

Bowdoinham Solid Waste Committee  
2020-2021  
Interim Report  
June 2021



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## **Bowdoinham Solid Waste Committee Overview**

Bowdoinham's Solid Waste Committee has been meeting every two weeks since June of 2020. Members include Bryan Benson (Director of Solid Waste and Recycling), Susan Brown, Michael Smith, Pat McDonough, Susan Drucker (secretary), Lisa Wesel (vice-chair) and Cathy Curtis (chair). (Tessa Kingsley stepped down from the committee in January)

The Committee's original task was to:

1. Oversee protocols for keeping the Recycling Barn open during the pandemic
2. Contain expenses for the recycling program and problem-solve curbside pick-up contamination
3. Address the condition of the Barn after the Select Board reviewed inspections and reports and discussed their findings with David Berry, Leaser

The committee created the following vision statement to guide its work:

"The goal of the Solid Waste Committee is to provide a resource for residents to reduce household solid waste, reuse and repurpose unwanted materials, and facilitate recycling as current markets allow. The Committee strives to seek revenue sources and cost savings for the town by staying current with market trends, and to encourage environmental stewardship through innovative and proactive practices."

Members toured the Recycling Barn and brainstormed possible ways to reopen for services while still adhering to Covid-19 safety precautions. The Recycling Barn did reopen for limited hours in August.

This task of the committee shifted in September, when the Select Board closed the Recycling Barn based on a report from Calderwood Engineering that cited safety concerns. This decision was made without the Solid Waste Committee.

As an interim solution, the town worked with Casella to have recycling receptacles (Silver Bullets) placed at the Recycling Barn allowing for zero-sort drop-off recycling. When that operation was moved to the Public Works property, curbside collection of recycling ceased.

The Committee was then re-tasked with: "Determining a vision for the future of solid waste and recycling to include: what services the town wants; what is needed to offer these services; and how can the services be offered."

To gain resident feedback, the committee created a survey that could be completed online or via a paper copy. The survey was open throughout the month of January, and results from 471 residents were tabulated in early February. The committee is using those results to help guide their work on determining the type of program residents would like to see implemented in Bowdoinham.

The committee continued to gather information on the different materials that can be recycled, the possible methods for recycling, the cost of recycling those items, and the space that might be needed to store those items until it is financially viable to have them hauled.

A presentation by Ecomaine was made at the 1/6/2021 meeting providing information about their recycling services for towns. Casella presented to the committee on 5/5/2021.

The committee continued information gathering and discussion through the spring and compiled its current findings into a report for the Select Board in June.

Next steps are to discuss findings and make formal recommendations on the kind of program the committee recommends for the town.

The Committee welcomes public attendance at our zoom and/or in-person meetings. Links/schedules can be found on the Town Calendar with agendas.

### **Timeline of Solid Waste and Recycling services for 2020-2021**

March 2020 - Recycling Barn closes to public based on Governor's Pandemic Order. Curbside pick-up of trash and recycling continue to be offered.

June 2020 - Recycling Barn reopens on Thursdays and resumes all services except "The Store" and bulky waste collection

August 2020 - Limited public hours offered on two Saturdays for bulky waste collection  
September 2020 - Recycling Barn is closed based on safety concerns

September 2020 - Recycling "Silver Bullets" from Casella are added to parking lot at Recycling Barn for zero-sort recycling; curbside pick-up of recycling continues

October 2020 - Select Board votes to move Silver Bullet operations to Public Works site

November 2020 - Curbside recycling services suspended due to lack of storage and sorting space. Silver Bullet drop-off suspended until receptacles can be relocated at Public Works Site

December 2020 - Zero-sort recycling resumes at Public Works

January 2021 - Tuesday hours added, 12-6 PM for recycling drop-off

February 2021 - Barn lease canceled with town

April 2021 - Cardboard started being baled, and a bulky waste collection day was held at Public Works on April 24.

June 2021 - Town Meeting-Citizen's petition to purchase Recycling Barn failed 90-95. Amendments halted further study on a new facility and limited any funds over \$2500 spent on Barn studies be put out to an open bid process with a total expenditure of no more than \$26,500.

April 2021: Independent of town operations, Sagadahoc Recycling begins a Pilot Program at the Recycling Barn at which residents can drop off source-separated recyclable materials. The Pilot Program will determine the weight and volume of these collected materials and will help the committee assess the viability of Source Separating as a recycling option.

## Solid Waste and Recycling Survey Interpretation

Late last year, the Solid Waste Committee surveyed the residents of Bowdoinham about their thoughts on a “pie-in-the-sky” recycling program -- what they value most and what was less important to them going forward. The “Solid Waste and Recycling Survey 2020” was distributed as an insert in the *January-February 2021 Bowdoinham News*, which is mailed townwide to approximately 1,400 households. The survey was also posted on the Bowdoinham town website for residents to record their responses online.

The survey generated 471 responses (a 34% return) by the Jan. 31, 2021, deadline. The data was compiled and graphed for analysis by town staff.

The survey addressed several aspects of a potential recycling program, including recyclable materials, hours of operation, and fees; it also included open-ended questions for residents to share their thoughts. Residents were asked to rate each service from 0 (not at all important) to 5 (extremely important). For purposes of our analysis (below), responses of “4” and “5” were counted as positive; “2” and “3” were considered neutral; and “0” and “1” indicated little or no interest in that service. The percentage next to each heading represents the level of positive support; items in each category are listed in order of greatest public support to lowest. Please also refer to the graphs printed elsewhere in this report.

### **OPERATIONS**

#### **A Local Recycling and Waste Facility: 92%**

5 -- 83%  
4 -- 9%  
0 or 1 -- 2%

#### **How important is it that the town has a program whereby materials can be reused or recycled instead of going into the waste stream? 85%**

5 -- 76 %  
4 -- 9% .  
0 or 1 -- 6%

#### **Curbside Recycling Collection: 54%**

5 -- 44%  
4 -- 10%  
0 or 1 -- 22%

### **MATERIALS**

#### **Hazardous Waste: 87%**

5 -- 68%  
4 -- 19%  
0 or 1 -- 3%

#### **Oversized Bulky Waste: 75%**

5 -- 53%  
4 -- 22%  
0 or 1 -- 5%

**The Store (Gift Shop): 70%**

5 -- 54%  
4 -- 16%  
0 or 1 -- 13%

**Electronics: 68%**

5 -- 48%  
4 -- 20%  
0 or 1 -- 8%

**Styrofoam: 63%**

5 -- 44%  
4 -- 19%  
0 or 1 -- 15%

**The Clothing Exchange: 59%**

5 -- 43%  
4 -- 16%  
0 or 1 -- 19%

**The Book Section of the Gift Shop: 54%**

5 -- 36%  
4 -- 18%  
0 or 1 -- 21%

**Returnable Bottle Collection (with proceeds going to local charity): 41%**

5 -- 26%  
4 -- 15%  
0 or 1 -- 35%

**Tires: 37%**

5 -- 24%  
4 -- 13%  
0 or 1 -- 29%

**Compost: 20%**

5 -- 12%  
4 -- 8%  
0 or 1 -- 60%

**Brush: 17%**

5 -- 11%  
4 -- 6%  
0 or 1 -- 61%

**Leaf and Grass Clippings: 13%**

5 -- 8%

4 -- 5%  
0 or 1 -- 66%.

### **RECYCLING FEES**

#### **Per Bag Fee for Curbside Recycling Pickup: 48.6%**

Do support -- 48.6%  
Do NOT support -- 54.4%

#### **Fee to Access a Recycling Facility: 51.4%**

Do Support -- 51.4%  
Do NOT support -- 48.6%

### **HOURS OF OPERATION**

Saturday mornings and afternoons elicited the most support.

Thursday afternoons and mornings came in second.

Other hours, in order from highest to lowest, were Thursday evenings, Saturday evenings, and Sundays.

### **THE COMMENT SECTION:**

**“Is there any service that you would like to see added to the recycling program?”**

**“Do you have any additional comments about the future of the Recycling Program?”**

Here are the most common themes among the comments collected, followed by the number of people who mentioned it:

Go back to how it used to be (68)

Need for Bowdoinham to have a good/robust recycling program (63)

Return to the Barn (44)

Recycle glass (38)

Provide better recycling education (32)

Need a town-owned-building (18)



Fix the Barn (18)

Continue Gift Shop (17)

Do curbside again (15)

Need a new building (13)

Fees on recycling would keep people from doing it (13)

Encouraging participation in recycling is more important than \$\$ (12)

Current program (Public Works) is not working / unacceptable (12)

No new building -- too expensive/wasteful (12)

Be nimble, flexible, have vision (11)

Value the community aspect of the Barn (11)

Don't reduce the recycling program (11)

Be sure material is actually recycled (11)

# Solid Waste Recycling Survey 2020 Results

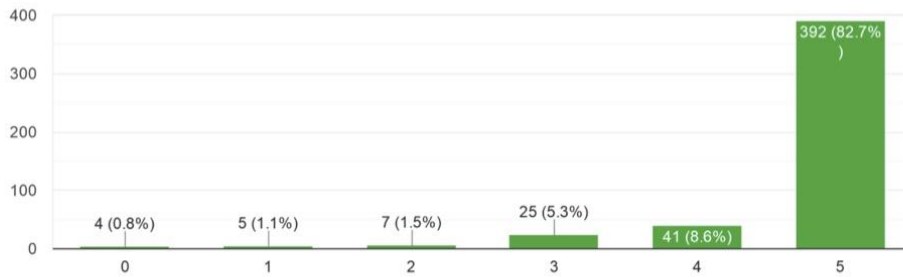
## Curbside recycling collection

471 responses



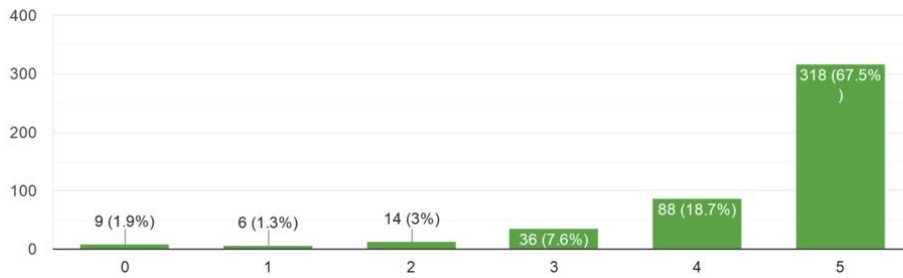
## A local facility where residents can bring recycling and waste material

474 responses



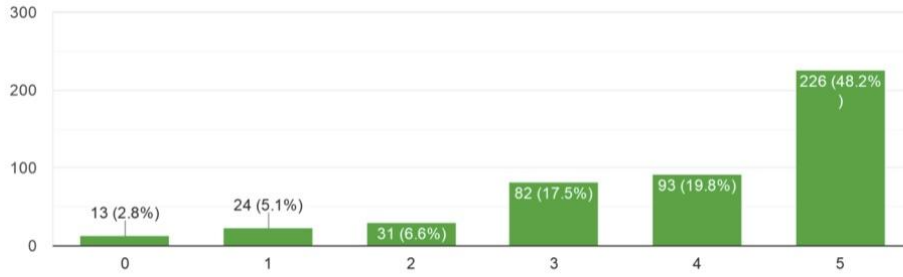
## Hazardous waste disposal (lightbulbs, paint, batteries, etc.)

471 responses



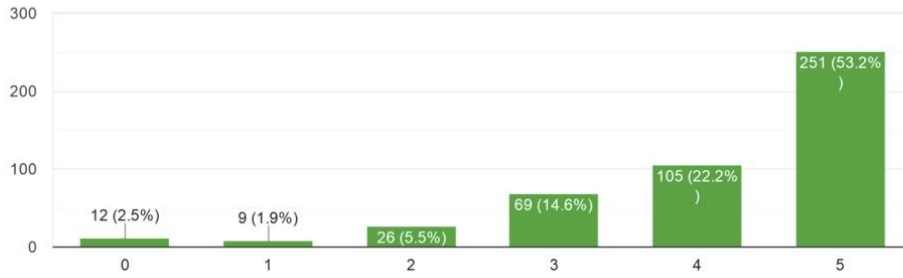
### Electronics disposal (printers, computers, etc.)

469 responses



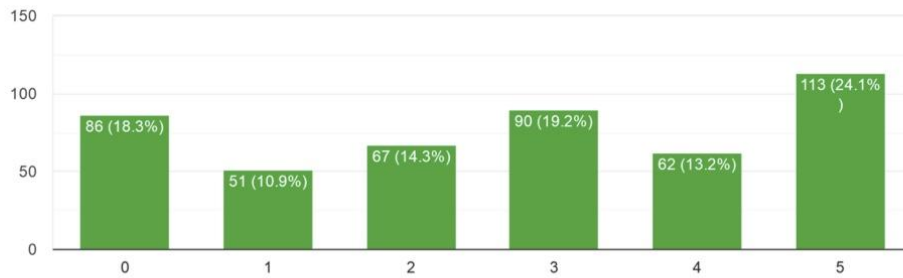
### Oversized bulky waste disposal (furniture, mattresses, appliances and other large items)

472 responses



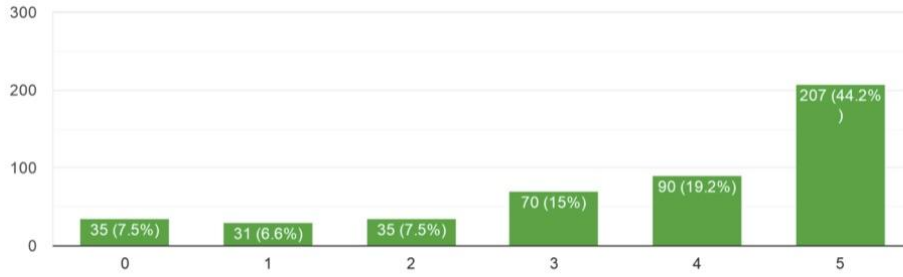
### Tire disposal

469 responses



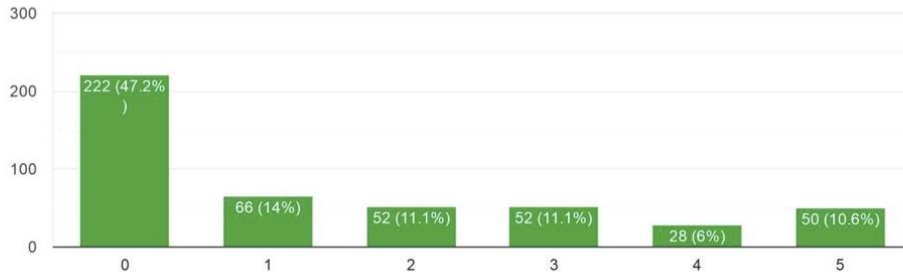
### Styrofoam collection

468 responses



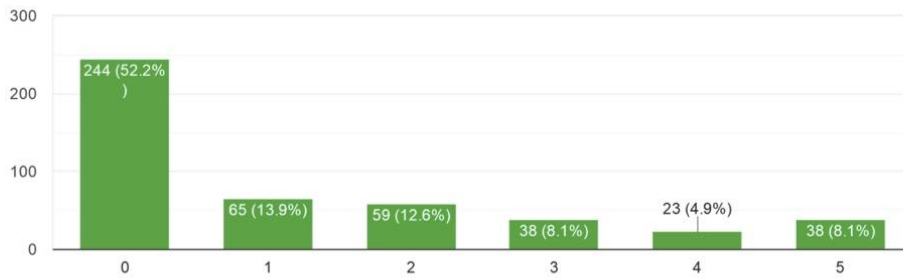
### Brush disposal

470 responses



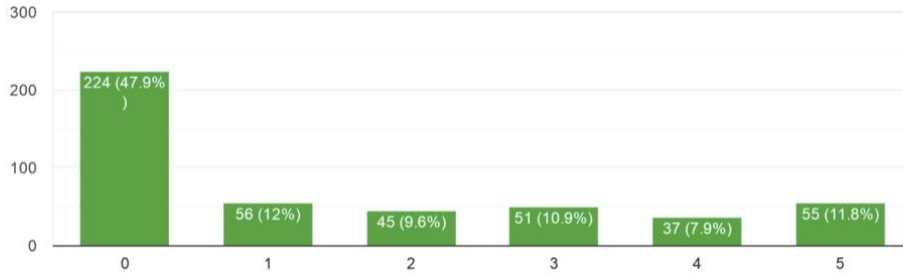
### Leaf and grass clippings disposal

467 responses



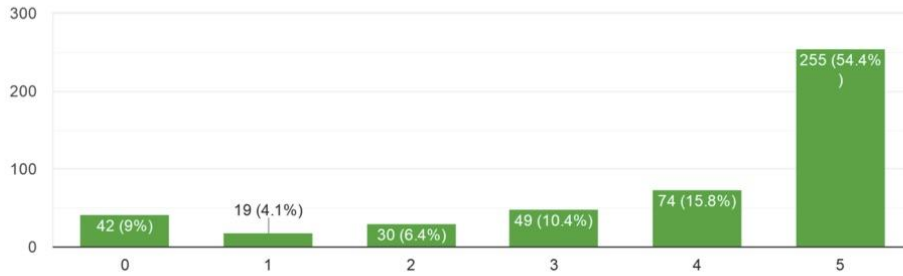
### Composting

468 responses



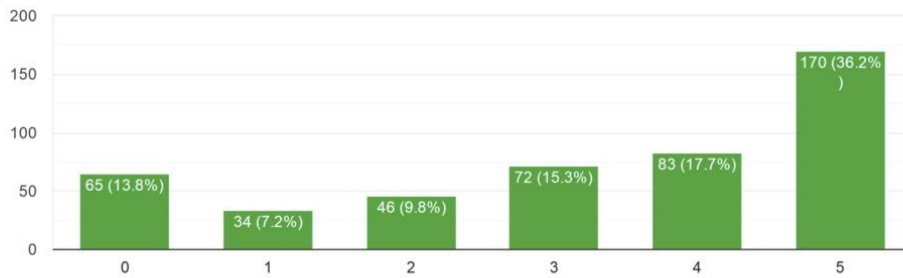
### The "Store," where residents donate reusable household items for others to take for free

469 responses



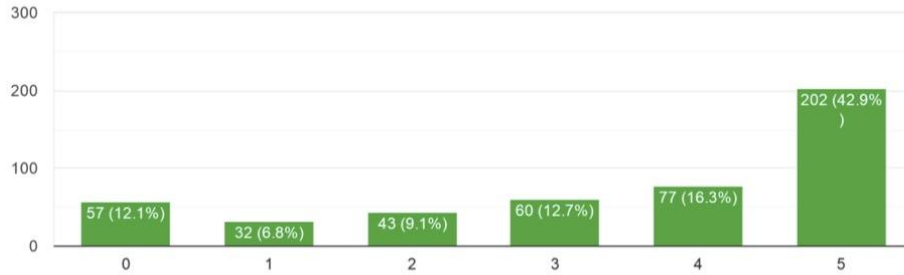
### The books section of the Store, where residents donate books for others to claim

470 responses



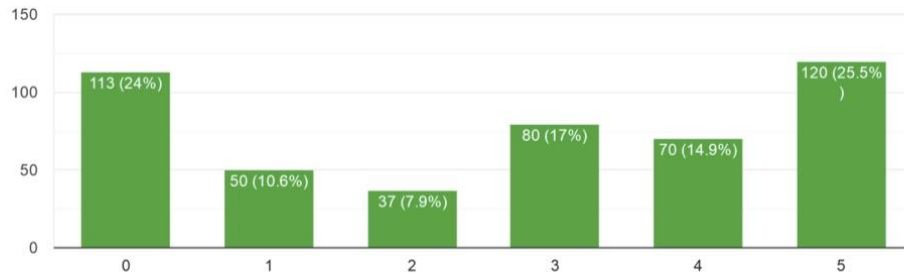
The "Clothing Exchange," where residents donate clothing, linens, fabric, etc. that others can take for free

471 responses



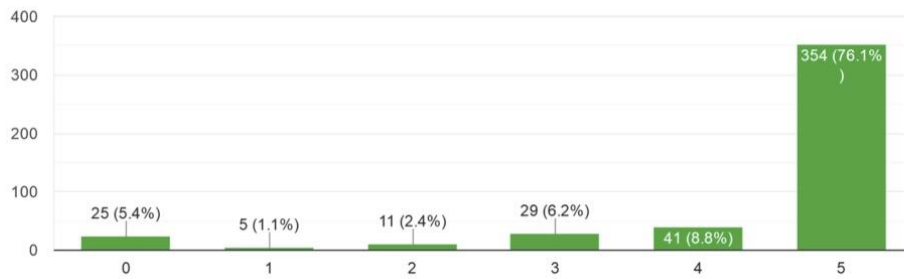
Returnable bottle collection, where the proceeds are donated to a charity.

470 responses



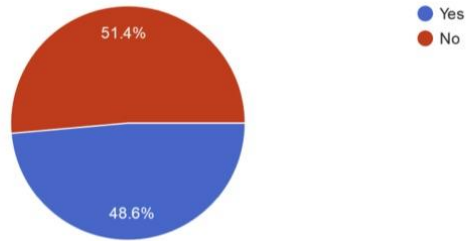
How important is it to have a town program to divert material from the waste stream by recycling and reusing?

465 responses



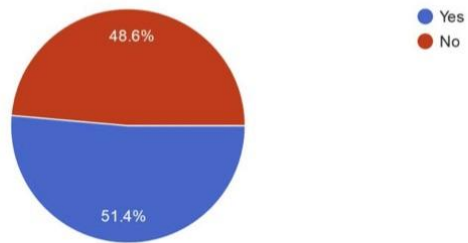
Would you be willing to pay a per-bag fee for curbside recycling collection?

465 responses

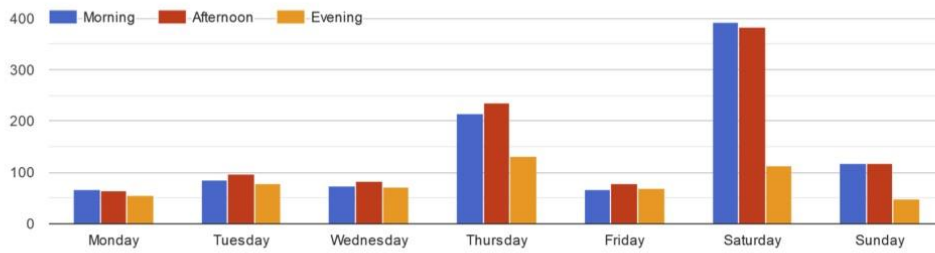


Would you be willing to pay for access to a recycling facility?

465 responses



The Solid Waste Department facility has historically been open on Thursdays and Saturdays from 8 a.m. to 4 p.m. What hours of operation would your household find most beneficial? Please check all that apply.



## Hazardous Waste

In addition to the standard recyclable materials that the town collects, the recycling facility has traditionally acted as a collection site for other materials that should be kept out of the waste stream because they are toxic to the environment – for example, paints, lightbulbs, and batteries. The Solid Waste Committee compiled this spreadsheet as a way of cataloging which materials the town has collected and how much space those materials take up in the facility. This information, combined with the requirements for other materials and the results from the town-wide survey, will help us determine which programs are worth retaining and how big a facility will be required to accommodate them.

Material	Amount collected	Space needed for	Cost to the town (just labor, or tipping / disposal fees)?
lightbulbs	1,000 lightbulbs	2 pallets	labor cost; program is free
house paint	6-8 pallets	4 pallets	labor cost; program is free
misc. paints	1-2 pallets	1 pallet	labor and trucking to Auburn
batteries	250 batteries		labor cost; program is free
tires		10' by 10' space	Tn charges \$3-\$3.50/tire
electronics	11,160 lbs	12-15 pallets	Costs tn \$3/lb to dispose of ballast resistors, most recently: \$435 for +/- 30
motor oil	maybe 15 55-gallon		
mercury	10-15 items	negligible	labor cost; program is free
pesticides/	at least one	3 metal cabinets, each	Cost: labor, transport and disposal, which depends on the weight and contents
Household	1-3 pallets	1 pallet	\$475/pallet in 2020; depends on the weight and contents
<b>Pallets are 40 x 42 inches (3' 4" x 3' 6 "). Two can be next to each other, but they need 2 feet of space on one side to walk around it.</b>			



## **Materials Requirements**

The Solid Waste Committee was tasked with determining what kind of recycling program the town would like to have going forward, and what size and type of building that would require. In order to answer those questions, we needed to understand the logistics of operating the program:

1. How long does each material spend at the facility before it is disposed of?
2. How much space does that require?
3. How is it processed for disposal, e.g. is it baled?

The following spreadsheet outlines those details. Some information is unknown because it has been years since the town separated recyclable materials.

Material Requirements Solid Waste Recycling

		Baler Needed?	Minimum load for transport	Time of storage until transport (est.)	Sq Ftg Floorspace needed for storage	Cost per ton to process	
Cardboard		Yes	Yes, 40,000lb	4 months	300	\$54.00	
Plastics		Yes	Unknown	Unknown	Unknown	Unknown	
Mixed Paper		Yes	Yes, trailer load	6 months	300	\$120.00	
Newspaper		No	Yes, trailer load	2+ years*	152	Minimal	
Magazines		No	Yes, trailer load	2+ years*	152	Minimal	
Metal		No	Grimmels supplies dumpster and takes for free		None	Minimal	
Metal cans (food)		Yes	Unknown	Unknown	Unknown		
HAZARDOUS WASTE							
Electronics		No	12-15 pallets		200	Minimal	
Lightbulbs		No	As boxes are filled	Minimal	50	Minimal (Fed funded boxes and shipping)	
Paint		No	3 pallets	1 year (?)	80	Minimal (one, maybe 2 trips to transport to Auburn a year)	
Batteries (rechargeable)		No	As boxes are filled (2 months to fill a box)		20	Minimal (Fed funded boxes and shipping)	
Tires		No	100 tires	6 months	100		
Household cleaners etc		No	1 pallet		20	Minimal	
Pesticides, insect., flammables		No			50	Variable	
			Newspaper and magazines may be taken together as a mixed load, thereby reducing storage time			"Cost to process" only reflect time for staff at our recycling facility to collect, bale, store, etc. No transport or cost to dispose of calculated	
	* These numbers reflect the approximate square footage required to sort recyclable in-town. Single-level, non-stacked bales.						

000001

## Town-by-town comparison

For decades, Bowdoinham's recycling program was known throughout the state – and even gained national praise – for its breadth and creativity. The program has changed over the years, along with economic and market forces, but remained (until the pandemic) one of the most comprehensive in the state. It is useful to review recycling in Bowdoinham and look at how other communities of a similar size are handling solid waste.

Before the pandemic, Bowdoinham took a two-pronged approach to recycling. Trash was collected curbside for a user fee of \$2.50 per bag, and recyclables were collected curbside, funded by property taxes, in a hybrid single-stream/sorted model: #1-#7 plastics, metal cans and, until very recently, glass, were combined in clear plastic bags; newsprint, magazines/glossy paper, mixed paper, and corrugated cardboard were also collected curbside, but had to be bundled separately. The fee from trash tags helped to cover the cost of trash collection and disposal and curbside recycling collection.

All of the items collected curbside also could be brought to the Recycling Barn, along with:

- Egg cartons, for reuse by residents who raise chickens
- Styrofoam peanuts, for residents to take for packaging
- Styrofoam – It was *not* recycled, but the town accepted it for free as a service, because it took up so much room in a resident's trash bag yet could be compacted to a very small and lightweight bale for disposal.
- Tires
- Lightbulbs
- Electronic waste
- Oil and latex paints
- Batteries
- Household hazardous waste (e.g. cleaning solutions)
- Fertilizers/pesticides/insecticides and flammable liquids
- Motor oil (which the town burned to heat the Barn)
- Mercury (e.g. thermometers)
- Household items, toys, and books for reuse by residents
- Shoes, clothing, and other fabric items for reuse by residents
- Small construction materials (e.g. windows and doors) for reuse by residents
- Scrap metal
- Scrap wood

Curbside collection of both trash and recyclables occurred on Thursdays, while the Recycling Barn was open Thursdays and Saturdays.

In early 2020, the barn was closed to the public in response to the COVID 19 pandemic and in February, 2021, the lease was terminated due to concerns about the safety of the structure and associated costs. (See timeline in Committee Overview, p. 3) In the interim, curbside collection of recyclables was suspended and large receptacles ("Silver Bullets") were installed at the Public

Works Facility. They are open for the single-stream collection of recyclables on Tuesdays, Thursdays, and Saturdays, but the list of materials has been reduced to:

- #1-7 plastics
- Newspapers
- Magazines/glossy paper
- Mixed paper
- Metal cans

Additional receptacles are available for source-separated:

- Scrap metal
- Paint
- Lightbulbs
- Batteries
- Mercury (thermometers)
- Corrugated cardboard

The town contracts with Casella and pays a per-ton tipping fee on both trash and recyclables. (As of May 19, 2021, Casella charges \$88 per ton for trash, \$370 per silver bullet. The silver bullets are collected four times per month. The annual budget for Solid Waste is \$191,906. This does not include the revenue from the sale of trash tags or the sale of recyclables.)

### **Woolwich**

Trash is collected curbside from half the town on Tuesday and the other half on Wednesday, and recycling is collected every other Monday (They don't have enough to make weekly collection cost-effective.)

Woolwich contracts with ecomaine for disposal of trash and recyclables, and with Riverside for trucking. They pay a fixed per-ton tipping fee for trash, and a separate fee for recycling that varies month by month, based on the market price ecomaine can get for the material. They do not require trash tags – the program is funded 100 percent through taxes. The success of the recycling program depends on compliance by residents to keep contamination to a minimum – if a resident's recycling bin contains material that is either not clean or not recyclable, they may be charged a penalty fee or it may not be collected. Training and education are an on-going process.

This year's budget for trash and recycling is \$202,194, of which \$128,050.92 is the contract with Riverside for trucking.

### **Dresden**

Dresden has no curbside collection of either trash or recyclables – residents bring all their trash and recycling to the solid waste facility, which is open on Thursdays, Saturdays, and Sundays. They pay \$2/bag for trash; recycling is free.

Residents sort materials into separate bins. Everything is taken to the Lincoln County Solid Waste Facility.

In addition, they also collect:

- Fluorescent bulbs (same program we use)
- Small batteries (no car batteries – same program we use)
- Used motor oil (a local resident collects it to heat his shop)

Dresden has an agreement with the Town of Richmond whereby Dresden residents can bring certain items (bulky waste, latex paint, tires, and household hazardous waste) to the Richmond transfer station. Richmond charges non-residents \$15 annually to access the facility, plus separate fees per item.

Dresden had a swap shop for household items and clothing, similar to Bowdoinham's, staffed by volunteers. It shut down because of COVID.

The town's annual budget for solid waste and recycling is \$55,800 (\$8,300 to operate the Recycling Center; an \$18,000 contract with Pine Tree Waste Systems for trucking; and \$29,500 for Transfer Station salaries.)

### **China, Maine**

Like Dresden, China has no curbside pickup of household trash or recyclables. They operate their own 3,000-sf transfer station, where residents (or companies with whom residents contract) bring trash and recyclables; residents are not charged a fee for either. Recyclables are sorted by residents.

The town accepts #2 plastic; newspapers and magazines; paperback books that are no longer sellable, as well as hardcovers with the cover removed. The items are baled together, 75 percent paper to 25 percent #2 plastic. Casella hauls the bales to Canada and then pays the town directly the profits of their share of material.

The town has decided not to collect mixed paper because at the moment, it costs money to dispose of it. China used to contract with Fiberite in Hampden, but the plant shut down in June. If it reopens, the town will start accepting mixed paper again; in the meantime, they are directing residents to put it into their household trash.

If there were an adequate water source at the recycling center, it would be possible for the town to purchase a \$15,000 machine to process the paper into "bricks" that residents could use for fuel in their wood stoves.

China also collects:

- Glass and porcelain (from toilets or tubs or sinks), which is crushed and used for clean fill.
- Scrap metals -- Ames Metal provides a 40-yard container which they pick up for free. A portion of the profit goes back to the town.
- Food waste, which is dumped on a slab at the recycling center and frequently turned with a front-end loader to create compost, which is then provided to residents free of charge.

- Clothing, linens, shoes, and accessories are collected by Apparel Impact, a veteran-owned business that provides a container at no cost to the town.
- Paint
- Engine oil, which they burn to heat the building.
- Bulky waste, which is crushed before it is loaded into a truck to be hauled away.

The annual budget, not including salaries, benefits, or vehicle maintenance, is \$209,000 (\$95,000 for municipal solid waste, \$43,000 for trucking, \$44,000 for demolition debris, and \$27,000 for recycling).

### **West Gardiner**

West Gardiner collects trash and recycling curbside using their own truck, funded by taxes with no individual user fees. They have three balers “going all the time,” processing mixed paper, cardboard, magazines, newspapers, #2 clear plastic, and #2 colored plastic, all of which they then haul to Casella themselves. They also compact their trash. Because they haul their own materials, low market prices aren’t a problem for them, and at the same time, they are able to take advantage of high market prices. Their metal goes to Grimmels.

Residents have access to the transfer station, which is open Monday, Wednesday, and Saturday. They had a swap shop but, according to their website, they closed it because the rules were not being followed.

The annual Solid Waste budget is \$130,000.

*Please note: The budgets for the local towns we researched in this report ranged from \$55,800 to \$209,000. This is not an apples-to-apples comparison due to the variables of what is included (salaries, materials accepted, trucking, etc.).*

See Grid on next page

## Grid for Town by Town Comparison

	Bowdoinham (2019)	Bowdoinham (now)	Woolwich	China	Dresden	W Gardiner
Population (2010 census)	2,889		3,072	4,428	1,672	3,474
<b>Accepted Materials</b>						
Newspapers	X	X	X	X	X	X
Magazines	X	X	X	X	X	X
Mixed paper	X	X	X		X	X
Cardboard	X	X	X		X	X
#1 plastic	X	X	X		X	
#2 plastic (clear)	X	X	X	X	X	X
#2 plastic (colored)	X	X	X	X	X	X
#5 plastic	X	X	X			
#6 plastic	X	X	X			
#7 plastic	X	X	X			
glass	X		X	X (and porcelain)	X	
styrofoam	X					
egg cartons	X	X				
metal cans	X	X	X		X	X
scrap metal	X	X		X		X
bulky waste				X	X (in Richmond)	X
household haz. waste	X				X (in Richmond)	
paint	X	X		X	latex (in Richmond)	
electronic waste	X					X
lightbulbs	X	X			X	X
batteries	X	X			X	
mercury (thermostats)	X	X				
oil	X			X	X	

	Bowdoinham (2019)	Bowdoinham (now)	Woolwich	China	Dresden	W Gardiner
clothing/textiles for reuse	X			X	X (pre-pandemic)	X
household items for reuse	X				X (pre-pandemic)	X
tires	X				X (in Richmond)	
food waste				X		X
<b>Operations</b>						
curbside trash	X (\$2.50/bag)	X (\$2.50/bag)	X (no fee)			X (no fee)
trash collected at facility (no curbside)				X (no fee)	X (\$2/bag)	
curbside recycling	X		X			X
Public building	X			X	X	X
# of employees	3 part-time	3 part-time		3 FT, 2 PT	3 PT (soon to be 2)	3 FT, 1PT (truck driver)
single-stream or sorted	Sorted by residents --> single-stream	single-stream	single-stream	sorted by residents	sorted by residents	sorted by residents

## Budget comparison Pre Covid vs 2021-22

**The following is a breakdown of the budgets for trash collection and recycling, both pre-COVID and currently.**

### **Trash:**

Currently the revenue from the sale of trash tags partially offsets the cost of trash collection and disposal.

Before 2020 (pre-COVID), as with prior years, trash disposal cost more than \$57 per ton, and the program generated a small income for the town. Curbside collection of trash and recyclables were included in the same budget line item.

As of at least July 2020, trash disposal has cost \$88 per ton, and the income from the sale of trash tags falls 60 cents per bag short of covering the cost. Based on the 2021-22 revenue of \$80,000 in yearly trash tag sales (32,000 tags), the projected shortfall will total \$19,000.

$\$80,000 / \$2.50 = 32,000$  trash tag sales

$\$2$  a bag  $\times 32,000 = \$64,000$ . Cost to pick up trash bags

$32,000 \times 25\text{lb}$  (max weight of bag) = 800,000 lbs or 400 tons  
 $400$  tons  $\times \$88$  (cost to dispose) = \$35,200

$\$64,000 + \$35,200 = \$99,200$  cost for pick-up and disposal of trash

$\$99,200 - \$80,000 = \$19,000$  net loss/cost to town

### **Recycling:**

Disposal of recyclable material—plastic, cardboard, mixed paper, etc.—has not changed much from pre-COVID until now. Pre-COVID, the materials were collected both curbside and at the recycling facility, and hauled unsorted to Casella, where the town was charged a per-ton tipping fee. Additional costs to the town included the labor to unbag the material collected curbside, load the truck, and drive it to Casella; plus gas and vehicle maintenance.

Post-COVID, residents bring their recyclables to Silver Bullets, which Casella hauls and charges the town by volume, not weight. The net costs to dispose of mixed recyclables pre- and post-COVID are similar: Pre-COVID it cost approximately \$100,000 to run the recycling operation, and the 2021-22 budget shows it costs approximately \$100,000 to run the current operation. It is important to note, however, that residents are receiving less service for the same cost, as there currently is no curbside collection of recyclable material.



## Recycling Service Alternatives

### **Ecomaine:**

\$95/ton tipping fee (\$16 per ton return; penalty fees could be added based on contamination levels).

\$225 hauling (through Troiano or Riverside) per container (One container averages 1.1 ton)

Total:  $\$95 + \$225 = \$320$  per container. If hauling 1 container a week, total is \$320 per week.

### **Casella before Silver Bullets (Town hauled):**

\$137/ton tipping fee.

Town hauled 1.7 tons a week in one trip.

Rough estimate on fuel costs: 3 miles/gallon @ 80 miles round trip to Scarborough = 26 gallons @ \$2.50/gallon = \$65 per trip. Rough estimate on labor costs: 2 hours driving and delivering time @ \$20/hr. = \$40

Total:  $\$137 + \$65 + \$40 = \$242$  per week

Note that use of the town's F550 truck changes future calculations as follows:

Rough estimate on fuel costs: 12 miles/gallon @ 80 miles round trip to Scarborough = 6.6 gallons @ \$2.183/gallon = \$ 14.41 per trip.

Total:  $\$137 + \$14.41 + \$40 = \$191.41$  per week

### **Casella using Silver Bullets**

After cardboard removal, Casella is picking up and hauling approximately one Silver Bullet container a week. Total cost is \$370 per week. (Total does not include the cost to bale and haul removed cardboard.)

## Recommendations

The Solid Waste Committee recommends a program similar to what was offered pre-Covid. We have termed this a “hybrid” program with a combination of source separation and single stream. Silver Bullets or trucking of recycling could be part of the program when markets are not favorable to source-separation.

- Space for the program should be at least 10,000 square feet; vertical storage options may lower this number
- If curbside recycling is offered, it would require more space in the facility (See note below.) This would not be storage space but a place to contain and process material as it is collected.)
  - Pros:
    - Convenience (especially people with mobility needs)
    - more people participating/less recycling in waste stream
    - In 2018 1,000 bags collected each month demonstrating resident participation
  - Cons:
    - Historically high rates of contamination
    - Plastic bags become trash
    - Cost of labor to process material for hauling
    - Cost of picking up bag \$.75
- Program should take advantage of recycling markets when possible/feasible to help offset costs.
- Look for ways to divert items from the waste/recycling stream to encourage reuse and help bring down costs, for example crushing glass for fill or processing mixed paper into fire bricks.
- Program should include an area/space for a Swap Shop of 1,000 square feet. This may require an organized volunteer component.
- Facility must meet ADA requirements for safety and accessibility for employees and the public, and include adequate heating and a restroom facility for both staff and the public.
- Program should include an ongoing education component for the community about what can be recycled, what cannot be recycled, and the background on why.
- Ideally, the building will serve as a transfer station to allow for storage of some materials.
- Solid Waste manager position should offer adequate hours to manage the program in a forward-thinking and creative manner, with duties that include coordination of waste removal, research on possible revenue markets, education about the program for the public.

- Consider increasing the cost of trash tags to \$3 to help offset costs of the program.

FYI: It currently costs \$3.15 to dispose of a 25-lb trash bag. (\$2.05 pickup + \$1.10 disposal @\$88/ton tipping fee). The average weight of a bag is around 16 lbs. It should be noted that in 2006, when trash tags went from \$2 to \$2.50, there was a significant increase in the use of dumpsters and loss of trash tag sales. The increase to \$2.50 covered the cost of trash pickup, disposal AND recycling bag collection at that time. If the town resumed curbside collection of recycling, trash tags would need to cost approximately \$4 each to cover the cost.

Respectfully submitted,

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