November 21, 2023

Mr. Michael Schlosser, P.E., Michael J. Schlosser@des.nh.gov
P.O. Box 95
Concord, NH 03303-0095

RE: Alteration of Terrain Permit Application DES #231113-224
Granite State Landfill, LLC, Granite State Landfill, CMA #1101

Dear Mr. Schlosser:

The Bethlehem Conservation Commission would like to offer some general comments about the Granite State Landfill (GSL) Alteration of Terrain Permit Application. We also reviewed the Application for Standard Permit for Solid Waste Landfill. Although this proposed landfill is going to be sited in Dalton, Bethlehem is a neighboring town and shares some of the same natural resources, namely an aquifer and the Ammonoosuc River. Douglas Drive, which is the proposed entrance to GSL, is in Bethlehem. It would be a shame if this project is approved and the terrain is altered to the extent of 6,400,000 sq.ft. for the many reasons below:

No need for extra trash capacity:

This project is unnecessary. The state has no need for extra trash capacity until **at least 2034**, and who knows what the situation will be then? Capacity could – and would -- be available even longer if the state were serious about reducing waste, which it is supposed to be doing.

NH has a waste reduction goal:

Opening another landfill will do nothing to help the state meet its current waste reduction goal of 25% by 2030 and DES should not be a party to that. New Hampshire already failed to meet its previous recycling goal of 40% by the year 2000, which was set by the NH legislature in 1990.

Douglas Drive:

We have concerns about the impact that altering Douglas Drive will have. There are references to "improving" Douglas Drive as it as the entrance to the proposed landfill. But that also means widening it to 32 feet. It will also change the configuration of the road so the impact is broader than the word "improving" would imply.

No public benefit:

The fact that extra capacity is not needed has been confirmed by the NH Waste Management Council (WMC). In Nov. of 2022 it reconfirmed its decision that a Stage VI expansion at Bethlehem's NCES landfill lacked a substantial public benefit as required by state law. If a Stage VI expansion in Bethlehem lacks public benefit, how is it possible that altering terrain is necessary for a landfill in neighboring Dalton?

The WMC ruling -- and the fact that this is still being deliberated in the NH Supreme Court – makes it difficult to understand how the GSL project could be allowed to move forward. How can an Alteration of Terrain permit be granted when this situation is unsettled? The project is described as altering 6,400 thousand sq.ft. of land and adding additional impervious surface. Are we going to see trees cut, ground plowed up and wetlands needlessly disturbed only to learn that this project is stopped by the courts or another department at NH DES? That is not a far-fetched scenario. It happened recently in Bethlehem with the Adair condominium project with its Standard

Dredge and Fill Wetlands Permit Application (RSA 482-A) NHDES File Number: 2022-00592 Subject Property: 80 Guider Ln, Bethlehem, Tax Map #403, Lot #27. Damage was done and then the project never completed.

Specifically, on April 26, 2022, NHDES conducted a site inspection at this project. Among other findings, the inspector observed potential impacts to jurisdictional areas caused by recent forestry activities: "In particular, wetlands next to the western condo development area and the stream with adjacent wetlands that flows northwest through the property were subject to heavy dredging (rutting) and filling (slash)." So, wetlands were damaged by trees that were cut down to provide views from houses that were never built when the project halted for economic reasons.

Direct immediate detriment to the community

Rural communities are on the front lines of **environmental justice** battles, bearing the burden of pollution generated in wealthy urbanized locations (Ashwood and MacTavish, 2016). It is worth noting that these impacts extend beyond the solid waste destined for rural landfills. We also need to account for associated the transportation impacts. Increased truck traffic brings increased exposure to air and noise pollution. These exposures have real and measurable impacts on human health included increased cardiovascular disease, respiratory illness and mortality (Truax at al 2012). Truck traffic increases risk of fatal collisions for people (National Safety Council, 2021) and wildlife (Skroch and St.Hailare, 2021) (**See "References" at the end**.)

A new landfill siting bill in the NH House:

Given the scope of this unnecessary project, it seems prudent to wait until new House Bill 602 makes its way through the legislature. That bill could make a tremendous change in how and where new landfills are sited. This bill would try to better protect water quality from contaminants that might leak from a landfill. Part of that bill would set a standard that would site landfills on solid soil instead of more porous soil where groundwater can flow more quickly toward waterbodies such as the Ammonoosuc River.

Wrong site for a landfill:

Concerns over porous soil on the site is one reason this is the wrong site for a landfill because that type of soil could allow any leaks to more quickly reach the Ammonoosuc than soil types at other locations. Also, the site is uphill of the Ammonoosuc – a designated river in the NH Rivers Management and Protection Program -- and over an aquifer. It's bad enough that Casella's landfill in Bethlehem is in close proximity to the Ammonoosuc and over the same aquifer. **(Aquifer map attached)** Two branches of the Alder Brook run a course that has them empty into the Ammonoosuc so that any disruptions and impacts, runoff, could affect the river

Speaking of leaks:

Although the Casella operation likes to refer to the Bethlehem landfill as state-of-the-art, in May of 2021, 154,000 gallons of leachate was allowed to spill out of the landfill over a weekend because of a mechanical failure. This operating deficiency resulted in NH DES Letter of Deficiency No. WMD LOD 21-023.

To quote from that letter: "On May 3, 2021, NCES reported a leachate spill or release from the facility's leachate storage units located outside the waste deposition area. Leachate was reportedly released through an open conduit from UST A to a valve box that is no longer in service (Valve Box 401). From this valve box, leachate reportedly traveled through an open conduit westward into soil, and overtopped the valve box to flow over the ground surface to the adjacent stormwater pond (Stormwater Pond No. 4). …"

The letter continued: "…Further, NCES verbally reported to NHDES during our meeting on May 3, 2021 that it had been having problems with proper operation of the wireless communication system for several weeks. Further, the "leachate management system audit" report received by NHDES on June 10, 2021, which focused on an audit of the supervisory control and data acquisition (SCADA) system, identifie that multiple interlocks and other controls that would prevent spills are not present."

A similar event could happen at the GSL and could contaminate the Ammonoosuc.

Vernal pools, streams and rivers: First, five vernal pools were located on the property.

Second, we have attached a letter dated **October 1, 2020** from the Ammonoosuc River Local Advisory Committee to DES, which was written about an earlier permit application for the same landfill, which Casella withdrew. It notes that Alder Brook has Highest Ranked Wildlife Habitat in NH in the 2020 Wildlife Action Plan.

Although written in 2020, it continues to apply today, particularly what was written about the Ammonoosuc River: "… the Ammonoosuc River having been selected for two upstream landfill sites (existing landfill in Bethlehem and proposed site in Dalton) makes it seem like the responsibility has unduly been put on one river to carry the landfill burden, which is unfair to the downstream communities."

Wetlands Impacts:

According to the plans, the project will require filling of 10 acres of wetlands, which could possibly have an impact on contiguous wetlands in the existing wetlands complex

As we said, several members also reviewed the Application for Standard Permit for Solid Waste Landfill which states: "The locations of the landfill footprint, access roads, and infrastructure were sited such that impacts to wetlands and waterbodies are minimized." **The 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 <u>the majority</u> 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's (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 focusses 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.

Considering all the above, we, the Bethlehem Conservation Commission, believe the proposed impacts to essential water sources and wildlife habitats are unnecessary and harmful. Given the proximity to and predicted temporary and permanent disturbance of water and wetlands at this site, we are of the view that this is the entirely wrong site for a landfill, and that no such large-scale alteration of terrain as proposed should take place here.

Thank you for listening to our concerns.

Sincerely,

Cheryl Jensen, member, Bethlehem Conservation Commission (bethlehemnhconservation@gmail.com)

Town of Bethlehem
P.O. Box 189
Bethlehem, NH 03574

Cc: Veronica Morris, Select Board Chair and Conservation Commission liaison

Attachments:

Bethlehem Aquifer Map

Letter of October 1, 2020 from the Ammonoosuc River Local Advisory Committee to NHDES regarding NH DES File #2020-02239

References:

Ashwood, L. & MacTavish, K. (2016). *Tyranny of the majority and rural environmental injustice*. Journal of Rural Studies, 47, 271-277

National Safety Council. (2021) Road users- lareg trucks. https://injuryfacts.nsc.org/motor-vehicle/road-users/large-trucks/

Truax, C., Cota, M., Rodriguez, E., Huffer, E. Marquez, J., (2012). *Driving harm: health and community impacts of living near truck corridors*. The Impact Project Policy Brief.

Skroch, M., and St. Hilaire, T. (2021) *Wildlife-vehicle collisions are a big and costly problem and congress can help*. PEW Charitable Trust.

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 theScientific Evidence (Final Report). U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-14/475F, 2015."