PRE-APPLICATION MITIGATION MEETING
GRANITE STATE LANDFILL, LLC
DALTON, NEW HAMPSHIRE

PROJECT DESCRIPTION:

Overall Goal of the Project.

The development of the Granite State Landfill, LLC (GSL) will provide the State of New Hampshire with critical long-term waste disposal planning and management need, consistent with the New Hampshire Department of Environmental Services (DES) "2022 Solid Waste Management Plan." Long-term secure disposal capacity is critical infrastructure to meet the health and safety of New Hampshire's natural environment and the people who live there. The new facility would replace North Country Environmental Services (NCES) landfill upon its closure.

The facilities and work that could impact jurisdictional areas.

Project Location: The proposed project (see locus plan) is located within Tax Map 406 Lot 2.1 and Tax Map 406 Lot 3 in Dalton, New Hampshire. This approximately 713 acre property is accessible via Douglas Drive from New Hampshire Route 116 in Bethlehem, New Hampshire and is located in an industrial area of Dalton. The Town of Dalton has no zoning ordinance.

Project Description: The original DES Wetlands Permit application was applied for in August 2020. This application (NHWB # 2020-02239) was for a 3 phased landfill (see Overall Conceptual Plan) encompassing approximately 135 acres with approximately 270 acres of land disturbance. As designed, the project would have affected approximately 16.6 acres of wetland, 150 linear feet of perennial stream, and 1,350 linear feet of intermittent stream. The facility had an estimated life of approximately 38 years. The total property consisted of 4 parcels encompassing approximately 1,280 acres.

Design Plans: During the application review process, comments from state and federal regulators served to shift the emphasis from a 3 phase project to a single phase project with a reduced overall footprint. The revised project (see Revised Overall Conceptual Plan) property consists of 2 parcels totaling approximately 713 acres. The revised design reduces the project impacts as follows:

	Original 3 – Phase Project	New Project	Net Reduction
Project Property	**1,280 acres**	**713 acres**	**567 acres**
Lined Footprint	**135 acres**	**70 acres**	**65 acres**
Area of Disturbance	**270 acres**	**147 acres**	**123 acres**
Project Life	**38 years**	**18 years**	**20 years**
Wetland Impacts	**+/-17 acres**	**+/-10 acres**	**+/-7 acres**

Intended Outcome: The project is planned to replace the NCES landfill facility in Bethlehem, New Hampshire upon its closure.

NATURAL RESOURCES IN THE PROJECT AREA THAT MAY BE IMPACTED:

The accompanying aerial photo of the overall project area was taken November 2022. This photo serves to provide an overview of existing land use features, wetlands, watershed boundary, and approximate limits of disturbance. As previously mentioned, approximately 10 acres of largely forested wetland within the depicted limits of disturbance will be impacted by the project. Three vernal pools and two potential vernal pools will be impacted. A portion of an intermittent stream will be filled, and two perennial stream (Tier 1) crossings are planned to be replaced and upgraded with adequately sized structures. The principal wetland functions to be affected center on wildlife habitat, flood flow alteration and groundwater discharge. The project is not within a floodplain or within a one mile radius of an impaired water. Fish habitat was documented in the vicinity of a perennial stream crossing. No fish habitat is anticipated to be directly affected within the landfill limits of disturbance.

The Natural Heritage Bureau (NHB#22-3682) report dated December 6, 2022 (see attached) listed the Northern White Cedar Seepage Forest natural community, the state endangered marsh horsetail (*Equisetum palustre),* and state threatened Common Loon *(Gavis immer).* These species and natural community known locations are off-site to the north and east of the subject property and were not documented at the site during natural resource surveys completed to date. As warranted, further site investigations are planned during the 2023 field season.

The NHF&G Wildlife Action Plan ("WAP", see attached) "Highest Ranked Wildlife Habitat by Ecological Condition" mapped portions of the project area as "Supporting Landscapes". Other Priority Resource Areas, not directly impacted but in the vicinity of the project area, include "Highest Ranked Habitat in Biological Region" associated with Forest Lake State Park, high elevation areas associated with Dalton Mountains, and large contiguous wetlands associated with Alder and Hatch Brooks, a "Highest Ranked Habitat in New Hampshire".

A Pre-Consultation meeting was held with NHF&G staff on March 7, 2023 (see attached meeting notes) to review the status of the project and to coordinate Consultation in accordance with PART Fis 1004 Consultation rules and requirements.

A Phase 1A archeological study was originally completed for the overall 3 phase project. The report is currently being updated and coordination with USACE (Section 106) and NHDHR is planned.

The project is within the jurisdiction of the Ammonoosuc River Local Advisory Committee.

ALTERNATIVES ANALYSIS:

A site selection search was originally conducted to identify and investigate the viability of sites for the proposed project in the states of New Hampshire, Vermont, Maine, and Massachusetts. Based on

regulatory restrictions on siting a landfill facility in Vermont and Maine, sites in these states were eliminated from further consideration. Several potential sites were initially screened in New Hampshire and Massachusetts. As previously stated, a three phased project was initially planned. Based on state and federal agency comments, the current design goals centered a one phase project which significantly reduces wetland impacts and provides buffers to sensitive environmental receptors. Recognizing these goals, the site selection search was re-visited to review the viability of the respective alternatives.

Based on specific site constraints to best meet design goals and/or the availability of potential subject parcels, the preferred site (Dalton) was identified.

Several on-site design alternatives were assessed to further avoid and minimize wetland impact. The initial concept centered on developing solely Phase 1 of the original 3-phase project. This project would have required the original proposed infrastructure area and wetland crossing. Due to the limits of waste and stormwater management areas in close proximity to the high quality Alder Brook wetlands, this design was dismissed.

A revised concept was considered within the original Phase 1 area that focused on pulling back the limits of waste and eliminating stormwater management areas situated adjacent to the high quality wetlands. While reducing wetland impact to approximately 12 acres, this concept still required significant land disturbance near the major wetland complex. Therefore, it was deemed not viable and dismissed from further consideration.

Other design alternatives centered combinations of Phases 2 and 3. Maintaining the general Phase 2 and Phase 3 footprint allowed for the reduction in wetland impact, however, 5 vernal pools would be impacted and the limits of waste would directly and indirectly impact contiguous wetland resources west of Douglas Drive.

AVOIDANCE AND MINIMIZATION:

The preferred site design alternative (see Design Plans) shifted the landfill and associated infrastructure to the east of Douglas Drive. The initial downstream crossing was eliminated and stream and culvert crossing improvements/restoration along the existing Douglas Drive upstream crossings are planned. Douglas Drive will serve as the main access for the facility. The scales, leachate collection system, maintenance building, and office are positioned further from wetlands and closer to Douglas Drive in the vicinity of the existing soil stockpile area and former asphalt plant. Where possible, stormwater management areas have been positioned to avoid wetlands while maintaining viable vegetative buffers to adjacent wetland resources. All temporarily disturbed areas within the Project area shall be stabilized and vegetated in accordance with NHDES Alteration of Terrain requirements.

This design achieves our goal of significantly reducing direct and indirect (secondary) wetland impacts, provides further buffer to maintain the functions of the large contiguous network of wetlands and headwater streams, and increases the setback to Alder Brook.

COMPENSATORY MITIGATION:

The project will require compensatory mitigation. As previously described, approximately 10 acres of wetland will be directly impacted along with portions of an intermittent stream, 2 perennial stream crossings, 3 vernal pools and 2 potential vernal pools. The primary loss of function is wildlife habitat, flood flow alteration, production export, and groundwater discharge. The site is not within an area designated in the WAP as highest-ranked habitat. A Phase 1-A Archeological study was conducted in 2020 and is currently being updated.

The original 3 Phase project provided both on-site and off-site land preservation mitigation options. The on-site option centered on preserving an approximate 244 acre parcel which contained headwater wetlands and streams associated with Alder Brook. No viable 3rd parties to hold a conservation easement were identified. Therefore, this mitigation option was eliminated from further consideration.

The off-site land preservation option would protect, via a conservation easement, approximately 108 acres of land with approximately 4,275 linear feet of frontage on the Ammonoosuc River, a WAP "Highest Ranked Wildlife Habitat in New Hampshire". This site borders other conservation land, including approximately 31,000 acres of US Forest Service land and river lands protected in-fee by the Society for the Protection of New Hampshire Forests (SPNHF). In total, approximately 3 miles of riverbank would be protected creating a significant corridor along the river. This mitigation option continues to be considered a viable alternative. In addition to land preservation, work to restore upland buffers, eradicate invasive species (Japanese knotweed) and create vernal pool habitat within the site are under consideration. Outreach to several viable 3rd party easement holders has been on-going.

Other potential restoration projects within the general vicinity are currently being explored. These opportunities center primarily on riverbank and floodplain restoration, restoration of riparian zones, stream crossing improvements, and potential dam removal projects. These opportunities will require a collaborative approach with various interest groups.

Should permittee responsible mitigations options prove not viable or feasible, then an in-lieu mitigation payment can be provided to the Aquatic Resource Compensatory Mitigation Fund (ARM) in accordance with RSA 482-A:28-A:30.