

**Seattle Requirements for
Construction & Demolition Materials
*Reuse and Recycling***

August 5, 2014

**Seattle Recycling Requirements and Shingles
Disposal Ban**

Seattle Public Utilities

Seattle Solid Waste and Building Code Construction Waste Recycling Requirements

- Targeted Landfill Disposal Bans
- Recycling Facility Certification
- Waste Diversion Plan & Report
- Salvage Assessment



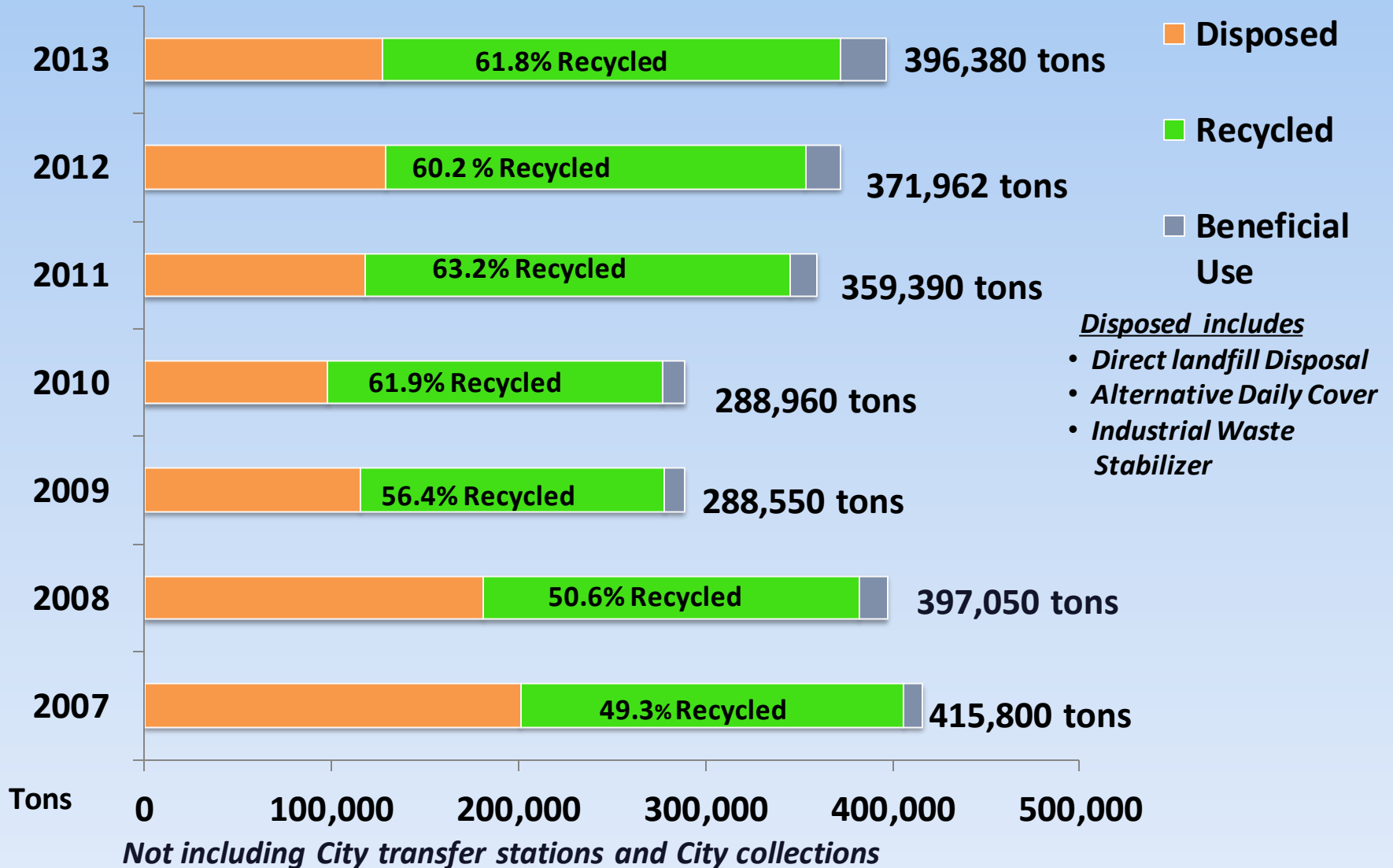
Seattle C&D Definitions

- **Recycling** – *materials separated for reuse or recycling*
- **Beneficial Use** – *clean wood to hog fuel or industrial boiler fuel*
- **Alternative Daily Cover (ADC) and Industrial Waste Stabilizer (IWS)** – *ADC covers the active face of a landfill instead of soil and IWS provides structure in special landfills.*

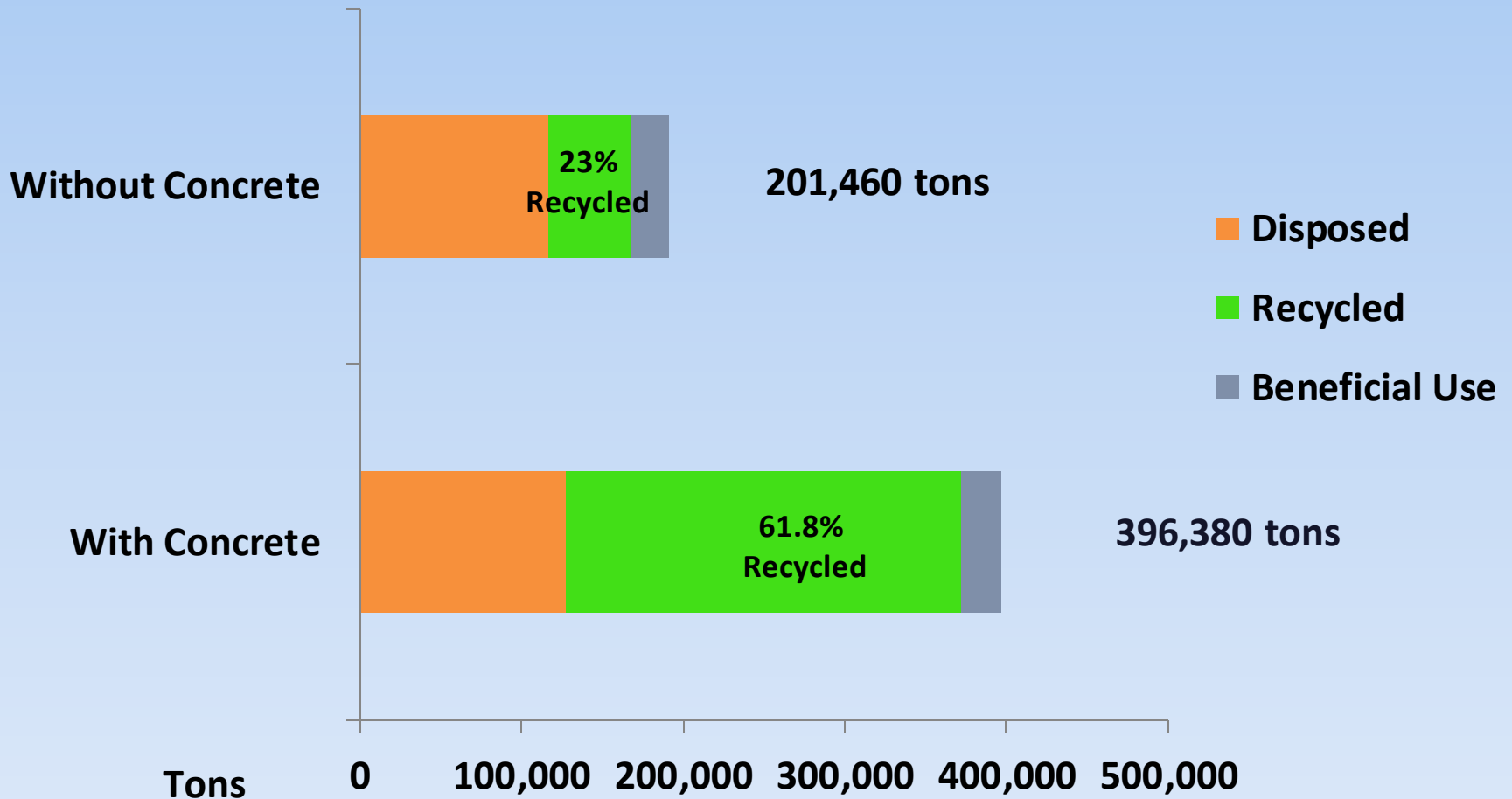
Both are counted as disposal

- **Disposal** – *material permanently place in a landfill*

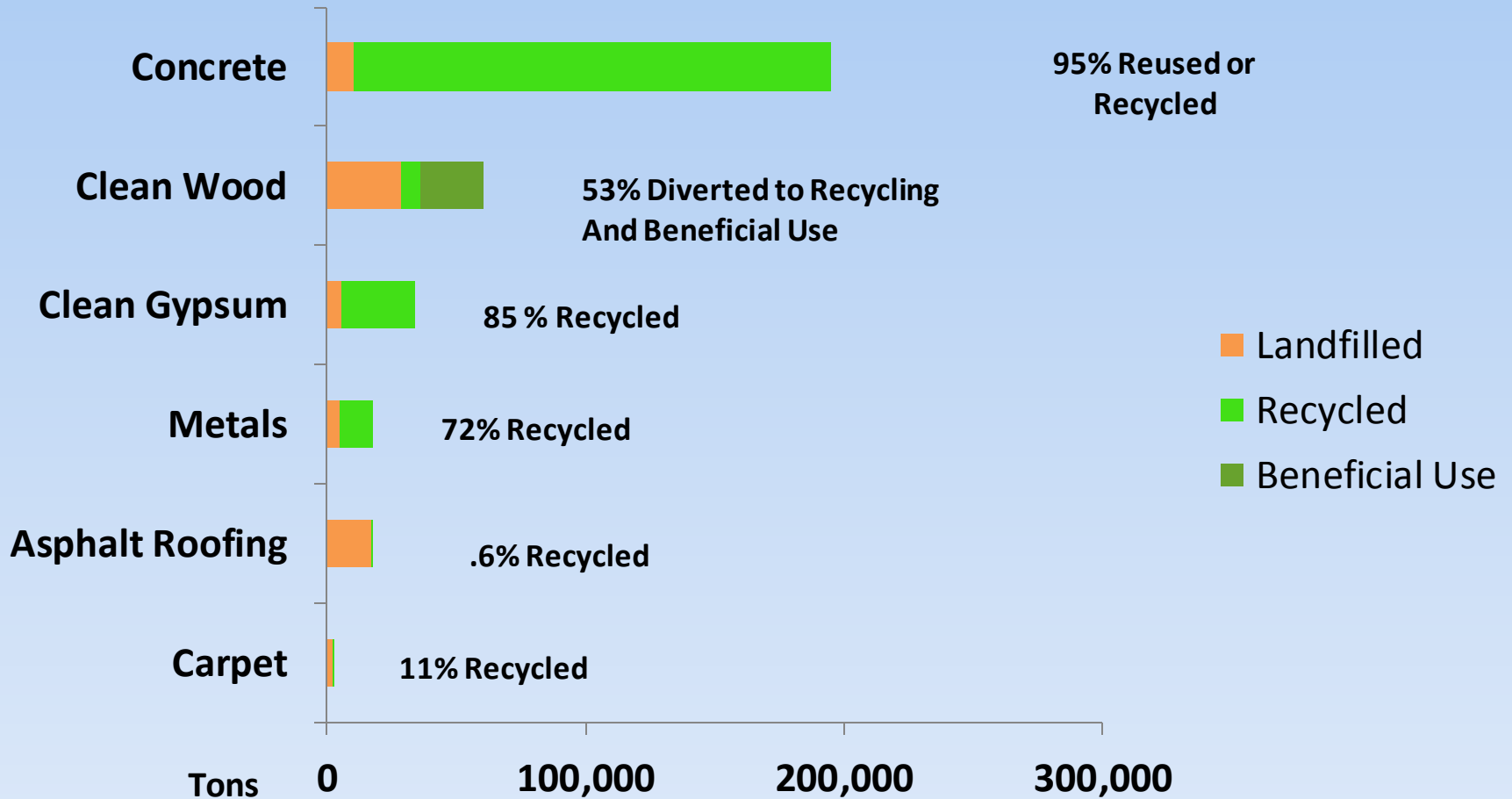
Seattle C&D Tons Generated



2013 Seattle C&D Generation with & without Concrete



2013 Material Diversion Levels



C&D Recycling Ordinances (2012- 2013)

- 2012 Seattle Solid Waste Plan Adoption
 - ❖ 70% recycling goal by 2020 for C&D Citywide
- Disposal Bans on Asphalt Paving, Brick and Concrete from construction job site disposal containers *effective in 2012*
- 2012 C&D Recycling Ordinance #124076-C&D Waste Recycling Required (SMC 21.36.09)
 - ❖ *Asphalt Paving, Brick and Concrete (effective 2012)*
 - ❖ *Metal, cardboard, new construction gypsum board (2014)*
 - ❖ *Carpet & plastic film wrap (originally effective 2014)*
 - ❖ *Clean wood and tear-off asphalt roofing shingles (2015)*
- 2013 SPU Director's Rulemaking- *details of facility certification, waste diversion reporting and phased landfill disposal bans*
 - ❖ Director's Rule SW-405.3 delayed the disposal ban on plastic film wrap and carpet to 2015 due to end market uncertainties

Phased Landfill Disposal Bans for Construction Sites (2012-2016)

Material	1/1/12	1/1/13	1/1/14	1/1/15	1/1/16
Asphalt Paving	Educate	Enforce	Enforce	Enforce	Enforce
Concrete & Bricks	Educate	Enforce	Enforce	Enforce	Enforce
Metal & Cardboard			Educate	Enforce	Enforce
New Gypsum Wallboard Scrap			Educate	Enforce	Enforce
Unpainted and Untreated Wood				Educate	Enforce
Carpet				Educate	Enforce
Plastic Film Wrap				Educate	Enforce
<u>Asphalt Roofing Shingles</u>				Educate	Enforce

Enforce – through field inspections and a possible monetary fine if “significant” amounts in disposal container or transfer station loads

C&D Facility Certification Criteria (2014)

	Permits & Regulatory Compliance	Annual Reporting to Seattle	Monthly Reporting to Seattle	Minimum Recycling Percentages	Sampling Residuals for Landfill Disposal
Source Separated Recyclers	Notification to Regulators	Yes, even if outside City	No	At least 90%	No
Mixed Waste C&D Recyclers	Solid Waste Permit Required	Yes	Yes	75% for LEED & Built Green Projects	Yes – quarterly sampling of residual for targeted materials – must meet standard of less than 10%

Hauling and Facilities

Recycling Hauling – any company can haul as long as container contents are 90% recyclable



Non-recyclable C&D only to be hauled by Waste Management under City contract

Recycling Facilities



“Qualified” Commingled Recyclers

- Recovery One, Tacoma
- Black River, Renton
- CDL Recycle, Seattle
- United Recycling, Maltby

Waste Diversion Reporting (2014)

Purpose:

- ❖ Assess if projects with a building permit are recycling targeted construction materials and using recyclers on the City's approved lists

Applicability:

- ❖ Projects where permit issued after January 1, 2014
- ❖ All demolition permits
- ❖ New construction and alteration permits valued at \$30,000 or greater

Report due within 60 days of a project receiving its "Final Inspection Approval" from DPD

New Seattle Building Code Requirements

- **Effective Date: January 1, 2014**
- **New sections:**
 - **SBC 106.5.9 & SRC R105.5.3**
- **Applies to projects > 750 sf**



Waste Diversion Plan and Salvage Assessment

Required prior to permit issuance for all projects with a working area > 750 square feet

Waste Diversion Plan must include:

- Materials from jobsite
- Hauler
- Receiving location



Deconstruction and Salvage Assessment

- Applies only to demolitions
- Checklist of Salvageable Materials
- Can be performed by reuse retail companies, or demolition or deconstruction contractors



A close-up photograph of asphalt shingles on a roof. The shingles are dark grey with a textured surface and are arranged in a staggered pattern. The lighting creates shadows between the shingles, highlighting their three-dimensional structure.

Tear-Off Asphalt Shingles Recycling Infrastructure Issues

Tear Off Asphalt Roofing Shingles

- **49,500 tons** generated in Seattle and King County
- Relatively easy to source separate at job site
- Lower tip fees for source separated materials
- Recovery of valuable resource (oil)
- State Roofing Association supportive



Recycling Rates for Composition Roofing (Seattle)

Year	Estimated Generation (Tons)	Estimated Disposed (Tons)	Reported Recycled (Tons)	Recycling Rate
Baseline 2007	27,258	26,967	291	1.5%
2008	25,281	24,297	983	4%
2009	16,247	15,477	771	5%
2010	14,440	13,180	1260	9%
2011	18,733	15,848	2884	15%
2012	19,453	17,074	2108	11%
2013	17,178	17,074	104	Less than 1%

2013 – closure of Glacier Recycling. Other facilities have had issues with asphalt shingles piles not moving to market

Local Recycler and Paver Infrastructure for RAS Production (2013)

Recyclers accepting Tear-Off Asphalt Shingles	Paving Producers using RAS
Miles Resources, Lakewood	Miles Resources, Lakewood
Evergreen Shingle Recycling, Woodinville	Lakeside Industries, Pierce County
Lautenbach Industries, Mt. Vernon	ICON Materials, Auburn
<i>Other Recyclers will accept incidental amounts in construction loads</i>	Northwest Asphalt and Pyramid Materials
	Central Washington Asphalt
	Oldcastle Materials

Action Steps to Support Asphalt Shingle Landfill Disposal Ban

- King County and WSDOT specifications should be adopted or referenced by other public agencies**
- SPU and other city agencies to consider use of RAS in appropriate road maintenance or new paving projects (hot mix or warm mix)**
- Recyclers need to be aware of local Health Department requirements for on site processing and storage of raw shingles and RAS**

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<http://www.seattle.gov/util/C&DWasteManagement>