

CONSTRUCTION WASTE MANAGEMENT AND RECYCLING



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Fact Number 1

- Demolition and construction debris represents up to 40% of total waste stream introduced into landfills in many areas

Fact Number 2

- In most cases up to 90% of all construction waste is recyclable...

“Your trash is another mans treasure.”

Fact Number 3

- Diversion rates of 70 to 80 percent are easily achievable. Construction waste becomes industrial feedstock for both new construction materials and many household consumer products.

Fact Number 4

- In nearly all cases, implementing an effective construction waste recycling program actually saves money and reduces the net project construction cost due to avoided costs – primarily the elimination of 60 to 80 percent of landfill tipping fees, which can range from \$150 to \$350 per roll off, or more, depending upon material type, weight and location of landfill.

Fact Number 5

- Some progressive construction waste firms now specialize in recycling (vs. disposal) of construction materials, have developed a network of industrial users of construction waste materials. These firms make a profit as the middle man for handling these materials, and still offer a 30 to 60% reduction in overall project construction waste management costs.

(ie: visit www.environmentallogic.com)

Fact Number 6

- Even if a waste management company does not have an established network of industries who take sorted construction materials, nearly all waste management firms will provide the dumpsters and haul the material to a pre-determined location as specified by the architect/owner/CM.

Fact Number 7

- Reduction in landfill tipping costs nearly always offsets the added cost of having more dumpsters and the added trucking fees to take recyclables to multiple locations – which in some cases are a greater distance than the local landfill.

Worst case scenario...

No net increase in project construction waste handling cost.

Fact Number 8

- Abundance of landfills in PA and lower tipping fees in some rural areas of the Commonwealth have historically made it harder to promote construction waste recycling but that is about to change as many landfills are predicted to reach capacity within the next 10 years, primarily due to importing of waste from other states.

Fact Number 9

- There is no good reason to put-off implementing a mandatory construction waste recycling program on all construction, renovation and demolition project sites. Commonwealth projects should take the lead on this important initiative by encouraging, if not mandating construction waste recycling at all state construction project sites.

Fact Number 10

- The United States Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) green building rating system gives two credits for construction waste recycling and requires separation and recycling of the following materials at the jobsite...

Construction Waste Recycling

USGBC LEED

Land Clearing Debris

Asphalt

Concrete and Masonry

Brick

Steel and Metals

Corrugated Cardboard

Dimensional Lumber/Wood

Gypsum

Carpet and Padding

Glass and Plastic

Beverage Containers

Other Materials

Rigid Foam Insulation

Engineered Wood Products

Asphalt Shingles

Wood Pallets

Job Trailer Mixed Paper

Excess Paint and Sealants

LEED Credits:

1 Point - 50% Diversion Rate

2 Points - 75% Diversion Rate

Fact Number 11

- Millions of tons of nylon carpeting go to landfills each year despite the fact that Dupont has 100 locations nationwide that take any new or used carpet or carpet padding which is then separated, cleaned, processed and used as industrial feedstock where it is turned back into new products and consumer goods from carpeting, carpet padding, flooring materials and other household goods to automotive parts.

(Go to Dupont's website for list of locations)

Fact Number 12

- PA DEP Website lists two valuable tools:

1) A comprehensive listing of *Pennsylvania Recycled Product Manufacturers* who use recycled materials as industrial feedstock to produce everything from construction materials to household goods and automotive products – many of the listed PA industries use waste materials generated on a construction site.

www.dep.state.pa.us/dep/deputate/airwaste/wm/RECYCLE/paman/page1

2) The *Official Recycled Products Guide (RPG)* lists over 4,500 recycled product listings by over 700 regional manufacturers and distributors of recycled content goods.

www.dep.state.pa.us/wm_apps/recycledproducts/

Final Fact

- The best solution is to not create waste in the first place – Develop and implement a *Construction Waste Reduction Plan*. There are lots of ways to reduce construction waste through both good design and quality controls at the jobsite. Strategies range from using modular architectural design standards and use of engineered or composite materials (such as flyash or blended concrete) to jobsite strategies such as centralized cutting areas, protecting building materials from the elements and quality control measures to reduce over-building and material waste.

Additional Resources:

- Triangle J Council of Governments has an outstanding publication called “WasteSpec” which is a model specification for construction waste reduction, re-use and recycling. Appendix E of this publication also lists numerous other valuable publications, manuals and resources.

(www.tjcog.dst.nc.us/solidwst.htm)

- The GGGC is has developed a draft construction waste reduction and recycling guideline to be posted on the GGGC website by Jan. 2002.

DGS Action Plan

- Establish a policy of mandatory construction waste reduction and recycling on all state projects.
- Develop tools such as a standard DGS construction recycling specification that will make it easier for architects to implement construction recycling on state projects.
- Develop and include in that specification, a listing or web-based database of industries throughout PA which specifically take construction waste materials.
- Encourage the use/specification of recycled content building materials and furnishings. This closes the loop, creates a demand for the recyclable materials, and encourages diversion of construction waste away from landfills.