



Northeast Resource Recovery Association

"Partnering to make recycling strong through economic and environmentally sound solutions"

9/5/2023

Town of Northumberland

Construction & Demolition Debris Diversion Recommendation Report

Date of visit: April 26, 2023

The Northeast Resource Recovery Association (NRRA) conducted a site visit for the Town of Northumberland to evaluate the town's construction and demolition debris (C&D) management practices. This report provides a summary of the town's current practices and recommendations to increase C&D diversion. The Town of Northumberland receives construction and demolition debris from residents and businesses from within the town. The town has a population of 2,126 based on the 2020 census. The town is part of the Androscoggin Valley Regional Refuse Disposal District (AVRRDD); the town uses their Transfer Station for disposal of wood and the Mt. Carberry Landfill for disposal of other C&D.

FACILITY USAGE

To use the facility, a person needs a "user pass" which is available at both the Transfer Station and the Office of the Selectmen. A residential pass is \$5 annually while a commercial pass is \$100 annually. They also offer non-resident property owners a pass, but the application needs to be submitted and approved by the selectboard and is a cost of \$15 annually.

TRANSPORTATION & TIPPING FEES

The town's current (2023) rate for hauling their material to AVRRDD is \$330 per haul plus a fuel surcharge based on the day's fuel prices. The total mileage varies depending on the material, but the rate stays the same. The mileage from the haulers yard to the Transfer Station and then delivery to the AVRRDD Transfer Station and back is 42.7 miles, while the same trip hauling to the Landfill instead of AVRRDD's transfer station is 57 miles.

The town has a mixed demolition debris and bulky waste tipping rate of \$58 per ton. Since they are a member of the district, they get this discounted rate. For example, a neighboring town is not a district member and pays \$20 per ton more. Being part of the district, Northumberland

utilizes AVRDD's "alternative daily cover" wood program, which has no tipping rate. Alternative daily cover is material that can be used instead of virgin earth material such as dirt.

WOOD

Northumberland takes advantage of AVRDD wood grinding option. The town separates all types of wood (plywood, pressure treated, painted, etc.) and sends the wood via an open top container to AVRDD's Transfer Station in West Milan. This wood is then ground and used as alternative daily cover at the Mt. Carberry Landfill. The town pays their hauler \$330 per trip plus a fuel surcharge. for transportation but there is no tipping fee, which saves \$58 per ton.

The town separates pallets and burns those in the burn pile.

ITEM:	TIPPING:	HAULING:	5 TON LOAD COST:
Wood	\$0.00/Ton	\$330.00	\$66.00/Ton
Mixed C&D/Bulky	\$58.00/Ton	\$330.00	\$124.00/Ton

ASPHALT/BRICK/CONCRETE (ABC)

The town collects asphalt, brick, and concrete (ABC) and the town plans on hiring a company to grind the material and use locally on roads. Currently they are looking for a company to crush the material but at the same time, they do not have a lot of material on hand. Most of the material is from the town highway department.

SHINGLES

Asphalt shingles are put directly in an open top container by the residents and are sent to the landfill for disposal. The town does not offer a recycling option. The town charges \$9 per square for residents and \$10 per square for businesses.

OTHER C&D ITEMS

All other types of C&D, sheetrock for example, are disposed of at the landfill. Customers put these items in one of two open top containers. The town combines their bulky waste with shingles and other C&D items. Currently the town charges residents and property owners \$15 per cubic yard. The town charges commercial and contractors \$30 per cubic yard. This is done visually, as the town does not have a scale to weigh material.

YEARLY TOTALS

The yearly tons of C&D managed at the facility varied somewhat between 2020 and 2022. The three-year average was 351.65 tons per year. The per capita rate for C&D was 337 pounds per person per year in 2022.

YEAR:	C&D TONS	MSW TONS	RECYCLING TONS
2022	358.43	751.15	229.42
2021	363.91	781.32	241.74
2020	332.61	772.55	257.14

2022 – Percentage of C&D/Bulky was 26.77% of total material received.

2021 – Percentage of C&D/Bulky was 26.24% of total material received.

2020 – - Percentage of C&D/Bulky was 24.42% of total material received.

DENSIFYING MATERIAL

The Northumberland transfer station is located right next door to the highway department, so the facility has easy access to the town’s backhoe. They crush open top containers multiple times; the town said it estimates an average weight of around 8 tons per container.

Since the town owns the backhoe and it is located nearby, the compaction cost is very low, with only labor and equipment costs. The cost savings from compacting are clear since the compaction rate is nearly zero, if you are able to go from 3 to 5 tons in a container, the town is saving \$44 per ton, which is a 27% savings. If the town can get 8 tons in a container, the town can save 41% of the disposal costs compared to a 3 ton load.

HANDLING

Besides the asphalt, brick, and concrete pile, all C&D is loaded directly into open top containers. This saves labor time compared to dumping it into a bay then loading it into an open top. This setup makes it difficult for large loads of material, however, one of the open tops is ground level so a trailer can dump right into it. The labor costs associated with their handling is: load inspection, charging customers, and crushing open tops with the town backhoe. Since the facility is compact, set up nicely, and next to the highway department, labor costs for handling the C&D are minimal.

RECYCLING OPTIONS

The closest C&D recycling facility is around 117 miles away in Colchester, VT. With the low tipping rate, the town currently has, and the longer distance to a recycling facility, the town is currently doing what is best financially for the taxpayers and users of the facility.

REUSE OPTIONS

The facility has a “no-picking” ordinance. Additionally, because the facility is so compact, an onsite reuse “swap shop” would be difficult to manage.

RECOMMENDATIONS

Asphalt, Brick, Concrete (ABC) – The facility has room to expand their ABC program and could become a regional hub in the future for other towns. They could get a new NH Department of Environmental Services (NHDES) permit for the entire facility or just for ABC. Then, like Gilford’s foam recycling program, they would be able to take ABC material from other towns. In Gilford’s case the facility has its own permit, and their foam program is a separate permit.

Asphalt Shingles – The town could look at recycling shingles in the future, but it is recommended that they be stored in a concrete bunker. The current cost to recycle would be higher than landfilling though as the current recycling cost is \$107.67 per ton plus transportation costs.

Reuse Options – There are no reuse stores in the area and the town has an ordinance about picking items at the facility. NRRRA recommends that the facility promotes the utilization of existing social media groups, such as Craigslist, the “free stuff” section of Facebook Marketplace, or the “North Country Market Post It Here” Facebook group to residents and facility customers. This would allow people to give away items before bringing the items to the facility for disposal.

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