

REUSING AND RECYCLING

LARGE RIGID PLASTIC ITEMS in Rural Communities

This guide is designed to help local government officials in rural communities better understand the options available for reusing and recycling large rigid plastic items. It is one of a series of guidance documents to help rural communities consider options and develop strategies for managing bulky wastes and diverting them from disposal. The other best practice documents focus on **furniture, mattresses, and carpet** and are available at: www.newmoa.org/solidwaste/projects/bulky.

Discarded large plastic items are difficult to handle and transport and consume increasingly scarce landfill space. Disposing of these items is challenging for homeowners and expensive for local waste authorities, particularly in rural communities. Some of what is thrown away might be reusable or contain materials that, through recycling, can replace virgin material in the manufacturing of new products reducing their carbon footprint and overall environmental impact.

Large rigid plastic items are generally defined as being the size of a five gallon bucket and larger, and are therefore, too big to include in the regular recycling stream. They include outdoor furniture, kiddie toys, pools, play structures, laundry baskets, and recycling bins. These products present significant opportunities for reuse and recycling.



Large Rigid Plastic Waste

Reuse

Large plastic items that are in good condition with no broken pieces and that can be cleaned should be reused whenever possible. Communities can facilitate reuse by promoting existing donation and resale options or by facilitating local swap opportunities. Many charities and non-profit organizations accept large plastic items in good condition, particularly children's toys and outdoor furniture for donation or re-sale, including Goodwill, Salvation Army, The Society of Saint Vincent de Paul, and other local social service agencies.

Consumers may be able to sell their large plastic items directly through yard sales, flea markets, or online exchanges, such as Craig's List (www.craigslist.org) or e-bay (www.ebay.com). Online sites, like the Free-cycle Network (www.freecycle.org) help to facilitate direct donations between households.

Swap Shop or Event

To promote diversion of usable materials from disposal, some communities operate a "swap shop" at their transfer station or recycling center where residents drop-off and/or pick-up all manner of items in reusable condition. This can consist of a permanent or seasonal building, barn, shed, tent, or covered open outdoor area. Generally, swap shops work best when the drop-off can be monitored so that residents cannot leave items that are in poor condition.

An alternative to a permanent "swap shop" could be a special community event operated as a one-day drop-and-swap exchange. A community could hold the event at the transfer station if there is ample space or at another community facility, such as a school. There will be items remaining onsite after a swap event, and communities generally have three options to handle them:

- Put the leftovers in the bulky waste bin at the transfer station or add them to the swap area if there is one
- Contract with a private hauling company to remove them for a fee
- Work with the local materials recycling facility to collect them for recycling

Benefits of Reusing & Recycling Bulky Plastic Items

Municipalities and tax payers benefit from reuse and recycling of bulky plastics by:

- Saving money on landfill disposal costs
- Conserving energy and raw materials
- Returning products and materials back into the economy and fostering job creation
- Helping people who can use the item but cannot afford to buy it new

Recycle

There is a recycling market for many large plastic items. Most of them are made from #2 - high density polyethylene (HDPE) or #5 - polypropylene (PP) plastics and are generally collected, baled, and sold together as so-called “mixed bulky rigids”. Items made from other types of plastics should not be included in the collection of bulky plastics for recycling. A list of plastic items that are typically accepted and not accepted for recycling is available in the sidebar on this page.

Most communities that recycle large rigid plastics work with the municipal recycling facility (MRF) that services their traditional recycling program for paper, bottles, and cans. If asked, most MRFs will facilitate recycling of mixed bulky rigids. However, these materials cannot be handled with traditional recyclables because they are too big to run through the MRF’s mechanized sorting process. Instead they are tipped separately and sent straight to the bailing machine. Due to onsite storage limitations, MRFs require that they receive a significant quantity of large plastics at one time. Communities can generate a big load of bulky plastics through either a special one-day community collection event and/or a dedicated container at the transfer station. Special one-day community recycling collection and reuse swap events can be combined and held together.

Most large rigid plastic recycling programs require that the items are completely plastic. This means that residents must remove metal, fabric, and other non-plastic components before recycling them. Additionally, although plastic items are not damaged if they get wet, they should not be stored outdoors uncovered for very long because they can degrade in the sunlight and collect rainwater that could breed insects.

Communities should contact their local recycling facility to assess the feasibility of recycling mixed bulky rigid plastic items. Depending on the plastics recycling market, the MRF might charge to accept a load of large plastics. But the costs associated with recycling are usually less than the costs of transporting and disposing of them at a landfill or waste-to-energy facility.

Municipal Collection of Bulky Rigid Plastics for Recycling

The town of Whately, MA is located in rural Franklin County in the western area of the State and has a population of about 1,500. In 2015, town officials found out that the local MRF would accept bulky rigid plastics for processing, and they decided to take advantage of this opportunity. The town uses a 40-cubic yard recycling roll-off at the transfer station to collect the materials, and they offer free drop-off for residents of Whately and surrounding communities. In the first year, they shipped two full containers to the MRF. Hauling this material to the MRF costs the same as transporting it to the landfill, and the town received approximately \$10 in revenue for each load from the MRF instead of having to pay the landfill for disposal.



Large Rigid Plastics Collection

For more information, visit:
www.franklincountywastedistrict.org/bulkyplastic.html.

Bulky Plastic Items That Usually Can Be Recycled

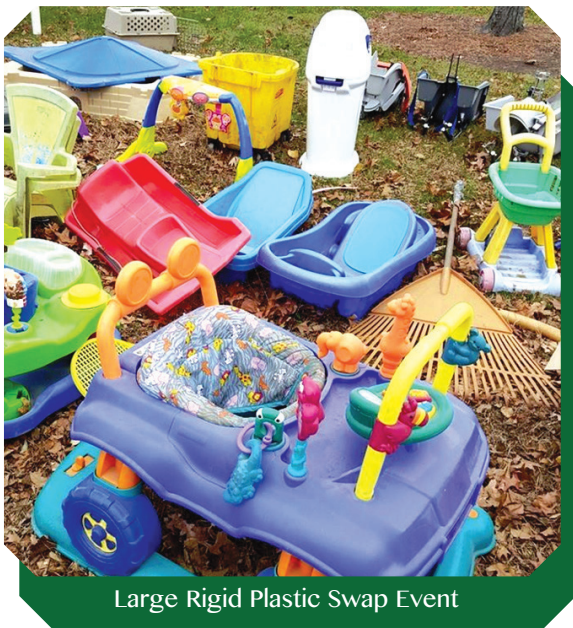
(check with your local MRF as program specifics vary)

- Toys and play structures
- Buckets and waste baskets
- Milk/soda crates
- Laundry baskets and dish drainers
- Lawn furniture and Landscaping edging
- Flower pots and trays (no thin crushable pots/trays)
- Totes and storage containers
- Pet carriers and kitty litter buckets
- Shelving and closet organizers
- Empty garbage cans and recycling bins
- Five gallon water bottles

Note: Metal handles and axles, batteries, and all other non-plastic parts must be removed before drop-off. All items should be rinsed and any loose dirt removed.

Items That Cannot Be Recycled as Bulky Rigid Plastic

- Anything made from #3 - polyvinyl chloride (PVC) including PVC pipe/tubing
- Vinyl siding or fencing
- Chemical containers, including pesticide/herbicide and oil/petroleum containers
- Medical waste containers
- Electronics or other items with circuit boards and/or batteries
- Bags, wrap, or other film plastics
- Flexible water hoses
- Polystyrene/Styrofoam (#6)
- Tires



Large Rigid Plastic Swap Event

Northampton's Reuse Committee's Fall 2015 Bulky Rigid Plastic Collection

Saturday, November 7, 9am-Noon
Smith Vocational High School



Bring your large, clean, rigid, plastic
discards for sharing & recycling!

All collected items will
be available to the public free of charge



Planning a One-Day Community Event to Facilitate Large Plastics Reuse & Recycling

CHALLENGE	POSSIBLE SOLUTION
Finding staff and/or volunteers to organize and manage the event	<ul style="list-style-type: none"> ■ Leverage resources by holding reuse event in conjunction with a household hazardous waste (HHW) or solid waste collection event ■ Partner with local charities, nonprofits, or businesses that can provide volunteers
For swap events: handling items that are not suitable for reuse or are not picked up by the end of the event	<ul style="list-style-type: none"> ■ Visually inspect items as they are collected and refuse unsuitable ones ■ Partner with a local recycling facility to take all of the leftover items at the end of the event ■ Charge a drop-off fee to offset the costs for recycling or disposal
Charging drop-off fees might limit participation	<ul style="list-style-type: none"> ■ Set the fee lower than the bulky waste disposal fee that is normally charged ■ Only charge fees on items that are in poor condition or not in demand
Recycling facilities require plastic only – no metal, fabric, or other components	<ul style="list-style-type: none"> ■ Publicize what items are and are not acceptable at the event – see sidebar on page 2 for more detail ■ Have tools available for residents to remove the other materials themselves
Recycling facilities require shipments of large quantities (30 cubic yards or more)	<ul style="list-style-type: none"> ■ Organize the event in collaboration with other communities to increase volume ■ Create storage capacity at the transfer station to allow continued collection of additional material over time
Paying for transportation to a recycling facility and for recycling fees (if any)	<ul style="list-style-type: none"> ■ Charge residents a drop off fee to help offset the costs for recycling ■ Collaborate with other communities to increase economies of scale and split costs
Promoting the event to attract customers for both drop-off and pick-up	<ul style="list-style-type: none"> ■ Include information in existing marketing campaigns for HHW, solid waste, or recycling management

Successful Municipal Reuse/Recycling Events

Northampton, MA is a small rural city with a population of 28,500 residents and has an active citizen volunteer ReUse Committee that is a subcommittee of Northampton's Public Works Commission. They operate the ReCenter swap shop at the transfer station and organize an annual series of one-day reuse and recycling events.

The annual spring and fall Recycling and Reuse Rallies are held in the parking lot of a local school and involve collection of bulky rigid plastics for recycling along with an outdoor swap area. The event planners partner with the local MRF who provides the required roll-off containers and hauls the unusable and leftover large plastics to their facility for recycling. To promote reuse, the event volunteers set up a cleaning station consisting of buckets of water, old towels, and dish detergent where residents can clean off their dirty, but good quality items.

The first bulky rigid plastics reuse and recycling event was held in 2010 and has evolved over time to include more types of materials. Now the community plans around these semi-annual events. For example, a local animal shelter attends to collect animal crates, litter boxes, and other supplies. The September 2011 event collected over 5.5 tons of bulky plastics for recycling at a total cost that was less than disposal.

For more information about Northampton reuse and recycling events, visit: www.northamptonma.gov/751/Recycling-Solid-Waste.

For more about the Northampton ReUse Committee, visit: www.facebook.com/NorthamptonReUse.



Northampton Recycling and Swap

Northampton Reuse Committee's
Spring Recycling Rally
Saturday, April 30, 2016 • 9 AM to Noon
Smith Vocational High School 80 Locust Street, Northampton

- 1** → **Bulky Rigid Plastic**
Nothing flexible or crinkly, no PVC
- 2** → **Pellet Fuel Bags**
Must be dirt-free and dry
- 3** → **White Styrofoam**
Large white chunks only, Must be rigid, dry & clean
- 4** → **Bicycles**
via Bikes Not Bombs
Suggested \$10 per bike donation to offset shipping expenses
- 5** → **Document Shredding**
Limit of 2 outside recycling-sized boxes

For more info visit www.northamptonma.gov/reduce-waste or call 413-557-1089

NEWMOA

NORTHEAST WASTE MANAGEMENT OFFICIALS' ASSOCIATION

NEWMOA is a non-profit, non-partisan interstate association whose membership is composed of the state environmental agency directors of the hazardous waste, solid waste, waste site cleanup, and pollution prevention programs in Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont (www.newmoa.org).

This document was developed by NEWMOA with input from the following partners:

- Androscoggin Valley Council of Governments (AVCOG) in Maine
- Central Vermont Solid Waste Management District (CVSWMD) in Vermont
- Franklin County Solid Waste Management District (FCSWMD) in Massachusetts
- Maine Department of Environmental Protection (ME DEP)
- Massachusetts Department of Environmental Protection (MassDEP)
- Northeast Kingdom Waste Management District (NEKWMD) in Vermont
- Vermont Department of Environmental Conservation (VT DEC)

This document was developed as part of NEWMOA's "Promoting Strategies to Increase the Reuse and Recycling of Bulky Wastes in Rural Communities" project. The purpose of this initiative is to provide technical assistance to rural communities in the Northeast to help them implement more sustainable systems for reusing and recycling furniture, carpet, mattresses, and large rigid plastic items. For more information about this project visit: www.newmoa.org/solidwaste/projects/bulky.

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