



CONSTRUCTION SITE RECYCLING

**A GUIDE FOR
ARCHITECTS,
BUILDERS AND
DEVELOPERS**

JUNE 1992

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Acknowledgements

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OF ARCHITECTS



HOME BUILDERS ASSOCIATION
OF METROPOLITAN PORTLAND



NATIONAL ASSOCIATION of
the REMODELING INDUSTRY

Prepared by

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Portland, OR 97201

Solid Waste Department
221-1646

What is construction site recycling?

For many builders, construction site recycling is the answer to rising waste disposal costs. By recycling construction waste, builders can control hauling and disposal costs and help stay competitive in the market place. Recycling also conserves landfill space and other resources.

The chart below shows an example of disposal and recycling costs for an actual 108-unit apartment construction project.

Disposal

Estimated cost to dispose: 96 tons
of wood @ \$68/ton \$6,528
(Metro Central Transfer Station)

Recycling

Actual recycling costs

Labor: 40 hours @ \$6.77/hr.	\$ 271
Hauling to processor (containers included)	\$1,200
Disposal	<u>\$ 0</u>
	<u>-\$1,471</u>
Total savings	<u>\$5,057</u>

Many materials left over from construction or demolition are reusable or recyclable. Examples include clean wood, cardboard, drywall, land-clearing debris, bricks, asphalt, concrete and scrap metal.

This guide offers tips on how to set up a construction site recycling program and provides a list of businesses that accept construction and demolition waste for reuse or re-processing in the Portland area. Fees for dumping or price paid for the materials vary. Some recycling companies also provide dumpsters or bins and offer pickup service.

Please note: This list of recyclers was compiled in June 1992. The recycling industry is changing rapidly and there may now be other firms offering recycling services. Fees may change based on market conditions; shop around to find the right fit for your business.

For more information, call:

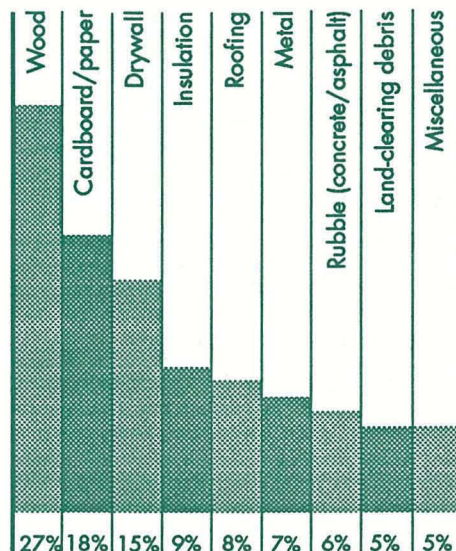
Metro Recycling Information
224-5555.

What makes up all this waste?

In the United States, we generate about 2.5 tons of waste material every time we build a single-family home. In the Portland metropolitan area, an estimated 200,000 tons of construction and demolition debris were sent to area landfills during 1990.

Types and quantities of construction waste vary. But on average, the types and percentages of disposed materials follow the chart below.

Typical waste from construction
Percentages based on volume



Source: WASTE AGE

Tips for setting up a recycling site

Options: Investigate recycling and disposal options before the job begins. Work with the recycler and hauler to determine what materials should be separated for recycling. Determine where and how recyclable materials will be collected and stored on site. Some recycling facilities require separation of materials by type (wood, drywall, cardboard, trash, etc.). Others take "mixed loads." Recyclers generally charge less to accept source-separated materials than mixed loads.

Bin coding: Clearly designate recycling bins by color coding and/or large identification signs. Example: orange bin for wood only, green bin for trash. Some recyclers supply clearly marked bins for each material.

Source separation: Educate subcontractors about the acceptable methods of source separation. Clearly define which bins are for which materials (see "bin coding" above). Consider offering an incentive program for subcontractors if disposal costs are reduced. Make it a contract requirement that drywallers,

framers, painters, roofers and other subcontractors must recycle. Contractors may be held liable for illegal dumping by their subcontractors.

Locked area: Designate one locked recycling area on site to prevent misuse or contamination of bins by the public. This works well on multiple builder sites. Coordinate with other builders to reduce disposal costs.

Location: Place the recycling bins in a convenient location that is out of the way of construction traffic.

Pickup: Coordinate regular or "when-called" pickup or delivery to eliminate overflowing bins.

Contamination: When a recycling program is first started, workers may need to be reminded to keep trash out of the recyclables. Soda cans, lunch bags, coffee cups, caulking tubes, etc., have a way of finding their way into recycling bins. This effort will pay off later when employees see the difference in cost between source-separated and contaminated loads. It will soon become a habit to throw wood in a recycling bin and trash in the trash bin.

Definition of terms

The facilities listed in this guide will accept materials as defined below.

Source-separated: similar materials that are separated from other waste or incompatible materials according to categories such as those described below.

Mixed loads: several types of materials that are combined into one container; food waste is not acceptable.

Concrete: see "rubble."

Land-clearing debris: includes grass, leaves, sod, woody debris, limbs and brush. Does not include concrete, rock, stumps or treated landscaping timbers.

Lumber: see "wood."

Rocks: see "rubble."

Rubble: includes dirt, bricks, block, rock, asphalt and concrete.

Sod: see "land-clearing debris."

Uncoated corrugated cardboard: cardboard with a wavy layer in the middle with no wax or plastic coating. Small amounts of glue, tape and staples acceptable.

Untreated wood: includes lumber, particle board, pallets, plywood and crating. May include nails and be painted or stained. Does not include pressure-treated or creosote-treated wood.

Salvage and Used Building Materials

Architectural Salvage (503) 248-0611
4118 SW Macadam
PO Box 69581
Portland, OR 97201

- antique hardware, plumbing, houseparts, selected furnishings
- pickup services available
- by appointment only
- retail outlet

- fees: call for information

Hippo Hardware & Trading Co.
(503) 231-1444
1040 E. Burnside
Portland, OR 97214

- contemporary and antique hardware, lighting, plumbing and houseparts
- salvage drop-off
- will purchase rights to salvage
- pickup services available
- retail outlet

- reimbursement: payment based on material value

Rejuvenation Houseparts
(503) 238-1900
1100 SE Grand Ave.
Portland, OR 97214

- pre-1940 doors, fixtures and plumbing
- restoration of light fixtures
- salvage services available
- retail outlet

- reimbursement: payment based on material value

The Wherehouse Project, Inc.
(503) 285-0116
PO Box 31099
2808 NE Martin Luther King Jr. Blvd.
Portland, OR 97283

- reusable new and used materials
- fixtures
- non-profit organization
- retail outlet
- fee: donations are tax deductible

Wood

Architectural Salvage (503) 248-0611
4118 SW Macadam
PO Box 69581
Portland, OR 97201

- reusable large-dimensional lumber
- fee: call for information

Bredl Saw Service (503) 252-2614
11005 NE Marx
Portland, OR 97220

- source-separated untreated wood
- fee: call for information

Durham Wood & Dirt (503) 359-5323
72nd and Bridgeport Road
Durham, OR 97224

- source-separated untreated wood
- nails not acceptable
- fee: \$8/cubic yard
\$10 minimum

East County Recycling Center
(503) 253-0867
12409 NE San Rafael (at 122nd)
Portland, OR 97230

- source-separated untreated wood
- mixed loads accepted
- fee: \$75/ton, source-separated
\$75/ton, mixed loads

Grimm's Fuel Co. (503) 692-3756
18850 SW Cipole Rd.
(Highway 99 and Cipole Road)
Tualatin, OR 97062

- source-separated untreated wood
- fee: \$4/cubic yard
\$3.50/cubic yard commercial

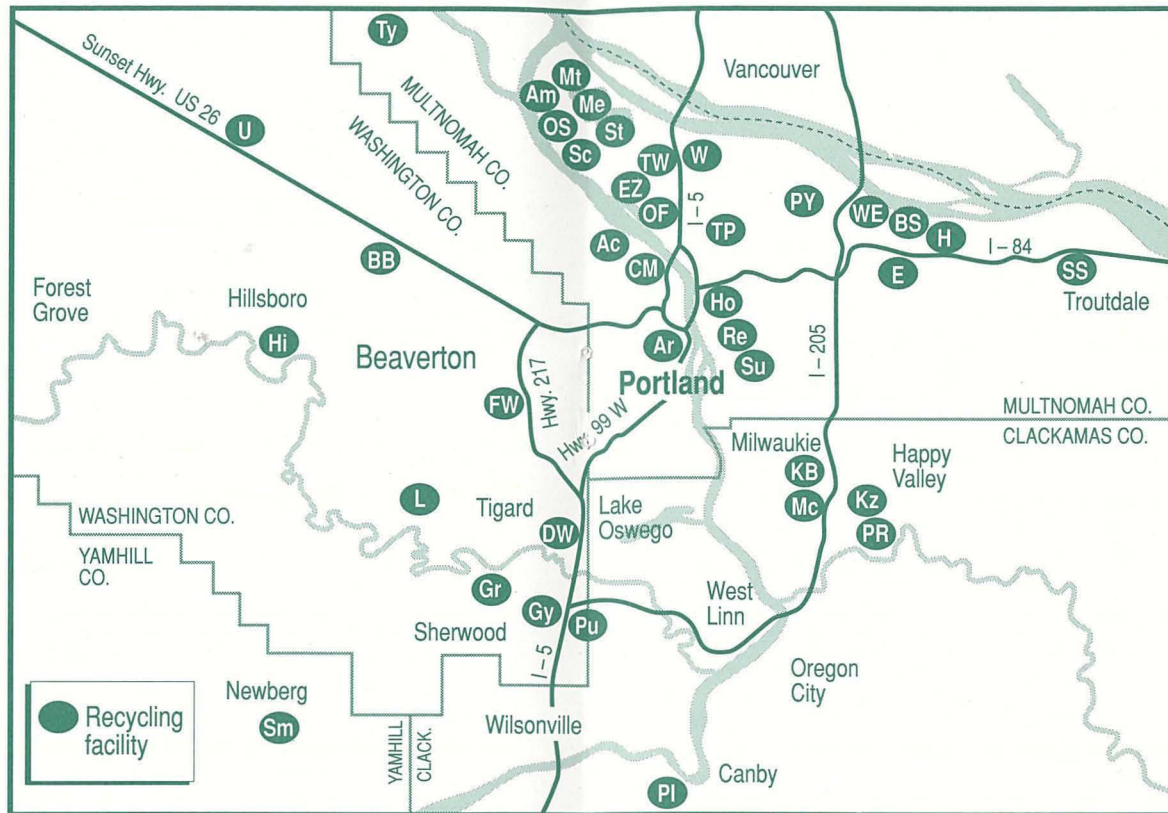
Hillsboro Landfill (503) 640-9427
3205 SE Minter Bridge Rd.
Hillsboro, OR 97123

- source-separated untreated wood
- mixed loads accepted
- fee: \$6/cubic yard, source-separated,
\$13 minimum
\$58.56/ton, mixed loads

Lakeside Reclamation (503) 628-1866
14930 SW Vandermost Rd.
Beaverton, OR 97007

- source-separated untreated wood
- no pickups or trailers
- mixed loads accepted
- fee: \$13.55/ton, source-separated
\$47.65/ton, mixed loads

Facilities Map



Ac Acme Trading and Supply Co.
Am American Container Recycling
Ar Architectural Salvage
BB Best Buy in Town, Co.
BS Bredl Saw Service
CM Calbag Metals Co.
DW Durham Wood & Dirt
E East County Recycling
EZ EZ Recycling
FW Far West Fibers
Gr Grimm's Fuel Company
Gy Gypsum Wallboard Recycling
H Hickory Springs Manufacturing Co.
Hi Hillsboro Landfill
Ho Hippo Hardware
KB KB Recycling
Kz Knez Building Materials
L Lakeside Reclamation
Mc McFarlane's Bark, Inc.
Me Metro Metals

Mt Mt. Hood Metals
OS Oregon Pacific Steel
OF Oregon Paper Fiber
PY Porter Yett
PR Portland Road & Driveway
PI Potters Industries
Pu Pumlite Building Products
Re Rejuvenation Houseparts
Sc Schnitzer Steel Products Company
Sm Smurfit
SS Storie Steel and Wood Products
Su Sunflower Recycling
St St. Johns Landfill
Ty Taylormade Products Inc.
TW The Wall
TP The Wherehouse Project, Inc.
U United Pacific Recycling
W Wastech
WE Wood Exchange

McFarlane's Bark, Inc. (503) 659-4240
13345 SE Johnson Rd.
Milwaukie, OR 97222

- source-separated untreated wood
- no paint/few nails acceptable
- fee: \$35/ton

Metropolitan Disposal Corporation (MDC)
(503) 285-0571
8443 N. Kerby
Portland, OR 97217

- source-separated untreated wood smaller than 6' x 6'
- drop box and pickup service available
- fee: call for information

Smurfit Newsprint (503) 538-2151
Foot of Wynooski
Newberg, OR 97132

- source-separated untreated wood
- fee: free - suppliers must be prequalified, call Caye Poe or Barbara Buie

Storie Steel & Wood Products
Portland office (503) 287-1775
Yard office (503) 667-0607
I-84E at exit 16B
PO Box 12490
Portland, OR 97212

- source-separated commercial structural components
- treated wood accepted
- hauling and pickup services available
- wholesale and retail outlet
- fee: call for information

Sunflower Recycling (503) 238-1640
2345 SE Gladstone St.
Portland, OR 97202

- source-separated untreated wood
- fee: landscapers \$6/yard
public \$8/yard
commercial haulers \$30/ton

Taylor-made Products Inc.
(503) 223-7041
PO Box 548
34202 Johnsons Landing Rd.
Scappoose, OR 97056

- source-separated untreated wood
- pickup service available
- call before delivery
- fee: free delivered
- free pickup of full loads

Wastech (503) 285-5261
701 N. Hunt
Portland, OR 97217

- source-separated untreated wood
- fee: call for information mixed loads accepted

Wood Exchange (503) 255-4000
11402 NE Marx St.
Portland, OR 97220

- source-separated untreated wood
- dump boxes and pickup service available
- fee: call for information

Drywall

Gypsum Wallboard Recycling

(503) 691-9765

Tri-County Industrial Park

11120 SW Industrial Way, Bldg. 9

Tualatin, OR 97062

- all waste gypsum wallboard
- new, old, painted, textured, vinyl covered, wet
- all drywall-related waste

· fee: \$45/ton

Knez Building Materials

(503) 655-1991

12301 SE Highway 212

Clackamas, OR 97015

- source-separated new construction scrap
- source-separated used, installed after 1979
- call before delivering used drywall

· fee: call for information

United Pacific Recycling

Portland office (503) 639-8835

North Plains office (503) 647-9052

1000 SE Frontage Rd.

North Plains, OR 97223

- source-separated new construction scrap

· fee: \$30/ton

Glass

Potters Industries (503) 266-7814

350 NW Baker Drive

Canby, OR 97013

- source-separated window glass
- hauler must unload glass
- call to make an appointment

fee: free, call first

Land-Clearing Debris

American Container Recycling

(503) 286-0886

9707 N. Columbia Blvd.

Portland, OR 97283

- source-separated land-clearing debris less than 8 inches in diameter

· fee: \$4/yard
\$10 minimum

Best Buy in Town Co. (503) 645-6665

21600 NW Cornell Rd.

(1½ mile west of 185th)

Hillsboro, OR 97124

- source-separated land-clearing debris
- limbs less than 10 inches in diameter
- stumps up to 4 inches in diameter

· fee: \$5/yard
\$5 minimum

Durham Wood & Dirt (503) 359-5323

72nd and Bridgeport Road

Durham, OR 97224

- source-separated land-clearing debris
- grass, leaves and sod not accepted
- stumps

· fee: call for information

Grimm's Fuel Co. (503) 692-3756

18850 SW Cipole Rd.

(Highway 99 and Cipole Road)

Tualatin, OR 97062

- source-separated land-clearing debris
- stumps

· fee: \$6/yard

Hillsboro Landfill (503) 640-9427
3205 SE Minter Bridge Rd.
Hillsboro, OR 97123

- source-separated land-clearing debris
- mixed loads accepted
- fee: \$6/cubic yard, source-separated,
\$13 minimum
\$58.56/ton, mixed loads

Lakeside Reclamation (503) 628-1866
14930 SW Vandermost Rd.
Beaverton, OR 97007

- source-separated land-clearing debris
- no pickups or trailers
- mixed loads accepted
- fee: \$13.55/ton, source-separated
\$47.65/ton, mixed loads

McFarlane's Bark, Inc. (503) 659-4240
13345 SE Johnson Rd.
Milwaukie OR 97222

- source-separated land-clearing debris
- stumps
- fee: \$35/ton
\$55/ton for stumps larger than
12" diameter by 4' long
\$16/ton grass - \$2 minimum
\$20/ton sod - \$2 minimum

Wastech (503) 285-5261
701 N. Hunt
Portland, OR 97217

- source-separated land-clearing debris
- stumps
- fee: \$35/ton
\$15 for less than 840 pounds

Corrugated Cardboard

East County Recycling Center
(503) 253-0867
12409 NE San Rafael (at 122nd)
Portland, OR 97230

- source-separated uncoated corrugated
cardboard
- bundling not required
- mixed loads accepted
- fees: free, source-separated
\$68/ton, mixed loads

EZ Recycling (503) 285-2299
4970 N. Basin
Portland, OR 97217

- source-separated uncoated corrugated
cardboard
- tape, glue and staples not accepted
- reimbursement: \$20/ton

Far West Fibers (503) 643-9944
10750 SW Denney Rd.
Beaverton, OR 97005

- source-separated uncoated corrugated
cardboard
- reimbursement: \$20/ton

KB Recycling (503) 659-7004
8277 SE Deer Creek Lane
Milwaukie, OR 97222

- source-separated uncoated corrugated
cardboard
- reimbursement: \$25/ton

Oregon Paper Fiber (503) 289-6872
4970 N. Basin
Portland, OR 97217

- source-separated uncoated corrugated cardboard
- drop boxes and pickup service available
- reimbursement: \$20/ton

Wastech (503) 285-5261
701 N. Hunt
Portland, OR 97217

- source-separated uncoated corrugated cardboard
- reimbursement: \$20/ton

Metal

ACME Trading and Supply Co.
(503) 227-5501
4927 NW Front Ave.
Portland, OR 97210

- source-separated metals
- reimbursement: call for information

Calbag Metals Co. (503) 226-3441
2495 NW Nicolai
Portland, OR 97210

- source-separated metals
- reimbursement: call for information

Hillsboro Landfill (503) 640-9427
3205 SE Minter Bridge Rd.
Hillsboro, OR 97123

- source-separated metals
- fee: free

Metro Metals: Winkler yard
(503) 231-0799
3365 SE 17th
Portland, OR 97202

Zusman yard (503) 289-8074
1525 NE Columbia Blvd.
Portland, OR 97211

- source-separated metals
- reimbursement: call for information

Mt. Hood Metals Inc. (503) 283-3300
9645 N. Columbia Blvd.
Portland, OR 97203

- source-separated metals
- drop boxes available for large quantities
- reimbursement: call for information

Oregon Pacific Steel (503) 285-3089
12299 Burgard Rd.
Portland, OR 97203

- source-separated metals
- drop boxes and pickup service available
- reimbursement: call for information

Schnitzer Steel Products Co.
(503) 286-5771
12005 N. Burgard Rd.
Portland, OR 97210

- source-separated metals
- drop boxes and pickup service available
- reimbursement: call for information

Storie Steel & Wood Products
Portland office (503) 287-1775
Yard office (503) 667-0607
I-84E at exit 16B
PO Box 12490
Portland, OR 97212

- source-separated commercial structural components
- hauling and pickup services available
- wholesale and retail outlet
- fee: call for information

Rubble

Best Buy in Town Co. (503) 645-6665
21600 NW Cornell Rd.
(1½ mile west of 185th)
Hillsboro, OR 97124

- source-separated rubble
- 4-inch or less concrete slab
- no wire or bar
- pickup service available
- fee: call for information

Durham Wood & Dirt (503) 359-5323
72nd and Bridgeport Road
Durham, OR 97224

- source-separated rubble
- pickup service available
- fee: \$1/cubic yard
\$10 minimum

East County Recycling Center
(503) 253-0867
12409 NE San Rafael (at 122nd)
Portland, OR 97230

- source-separated rubble
- mixed loads accepted
- fee: \$5/yard, source-separated
\$12 minimum
\$75/ton, mixed loads

Hillsboro Landfill (503) 640-9427
3205 SE Minter Bridge Rd.
Hillsboro, OR 97123

- source-separated rubble
- concrete or asphalt slabs 6 inches or less
- bar and wire not accepted
- mixed loads accepted
- fee: free, source-separated
\$58.56/ton, mixed loads

Lakeside Reclamation (503) 628-1866
14930 SW Vandermost Rd.
Beaverton, OR 97007

- source-separated rubble
- no pickups or trailers
- mixed loads accepted
- fee: \$13.55/ton
4 inches and less concrete slabs - free
\$47.65/ton, mixed loads

Porter Yett (503) 282-3251
5949 NE Cully
Portland, OR 97218

- source-separated rubble
- fee: single axle: \$6/load
double axle: \$12/load
long bed: \$18/load

Portland Road and Driveway
(503) 650-5006
10500 SE Jennifer St.
Clackamas, OR 97015

- source-separated rubble
- fee: \$20 for first 10 yards
\$2/yard over 10 yards
minimum 10 yards

Pumlite Building Products
(503) 692-1050
19477 SW 89th
Tualatin, OR 97062

- source-separated red brick
- 5,000 or more
- must be on pallets
- retail outlet
- reimbursement: call for information

St. Johns Landfill (503) 286-9614
9363 N. Columbia Blvd.
Portland, OR 97203

- source-separated rubble
- large quantities only by appointment
- no pickups or trailers
- fee: call for information

The Wall (503) 288-7881
5204 N. Albina Ave.
Portland, OR 97217

- 4-inch or less thick concrete slabs 2 feet or larger
- no wire or bar
- tear-out and pickup services
- fee: call for information

Carpet Padding

Hickory Springs Manufacturing Co.
(503) 255-5850
3900 NE 158th
Portland, OR 97230

- source-separated polyurethane padding
- staples and tacks not accepted
- wholesale outlet for remanufactured carpet padding
- rubber padding not accepted
- reimbursement: 5 cents\pound

METRO

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