

REUSE & RECYCLING GUIDE FOR CONSTRUCTION & DEMOLITION WASTE



**BROOME COUNTY DIVISION OF SOLID WASTE MANGEMENT
2017**

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Introduction

This guide provides practical information for reuse and recycling of construction and demolition (C&D) debris generated during construction and deconstruction projects.

Why recycle and prevent waste?

Efforts to reduce, reuse and recycle construction waste can save money, keep job sites cleaner and safer and save landfill space. It is also the law for materials like cardboard, which is banned from the landfill by the Broome County Charter and Code (See Appendix C).

What's your role?

Property owners, property managers and developers

As a property owner, property manager or developer, you are in a position to create a successful waste reduction program for a project. It begins with making waste reduction a priority from the start of the project and planning for it throughout all phases of deconstruction, design, construction, installation, and habitation. It involves setting specific waste reduction goals for each project and assembling a team experienced in environmentally sound design and construction practices. All goals and requirements for experience should be included in requests for proposals and other contract documents. Identify materials that can be salvaged and reused. The progress of waste reduction efforts can be monitored by requiring contractors to submit waste management plans and monthly waste reduction reports. Locations to collect and store recyclables on-site should also be identified.

Designers and contract specification writers

These individuals can influence the process by supporting waste reduction efforts and by working with owners and developers to identify cost and public relation benefits associated with specific practices, methods or products. Clear, detailed requirements, listed plans and specifications for waste prevention, salvage, deconstruction and recycling have been the most effective way to guarantee a successful waste reduction program.

Construction project manager

The construction project manager plans and implements the waste reduction program. Therefore, it is important to have a waste management plan and effectively communicate the expectations of the plan to the crew and subcontractors involved in the project. The plan should include ways to prevent waste, options for salvage and reuse, and materials to be recycled on the project, including materials subcontractors will be responsible for recycling.

How can you prevent costly waste?

Preventing the generation of waste by reusing materials onsite and reducing packaging decrease the quantity of material you need to use and pay for. By identifying potential waste early in the design, you can decrease the amount of waste generated during construction and see a cost savings.

Waste prevention ideas

- Develop and set waste prevention goals and include them in contract specifications.
- Require specific waste prevention activities including reuse and salvage practices.
- Specify green building materials such as certified wood or low VOC paint.

- Choose flexible interior finishes or materials, such as carpet tiles, that can be easily removed and recycled and replaced when worn or damaged.
- Communicate your waste prevention plan at meetings, post it at the job site, monitor the program, and promote the results.
- Require vendors to ship materials to the job site in recyclable or reusable packaging.
- Re-evaluate estimating procedures to make sure the correct amount of each material is obtained.
- Ask suppliers to deliver supplies using returnable pallets and containers. Have them pick up the empty containers when delivering new ones. Also, require the supplier to take back or buy back any unused items.

How to salvage and reuse building materials

There may be materials that have a greater value “as is” for salvage compared to their value as material for recycling. Some of these materials may be valuable to reuse on-site; others may be donated or sold to a used building material retailer or charitable organization (see Appendix A). These activities cut waste and reduce purchasing costs, and sometimes may bring in significant revenue or provide a tax benefit.

Reused materials may also provide functional or aesthetic features not available in new materials. There are two ways to recover materials for salvage and reuse: Deconstruct the building or conduct a selective salvage operation prior to demolition. Deconstruction involves the careful dismantling of a whole structure. Salvage is the removal of certain reusable building materials before demolition.

Reusable building materials

Appliances,	Lumber and timbers
Architectural detailing	Mouldings and millwork
Brick and block	Plumbing and lighting fixtures
Cabinets	Plywood
Doors	Siding
Flooring	Structural steel
Hardware	Windows

What to recycle?

Recycling construction materials will save money by cutting disposal costs. It will reduce waste going to the landfill, create a cleaner and safer construction site, and boost community relations. Below is a list of materials that can be recycled. It is important to locate a recycling outlet prior to the start of the project.

Appliances & fixtures	Metals
Brush & trees	Plastics- numbered containers, bags & sheeting
Cardboard & paper	
Wood waste	

Recycling and waste minimization guidelines

- Cardboard and Paper
 - Avoid excessive packaged materials and supplies
 - Separate cardboard and store in a dry place. See Appendix A for list of local cardboard and paper recyclers.
- Plastic and Vinyl

- Minimize waste of vinyl siding, flooring and countertop materials by ordering only quantities needed.
- Excess materials may be used by the local Habitat for Humanity or other reuse outlet. See Appendix A.
- Paints, Stains, Solvents and Sealants
 - Donate unused portions to Habitat for Humanity.
 - Save unused portions for touch up or other jobs
 - Any unused materials should be properly disposed of at a hazardous waste collection facility. (Broome County operates a year-round facility. See Appendix B).
- Drywall
 - Technology does exist, although it is not available in the Broome County area. It can be recycled into new products such as gypsum stucco, textured wall sprays, fire barriers or agricultural products.
 - Large pieces of dry wall may be donated to the local Habitat for Humanity or to another reuse outlet. See Appendix A.
- Metals and Appliances
 - Separate metal radiators, grates, aluminum siding, copper piping, wire and flashing, iron and steel banding from bundles, rebar and old appliances for recycling. See Appendix A for local scrap metal recyclers.
 - Refrigerators and air conditioners contain Freon and must be handled separately.
- Miscellaneous
 - Cabinets, light fixtures, bathtubs, sinks mortar mix, nails, screws, plumbing fittings and various other supplies may be accepted by one of the reuse outlets. See Appendix A.
 - Old batteries from power tools can be recycled at various store locations or at the Broome County hazardous waste facility. See Appendix A.
 - Trees and branches from brush clearing can be chipped to use as mulch or brought to one of the local facilities to be composted. See Appendix A.

Non-recyclable materials

The following materials require special handling due to health, safety and environmental hazards. For more information on proper disposal call the Division of Solid Waste Management at 778-2250.

- Any materials containing asbestos such as older pipe insulation, asphalt floor tiles and old linoleum.
- Petroleum contaminated soils
- Wood that's been pressure treated or creosote treated timber.

Select a waste and recycling hauler

Below are some questions you want to ask when you contact a hauler. See Appendix A for a listing of area haulers.

- When choosing a hauler be sure to ask for a container for general debris, one for cardboard and one for scrap metal.
- What size containers do they offer?
- What is the charge to service the container?
- Do charges include a container rental fee?
- What materials are acceptable?

APPENDIX A

Recycling Outlets

The below listing is for information purposes only. It is not an all-inclusive list and it does not constitute an endorsement or approval by the County, or provide any assurances with regard to the quality of services provided. Please refer to the yellow pages for a full listing.

Area Haulers- contact for service locations

Joe's Disposal Service, Inc.
PO Box 897
Hallstead, PA
1-800-836-2149

Don Snow Trucking Inc
1941 NY Route 7
Harpursville, NY
607-772-9949
607-693-8432

Adams Disposal
Main Street
Chenango Bridge, NY
607-648-4863
1-800-386-7783

Chipper Dave Roll-off Container Service
820 Conklin Road
Binghamton, NY
607-724-5930

Jenks D & Son Refuse Service
Jenks Road
Port Crane, NY
607-648-8223

Taylor Garbage Service
3051 Old Vestal Road
Vestal, NY
607-797-5277

Cardboard & Paper Recyclers

A&W Recycling
Main Street
Chenango Bridge, NY
607-648-3766

Broome Recycling Inc.
Broad Street
Binghamton, NY
607-724-3805

Empire Recycling
172 Broad St
Binghamton, NY
607-729-1518

Southern Tier Recyclers
PO Box 550
Owego, NY
607-258-0339

APPENDIX A (continued)

Wood Waste Recyclers

Tioga County Wood Waste Recyclers
3711 Waverly Road
Owego, NY
607-687-4479

Scrap Metal Recyclers

Ben Weitsman & Son Inc.
15 W Main Street
Owego, NY
607-687-2780
800-245-3133

Rozen's
24 Carroll Street
Binghamton, NY
607-771-0671

Gary's U-Pull-it Inc.
230 Colesville Road
Binghamton, NY
607-775-1900

Greenblott Metal Co Inc
7 Alice Street
Binghamton, NY
607-723-4666

Louis Kutz Sons
13 Barlow Road
Binghamton, NY
607-775-3122

Plastics Recycling

Broome Recycling
Broad Ave
Binghamton, NY
607-724-3805
(plastic beverage & food containers
only)

Plastic Resources
Online market database
www.plasticsresource.com

Tree Branches & Brush

Broome County Landfill
286 Knapp Road
Binghamton, NY
607-778-2250

Robinson Hill Nursery & Mulch
1000 Robinson Hill Rd
Johnson City, NY 13790
607-770-9821

Check with your local municipality

APPENDIX A (continued)

Battery Recycling

Home Depot (Rechargeable only)
798 Main Street
Johnson City, NY
607-785-8614

Lowes (Rechargeable only)
225 Sycamore Street
Vestal, NY
607-770-9800

SUNY Broome
907 Front Street
Binghamton, NY

Broome County Landfill
Recycling Drop-off
286 Knapp Road
Binghamton, NY
607-778-2250

Wegmans
650 Harry L Drive
Johnson City, NY
607-729-7782

Reuse Outlets

Habitat for Humanity
42 Chenango Street
Binghamton, NY
607-772-0809

Binghamtonfreecycle

<http://groups.yahoo.com/group/binghamtonfreecycle/>

An internet group that allows you to post unwanted items to “recycle” them to area residents. All items must be free.

MAT-EX

www.mat-ex.org

Material exchange that includes several New York State counties. Materials are listed on the website with contact information.

Broome County Eco Center

<http://gobroomecounty.com/solidwaste/eco-center-building-materials-reuse>

Reuse facility for building & construction materials. Accepts usable items and gives away material at no cost.

APPENDIX B

Broome County Household Hazardous Waste Facility

Who Can Participate?

- Broome County Residents
- Tioga County Residents (April through November on designated days only).
- Broome and Tioga County businesses that produce a small quantity of hazardous waste. Businesses call 763-4305 for more information.

How to Participate

Designated free collections are held two to three times a month from the hours of 7:30am to 11:30am. Broome County residents only can also opt to pay \$5 and drop HHW/Electronics off during regular landfill hours. A full list of collection dates for the year can be found on the county website at www.gobroomecounty.com or residents can call for more information: Broome Residents call 778-2250 Tioga Residents call 687-8274

What is the Cost?

There is no charge to residents to use the hazardous waste facility on the designated collection days.

Location

- Broome County Landfill at 286 Knapp Road, Binghamton, NY.
For map of the landfill, go to the Broome County web site at www.gobroomecounty.com.

Materials Accepted- Electronics are acceptable working or not working.

- Household cleaners & floor care products
- Pesticides & fertilizers
- Oil paints, solvents, stains, polishes & varnishes
- Driveway sealers
- Pool and photography chemicals
- Fluorescent bulbs
- Gasoline & kerosene
- Auto fluids (oil, antifreeze, brake fluid, etc.)
- Fire Extinguishers, compressed cylinders up to 20 lbs
- Computers, printers, modems,
- Televisions, monitors, VCRs, (Up to 3 TV's & 3 monitors per resident).
- Laptops, keyboards, radios, stereos
- Fax machines, pagers, mobile phones
- Microwaves, copiers

Unacceptable Material as Part of the Hazardous Waste Program

Low level radioactive materials, smoke detectors, medical or infectious waste, explosives, shock sensitive material (picric acid, crystallized ethers), counter top appliances (coffee makers, toasters, etc), answering machines, vacuums, large appliances, latex paint, refrigerators, air conditioners and dehumidifiers.

For more information visit the Broome County web site at www.gobroomecounty.com/soildwaste or call 778-2250.

APPENDIX C

The Broome County Charter and Code can be found on the County website at www.gobroomecounty.com.

ARTICLE IV Source Separation

[Adopted 8-20-1992 by L.L. No. 10-1992; amended in its entirety 5-20-1993 by L.L. No.9-1993 (Ch. 179, Art. IV, of the 1991 Code)]

§ 317-23. Title. 14

This article shall be known as the "Mandatory Source Separation Law."

§ 317-24. Purpose.

- A. The purpose of this article is to encourage, facilitate and mandate the source separation of recyclable materials on the part of each and every household, business and institution within Broome County.
- B. The Broome County Legislature acknowledges that recycling will decrease the flow of solid waste to landfills, aid in the conservation of valuable resources and reduce the required capacity or extend the useful life of existing and proposed solid waste management facilities.
- C. It further acknowledges that methods of solid waste management emphasizing source reduction, recycling, recovery and conversion of solid wastes are essential to the long-range preservation of the health, safety and well-being of the public, to the **179-23. Title.**
Editor's Note: Local Law No. 9-1993 contained no text for this section.

§ 317-25. Definitions.

- A. Terms as used or referred to in this article, unless a different meaning clearly appears from the context, are as defined in Title 6 Part 360 of the New York Codes, Rules and Regulations, Solid Waste Management Facilities, as amended.
- B. As used in this article, the following terms shall have the meanings indicated:
AUTHORIZED AGENT OF THE COUNTY — Refers to waste haulers permitted by Broome County.

PARTICIPATING HAULER — An authorized agent of the County that utilizes the Broome County Landfill exclusively for the disposal of solid waste it collects. **[Added 9-20-2001 by L.L. No. 5-2001; amended 2-6-2013 by L.L. No. 3-2013]**

PUBLIC FACILITY — Any facility allowing public access, including but not limited to parks, recreational facilities, shopping centers, shopping malls, office buildings, restaurants, hospitals, schools and churches.

SOURCE SEPARATION — That recyclables shall be maintained and placed for collection separately from refuse intended for disposal.

§ 317-26. Source separation required.

- A. Source separation shall be required of each and every generator within Broome County producing solid waste destined for a disposal facility within Broome County and by any generator outside of Broome County where such waste will be processed or disposed in a Broome County solid waste management facility.
- B. Materials that must be source separated include paper, corrugated cardboard, glass, metals, plastics, leaves, yard wastes, tires, batteries (wet and dry cell) and household hazardous waste. A detailed published list of materials to be accepted will be on file with the Broome County Legislature. **[Amended 12-19-2002 by L.L. No. 2-200315 ; 2-6-2013 by L.L. No. 3-2013]**

APPENDIX C (continued)

- C. For the purpose of this article, the term "recyclable material" shall mean those materials that must be source-separated, as defined in § 317-26B, with the exception of household hazardous waste.
- D. Each and every waste hauler, public and private, providing waste collection services in the County of Broome shall be required to provide curbside or dropoff collection of source-separated recyclables for all units serviced by the hauler.
- E. All municipal and private haulers are prohibited from commingling source-separated recyclables with solid waste. **[Added 2-6-2013 by L.L. No. 3-2013]**

§ 317-29. Residential/commercial (institutional) and industrial waste and recyclables. [Amended 2-6-2013 by L.L. No. 3-2013]

- A. All residential solid waste collected by either municipal or private haulers shall be source separated and delivered to an appropriate facility for disposition, as may be designated by the County.
- B. All commercial/industrial/institutional solid waste collected by either municipal or private haulers shall be source separated and delivered to an appropriate facility for disposition, as may be designated by the County.
- C. All recyclable commercial/industrial/institutional by-products shall be source separated and delivered to an appropriate facility for the express purpose of processing for sale to a secondary materials market. Nothing in this section shall prevent generators from marketing these materials directly to an end-use market, secondary materials market or secondary materials broker.

§ 317-30. Penalties for waste generators.

- A. Failure to comply with this article by any person shall be an offense punishable as provided.
- B. Each day of violation of this article shall constitute a separate offense.
- C. The waste hauler shall maintain the right to refuse collection of solid waste and/or recyclables due to a lack of source separation or proper preparation on the part of the waste generator. In such a case, the hauler shall affix a notice to the waste material which clearly states the reason for noncollection.
- D. Individuals convicted of a first offense under this article shall be subject to a fine of not less than \$25 and not more than \$50. Conviction of a second offense within one year of the first offense shall be punishable by a fine of not less than \$50 nor more than \$100. Conviction of subsequent offense(s) within one year of the first offense shall be punishable by a fine of at least \$100 and not more than \$200. In addition to the penalties listed above, anyone convicted of an offense under the provisions of this article shall be subject to a civil penalty to recover cost of enforcement and prosecution, including but not limited to attorneys' fees, court costs and site cleanup cost, if applicable.
- E. Any company, partnership, corporation, municipality or entity other than an individual person convicted of a first offense as provided for by this article shall be subject to a fine of not less than \$200 and not more than \$1,000 and/or revocation of solid waste collection and disposal permits. Conviction of subsequent offenses shall be punishable by a fine of not less than \$1,000 and not more than \$2,000. Any such entity convicted of an offense under the provisions of this article shall also be subject to a civil penalty to recover the cost of enforcement and prosecution, including but not limited to attorney's fees, court costs and site cleanup costs, if applicable. In addition, the County Attorney may also maintain an action or proceeding in the name of Broome County in a court of competent jurisdiction to compel compliance with or to restrain by injunction such violation

Appendix D

Waste Management Plan

(This is a sample you can use as a guide to developing your own).

Company: Company ABC

Project: Construction of ABC facility

Designated recycling coordinator: John Doe

WASTE MANAGEMENT GOALS:

- This project will recycle or salvage for reuse 65 percent by weight of the waste generated on-site.

COMMUNICATION PLAN:

- Waste prevention and recycling activities will be discussed at the beginning of each safety meeting.
- As each new subcontractor comes on-site, they will be presented with a copy of the waste management plan and given a tour of the recycling areas.
- The subcontractor will be expected to make sure all their crews comply with the waste management plan.
- All recycling containers will be clearly labeled and accessible.
- Lists of acceptable/unacceptable materials will be posted throughout the site.

EXPECTED PROJECT WASTE, DISPOSAL AND HANDLING:

The following charts identify waste materials expected, their disposal method and handling procedures:

Material	Disposal Method	Proper Handling
Cardboard	Recycling	Keep dry/ place in designated dumpster
Scrap metal	Recycling	Place in designated dumpster
General MSW	Landfill	Place in 40yd dumpster
Branches & Brush	Recycle/ chip	Use for landscaping onsite

Appendix E

Waste Management Report

(This is a sample you can use as a guide to developing your own).

Company: Company ABC

Project: Construction of ABC facility.

Designated Recycling Coordinator: John Doe

Material	Quantity		Recycling (cost) or savings	Handling Method
	Yards	Tons		
	Final Report			
	Yards	Tons		
Cardboard	309	15.5	\$900	<i>Separated on site in designated dumpster/ recycled by ABC Company</i>
Concrete				
Asphalt				
Metal				
Drywall				
Plastic sheeting				
Office paper				
Total Recycled				
Total to landfill				
% Recycled				

APPENDIX F

Additional Resources

Environmental Protection Agency web site:

<http://www.epa.gov/epaoswer/non-hw/debris-new/index.htm>

<http://www.epa.gov/epaoswer/non-hw/debris-new/recycle.htm>

WasteSpec: Model Specifications for Construction Waste Reduction, Reuse, and Recycling

<http://www.tjcog.dst.nc.us/regplan/wastspec.htm>

Association of General Contractors (AGC)

<http://www.agc.org/index.wv>