

CLF Exhibit 9

Connecticut Valley Environmental Services, Inc.

Mr. Frank J. DelGiudice
U.S. Army Corps of Engineers
New England District
696 Virginia Road
Concord, MA 01742

vía email: frank.j.delgiudice@usace.army.mil

May 8, 2024

**re: Comment on USACE Wetland Application, NAE-2021-02240;
Granite State Landfill LLC (GSL), Dalton, New Hampshire**

Dear Mr. DelGiudice,

I write as a resident of the Connecticut River Valley, a wetland consultant to the Town of Dalton, and a Commissioner on the Connecticut River Joint Commissions, who has expressed an interest in commenting on this project¹.

As you know, this may be the most complex permitting project in New Hampshire's history, the full scope of the which appears to evolve on a daily basis. This project will disturb approximately 148 acres of land, add 25.5 acres of impervious surfaces, destroy 11.5 acres of wetlands and 3,256 linear feet of streams, and adversely affect the Ammonoosuc River and other known and unknown public interest factors.

It is my opinion that, as of this letter's date, the GSL's federal wetland application should be rejected because: 1) landfill design standards are outdated; 2) cumulative aquatic resource impacts are not addressed; 3) existing unauthorized wetland impacts should not be permitted with the landfill; 4) necessary natural resource and design information is conflicting or missing; and, 5) evaluation of the project on the public interest has not been conducted.

1. Landfill Design Standards are Outdated

New Hampshire's Solid Waste Management Rules (Env-Sw 800, Landfill Requirements) are in the process of being revised, and siting and design criteria within them are destined to be more restrictive (e.g., increased setback distances of landfill cells to water bodies and, updated stormwater management design standards in order to control increased stormwater flows that are

¹ The opinions in this letter are my own and may not reflect those of any other person or organization. Connecticut River Joint Commissions has a statutory duty, as a public entity, to comment on actions that affect the Connecticut River watershed and advise public agencies in their decisions regarding the river.

predicted by a preponderance of climate change models²). The significance of this is that current landfill design standards are not sufficient to control increased stormwater discharges from the developed landfill nor maintain water quality at pre-development levels. If the project is built to existing landfill design criteria, this will result in adverse effects on downgradient waterways and wetlands including the Ammonoosuc River, highest ranked habitats in New Hampshire, and cold-water fisheries³. These impacts have not been adequately addressed nor quantified in the pending wetland permit application.

2. Cumulative Aquatic Resource Impacts are not Addressed

Wetland impacts trigger a number of federal jurisdictional authorities, notably including the National Environmental Policy Act (NEPA). This Act ensures that all impacts (effects) on public interest factors are considered in a determination of “effects” before a permit decision is rendered. And recently, on April 20, 2022, the definition of “effects” was revised “to include direct, indirect, and cumulative effects⁴.”

Consequently, it is my opinion that aquatic resource impacts enumerated in the wetland permit application are drastically underestimated. Wetland impact calculations in the application ignore probable indirect impacts on aquatic resources from inadequate stormwater control measures (mentioned above), other existing and proposed projects within the same watershed, and the likely future expansion of the landfill. A decision to issue a permit must be “based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity....” 33 C.F.R § 320.4(a)(1).

The construction of numerous ponds (13 infiltration basins, six rain gardens, three deep-sump catch basins, and two stormwater ponds) will increase surface water temperatures to levels that will likely have additional adverse effects on downstream wetlands and cold-water fisheries. Furthermore, the landowner has reserved portions of the subject property for its own use. The asphalt plant, proposed development of a drag strip and business park, and likely expansion of the existing rock quarry and gravel pits⁵ will probably have adverse effects on the quantity and quality of storm water and downgradient aquatic resources, but these impacts are not addressed in the application. The impact of all of these projects must be taken into consideration in an evaluation of cumulative impacts.

The proposed project will disturb approximately 148 acres of land in order to provide 18 years of disposal capacity. These are the areal and temporal extents upon which the aquatic impacts are calculated. However, this represents only a fraction of the total scope of an earlier version of the

² Precipitation in the Northeast has increased in all seasons, and extreme precipitation events (defined as events with the top 1% of daily precipitation accumulations) have increased by about 60% in the region—the largest increase in the US. USGCRP, 2023: Fifth National Climate Assessment. Crimmins, A.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, B.C. Stewart, and T.K. Maycock, Eds. U.S. Global Change Research Program, Washington, DC, USA. <https://doi.org/10.7930/NCA5.2023>. November 2023.

³ Reaches of Alder Brook are the “receiving waters” and are identified as native cold water trout habitat. Probable indirect impacts to this brook include increase in temperature, changes in water chemistry, and alteration of flow.

⁴ <https://www.ecfr.gov/current/title-40/chapter-V/subchapter-A/part-1508/section-1508.1>.

⁵ Since material from the quarry pits will be used to construct the landfill, expansion of these pits is likely.

project, which was withdrawn under significant public pressure. Moreover, GSL has acknowledged an intent to expand the landfill project in the future. If the applicant denies an intent to expand the landfill in the future, then to avoid future incremental increases in impervious surfaces and loss of aquatic resources, future development within the project's watershed should be explicitly prohibited by conditions in the federal wetland permit.

All potential phases of the landfill and all other "past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions"⁶ within the vicinity of the proposed project need to be assessed.

3. Existing Unauthorized Wetland Impacts should not be Permitted with the Landfill

Existing roadways are estimated to have impacted 0.9 acres of wetlands and a perennial stream (see *ECP-1, Existing Conditions Plan* located at [section-14.1-part-1-of-3.pdf](#)). These are unpermitted impacts that occurred prior to GSL's involvement with the site and are proposed to be permitted after-the-fact as part of the landfill project. They extend west of the landfill cells and beyond 'the landfill proposed property line and facility compliance boundary' and 'the wetland field delineation limit' depicted on the *Existing Conditions Plan*. The 'Main Access Road' (shown on Sheet 2-1 of the Wetland Impact Plans (see [36-I-Y](#))) leads from the terminus of Douglas Drive and ultimately branches toward the gravel pits. Portions of these roads have unauthorized wetland and stream impacts.

It is my opinion that these road impacts should not be included in the landfill permit application as the purpose, need, and alternative analyses for them are distinct from those for the construction and operation of the landfill. These roads were illegally constructed to access other activities on the site and USACE should not allow these impacts to be treated as part of the landfill project. To do so, unfairly rewards the landowner for its illegal actions by circumventing the normal permitting process.

The USACE should require restoration of the wetland impacts and, if there is a need to retain the roads, a separate wetland application should be submitted that evaluates alternative alignments in order to minimize wetland impact.

4. Necessary Natural Resource and Design Information is Conflicting or Missing

- The *New Hampshire Alteration of Terrain* (AoT) application provides details on infiltration basins and rain gardens but notes that the mandatory analysis of the feasibility of infiltration is not complete as additional onsite tests are proposed in 2024⁷
- There are conflicting interpretations on the definition of estimated seasonal high-water table between the *Site-Specific Soil Survey Report* and the *NHDES Solid Waste Landfill Application*.

⁶ <https://www.ecfr.gov/current/title-40/chapter-V/subchapter-A/part-1508/section-1508.1>.

⁷ "We note that there are five pond locations that do not currently have infiltration test data due to reconfiguring some of the ponds since the tests were completed. The remaining infiltration tests will be completed in 2024." (AoT, Part 1, p. 20).

- A plant species inventory with information on rare, threatened and endangered (RTE) species and exemplary natural communities is not included in the wetland application. The New Hampshire Natural Heritage Bureau (NHNHB), on December 12, 2023, requested field surveys be conducted to determine what species and natural communities occur on the GSL site, and that a comprehensive list of plant species, native and invasive, that occur on the site be provided (*New Hampshire Wetland Application*, Section 10.1, pages 1-4). To date, responses to NHNHB's request, are not included with the wetland application materials.
- Information on RTE and invasive species within wetland areas is important to assess wetland functions and values, and would dramatically improve the AoT application which only provides boiler-plate information on invasive species control and makes no effort to make their management site specific (see *AoT Application Part 2, Appendix N-O*, p. 3-7).
- GSL's wetland function-value evaluation concludes that one of the principal functions the onsite wetlands provide is flood flow alteration. However, the AoT application claims the wetlands are not supported by surface (sheet) flow; their hydrology is derived from ground water.⁸ These interpretations are conflicting. If the latter interpretation is accurate then the wetlands are unlikely to function in flood flow alteration.
- The need to dispose of solid waste in landfills would be less if the waste stream is reduced. The New Hampshire 2003 Solid Waste Plan (the "2003 Plan") places landfilling as the least desirable alternative and recommends consideration of waste reduction and incineration as practicable alternatives. GSL has not demonstrated consistency with the 2003 Plan, it should address the comparative economic and environmental costs of incinerating versus landfilling solid waste in Dalton.
- The validity of the onsite alternative analysis to locate project components is dubious as it appears GSL may have been unnecessarily steered away from using certain upland areas (e.g., the purported location of a future business park) that the land owner is reserving for its own use.
- The offsite alternative analysis would have been more robust if it would have given more weight to the fact that the Ammonoosic River designated river corridor, highest ranked habitats in New Hampshire, acres of wetlands, vernal pools, perennial and intermittent streams, and cold-water fisheries are downgradient and will be adversely affected by the project. It is likely that there are suitable sites in New England for a landfill that will not put this many valuable aquatic resources at risk.
- The alternative analyses are complex and their review is probably beyond the technical expertise of the USACE. Since this is arguably the most important task in determining the best place to locate the landfill, GSL should be required to retain a qualified independent third party to verify the accuracy of their alternative analyses.

⁸ "Note the wetlands are primarily recharged by groundwater flow. There is no surface water flow in or emanating from these wetlands." (AoT, Part 1, p. 8).

5. Evaluation of the Project on the Public Interest has not been Conducted

USACE has an obligation to comply with requirements of both the National Environmental Policy Act and the Clean Water Act and must make a variety of determinations before issuing a requested permit. See 33 C.F.R. Part 320; 40 C.F.R. Part 230. These relevant determinations include that the project serves the public interest.

They provide that the “decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity and its intended use on the **public interest.**” 33 CFR 320.4(a)(1) (emphasis added). They further provide that the district engineer should consider these criteria before a permit is granted.

Clearly, potential discharges of leachate or other toxic substances from the landfill should be part of the public interest review. At a minimum, it is “projected that the GSL will generate leachate contamination for the better part of 100 years”⁹. The project’s impact on public interests, including wetlands, has been identified by conservation commissions, town and county officials, and state legislators. In their letters, these officials express concern over the impact on the environment, public health and safety, property values, quality of life, and the rural character of the area.

USACE has, to date, not determined that the landfill is in the public interest. In *Friends of Mahoning*, the appeal court concluded the issuance of a USACE permit could not be affirmed because of USACE’s failure to demonstrate the project’s contribution to the public interest¹⁰.

In this instance, where there is meaningful substantial impact, conflicting evidence and overwhelming public opposition, the issuance of a USACE wetland permit should be predicated upon a robust assessment of the project on all public interest factors. And, in my opinion, this assessment should give deference (significant weight) to the fact that toxic substances generated by the landfill will persist in the environment long after the landfill is closed.

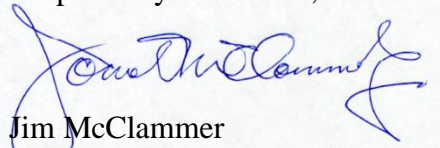
⁹ Carex Environmental Consulting, February 12, 2014-letter, p. 1.

¹⁰ See *Friends of the Mahoning River v. U.S. Army Corps of Engineers*, 4:19CV2771 (N.D. Ohio Sep. 9, 2021).

6. Conclusion

It is my opinion that the wetland permit application should be rejected because: 1) landfill design standards are outdated; 2) cumulative aquatic resource impacts are not addressed; 3) existing unauthorized wetland impacts should not be permitted with the landfill; 4) necessary natural resource and design information is conflicting or missing; and, 5) evaluation of the project on the public interest has not been conducted.

Respectfully Submitted,



Jim McClammer
NH Certified Wetland Scientist #003
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Charlestown, NH 03603



Town of Dalton Selectboard, selectmen@townofdaltontn.com
Dalton Conservation Commission, conservationchair@townofdaltontn.gov

CLF Exhibit 10

March 1, 2024

Emma Berger, PWS, CPSS (Emma.Berger@des.nh.gov)
Wetlands Permitting Specialist
Wetlands Bureau, Land Resources Management, Water Division
NH Department of Environmental Services
P.O. Box 95
Concord, NH 03302-0095

Re: Standard Dredge and Fill Wetlands Permit Application (RSA-482-A)
NHDES File # 2023-03259; Subject Property: Dalton Drive, Dalton,
Tax Map #406/1, Lot #406/2

Dear Ms. Berger:

These are comments from the Bethlehem Conservation Commission regarding the Granite State Landfill (GSL) NHDES File # 2023-03259. Although this proposed landfill is in neighboring Dalton, the proposed entrance, Douglas Drive, is in Bethlehem. Also, both towns share some of the same natural resources, namely an aquifer and the Ammonoosuc River. The commission considers the impact to go well beyond Dalton's boundaries.

The commission's comments below are based on information from experts hired by the Dalton Conservation Commission (DCC) and North Country Alliance for Balanced Change (NC ABC) as well as our review of the previously filed Alteration of Terrain permit application (NHDES File #231113-224).

Both organizations either have or will be sending comments on this project. We have attached synopses/executive summaries from each of these experts:

In summary, the BCC is convinced that this project is so ill-advised and ill-conceived that we cannot imagine that the New Hampshire Department of Environmental Services will approve it. It is clear that this project will result in a breathtaking amount of damage to the environment, including posing a threat to the Ammonoosuc River, a protected river. It would be unconscionable to approve the proposed Granite State Landfill when the capacity of a new landfill is clearly not needed.

The consultants also found some of the information in the application itself deeply flawed or missing. These are some of their comments:

Jim McClammer, NH Certified Wetland Scientist #003, Connecticut Valley Environmental Services, Inc., says the application should be rejected for issues such as cumulative impacts are not addressed; stormwater models do not use the best available science; the landfill design is incomplete and required natural resource information is missing. (p. 2)

D. Scott Reynolds, Ph.D., CWB, CSE, North East Ecological Services, wrote: "It is my opinion that the current Habitat Assessment, and therefore any conclusions or recommendations base on the Habitat Assessment, is qualitatively inadequate to assess likely impact to bats at the Project Site." (Executive Summary)

Damon E. Burt, CWS, CPESC, Fraggie Rock Environmental, stated: “The GSL NHDES Wetlands Application remains incomplete and misleading. The site was not entirely wetland delineated and was not fully assessed in the Wetland Functions and Values assessment. Therefore, the project’s wetland impacts cannot have been avoided, minimized, or adequately assessed in the alternatives analyses.” (p. 9)

Dr. W. Richard Laton, Principal Consultant, Hydrology and President of Earth Forensics, Inc noted: “In addition, reports by Calex Environmental Consulting(2024)(Calex), Watershed to Life, Inc. and North Country Council, Inc. (2006), and other professional companies and agencies were reviewed to prepare opinions and assessments. The comments provided by Calex (2024) point out very critical omissions and unsubstantiated declarations in the Sanborn Head report and, therefore, in the permit application.” (p.2)

The commission also thinks it is also important to highlight portions of their concerns about impacts to wildlife, plants and wetlands that are alarming to BCC members. (The areas in yellow have been highlighted by the BCC and not the consultants.)

I. IMPACTS OF DOUGLAS DRIVE IMPROVEMENTS

When the BCC commented on the Alteration of Terrain permit (AoT) application for this site recently (NHDES File #231113-224) we said we had concerns about the impact that altering Douglas Drive, the entrance to the proposed landfill, would have on the environment. “Improvements” include widening it to 32 feet and changing its configuration, making the impact to the road broader than the word “improving” would imply. The AoT application maps showed 33 separate points of permanent and temporary impact of wetlands along Douglas Drive alone.

These are some observations related to the Douglas Drive portion of the application made by experts hired by the DCC and NC ABC.

Jim McClammer

*Existing, Unauthorized Wetland Impacts for Douglas Drive should not be Permitted as a Component of GSL: “The existing Douglas Drive and gravel pit access roads are estimated to impact 0.9 acres of wetlands and a perennial stream. These are existing unpermitted impacts that are proposed to be added to aquatic impacts for the GSL. However, the roads and wetland impacts extend well beyond what is needed to access the landfill site (see Overall Site Plan in Section 14.1.3). **This plan also clearly shows that road locations have not minimized impact to wetlands, which violates the wetland rules. Less-impacting road alignments are available...** The NHDES should require restoration of the road impacts and submission of a separate application which evaluates road alignments that are less environmentally-damaging. Wetland impacts need to be avoided and minimized to the maximum extent practicable.” (p.8)

*Re-grading a portion of the northern side slope adjacent to Route 116 in order to accommodate a truck turn lane is within the protected shoreline of the Ammonoosuc River and will affect 198 linear feet of perennial stream, 24 feet of intermittent stream and associated 2,961 SF of permanent wetland impact. The report says: **“The post-development channel will continue to direct surface water runoff to an existing catch basin (See CMA Sheet DD-8) which discharges under Route 116 via an existing 24" RCP**

pipe. **This drainage will continue unimpeded to the Ammonoosuc River [emphasis mine]**" (Wetland Application 6.1, page 5) (p.6)

Dr. Richard Laton had concerns over wetlands areas that are going to be destroyed, including those along Douglas Drive. His report noted that areas to be filled include intermittent streams, vernal pools, scrub/shrub, and wildlife-sensitive habitats. The intended impacts on the wetlands include the removal of vegetation and filling streams and vernal pools to create a flat floor footprint for the landfill. **"Some impacts will also be made along the access road and Douglas Road. While the impacts are considered minimal in the permit-associated reports, they have continuity to the downstream wetlands and thus should not be regarded as minimal impacts.** Although considered intermittent under the landfill, the stream channels will nonetheless remain topographically tied to downstream perennial creeks, which ultimately discharge into Alder Brook and the Ammonoosuc River." (p.5)

Damon E. Burt raises the possibility in his report that another approach to the entrance should be considered: "Potential for an entrance to the site from the north/west appears possible and may minimize impact area, however due to areas of no review this cannot be determined. In Section 7.2 of the GSL Wetland Permit Application packet the 'Avoidance and Minimization Written Narrative' asks, "Does the proposed project require access through wetlands to reach a buildable lot or portion thereof?" The applicant answers yes. The applicant has not conclusively shown that there are no other access points to the parcel. In addition to the areas marked as assessed in Section 7.3 in the 'Siting, Evaluation and Minimization' report, additional portions of the site were not reviewed at all. **As described above, a large portion of the site was not wetland field delineated or reviewed in detail and therefore the on-site alternative analysis is incomplete and not conclusive."** (p.6)

II. IMPACT ON THE NORTHERN LONG-EARED BAT: The DCC retained North East Ecological Services (NEES) to determine whether the proposed landfill construction posed a potential adverse impact on this endangered species. **Findings are that the "Habitat Assessment is qualitatively inadequate to assess likely impact to bats at the Project Site."**

D. Scott Reynolds went on to list eight primary deficiencies/failures of the applicant's Habitat Impact Assessment. We want to highlight three:

*Failure to acknowledge multiple data sources that document the northern long-eared bat in proximity to the GSL project site. The report notes "it is important to realize that half of the known hibernacula in the state are found within 25 miles of the Project site" and with three located in Grafton County within 14 miles west or southwest of the Project site. (Executive Summary)

* Failure to consider the complete deforestation of more than 200 acres of forested habitat, as well as the complete and permanent loss of multiple wetlands, intermittent streams perennial streams, and vernal pools, as a potentially significant impact to any local bat species (for both roosting and foraging habitat). (Executive Summary)

*There was a failure in the permit application "to document the impact of road expansion at the Project Site on the foraging and roosting habitat of northern long-eared bats." (Executive Summary)

III. WETLANDS and OTHER WATER-RELATED IMPACTS: In addition to comments from the four experts, the BCC is submitting some of its own comments on wetlands.

BCC comments on wetlands impacts

The commission reviewed the previous Alteration of Terrain permit application (NH DES File # 231113-224) for this property. **Those application maps show 33 separate points of permanent and temporary impact of wetlands specifically along Douglas Drive only, a part of which is in Bethlehem. In total, the applicant states that 10 acres of wetlands will be disturbed.**

While a large part of the wetlands to be affected are located outside of the Town of Bethlehem's jurisdiction, nature does not know human-made boundaries and water flows and seeps wherever it can. We are concerned about any necessary or unnecessary, permanent or temporary impact on wetlands within and surrounding Bethlehem, given the following:

In 2015, the Bethlehem Conservation Commission commissioned a "Wetlands and Wildlife Assessment" of the impacts of the then proposed Northern Pass transmission lines on our local ecological systems. The authors of the report, Elise Lawson and John Severance, both certified wetland scientists, stated the following in the results section of that report (emphasis added in bold):

"Wetlands and Perennial Streams:

Wetlands are an essential habitat type for the majority of plant and animal species in New Hampshire. As a whole, wetlands are extremely diverse depending on the hydrology, soils, topography, and climate of an area. In addition to rivers, lakes, and ponds, there are four general types of Palustrine (1) wetlands: marsh, swamp, bog, and fen, with additional sub-types within each of these categories. This diversity extends into each individual wetland where a complex matrix of plant and wildlife species and water regimes co-exist. The resulting edge habitats within and around wetlands are frequently used by a great deal of wildlife species. It is estimated that riparian areas (habitat along streams and rivers) and wetlands are used by over 90% of the region's wildlife species and provide preferred habitat for over 40% of local species.

*In 2015, the U.S. Environmental Protection Agency (USEPA) Office of Research and Development has finalized a report called: **Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence (2)**. The report reviews more than 1,200 peer-reviewed publications and summarizes current scientific understanding about the connectivity and mechanisms by which streams and wetlands, singly or together, affect the physical, chemical, and biological integrity of downstream waters. **The report focuses on how surface and shallow subsurface connections including small or temporary streams, wetlands, and open waters affect larger waters such as rivers, lakes, reservoirs, and estuaries.** It makes five major conclusions, summarized below. (See "Footnotes" at the end)*

1. Streams, regardless of their size or frequency of flow, are connected to downstream waters and strongly influence their function.

2. Wetlands and open waters in riparian areas (transitional areas between terrestrial and aquatic ecosystems) and floodplains are physically, chemically, and biologically integrated with rivers via

functions that improve downstream water quality. These systems act as buffers to protect downstream waters from pollution and are essential components of river food webs.

3. Many wetlands and open waters located outside of riparian areas and floodplains, even when lacking surface water connections, provide physical, chemical, and biological functions that could affect the integrity of downstream waters.

4. Variations in the degree of connectivity are determined by the physical, chemical and biological environment, and by human activities. These variations support a range of stream and wetland functions that affect the integrity and sustainability of downstream waters.

5. Incremental contributions of individual streams and wetlands are cumulative across entire watersheds, and their effects on downstream waters should be evaluated within the context of other streams and wetlands in that watershed.

In relation specifically to point 5 from the report, as quoted above, the proposed wetlands impacts cannot be viewed in isolation from the surrounding area, and indeed the wider region/watershed.

Some concerns raised in the report, which would also apply to this specific permit application are: **the loss of biodiversity** not only to wetlands, but also adjacent upland plant and animal communities; **erosion and stream bank destabilization** at the site, as well as **sedimentation downstream** in all intermittent and perennial streams; **and aquifer degradation**. Regardless of the size, all aquifers need special consideration to ensure good water quality now and into the future. Given the worldwide water crises we are experiencing, all aquifers should be considered potential drinking water sources.

Jim McClammer

*This is an extremely important project that will disturb approximately 148 acres of land, add 25.5 acres of impervious surfaces, destroy 11.5 acres of wetlands, and have adverse effects on the Ammonoosuc River and other known and unknown public interest factors. At a minimum, it is “projected that the GSL will generate leachate contamination for the better part of 100 years”1. (p.1)

*Based on uncertain outcomes in the regulatory framework, segmentation of the permit process, and basic deficiencies in the wetland and related applications it is my opinion that the wetland application should be rejected. A premature ruling on the wetland application puts at risk the New Hampshire’s natural environment including the Ammonoosuc River, highest ranked habitats in New Hampshire, 11.5 acres of wetlands, five vernal pools, perennial and intermittent streams, cold water fisheries, and possibly exemplary natural communities and rare, threatened and endangered species. (p.9)

*At a minimum, the numerous ponds (13 infiltration basins, six rain gardens, three deep-sump catch basins, and two stormwater ponds) will increase surface water temperatures to levels that will likely have adverse effects on downstream wetlands, cold-water fisheries, and highest ranked habitats in New Hampshire. (p.4)

* “The offsite alternative analysis would have been more robust if it would have given more weight to the fact that the Ammonoosic (sic) River designated river corridor, highest ranked habitats in New Hampshire, acres of wetlands, vernal pools, perennial and intermittent streams, and cold-water fisheries are downgradient and will be adversely affected by the project. **It is likely that there are suitable sites in**

New England for a landfill that will not put this many valuable aquatic resources at risk. For these reasons, it is my opinion that the current offsite alternatives analysis is inadequate.” (p.7)

Damon E. Burt:

*“... These remarks indicate that both groundwater and surface water from the site drains in the direction of the Ammonoosuc River. This indicates any potential contamination in surface or groundwater will flow to the Ammonoosuc River.” (p.2)

*“In summary, the proximity of the proposed GSL to the Ammonoosuc River that provides drinking water to thousands, and flows into the Connecticut River that provides drinking water to millions, is both egregious and unethical. Research shows that PFAS is not adequately contained by landfills nor treated well enough to ensure the nearby waterways will remain uncontaminated. The applicant has not provided adequate proof that runoff from the landfill nor leachate will be free of PFAS, a forever chemical, shown to cause significant impact to wildlife and humans.” (p.3)

Dr. W. Richard Laton

*History does not support the statement that the double liner will prevent leachate from escaping the landfill. Even the EPA states that, ultimately, the liner system will fail and that after closure, it is inevitable that the liner will deteriorate, and leachate leakage is guaranteed. For this reason alone, it is recommended that a landfill be placed in a zone of upward vertical gradients (groundwater discharge area). (p.3)

*As discussed above, PFAS and other chemicals are being found in the monitoring system for the NCES landfill in Bethlehem that threaten the water quality of drinking water and the Ammonoosuc River. It must be considered that such an event could take place at the GSL. Placing a landfill within the groundwater recharge area for the Alder Brook groundwater basin and Alder Brook catchment surface water area would also lead to discharges of leachate contaminants into the Ammonoosuc River but, in addition, could threaten the water supply and water quality for Forest Lake. (p. 4)

IV. IMPACTS ON OTHER WILDLIFE AND PLANT SPECIES

Damon E. Burt:

* “According to the NHDES The Ammonoosuc River Fact Sheet, “[s]everal threatened or endangered wildlife species are found in the Ammonoosuc River watershed,” including the bald eagle; peregrine falcon; American marten; upland sandpiper; brook floater; dwarf wedge mussel; resident osprey; and the northern bog lemming. (p.3)

*In addition to threatened and endangered wildlife, the NH Natural Heritage Inventory lists “20 state-endangered plant species as occurring along the Ammonoosuc River,” including Boott’s rattle snakeroot; chestnut sedge, Robbins’ cinquefoil, green dragon; Kalm’s brome; bristly rose; wavy blue grass; hairy-eared rockcress as well as 15 state threatened plant species. (p.3)

* “Furthermore, in Section 10 of the GSL Wetland Permit Application packet, the Natural Heritage Bureau Data Check (NHB23-3333) submitted on 12/12/2023 found the potential for two rare natural communities (northern white cedar balsam fir swamp and northern white cedar seepage), two state

endangered plant species (greater yellow lady's slipper and marsh horsetail) and the state threatened common loon to be within the vicinity of the project area. Impacts to the **northern white cedar balsam fir swamp** and **northern white cedar seepage** and the **greater yellow lady's slipper** and **marsh horsetail** may occur **as these were not evaluated by the applicant.**"(p.3)

* "The Fish and Wildlife Service Endangered Species Project Review (Project code 2023-0019103, dated 11/21/23) found the Canada lynx (federally threatened), northern long-eared bat (federally endangered), and monarch butterfly (candidate) may occur within the boundary of the project or be affected by the project." (p.4)

CONCLUSION:

In summary, the Bethlehem Conservation Commission feels the problems with this application are so widespread and indisputable that **the permit must be denied** if the department is to follow its mandate: "to help sustain a high quality of life for all citizens by protecting and restoring the environment and public health in New Hampshire. The protection and wise management of the state's environment are the main goals of the agency."

It has been said over-and-over again in comments associated with several permit applications already filed for the proposed GSL, but we think there is a need to say it again: **this is the wrong site for a landfill.**

One reason is that the porous soil on the site could allow any leaks to reach the Ammonoosuc more quickly than soil types at other locations. Two, the site is uphill of the Ammonoosuc, a designated river in the NH Rivers Management and Protection Program. Also, two branches of the Alder Brook run a course that has them emptying into the Ammonoosuc so that any disruptions and impacts, runoff, could affect the river, which provides drinking water to communities.

Perhaps the best way to summarize the severe impact of this project is noted in comments from wetland scientist, Jim McClammer of Connecticut Valley Environmental Services, Inc. He mentions the fact that the Ammonoosuc River, the highest ranked habitats in New Hampshire, acres of wetlands, vernal pools, perennial and intermittent streams, and cold-water fisheries "are downgradient and will be adversely affected by the project. It is likely that there are suitable sites in New England for a landfill that will not put this many valuable aquatic resources at risk." (p.7)

The potential impacts of this project are so severe and unacceptable to the local and natural communities that it has absolutely no public benefit. **Please deny the application.**

Sincerely,

Cheryl Jensen, member, Bethlehem Conservation Commission, Conservationcommission@bethlehemnh.org, CherylJensen448@gmail.com, vivavw@gmail.com

Cc:

Veronica Morris, Selectboard liaison, selectman4@bethlehemnh.org

Dalton Conservation Commission, conservationchair@townofdaltonnh.gov

North Country Alliance for Balanced Change: Amy Manzelli, manzelli@nhlandlaw.com; Damon Burt, fnvironmental@gmail.com; Wayne Morrison, birdiequest@aol.com,

Jared Sullivan, Jared.Sullivan@leg.state.nh.us

Linda Massimilla Linda.Massimilla@leg.state.nh.us

Carrie Gendreau Carrie.Gendreau@leg.state.nh.us

ATTACHMENTS:

Damon Burt: FRE Comments on GSL Wetland Permit Application 2 28 2024

D. Scott Reynolds: 2024 NEES Report

Dr. W. Richard Laton: 2 20 2024 EFI Letter GSL Permit Application Dr Ricard Laton Hydrologist

Jim McClammer: McClammer Letter 2 20 2024 Dalton GSL Landfill Wetlands Comments CVES

Footnotes:

(1) Palustrine wetlands are a group of vegetated wetlands traditionally called marshes, swamps, bogs, fens. They also include the small, shallow, permanent or intermittent water bodies often called ponds.

(2) U.S. EPA. Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of The Scientific Evidence (Final Report). U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-14/475F, 2015.”

CLF Exhibit 11



Fraggle Rock Environmental
Damon E. Burt, CWS, CPESC
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FREnvironmental@gmail.com

May 2, 2024

BCM Environmental and Land Law, PLLC
3 Maple Street
Concord, New Hampshire 03301
Attn: Amy Manzelli, Esq.

RE: Environmental/Ecological Comments
NHDES Standard Dredge and Fill Wetlands Permit Application – December 2023
NHDES Standard Dredge and Fill Wetlands Permit Application Supplement – February 6, 2024
NHDES File #: 2023-03259
USACE Clean Water Act Section 404 Individual Wetland Permit Application – February 2024
USACE Clean Water Act Section 401 Request for Water Quality Certification – April 19, 2024
Granite State Landfill, Dalton and Bethlehem, New Hampshire

Dear Attorney Manzelli,

The proposed Granite State Landfill (GSL) on Douglas Drive, off of NH Route 116 in Dalton, New Hampshire is of significant environmental concern and should not be approved by the State of New Hampshire. Fraggle Rock Environmental reviewed the following with a focus on ecological and environmental aspects of the project. Our review was based on current information available to us and we foresee providing additional comments and concerns as we continue our analysis and new information becomes available to us:

- NHDES Standard Dredge and Fill Wetlands Permit Application – December 2023 (NHDES File #: 2023-03259)
- NHDES Standard Dredge and Fill Wetlands Permit Application Supplement – February 6, 2024
- USACE Clean Water Act Section 404 Individual Wetland Permit Application – February 2024
- USACE Clean Water Act Section 401 Request for Water Quality Certification – April 19, 2024

In summary, the following were found to be of significant concern based on our review of the materials listed above at this point. Our detailed analysis of the following concerns is below.

1. Impacts during construction:
 - 1.1. Threat to Wildlife and Threatened and Endangered Species:
 - 1.2. Destruction of Wetlands and Vernal Pools:

2. Impacts Post Construction, During Operation, and Post-Closure:
 - 2.1. Contamination of Drinking Water:
 - 2.2. Impact of Wetland Loss
3. Final Review
 - 3.1. Errors in Permit Applications
4. Conclusion - Summary of Concerns

PART 1: IMPACTS DURING CONSTRUCTION:

The project proposes significant impacts on the environment during construction including serious threats to wildlife and threatened and endangered species habitat and the destruction of 11.52 acres of wetlands, including vernal pools.

1.1 Threat to Wildlife and Threatened and Endangered Species:

According to the NHDES The Ammonoosuc River Fact Sheet, “[s]everal threatened or endangered wildlife species are found in the Ammonoosuc River watershed,” including the following species²:

- **bald eagle** (*Haliaeetus leucocephalus*, state-threatened)
- **peregrine falcon** (*Falco peregrinus anatum*, state-threatened)
- **American marten** (*Martes americana*, state-threatened)
- **upland sandpiper** (*Bartramia longicauda*, state-threatened)
- **brook floater** (*Alasmidonta varicosa*, state-endangered)
- **dwarf wedge mussel** (*Alasmidonta heterodon*, federally endangered)
- **resident osprey** (*Pandion haliaetus*, species of concern)
- **northern bog lemming** (*Synaptomys borealis sphagnicola*, species of concern)

In addition to threatened and endangered wildlife, the NH Natural Heritage Inventory lists “20 state-endangered plant species as occurring along the Ammonoosuc River,” including the following²:

- **Boott’s rattle snakeroot** (*Prenanthes boottii*)
- **chestnut sedge** (*Carex castanea*)
- **Robbins’ cinquefoil** (*Potentilla robbinsiana*)
- **green dragon** (*Arisaema dracontium*)
- **Kalm’s brome** (*Bromus kalmii*)
- **bristly rose** (*Rosa acicularis*)
- **wavy blue grass** (*Poa laxa*)
- **hairy-eared rockcress** (*Arabis pycnocarpa*)

As well as 15 state threatened plant species.²

In Section 10 of the GSL Wetland Permit Application packet, the Natural Heritage Bureau DataCheck (NHB23-3333) submitted on 12/12/2023 found the potential for two rare natural communities (northern white cedar balsam fir swamp and northern white cedar seepage), two state endangered plant species (greater yellow lady’s slipper and marsh horsetail) and the state threatened common loon to be within the vicinity of the project area. Impacts to the **northern white cedar balsam fir swamp** and **northern**

white cedar seepage and the **greater yellow lady’s slipper** and **marsh horsetail** may occur as these were not evaluated by the applicant.

The Fish and Wildlife Service Endangered Species Project Review (Project code 2023-0019103, dated 11/21/23) found the Canada lynx (federally threatened), northern long-eared bat (federally endangered), and monarch butterfly (candidate) may occur within the boundary of the project or be affected by the project. In section 10.5 of the GSL Wetland Permit packet, in the ‘Canada lynx – Winter Tracking Survey’ no lynx tracks, scat, or signs were observed, however it was found that the following species made significant use of the site: snowshoe hare, coyotes (*Canis lantrons*), moose (*Alces alces*), white-tailed deer (*Odocoileus virginianus*), ruffed grouse (*Bonasa umbellus*). According to the US Fish and Wildlife Service, the Canada lynx is “highly specialized to hunt snowshoe hare,” found to be abundant in the survey.⁷ Additionally, Canada lynx will eat small mammals such as grouse, also observed in the survey.⁷ **This shows the site has significant habitat for the Canada lynx, a threatened species and development of the site will impact the Canada lynx.** Additionally impacts to the northern long-eared bat and monarch butterfly may occur as part of this project as these were not evaluated by the applicant.

In addition to the direct impact on species found or documented to be present on site, the project has the potential to significantly impact the dozens of species that call the Ammonoosuc River Corridor their home through contamination of waterways, alteration of terrain, or degradation of habitat. According to the NHDES Wildlife Action Plan maps, the project parcel contains prioritized habitat blocks, wildlife terrestrial corridors, areas of highest ranked habitat in NH, areas of highest ranked habitat in the region, and areas of supporting Landscape. **The proposed project will have significant impacts to wildlife and supporting habitats.**

1.2 Destruction of Wetlands and Vernal Pools:

The proposed GSL will impact 11.52 acres of wetlands including 11.03 acres of permanent wetlands impact across Bethlehem and Dalton, NH. Impacts are proposed to forested wetlands, scrub-shrub wetlands, emergent wetlands, riverine habitats, and vernal pools. Significant loss of wetland habitat will negatively impact wildlife, threatened and endangered species, surrounding habitats/environments, and human populations. Furthermore, incomplete analysis of all wetlands on site, puts unknown wetlands at risk and proves the applicant did not minimize impacts during project design.

Town	Sheet	Linear (ft)	Permanent (sqft)	Temporary (sqft)	After-the-fact (existing) (sqft)
Bethlehem	33-I	0	1622	2674	2270
	34-I	0	2346	6057	19346
	35-I	222	2725	111	767
	36-I	0	290	0	0
Bethlehem Sub- Total		222	6,983 (0.16 ac)	8,842 (0.20 ac)	22,383 (0.51 ac)
BETHLEHEM TOTAL		222	38,208 (0.88 acres)		

Table 1: Total wetland impact proposed for GSL in Bethlehem per GSL wetland permit plans.

Town	Sheet	Linear (ft)	Permanent (sqft)	Temporary (sqft)	After-the-fact (existing) (sqft)
Dalton	1	0	0	0	1120
	2-I	0	0	0	8912
	8-I	0	1928	1353	0
	9-I	0	1627	24	0
	13-I	932	37270	0	331
	19-I	0	6648	50	0
	20-I	0	44573	0	0
	21-I	0	205329	298	0
	22-I	0	101528	852	0
	23-I	711*	7233	3927	0
	27-I	0	26077	0	0
	31-I	0	2081	408	0
	32-I	0	1901	3585	0
	33-I	0	589	1965	4150
Dalton Sub-Total		1,643	436,784 (10.03 ac)	12,462 (0.28 ac)	14,513 (0.33 ac)
DALTON TOTAL		1,643	463,759 (10.65 acres)		

Table 2: Total wetland impacts proposed for GSL in Dalton per GSL wetland permit plans. *discrepancy of wetland impact in plans/notes

	Linear (ft)	Permanent (sqft)	Temporary (sqft)	After-the-fact (existing) (sqft)
Project Sub-Total	1,865	443,767 (10.19 ac)	21,304 (0.49 ac)	36,896 (0.85 ac)
PROJECT TOTAL	1,865	501,967 (11.52 acres)		

Table 3: Total wetland impacts proposed as part of the GSL project per the GSL wetland permit plans.

Town	Sheet/Impact	Linear (ft)	Bank (ft)	Bank (sqft)	Permanent (sqft)	Temporary (sqft)
Dalton	1-2	120	missing	missing	40	0
	2-1A	30	missing	missing	30	0
	2-2A	60	missing	missing	75	0
	2-5	20	missing	missing	25	0
	13-1	932	missing	missing	1864	0
	23-6A	34	missing	missing	89	0
	23-7	390	missing	missing	780	0
	23-8A	116	missing	missing	56	0
	23-11	171	missing	missing	37	0
Bethlehem	35-2	24	missing	missing	132	0
	35-7	198	missing	missing	24	0
Dalton - Total		1,873	unknown	unknown	2,996	0
Bethlehem - Total		222	unknown	unknown	156	0

PROJECT TOTAL		2,095	unknown	unknown	3152	0
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Table 4: Stream impacts proposed as part of the GSL project per the GSL wetland permit plans.

In Section 11 of the application within Section 2.1 of the GSL Wetland Permit Application packet the applicant states they propose to **impact a total of 501,967 (11.52 acres) of wetlands and vernal pools (5) on site** which may increase during review of the project. In section 2 of the application within the project description the applicant states “the proposed wetland impacts have been minimized by evaluating a number of on- and off-site alternatives”. However, the applicant cannot claim that wetland impacts were minimized on site because the **entire site was not field wetland delineated**. In ‘Section 8: Wetland Classification & Impacts’ of the GSL Wetland Permit Application packet, the applicant described that area outside of the “core candidate land” was delineated using “existing topographic base plans, NWI maps, aerial photography and a reconnaissance level field review”. This does not seem appropriate, as areas outside of the predetermined “core candidate land” may allow for minimized wetland impacts or impacts of lower functioning wetlands. **The “core candidate land” should not be chosen until all wetlands have been assessed/delineated on site. As the entire site was not field delineated it is impossible to determine if the proposed landfill has minimized all wetland and vernal pool impacts.** It is also impossible to determine if the proposed landfill location has minimized impacts to high functioning wetlands.

Furthermore, in Section 3 of the ‘Avoidance and Minimization Written Narrative’ in Section 7.2 of the Standard Wetland Permit Application packet the applicant described that alternative sites in NH were assessed. Yet, they fail to describe if nearby alternatives were analyzed, such as the nearby land owned by the same owner as the project parcel: J. W. Chipping. As shown in the ‘Abutter Plan’ in Section 5.1 of the GSL Wetlands Permit Application J. W. Chipping owns many abutting parcels that do not appear to be adequately assessed for their potential to minimize or avoid wetland impacts or increase the distance from the proposed landfill and the Ammonoosuc River.

For example, Section 8 states that the “property owner maintains a quarry along Douglas Drive and has retained development rights for a proposed future industrial park, thus precluding landfill development and the need for further field wetland evaluation of this area” and in Section 7.3 in the ‘Siting, Evaluation and Minimization’ report, an alternative landfill location Area C is excluded as a candidate for the landfill as the “property owner is considering an industrial park at this location and is not in favor of pursuing a landfill footprint in Area C.” **Potential unpermitted future uses for the property should not prevent this area from being included in alternative analyses.** Wetlands should be fully delineated in area C, as would be required if an industrial park was constructed here as well, and this area should be included in additional alternative analyses. Potential for an entrance to the site from the north/west appears possible and may minimize impact area, however due to areas of no review this cannot be determined. In Section 7.2 of the GSL Wetland Permit Application packet the ‘Avoidance and Minimization Written Narrative’ asks, “Does the proposed project require access through wetlands to reach a buildable lot or portion thereof?” The applicant answers yes. The applicant has not conclusively shown that there are no other access points to the parcel. In addition to the areas marked as assessed in Section 7.3 in the ‘Siting, Evaluation and Minimization’ report, additional portions of the site were not reviewed at all. **As described above, a large portion of the site was not wetland field delineated or reviewed in detail and therefore the on-site alternative analysis is incomplete and not conclusive.**

In addition to not all wetlands being delineated, not all wetlands were assessed as part of the Wetlands Functional Assessment in Section 9. Per NHDES Rule Env-Wt 311.03(b)(10) “For minor and major projects, a functional assessment of all wetlands on the project site...” shall be included in the complete application package for a standard permit. **The submitted Wetland Functions and Values report in Section 9 is therefore incomplete and cannot adequately determine that the project avoids or minimizes impacts to high functioning wetlands.** All wetlands should be field delineated as noted above and analyzed for suitable wetlands functions and values.

Also, in Section 9 of the GSL Wetlands Permit Application packet in the ‘Wetland Functions & Values’ report, the applicant describes that some wetlands provide no functions or values. **It seems very unlikely that the wetlands do not provide a single function or value,** such as wildlife habitat if it's in undeveloped lands or floodflow alteration if it is along a roadway.

The project proposes to impact 5 vernal pools (7,550 sq. ft.) and supporting terrestrial habitat (vernal pool buffer impacts not quantified), as shown in the Vernal Pool Assessment report within Section 10 of the GSL Wetlands Permit Application packet. As described in the report, spotted salamanders and wood frog egg masses were documented during the reviews in 2019 through 2020. Impacts have occurred in and along vernal pools already, as noted in Section 3.0 of the report. **The project will directly impact vernal pool habitat and amphibian species.** Mitigating the loss of vernal pool habitat is challenging and often fails to adequately replicate naturally occurring functions.

Finally, stream impacts described in the Wetland Permit Application Supplement includes updated stream impact calculations. However, the stream impacts still appear to be insufficient as only linear feet and square footage are reported, and **stream bank impacts are missing.** Linear feet impact is proposed to be 2,095 feet, per our calculations (Table 4) from information provided in the updated wetland impact plans included in the Wetland Permit Application Supplement. Estimated stream bank impact should be double the proposed linear feet impact and would total 4,190 ft as proposed.

Furthermore, photos of wetland impacts were included as part of the wetland impact permit supplement, as requested by DES, however photos were taken far outside of the growing season on January 3 and 4, of 2024. Additionally, photo annotations are lacking view location direction and descriptions of proposed impacts making the review of wetland impacts difficult.

PART 2: IMPACTS POST CONSTRUCTION, DURING OPERATION, AND POST-CLOSURE:

The GSL claims to provide “18 years of disposal”, however this project will cause decades of long-term impacts post construction, during operation, and following the closure of the GSL.

2.1 Contamination of Drinking Water:

The GSL poses significant risks to public drinking water supply as surface waters and shallow groundwater from the proposed site drains to the Ammonoosuc River which provides drinking water to thousands¹, and drains to the Connecticut River which provides drinking water to millions.³ From information included in the Pollutant Loading Analysis included as Attachment 3 of the 401 Water Quality Certification (WQC) Application, the project risks contaminating millions of gallons of water per year, including, if nothing else, 10 million gallons of just precipitation.

The project proposes wetland impacts within 700 ft of the Ammonoosuc River. As described in the Ammonoosuc River Corridor Management Plan, June 2013, “several community water systems depend upon the Ammonoosuc for water supply, either through direct withdrawal from the river or from nearby wells.”¹ The plan continues to explain that “Woodsville Water & Light serves approximately 2,000 users with a direct withdrawal from the river”, the “Lisbon Water Department’s Caswell Wellfield serves approximately 1050 individuals”, the “Carrow water works serves approximately 875 individuals with wells adjacent to the river.”, and the “Rosebrook Water serves approximately 1050 individuals with wells adjacent to the river.”¹ Furthermore, “Littleton Water and Light’s Brickyard Road well is used as a back-up source for the town” adjacent to the Ammonoosuc River.¹ Additionally, “[m]any private wells at homes and businesses are also near the river.”¹ In summary, the Ammonoosuc provides substantial drinking water supply to thousands of individuals along the Ammonoosuc River, and therefore maintaining clean, healthy water is of utmost importance.

The Ammonoosuc River, as described by NHDES in the Ammonoosuc River Environmental Fact Sheet, “begins at the Lake of the Clouds... and flows approximately 60 miles west... to its confluence with the Connecticut River.” The Connecticut River supplies drinking water to millions according to the Vermont Department of Environmental Conservation.³

In section I.III of ‘Attachment A’ in Section 6.1 the Standard Wetland Permit Application packet (NHDES File #: 2023-03259), the “Groundwater, which was determined to flow in a westerly to southwesterly direction”. Additionally, in the ‘Wetland Functions & Values’ report in Section 9.0 of the Standard Wetlands Permit Application packet, the applicant asserts that “[g]roundwater observations indicate that groundwater movement is in a west to southwesterly direction largely paralleling surface water drainage patterns” and that groundwater recharge/discharge was “considered a principal function with 22 wetlands.” **These remarks indicate that both shallow groundwater and surface water from the site drains in the direction of the Ammonoosuc River. This indicates any potential contamination in surface or groundwater will flow to the Ammonoosuc River.**

Perfluoroalkyl and polyfluoroalkyl substances (PFAS), are widely used chemicals used in many man-made products that then make their way into landfills. According to the EPA, in their 'Effluent Guidelines Program Plan 15' from January 2023, the "EPA evaluated discharge data from over 200 landfills from across the country and found PFAS present in the leachate at over 95 percent of the landfills."⁴ Additionally, NHDES states that "[h]undreds of waste sites in New Hampshire have sampled for and detected PFAS in groundwater, with the majority of those sites detecting PFAS at levels that are greater than applicable regulatory standards."⁵ According to the EPA, current research indicates exposure to certain levels of PFAS can lead to reproductive issues, developmental delays in children, increased risk in cancers, reduction of the body's immune system response, interference with hormones, and increased cholesterol levels or risk of obesity.⁶

In section I.III of 'Attachment A' in Section 6.1 the Standard Wetland Permit Application packet (NHDES File #: 2023-03259), the applicant describes that "surface water runoff from the landfill will be collected and treated by a series of drainage swales and stormwater management structures" which will be "directed to these downgradient wetland and stream systems," and then, as described above, drain towards and likely to the Ammonoosuc River. Drainage swales and stormwater management structures will not adequately remove PFAS from landfill surface water runoff, posing significant potential harm to the entire Ammonoosuc River watershed.

Furthermore, in Section 6.1 in Attachment A of the GSL Wetlands Permit Application packet, the applicant states "no public water supply wells are located within or immediately adjacent to the project area, nor are surface water drinking water supplies are known to exist within the catchment area." However, according to the limits of the catchment area (Shown in Section 9.3) the catchment area contains and drains to the Ammonoosuc River which as described above provides public drinking water supply to thousands. This statement is misleading as the catchment area drains to the Ammonoosuc River which is a water supply.

The Sampling and Analysis Plan (SAP), prepared by Normandeau Associates, Inc. and included as Attachment 1 of the 401 WQC Application, states that "[t]he chemical, physical, and biological characteristics of the discharge will be typical of stormwater from industrial areas and roadways. Chemical constituents associated with industrial and roadway stormwater runoff include suspended solids, nutrients, metals, and toxics." Water quality will decrease as a result of the GSL. The best stormwater management structures are inferior to natural wetland habitat, and therefore total suspended solids (TSS), nutrient, metals, and toxin levels will be higher than if the site was left undeveloped. Furthermore, stormwater management structures are designed to withstand only 50-year, 24-hour storm events, as described in the 401 WQC Application, however they are also described in the same application as "designed to manage at least a 1-inch rain event." According to the New Hampshire Climate Assessment, extreme precipitation significantly increased between 1996 and 2016⁸. During extreme events, all potentially contaminated stormwater will be direct surface water discharges, posing an even larger threat to the nearby community and wildlife of the Ammonoosuc Corridor. Weather stations in the area show 2023 had 5 or more days totaling 1 inch of rain or more in a 24 hour period. Additionally, to claim that the project will result in a net decrease in TSS or nitrogen, as described in the Pollutant Loading Analysis (Attachment 3 of the 401 WQC Application) is improbable.

Furthermore, the applicant claims in the 401 WQC Application that the “conversion of 90 acres of forest to unforested land” will cause a “decrease in evapotranspiration” of an estimated “22,000,000 gallons per year”. This estimation is baseless and should not be viewed as a beneficial reason to remove high functioning and valuable forested habitat. This combined with precipitation and surface flow sum to a huge volume of water entering and exiting the site. The greater the volume of water, the greater the risk of flooding on site. This is of particular concern as flooding will cause leachate collection systems to fail, contaminating nearby ecosystems. Untreated stormwater or leachate leakage will enter the Ammonoosuc River.

In summary, the proximity of the proposed GSL to the Ammonoosuc River that provides drinking water to thousands, and flows into the Connecticut River that provides drinking water to millions, is both egregious and unethical. Millions of gallons of water risk becoming contaminated and the applicant fails to show that all water will be treated on site. In the event of a large storm, the leachate collection system will fail putting the Ammonoosuc River and the surrounding community at risk. Furthermore, research shows that PFAS is not adequately contained by landfills nor treated well enough to ensure the nearby waterways will remain uncontaminated. **The applicant has not provided adequate proof that runoff from the landfill will be free of PFAS, a forever chemical, shown to cause significant impact to wildlife and humans.**

2.2 Impacts of Wetland Loss

The GSL will impact 11.52 acres of wetlands, including emergent wetlands, scrub-shrub wetlands, forested wetlands, riverine habitats, and vernal pools. An abundance of functions and values will be lost due to this destruction, of which will change the local ecosystem. Groundwater recharge will be significantly reduced, regardless of constructed stormwater management structures. Natural systems far outperform man-made structures. Additionally, the applicant fails to detail the long-term management of the stormwater management structures after the landfill has been capped and closed.

Wildlife habitat will forever be diminished, as dozens of species, as described above, rely on wetland habitats.

PART 3: FINAL REVIEW

In summary, we believe the project has not minimized wetland impacts or vernal pool impacts, and has not minimized impacts to high functioning wetlands. The entire parcel was not wetland field delineated or fully reviewed in the functional assessment. Therefore, the review is incomplete and inadequate. The project proposes significant threat and impact to wetlands, vernal pools, and adjacent terrestrial habitat, posing significant risk to wildlife, the environment, and human populations. Due to the immense proposed wetland impacts and potential risks to the environment, the application should be denied.

3.1 Errors in Permit Applications

In addition to significant environmental concern, we found the following errors or concern with the GSL NHDES Wetlands Permit Application.

1. In Section 1 of the GSL Wetlands Permit Application the applicant states that the property does not contain a PRA (priority resource area), however in the same section the applicant states that the NHB Datacheck (NHB23-3333) documents occurrences of protected species; the common loon, the marsh horsetail, and the greater yellow lady's slipper. Per Env-Wt 103.66(a) "Priority resource area means a jurisdictional area that has documented occurrences of protected species or habitat".
 - a. Additionally, when asked if the property contains protected species or habitat in Section 1 of the GSL Wetlands Permit the applicant lists the common loon, the marsh horsetail, and the greater yellow lady's slipper and excludes two rare/sensitive habitats included in the NHB letter NHB23-3333 dated 12/12/23. The following rare/sensitive natural communities were excluded:
 - **Northern white cedar - balsam fir swamp**
 - **Northern white cedar seepage forest**
2. Dalton Tax Map 406, Lot 2.3, Lot 2.4, and Lot 2.5 are not included in the project location (Section 3 of the Standard Wetland Permit Application, Section 2.1 of the Application packet). However, review of the wetland impact plans in section 14.3 shows existing impacts in Sheet 31-I, 32-I, 33-I, 34-I, 35-I and 36-I to be permitted as **after-the-fact wetland impacts** within these excluded parcels.
3. In Section 9, Part 3 nearby waterways are evaluated for impairments. It is noted in the figure narrative that they "understand all waterbodies in New Hampshire have been designated as impaired for fish/shellfish consumption due to mercury, and therefore these mercury impairments are not shown individually on this figure." However, if **impaired waters require a 1-mile buffer, the buffer is missing from the Hatch/Alder Brook and from the unnamed brook along West Forest Road/West Side Road**. One-mile buffers from these waterways will be within project boundaries.
 - a. Furthermore, the Forest Lake Buffer area was trimmed to be contained within the adjacent watershed, however this seems incorrect as the **Forest Lake Buffer should be consistent regardless of watershed boundaries**.
 - b. Also, it is important to note that all impaired waters are of poor water quality. Waters are denoted as "marginal" on Figure 9-3.2 which is misleading. **Waters are of poor quality**.
4. In Section 8: 'Wetland Classification & Impacts' of the NHDES Standard Wetlands Permit Application, multiple features are missing in the legend. There are light blue lines in the east and red lines throughout the property that are unlabeled. Additionally, features are labeled as "NWI Wetlands, Typical" in the east. However, almost all **NWI mapped wetlands are missing from this plan**. All wetlands should be field delineated, surveyed, and added to the plan.
5. Impact numbers are incorrect. For example, on Plan sheet 23-I the linear ft of impact for Impact 23-7 is listed as 390 ft. in the summary table, however, it is keyed out as 400 ft in the plan note.

PART 4: CONCLUSION

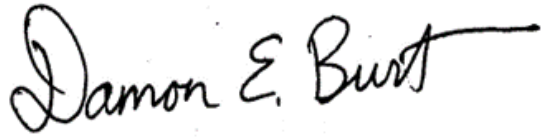
Summary of Concerns

- 1) Shallow groundwater and surface water from the site drains in the direction of the Ammonoosuc River. This indicates any potential contamination, including PFAS, in surface or shallow groundwater will flow to the Ammonoosuc River.
- 2) Millions of gallons of water, through precipitation, surface flow, and landfill activities, risks becoming contaminated and entering the Ammonoosuc River.
- 3) The on-site “stormwater management system has been designed to manage at least a 1-inch rain event” which will routinely fail allowing untreated water to enter the Ammonoosuc River.
- 4) Perfluoroalkyl and polyfluoroalkyl substances (PFAS), a potential contaminate of the landfill, can lead to reproductive issues, developmental delays in children, increased risk in cancers, reducing the body’s immune system response, interference with hormones, and increased cholesterol levels or risk of obesity.⁶
- 5) The applicant has not provided adequate proof that runoff from the landfill nor leachate will be free of PFAS, a forever chemical, shown to cause significant impact to wildlife and humans.
- 6) The GSL is proposed in close proximity to the Ammonoosuc River that provides drinking water to thousands, and flows into the Connecticut River that provides drinking water to millions.
- 7) The Ammonoosuc River corridor is home to at least 43 threatened or endangered wildlife and plant species.
- 8) Two rare natural communities (northern white cedar balsam fir swamp and northern white cedar seepage), two state endangered plant species (greater yellow lady’s slipper and marsh horsetail), the state threatened common loon, Canada lynx (federally threatened), northern long-eared bat (federally endangered), and monarch butterfly (federal candidate) have been documented within or near the project area and will be threatened by the proposed project.
- 9) The project proposes to impact a total of 501,967 square feet (11.52 acres) of wetlands and vernal pools (5) on site.
- 10) The project will directly impact five vernal pools, significantly impacting amphibian species.
- 11) The site was not fully wetland delineated or fully assessed in the wetland functional assessment, therefore wetland impacts have not been minimized and the Wetlands Functions and Values report is incomplete and inadequate.
- 12) Potential unpermitted future uses for the property should not prevent areas from being included in the alternative analyses.
- 13) The “core candidate land” should not be chosen until all wetlands have been assessed and delineated on site.
- 14) Stream bank impacts are absent from the wetlands permit application.

The GSL NHDES Wetlands Application remains incomplete and misleading. The site was not entirely wetland delineated and was not fully assessed in the Wetland Functions and Values assessment. Therefore, the project's wetland impacts cannot have been avoided, minimized, or adequately assessed in the alternatives analyses. The project poses significant impacts to wetlands (11.52 Acres), vernal pools (destruction of 5 vernal pools), and impact to wildlife (state and federal species and natural communities).

This project will degrade drinking water, groundwater and surrounding wetlands. Therefore, the Wetland Permit for GSL should be denied by the NHDES.

Sincerely,



Damon E. Burt
NH Certified Wetland Scientist
Certified Professional in Erosion and Sediment Control
Fraggle Rock Environmental, LLC
FREnvironmental@gmail.com

¹Ammonoosuc River Local Advisory Committee Corridor Management Plan, June 5, 2013

²The Ammonoosuc River, New Hampshire Department of Environmental Services Environmental Fact Sheet WD-R&L-20, 2019

³ Connecticut River. VT Department of Environmental Services.

<https://dec.vermont.gov/watershed/restoring/connecticut#:~:text=Decades%20of%20work%2C%20financial%20investment,410%20mile%20long%20natural%20treasure.>

⁴ U.S. Environmental Protection Agency. Effluent Guidelines Program Plan 15. EPA-821-R-22-004. January 2023.

⁵ Waste Site Remediation. New Hampshire PFAS Response. NHDES. <https://www.pfas.des.nh.gov/response-areas/waste-site-remediation>

⁶ 'Our Current Understanding of the Human Health and Environmental Risks of PFAS'. EPA. June 7, 2023.

<https://www.epa.gov/pfas/our-current-understanding-human-health-and-environmental-risks-pfas>

⁷Canada Lynx (*Lynx canadensis*). U.S. Fish and Wildlife Service – Maine Field Office Threatened and Endangered Species.

https://www.fws.gov/sites/default/files/documents/Canada%20lynx_fact%20sheet.pdf

⁸ Lemcke-Stampone, Mary D.; Wake, Cameron P.; and Burakowski, Elizabeth, "New Hampshire Climate Assessment 2021" (2022). The Sustainability Institute. 71. <https://scholars.unh.edu/sustainability/71>

APPENDIX INDEX:

A. Ammonoosuc River Local Advisory Committee Corridor Management Plan.....Page 14
B. NHDES The Ammonoosuc River Fact Sheet.....Page 114
C. EPA Effluent Guidelines Program Plan 15.....Page 117
D. Canada lynx US FWS Fact Sheet.....Page 185

CLF Exhibit 12



MEETING AGENDA
January 24, 2024
NHDES Office Building, 29 Hazen Drive, Concord
Rooms 112
10:00 AM

Granite State Landfill (GSL)

I. Introductions

II. Purpose

III. Topics

GSL: Applicant Discussion

DES: Application Review Schedule

DES: Comments on Completeness of Application

IV. Wrap Up

Notes:

NHDES kicked off the meeting with introductions. See attendance list.

NHDES outlined the purpose of the meeting was to go over some aspects of the GSL landfill application with respect to a completeness evaluation. NHDES noted that GSL requested the meeting. NHDES also provided a brief overview of the schedule for the permit application process and stated that an incomplete application letter and request for additional information will be issued by February 28, 2024, per the [written agreement](#) between NHDES and GSL. NHDES noted that, in accordance with Env-Sw 304.05(d), an applicant must submit all information required to complete an incomplete application within one year from the date the application is initially deemed incomplete by NHDES, that is, the date of the incomplete application letter (February 28, 2024), or the application will be deemed dormant and denied by effect of rule.

GSL then provided a status update regarding permits/approvals required from others including NHDOT and the EPA. GSL would like to start construction in 2025.

NHDES proceeded to provide comments and ask questions about the landfill application as follows:

- GSL confirmed that it has not yet sent notification with the background information to NHDOJ as required by Env-Sw 314.03 and Env-Sw 316

- NHDES identified that it is still missing some abutter notification return receipts. NHDES stated that if abutter notifications were not successful due to failed delivery by the U.S. postal service, then GSL should provide proof that the postal service made multiple delivery attempts.
- Landowner Agreement: NHDES stated that the provided landowner agreement was redacted to the point where NHDES was unable to evaluate certain requirements in the rules. An updated and unredacted (or less redacted) landowner agreement is required. NHDES must be able to see the dates, signatures, terms and conditions relating to easements and rights of way, access controls, post-closure care access, and access for other parties including state and federal regulators. NHDES noted that the agreement can be submitted under Confidential Business Information as described in Env-Sw 200.
- Utilities: A discussion was held on the utility requirements for the landfill. Specifically, a water supply well will be installed in the infrastructure area (see Figure GD-5); a septic system will be installed (instead of combining with leachate); overhead electrical utilities will be run to the infrastructure and footprint areas; and backup generators will be available.
- Traffic Impacts: Consistent with the Solid Waste Rules, traffic discussion focused on on-site traffic issues. CMA outlined how truck numbers for the proposed landfill were determined. CMA stated that the number of smaller trucks (i.e., local traffic vehicles) would be similar to those at the NCES landfill, however, the tonnage proposed for GSL would mean an increase in long distance haul trucks over the amount at NCES. Tonnage per truck varies, but long-haul trucks typically carry between 20 and 30 tons each. A discussion was held on what information was needed regarding on-site flow of traffic, traffic safety, and site security requirements related to the private road. The operating plan will need to address traffic management.
- Siting: Discussions held regarding plans for filling in wetlands if/as allowed by a dredge and fill permit. NHDES requested more information on GSL's plans to ensure conformance with subgrade and stability requirements in Env-Sw 805. NHDES personnel stated that there shouldn't be a presumption of groundwater separation; this will need to be demonstrated. NHDES also requested labeling data for Figures 4, 5 and 11 in the Site Report.
- Stormwater Infrastructure: The different types of stormwater ponds, i.e., infiltration, lined ponds, bioretention (aka rain garden), and the location of such ponds were discussed. NHDES expressed concerns regarding possible leachate releases and whether the proposed stormwater structures would meet the design criteria to mitigate the release of leachate spills required under Env-Sw 805.03(b). GSL stated the stormwater ponds proximate to wetlands are designed for stormwater infiltration into the groundwater and not as detention ponds.

NHDES also discussed the infrastructure leachate loadout area which, on Figure G&D-5, shows a catch basin and piping directing flow to a lined pond. GSL stated that this area will be redesigned to ensure the catch basin in the loadout area will be redirected to the leachate storage tank(s).

- Geotechnical Report: NHDES had several comments:
 - Appendices 2 and 3 are missing in the application. NHDES stated that we will need input parameters for stability analyses as well. (Appendix K from the Hydrogeological Report was also missing.)

- Subsurface exploration logs, including test pit logs, in or near the footprint are missing. Applicant stated this information should be in the hydrogeological report. NHDES stated that this information needs to be in the geotechnical report as well. Boring logs provided in the geotechnical report appear to be logs only related to the infrastructure area.
- The report did not contain bearing capacity analyses for the infrastructure area. CMA stated that this information will be submitted with final design plans.
- Leachate Management Design: NHDES stated that the application did not include dynamic stability calculations, i.e., equipment loading on the piping system; anchor trench pullout calculations; and geotextile design calculations to ensure that clogging will not be an issue. CMA stated that some of these calculations are not needed and/or that they will be provided with final design plans. NHDES verified the maximum liner slopes are designed at 3H:1V.

There was a discussion on the piping layout for landfill gas and leachate beneath the access road between the footprint and the infrastructure area. NHDES expressed concerns regarding crushing analyses for these systems. GSL also stated the landfill gas pipe will be insulated where it becomes shallow near the knockout location.

NHDES confirmed that one leachate collection tank would be installed at the infrastructure area to start and two 10,000 gallon contingency USTs will be installed closer to the landfill footprint. Discussion was held on the manner of backup pumps for the leachate collection system. The leachate generation calculations were discussed. Other than the standard analysis using the HELP model, snow melt was not considered in the leachate generation analyses. CMA also confirmed that calculations were performed for an initial 6 ft thick waste lift, a 96 ft thick midpoint waste lift, and a final waste thickness. NHDES stated it was not able to locate the 6 ft waste lift thickness calculation, but will check again.

NHDES also stated that, before operations start, written leachate disposal agreements will need to be included in a leachate management plan in the operating plan. The leachate management plan will also need to include the leachate pumpout and removal schedule. Discussions were held on the possibility of loading out leachate outside of the 6 am to 6 pm regular operations hours. NHDES stated that the applicant will have to make the demonstration required by Env-Sw 1105.08(b).

Additional discussion was then held on the applicant's leak detection plan. A review of the plans (see Figures LP-1 and D-1) commenced and discussions were held on how GSL would determine locations of possible leaks.

- Miscellaneous: Brief discussion held on the historical issue regarding asbestos containing materials (ACM) on the site. Question were brought up relating to the ACM location and disposal information. Applicant and NHDES stated that they both would try to obtain further information.

NHDES also brought up questions about the hot load area and fire response capabilities as well as snow removal management. GSL stated they would consider these areas further.

Meeting was adjourned at 12:00 noon.

Month

January

Year

2024

STATE OF NEW HAMPSHIRE VISITORS LOG TEMPLATE

Date: MM/DD/YYYY	Time In	Visitor First & Last Name (Print)	Agency / Company	Reason for Visit (Meeting, Interview, Testing, etc)	Visitor Signature	Time Out	Authorized by (Signature)
1/24/2024	9:41	MARY DRAUN	NHDES	meeting	<i>[Signature]</i>	12:05	
1/24/2024	10:00	Kevin Roy	Casella	meeting	<i>[Signature]</i>		
1/24/2024	10:00	Jef Goff	CASEWA	meeting	<i>[Signature]</i>		
1/24/2024	10:00	Rob Grillo	CMA Eng.	meeting	<i>[Signature]</i>		
1/24/2024	10:00	ADAM SANDAK	CMA ENGRS	MEETING	<i>[Signature]</i>		
1/24/2024	10:00	James O'Rourke	NHDES	meeting	<i>[Signature]</i>		
1/24/2024	10:00	Jaine Colby	NHDES	meeting	<i>[Signature]</i>		
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CLF Exhibit 13



April 19, 2024

Robert Scott, Commissioner
New Hampshire Department of Environmental Services
29 Hazen Drive
Concord, NH 03302-0095
robert.scott@des.nh.gov

Subject: Granite State Landfill (GSL) Development, NCES Landfill

We are writing to you on behalf of our constituents to address several pressing concerns related to environmental and public health matters in the North Country of New Hampshire regarding the proposed Granite State Landfill (GSL) project. **After careful consideration and engaging with the constituents of our districts, we find it our duty to express absolute opposition to this initiative.**

New Hampshire prides itself on its natural landscapes, pristine waterways, and rich biodiversity. The Forest Lake area, in particular, serves as a vital habitat for wildlife, a recreational haven for our residents, and a source of clean, fresh water. Introducing a landfill to this environment poses unacceptable risks that could tarnish not only the local ecosystem but also the health and well-being of our communities.

Additionally, common concerns and questions from our constituents include:

- The potential PFAS-contaminated runoff within the watershed of the Ammonoosuc River and adjacent Forest Lake State Park from the proposed site. The contamination risk poses serious threats to both the environment and public health, necessitating immediate remediation efforts.
- The costs associated with PFAS remediation at the NCES landfill are potentially placing a heavy burden on the towns of Bethlehem, Grafton County, and the state of New Hampshire. Will these communities qualify for funds from the Drinking Water and Groundwater Trust Fund? Will DES communicate with these communities how to receive funds?
- What kind of mitigation plans exist, including funding mechanisms, for the eventual contamination of Forest Lake and the Forest Lake State Park if the Granite State Landfill (GSL) is permitted? Will GSL be required to be bonded?
- The potential negative effects on North Country tourism and outdoor recreation due to ongoing NCES contamination and potential permitting of GSL are of great concern. The economic impacts, particularly on those who utilize Littleton's Riverwalk area for swimming, tubing, and fishing, must be carefully evaluated.

- The considerable increases in heavy-duty, trash-related vehicle traffic in the towns of Carroll, Whitefield, and Littleton must be addressed to minimize disruptions and ensure the safety of residents. Currently the intersection of Cottage Street and Main Street in Littleton is already congested. Increased traffic will only make this worse.
- What is the potential for ground and surface water contamination within the vicinity of the proposed GSL development, particularly concerning PFAS compounds? These areas are currently free of such contamination, and it is crucial to preserve areas to prevent further environmental degradation.

Beyond the environmental and quality-of-life concerns, there is an economic argument to be made against the landfill. The natural beauty of New Hampshire is one of our most valuable assets, attracting tourists from across the nation and generating significant revenue for our state. Compromising these landscapes with a landfill could diminish tourism appeal and, as a result, negatively impact local businesses that depend on tourism dollars.

While we understand the need for effective waste management solutions, these must be balanced with the imperative of preserving our environment for future generations. We urge you to deny the applications for the GSL project and consider alternative waste management strategies that have less environmental impact, such as increased recycling programs, the adoption of zero-waste initiatives, and investment in more sustainable forms of waste processing.

It is imperative that we take a stand now to avoid the long-term consequences that the Granite State Landfill project might impose. We owe it to our constituents, our communities, and our state to protect the resources that make New Hampshire the place we love and are proud to call home.

In conclusion, we agree with the reports submitted to DES by both Bethlehem and Dalton Conservation Commissions as well as the letters submitted by the Grafton and Coos County Commissioners and we urge you to take swift and decisive action to deny the wetlands permit application, NHDES File Number: 2023-03259, and the driveway permit application, NHDOT File Number 14656, for the GSL Landfill Projection.

Your attention to these pressing issues is greatly appreciated.

Sincerely,

Rep. Sean Durkin, Coos-1
Sean.durkin@leg.state.nh.us

Rep. Jim Tierney, Coos-1
James.tierney@leg.state.nh.us

Rep. Seth King, Coos-4
Seth.king@leg.state.nh.us

Rep. Linda Massimilla, Grafton-1
Linda.Massimilla@leg.state.nh.us

Rep. David Rochefort, Grafton-1

David.rochefort@leg.state.nh.us

Rep. Matthew Simon, Grafton-1
Matthew.simon@leg.state.nh.us

Rep. Jared Sullivan, Grafton-1
Jared.sullivan@leg.state.nh.us

Cc: Commissioner William Cass, New Hampshire Department of Transportation; United States Army Corps of Engineers

CLF Exhibit 14

Davidson, Tyler

From: Werner, Pam
Sent: Friday, June 14, 2024 2:23 PM
To: john.gay@casella.com
Cc: Davidson, Tyler; Colby, Jaime; Daun, Mary
Subject: NCES LF_LOD SWMB 24-006 for Leachate Deficiencies.pdf
Attachments: NCES LF_LOD SWMB 24-006 for Leachate Deficiencies.pdf

Good afternoon,

Please find the attached letter from Ms. Leah McKenna regarding the Leachate deficiencies for 581 Trudeau road. If you have any questions or cannot open the above attachment please feel free to call.

Thank you,

Pamela Werner

Administrative Supervisor

NH Department of Environmental Services

Tel. (603)271-2905



The State of New Hampshire
Department of Environmental Services

Robert R. Scott, Commissioner



June 14, 2024

CERTIFIED MAIL #7018 0680 0000 7433 2951
RETURN RECEIPT REQUESTED

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

LETTER OF DEFICIENCY
No. SWMB 24-006

**Subject: North Country Environmental Services, Inc. Landfill, 581 Trudeau Road, Bethlehem, NH
Permit No. DES-SW-SP-03-002**

Dear John Gay:

The records of the New Hampshire Department of Environmental Services, Waste Management Division, (NHDES) show that North Country Environmental Services, Inc. has been issued a solid waste permit for the subject facility (the Facility). As such, North Country Environmental Services, Inc. (the Permittee) is required to comply with RSA 149-M, NH Admin. Rules Env-Sw 100 – 2000, and the Facility's permit. The purpose of this letter is to notify North Country Environmental Services (NCES) of violations identified by NHDES and request that NCES take specific actions to address the non-compliance. The violations were identified through a review of the Facility's 2023 Third and Fourth Quarter Facility Reports, 2024 First Quarter Facility Report, and leachate management system records from April 1, 2024 through June 12, 2024, which were obtained from NCES during site visits on June 4 and June 12, 2024.

Based on NHDES' review of the above-referenced reports and documentation, violations related to leachate management, and leachate data collection and reporting have been identified. More specifically, violations relate to storage of leachate on the liner system in excess of 12 inches of head on the liner; failure to collect data as required when head exceeds 12 inches; flow rates in the secondary leachate system exceeding 25 gallons per acre per day (G/A/D) and, in some locations, exceeding 100 G/A/D; failure to control to the greatest extent practical the generation of leachate; and failure to report data, investigations, and incidents as required. Further details are provided below.

Please be aware that leachate storage on the liner in the depths and at the frequency suggested by the currently available data is a significant issue. When this occurs, it is NCES's responsibility to identify and resolve the issue as quickly as possible.

#1: Storage of Leachate on Liner System

Env-Sw 806.05(b) requires that, as part of a facility's operating plan, a leachate management plan is to be developed and implemented based on the criteria outlined in Env-Sw 806.05(b)(1) through (7). In accordance with Env-Sw 1105.04(a), a facility is to operate in compliance with RSA 149-M, all requirements in the solid waste rules, and the terms and conditions of the permit. In the permit modification issued October 9, 2020, Condition (16)(c) requires the Facility to be operated in accordance with the Facility's approved Operating Plan of record, and Condition (18)(a) identifies the approved Operating Plan of record, dated October 9, 2020 (Operating Plan). Section 5.7 of the Operating Plan specifies that, "Leachate is removed from the sump area to keep head on the liner less than 12-inches during routine operations, including up to the 25-year, 24-hour storm events."

www.des.nh.gov

29 Hazen Drive • PO Box 95 • Concord, NH 03302-0095
(603) 271-2925 • Fax: (603)271-2456 • TDD Access: Relay NH 1-800-735-2964

According to the Facility’s 2023 Third and Fourth Quarter Facility Reports (Q3-2023 and Q4-2023 Facility Reports) and 2024 First Quarter Report (Q1-2024 Facility Report), the Facility experienced a hydraulic head elevation on the primary liner greater than 12 inches at variable dates throughout the reporting periods as identified using leachate level measurements at Pump Stations #1, #2 and #3. Through a review of the Facility’s leachate management system records from April 1, 2024 through June 4, 2024, provided to NHDES on June 4, 2024, NHDES identified hydraulic head elevations greater than 12 inches at variable dates throughout April and May as well as on June 3 and 4, 2024 using leachate level measurements at Pump Stations #1, #2, and #3. On June 7, 2024, NHDES received an email from John “Joe” Gay of NCES providing the April and May 2024 sump levels taken from the NCES’ telemetry system at a more consistent time than those provided on June 4, 2024. NHDES observed differences in the data sets that averaged 1.58 to 2.79 inches more head on the liner system in the June 7 data set. For the purpose of the analyses presented herein, NHDES has used the data provided on June 7, 2024, except for:

- (a) June 3 through 12, 2024, for which it used the data obtained on June 4 and June 12, 2024; and
- (b) for Pump Station No. 3, December 4 through December 21, 2024, for which it used the handwritten logs provided by Bruce Grover, NCES, on June 12, 2024.

Based on email from Samuel Nicolai of NCES, received on June 6, 2024, leachate level measurements taken on June 5 and June 6, 2024 for Pump Stations #1 and #2 indicated less than 12 inches of head on the primary liner, and for Pump Station #3 indicated greater than 12 inches of head on the primary liner. A follow-up email from Samuel Nicolai on June 7, 2024 stated that NCES’ replaced the transducer in the Stage III sump (Pump Station #3), and reported head on the liner to be less than 12 inches at this location. Based on data provided by NCES during a follow-up site visit on June 12, 2024, head on the liner was less than 12 inches on June 10 through June 12, 2024.

Specific instances of hydraulic head elevation on the primary liner greater than 12 inches between July 1, 2023 and June 12, 2024 for the sump associated with Pump Station #1 are provided in Table 1 below.

Table 1 – Instances of Hydraulic Head Elevation >12 inches		
Sump Associated with Pump Station #1 (Stage IV, Phase II)		
Date / Date Range	Hydraulic Head on Liner (inches)	# of Instances
11/11/2023 – 11/15/2023	15.84 – 23.45	5
12/24/2023 – 12/25/2023	13.39 – 19.73	2
12/30/2023 – 2/2/2024	12.63 – 74.78	35
2/25/2024 – 2/27/2024	12.33 – 18.13	3
3/11/2024 – 3/26/2024	16.58 – 71.82	16
3/29/2024 – 3/31/2024	12.76 – 27.00	3
4/1/2024 – 5/1/2024	12.80 – 116.42	31
TOTAL		95

Specific instances of hydraulic head elevation on the primary liner greater than 12 inches between July 1, 2023 and June 12, 2024 for the sump associated with Pump Station #2 are provided in Table 2 below.

Table 2 – Instances of Hydraulic Head Elevation >12 inches		
Sump Associated with Pump Station #2 (Stage IV, Phase I)		
Date / Date Range	Hydraulic Head on Liner⁽¹⁾ (inches)	# of Instances
7/21/2023	45.16	1
8/19/2023 – 8/21/2023	49.07 – 66.71	3
10/23/2023	56.42	1
11/2/2023 – 11/17/2023	34.78 – 74.16	16
11/25/2024 – 11/28/2024	46.62 – 66.62	4
12/10/2023 – 12/12/2023	54.5 – 67.53	3
12/18/2023 – 12/21/2023	33.77 – 61.31	4
12/23/2023 – 12/30/2023	65.61 – 76.6	8
1/1/2024 – 1/4/2024	65.00 – 76.6	4
1/7/2024 – 1/10/2024	62.93 – 76.6	4
1/12/2024 – 1/18/2024	56.00 – 76.6	7
1/21/2024 – 2/1/2024	15.83 – 76.6	12
2/5/2024 – 2/8/2024	51.66 – 66.01	4
2/11/2024 – 2/14/2024	54.56 – 66.5	4
2/17/2024 – 2/28/2024	17.14 – 74.34	12
3/9/2024 – 3/23/2024	53.83 – 76.6	15
4/1/2024 – 4/2/2024	76.6, both dates	2
4/6/2024	76.6	1
4/8/2024 – 5/8/2024	31.39 – 76.6	31
5/15/2024	23.85	1
5/17/2024 – 5/22/2024	19.43 – 29.07	6
5/25/2024 – 5/31/2024	36.64 – 51.54	7
6/3/2024	32.86	1
TOTAL		151
(1) The transducer in the sump associated with Pump Station #2 appears to have a maximum reading of 100 inches, which equates to a maximum measurement of 76.6 inches of head on the liner system. Hydraulic head may exceed the maximum measurement of which the transducer is capable.		

Specific instances of hydraulic head elevation on the primary liner greater than 12 inches between July 1, 2023 and June 12, 2024 for the sump associated with Pump Station #3 are provided in Table 3 below.

Table 3 – Instances of Hydraulic Head Elevation >12 inches Sump Associated with Pump Station #3 (Stage III)		
Date / Date Range⁽¹⁾	Hydraulic Head on Liner⁽²⁾ (inches)	# of Instances
7/10/2023	19.86	1
7/21/2023	76	1
7/25/2023	17.12	1
7/27/2023	17.27	1
7/30/2023	12.87	1
8/1/2023	13.24	1
8/3/2023	15.32	1
8/9/2023	17.67	1
8/18/2023 – 8/21/2023	17.91 - 76	4
8/28/2023 – 9/1/2023	76, all dates	5
9/5/2023	76	1
9/8/2023	76	1
9/12/2023 – 9/14/2023	76, all dates	3
9/18/2023	76	1
9/20/2023	76	1
9/25/2023	76	1
9/28/2023	76	1
10/2/2023 – 10/4/2023	15.26 – 30.76	3
10/9/2023	65.96	1
12/4/2023 – 12/6/2023	111.8 – 113.5	3
12/11/2023 – 12/14/2023	113.5 – 113.7	4
12/19/2023 – 12/21/2023	115.0 – 115.1	3
12/22/2023 – 1/13/2024	48.22 - 76	23
1/16/2024 – 3/31/2024	28.72 - 76	76
4/1/2024 – 5/31/2024	59.15 - 76	61
6/3/2024 – 6/6/2024	45.62 - 62.44	4
TOTAL		204

(1) Measurements were not reported in the Q4-2023 report from October 11 through December 21, 2023. Data from December 4 through 21, 2023 were taken from handwritten logs provided by NCES on June 12, 2024.

(2) The transducer in the sump associated with Pump Station #3 appears to have a maximum reading of 100 inches, which equates to a maximum measurement of 76 inches of head on the liner system. Hydraulic head may exceed the maximum measurement of which the transducer is capable.

Based on the data presented in Tables 1 - 3 above, NHDES concludes there were 95 recorded instances where head on the liner exceeded 12 inches proximate to the sump in Stage IV Phase II; 151 recorded instances where head on the liner exceeded 12 inches proximate to the sump in Stage IV Phase I; and 204 recorded instances where head on the liner exceeded 12 inches proximate to the sump in Stage III, for a total of 450 total instances of head on the primary liner exceeding 12 inches. Precipitation data included in the quarterly reports indicate that there were no storm events that exceeded the 25-year/24-hour storm.

#2: Primary Liner - Leachate Data Collection and Reporting

Env-Sw 806.08 establishes requirements for inspecting, maintaining, and monitoring landfills which have not undergone closure, and further specifies the requirements for reporting this information to NHDES. Env-Sw 806.08(d) identifies the requirements for monitoring leachate management systems and recording the data in the facility operating records. Relative to leachate management systems, Env-Sw 806.08(d)(1)(a) requires the hydraulic head elevation on the liner to be measured at the low point of a cell, phase, or stage where leachate is collected and be recorded at least once per month. Further, Env-Sw 806.08(d)(1)(c) requires hydraulic head elevation on the liner to be measured daily when the hydraulic head is found to be greater than or equal to 12 inches, where daily means on each operating day. Additionally, Env-Sw 806.08(h)(2) requires that this data be included in the quarterly reports provided to NHDES pursuant to Env-Sw 806.08(g)(1).

The Q4-2023 Facility Report did not include any hydraulic head elevations for the primary sump in Stage III of the landfill for the month of November 2023. The report specified that, "The Stage III sump was temporarily disconnected from the leachate management system for construction of a new cell during the month of November; therefore, no data is available." Further, in the Q3-2023 and Q4-2023 Facility Reports, head on the liner exceeded 12 inches and was not recorded on the following operating day, as follows:

- At the sump associated with Pump Station #2, located in Stage IV Phase I:
 - On July 21, 2023 and was not recorded again until July 26, 2023, totaling 2 missed daily measurements; and
- At the sump associated with Pump Station #3, located in Stage III:
 - On September 5, 2023 and was not recorded again until September 7, 2023, totaling 1 missed daily measurement;
 - On September 14, 2023 and was not recorded again until September 18, 2023, totaling 1 missed daily measurement; and
 - On October 4, 2023 and was not recorded again until October 9, 2023, totaling 2 missed daily measurements.

Based on the data, NHDES concludes the Permittee failed to record 6 required measurements of head on the liner.

#3: Secondary Liner – Leachate Data Collection and Reporting

Env-Sw 806.08(d)(3)(a) requires the flow in the secondary leachate collection system(s) to be measured and recorded at least once per week.

The Q4-2023 Facility Report did not include secondary flow rates for Pump Station #3 from October 31, 2023 through December 22, 2023, equating to 6 weeks without secondary flow rate measurements.

Env-Sw 806.08(d)(4) requires the average flow in the secondary leachate collection system(s) occurring during the 30-day period preceding the last measurement to be calculated, recorded, and reported to NHDES in accordance with reporting thresholds identified in Env-Sw 806.08(k). Env-Sw 806.08(k)(1) requires average secondary leachate collection system flow rates less than or equal to 25 gallons per tributary acre per day to be reported to NHDES in the quarterly reports provided pursuant to 806.08(g).

The Q3-2023 and Q4-2023 Facility Reports and the Q1-2024 Facility Report did not include the 30-day averages for secondary leachate flow rates for any of the Facility's secondary leachate collection system pumps, as required by Env-Sw 806.08(d)(4). As a result, average secondary leachate collection system flow rates less than or equal to 25 gallons per tributary acre per day (G/A/D) were not provided in the quarterly reports, as required by Env-Sw 806.08(k)(1).

Env-Sw 806.08(k)(2) requires the average secondary leachate collection system flow rates occurring over a 30-day period which exceed 25 G/A/D to be reported to NHDES within one week of identifying the rate. Additionally, Env-Sw 806.08(k)(3) requires the permittee to file an investigation report with NHDES for average secondary leachate collection system flow rates occurring over a 30-day period which exceed 100 G/A/D. For both requirements, no notification or report is required for flows above these thresholds which NHDES agrees is the result of the dewatering of the drainage layer following construction.

Though NCES did not provide the 30-day average for secondary leachate flows at any of the Facility's pump stations in the Q3-2023, Q4-2023, and Q1-2024 Facility Reports, NHDES reviewed the flow rate data in the reports and the Facility's leachate management system records from April 1, 2024 through June 12, 2024, as provided by NCES on June 4 and June 12, 2024, and identified 30-day average secondary leachate collection system flow rates that exceeded 25 G/A/D at Pump Stations #1, #2, #3 and #4. More specifically, 30-day average flow rates in the secondary leachate collection system exceeded 25 G/A/D between July 30, 2023 and June 12, 2024, as detailed in Table 4 below.

Pump Station	Date / Date Range	30-day Average Secondary Leachate Flow Rate(s)⁽¹⁾ (G/A/D)	# of Instances
1	1/24/2024 – 1/26/2024	25.4 - 27	3
	1/29/2024 – 2/22/2024	25.1 - 28	25
	3/26/2024 – 3/29/2024	26 - 28	4
	3/31/2024	26	1
	4/9/2024 – 6/12/2024 ⁽²⁾	26 - 43	69
2	8/31/2023 – 9/30/2023	25.3 - 30	41

Table 4 – Instances of 30-day Average Secondary Leachate Flow Rates > 25 G/A/D (continued)			
Pump Station	Date / Date Range	30-day Average Secondary Leachate Flow Rate(s)⁽¹⁾ (G/A/D)	# of Instances
2	10/1/2023 – 12/31/2023	25.3 - 141	92
	1/1/2024 – 3/31/2024	86 - 234	91
	4/1/2024 – 6/4/2024	109 - 362	65
3 ⁽³⁾	12/26/2023 – 12/31/2023	30 - 50	6
	1/1/2024 – 2/15/2024	28 - 54	46
	3/12/2024 – 3/31/2024	26 - 54	20
	4/1/2024 – 5/27/2024 ⁽⁴⁾	26 - 80	57
4	4/14/2024 – 5/14/2024	28 - 45	30
TOTAL			550
(1) As calculated by NHDES SWMB using data from the Facility's Q3-2023 and Q4-2023 Facility Reports, Q1-2024 Facility Report, and leachate management system records from April 1, 2024 through June 4, 2024, provided to NHDES on June 7, 2024. (2) Data for June 1 through June 12, 2024 is from data provided to NHDES on June 4 and June 12, 2024 by NCES. (3) Measurements were not reported from October 11 through December 21, 2023. (4) Flow rates are based on data submitted by NCES on June 7, 2024. Data provided to NHDES on June 4 and June 12, 2024 indicate that secondary flow rates in Pump Station No. 3 exceeded 25 G/A/D from March 28 through June 11, 2024.			

Additionally, NHDES identified 30-day average secondary leachate collection system flow rates that exceeded 100 G/A/D at Pump Station #2 between July 30, 2023 and June 12, 2024, as detailed in Table 5.

Table 5 – Instances of 30-day Average Secondary Leachate Flow Rates > 100 G/A/D			
Pump Station	Date / Date Range	30-day Average Secondary Leachate Flow Rate(s)⁽¹⁾ (G/A/D)	# of Instances
2	11/14/2023 – 11/20/2023	102 - 110	7
	12/20/2023 – 12/31/2023	116 - 141	12
	1/4/2024 – 3/31/2024	113 - 234	88
	4/1/2024 – 6/12/2024 ⁽²⁾	109 – 362	69
TOTAL			176
(1) As calculated by NHDES SWMB using data from the Facility's Q3-2023 and Q4-2023 Facility Reports, Q1-2024 Facility Report, and leachate management system records from April 1, 2024 through June 4, 2024, provided to NHDES on June 4, 2024. (2) Flow rates for June 1 through June 12, 2024 are from data provided to NHDES on June 4 and June 12, 2024 by NCES.			

As of the date of this letter, NHDES has not received the notifications required by Env-Sw 806.08(k)(2), nor the investigation report required by Env-Sw 806.08(k)(3), for the 726 exceedances detailed above. NHDES acknowledges that NCES provided written notifications of secondary leachate collection system flow rates which exceeded 25 G/A/D on a weekly average basis, as discussed further in #5 below.

#4: Failure to Control the Production of Leachate to the Greatest Extent Practicable

Env-Sw 1005.01(d)(7) requires the Permittee to operate and maintain the Facility in a manner that controls the production of leachate to the greatest extent practicable.

Based on a review of the Q3-2023 and Q4-2023 Facility Reports and the Q1-2024 Facility Report, leachate removed by pump from the liner systems totaled:

- *4,940,850 gallons in Q3-2023;*
- *4,083,367 gallons in Q4-2023; and*
- *5,184,026 gallons in Q1-2024.*

Prior to Q3-2023, between the third quarter in 2021 and the second quarter in 2023, leachate removal rates have ranged between 1,978,348 gallons and 2,829,879 gallons. Paired with the preceding information regarding head exceedances on the liner system and 30-day average secondary flow rates, the Permittee has not controlled to the greatest extent practical the generation of leachate as required by Env-Sw 1005.01(d)(7).

#5: Incident Reporting

Env-Sw 1005.09(a) requires the permittee to report all incidents at the facility which involve an imminent and substantial risk to human health, safety, or the environment, or which constitute a violation of the solid waste rules or the facility permit. In accordance with Env-Sw 1005.09(b), the permittee is required to verbally notify NHDES of an incident as soon as practicable, and Env-Sw 1005.09(c) requires the permittee to submit a written report of the incident to NHDES within 5 working days of becoming aware of the incident.

On 450 occasions, as detailed in Violation #1 above, the Facility experienced hydraulic head elevations on the primary liner that were greater than 12 inches at Pump Stations #1 through #3. The hydraulic head elevations are in violation of Section 5.7 of the Operating Plan, and thus the Facility's permit and the Solid Waste Rules. NCES did not provide the required verbal or written notification of the incidents.

Additionally, the Facility experienced 30-day average secondary leachate collection system flow rates that exceeded 25 G/A/D as described above, on 550 instances, that required notification to NHDES in accordance with Env-Sw 806.08(k)(2). NHDES acknowledges that NCES provided written notification of secondary leachate collection system flow rates which exceeded 25 G/A/D on November 6, November 29, and December 19, 2023, as well as June 12, 2024. However, the average flow rates reported in these notifications were weekly (i.e., 7 day) averages, rather than the 30-day averages required by Env-Sw 806.08(d)(4). Therefore, NCES failed to properly notify NHDES of the 550 instances in which 30-day average secondary leachate collection system flow rates exceeded 25 G/A/D at the Facility, as required by Env-Sw 806.08(k)(2).

NHDES believes that the deficiencies may be corrected by taking the following actions:

1. **No later than June 21, 2024**, in accordance with Env-Sw 1005.09(c), submit a written incident report for each of the following violations:
 - a. One incident report for hydraulic head elevations on the primary liner greater than 12 inches for the period beginning July 1, 2023 through June 12, 2024 (Violation #1).
 - b. One incident report for average secondary leachate collection system flow rates occurring during the 30-day operating period preceding the last measurement which exceeded 25 G/A/D for the period beginning July 1, 2023 through June 1, 2024. (Violation #3).
2. **Beginning July 1, 2024 and continuing until the 30-day average secondary leachate collection system flow rates are below 25 G/A/D for all pump stations at the Facility**, provide updates to NHDES once every two weeks on the flow and 30-day average flows in the secondary leachate collection system at the Facility, as well as any changes or updates to Facility operations implemented to reduce secondary leachate flow rates.
3. **No later than July 15, 2024**, submit an analysis of the cause(s) of the excessive leachate head buildup on the primary liner system, which includes:
 - a. The amount of leachate generated per day from the primary leachate collection system, and the capabilities of the facility to manage, store, and dispose of such leachate;
 - b. Proposed operational and maintenance changes, as well as schedule adjustments, to ensure that the quantity of leachate generated at the Facility is limited by properly planning the sequenced development of the facility, properly managing stormwater infiltration and inflow, and minimizing the active area of the landfill in accordance with Env-Sw 806.05(b)(2).
4. **No later than July 15, 2024**, perform the investigation required by Env-Sw 806.09(e) for secondary leachate collection system flow rates exceeding 100 G/A/D and submit the proposed response action plan required by Env-Sw 806.09(f).
5. **No later than July 15, 2024**, identify, implement, and submit a report on improvements in stormwater diversion and other measures taken to control to the greatest extent practical the generation of leachate.

The information requested in this letter should be sent to NHDES and/or addressed as follows:

Tyler J. Davidson, Enforcement Program Coordinator
New Hampshire Department of Environmental Services
Solid Waste Management Bureau
PO Box 95
Concord, NH 03302-0095
swmbenforcement@des.nh.gov

A variety of resources are available to assist in complying with the Solid Waste Rules. An incident reporting form is available on the NHDES [website](#). If any of the actions above require a permit

modification, forms are available on the NHDES [website](#). For further questions regarding engineering or permitting, contact Mary Daun, P.E., by phone at (603) 271-8573, or by email at mary.f.daun@des.nh.gov.

A copy of the New Hampshire Solid Waste Rules, [Env-Sw 100 et seq.](#) is available on the NHDES website or by contacting the Public Information Center at (603) 271-2975. Statutes are available via the [State of NH](#) website.

Failure to comply with this letter may result in a formal administrative action in accordance with the department's Compliance Assurance Response Policy. Potential enforcement actions include issuance of an administrative order or referral to the New Hampshire Department of Justice (NHDOJ) for enforcement. If you have any questions concerning this matter, please contact Tyler Davidson by phone at (603) 271-0674 or by email at tyler.j.davidson@des.nh.gov.

Sincerely,



Leah McKenna, Administrator
Solid Waste Management Bureau

ec: NHDES Legal Unit
Tyler Davidson, Solid Waste Management Bureau, NHDES
Jaime Colby, P.E., Solid Waste Management Bureau, NHDES
Mary Daun, P.E., Solid Waste Management Bureau, NHDES

CLF Exhibit 15

Davidson, Tyler

From: DES: Solid Waste Management Bureau Enforcement
Sent: Monday, June 24, 2024 9:51 AM
To: Kimberly Crosby
Cc: Kevin Roy; Joe Gay; Colby, Jaime
Subject: RE: NCES Incident Reports

Good morning Ms. Crosby,

This has been received and noted – thank you for the clarification.

Kind regards,

Tyler J. Davidson, Enforcement Program Coordinator

NH Dept. of Environmental Services
Solid Waste Management Bureau
29 Hazen Drive / P.O. Box 95
Concord, NH 03302-0095
Email: tyler.j.davidson@des.nh.gov / Phone: (603) 271-0674

From: Kimberly Crosby <Kimberly.Crosby@casella.com>
Sent: Friday, June 21, 2024 4:23 PM
To: DES: Solid Waste Management Bureau Enforcement <swmbenforcement@des.nh.gov>
Cc: Kevin Roy <Kevin.Roy@casella.com>; Joe Gay <John.Gay@casella.com>; Colby, Jaime <Jaime.M.Colby@des.nh.gov>
Subject: RE: NCES Incident Reports

EXTERNAL: Do not open attachments or click on links unless you recognize and trust the sender.

Good Afternoon (again) Mr. Davidson,

Please reference the attached sumps diagrams as the most recent version, the version sent earlier today had an incorrect/conflicting date on it. Sorry about that.

Thanks you,

Kim Crosby, CES

Director of Environmental Compliance

Permits, Compliance & Engineering

408 East Montpelier Road, Montpelier, VT 05602
c. 802-585-5442
e. kimberly.crosby@casella.com • w. casella.com

CASELLA

RECYCLING • SOLUTIONS • ORGANICS • COLLECTION • ENERGY • LANDFILLS

From: Kimberly Crosby <Kimberly.Crosby@casella.com>

Sent: Friday, June 21, 2024 1:45 PM

To: swmbenforcement@des.nh.gov

Cc: Kimberly Crosby <Kimberly.Crosby@casella.com>; Kevin Roy <Kevin.Roy@casella.com>; Joe Gay <John.Gay@casella.com>; Jaime.M.Colby@des.nh.gov

Subject: NCES Incident Reports

Good Afternoon Mr. Davidson,

Attached are incident reports 1(a) & 1(b) for North Country Environmental Services, Inc.. Please feel free to reach out with any questions.

Thank you,

Kim Crosby, CES

Director of Environmental Compliance

Permits, Compliance & Engineering

408 East Montpelier Road, Montpelier, VT 05602

c. 802-585-5442

e. kimberly.crosby@casella.com • w. casella.com

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Incident Report Form for Solid Waste Management Facilities – Permitted and Permit-Exempt Facilities



Waste Management Division, SWMB

RSA/Rule: [Env-Sw 1005.09\(c\)](#)

Instructions: Complete form in its entirety, utilizing additional pages, as necessary. Maps and diagrams are recommended for clarity. A written report is due within 5 working days of the incident / situation date. Form meets the requirements of Env-Sw 1005.09(c) for “written report” if completed in its entirety and submitted in accordance with submission timeframe requirements.

Section I – General Information		
1. Date & Time of Incident / Situation:	2. Date of Report Submission to NHDES:	3. Name of Person Preparing Report:
7/1/2023-6/12/2024 (periodic incidents)	6/21/24	Kim Crosby
4. Facility Name:	5a. Affected Area Within Facility	5b. Physical Address, Town / City:
North Country Environmental Services	North Country Environmental Services	581 Trudeau Road Bethlehem, NH 03574
6. NHDES SW Permit Number:	7. Permittee Name on Permit:	8. Mailing Address:
DES-SW-SP-03-002	North Country Environmental Services	P.O.Box 9 Bethlehem, NH 03574

Section II – Parties Involved in Incident / Situation			
9. Persons:			
	Name:	Title:	Affiliation:
a.	Joe Gay	Engineer	NCES
b.	Kevin Roy	General Manager	NCES
c.	Kim Crosby	Director of Compliance	Casella
d.			
e.			
f.			

Section III – Details
<p>10. The quantity and types of wastes and material(s) involved in the incident or situation and in the clean-up activities:</p> <p>For the period beginning July 1, 2023, through June 12, 2024, leachate at times exceeded the regulatory threshold on the primary liner system.</p>

11. Measures employed to contain releases caused by the incident or situation:

No releases to the environment occurred.

12. Assessment of actual or potential hazards to the environment, safety and human health related to the incident:

No potential hazards to the environment, safety and human health occurred as a result of the incidents. The accumulation of leachate on the primary liner creates a highly attenuated hazard (meaning potential for harm) to the environment in the sense that increased hydraulic head can increase the chance of a leak through the liner if there is an imperfection in the liner. The hazard is very remote, however, because not only would there have to be an imperfection that escaped detection upon liner installation and inspection and sufficient head to force leachate through the imperfection, but any such leachate would be contained by the secondary liner where there is typically no hydraulic head. Increased flows in the secondary system from construction-related infiltration of stormwater or dewatering would also dilute contaminants in any such leachate beyond non-detectable levels after which it would be removed from the secondary liner system. In short, the redundancies incorporated in the design of modern landfills by rule have successfully eliminated releases to the environment from the liner systems for all practical purposes.

13. Measures the permittee has or intends to apply to reduce, eliminate, and prevent a recurrence of the incident or situation:

NCES has and is in the process of taking the following measures to reduce, eliminate and prevent recurrence:

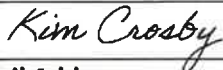
1. NCES is submitting a Type II permit modification to NHDES on June 21, 2024 to extend the Facility's operating hours for the ability to haul leachate beyond the current permitted hours.
2. NCES has obtained disposal capacity at additional wastewater treatment facilities.
3. NCES has contracted with additional haulers to haul more leachate off-site.
4. NCES has evaluated the level of the transducers in all of the sumps and has re-calculated the actual depth of leachate on the liner that occurred during this time period using the known transducer levels (see attached drawings prepared by SHA).
5. NCES has requested a meeting with NHDES to discuss how levels are being reported at the site and to establish appropriate reporting of such levels.
6. NCES will report exceedances using the NHDES Incident Report Form within the time prescribed by rule.
7. As observed by DES staff on June 11, 2024, NCES deployed temporary scrim in the new cell on April 22, 2024 to minimize stormwater infiltration into the leachate collection system until a fluff layer was completed (in progress). In addition, NCES has placed additional intermediate cover, hydroseeded areas, and incorporated additional stormwater controls to minimize stormwater infiltration into the landfill. NCES is in the process of capping approximately six acres which will reduce the amount of leachate generated at the site (ongoing).
8. NCES will provide additional training on leachate management systems, operations and the requirements of the rules to the Operations Team (to be completed by early July 2024).

In addition to the action items listed above, site wide calibration of sump levels and telemetry adjustments are being made and cleaning of the leachate collection systems will be completed by the end of June.


14. If measures not completed by time of report submission, expected date of completion:	See above
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Section IV – Signatures

15a. Person Preparing Report:

Name:	Title / Affiliation:	Signature:
Kim Crosby	Director of Compliance	
Phone Number:	Email Address:	
802-585-5442	kimberly.crosby@casella.com	

15b. Permittee:

Name:	Title / Affiliation:	Signature:
Kevin Roy	General Manager/Casella	
Phone Number:	Email Address:	
603-361-6477	Kevin.Roy@Casella.com	

Form Submittal Instructions:

Submit the completed report in PDF via email to SolidWasteInfo@des.nh.gov.



Incident Report Form for Solid Waste Management Facilities – Permitted and Permit-Exempt Facilities



Waste Management Division, SWMB

RSA/Rule: [Env-Sw 1005.09\(c\)](#)

Instructions: Complete form in its entirety, utilizing additional pages, as necessary. Maps and diagrams are recommended for clarity. A written report is due within 5 working days of the incident / situation date. Form meets the requirements of Env-Sw 1005.09(c) for “written report” if completed in its entirety and submitted in accordance with submission timeframe requirements.

Section I – General Information		
1. Date & Time of Incident / Situation:	2. Date of Report Submission to NHDES:	3. Name of Person Preparing Report:
8/31/2023-6/12/2024 (periodic incidents)	6/21/24	Kim Crosby
4. Facility Name:	5a. Affected Area Within Facility	5b. Physical Address, Town / City:
North Country Environmental Services	North Country Environmental Services	581 Trudeau Road. Bethlehem, NH 03574
6. NHDES SW Permit Number:	7. Permittee Name on Permit:	8. Mailing Address:
DES-SW-SP-03-002	North Country Environmental Services	P.O.Box 9 Bethlehem, NH 03574


Section II – Parties Involved in Incident / Situation			
9. Persons:			
	Name:	Title:	Affiliation:
a.	Joe Gay	Engineer	NCES
b.	Kevin Roy	General Manager	NCES
c.	Kim Crosby	Director of Compliance	Casella
d.			
e.			
f.			

Section III – Details
10. The quantity and types of wastes and material(s) involved in the incident or situation and in the clean-up activities:
For the period beginning 8/31/23 through 6/12/24 at pump stations 1, 2, 3 & 4, flow rates in the secondary collection system at times exceeded 25 g/a/d over a rolling 30-day average.

11. Measures employed to contain releases caused by the incident or situation:	
Flow rates in the secondary leachate collection system did not result in a release to the environment.	
12. Assessment of actual or potential hazards to the environment, safety and human health related to the incident:	
No hazards to the environment, safety or human health occurred.	
13. Measures the permittee has or intends to apply to reduce, eliminate, and prevent a recurrence of the incident or situation:	
<p>NCES has implemented operational improvements and capping identified in a separate Incident Report on leachate levels in the landfill's primary liner system. These measures will substantially diminish the production of leachate in the primary system. When leachate storage reaches capacity, the priority is removing leachate from the storage tank and primary liner, and pumping of liquid in the secondary system is deferred. The operational and capping initiatives NCES is implementing, together with the emergency approval of extended operating hours for leachate removal, has resulted in the removal of accumulated leachate and enabled NCES to resume its ordinary pumping of liquid in the secondary system, preventing flow rates above permissible levels. NHDES approval of NCES's June 21, 2024, application to amend its operating plan to extend operating hours for leachate load-out and transportation will enable NCES to maintain regular pumping of liquid in the secondary system, thereby preventing a recurrence of the incident.</p>	
14. If measures not completed by time of report submission, expected date of completion:	6/21/2024

Section IV – Signatures		
15a. Person Preparing Report:		
Name:	Title / Affiliation:	Signature:
Kim Crosby	Director of Compliance	<i>Kim Crosby</i>
Phone Number:	Email Address:	
802-585-5442	kimberly.crosby@casella.com	

15b. Permittee:		
Name:	Title / Affiliation:	Signature:

Kevin Roy	General Manager/Casella	
Phone Number:	Email Address:	
603-361-6477	Kevin.Roy@Casella.com	

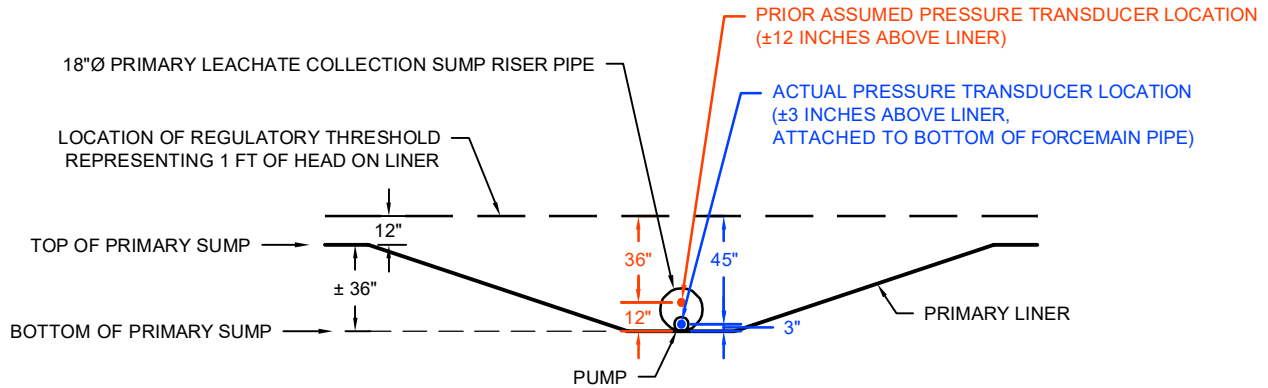
Form Submittal Instructions:

Submit the completed report in PDF via email to SolidWasteInfo@des.nh.gov.

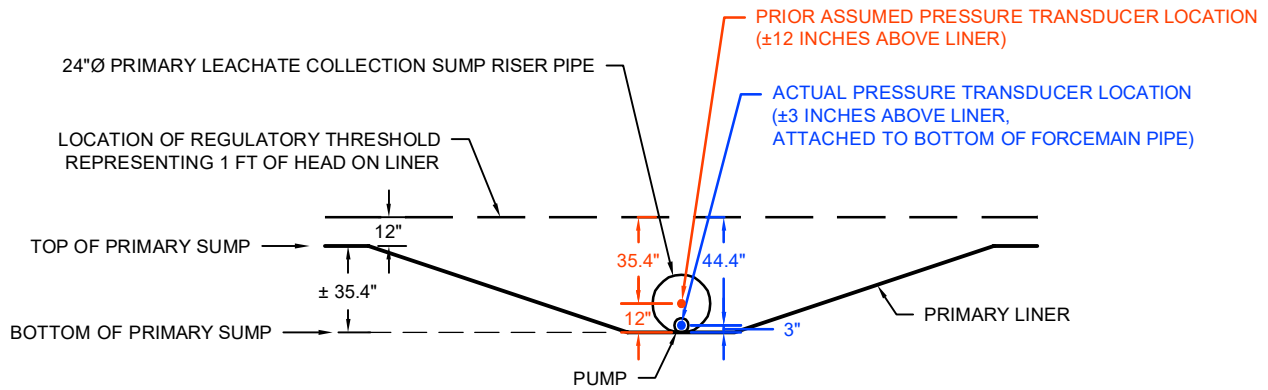
©2024 SANBORN HEAD & ASSOCIATES, INC.

NOTE:

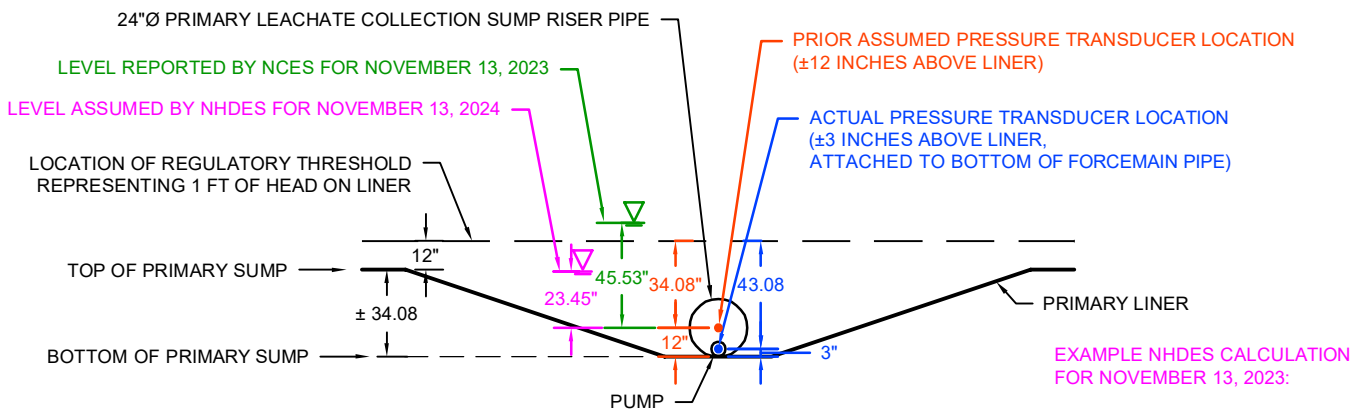
1. THE CROSS SECTIONS SHOWN ARE INTENDED TO BE DIAGRAMMATIC.
2. THE SUMP DEPTHS SHOWN WERE CALCULATED BASED ON RECORD DRAWING INFORMATION FOR EACH SUMP.



STAGE III PRIMARY SUMP SCHEMATIC



STAGE IV PHASE I PRIMARY SUMP SCHEMATIC



STAGE IV PHASE II PRIMARY SUMP SCHEMATIC

NCES LANDFILL
BETHLEHEM, NEW HAMPSHIRE

NCES LANDFILL
SUMP DIAGRAMS



NOT TO SCALE

DRAWN BY:RLC

FILE NO. 2493.25

DATE: JUNE 2024

CHECKED BY:BJB

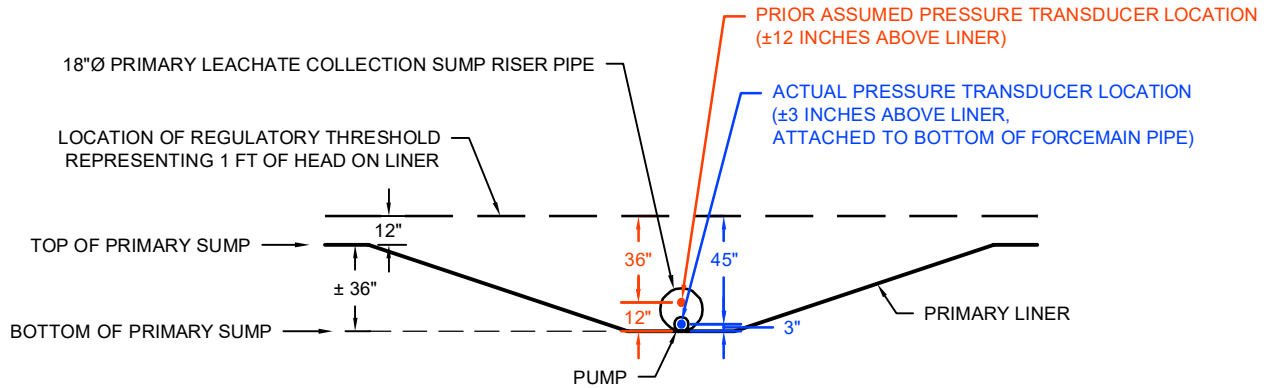
FIGURE NO. 1

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LAYOUT: 8.5X11
C:\B FILE: SHA Standard.ctb
PLOT DATE: 6-21-24

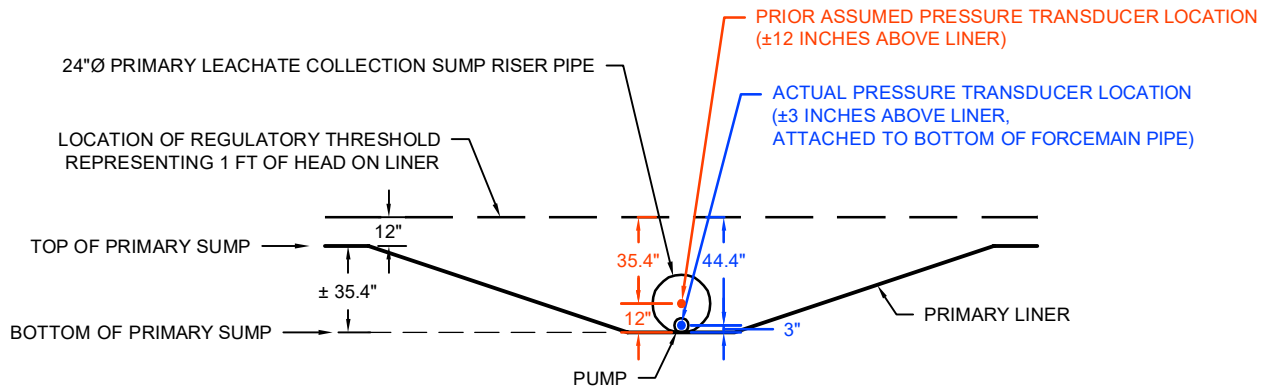
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NOTE:

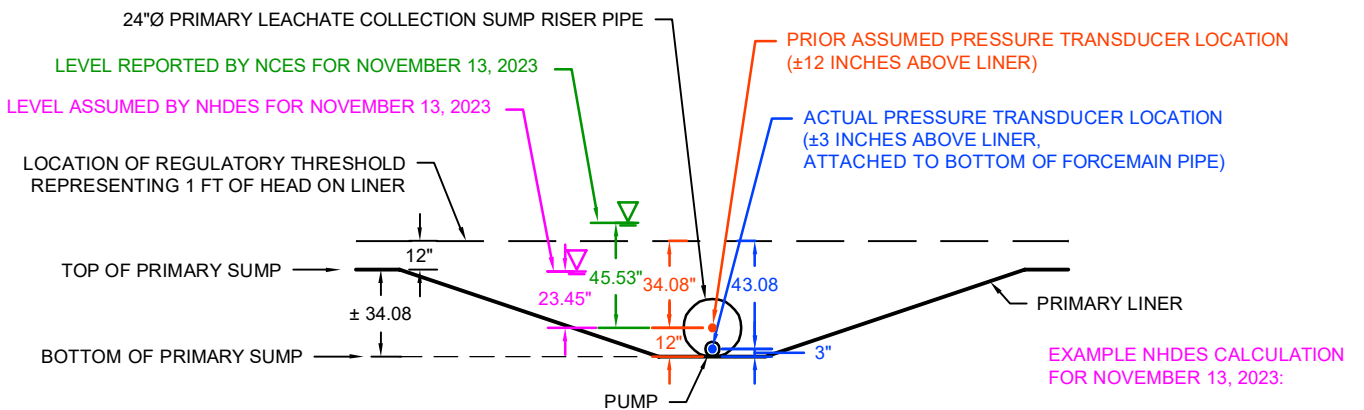
1. THE CROSS SECTIONS SHOWN ARE INTENDED TO BE DIAGRAMMATIC.
2. THE SUMP DEPTHS SHOWN WERE CALCULATED BASED ON RECORD DRAWING INFORMATION FOR EACH SUMP.



STAGE III PRIMARY SUMP SCHEMATIC



STAGE IV PHASE I PRIMARY SUMP SCHEMATIC



STAGE IV PHASE II PRIMARY SUMP SCHEMATIC

NCES LANDFILL
BETHLEHEM, NEW HAMPSHIRE

NCES LANDFILL
SUMP DIAGRAMS



NOT TO SCALE

DRAWN BY:RLC

FILE NO. 2493.25

DATE: JUNE 2024

CHECKED BY:BJB

FIGURE NO. 1

FILE: P:\14100s\174-08\Graphics Files\CAD\Work\Sumps\Sump Diagrams.dwg
LAYOUT: 8.5X11
C:\B FILE: SHA Standard.cbr
PLOT DATE: 6-21-24