



RESPONSE TO PUBLIC COMMENTS
Application for Landfill Expansion – Stage VI
North Country Environmental Services, Inc.
581 Trudeau Road, Bethlehem, NH
Permit No. DES-SW-SP-03-002
October 9, 2020

TABLE OF CONTENTS

I. INTRODUCTION	3
II. MATTERS OF POLICY, PROCEDURE AND AUTHORITY	4
1. Approving the Application is Contrary to RSA 149-M and NHDES Mission	4
2. Expansion is Contrary to Local Zoning, Approvals and Agreements.....	5
3. Are decisions to grant permits influenced by NHDES revenue sources?.....	6
4. Out-of-State Waste	7
5. Environmental Equity Policy.....	7
6. Effect of Ongoing Clean Water Act Lawsuit	7
7. Attending NHDES internal meetings	8
8. Time to Reform and Redirect NH’s Solid Waste Management Practices	8
9. Public Hearing and Comment Process	9
10. NHDES is not staffed and budgeted to provide oversight	10
III. NUISANCE AND QUALITY OF LIFE IMPACTS	10
1. The landfill creates conditions that adversely impact quality of life	10
2. Landfills are a blight on the landscape.....	12
IV. APPLICANT PERFORMANCE HISTORY, RELIABILITY, AND INTEGRITY	12
V. FACILITY NEED AND PUBLIC BENEFIT.....	14
1. Capacity Need Considerations	14
2. Economic Considerations	15
VI. GROUNDWATER, SURFACE WATER, AND AIR QUALITY PROTECTION.....	15
1. Leachate	15
2. Groundwater Quality	16
3. Surface Water Quality	17
4. Air Quality.....	18

Response to Public Comments

Application for Landfill Expansion – Stage VI

North Country Environmental Services, Inc., Bethlehem, NH

Permit No. DES-SW-SP-03-002

October 9, 2020

Page 2 of 24

VII. CURRENT COMPLIANCE CONSIDERATIONS AND OPERATING CONDITIONS	19
VIII. APPLICATION ADEQUACY AND DESIGN REVIEW CONSIDERATIONS	21
1. Comparison to Previous Application for Stage VI	21
2. Property Line Setback	22
3. Liner integrity and Waiver Request.....	22
4. Truck count and economic viability	24
5. Landfill height	24

Response to Public Comments

Application for Landfill Expansion – Stage VI

North Country Environmental Services, Inc., Bethlehem, NH

Permit No. DES-SW-SP-03-002

October 9, 2020

Page 3 of 24

I. Introduction

The New Hampshire Department of Environmental Services (NHDES) has prepared this document in response to public comment and hearing testimony received for an application by North Country Environmental Services, Inc. (NCES) to modify solid waste facility permit #DES-SW-SP-03-002 to authorize an expansion of the NCES landfill located on Trudeau Road in Bethlehem, NH. The expansion, referred to as Stage VI, has a design capacity of about 1.24 million cubic yards, with a projected life expectancy of 5.3 years (through December 31, 2026). The expansion is lateral to the south and east, and also overlies portions of the existing landfill while maintaining the maximum permitted height of the existing facility. The expansion application includes an application for waiver of certain design requirements in the New Hampshire Solid Waste Rules, Env-Sw 100 et seq. (Rules) relative to the leak detection and location systems previously built in Stage I, which will service the portion of Stage VI that vertically overlays Stage I.

NHDES reviewed and processed the application in accordance with Chapter Env-Sw 300 of the Rules and, on this date, issued conditional approval. As part of the review process, NHDES solicited written public comment during the time period of July 19, 2020 through September 18, 2020 and also held a public hearing for receipt of oral and written testimony on August 25, 2020. NHDES received comments expressing both support of and opposition to the application. Commenters raised questions and expressed a number of specific concerns about the application, the applicant, the permitting requirements and procedures, ongoing and proposed facility operations, site conditions, planning and policy, and various other issues. Some commenters referred to their testimony made in December 2019 on the preceding application for Stage VI that was withdrawn. Some commenters also expressed opposition to a proposal by NCES to locate another landfill in Dalton, NH. As of this writing, NHDES has not received a solid waste facility permit application for a landfill in Dalton and the comments received in opposition to that proposal are not explicitly included in this response to comments. A number of commenters also raised other issues outside of the scope of this regulatory process. We included those comments in this document to help inform the reader as to the scope of the process.

Many comments focused on similar topics or areas of concern. For purposes of organization and readability, NHDES has summarized and grouped the comments by general topic of concern, as shown in the Table of Contents. In the following pages, the concerns of commenters are shown in underlined italic type, followed by NHDES' responses, shown in regular type.

Documents related to the application and the application decision, including this response to public comments, are available via NHDES' OneStop online database at

Response to Public Comments

Application for Landfill Expansion – Stage VI

North Country Environmental Services, Inc., Bethlehem, NH

Permit No. DES-SW-SP-03-002

October 9, 2020

Page 4 of 24

<https://www.des.nh.gov/onestop/index.htm>, or by making a file review request.¹ A recording of the public hearing is also available by making a file review request or via the NHDES YouTube channel at <https://www.youtube.com/user/NHDES>

NHDES extends its appreciation to all of the commenters for participating in this review process. While NHDES acknowledges that not all readers will concur with the responses or with the decision to approve this application, it is important to note that the public review process enables decisions to be thoroughly vetted and, in the case of this application, has helped to identify permit conditions necessary to address some key concerns. Additionally, this public review process demonstrated the public’s growing concern about NH’s current static dependency on landfilling, which NHDES shares. NHDES agrees with the many commenters who urged that NH pivot away from landfilling toward more sustainable waste management solutions, consistent with the hierarchy outlined in RSA 149-M, and that NHDES take on a stronger leadership role in helping NH communities make changes in that regard. However, as a practical matter, the desired pivot will take time to accomplish and some commenters made the point that NH communities and other NH waste generators that currently depend on the NCES landfill need time to plan for its closure and redirect their solid waste management practices. While resource deficiencies within and increasing demands on the NHDES solid waste management program over the last two decades, have limited the capacity of the program to provide robust technical and planning assistance to municipalities, NHDES is in the process of reorganizing and restaffing the solid waste program, which includes establishing a Materials Management, Education, and Planning (MMEP) Section. Near term, NHDES intends to update the state’s solid waste management plan, and establishment of the MMEP Section will enable NHDES to better plan, assist and raise awareness among NH municipalities, other waste generators, and the solid waste industry, about the pressing need to actively engage in building a more diverse and integrated system for managing solid waste in the state. The permit issued to NCES today includes conditions to assist in that regard.

II. Matters of Policy, Procedure and Authority

1. Approving the Application is Contrary to RSA 149-M and NHDES Mission

Commenters expressed their general concern that landfills threaten human health and the environment, are not a sustainable method of waste management, and that granting a permit to expand the landfill is contrary to the stated purpose of RSA 149-M:1, which is “to protect human health, to preserve the natural environment, and to conserve precious and dwindling natural resources through the proper and integrated management of solid waste,” and NHDES’ mission, which is “to help sustain a high quality of life for all citizens by protecting and restoring the environment and public health in New Hampshire.”

¹ To make a file review request, please call (603) 271-2919, email filereview@des.nh.gov, or complete the online Right-to-Know request form linked here: <https://www.des.nh.gov/organization/commissioner/pip/index.htm>.

Response to Public Comments

Application for Landfill Expansion – Stage VI

North Country Environmental Services, Inc., Bethlehem, NH

Permit No. DES-SW-SP-03-002

October 9, 2020

Page 5 of 24

NHDES does not agree that approval to expand a landfill is intrinsically contrary to the stated purpose of RSA 149-M and NHDES' mission statement. Landfills, although the least preferred method of managing solid waste, are still a necessary component of the integrated solid waste management system endorsed by the General Court in RSA 149-M:3. While NHDES is very concerned about the lack of progress that the waste management industry in New Hampshire has made toward providing more sustainable waste management methods, NHDES must work within the full framework of RSA 149-M to achieve the stated purpose of the Act. In so doing, under the authority of RSA 149-M, NHDES has adopted the New Hampshire Code of Administrative Rules Env-Sw 100 et seq. pertaining to solid waste management (Solid Waste Rules). The Solid Waste Rules establish standards for all facility types, including landfills, which are intended to be consistent with achieving the purpose of RSA 149-M and the agency's mission statement. The standards pertaining to landfills in NH meet or exceed federal requirements so that, to the extent that landfills remain a necessary component of the integrated system for managing solid waste in New Hampshire, there are protections in place for health, safety, and the environment. In making its decision to approve expansion of the NCES Landfill, NHDES assessed whether the expansion met the requirements of the Solid Waste Rules. NHDES concluded that the expansion could be constructed, operated, and closed in accordance with the requirements and, therefore, the agency does not have grounds for denying the application for expansion. However, NHDES also acknowledges that there is much work to be done to move New Hampshire toward more sustainable waste management solutions endorsed by the General Court in RSA 149-M:3, including augmenting our planning and education functions, and engaging with the public and industry to renew the state Solid Waste Plan.

2. Expansion is Contrary to Local Zoning, Approvals and Agreements

Several commenters expressed the belief that a state permit for expansion of the facility should not be approved because expanding the landfill is contrary to local approval, local agreements with NCES, local zoning, and local sentiment. Commenters expressed concerns regarding the proximity of the landfill footprint to the local zoning District V boundary. One commenter asserted that if the berm is located outside District V, it is a violation of local zoning and past agreements with the Town of Bethlehem. Commenters also expressed concern that the continued operation of a landfill in Bethlehem is a source of discord in the community. One commenter requested NHDES to not issue a decision on the application without first obtaining confirmation that the expansion complies with all local requirements and has local approval.

While NHDES does have authority, pursuant to Env-Sw 305.03(b)(4), to deny an application when the applicant has not demonstrated its legal right to occupy the property, local and state approvals for solid waste management facilities are generally separate actions that can and often do proceed on separate timelines. Toward that end, the Solid Waste Rule Env-SW

Response to Public Comments

Application for Landfill Expansion – Stage VI

North Country Environmental Services, Inc., Bethlehem, NH

Permit No. DES-SW-SP-03-002

October 9, 2020

Page 6 of 24

305.04(b) and RSA 149-M:9,VII provide that a permit issued by NHDES shall not eliminate or otherwise affect the applicant's obligation to obtain local approvals. In addition, NHDES is obligated by law to process and make decisions on permit applications within the time limits established by RSA 149-M,VIII, which currently are those set forth in Env-Sw 304 and Env-Sw 305. Not doing so, without the consent of the applicant, has the undesired result of the application being deemed approved pursuant to RSA 541-A:29-a. Thus, NHDES processes solid waste facility applications according to the applicable statutes and rules, and does so independently of the status of local approvals.

With regard to local approval for Stage VI, NHDES is aware of the 2012 agreement and a subsequent agreement in 2018 between NCES and the Town of Bethlehem, which place limits on the physical location and height of the landfill, among other matters. During review of the application and in response to public comment, NHDES considered whether the agreements provide a basis to question the applicant's legal right to occupy the property for the purposes stated in the application, and therefore potential grounds for application denial pursuant to Env-Sw 305.03(b)(4). However, because the 2012 agreement allows landfills in District V and the 2018 agreement allows NCES to construct certain landfill infrastructure outside of District V, NHDES found no apparent reason to believe NCES is without a legal right to occupy the property for the purpose proposed in the application. Therefore, NHDES determined it had no authority to deny the application on that basis. Even so, as explained above, the approval issued for the Stage VI expansion does not eliminate or otherwise affect the obligation of NCES to obtain any required local approvals, nor does it affect the Town's authority to enforce the local requirements.

3. Are decisions to grant permits influenced by NHDES revenue sources?

One commenter noted that RSA 149-M:6,XI authorizes NHDES to collect a fee of \$1 per ton waste disposed of in NH from out-of-state sources. The commenter asked how much revenue NHDES collects from this surcharge and requested to know whether the revenue influences NHDES decisions to grant permits

A surcharge on out-of-state waste was established approximately thirty (30) years ago. The surcharge was collected by NHDES for a brief period of time, before its collection was discontinued due to concerns about the law's constitutionality. Accordingly, no revenues associated with this law are now collected. Regardless, NHDES evaluates all permit applications based upon applicable law and administrative rules, without regard to revenue implications. NHDES' review and assessment of the application is documented in the Application Review Summary issued on the date of the decision.

Response to Public Comments

Application for Landfill Expansion – Stage VI

North Country Environmental Services, Inc., Bethlehem, NH

Permit No. DES-SW-SP-03-002

October 9, 2020

Page 7 of 24

4. Out-of-State Waste

Commenters objected to NH being the disposal site for waste sourced from out of state. Commenters noted that the amount of out of state waste disposed of in NH is alarming.

The United States Constitution and interstate commerce law prohibit states from preventing out-of-state generators from having access to disposal services in any other state. While NHDES cannot specifically prohibit importation of waste not generated in New Hampshire, NHDES did include a condition in the permit for expansion requiring that disposal capacity be made available to New Hampshire generators (see permit Condition (27)(c)).

In addition, NCES' public benefit statement indicates that approximately 70% of the waste that will be disposed in Stage VI will be New Hampshire-sourced waste. All waste received at the facility, regardless of source, is required to conform with the list of approved wastes specified in Condition (19)(a) of the permit.

5. Environmental Equity Policy

Commenters stated that NHDES must scrutinize the application under the agency's Environmental Equity Policy.

NHDES used its authority provided under RSA 149-M to ensure fair and equitable treatment of all New Hampshire citizens in evaluating the application and deciding to approve the application with conditions. As required by Env-Sw 304.08, *Public Hearing* and RSA 149-M:11,IV(a), NHDES specifically considered the concerns of citizens living near the landfill in evaluating whether the expansion meets the criteria for providing a public benefit. NHDES made substantive efforts to assure that citizens affected by the decision were aware of the opportunity to express their concerns and submit comments for NHDES to consider, regardless of their socioeconomic group. These efforts are detailed in Section II. 9. of this document.

NHDES received testimony from over 100 commenters, including citizens, municipalities, and advocacy groups. Some commenters live near the landfill and some commenters rely on the landfill for waste disposal services. NHDES believes that the outreach was successful, and considered all of these comments in its determination.

6. Effect of Ongoing Clean Water Act Lawsuit

Commenters reminded NHDES that a lawsuit by the Conservation Law Foundation (CLF) et al. for alleged violation of the Clean Water Act related to a groundwater seep located proximate to the landfill is not yet resolved, and asked whether or how NHDES will take this into consideration in making its decision on this application. Commenters opined that NHDES should not decide on the application until after the court rules on the lawsuit, particularly in light of the fact that RSA

Response to Public Comments

Application for Landfill Expansion – Stage VI

North Country Environmental Services, Inc., Bethlehem, NH

Permit No. DES-SW-SP-03-002

October 9, 2020

Page 8 of 24

149-M:12 provides that NHDES can approve a facility only if it determines the facility will comply with federal and state water pollution statutes, regulations, and rules.

NHDES is obligated to issue a decision on solid waste permit applications in accordance with the time limits identified in RSA 149-M and Env-Sw 304. Further, if NHDES fails to issue a decision in accordance with the time limits imposed, the application may be deemed approved by effect of law pursuant to RSA 541-A:29-a. There is no provision in the law to stay the decision pending resolution of lawsuits.

Based upon its review of the application and information available, NHDES has determined that construction and operation of the proposed expansion will comply with applicable state and federal water pollution laws, regulations, and rules. The requirements of RSA 149-M:12,1(c) are further addressed by a condition of the approval pursuant to Env-Sw 305.04(b), which states in part that the approval "...shall not affect the applicant's obligation to ...comply with all other applicable federal, [or] state...laws ...pertaining to the approved activity."

NHDES is aware of the on-going federal Clean Water Act lawsuit, which may take considerable time to resolve. If, upon conclusion of the lawsuit, it is determined that construction or operation of the landfill is resulting in violation of any applicable state or federal laws or rules, NHDES would, within its authority, require the facility to undertake appropriate remedial measures and correct the violation(s).

7. Attending NHDES internal meetings

Citing RSA 91-A (Right-to-Know), a commenter asked if they could be present at deliberative internal meetings regarding a decision on the application, to listen to internal discussions about the application for expansion.

NHDES is not a "public body" as defined in RSA 91-A:1-a, VI (d), for the purposes of RSA 91-A:2's open meeting requirement. However, NHDES is a "public agency" pursuant to RSA 91-A:4 and fulfills RSA 91-A's open government/transparency requirements by providing the opportunity for the public to review available records pursuant to RSA 91-A:4. NHDES' review and assessment of the application is documented in the Application Review Summary issued on the date of the decision.

8. Time to Reform and Redirect NH's Solid Waste Management Practices

Commenters stated that the decision on this application is a precedent-setting decision and pivotal for reforming solid waste management decision-making. Commenters urged adoption of regulations to incentivize waste reduction and diversion to reduce reliance on landfills. Commenters reminded NHDES that waste reduction is part of its mandate.

Response to Public Comments

Application for Landfill Expansion – Stage VI

North Country Environmental Services, Inc., Bethlehem, NH

Permit No. DES-SW-SP-03-002

October 9, 2020

Page 9 of 24

Landfills, while less preferred than other waste management methods, are allowable and part of an integrated system in New Hampshire's goals for managing solid waste set forth in RSA 149-M:2, *Waste Reduction Goal*.

NHDES did consider solid waste diversion goals and New Hampshire's waste management hierarchy in RSA 149-M:3, *Achieving Goals; Hierarchy*, in evaluating whether to approve this permit modification. As noted in Section V.2. of this document and Attachment A of the Application Review Summary, NHDES has included permit conditions targeted at advancing future progress toward waste diversion goals.

Commenters provided excellent suggestions for advancing solid waste reduction, recycling, and diversion goals, most of which would require legislation or administrative rule changes, and are beyond the scope of this permit decision. NHDES would support many of these suggested changes, and anticipates working on such efforts in the future as we augment our solid waste management program, as described in the Introduction above.

9. Public Hearing and Comment Process

Commenters expressed concern about the public notification, and public hearing and comment process, specifically noting that phone only attendees could not comment and that the applicant submitted prerecorded testimony. One commenter reasoned that because NHDES often incorporates conditions in its permits, the agency should issue a draft permit for public review and comment. The commenter also requested that specific conditions be included in the permit. Some commenters requested to be notified of future proceedings regarding solid waste management facility applications.

NHDES and NCES made notifications as required in accordance with RSA 149-M and the Rules, as documented in the Application Review Summary issued concurrently with the decision. Further, as documented in the Application Review Summary, NHDES held the public hearing as required by statute and rule, and in accordance with the Governor's executive and emergency orders related to the ongoing COVID-19 pandemic. With regard to phone-only attendees, NHDES made notification as soon as it was able once it became clear that the GoToWebinar platform used for the public hearing could not accommodate delivery of testimony by phone only. To supplement potential internet and phone connectivity issues, NHDES ensured a physical location was available in the host community from which to deliver testimony. NHDES did not receive comments or complaints that individuals were unable to deliver testimony at the hearing or using the written submittal process.

With regard to NCES' presentation during the hearing, due to technical and connectivity concerns, NHDES requested that NCES pre-record its presentation on the application, which presentation is a standard part of public hearings for solid waste management applications.

Response to Public Comments

Application for Landfill Expansion – Stage VI

North Country Environmental Services, Inc., Bethlehem, NH

Permit No. DES-SW-SP-03-002

October 9, 2020

Page 10 of 24

Relative to the request for issuance of a draft permit for public review and comment, NHDES notes that some environmental permitting programs (e.g., Title V Operating Permits administered by NHDES' Air Resources Division) have administrative rules that specify that a draft permit be prepared before the public hearing. However, neither RSA 149-M, nor its implementing rules provide for such a process. As noted above, the public hearing and comment period for this permit application were conducted as required by statute and rule.

With regard to requests to be added to a mailing list for all future proceedings related to solid waste facilities and/or applications, NHDES does not maintain a standing list of parties interested in such. However, interested parties can join NHDES' email lists to receive certain publications and press releases issued by NHDES. To subscribe, please go to <https://www.des.nh.gov/organization/commissioner/pip/newsletters/index.htm>. Further, interested parties can follow NHDES on social media for additional updates and information on certain activities at NHDES. Interested parties can also monitor and access facility records through OneStop that are routinely posted for public access.

10. NHDES is not staffed and budgeted to provide oversight

A commenter expressed concern that NHDES is not sufficiently budgeted and staffed to provide oversight of the facility. A commenter asserted that NHDES and other pertinent agencies need to be properly funded for regular, vigilant oversight of waste disposal facilities.

NHDES is required to make decisions on applications in accordance with the applicable statute and rules. As such, NHDES staffing and budgetary constraints are not considered during the review and decision-making process. However, NHDES does make every effort, within its limitations, to provide effective and efficient regulatory oversight of facilities. Further, NHDES relies on licensed professionals (e.g., engineers, geologists, surveyors) and certified solid waste operators to supplement its regulatory oversight of solid waste facilities. NHDES uses this multipronged approach of education, assistance of qualified professionals, and compliance audits by NHDES staff to provide regulatory oversight.

III. Nuisance and Quality of Life Impacts

1. The landfill creates conditions that adversely impact quality of life

Commenters expressed concern about noise, odors, vectors (e.g., wildlife), dust, litter, and other nuisance conditions related to facility construction and operations that impact their quality of life, local tourism, and the environment.

The Solid Waste Rules include multiple specific requirements directed at controlling nuisance conditions, in addition to the requirement in Env-Sw 1005.01, *General Operating Requirements*,

Response to Public Comments

Application for Landfill Expansion – Stage VI

North Country Environmental Services, Inc., Bethlehem, NH

Permit No. DES-SW-SP-03-002

October 9, 2020

Page 11 of 24

that all solid waste facilities be operated and maintained in a manner that controls to the greatest extent practicable: dust, litter, insects, odors, vectors, noise, and nuisances, among other conditions. Relative to landfills, the use of daily cover is specifically required in Env-Sw 806.03, *Landfill Cover During Operations*, to minimize the dispersal of offensive odors and deter vectors and litter, among other undesirable conditions.

The approved operating plan of record also includes a number of provisions related to controlling nuisance conditions. NCES has identified in its operating plan the following measures to minimize nuisance conditions, including the potential for windblown litter: limiting the size of the active working face; applying daily cover to active fill areas, using portable (litter catch) and permanent fences, and employing litter pickers to cleanup windblown litter. In addition, waste hauling trucks are required to have their loads tarped or be delivered in enclosed containers/truck bodies. The Application proposed no substantial changes to the methods used to control nuisance conditions.

NHDES understands that excessive or repetitive nuisance conditions can be disruptive and requests that concerns be reported to NCES directly as they are best positioned to respond to concerns in a timely manner. NHDES is concerned with the number of complaints it continues to receive regarding the facility, and will continue to work with all active landfill operators to improve nuisance control methods and performance of those methods.

Specific to this facility and approval, NHDES has placed new conditions in the permit relative to the control of nuisance conditions during both construction and operations.

Commenters expressed concerns about NCES' complaint response procedures, and the accuracy or effectiveness of its responses.

NCES implemented new complaint response procedures pursuant to its revised operating plan approved by permit modification on December 28, 2018. NHDES is aware of some discrepancies/errors in odor complaint reports submitted by NCES, and NCES has modified those reports when requested to do so by NHDES. NHDES will continue to monitor and evaluate the effectiveness of NCES' response procedures. Further, as discussed above, NHDES has added conditions to the permit to encourage NCES to adopt a continuous improvement approach to the control of nuisance conditions.

Commenters expressed concern about traffic associated with the facility.

Off-site traffic management, including the use of local roads and state highways, is under the purview of others, and is not within the scope of NHDES' permitting authority. However, NHDES notes that on page 9 of the Design Report included in the Application, the applicant provides a description of truck traffic due to current operations. NCES reported in the

Response to Public Comments

Application for Landfill Expansion – Stage VI

North Country Environmental Services, Inc., Bethlehem, NH

Permit No. DES-SW-SP-03-002

October 9, 2020

Page 12 of 24

Application that landfill operations had an average truck count of 79 trucks per day over a roughly 2-year period, and asserted that no changes to truck traffic volume or routing is anticipated.

Further, the Application identified that seasonal variations in truck traffic will occur, which is evident in the graph entitled, “Daily Truck Counts at NCES Landfill from 1/1/2016 to 8/1/2019” on page 10 of the Design Report. The truck count graph shows that truck counts at the facility over the specified time period ranged between less than 20 and more than 120 trucks per day. Trucks in the count primarily included 18-wheel tractor-trailers, packer trucks, and roll-off container trucks, but did not include smaller infrequent pickup trucks.

NHDES notes that the amount of truck traffic will likely decrease due to the decreased airspace usage rate permitted.

2. Landfills are a blight on the landscape

Commenters expressed concern about the visual impacts of the landfill, including its height above treeline and its potential to obstruct views.

While NHDES acknowledges that landfills are not attractive in the landscape, RSA 149-M and the Solid Waste Rules do not provide explicit standards regarding visual impacts from landfills. Therefore, the application requirements for expanding the landfill do not include an assessment of visual impacts and NHDES did not evaluate visual impacts during the application review process. However, NHDES notes that landscaping features must be incorporated into the design of a solid waste landfill to minimize impacts to surrounding properties and a vegetative buffer zone must be established and maintained to minimize impacts to abutting properties.

Further, the Solid Waste Rules do not explicitly restrict the height of a landfill, nor do they include height criteria relative to tree line. Accordingly, NHDES did not consider height above tree line in its review of the application. NHDES notes that the applicant did not request, and NHDES did not approve, an increase in landfill height.

IV. Applicant Performance History, Reliability, and Integrity

Multiple commenters expressed their belief that the applicant lacks the reliability, expertise, integrity, and competence required to operate a compliant solid waste facility. Others expressed their belief in the opposite. Several commenters requested NHDES to consider the background history of NCES, and provided a list of approximately 100 alleged violations, levied fines, or litigation matters spanning over 25 years across multiple facilities, which appeared to be connected to Casella Waste Services, Inc. or NCES in approximately 7 states. Approximately

Response to Public Comments

Application for Landfill Expansion – Stage VI

North Country Environmental Services, Inc., Bethlehem, NH

Permit No. DES-SW-SP-03-002

October 9, 2020

Page 13 of 24

20 of these were seemingly related to environmental issues or management concerns alleged to have been brought by governmental agencies.

Grounds for denying a solid waste permit application are provided in Env-Sw 305.03(b). Env-Sw 305.03(b)(3) establishes grounds on the basis of the criteria specified in RSA 149-M:9,IX. Thus, in reviewing an application, NHDES considers the applicant's performance history as required by RSA 149-M:9,IX, relative to reliability, expertise, integrity, and competence to operate a solid waste facility; and felony convictions during the five years before the date the application is submitted. In the application, the applicant must identify its compliance status and history pursuant to Env-Sw 303.13. Additionally, NHDES requests the NH Department of Justice (NHDOJ) conduct a background investigation of the applicant, officers, directors, partners, entities holding 10% or more of the applicant's debt or equity, and key employees, pursuant to Env-Sw 316.

Based on the applicant's ability to certify compliance with the standards provided in Env-Sw 303.14 and the result of NHDOJ's background investigation, NHDES did not identify grounds for denial pursuant to Env-Sw 305.03(b)(3).

Several commenters stated that residents view NCES as a "bad neighbor" that is accountable only to its stockholders and does not care about the protecting the land, water and health of people in the community. Commenters state that the company has failed to keep promises, lacks transparency, is unable or unwilling to address resident concerns, and "tricked" the Town of Bethlehem into agreeing to the expansion in a settlement agreement over a tax abatement issue. Commenters urged NHDES to hold NCES accountable for their bad faith agreements and not reward the company by issuing the permit for expansion. Other commenters stated that NCES is a good neighbor and employer, provides essential services to the Town of Bethlehem, and supports local activities.

NHDES is bound to review and act on permit applications that it receives in accordance with the applicable provisions of RSA 149-M and its implementing administrative rules. To the extent that a facility's interactions with a community or impacts on residents directly relate to its compliance, the agency is empowered to use its permitting authority to impose conditions that will ensure compliance, or its enforcement authority to compel compliance. In extreme cases, those authorities may be used to deny or revoke a permit. As a general matter, NHDES hopes for and encourages all of its permittees to maintain positive relationships with the citizens and local governments of the communities where they are located. However, the agency cannot use its permitting authority to act as an arbiter of disputes between local communities, residents, and permittees.

Response to Public Comments

Application for Landfill Expansion – Stage VI

North Country Environmental Services, Inc., Bethlehem, NH

Permit No. DES-SW-SP-03-002

October 9, 2020

Page 14 of 24

V. Facility Need and Public Benefit

1. Capacity Need Considerations

Many commenters asserted there is no need for the capacity of the proposed expansion, and that the applicant did not meet its burden of proof thereof in the application. Commenters stated there is more than enough landfill capacity available at the Turnkey Landfill in Rochester, NH and the Mt. Carberry Landfill in Success Township, which has recently submitted an application for expansion. Other commenters stated that many NH generators depend on the facility; that denial of the expansion would be a failure to ensure proper and adequate capacity to NH citizens; and, when assessing need for the facility, NHDES should consider the many communities that NCEs & Casella hauling divisions serve. Further, commenters expressed concern about the amount of out-of-state waste accepted at the facility.

NHDES has determined that the facility, operating in accordance with specific permit conditions, will provide a substantial public benefit as required by and based on the criteria provided in RSA 149-M:11, *Public Benefit Requirement*. NHDES' evaluation and determination is provided in Attachment A of the Permit Application Review Summary. Attachment A outlines in detail NHDES' analysis, which resulted in a determination that the proposed facility will address a capacity need during one year of its proposed operating life. Note that NHDES' determination must be based on existing capacity, and cannot be based on proposed or speculative capacity that may exist at other landfills. The permit includes terms and conditions to ensure the facility operates in accordance with the determination.

Commenters requested to know what has changed from the previous application relative to public benefit. Commenters expressed concern that the math for proposed operating life and receipt rate, coupled with anticipated capacity depletion date of the current landfill configuration, does not “add up” and that the facility will not be economically viable at the proposed decreased waste acceptance rates.

As indicated immediately above, NHDES' evaluation of capacity need resulted in a determination that the proposed facility will address a capacity need during one year of its proposed operating life, accomplished by reducing the annual fill rate proposed in the first application (from about 400,000 to 175,000 tons per year). This is the major difference between the subject application and the previous application that was withdrawn in early 2020. That previous application proposed an operating life during which no capacity need existed. As discussed in Attachment A of the Application Review Summary, during its review of the applicant's public benefit statement, NHDES did identify discrepancies between the proposed receipt rates and the proposed operating life. However, the terms and conditions of this approval will assure that the facility will achieve the proposed operating life, which extends through December 31, 2026. NHDES has no information to suggest that the permitted waste acceptance rates will result in the facility being economically non-viable.

Response to Public Comments

Application for Landfill Expansion – Stage VI

North Country Environmental Services, Inc., Bethlehem, NH

Permit No. DES-SW-SP-03-002

October 9, 2020

Page 15 of 24

2. Economic Considerations

Commenters stated that the facility plays a key part in the economic well-being of the North Country; that it provides needed jobs; keeps taxes down in Bethlehem by providing free trash disposal services, revenue, and financial support of various community programs/undertakings; and that closing the landfill now will increase trash disposal and trucking costs for many communities and haulers that currently rely on the facility. Further, commenters indicated that towns need time to budget and plan ahead for alternatives, and urged NHDES to make a timely decision on the application to allow towns to budget and plan.

NHDES considered these comments in making its decision on the application. In part, in response to communities' and citizens' stated concerns about future waste management planning and a desire to make gains in recycling and waste diversion, NHDES has included a condition requiring the applicant to annually assist at least 10 NH solid waste generators, including no less than 5 New Hampshire municipalities, with improving waste management practices consistent with the hierarchy and goals.

VI. Groundwater, Surface Water, and Air Quality Protection

1. Leachate

Commenters expressed concern about the quantity of leachate the landfill generates. Commenters also expressed concern about the shipment to and disposal of leachate at wastewater treatment plants that may not be designed to remove per- and polyfluoroalkyl substances (PFAS), thus resulting in detectable concentrations of PFAS in treated wastewater discharged to surface waters and in land-applied biosolids (i.e., sludges created during wastewater treatment and subsequently processed to meet land application standards).

The Solid Waste Rules include multiple requirements to limit the production of leachate from landfills. Leachate production is directly related to the amount of liquid in wastes that are disposed in the landfill, and the landfill area open to rainfall infiltration. The permit prohibits the permittee from accepting liquid wastes. The permit further requires the permittee to place cover materials as required in accordance with the Rules and operating plan, and cap the landfill in accordance with the fill sequencing plan designed, in part, to limit the production of leachate. Based on available data, dividing the annual leachate quantity produced by the number of acres of landfill footprint shows that overall leachate generation rates for the NCES Landfill are commensurate with other operating New Hampshire landfills.

With regards to the discharge of treated wastewater and land application of biosolids, these are managed under other programs at NHDES and are not within the permitting authority of NHDES' Solid Waste Management Bureau. NHDES programs communicate with one another on

Response to Public Comments

Application for Landfill Expansion – Stage VI

North Country Environmental Services, Inc., Bethlehem, NH

Permit No. DES-SW-SP-03-002

October 9, 2020

Page 16 of 24

matters of mutual concern. The topic of PFAS-impacted wastes and treatment of PFAS is an emerging field of study. NHDES has committed significant resources to the issues around PFAS, including investigating PFAS concentrations in leachate. This is a broad issue that affects every landfill in NH, those that are operating and those that are long-ago closed. NHDES continues to monitor, review, evaluate and respond to information and data regarding PFAS. For the latest information regarding NHDES' efforts, please go to <https://www4.des.state.nh.us/nh-pfas-investigation/>.

2. Groundwater Quality

Multiple commenters expressed concern regarding the detection of PFAS and 1,4-dioxane in groundwater monitoring wells, as well as possible changes noted in groundwater quality trends.

NCES implements a comprehensive groundwater quality monitoring program at the site pursuant to Groundwater Management and Release Detection Permit #198704033 (Groundwater Permit). The Groundwater Permit requires NCES to regularly sample groundwater monitoring wells surrounding the landfill and to have the samples tested by a certified laboratory for a number of constituents, including but not limited to metals, volatile organic compounds (VOCs), various leachate indicator parameters (i.e., chloride, nitrate, total Kjeldahl nitrogen (TKN), iron and manganese), per- and polyfluoroalkyl substances (PFAS), and 1,4-dioxane. Further, the Groundwater Permit requires NCES to regularly submit groundwater monitoring reports prepared by New Hampshire licensed professional engineers or geologists, as consultants of NCES. The reports are reviewed and the data evaluated by NHDES' technical staff, who are also New Hampshire licensed professional engineers or geologists.

Groundwater monitoring data from the facility's release detection monitoring network do not indicate an overall increasing trend in the leachate indicator parameters, PFAS, or VOCs that have been attributed to the lined landfill. Isolated elevated concentrations of chloride (without corresponding increases in other landfill leachate indicator parameters) have been noted at a limited number of monitoring wells located in areas to the north and northwest of the landfill. Prior instances of increased concentrations of chloride at individual monitoring wells at the facility have been observed to be transient in nature and have been attributed to short-term, construction-related excavation activities (increasing suspended solids in groundwater) and facility road de-icing and truck traffic.

The presence of PFAS and 1,4-dioxane in groundwater samples at the concentrations reported to date is attributed to past documented and resolved leachate releases from the existing facility not associated with the landfill's liner systems, and/or is a residual effect of the now removed unlined landfill. NHDES' evaluation includes the data reported for leachate indicator parameters, PFAS and VOCs, which are not indicative of an active leachate release from the liner system or facility operations.

Response to Public Comments

Application for Landfill Expansion – Stage VI

North Country Environmental Services, Inc., Bethlehem, NH

Permit No. DES-SW-SP-03-002

October 9, 2020

Page 17 of 24

Commenters expressed concern that drinking water supply wells share the same aquifer as the groundwater monitoring wells.

Data indicates that existing drinking water wells are not at risk of being contaminated by either the existing facility or the plume of contamination attributable to the former unlined landfill (removed in 1993 by NCES). The plume is being managed within a well-defined and delineated Groundwater Management Zone (GMZ) established for the site in the Groundwater Permit, which purpose is to ensure no risk to any private wells.

3. Surface Water Quality

Commenters expressed concerns about the landfill’s potential impact on water quality in the Ammonoosuc River, stating their belief that leachate is currently and/or occasionally running-off into the river.

Groundwater monitoring data and leak detection monitoring data from the facility’s liner systems do not indicate a leachate release from the liner system or facility operations. Therefore, the concern that leachate is running off into the river is unfounded.

Commenters expressed concern about “seeps” along the embankment of the Ammonoosuc River.

Groundwater springs or “seeps”, such as those along the stretch of the Ammonoosuc River near the NCES landfill, are a natural occurrence. The seeps in this area are believed to occur due to the natural geology. Specifically, the seeps are thought to occur where the bottom of the stratified-drift soil layer underlying the landfill makes contact with the top of the underlying glacial till soil layer. The change in permeability, that is, the ability of water to flow through the soil, at this interface changes between the stratified-drift soil layer and relatively less-permeable glacial till soil layer, and forces groundwater out of the embankment. When groundwater is inside the soil layers, the amount of oxygen available is reduced. When the groundwater “seeps” out of the embankment, the amount of oxygen available increases and causes metals in the groundwater to precipitate, or drop, out of the groundwater causing a reddish-orange staining. Over the years, there have been several large-scale disturbances near the main seep that have likely contributed to the reducing oxygen conditions observed at the seep, including the existing lined landfill, a gravel pit operation (i.e., the former Tucker Pit), and the removal of the unlined landfill.

Analytical results from ongoing water quality monitoring of the “main seep” indicate that water quality at the seep has significantly improved since the mid-1990s following removal of the unlined landfill, especially for volatile organic compounds (VOCs). NCES continues to conduct

Response to Public Comments

Application for Landfill Expansion – Stage VI

North Country Environmental Services, Inc., Bethlehem, NH

Permit No. DES-SW-SP-03-002

October 9, 2020

Page 18 of 24

surface water sampling of the main seep and river as required by its the Groundwater Permit. Current monitoring data consistently report elevated levels of iron and manganese consistent with the metals-precipitation scenario outlined above, with VOCs notably absent, and thus do not indicate water quality impacts that could be attributed to a leachate release affecting the embankment area.

The Groundwater Permit requires NCES to monitor the Ammonoosuc River at three sampling locations along the river; upstream and downstream of the landfill, and where the water from the main seep joins the river. Current surface water monitoring data also do not indicate a leachate release.

4. Air Quality

One commenter asserted that approval should not be granted because landfill gas causes adverse effects on human health and is a large contributor to greenhouse gases.

NHDES recognizes that landfills emit landfill gas and other pollutants to the ambient air. The NCES landfill is subject to air pollution control requirements administered by NHDES Air Resources Division. NCES is required to maintain an air permit which includes all applicable air pollution control requirements and was also required to obtain an updated air permit prior to the Stage VI expansion that incorporates new or amended air pollution control requirements.

NCES submitted an application to the NHDES Air Resources Division on February 22, 2019 for an updated air permit to incorporate the Stage VI expansion. NHDES Air Resources Division reviewed the application and determined that NCES could expand the landfill as proposed and maintain compliance with all applicable air pollution control requirements, including compliance with human health-based air pollution standards. NCES Air Resources Division granted NCES an updated air permit that incorporates the Stage VI expansion on April 22, 2020. Additional information regarding NHDES's review of NCES's application for the air permit (including NCES's application, NHDES Air Resources Division's application review summary, the draft and final permits, and NHDES Air Resources Division's responses to public comments regarding the air permit for the Stage VI expansion) are available on NHDES's OneStop database (see NCES air permit application #19-0056).

Further, NHDES recognizes that landfills emit methane gas, which is a greenhouse gas air pollutant. The air pollution control requirements administered by the NHDES Air Resources Division require NCES to capture and control (e.g., combust or treat) the majority of the landfill gas produced by the landfill. While the NCES landfill is not subject to air pollution control requirements that specifically target greenhouse gases, the applicable requirements do require capture and control of the landfill gas and therefore have a co-benefit of reducing greenhouse gas emissions from the landfill.

Response to Public Comments

Application for Landfill Expansion – Stage VI

North Country Environmental Services, Inc., Bethlehem, NH

Permit No. DES-SW-SP-03-002

October 9, 2020

Page 19 of 24

VII. Current Compliance Considerations and Operating Conditions

Commenters expressed concern regarding the facility's current compliance status. Some commenters expressed their belief that NCES is currently over capacity and will not meet its permitted operating life expectancy. Commenters questioned NCES' compliance relative to its permitted height. Commenters noted that NHDES' last inspection identified cover violations and asserted that another inspection is overdue. One commenter reminded NHDES of its responsibilities pursuant to RSA 149-M:6,IV(b) to investigate any condition which is believed to be in violation of RSA 149-M or the Solid Waste Rules, or a substantial threat to human health or the environment.

These concerns relate to compliance assurance activities, generally, and ongoing compliance assessments, specifically. Generally speaking, to assure compliance at a solid waste facility, NHDES uses a number of tools including inspections and audits of solid waste facilities, to identify potential compliance deficiencies and seek meaningful return to compliance at those facilities identified as having a compliance deficiency. NHDES acknowledges the cover violations identified in past inspections and the need to assure compliance with the permitted height and final grades at this facility. NHDES will continue to perform unannounced inspections and audits of regulated solid waste facilities, including the NCES landfill, as one of several means for assuring compliance. The results of NHDES' compliance assurance activities can be found and viewed under the facility record accessible via the OneStop Data and Information Retrieval System (OneStop) on the NHDES website or through a file review request. OneStop can be accessed online here: <https://www.des.nh.gov/onestop/>. To request a file review, please call (603) 271-2919, email filereview@des.nh.gov, or complete the online file review request form (Right-to-Know request) linked here: <https://www.des.nh.gov/organization/commissioner/pip/index.htm>.

A commenter asked for the current rate of recycling by NCES and wanted to know what proof there is that NCES in fact sends its recyclables to Zero Sort.

NCES stated in Section 3.3.2.3 of its Public Benefit Demonstration in the application for expansion that it diverted 1,884,580 pounds (about 942 tons) of single-stream recyclables from landfilling, with most of the materials originating from Bethlehem and surrounding communities. In the 2019 Annual Facility Report for the transfer station, NCES reported it shipped about 1,022 tons of recyclables to out of state destinations. In the 2019 Annual Facility Report the landfill, NCES reported it shipped 57 tons of recyclables to out of state destinations. NHDES encourages concerned citizens to discuss the destination of recyclable materials, recycling rates and other diversion programs with their waste service provider, which for the Town of Bethlehem is NCES.

Response to Public Comments

Application for Landfill Expansion – Stage VI

North Country Environmental Services, Inc., Bethlehem, NH

Permit No. DES-SW-SP-03-002

October 9, 2020

Page 20 of 24

Commenters stated that a local ordinance prohibits the disposal of sludge in Bethlehem and wanted to know how a permit could be issued when the company is out of compliance with a local ordinance.

Article VII of the Town of Bethlehem’s zoning ordinance addresses the management of municipal sewage sludge. NHDES does not interpret this ordinance to explicitly ban the landfilling of sludge within the town. It is also unclear to the agency whether a municipal ordinance banning the landfilling of sludge could be applied to a State-permitted facility.

Commenters expressed concern about the landfill accepting toxic waste and ensuring that harmful materials are not improperly disposed of.

The NCES landfill is not authorized to receive hazardous waste, and facility operating requirements, as well as other state and federal regulatory requirements, protect against receipt of hazardous waste.

First, hazardous waste is highly regulated in New Hampshire and nationwide. It is subject to an interstate “cradle to grave” reporting and tracking system to ensure hazardous waste generators do not dispose of their hazardous waste at facilities not authorized to receive hazardous waste, which includes the NCES landfill in Bethlehem.² The transportation of hazardous waste in New Hampshire is also regulated and requires use of registered hazardous waste transporters who are also accountable for where the waste goes and where it is disposed. Additionally, the NH hazardous waste management program, which implements the hazardous waste generator and transporter programs, is broader in scope and more stringent than the federal program, and includes regulation of small quantities of hazardous waste and regulation of waste types, such as used oil, that are not regulated as hazardous waste at the federal level and in some other states. With all of these controls in place, hazardous waste disposal at NCES landfill and other unauthorized facilities, is restricted.

The NCES landfill is permitted to receive waste regulated as “solid waste”, which specifically excludes hazardous waste. Other exclusions apply as well. For a full list of authorized and prohibited wastes for the NCES landfill, see Condition (19) of the permit modification issued concurrently with this response to public comments.

Further, the Solid Waste Rules, facility permit, and facility operating plan administered and enforced by NHDES include measures to prevent acceptance of unauthorized wastes at solid waste management facilities. To ensure compliance with its authorized and prohibited waste requirements, NCES implements various measures to restrict acceptance of prohibited wastes

² NHDES notes that there are no hazardous waste disposal facilities in NH and that hazardous waste generated in NH is disposed of at facilities outside of NH.

Response to Public Comments

Application for Landfill Expansion – Stage VI

North Country Environmental Services, Inc., Bethlehem, NH

Permit No. DES-SW-SP-03-002

October 9, 2020

Page 21 of 24

from any source. Those measures include: customer education; signed agreements acknowledging the rules and regulations for use of the facility, specifically including acceptable and unacceptable wastes; routine visual inspection of each load by trained operators looking for unacceptable materials when loads are discharged from the delivery vehicle onto the working face and as the waste is spread out at the working face; random load inspections away from the active face by trained NCES personnel looking for unauthorized wastes; and profiling certain special wastes in advance of delivery, as described below.

Special wastes, such as contaminated soils, are profiled prior to being accepted at the Landfill. A waste profile is submitted to NCES technical staff, who review the information submitted to determine whether the waste meets the Landfill's acceptance criteria. If the profiled waste meets acceptance criteria, the special waste may be approved for disposal at the Landfill. If the profiled waste does not meet acceptance criteria, the special waste is rejected. Profiling typically includes characterization of the special waste using due diligence and, when appropriate, laboratory analysis of representative samples of the waste to ensure that the waste is non-hazardous and of a type and form that can be accepted by the Landfill. When a waste load arrives at the landfill, the scale operator checks the waste approval number provided by the waste hauler to ensure the waste is authorized for disposal at the facility, and checks and verifies the shipping paperwork. Landfill operators at the working face inspect the waste load to ensure it comports with the waste type expected.

NHDES recognizes that, while these measures may minimize acceptance of unauthorized wastes, they do not guarantee unauthorized waste will never be disposed of at a landfill. However, it is incorrect to believe that waste coming into the NCES landfill is not inspected and that there are no controls in place to prohibit disposal of hazardous waste at the landfill.

VIII. Application Adequacy and Design Review Considerations

1. Comparison to Previous Application for Stage VI

Commenters asked whether NCES has fixed the deficiencies noted in the Assessment Review Summary of the first application for Stage VI, which NCES withdrew in February 2020.

Commenters noted that unless the deficiencies of the first application have been addressed, NHDES should deny this application. Further, commenters asked how the two applications compare. One commenter stated that an approval with compensating conditions should not be granted.

NHDES reviewed this application for Stage VI independent of the prior application. A comparison of the two application review summaries for Stage VI (the prior application and this application) indicates that NCES addressed some of the deficiencies noted in the prior application. As required by the Solid Waste Rules, specifically Env-Sw 305.03(b)(2), NHDES

Response to Public Comments

Application for Landfill Expansion – Stage VI

North Country Environmental Services, Inc., Bethlehem, NH

Permit No. DES-SW-SP-03-002

October 9, 2020

Page 22 of 24

determined that the resubmitted application provided sufficient information for NHDES to remedy the deficiencies by compensating terms and conditions in the permit modification.

2. Property Line Setback

Commenters expressed the opinion that NHDES should scrutinize the setback to property line requirements and make sure that NCES' ownership of the abutting parcels does not excuse them from meeting setback requirements, because NCES might not retain ownership of the abutting parcel in the future.

In its application, NCES proposed to meet setback requirements in the Solid Waste Rules by expanding the regulated facility boundary to include additional properties now owned by NCES. Based on a review of the application and prior approvals, NHDES identified the properties by tax map and lot number where solid waste operations occur, are proposed to occur, and/or which are necessary to maintain regulatory setbacks from the existing and proposed landfill footprint to the facility property line. For clarity, the permit identifies the regulated solid waste facility as being comprised of Bethlehem Tax Map 419, Lots 1, 2, 21, 22, 24 and 25, establishes the outer boundaries of those lots as the compliance boundary for requirements in the Solid Waste Rules that refer to “property line” or “property boundary.” As such, the permit compels NCES to seek NHDES approval prior to removing parcels from the regulated facility.

NHDES notes that the existing landfill footprint and the proposed Stage VI footprint are only located on Bethlehem Tax Map 419, Lot 22.

3. Liner integrity and Waiver Request

Commenters noted that the US Environmental Protection Agency has stated that all liners leak, which will lead to PFAS and other toxic chemicals posing a harm to people and the environment. Some commenters expressed their belief that allowing more trash to be piled on top of an already faulty system is not acceptable. One commenter noted that in 2019, NCES reported a tear in the liner(s).

Landfills are engineered waste containment systems designed and constructed in accordance with the Solid Waste Rules and the standards of practice at the time of construction. The rules and standards are intended to ensure the longevity of an engineered waste containment system. Solid Waste Rule Env-Sw 805.12 requires that landfills receiving municipal solid waste, such as the NCES landfill, be constructed with a double-liner system, which extends the overall life-expectancy of the waste containment system. Further, the design and construction of landfill liners is required to comply with Env-Sw 805.04, *Liner Material and Construction Requirements*. Some of the requirements in Env-Sw 805.04 help ensure that the liner will continue to function for as long as possible. For example, Env-Sw 805.04(b)(2) requires that synthetic liner material be chemically compatible with anticipated waste and leachate

Response to Public Comments

Application for Landfill Expansion – Stage VI

North Country Environmental Services, Inc., Bethlehem, NH

Permit No. DES-SW-SP-03-002

October 9, 2020

Page 23 of 24

characteristics. While the liner requirements in the rules include requirements to help prolong the lifespan of liners, there is no specified design life for liners.

Further, the Solid Waste Rules contemplate vertical expansions of existing facilities (i.e., piling new waste on top of existing waste). The Solid Waste Rules include specific requirements for construction of new capacity on top of existing waste pursuant to Env-Sw 805.17, *Vertical Expansion of Landfills*. Generally, this rule requires that a vertical expansion is only allowed over a double-liner system meeting the requirements of Env-Sw 805.05.

In addition, the Solid Waste Rules contain many provisions to prevent landfill leaks (e.g., liner and leachate collection system design standards); construction quality assurance/quality controls as required in Env-Sw 805.16, *Quality Assurance/Quality Control (QA/QC) Standards for Liner and Capping Systems*; and long term inspection, monitoring and maintenance as required in Env-Sw 806.08, *Inspections, Maintenance, Monitoring and Reporting Requirements*, and Env-Sw 807, *Closure Requirements*.

The NCES Landfill has been designed in accordance with the requirements of the Solid Waste Rules. Further, NCES is required to monitor for leaks using the secondary leachate collection system and the groundwater release detection program. Provisions exist in the applicable rules to respond to leaks, should they occur.

With regards to the tear in 2019, NCES reported in its monthly operations reports submitted to NHDES that an off-road haul truck struck a leachate cleanout pipe, damaging the connection between the pipe and the liner system (i.e., boot). NCES states that it contracted for and had the damage repaired. NCES continues to monitor leachate flows in the secondary leachate collection system and collects samples from the primary and secondary leachate collection systems for laboratory testing of analytical characteristics.

Commenters asserted that NHDES should deny the requested waiver, stating their belief that the request meant there was no leak detection and location system in Stage I or that the design was otherwise non-compliant and granting the waiver request would set a bad precedent.

The area of Stage I for which NCES seeks a waiver of certain design requirements related to leak detection and location systems does have a primary and secondary leachate collection system. The secondary leachate collection system serves as a leak detection and location system for the primary liner. The rule being waived requires that the secondary system include geonet or be comprised of a composite liner system. As the existing Stage I secondary system is not a composite liner system and does not include geonet in certain locations, a strict application of the Rules would require a third leak detection and location system be installed beneath the secondary system in Stage I. However, based on a review of the application for waiver and considered in context with demonstrations made in previous applications for waiver of the

Response to Public Comments

Application for Landfill Expansion – Stage VI

North Country Environmental Services, Inc., Bethlehem, NH

Permit No. DES-SW-SP-03-002

October 9, 2020

Page 24 of 24

same provision (which requests were granted in 2013 and 2014), NHDES determined that the existing system meets the design intent of the rule and the request met the criteria for waiver. Therefore, NHDES granted the waiver.

4. Truck count and economic viability

A commenter asserted that the number of trucks per day for the proposed expansion would be 7 or 8, and that did not make economic sense, thus the application should be denied.

Based on current waste acceptance rates, and proposed waste acceptance rates, the number of truck trips per day will likely be about half of current truck trips. Further, NHDES has no information to suggest that the facility would be unable to secure financing for construction of Stage VI or operation of the facility. NCES also maintains two financial assurance mechanisms, one for closure of the facility and one for post-closure care, in the extreme case that NCES is unable to fulfill its obligations to close the facility and provide post-closure care, NHDES has the ability to call on these mechanisms to fund such.

5. Landfill height

Commenters expressed concern regarding the height of the landfill and the proposed expansion, noting that an increase in landfill height might violate a local restriction. Further, commenters requested to know when the last time a surveyor checked the height of the landfill, what that height was, and whether the landfill was at or above the height specified in its permit.

The Application did not propose a change in the maximum permitted height of the landfill. The current and proposed maximum height of the landfill is elevation 1483 feet referenced to the North American Vertical Datum of 1988 (NAVD88). NHDES understands this is the same elevation specified in local settlement agreements relative to the landfill.

As part of the application for expansion, NCES provided an existing conditions plan (Design Drawings, Drawing No. 2). The notes on that drawing state that existing topography (e.g., elevations) were determined by an aerial photogrammetry survey on June 7, 2019 (see WMD Log No. 2020-47865-01). The plan shows that the height of the landfill at the time of the survey was about Elevation 1482 feet NAVD88. For reference, the elevation at the entrance to the landfill property on Trudeau Road is about Elevation 1338 feet NAVD88. With regard to compliance assessments and assurances, please see NHDES' response in Section VII above.