

City of Portland Sustainability Office

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for
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Overview

- First GHG Inventory – 2001
- 2nd GHG Inventory – 2005
- Sustainable Portland Report – 2007
- Municipal Climate Action Plan – 2008

Some Major Actions

- Energy efficiency upgrades for City buildings in 2011
- Green Building Ordinance – projects using City funds exceed ASHRAE standards by 30% (new construction)
- Solar Ordinance allows solar generation in all zones
- Developing solar at landfill and Jetport

Deeper Dive

- Waste reduction and recycling
- Green Packaging
- Street lighting
- Heat Pump Challenge

Waste Reduction & Recycling

- Waste Reduction and Recycling
 - Curbside Recycling and PAYT: 1999
 - Single Stream Recycling: 2007
 - Cart based recycling: 2017
 - Food scrap collection: TBD
- Green Packaging Ordinance: 2015
 - Fee on shopping bags
 - Ban on polystyrene foam packaging

Waste reduction, why?

- EPA Report, 2011: “End of life management strategies such as recycling can lead to significantly lower emissions from earlier stages in the material life cycle, including material extraction, manufacturing, and distribution.

Source Reduction/Reuse

Source Reduction Benefits:

- Reduce Packaging use by 50% = > 40 MMTCO₂/year
- Reduce non packaging paper by 50% = > 20 MMTCO₂/year
- Extend the life of PCs by 25% = > 15 MMTCO₂/year

Source EPA Solid Waste Management and GHG, a Lifecycle Assessment

Recycling

- Increase recycling of C&D to 50% = > 75 MMTCO₂/year
- Increase national recycling and composting rate to 50% = > 70 MMTCO₂ /year

Source EPA Solid Waste Management and GHG, a Lifecycle Assessment

GHG Value of Recycling

- Tons of carbon reduced by recycling:
 - Aluminum cans: 10 tons CO₂ / per ton
 - Newspaper: 2.5 tons CO₂ / ton
 - PET (soda bottles): 1.7 tons CO₂ / ton

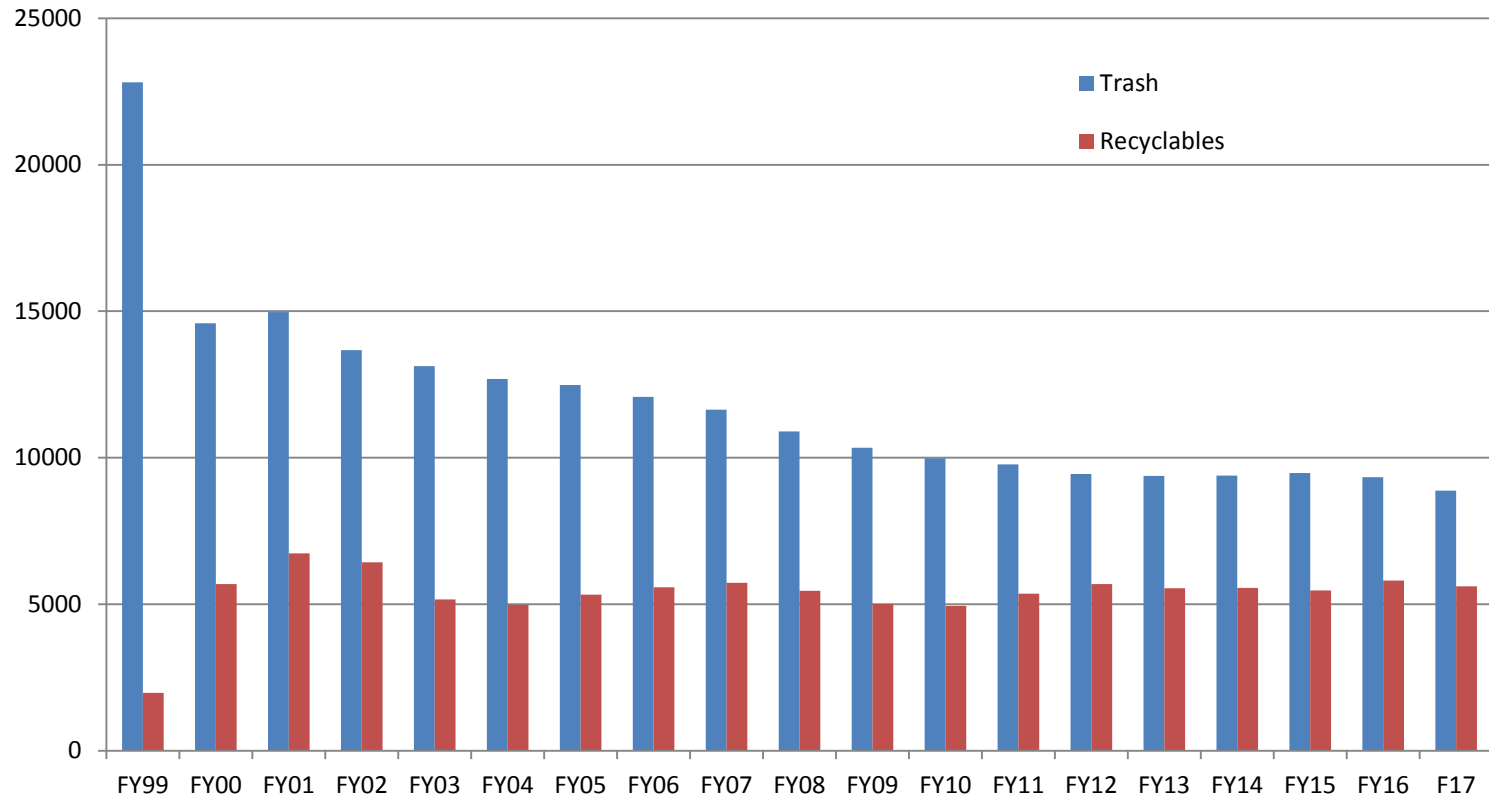
Source: Popular Mechanics, November 12, 2008

<http://www.popularmechanics.com/science/environment/a3757/4291576/>

Curbside Recycling and PAYT



Portland Waste / Recycling History



Over 60% reduction in trash tonnage since 1999

Green Packaging

washingtonpost.com > Arts & Living



MORE THAN MEETS THE EYE

An occasional feature that digs deeper into things you've been wondering about

Paper or Plastic?

We hear the question almost every time we go grocery shopping. Some shoppers answer automatically: plastic — convinced that they are making a better choice for the environment. Others ask for paper, believing the very same thing. The reality is that both paper and plastic bags gobble up natural resources and cause significant pollution. When you weigh all the costs to the environment, **you might just choose to reuse:**



<http://www.washingtonpost.com/wpdyn/content/graphic/2007/10/03/GR2007100301385.html>

US consumes 100 Billion Plastic Bags & 10 Billion Paper Bags Annually

Why?

- Source reduction: Get people to think about whether they need a bag
- Prevent marine pollution: Poly foam and plastic bags are pernicious forms of marine debris
- Keep debris off the street and out of the storm drains
- It takes 12 million barrels of oil / year to make the plastic bags used in the US!!! (Washington Post)

LED Streetlights

- Converting all street lights in the US would save \$2.3 billion annually and eliminate 15 million tons of CO₂. (The Climate Group)
- In Portland: Energy consumption from streetlight will fall from 4 million kWh/year to 1 million kWh.
- Portland's annual street lighting costs will fall from \$1.2 million to \$200,000.

Key Considerations

- Use warm lights -- no higher than 3000 K to avoid blue/white glare
- Consider town or utility ownership
- Consider advanced controls
- Payback can be very fast
- Every town in Maine should be doing this

Casco Bay Heat Pump Challenge



- o Free admission!
- o Saturday, June 17th
10:00am – 2:30pm
Presentations at 10:30am and 1:00pm
- o East End Community Center
195 North St.
Portland, ME 04101
- o Find out more at:
<http://wepowr.com/casco-bay>



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Events

Portland, South Portland,
Scarborough, Falmouth

5 heat pump vendors

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and cooling



Questions

