# 2018 Transfer Station Evaluation Committee Report


**Final Report**

## Executive Summary

- The Transfer Station Evaluation Committee (TSEC) met nine times from May through November of 2018

- Review and analysis was completed of the following:
    - Current Rules of Operation
    - Current Fee Schedule - to ensure we are covering costs
    - Freon costing analysis - to ensure we are covering costs
    - Cost/benefit analysis for new recyclable compactors
    - Separation of precious metals for increased revenue

- The following recommendations resulted from the committee's work:
    - Tree work needed to remove two trees and branches that currently block lighting
    - Oil shed roof needs reshingling (grant funds available)
    - Two sets of stairs to the trash compactors need to be replaced with a single set of stairs
    - The glass recycling roll-off should be placed where one of the mixed plastics roll-offs is to eliminate steps for these heavier items; one mixed plastics container eliminated once the two new compactors are in place
    - Continue to monitor revenues and expenses every six months to ensure costs are being covered
    - Conduct a 2-3 month pilot program to assess if sorting precious metals using existing staff is worth the labor costs; requires several additional tools for processing
    - Obtain a roll-off through the district at minimal/nominal cost to store and secure precious metals
    - Continue to spread out up to 15 rimless tires in each trash compactor load to minimize tire disposal costs and aid incineration process
    - Continue with semi-annual electronics collection days; do not initiate continual collection of electronics at this time
    - Work with the SRLD to replace the cardboard trailer in 2019 and rear trash trailer in 2020 (paid for by the district)
    - Continue to monitor ways of reducing costs and enhancing revenues both with the SRLD and on our own

## Background

In April 2018, the Selectboard chartered a nine member committee to evaluate current operations of the transfer station and make recommendations for future recycling and site improvements. The committee's charter is included in the *Appendix*.

Recent changes and challenges in the recycling market were a key contributor to the committee's formation. China recently increased its contamination thresholds on incoming recyclable material effectively closing off its market for many items. It now costs us to get rid of "mixed paper" where it generated revenue as recently as the end of 2017. Cost pressures on other recyclables have also increased.

The committee met a total of nine times, including a facility site walk.

The committee was comprised of the following:

- Jim Solinas (Chair, Lead Transfer Station Attendant)
- Peter Lemay (Vice-Chair, at-large resident)
- Tad Putney (Secretary, Town Administrator)
- Ron Olsen (Selectboard Representative)
- Jerry Farwell (Town's Souhegan Regional Landfill District Representative)
- Joan Cudworth (at-large resident/Hollis Transfer Station Supervisor)
- Guy Wadsworth (at-large resident)
- Kel Bachus (at-large resident; resigned October 23rd)
- Mike Wenrich (DPW Director, joined at August 15th meeting)
- Gary Nedelman (at-large resident; appointed December 3rd)

## Brookline's Current Transfer Station Operations

Brookline is one of four towns that comprise the Souhegan Regional Landfill District ("SRLD"), which dates back to 1974. The other member towns are Amherst, Hollis and Mont Vernon. The SRLD serves to provide the member towns with greater cost and revenue efficiencies than if they were operating as individual towns. The SRLD contracts with a firm (currently D.C. Slocomb) for the hauling of trash and recyclables. The current contract with Slocomb runs through 2020.

The SRLD is involved in some, but not all, of the Transfer Station's operations:

- Trash compactors
- Cardboard compactor
- Recycling bins/compactors

Brookline's trash is currently taken to the Wheelabrator plant in Concord, NH where it is burned. The incineration process is used to generate power for approximately 14,000 NH homes. Recyclables are delivered to various locations based on the best available pricing at the time.

Brookline's 2018 apportioned SRLD cost was $163,015.

The SRLD owns the compactors/bins and pays to haul and dispose of the trash/recyclables. In the event capital improvements are required in these areas, the SRLD pays for all equipment replacements/improvements and the Town is responsible for the related labor costs, if any.

All other functions of the Transfer Station are the sole responsibility of the Town (not SRLD), including:

- Metal pile
- Construction debris
- Burn pile
- Propane tanks
- Tires
- Light bulbs
- Used Oil
- Batteries
- Electronics collection
- Collection bins

The Town currently utilizes D.C. Slocomb for the hauling of construction debris and removal of the metal pile and pays directly for the services.

Brookline has two representatives that serve on the SRLD Board, which meets monthly. The current representatives are Jerry Farwell and Eddie Arnold.

## Four Alternatives for Collecting/Processing Recyclables

There are four alternatives for towns to collect and process recyclables:

- Single stream
- Loose separation
- Compacted separation
- Baled separation

The following table outlines the pros and cons of each alternative:

| Alternative | Pros | Cons |
|---|---|---|
| Single Stream | Easy for residents; no separation required | Higher cost for town as vendor sorts |
| Loose separation | Greater revenue to town than single stream | Higher hauling costs than if compacted/baled as more trips to empty roll-offs containers;<br>Requires separation by residents |
| Compacted separation | Saves on hauling costs as contents are compacted | Investment required in compactors |
| Baled separation | Greatest savings on hauling costs;<br>Can "time" market for optimal revenue of baled items | Greatest investment required, including baler(s), loader, building |

The SRLD considered going to single stream about 10 years ago, but fortunately chose not to. Towns that did, like Merrimack, have regretted the move due to significant costs incurred.

Recently, the SRLD has been moving from loose separation to compacting recyclables in order to reduce hauling costs. This led to the addition of two more compactors for Brookline recyclables in 2018. The cost of the compactors was paid for by the district and the town paid the labor for installation.

The SRLD has considered baling, but has determined it does not make sense at this time. Part of the reason is that the four member towns are in different locations, so hauling to a single location for baling does not help address hauling costs. Additionally, the current volume of recyclables was not seen as significant enough to justify the investment needed to bale.

## Work Completed by the Committee

The committee completed the following work:

- Located a detailed topographical map of the Transfer Station property (prepared by Meridian in 2006) for use in considering future facility changes, including the potential addition of a Public Works building
- Conducted a site walk, which identified tasks to be completed or pursued
- Conducted a cost/benefit analysis for two new recyclables compactors
- Evaluated potential changes to the layout of the recyclable bins for optimization
- Reviewed SRLD hauling reports for 2017; identified hauling costs as an area of cost concern
- Reviewed the facility fee schedule and recommended changes to better cover costs

    - Construction debris disposal costs recently increased from $71/ton to $100/ton (*See Appendix* for August 23 memo outlining impact of increased costs for a portion of 2018)
    - Establish a new rate of $25 to dispose of tractor tires
- Reviewed the facility rules of operation and recommended changes
- Reviewed the current approaches and potential enhancements for:
    - Metal pile
    - Tires
    - Electronics collection
- Informally surveyed residents regarding mandatory recycling
- Hosted Ray Dube, Sustainability Manager at Coca-Cola Bottling Co, at a committee meeting to learn about his company's progress toward generating zero waste at its plant and what is being done by companies to repurpose recycled items into useable products
- Participated in a bus tour of Harvey Industries (where recyclables are sorted and processed) and the Wellesley, MA Recycling Center
- Discussed baling as an alternative to our current approach
- Evaluated if a warrant article should be recommended for the March 2019 town meeting

## Analysis – Cost/Benefit for New Compactors

In an effort to reduce hauling costs for recyclables, the SRLD decided to install two more compactors in Brookline during 2018. At the time, the Town was compacting mixed paper. The committee conducted a cost/benefit analysis to determine which compacted recyclables would provide the greatest return on investment. It was estimated that the Town's costs would be about $5,000 per compactor as the Town must cover labor costs and the SRLD covers all other costs related to the compactors.

The analysis (exhibit on the following page):

- Confirmed that compacting "mixed paper" provides the best return by saving about $8,100 per year in hauling costs compared to "loose" mixed paper
- Identified compacting "mixed plastics" as the next best option as it saves about $5,600 per year in hauling costs (breakeven of less than one year)
- Identified separating and compacting translucent plastics as an opportunity to generate revenue of approximately $3,000 per year and reduce hauling costs. (Hollis started separating and compacting translucent plastics in 2017)
- Compacting aluminum cans was found to not be optimal as it would only save about $1,000 a year in reduced hauling costs and have a five-year breakeven

## Compactor Analysis

| | | | | | | | | Exhibit |
|---|---|---|---|---|---|---|---|---|
| Item | Town - Form | 2017 Tonnage | 2017 # of Trips | Tons/ Trip | Trips Saved Per Year By Compacting | Current Cost Per Trip | Annual Savings | 2017 Income/ (Expense) |
| **Mixed Paper** | **Brookline - Compacted** | **84.3 tons** | **10** | **8.4 tons** | **30** | **$271** | **$8,130** | **$3,859** |
| | Mt. Vernon - Loose | 30 tons | 14 | 2.1 tons | -- | -- | N/A | $1,459 |
| **All Mixed Plastic** | Hollis & Amh. - Compacted* | 108.9 tons | 38 | 2.9 tons | -- | -- | N/A | ($3,266) |
| | **Brookline - Loose**** | **46.3 tons** | **44** | **1.1 ton** | **28** | **$200** | **$5,600** | **($1,390)** |
| **Aluminum Cans** | Hollis & Amh. - Compacted | 21.3 tons | 14 | 1.5 tons | -- | -- | N/A | $17,186 |
| | **Brookline - Loose** | **9.7 tons** | **11** | **.88 ton** | **5** | **$200** | **$1,000** | **$9,994** |
| * Excludes milk jugs which began being separated in the third quarter of 2017. | | | | | | | | |
| ** Includes milk jugs. | | | | | | | | |
| **Milk Jugs** | Hollis & Amh. - Compacted | 16.9 tons | 5 | 3.4 tons | -- | $275 | -- | $6,393 @ $378/ton |
| | ***Est.*** **Brookline - Compacted** | **5.1 tons** | **1.5** | **3.4 tons** | **--** | **$275** | **--** | $1,929 @ $378/ton |
| | | | | | | | | **$2,856 @ $560/ton** |

## Separating Precious Metals for Increased Revenue

At about the time of the committee's formation, separation of precious metals (cooper, brass, wire, aluminum, stainless steel) from the metal pile was initiated as an experiment to see if additional revenue could be generated. One challenge involved the declining prices paid for grade 2 precious metals between May and August:

| Type (Grade 2) | May 2018 Pricing | August 2018 Pricing |
|---|---|---|
| Copper | $2.10/lb. | $1.70/lb. |
| Brass | $1.20/lb. | $1.00/lb. |
| Insulated wire | $0.50/lb. | $0.30/lb. |
| Aluminum/lead | $0.35/lb. | $0.30/lb. |
| Stainless steel | $0.30/lb. | $0.20/lb. |

The volatility of metal prices makes cost/benefit analysis a moving target, given a 20%-40% decline in prices over just three months.

Two trips were made to MJS in Townsend in April and May, which generated a total of $615 in revenue:

| | Date: April 27th | | | Date: May 14th | | | |
|---|---|---|---|---|---|---|---|
| **Item** | **Weight** | **$/Pound** | **$** | **Weight** | **$/Pound** | **$** | |
| Steel | 320 | $0.06 | $19.20 | 700 | $0.06 | $42.00 | |
| (Old) Aluminum | 219 | $0.30 | $65.70 | 417 | $0.35 | $145.95 | |
| Insulated Wire | 123 | $0.40 | $49.20 | 89 | $0.40 | $35.60 | |
| Stainless Steel | 69 | $0.25 | $17.25 | 56 | $0.20 | $11.20 | |
| Copper | 10 | $2.00 | $20.00 | 58 | $1.80 | $104.40 | |
| Brass | 64 | $1.00 | $64.00 | 40 | $1.00 | $40.00 | **Total:** |
| | | **Totals:** | **$235.35** | | | **$379.15** | **$614.50** |

If the above items were not separated, they would have generated about $120 in revenue, resulting in a net gain of $495 by separating. The above was processed over the course of about four weeks. On an *annualized* basis, it would suggest total increased revenue of $5,500-$6,500 depending on prices. While not closely tracked, it was estimated that the $495 in revenue was the result of about 10 hours of labor, or about two hours per week. Assuming $20 per hour for labor, including taxes, the resulting profit was about $295, or $75 per week.

Hollis generates approximately $2,000 annually in precious metal revenue. Given Brookline's population is about 65% of Hollis's, it can be estimated that Brookline would generate about $1,300 annually using a similar approach. Hollis received about $18,000 for mixed scrap metal last year after factoring in trucking costs.

A pilot program is needed, with labor hours tracked, to determine the cost/benefit of separating precious metals. The pilot program would assist in determining if additional staff time dedicated to metal separation (i.e., 2-3 hours per week) would be worth the added cost. There is some concern that current staff may have limited availability for active metal sorting *during* transfer station hours while still effectively completing their many other duties, including collecting fees *(see Freon analysis in next section).* It is recommended that a staff member come in up to one hour early each day to work on metals and track the revenue gained versus the time spent over a period of 2-3 months.

MJS in Townsend is one option for taking the precious metals. They are relatively close and material was delivered *to them* in the above instances. A second option is Schnitzer in Manchester. While further away, better per pound pricing is likely if the Town were to use Slocomb to deliver the metal given the volume it moves. Actual pricing has not been received from Schnitzer and the cost of about $200 per trip would need to be factored into the cost/benefit analysis. In order to use Slocomb for transportation, a roll-off container would also be required and may result in only one or two trips per year. Grant funding is available from NH the Beautiful for up to 50% of the cost of a container, however, it is possible the town could obtain a roll-off for almost no cost and this option is being pursued.

The benefits of separating precious metals would be enhanced if the metals could be touched once when pulled from the metal pile and then placed in a locked area near where it is dropped off. Currently, if the metals are to be secured in a locked area, they need to be carried to the barn, which is being used for other purposes as well.

## Freon Costing Analysis

Prior to the disposal of the metal pile, a vendor removes the Freon from units that have been dropped off.

In July an analysis was conducted to evaluate the number of units that had Freon removed (cost to Town) versus the fees collected for units dropped off (revenue to Town). For the period May 3 through July 3, the analysis found:

- Cost of Freon removal was covered by the collection of fees
- However, fees were not collected on a number of items that were dropped off (fees collected for only 50% of the air conditioners):

| | Costs | | Revenues | |
|---|---|---|---|---|
| | # with | Cost at | # of | Rev. at |
| | Freon Removed | $9.00 | Slips | $15.00 |
| Item | on July 3rd | Per Unit | Received | Per Unit |
| Fridge/freezer | 27 | $243.00 | 20 | $300.00 |
| | | | | |
| Dehumidifier | 14 | $126.00 | 11 | $165.00 |
| | | | | |
| Air conditioner | 48 | $432.00 | 24 | $360.00 |
| | | | | |
| **Totals:** | **89** | **$801.00** | **55** | **$825.00** |

Lost revenue over two months: $510 (34 units at $15 per unit)

## Mandatory Recycling

Some residents were informally polled about the idea of moving to mandatory recycling. Based on the committee's review of the input and discussion of the topic, it was determined that the members were not in favor of mandatory recycling and view education and encouragement as the preferred approach.

## Baling

An alternative approach to processing and disposing of recyclables involves baling. This process compacts various recyclables into smaller rectangular blocks. A baler, skidsteer/loader, and building are required for baling. Baling would allow the town to further reduce hauling costs and hold recyclables for a period of time, so favorable pricing can be realized.

The SRLD has recently discussed baling. It was determined that baling does not currently make economic sense for the district and will not be pursuing it at this time. Should Brookline wish to pursue baling in the future, it could approach the district and seek funding for baling equipment needed to bale recyclables.

A June 2018 MOM meeting discussed baling and recent challenges that have arisen. These included:

- Bales must be kept away from daylight and free of mold and moisture
- Bales cannot be held for more than six months (limiting the window of time for optimal pricing)
- Specifications on the bales is changing so some older balers (Greenfield) are not able to meet the new specifications
- Increasing challenges with brokers and truck drivers who are not showing up on time to remove bales; leading to wasted town staff time (and pay)

## Recommendations

The committee recommends the following:

*Facility*

- Trim branches and remove two trees that are blocking lighting at facility entrance and near the front trash compactor. Timing: Late 2018/early 2019.
- Reshingle used oil shed. Estimated cost: $2,000 Timing: Late 2018 (seek grant funding from NHDES for partial reimbursement).
- Replace the two deteriorating sets of stairs that lead to the two trash compactors with a single stairway. Estimated cost: $10,000. Timing: Spring 2019
- Glass recycle bin should be placed where a mixed plastics bin is located once new compactors are in place; eliminates stairs for these heavier items
- Consider facility needs of the Transfer Station when Public Works building is planned for during 2019 (i.e., potential water line for residents to wash out dirty barrels, shared bathrooms, optimized lighting, etc.)

*Equipment*

- A backhoe with lift fork capabilities would assist Transfer Station operations and reduce subcontracting costs. Warrant article planned for 2019 town meeting.
- Cardboard trailer should be replaced in 2019; Town's representatives need to advocate that SRLD vote for and carry out this replacement
- Large (approximately 40-yard) roll-off needed to secure precious metals. Pursue potential purchase of the current newspaper or aluminum can roll-off for this purpose as SRLD may be replacing them in the near term. 50% grant funding available to assist with the purchase, if needed
- Tools needed (gloves, safety glasses, wire cutters, hand-held pipe cutter, pipe cutter blades, tin snips, chop saw and metal blades) to assist in cutting metal to optimize precious metal revenue
- Rear trash trailer needs replacement in 2020; Town's representatives need to advocate that SRLD vote for and carry out this replacement

*Construction Debris*

- Continue to monitor revenue and expenses every six months to ensure costs are being covered
- Pursue *purchase* of construction debris roll-offs to eliminate current rental cost of $50 per month

*Metal Pile*

- Conduct a pilot program to assess cost/benefit of separating metals over a 2-3 month period using an existing staff member who comes in up to an hour early each day for dedicated work separating precious metals
- Review collection of metal-related revenue each time metal pile is removed to ensure sufficient collection of fees from residents and covering Freon removal costs.

*Tires*

- Continue to load up to 15 rimless tires spread throughout each trash container. Wheelabrator benefits from having the tires in the trash and it eliminates our per tire disposal costs.

*Electronics Collection*

- Continue to hold events twice a year at this time. Hollis accepts electronics (primarily televisions and computers) on a continual basis, but requires a small fork lift to move items and pallets. It costs Hollis about $1,500 every quarter to get rid of the accumulated electronics. Our approach is currently revenue neutral or generating a slight profit. We do not see a reason to change this approach.

*Collection Boxes*

- During the committee's work two additional collection boxes were added to accommodate the overflow of items that were being left outside in the elements due to full Salvation Army bins. A Planet Aid box was added and will provide the town with revenue of $0.05 per pound collected. A SHARE box was added and $0.05 per pound of contents in that bin will be paid directly to SHARE in Milford by the vendor.
- Each vendor should be contacted immediately if their bin is full
- Tracking of Planet Aid revenue is recommended. If successful, the Town may want to replace one or both Salvation Army boxes with Planet Aid for additional Town revenue.

*Warrant Article*

- None recommended for 2019 town meeting.

*General Operations*

- Continue to monitor ways of reducing costs and enhancing revenues as changes continue to unfold. Continue to exchange information with other SRLD towns.

# Appendix

**TOWN OF**
**BROOKLINE, NEW HAMPSHIRE**
**SELECTBOARD**

**Telephone (603) 673-8855, ext. 213**

**Fax (603) 673-8136**

**P.O. BOX 360 – 1 Main Street**

**BROOKLINE, NH 03033-0360**

# *2018/2019 Transfer Station Evaluation Committee Charter*

**Purpose**

The Brookline Selectboard has established the 2018/2019 Transfer Station Evaluation Committee (TSEC) to evaluate future recycling implementation and site improvements of the Transfer Station property, including the estimated costs and revenue for the Town. A report, including specific recommendations, is expected for the March 2019 annual town meeting (or sooner). Members of the committee shall be appointed by the Selectboard. The committee's charter will end at the conclusion of the 2019 town meeting.

Meetings will be noticed and minutes taken consistent with RSA 91-A.

**Organization**

The TSEC will consist of nine voting members appointed by the Selectboard and will include the following:

- Selectboard Representative
- Transfer Station Lead Attendant
- Town Representative to Souhegan Regional Landfill District
- Town Administrator
- Brookline's DPW Director, once appointed
- Four at-large residents

Each voting member who represents another board or department will be responsible for keeping their respective group informed of the committee's work.

Additional (non-voting) members may join the committee at various points in time at the discretion of the committee. It is expected that one or more of the following may be asked to assist the TSEC during its work:

- Town Planner (for link to Planning Board for any eventual site review)
- Prior Public Works Study Committee members
- Conservation Commission representative
- Subject matter experts

In the event the committee wishes to modify the membership of voting members, approval of the Selectboard is required.

**Scope**

The committee will focus on the following tasks:

- Elect a Chair, Vice-Chair and Secretary
- Research availability of topographic map(s) for transfer station parcel and identify location of property boundaries
- Conduct a full site walk
- Review the work of last year's DPW Study Committee
- Establish a timeline for the committee's work
- Evaluate implementation of one or two new compactor(s) ($15,000 of funds available in 2018)
- Evaluate potential changes to the collection, storage/location, evolving NH DES requirements for, and disposal of:
    - Electronics
    - Tires
    - Metal
- Identify alternatives for future use/improvements of the property and layout, including timelines
- Identify alternatives for recycling improvements/implementation, including timelines
- Identify any legal questions/issues of importance and forward them to the Selectboard
- Advise Selectboard of preliminary alternatives as an interim step
- Develop a comprehensive list of pros and cons for each alternative
- Develop estimated costs and/or revenue to the town for each alternative; estimate return on investment for each
- Prioritize alternatives
- Develop final report outlining the committee's work and recommendations
- Assist the Selectboard in developing a presentation and warrant article(s) for town meeting, if needed

Committee charter adopted on April 23, 2018.

| | | |
|---|---|---|
| _____ | _____ | _____ |
| Brendan Denehy | Tom Humphreys | Valerie Ogden |
| _____ | _____ | |
| Eddie Arnold | Ron Olsen | |

# TOWN OF
# BROOKLINE, NEW HAMPSHIRE

**Telephone (603) 673-8855, ext. 213**

**Fax (603) 673-8136**

**P.O. BOX 360 – 1 Main Street**

**BROOKLINE, NH 03033-0360**


To: Selectboard

From: Tad Putney

Date: August 23, 2018

**Re: Recommended Increases in Transfer Station Fees – Construction Debris**

Disposal costs for "construction debris" have recently increased from $71/ton to $100/ton. Our fees were last increased in August 2016.

At its last meeting, the Transfer Station Evaluation Committee (TSEC) looked at the revenue collected year to date for construction debris and related costs for disposal:

- Revenue collected thru July: $5,454
- Disposal costs: $9,194
- **Shortfall: $3,740**

TSEC has recommended the Selectboard increase the construction debris fees in order to better align revenue with expenses.

Hollis recently increased their fees and I have recommended changes to the current fee schedule that are both more comparable to Hollis's and better aligned with our costs:

- Eliminate "no charge" if under 5 pounds
- Make "asphalt shingle" a separate category given weight; charge $75/cubic yd
- Increase fee for sheetrock and pressure-treated wood from $30 to $50/cubic yd
- Increase "painted wood/plywood" and "other items" from $15 to $30/cubic yd
- Increase fee for sliders from $10 to $15 each
- Eliminate "plastic/composite" item as should go in "trash"

TSEC may recommend other changes to the fee schedule in the future, but would like the construction debris shortfall to be addressed immediately.