



Northeast Resource Recovery Association

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

July 29, 2022

Dear Tamworth Representatives,

Thank you for participating in the SWAT (Solid Waste Advisory Team) Visit at the Tamworth Transfer Station on Tuesday, July 12th. This visit was conducted under NRRA's Recycling with Results grant, which is supported by the Rural Utilities Service, United States Department of Agriculture (USDA). To learn more about this grant, see <https://www.nrrarecycles.org/news/press-release-nrra-begins-recycling-results-grant-project>.

Joining us were:

SWAT Volunteers: Carol Burgess, Wilton, NH; Ken Filpula, Moultonborough, NH; Brian Patnoe, Lancaster, NH; Dennis Patnoe "Retired", Lancaster, NH; Meghan Theriault, Gilford, NH

NRRA Staff: Heather Herring, Member Services Representative; Bonnie Bethune, Sr. Member Services Representative

Transfer Station Staff: Glenn Johnson, Transfer Station Supervisor; Allen Libby, Attendant; Tim McGlew, Highway Maintenance
TSIC (Transfer Station Improvement Committee): Will Farnum, Chair; Gabrielle Watson, Vice Chair; Maud Anderson

Town Official(s): Kelly Gordon, Selectboard and TSIC; Karl Behr, Selectboard

The SWAT Volunteers and NRRA Staff met with the Transfer Station Staff, TSIC Members, and Town Officials to discuss the conceptual drawing for the proposed transfer station. Congratulations to Tamworth for acquiring a grant for this conceptual drawing. (See proposal below– Option G)

https://www.tamworthnh.org/sites/g/files/vyhlf3906/f/uploads/210902_concept_dwgs.pdf



Overall Goal of Renovation:

SWAT Team question:

Is the main focus of Transfer Station Renovation to decrease operating expenses, increase revenue, decrease MSW (municipal solid waste) generated?

Tamworth answer:

“...to create revenue to offset costs in the most economical way.”

Introduction as provided by Will Farnum:

- Some of the existing equipment and structures will stay in place during and after the renovations (MSW compactor)
- The site will need to stay in operation while construction takes place. The Transfer station is open Wednesday, Saturday, and Sunday for 8 hours each
- We hope that the construction company would be able to work four 10-hour days and we will be able to change the transfer station hours to the other three days. (Saturday Sunday Monday) or (Friday Saturday Sunday)
- 85-acre site, but there is limited space around facility due to existing grading

Goals of meeting as provided by Will Farnum:

- Ideas for the final plans for improvement to the TS in the construction of the new facility
- Space requirements (larger or smaller)
- Ways to make the dropping off materials easy for people
- Ways to make the handling of materials easy and less time consuming for employees
- Safety issues
- Best sorting of recyclables methods
- Specialized equipment; Baler types; Truck Scales
- Record keeping for savings/cost analysis
- Things that would be helpful to be able to do in the future:
Glass Pulverizing; Light Bulbs; Waste Oil; Batteries; Composting and Swap Shop

Tamworth has the following monies available as of 7/12/22:

- USDA – up to 35% of the costs (\$493,000)
- Town meeting vote to establish \$100,000 TS capital reserve in 2021 – Balance \$93,250
- Town meeting vote - \$149,460 in 2022
- Tamworth Foundation Grant - \$125,000
- Town meeting Vote – 2022 - 77.8% FOR \$274,460 in 2023
- Town meeting Vote – 2022 - 77.8% FOR \$274,460 in 2024
- **TOTAL monies to work with: \$1,409,630 as of July 2022**
- TSIC is still looking for other grants to help with project, i.e., Northern Borders Grant
- ARPA (American Rescue Plan Spending) funds can be used for septic and well (well has been drilled, septic needs better design as tank location is in proposed construction area)
- Total Tonnage of MSW (municipal solid waste) and recyclables in 2020 – 1,482 tons
Total Tonnage of MSW (municipal solid waste) and recyclables in 2021 – 1,428 tons
- Planning for operation during construction in 2023 -2024

I. Specific Materials:

A. Baled Recyclables:

1. Cardboard or OCC (old, corrugated cardboard) – CONTINUE COLLECTION

- High volume/market revenue (currently \$140/ton)
- Currently, cardboard is flattened by residents and stored in a container
- If baled, 48 bales are ideal to make a full trailer load but, if baling mixed paper, a combination load of 24 OCC bales and 24 Mixed Paper bales is an option



2. Plastics – ADD COLLECTION

- Due to high volume/market revenue
- Plastics can be separated into any of the following categories as is feasible for the Town (this can change over time as the facility grows)
- 1 category -1-7 plastics (48 bales to trailer load or 24 bales with another community to make a trailer load thru NRRRA); lowest revenue/most simple for residents/staff
- 2 categories - #1 PET (soda/water), #2 HDPE Natural (milk jugs) and #2 HDPE MC (Tide bottles) combined in one bale a.k.a. an HDPE “Z” bale; next highest revenue/ less simple for residents/staff
- 3 categories - #1 PET (soda/water), #2 HDPE Natural (milk jugs), and #2 HDPE MC (Tide bottles); next highest revenue/ less simple for residents/staff
- 4 categories - #1 PET (soda/water), #2 HDPE Natural (milk jugs), #2 HDPE MC (Tide bottles) and #5 PP; highest revenue/ less simple for residents/staff

3. Aluminum Cans – UBC’s (used beverage cans) only – CONTINUE COLLECTION

- Currently aluminum cans are crushed/flattened mechanically; if opt to bale, it would not be desirable to crush/flatten cans prior to baling as the bale would not hold together



- Baled - full trailer loads desired but smaller loads of 8 or so bales can be picked up by NRRRA vendors
- NRRRA Vendors can also pick up combination loads with aluminum can bales plus non-ferrous items and lead-acid batteries

4. Steel Cans – CONTINUE COLLECTION

- Depending on scrap metal market, steel cans may be able to be included with scrap metal at a high revenue per gross ton (check with current market)

5. Mixed Paper – ADD COLLECTION

- Option 1: 48 bales ideal but can do a combination load of 24 OCC bales and 24 Mixed Paper bales
- Option 2: Use one of Town's gambrel container with windows for loose mixed paper; July 2022 revenue per ton through NRRRA is \$40/ton delivered to our MA vendor (this does not include haul fee)
- Baled or loose material Includes junk mail, newspaper, magazines, office paper ("anything that rips"); wet strength (soda/beer cartons; frozen food boxes unacceptable)

B. Glass – CONTINUE COLLECTION

- Currently collect in gambrel style rolloff container with sliding windows
- Interest in a glass pulverizer like BCEP in Pittsfield NH where glass jars and bottles are pulverized into a sand-like material
- It was noted that Conway used a highway roller to crush glass and uses as ADC (alternative daily cover) on their landfill



C. Commercial C&D (Construction & Demolition Debris)

- Suggestion of allowing contractors to come in on off days when Staff is onsite baling, etc. to cut down on traffic when residents are using the Transfer Station. This concept was previously denied by BOS due to resident concerns that if site was open to contractors, it should be open to public. BOS could revisit this matter.
- Alternative to above, allow commercial trucks with cardboard to dump at overhead door on left side of recycling building; Staff would move cardboard to bunker or baler from there

D. Compost

- Encourage backyard composting
- If collect at facility, start with leaf and yard waste; add food scraps later
- Explore local farm options for food scraps

II. Infrastructure:

1. Recycling Building

- Proposed 126' x 90'
- Suggestion to have the traffic lane closest to the scale be a "Recycling Only" lane for better traffic flow
- Make additional windows that can be closed off for future expansion of recyclables collected or further sorting of plastics for increased revenue
- Consider rollup doors with locks
- Two-stage separation keeps material from contamination
 - Option 1: Tippable trays at each window (Staff would inspect and "tip" into bunkers)
 - Option 2: Gilford uses a mesh truck tarp across the collection area where residents place recyclables; Staff then "weeds out" any contamination before dumping contents into the collection area below (particularly for aluminum cans and plastics)

- Bunkers/collection areas for recyclables – recommend moveable barriers so can expand/contract collection areas



Lee NH Transfer Station



Gilford NH Transfer Station

2. Bale Storage

- Recommended having room for 100 bales at one time of various recyclables
- Prepare for inside storage of all baled materials either in recycling building or in storage trailers
- Consider one “live” loading dock
- If have two (2) loading docks, consider having one (1) trailer for bale storage and then “live load” into a trailer that will pick up material and ship to market
- Full loads of one material – 48 bales of one recyclable i.e., Cardboard
- Combination loads – 48 bales of two recyclables i.e., Cardboard & Mixed Paper
- Combination loads – 48 bales of 1 -7 plastics or 48 bales of #1 PET + #2 HDPE

3. **Establish collection areas** for batteries, electronics, fluorescent bulbs, Freon units, and tires near office area as these will be disposal fee items
4. **Swap Shop**
 - Gilford has had success with their swap shop and recommends purging area frequently to prevent buildup of unwanted items
 - Walpole has a successful swap shop with many volunteers and a tracking system to weigh gains/losses of items to show costs avoided by not landfilling these items
 - Some communities have done away with the swap shop as becomes too cumbersome for staff to maintain or becomes a gathering spot for residents/yard sales

III. Equipment:

1. **Baler – One (1) horizontal baler vs 2,3,4 vertical balers**
 - Horizontal should be purchased new; vertical balers can be purchased used if determine type/amount of use it has had (cardboard baler, plastics baler, etc.)
 - Vertical Balers – PTR (Philadelphia Tramrail) is a popular baler; consider “long-stroke” so that platen that pushes material down, pushes it all the way down to the bottom of the baler for a denser bale
 - Vertical Balers – note how many wires around each bale and how close they go to the sides of the bale (typically 5 -6 wires with 6 being best)
 - <https://www.nrrarecycles.org/resource-library/baler-vendors>
2. **Skid Steer**
 - Per Glenn Johnson, Tamworth Transfer Station Supervisor, a skid steer is the “Swiss army knife for Transfer Stations” for moving of recyclables to baler and loading bales on trailer in addition to many other functions
 - Consider purchasing the following attachments for the skid steer
 - Sweeper
 - Snowblower or snow pusher
 - Sander
 - Grapple (if purchase a horizontal baler this is a must)
 - <https://www.nrrarecycles.org/resource-library/skid-steer-companies>
3. **Truck scale**
 - consider placing scale house/office area by offramp of scale and between the existing MSW building and scale so residents do not have to cross traffic going to recycling building
(see Option G on conceptual drawing) <https://www.nrrarecycles.org/resource-library/scale-companies>
4. **Waste Oil Furnace**
 - To heat new recycling building; accept waste oil from residents and highway department only (not from businesses)
 - Arrow Equipment – Littleton, NH 603-444-3313

- NHDES Used Oil Grant Assistance Program – up to \$2,500/year for NH Municipalities 1-888-TAKEOIL or UsedOilGrants@des.nh.gov

5. Backhoe

- Transfer Station already has a backhoe for compacting C&D (construction and demolition debris) and scrap metal, etc.

IV. Other

1. RFP (Request for Proposal)

- Instead of putting facility construction “out to bid” which requires Town to take the lowest bid, it was recommended by the SWAT team to put out an RFP – “Request for Proposal” for a design/build with a general contractor; interested contractors would come in to discuss #’s/design/make suggestions or adjustments to conceptual plan
- Please find Gilford’s recycling facility documents/specifications and construction plans attached separately as provided by Meghan Theriault.

2. PAYT

- Consider Pay-As-You-Throw unit-based fee system for MSW
- Decide if cost per bag/sticker/punch will cover all MSW expenses – tipping fee, trucking fee, equipment rentals, administrative fees
- <https://www.nrrarecycles.org/resource-library/pay-you-throw>

3. Special Revenue Fund

- Consider establishing a special revenue fund that would hold disposal fees, revenues generated and would be used for Transfer Station needs such as a new baler, skid steer, etc.
- Set up either for expenditure to be approved by Selectboard or by Town Vote <https://www.nhmunicipal.org/town-city-article/reserve-funds-special-revenue-funds-or-revolving-funds-choosing-right-tool-right>

4. Motor Vehicle Waste Fund

- Consider establishing a motor vehicle waste fund for batteries, tires and waste oil <https://waste.uvlsrpc.org/funding-project-assistance/motor-vehicle-reclamation/>

5. Join NRRRA Listserv

- Sign up to join and have access to dozens of regional recycling operators regarding equipment, disposal fees, recycling programs, etc. <https://www.nrrarecycles.org/education-technical-assistance>

V. Recommendations for Future Field Trips

- 1) **Gilford, NH** – newest recycling facility in NH; horizontal baler, pre-storage of recyclables, storage of baled recyclables; 1-7 baled plastics; contact - Meghan Theriault dpwdirector@gilfordnh.org; (603) 527-4783
- 2) **Moultonborough, NH** – C&D management, security system (24/7 monitoring; addresses safety/liability concerns; can see material dropped off (especially items with disposal fees); can see license plate #'s); contact - Ken Filpula wmf@moultonboroughnh.gov ; (603) 476-800
- 3) **Lancaster, NH** – C&D management; multi-vertical baler system; C&D management; pre-storage of recyclables, storage of baled recyclables; contact - Brian Patnoe transferstation@lancasternh.org; (603)788-3200
- 4) **Bristol NH** – horizontal baler recently installed and unique collection system; contact – Mark Bucklin mbucklin@townofbristolnh.org ; (603) 744-2441

Quotes of the Day:

- “A lot of minds make things work better in the long run.” Will Farnum
- Regarding facility construction contractor “You will need a big dog for this one.” Ken Filpula



School children to paint mural on existing building

This material is based upon work supported under a grant by the Rural Utilities Service, United States Department of Agriculture. Any opinions, findings, and conclusions or recommendations expressed in this material are solely the responsibility of the authors and do not necessarily represent the official views of the Rural Utilities Service. Rural Community Assistance Partnership, Inc., is an equal opportunity provider and employer.

Additional Resources:

The following are resources available to the Bristol for education and capital improvements at the Tamworth Transfer Station:

- 1) NHTB – Free Signs <https://nhthebeautiful.org/facility-signs/>
- 2) NHTB – Free Sandwich Boards <https://nhthebeautiful.org/a-frame-sandwich-board-facility-sign-program/>
- 3) NHTB – Equipment Grants <https://nhthebeautiful.org/municipal-recycling-and-storage-equipment-grants/>
- 4) USDA – Community Facilities Direct Loan & Grant - Tamworth is eligible for a 35% Community Facilities Grant <https://www.nrrarecycles.org/news/january-mom-meeting-features-usda-funding-recycling-facilities> (ALREADY RECEIVED)
- 5) EPA Grants (Pending Fall 2022)