The annual cost for replacement of 20% of the landfill gas system is $15,900 for years 1 through 30.**

Item III – Settlement Monitoring

Years 1 - 30

- **Assume settlement survey costs will average about $3,000 per year for years 1 through 20. Years 20 through 30 will not require instrument survey and only a visual inspection at an estimated cost of $700 per year.**

Item IV-a – Leachate/Condensate Disposal

Leachate generated at NCES is hauled to an off-site disposal facility. Based on information provided by NCES, the average transportation and disposal cost is $0.115 per gallon of leachate.

Years 1 - 5

- Assume 2.7 acres of the West Side cap and 1.4 acres of the Eastern Slope cap remains and will have been in place for at least 6 years at the time of closure and that the leachate flow rate will average 55 gallons per acre per day (gpad), which would produce about 226 gallons per day (gpd).

- Assume 47.8 acres of cap are constructed in Year 1 and that leachate is produced in this area at the rate of 110 gpad or 5,258 gpd.

- **Therefore, the annual cost for years 1 through 5 is approximately $230,200.**

Years 6 - 10

- Assume flow rate of 50 gpad over 4.1 acres, or 205 gpd.
- Assume a flow rate of 75 gpad for the remaining 47.8 acres, or 3,585 gpd.
- **Therefore, the annual cost for years 6 through 10 is approximately $159,100.**

Years 11 - 20

- Assume a flow rate of 40 gpad over 4.1 acres, or 164 gpd.
- Assume a flow rate of 50 gpad over 47.8 acres, or 2,390 gpd.
- **Therefore, the annual cost for years 11 through 20 is approximately $107,300.**

Years 21 - 30

- Assume flow rate of 40 gpad over the entire 51.90 acres, or 2,067 gpd.

Therefore, the annual cost for years 21 through 30 is approximately $87,200.

Item IV-b - Leachate Monitoring

Years 1 - 10

- Assume leachate is collected for analysis for the parameters required by the Solid Waste Rules three times per year from all Stages.
- Based on current costs for analytical testing, the annual laboratory cost is $2,400.
- Assume labor and expenses total $800 per round or $2,400 annually.
- **Therefore, the annual cost for years 1 through 10 is $4,800.**

Years 11 - 30

- Assume based on diminishing flows and stabilization of the leachate that the frequency of sampling may be cut by one-third so that the cost of monitoring is two-thirds of the initial cost. During years 11-20 following closure, sampling will be conducted twice per year. With stabilization, it is likely that the parameters for which analyses are required could also be reduced resulting in a further reduction in the monitoring cost, which is not reflected here.
- **Therefore, the annual cost for years 11 through 30 is about $3,200.**

Item IV-c Leachate Pump Station Operation & Maintenance

Years 1 - 30

- Assume routine inspections coincide with gas system maintenance under Item 2 at a cost of **$3,600** per year.
- Assume replacement parts and repairs for system components cost approximately **$3,100** per year.
- Assume pipes are cleaned every two years at a cost of $5,200 (annualized cost of **$2,600).**
- **Therefore, the annual maintenance cost for years 1 through 30 is about $9,300.**

Electricity Costs

Years 1 - 5

- Assume the annual electricity cost for years 1 through 5 is about **$16,000**.

Years 6 -10

- Assume the leachate flow rates drops to about 55 percent of flow at closure on average over the 5 year period due to the cap so that the annual electricity cost for years 6 through 10 is about **$8,800.**

Years 11 - 20

- Assume the leachate flow rates drop to about 40 percent of the flow at closure on average over the 10 year period so that the annual electricity cost for years 11 through 15 is about **$6,400.**

Years 21 - 30

- Assume the leachate flow rates drop to about 30 percent of the flow at closure on average over the 10 year period so that the annual electricity cost for years 21 through 30 is about **$4,800.**

Outlook

[Records Center] Public Records Request :: R005993-123024

From New Hampshire Department of Environmental Services Public Records Center <nhdes@govqa.us>
Date Tue 1/7/2025 10:23 AM
To Conservation Chair <conservationchair@townofdaltonnh.gov>

--- Please respond above this line ---

Re: Public Records Disclosure Request No. R005993-123024

Dear Jon Swan,

New Hampshire Department of Environmental Services received a public records request from you on December 30, 2024. Your request described the following records:

"Any "written agreements of no less than two locations for leachate treatment or disposal to manage the quantity of leachate generated by the facility during its active life consistent with Env-Sw 806.05(b)(3), pursuant to Env-Sw 1105.11" for the proposed Granite State Landfill, LLC. in Dalton, NH."

New Hampshire Department of Environmental Services has reviewed its files and has determined there are no records responsive to your request.

The written agreements should be part of the leachate management plan, which is part of the Operating Plan. They're usually found as an attachment to the Operating Plan. GSL does not have written agreements yet

If you have questions you may contact my office at (603)271-2919.

Sincerely,

Sarah Chance
File Review Coordinator
Commissioner's Office
(603)271-2919

NHDES would greatly appreciate your feedback and wants to hear from you. Please take a moment to fill out our short (5-question)

https://onlineforms.nh.gov/app/?allowAnonymous=true#/formversion/8ec9787c-f388-4634-a077-d86312c318f3?formtag=NHDES-C-07-010

To monitor the progress or update this request please log into the NHDES Public Records Center

GovQA logo

NHDES-S-05-025

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

RSA 149-M/Env-Sw 1400

Cost Estimate Form for Post-Closure of a Landfill

(lined or unlined)

Submit to:

Waste Management Division, SWMB

PO Box 95, Concord, NH 03302-0095

(603) 271-2925 or solidwasteinfo@des.nh.gov

https://www.des.nh.gov

Facility Name: Granite State Landfill

Facility Address: Douglas Drive, Dalton, NH 03598

NHDES Permit #: DES-SW-SP-XX-XXX (TBD)

Owner: Granite State Landfill, LLC

Phase: Stages 1 and 2 — **Acreage:** 70

Task	Unit	Unit Cost	Quantity	Total Cost
I Water Monitoring				
Surface Water Sampling & Analysis				
Other (Permit Requirement) _____				
Ground Water Sampling & Analysis	*LS*	$60,000.00	1	$60,000.00
Other (Permit Requirement) _____				
Other - Repair of Wells	*LS*	$1,000.00	1	$1,000.00
II Gas Monitoring				
Landfill Gas Migration Monitoring	*LS*	$10,000.00	1	$10,000.00
Operation and Maintenance of Gas Collection System	*LS*	$178,400.00	1	$178,400.00
Replacing 20% of the Active Gas Collection System	*LS*	$30,200.00	1	$30,200.00
Other				
III Settlement Monitoring				
Field Survey	*LS*	$3,000.00	1	$3,000.00
Data Tabulation				
Other				
IV Leachate Collection/Monitoring				
Sewer Charges	*LS*	$571,200.00	1	$571,200.00
Water Monitoring				
Electricity				
Maintenance of Collection System				
Sampling & Analysis	*LS*	$4,800.00	1	$4,800.00
Other - Pump Station O&M	*LS*	$25,300.00	1	$25,300.00
V Clean Air Act Requirements				
Monitoring & Analysis	*LS*	$ 36,000.00	1	$36,000.00
Emissions Fees	*LS*	$ 90,000.00	1	$90,000.00
VI Repair & Site Maintenance Costs				
Snow Removal	*LS*	$500.00	1	$500.00
Roadway Maintenance				
Mowing	*AC*	$100.00	70	$7,000.00
Soil Cover Maintenance and Planting	*LS*	$3,100.00	1	$3,100.00
Maintenance of Gas Venting System				
Subsidence Repair	*LS*	$2,000.00	1	$2,000.00
Stormwater Maintenance	*LS*	$2,000.00	1	$2,000.00
Other				
VII Inspections				
Annual Report	*LS*	$6,250.00	1	$6,250.00
Annual Site Inspections	*LS*	$6,250.00	1	$6,250.00
Other				
VIII Other				
Qualified Professional Oversight of all Activities				
Sub-total				$1,037,000.00
Contingency (10 % minimum)				$103,700.00
Total Yearly Cost				$1,140,700.00
Total 30-Year Cost (2023 Dollars)				$ 13,951,000.00

STATE OF NEW HAMPSHIRE – ADAM J. SANDAHL No. 12544 LICENSED PROFESSIONAL ENGINEER

Signature of Preparer: _____ Date: 06/12/2023

(Must be a Professional Engineer)

This form provides a basis for estimating post-closure costs for a lined or unlined landfill. This form is not inclusive of all costs that may be associated with the landfill's post-closure monitoring and maintenance requirements. The cost estimate must include all expenses associated with compliance of all NHDES permits. Please use the spaces provided above noted as "Other" or attach additional sheets if necessary.

Table 1
Estimated Post-Closure Monitoring/Maintenance Costs
Granite State Landfill, LLC
Jul-23

Task		Annual Cost Years 1-5	Annual Cost Years 6-10	Annual Cost Years 11-20	Annual Cost Years 21-30
I-a	Water Quality Monitoring	$ 60,000.00	$ 45,000.00	$ 30,000.00	$ 30,000.00
I-b	Repair of Monitoring Wells	$ 1,000.00	$ 1,000.00	$ 1,000.00	$ 1,000.00
II-a	Landfill Gas Migration Monitoring	$ 10,000.00	$ 10,000.00	$ 10,000.00	$ 10,000.00
II-b	Landfill Gas Collection System O&M	$ 178,400.00	$ 124,700.00	$ 59,300.00	$ 39,300.00
II-c	Replacing 20% of the Active Gas Collection System	$ 30,200.00	$ 30,200.00	$ 30,200.00	$ 30,200.00
III	Settlement Monitoring	$ 3,000.00	$ 3,000.00	$ 3,000.00	$ 700.00
IV-a	Leachate/Condensate Disposal	$ 571,200.00	$ 252,300.00	$ 175,600.00	$ 153,600.00
IV-b	Leachate Monitoring	$ 4,800.00	$ 4,800.00	$ 3,200.00	$ 3,200.00
IV-c	Leachate Pump Station O&M	$ 25,300.00	$ 18,100.00	$ 15,700.00	$ 14,100.00
V	Air Quality Monitoring	$ 126,000.00	$ 63,000.00	$ 33,000.00	$ 18,000.00
VI	Repair & Site Maintenance Costs	$ 14,600.00	$ 11,000.00	$ 7,750.00	$ 6,000.00
VII	Inspections	$ 12,500.00	$ 8,500.00	$ 8,500.00	$ 8,500.00
VIII	Other	$ -	$ -	$ -	$ -
IX	10% Contingency	$ 103,700.00	$ 57,200.00	$ 37,800.00	$ 31,500.00
	TOTAL	**$ 1,140,700.00**	**$ 628,800.00**	**$ 415,050.00**	**$ 346,100.00**

Notes:
A summary of the assumptions made in developing the estimate is attached
Costs presented are in 2023 dollars
Costs are based on our experience and data and information provided by GSL. Actual costs may vary.

Years 11 - 20

Assume that starting in year 11, the LFG collection system operates on one blower and one flare. Assume the electricity cost, in 2023 dollars, would be 40 percent of the current total electricity cost, or about **$40,000 per year for 10 years.**

Years 20 - 30

Assume that the one blower and one flare operate on a part-time basis with a 50 percent duty cycle. Therefore, the annual electricity cost would be about **$20,000 per year for the last 10 years of the period.**

Item IIc – Replacing 20% of the Active Gas Collection System

This item is to replace 20% of the active landfill gas system per Env-Sw 1403.02(g)(7) within the footprint of the landfill through Stage VI. This cost is presented as an annual value with the full replacement cost spread out over 30 years. **The annual cost for replacement of 20% of the landfill gas system is $30,200 for years 1 through 30.**

Item III – Settlement Monitoring

Years 1 - 30

- **Assume settlement survey costs will average about $3,000 per year for years 1 through 20. Years 20 through 30 will not require instrument survey and only a visual inspection at an estimated cost of $700 per year.**

Item IV-a – Leachate/Condensate Disposal

Leachate and landfill gas condensate generated at GSL will be hauled to an off-site wastewater treatment facility. Based on information provided by NCES, the average disposal and transportation cost to the Concord NH WWTF is $0.115 per gallon of leachate. We assume that the cost will be higher since the Granite State Landfill is farther from Concord than the NCES site. For this calculation, we are assuming the leachate disposal and transportation cost will be $0.120 per gallon of leachate.

Years 1 - 5

- Assume 50 acres of the 70.1-acre footprint have been capped at least five years prior to final closure of the landfill. The average leachate flow rate for this area will average 100 gallons per acre per day (gpad), which would produce 5,000 gallons per day (gpd).

- Assume the remaining 20.1 acres of cap are constructed in Year 1 and that leachate is produced in this area at the rate of 400 gpad or 8,040 gpd.

- **Therefore, the annual cost for years 1 through 5 is approximately $571,200.**

Years 6 - 10

- Assume flow rate of 75 gpad over 50 acres, or 3,750 gpd.
- Assume a flow rate of 100 gpad for the remaining 20.1 acres, or 2,010 gpd.
- **Therefore, the annual cost for years 6 through 10 is approximately $252,300.**

Years 11 - 20

- Assume a flow rate of 50 gpad over 50 acres, or 2,500 gpd.
- Assume a flow rate of 75 gpad over 20.1 acres, or 1,508 gpd.
- **Therefore, the annual cost for years 11 through 20 is approximately $175,600.**

Years 21 - 30

- Assume flow rate of 50 gpad over the entire 70.1 acres, or 3,145 gpd.

Therefore, the annual cost for years 21 through 30 is approximately $153,600.

Item IV-b - Leachate Monitoring

Years 1 - 10

- Assume leachate is collected for analysis for the parameters required by the Solid Waste Rules three times per year from all Stages.
- Based on current costs for analytical testing, the annual laboratory cost is $2,400.
- Assume labor and expenses total $800 per round or $2,400 annually.
- **Therefore, the annual cost for years 1 through 10 is $4,800.**

Years 11 - 30

- Assume based on diminishing flows and stabilization of the leachate that the frequency of sampling may be cut by one-third so that the cost of monitoring is two-thirds of the initial cost. During years 11-20 following closure, sampling will be conducted twice per year. With stabilization, it is likely that the parameters for which analyses are required could also be reduced resulting in a further reduction in the monitoring cost, which is not reflected here.
- **Therefore, the annual cost for years 11 through 30 is about $3,200.**

Item IV-c Leachate Pump Station Operation & Maintenance

Years 1 - 30

- Assume routine inspections coincide with gas system maintenance under Item 2 at a cost of **$3,600** per year.
- Assume replacement parts and repairs for system components cost approximately **$3,100** per year.
- Assume pipes are cleaned every two years at a cost of $5,200 (annualized cost of **$2,600).**
- **Therefore, the annual maintenance cost for years 1 through 30 is about $9,300.**

Electricity Costs

Years 1 - 5

- Assume the annual electricity cost for years 1 through 5 is about **$16,000**.

Years 6 -10

- Assume the leachate flow rates drops to about 55 percent of flow at closure on average over the 5 year period due to the cap so that the annual electricity cost for years 6 through 10 is about **$8,800.**

Years 11 - 20

- Assume the leachate flow rates drop to about 40 percent of the flow at closure on average over the 10 year period so that the annual electricity cost for years 11 through 15 is about **$6,400.**

Years 21 - 30

- Assume the leachate flow rates drop to about 30 percent of the flow at closure on average over the 10 year period so that the annual electricity cost for years 21 through 30 is about **$4,800.**