

construction*

setting up a recycling program



implement a recycling program during construction, demolition or renovation



5 easy steps to implement the 3r's

1) plan your program

- Look at the types of waste generated at your site; determine your disposal needs
- Develop a waste reduction plan prior to beginning the project

2) recycle

- Identify recyclables: plastics, gypsum, paint, and asphalt roofing, as well as commonly recycled materials such as wood, metals, concrete and cardboard.
- Separate materials: clean wood, scrap metal, and cardboard for recycling
- Separate concrete, asphalt, gypsum and land clearing debris for crushing and grinding

3) reuse

- Reuse materials whenever possible: chipping land clearing debris for mulch or erosion control or grinding concrete and asphalt for fill
- Salvage reusable materials from demolition and renovation projects

4) reduce

- Store materials properly to minimize damage and waste from exposure
- Purchase materials in the quantities required for the job size

5) close the loop: buy recycled

- Ask suppliers to minimize product packaging or to accept the return of packaging for reuse
- Purchase materials with recycled-content whenever possible.

Recycling construction materials saves money by cutting disposal costs. It reduces waste going to the landfill and attracts clients who value environmental responsibility. Other benefits include a cleaner, safer site and improved community relations. Follow these steps to set up a successful, cost-effective job-site recycling program.

reduce, reuse, ask questions

wasteless building practices

lumber is the biggest component of the waste stream for new construction and renovation. Applying the following principles will reduce the amount of lumber you buy and throw away.

reduce

- Review floor plans and elevations to ensure optimal use of sub flooring and sheathing.
- Detail framing layouts to allow for more accurate ordering. Where possible, have studs and joists pre-cut to reduce on-site waste.
- Amend framing details, where necessary, to minimize unnecessary corner studs, avoid excessive amounts of lumber at window and door openings, and prevent overbuilt lintels.
- Consider using resource-efficient materials such as modular wall panels, wooden I-beams, and flooring underlay made from recycled cardboard.
- Buy kiln-dried lumber to reduce waste from warping and shrinkage.
- Store lumber to prevent warping and twisting from exposure to the elements.
- Eliminate procedural inefficiencies on construction and renovation sites.

reuse

- During demolition, carry out assessments of the reuse potential of lumber as it is exposed. You may see ways to reduce the purchase of new lumber by using the old. Set aside the sound, older pieces for sale.
- Make all cuts at a central location. Off-cuts can be used for cripples, lintels and blocking.

questions to ask recyclers

Before contacting recycling companies, estimate the types and quantities of waste the project will generate during each phase of construction. To do this, consider engineering estimates, previous material purchasing records and waste disposal records from similar projects. Compare the costs of recycling to disposal for recyclable material to determine what is cost effective for your project. Recycling helps reduce overall disposal costs because the cost per tonne to recycle a material is less than the cost per tonne of disposal as garbage.

Using a commercial hauler works well on projects where large quantities of materials are generated, such as demolition, multi-family and commercial projects.

Self-hauling is a good choice for projects where small quantities of materials are generated, such as residential construction and remodeling.

When researching recycling options, ask recyclers the following questions:

- What materials do they accept?
- Is co-mingled recycling available?
- What are the specific guidelines for each material? For example, do they accept forming plywood in "clean wood?"
- If you are planning to self-haul, do they accept materials for drop-off? What are the tipping fees?
- What are the charges for pick-up services including bins rental, hauling and tipping fees?
- What type of bins do they offer for pick-up service?
- What are the collection options? Do you need to call for service or do they monitor the bins?
- Will they help set up the program and provide training for the crew?
- Are receipts available for tracking the types and quantities of recyclables collected? This information is required for effective Waste Management Plans.

construction & demolition site material sorting chart

	RECYCLE	SALVAGE	GARBAGE
asphalt shingles	✓		
cabinets & casework		✓	
carpet			✓
concrete & asphalt	✓		
concrete block & brick	✓	✓	
corrugated cardboard	✓		
dimensional wood & heavy timbers	✓	✓	
drywall	✓		
electrical wiring	✓	✓	
electric equipment/fixtures		✓	
fluorescent tubes	✓		
hardwood flooring	✓	✓	
insulation		✓	
land clearing debris	✓		
linoleum			✓
mantle pieces/columns/etc.		✓	
mixed waste			✓
paint	✓		
palette wood	✓	✓	
plastic/shrink wrap	✓		
plate glass/windows	✓		
plumbing fixtures & brass		✓	
scrap metal	✓		
structural steel/rebar	✓	✓	
treated wood			✓
windows/doors/frames		✓	
wood paneling/trim/molding	✓	✓	
wood siding	✓	✓	



monitor your progress

track waste diversion to monitor the progress of your recycling program

1. BEFORE START OF PROJECT/SECTION 1: Using a checkmark (✓), identify the materials you estimate will be recycled, salvaged or disposed of. 2: Identify the handling procedure, hauler, and/or destination of each material type. 3: Identify if the project requires the use of subcontractors. If yes, determine how you will ensure consistency in your waste management system.
2. UPON COMPLETION OF PROJECT/SECTION 2: Indicate the material types and quantities recycled, salvaged or disposed from this job-site. Identify 1) job site address, 2) weight of load(s), 3) material types, and 4) if materials were recycled, salvaged or disposed.

MATERIAL TYPE	SECTION 1 IDENTIFY MATERIALS (✓)			IMPORTANT HANDLING METHOD, HAULER OR FINAL DESTINATION OF MATERIALS	SECTION 2 QUANTITY OF EACH MATERIAL (BY WEIGHT)		
	RECYCLE	SALVAGE	WASTE		RECYCLE	SALVAGE	WASTE
asphalt & concrete							
gypsum wallboard							
brick, tile							
cardboard							
building materials: doors, windows, fixtures, cabinets, etc.							
dirt/fill							
carpet padding/foam							
plate/window glass							
scrap metals							
wood & pallets							
yard waste (brush, trees, stumps)							
other							
garbage							
TOTAL							