

REUSING AND RECYCLING

FURNITURE in Rural Communities

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

Disposal Alternatives:

- Reuse – the item is kept “whole” and is sold or donated for use again
- Refurbish/Remanufacture/Rebuild/Renovate – some or all components are removed and replaced
- Recycle – the item is separated into its components that are then processed and used to create new products

Reuse

Furniture that is in good condition with no rips, stains, or broken pieces should be reused whenever possible. Communities can facilitate furniture reuse by promoting existing donation and resale options or by facilitating local swap opportunities. Many charities and non-profit organizations accept furniture in good condition for donation or re-sale, including Habitat for Humanity ReStores, Goodwill, Salvation Army, The Society of Saint Vincent de Paul, and other local social service agencies.

Consumers may be able to sell their used furniture directly through yard sales, estate sales, flea markets, or online exchanges, such as Craig’s List (www.craigslist.org) or e-bay (www.ebay.com). Another resale option is antiques dealers, consignment stores, or

Discarded furniture is difficult to handle and transport and consumes increasingly scarce landfill space. Disposing of furniture 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.

Benefits

Municipalities and tax payers benefit from reuse and recycling of furniture 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 need furniture but cannot afford to buy it new

Furniture generally includes large household items made from metal, plastic (e.g., patio or garden furniture), and/or wood. Some furniture is upholstered. This document focuses on wood and upholstered furniture, including couches, chairs, tables, bureaus, desks, and bedframes because this material presents significant opportunities for reuse and recycling. Metal recyclers value the steel, aluminum, and other materials in metal furniture, making them easily diverted from landfill disposal. Most municipal programs currently recycle these metal products. Guidance on reuse and recycling of plastic furniture is covered in a separate document that focuses on “Large Rigid Plastics Items”.



Segregated furniture at a transfer station

How Communities Can Facilitate Reuse

- Add containers at their transfer stations dedicated to specific charity organizations that will pick up when filled
- Add a swap shop at their transfer station (see page 3 for examples)
- Host a reuse event, such as a yard sale, swap, or zero waste event

Profile of a Furniture Bank in New England: The Wish Project

The Wish Project is a furniture bank that operates a 15,000 square foot warehouse located in Lowell, MA. They accept furniture, home goods, mattresses, working appliances, baby gear, and clothing. The organization prefers to work with large donors, such as hotels and universities, because they have multiple pieces of furniture that are of the same style and size, and are generally in excellent condition. However, they also accept donations from the public. There is no charge for dropping off items, and donations are tax-deductible.

The Wish Project provides online guidance about the items that they accept for donation. For example, wooden furniture must be sturdy and intact; upholstered furniture cannot have any rips, stains, or tears. They have their own heat-treatment trailer and use it to process all mattress and upholstered furniture donations. As a result of these requirements, they have a high rate of refusal, and often turn people away because of the poor quality of the items being dropped off. Sometimes items that cannot be reused can be recycled, and The Wish Project accepts them because they are able to earn money by selling them to a recycler. They estimate that, of the donated material that they accept, about 10 percent ends up in the trash.

There are several nearby communities that facilitate donations to The Wish Project. In most cases, the communities hold their own collection events and rent a truck or trailer to transport collected items to the warehouse. For example, a nearby town rented a vehicle to transport collected furniture and mattresses. The town of Ayer, MA has a permanent trailer that they use to transport their collected donations. In special circumstances, The Wish Project has utilized its staff and heat-treatment trailer to facilitate pick-up from a community.

For more information, visit: www.thewishproject.org.



Mattress Heat Treatment Trailer

upholsterers, who sell directly to clients looking for vintage or antique furniture.

Online sites, like the Free-cycle Network (www.freecycle.org) help to facilitate direct donations between households.

Furniture Banks

Communities could promote or facilitate donations to furniture banks. A furniture bank is a large building or warehouse that receives, sorts, processes, and distributes all types of furniture (and sometimes mattresses) at little or no cost to low-income families and individuals moving from shelters into permanent housing, including victims of fire,



Furniture & Carpet Disposal	
Please request placement of these items, do not throw into container.	
Twin /Single Mattresses or Boxsprings	\$30 each
Full /Queen /King Mattresses or Boxsprings	\$30 each
Couch	\$20 each
Loveseat	\$15 each
Upholstered Chair	\$10 each
End tables, wooden chairs, kitchen/dining room tables, bookcases, bureaus	\$5 each
Area rug	\$10 each
Wall-to-wall carpet	\$25 each
Sink, toilet	\$10 each

An example of current fees for disposal

Furniture Banks in New England

Helping Hands Furniture Bank
North Haven, CT

Making a Home Foundation Inc.
Sandy Hook, CT

New Haven Home Recovery
West Haven, CT

Household Goods Recycling of MA
Acton, MA

Project Home Again
Andover, MA

My Brother's Keeper
Easton, MA

The Wish Project
Lowell, MA

Mass. Coalition for the Homeless
Lynn, MA

Touchstone Furniture Depot
Marlborough, MA

Mission of Deeds
Reading, MA

New Life Home Refurnishing
Walpole, MA

Central MA Housing Alliance Clearinghouse
Worcester, MA

Greater Portland Charitable Furniture Center
Portland, ME

Furniture Bank of Rhode Island
Providence, RI

resettled refugees, and those fleeing domestic violence. Each furniture bank is funded and operated differently, but they all typically require that recipients have a referral from a social service agency. Desirable items for those starting over include beds, dressers, nightstands, tables, chairs, sofas, and lamps. Because most of the low-income or temporary housing is of modest size, furniture banks generally do not accept large pieces of furniture, such as armoires, headboards, desks, or mini-bars. There are 15 furniture banks in New England and more than 80 across the U.S. and Canada. A full listing is available at: www.furniturebanks.org/list-of-furniture-banks/.

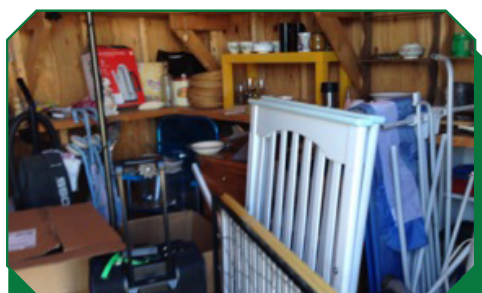
By far, the biggest concern when designating upholstered furniture for reuse is the potential for spreading bed bugs or other unwanted pests. Upholstered furniture items should be properly treated by the distribution facility before they are given to those in need, or offered for resale. Treatment options for bed bugs include:

- Pesticides (less preferred due to potential toxicity of the chemicals used)
- Heat treatment – all stages of bed bugs are killed at 113 degrees F
- Cold treatment – all stages of bed bugs are killed after 3 to 4 days in freezing temperatures
- Pressurized carbon dioxide (CO₂) treatment – all stages of bed bugs are killed as temperatures reach as low as -108 degrees F

Vacuuming and steam cleaning in addition to these methods offers more complete protection.

Swap Shops

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. However, to accept furniture, the community would need to ensure that the storage place is covered so that items can stay dry and big enough to store large items. Generally, swap shops work best when the drop-off can be monitored so that residents cannot leave items that are in poor condition.



Indoor Swap Shop



Outdoor Swap Shop

Special Collection Events

An alternative to a permanent “swap shop” could be a special community event where furniture is collected for donation to a partner charity or is operated as a one-day drop-and-swap exchange. If there are remaining items left onsite after the event, communities could contract with a private hauling company. These haulers can pick up all types of furniture for a fee, and many of them will recycle what they are able to (typically metal). Ultimately some of the material may end up in the landfill or incinerator.



ReCenter in Northampton, MA

ReCenter: A Community Swap Shop

The ReCenter Swap Shop, located in Northampton, MA is operated by a volunteer subcommittee of the city's Public Works Commission. It provides a location for individuals and organizations to donate durable, useful items for others to use, including metal and wooden furniture and other large household items. Upholstered furniture is not generally accepted because of space limitations and concerns about bed bugs and the often poor condition of the upholstery.

ReCenter membership is included in the transfer station permit fee (\$25.00 for residents), and residents of other communities can purchase an annual ReCenter permit for \$10.00. The facility is open Saturday mornings from April through October.

If someone brings in an item that is not recyclable (e.g., a varnished wooden table), or is not in high demand, the donor must pay a drop-off fee. This policy helps Northampton fund its disposal costs. Northampton also sponsors several one-day reuse events during the year, including a toy exchange, a community tag sale, and two bulky rigid plastics swaps.

For more information, visit: www.northamptonma.gov/reduce-waste.

Planning a One-Day Community Event to Facilitate Furniture Reuse

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 a local charities, nonprofits, or businesses that can provide volunteers
Finding a convenient location with a sheltered area to prevent damage to the furniture from adverse weather	<ul style="list-style-type: none"> ■ Hold event in the summer to avoid issues with cold weather ■ Utilize a local transfer station shed, department of public works (DPW) garage, or other public facility that has a large covered space ■ Rent a large tent ■ For donation collection events, rent trailer(s) or other transportable container(s)
Handling items dropped off at the event that are not suitable for reuse	<ul style="list-style-type: none"> ■ Provide information on how to properly store and transport items to keep them in useable condition ■ Visually inspect items as they are collected and refuse unsuitable items ■ 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
For events that are dedicated to collecting items for donation, identifying the place(s) that will receive the items for reuse and confining the collection to the types of items they will accept	<ul style="list-style-type: none"> ■ Partner with local charities, nonprofits, or businesses that will accept the items for reuse and have their staff help monitor the drop-off to ensure that they will take the donations ■ Publicize what items are and are not acceptable at the event ■ Publicize that donations are tax deductible ■ Refuse drop-off of oversized items ■ Charge a drop-off fee to offset the costs for recycling or disposing of oversized items
For swap events: ensuring that all of the dropped-off furniture will be picked-up by others	<ul style="list-style-type: none"> ■ Partner with a local charity, non-profit, or business to take the remaining usable items at the end of the event
Addressing the potential for upholstered furniture to spread bed bugs or other unwanted pests	<ul style="list-style-type: none"> ■ Refuse drop-off of upholstered items ■ Treat upholstered items before they are donated (see page 3)

CHALLENGE	POSSIBLE SOLUTION
Finding proper storage of remaining items at the end of the event	<ul style="list-style-type: none"> Organize logistics so all items are removed at the end of the event for disposal, recycling, and/or donation
Transporting collected items to the donation location(s)	<ul style="list-style-type: none"> Charge a drop-off fee to offset the costs for transportation Split the costs of transportation between the community and the partner organization(s) that receives the items
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 – see sidebar below for examples

How Municipalities Can Promote Furniture Reuse

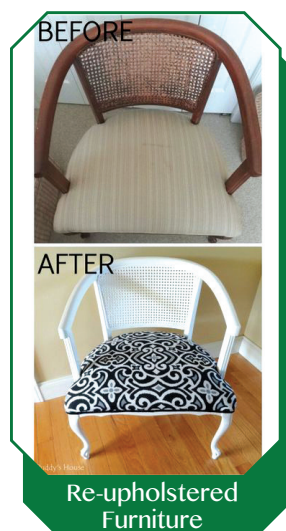
Local governments can identify local reuse options, including swap events and donation centers, for good quality furniture items. Municipalities can include this information in outreach and educational materials distributed to residents in a variety of ways:

- Include an insert in regular town mailings, such as tax bills, utility bills, and other communications about solid waste and HHW management
- Distribute a flyer at HHW collection and/or other community events
- Place announcements in the local newspaper
- Put up posters on local community bulletin boards
- Provide contractors, realtors, and others with lists of local facilities that accept good quality furniture and other bulky items for reuse or donation.
- Post information on the town's website, Facebook page, and other social media platforms

Refurbish, Remanufacture, Rebuild, or Renovate

Wooden and upholstered furniture that may not be suitable for donation or re-sale because it is damaged may be able to be repaired or restored. Communities can host a Do-It-Yourself (DIY) or “Fix mix” event, a social gathering where people share repair skills (e.g., furniture reupholstering, leather repair, woodworking, carpentry) as a way to refurbish, remanufacture, rebuild, or renovate pieces of furniture. There are many examples of communities across the country – small and large – that host regular “fix it clinics” or “repair cafés” where people can meet with skilled volunteers to repair any number of items that have broken and would otherwise be thrown away (see <http://repaircafe.org/en/>). These organizations typically limit the types of items that can be “fixed” to smaller household goods, but the idea could be modified and expanded to focus on furniture. Team up with a local food bank, library, or senior center to see if this is something they would be willing to host. Connect with boy scout/girl scout troops, veterans organizations, and small businesses that specialize in fixing furniture, electronics, appliances, and bikes.

Use of social media can be an effective way to promote repair/refurbish opportunities, find ideas, and obtain skills, as well as to gather volunteers that can offer their skills to a fix-it clinic. For example, some local agencies have their own YouTube channels where they provide online tutorials for repairing or repurposing furniture into new items. Towns could post “before and after” photos and instructions on community Facebook pages, Pinterest boards, and town websites as another way to promote refurbishing ideas.



ReSource: A Household Goods & Building Material Store

ReSOURCE is headquartered in Burlington, VT and has a mission to meet community and individual needs through education and job skills training; environmental stewardship; and economic opportunities.

To further its' mission, ReSOURCE operates Household Goods Stores in Burlington, Barre, and Hyde Park. They accept drop-off donations of

good quality furniture and mattresses, as well as appliances, small household goods, electronics, and recreational items.

The Burlington location offers free pickup service within Chittenden County of good quality household furniture. They also offer a fee-based service for removing items from inside a building, or picking up outside of Chittenden County. The Barre store offers a similar free service within a 10-mile radius of that store.

The Burlington store has a “hot box” to heat-treat mattresses and upholstered furniture. The three ReSOURCE Household Goods Stores are open for sales to the general public. In addition, ReSOURCE works with 30 different nonprofit agencies to distribute vouchers for household goods at its resale stores through its Essential Goods Program. In 2015, this program provided \$137,241 worth of goods to 1,013 individuals/families in Chittenden County and the greater Barre area.

For more information, visit: www.resourcevt.org/store.



Planning a Community Event to Facilitate Furniture Repair

CHALLENGE	POSSIBLE SOLUTION
Finding local people with furniture repair skills that are willing to participate in a DIY or fix-mix event	<ul style="list-style-type: none">■ Provide incentives for people to participate, such as publicizing their stores or services in existing marketing campaigns for HHW or solid waste disposal, and through community announcements
Soliciting staff and/or volunteers to organize and manage the event	<ul style="list-style-type: none">■ Partner with a local charities, nonprofits, or businesses that can provide volunteers
Finding a location with a sheltered space to protect participants and their items from the elements	<ul style="list-style-type: none">■ Hold event in the summer to avoid issues with cold weather■ Utilize a local transfer station, DPW garage, or other public facility that has a large covered space■ Hold the event indoors on the weekend or after work hours when community buildings aren't being used (e.g., school cafeteria, town hall conference room, library)
Supplying tools and repair supplies	<ul style="list-style-type: none">■ Ask volunteers to bring their own supplies■ Solicit donations from local businesses■ Charge a participant fee to offset purchases
Promoting the event to attract participants	<ul style="list-style-type: none">■ Include information in existing marketing campaigns for HHW, solid waste, or recycling – see sidebar on page 5 for examples

Recycle

If a piece of used furniture is severely stained, broken, ripped, or torn beyond repair, it is often destined for disposal. However, much of the furniture's components, including wood, cotton, wool, and metal – may be able to be diverted from disposal and recycled or otherwise used.

Upholstered furniture offers the greatest potential for component recycling. Upholstered means “covered.” The seat, back, and/or arms on upholstered furniture can have padding and be covered by fabric or leather. Structurally, these pieces are made mostly of wood, foam padding, stuffing, and metal springs/coils.

Generally, dismantling upholstered furniture into its individual components is time-consuming, and most communities are not able to devote staff time and other resources for these activities. However, communities could promote deconstruction by residents. A major benefit of deconstruction is the reduction in the size of the item and its overall “bulk”, which makes transportation easier (e.g., fabric materials could be bagged separately, and wood could be cut to an easy-to-handle size). By doing this, residents may avoid bulky waste disposal fees, and communities could increase the amount of material that is recycled.

Textile recyclers can reclaim fibers from the furniture stuffing and upholstery covers. These components cost less than virgin textiles and can be recycled into shop rags and wiping cloths for the automotive industry, or reprocessed into fiber stuffing for use in new furniture, home furnishings, insulation, and mattresses. An option for recycling the textiles recovered from furniture dismantling are the clothing recyclers that operate the clothing donation drop-off bins located in many communities. These clothing donation organizations are set up to facilitate reuse and recycling of all textiles, including those with tears or stains, as long as they are clean.

The frame of most upholstered furniture is made of wood that is not stained or painted, and therefore is readily recyclable. Contaminants such as nails, plastic, foam, or rubber should be removed. Many communities collect clean, untreated wood for recycling. A major benefit of recycled wood is that it has a lower moisture content as compared to virgin wood, which decreases its weight and associated transportation costs and increases its durability.

There are several markets for clean recycled wood waste that include:

- Panelboard, chipboard, fiberboard – used in construction, and less expensive/DIY furniture
- Animal bedding (woodchips)
- All-weather surfaces for horse gallops and arenas
- Play area surfaces or footpaths in parks
- Mulch and other garden coverings
- Fuel pellets or chips – used for generating heat or electricity

Wood furniture that is stained, painted, or treated with chemical preservatives (e.g., pressure-treated or waterproofed), as well as furniture made from engineered or manufactured wood (e.g., fiberboard, particle board, and plywood) cannot be recycled as clean wood. Many construction and demolition (C&D) debris processors will accept wood furniture made from all of this material (as well as couches, chairs, and upholstered furniture) and will recycle what they are able to. It may be less expensive to pay for C&D debris processing, compared to landfill or incinerator costs, although depending on the location, the costs of transportation could outweigh the lower drop-off fee.

Many communities maintain a bulky waste collection bin at their transfer station or recycling center where residents can dispose of large pieces of furniture for a fee. Once these boxes are full, they are typically sent to a disposal facility. To facilitate recycling of at least some of the discarded materials, communities should contact a C&D processing facility and assess the feasibility of sending their bulky wastes to them instead of disposal. Another alternative to increase recycling could be to host a one-day event specifically for collecting and sorting furniture suitable for recycling.



Example of Bulky Bin



Example of Bulky Bin

Planning a One-Day Community Event to Collect Furniture for Recycling

CHALLENGE	POSSIBLE SOLUTION
Separating wood furniture by type (e.g., natural wood versus plywood versus mixed material)	<ul style="list-style-type: none"> Visually inspect and segregate as materials comes in Refuse collection of “unclean” or unsuitable wood (e.g., varnished or chemically treated), or charge a fee for drop-off
Identifying recycling outlets, and creating storage capacity until a sufficient quantity is accumulated for economical transport to the recycling facility	<ul style="list-style-type: none"> Utilize a local transfer station that has a storage shed or building to keep furniture temporarily Rent a trailer or other collection container for temporary storage and transport
Finding staff and/or volunteers to manage collection of furniture to ensure items are acceptable (and/or collect fee for drop-off)	<ul style="list-style-type: none"> Hold the collection in conjunction with a HHW event or at an existing HHW or solid waste facility Partner with local charities, nonprofits, or businesses that can provide volunteers
Paying fees charged by recyclers and for transportation to their location (they may require a certain volume of material before scheduling a pick-up)	<ul style="list-style-type: none"> Charge residents a fee for dropping off furniture to help offset the costs for recycling Several towns can collaborate on pick-ups to increase economies of scale and split costs Set up a landfill or a couple of transfer stations as consolidation points for a regional area



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. More information about this project is available at: www.newmoa.org/solidwaste/projects/bulky

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