

**Solid Waste Task Force
April 22, 2010
4:00 PM
Room 24, City Hall**

1. Solid Waste Policies Background

Documents: [SOLID WASTE POLICIES BACKGROUND.PDF](#)

2. Draft Goals And Objectives

Documents: [DRAFT GOALS AND OBJECTIVES.PDF](#)

3. Estimated Recovery Rate Of Recyclables

Documents: [ESTIMATED RECOVERY RATE OF RECYCIABLES.PDF](#)

4. Europe Finds Cleaner Energy

[EUROPE FINDS CLEANER ENERGY](#)

5. Iswm Vs Zero Waste

Documents: [ISWM VS ZERO WASTE.PDF](#)

Existing Solid Waste Management Policies and Infrastructure

Report to the Solid Waste Task Force

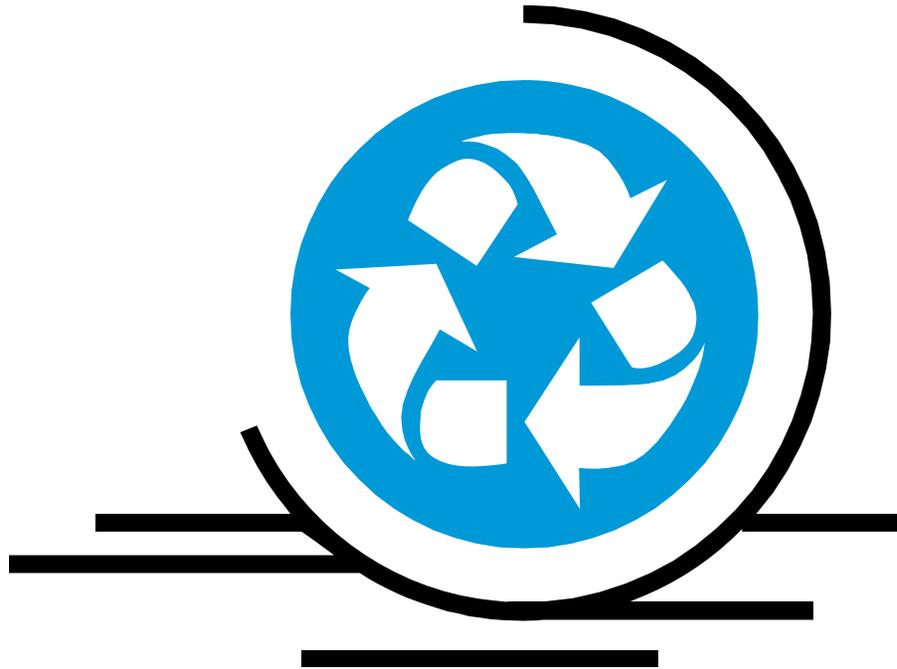
3/25/2010

Department of Public Services

Michael Bobinsky, Director

Troy Moon, Solid Waste Manager

Policy Overview



State Policy and Goals

- See 38 MRSA, Chapter 13 -- Declaration of Policy (1989):
 - Establish statewide waste reduction, recycling and management program
 - Establish waste management hierarchy
 - Notes economic benefits of recycling
 - Notes the need for State action to assist municipalities in managing solid waste

State Waste Management Hierarchy

1. **Reduce waste** (both amount and toxicity)
2. **Reuse**
3. **Recycle**
4. **Compost**
5. **Reduce volume** (Waste to Energy)
6. **Landfill**

State Goal

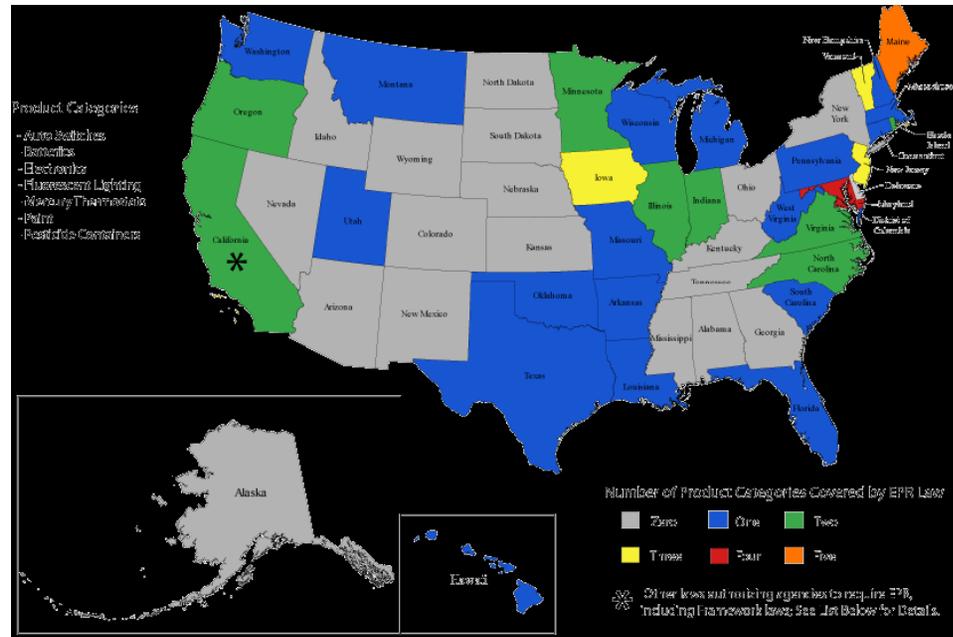
- Recycle 50% of the waste generated in the State of Maine by 2009
 - Goal established in 1989
 - Recycling rate is currently about 35%
 - Municipalities not required to achieve 50% but must demonstrate progress

Mandatory Recycling

- MRSA Title 38, Chapter 24, Subchapter 3:

Businesses with 15 or more employees in a single location are required to recycle office paper and cardboard

Producer Responsibility



- Manufacturers help manage and pay for recycling of products
- Maine is the national leader in promoting producer responsibility
- Laws cover fluorescent bulbs, electronic waste, thermostats, mercury switches, batteries

Producer Responsibility

- The law has been very effective for TVs and CRTs – the DEP estimates that 50% are now being recycled.
- Decreases costs to municipalities so they can offer recycling to their residents
- The State is exploring expanding PR to other difficult to manage products.

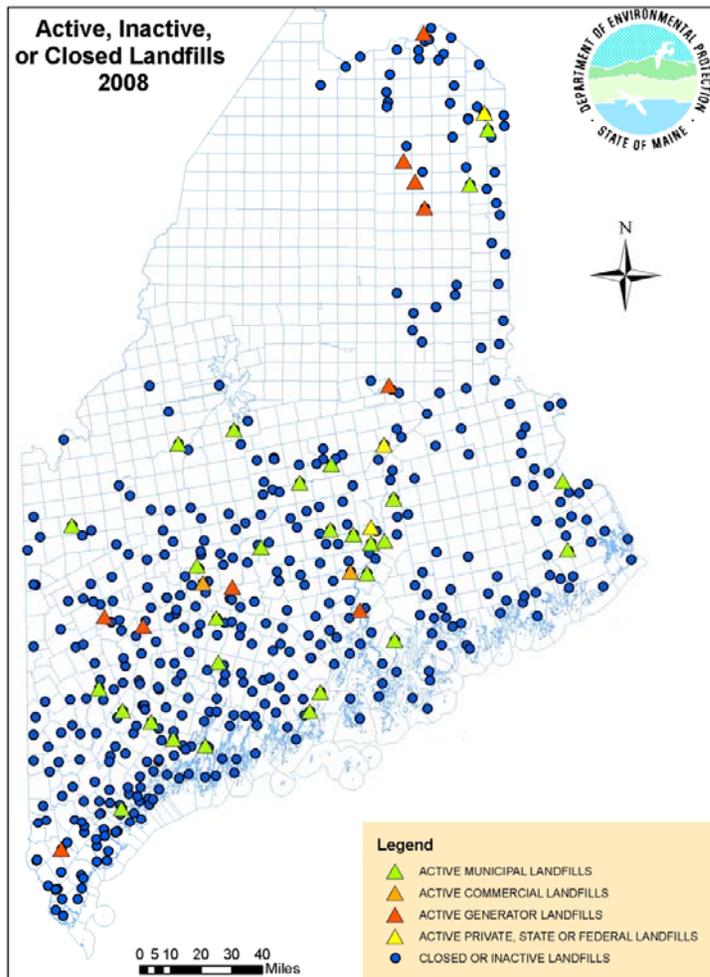
City Policies

- Climate Goals
 - Reduce GHG emissions to 10% below 1990 levels by 2020
 - Will calculate GHG impact of current efforts with EPA's Waste Reduction Model (WaRM) software for future meeting

Existing Solid Waste Infrastructure



Landfills



Landfills (Commercial):

Crossroads, Norridgewock
Juniper Ridge, Old Town
Pine Tree, Hampden (*now closed*)

Major Landfills (Municipal)

Bath
Brunswick
Hatch Hill (Augusta)
Tri-Community (Fort Fairfield)
Presque Isle
Lewiston

WTE:

ecomaine, Portland (170K tpy)
ME Energy, Biddeford (310K tpy)
MMWAC, Auburn (70K tpy)
PERC, Orrington (304K tpy)

WTE handles 32% of Maine's waste

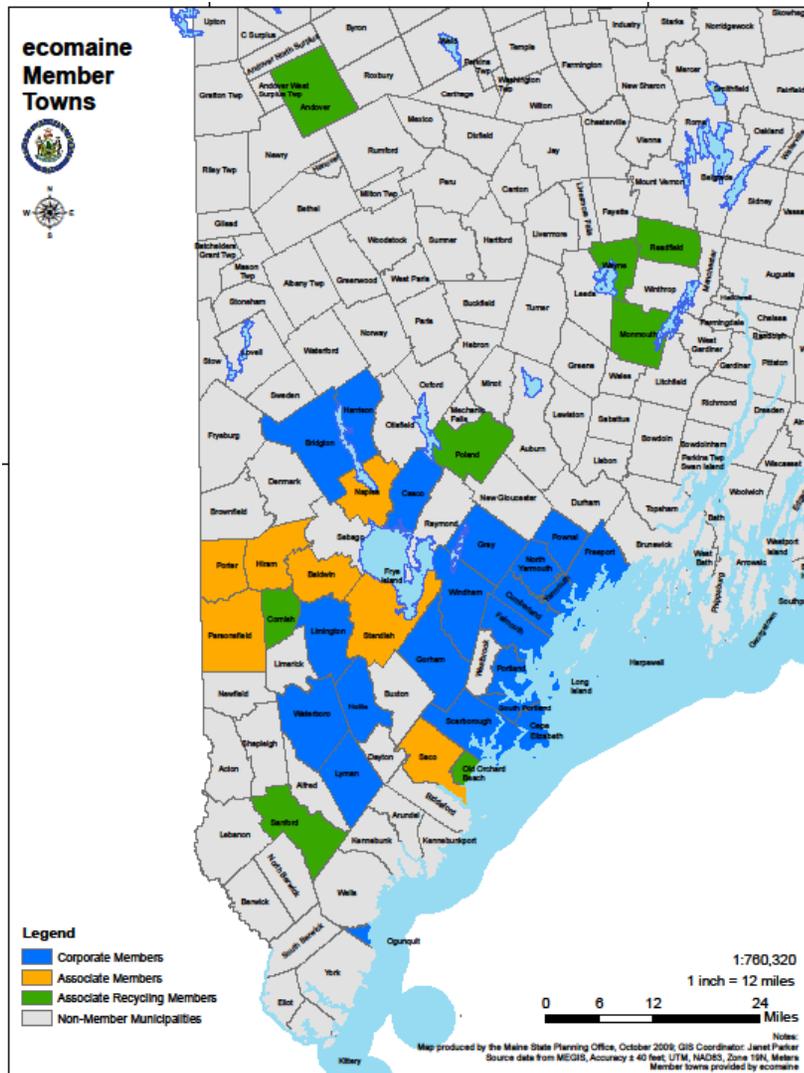
Private Transfer Stations

- **Plan-It**, Gorham
- **Troiano**, South Portland
- **BBI**, Old Orchard Beach
- **Oceanside**, Wells

Future of Disposal

- The State has banned development of new disposal facilities
- The State owns Carpenter Ridge near Lincoln that will become the site of a future landfill when needed
- Existing disposal capacity sufficient for now with additional capacity to be permitted.

ecomaine Communities



- 21 Owner Communities
- 7 Associate Member Communities
- 10 Contract Communities

ecomaine serves a population of more than 250,000 people

ecomaine Facilities

- Waste to Energy
- Single Stream MRF
- Landfill / Ashfill



Riverside Recycling

- Owned by City
- Managed by CPRC
- Used by:
 - City crews
 - Portland residents
 - Businesses
 - Regional

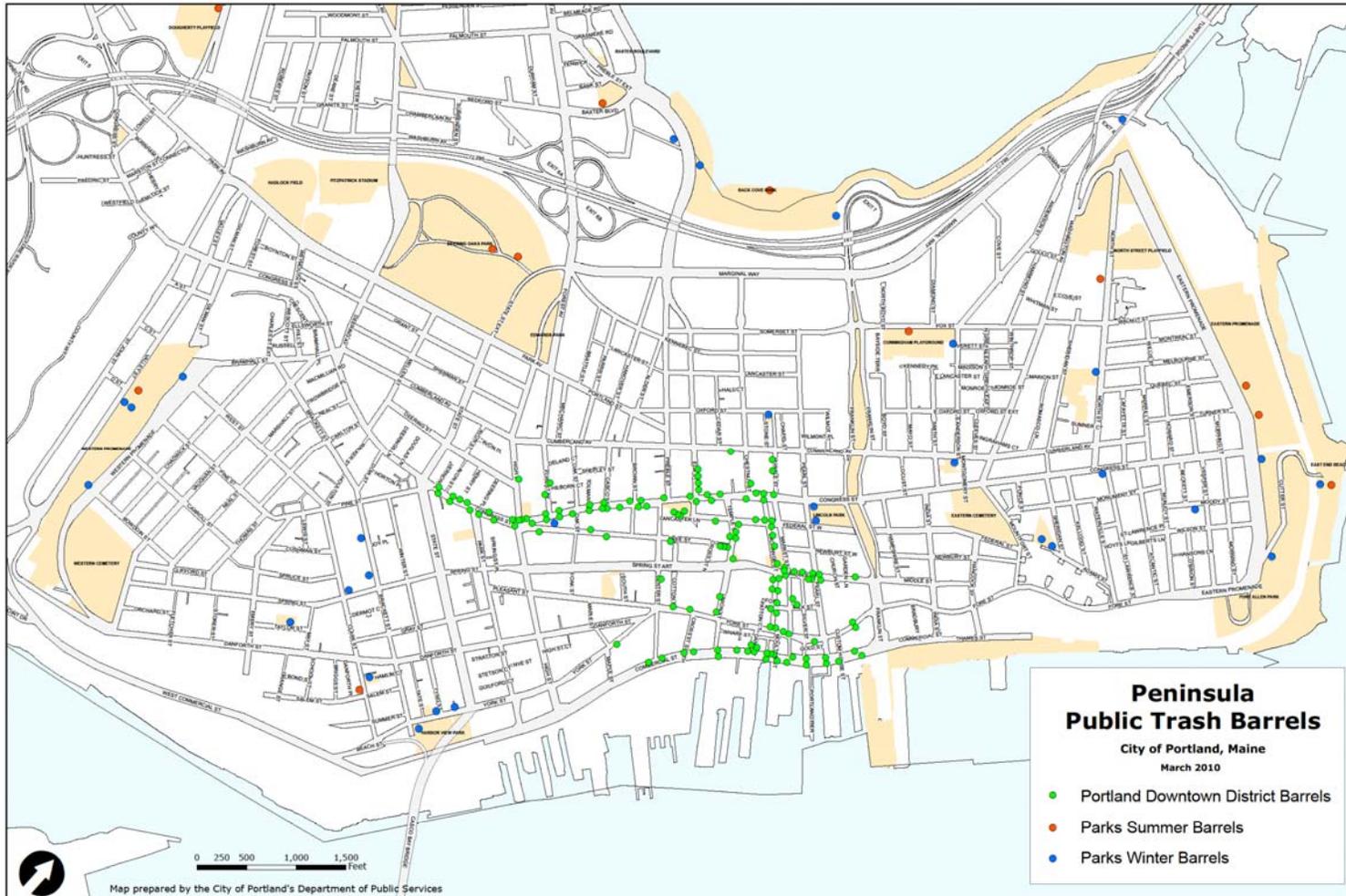


Riverside Recycling

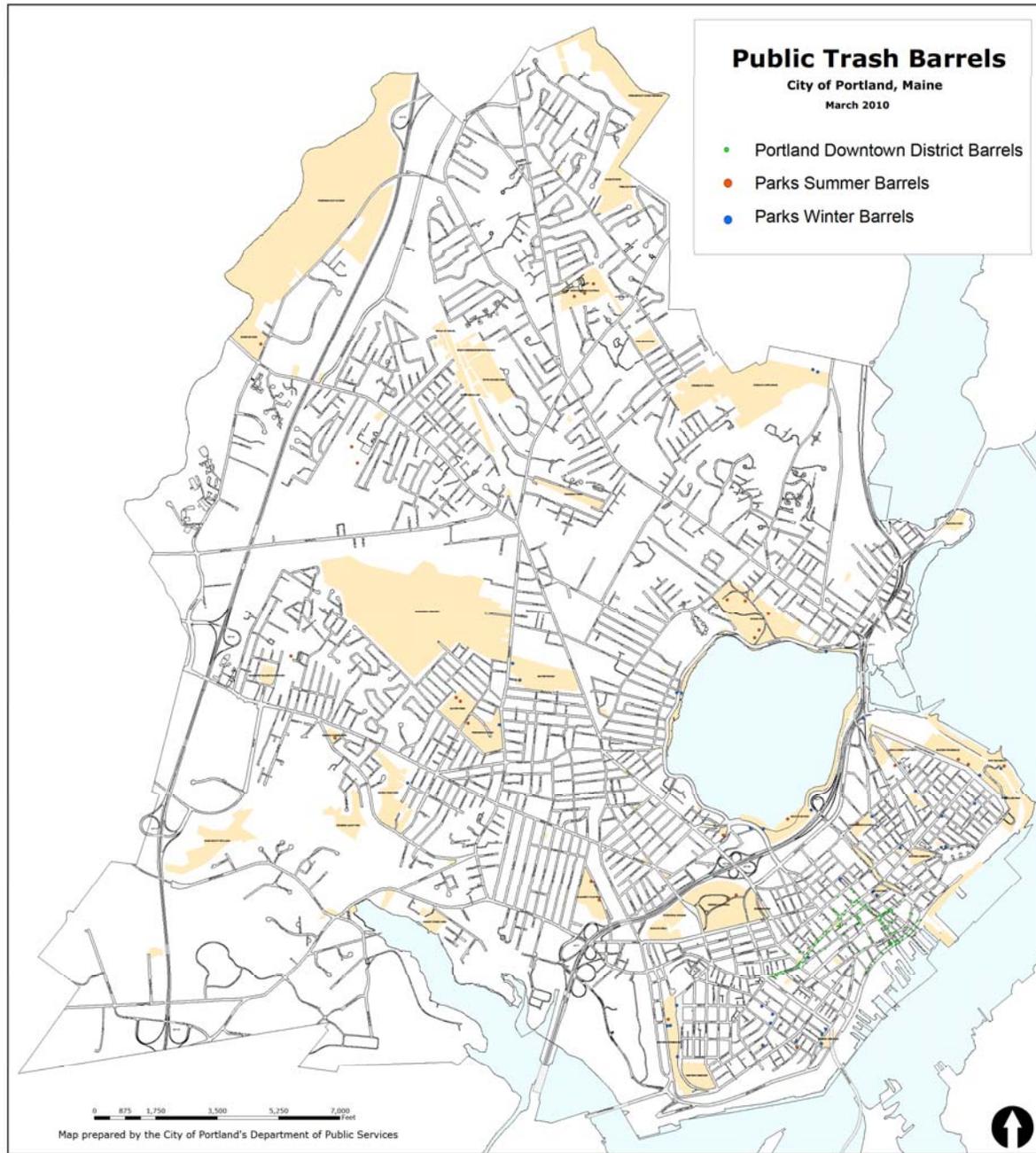
- Up to 60,000 tons per year
- 50% is C&D/Mix to landfill
- 50% recycled:
 - Wood (demo and clean)
 - Metals
 - Drywall
 - Asphalt Shingles
 - Yard waste
 - Electronics
 - Mercury containing items
 - Brick, block, concrete, soils
 - Glass



Downtown Trash Barrels



150 trash barrels emptied at least 1 x daily



X Year round X Summer only 150 downtown

Drop off Recycling



- Somerset Street location has 8 “Silver Bullets”
- Open 24/7, gate closed in the evening to prevent vehicular access
- Available for use by anyone, used by small businesses with limited options
- Very heavily used
- Need to find permanent location for them
- Riverside Recycling has 1 “Silver Bullet” for use during open hours

Data



State Waste Management Plan

- State Planning Office prepares reports on waste generation and disposal capacity as well as progress toward goals.
- State data that follows derives from these documents.
- <http://www.state.me.us/spo/recycle/publications.htm>

State Waste Generation

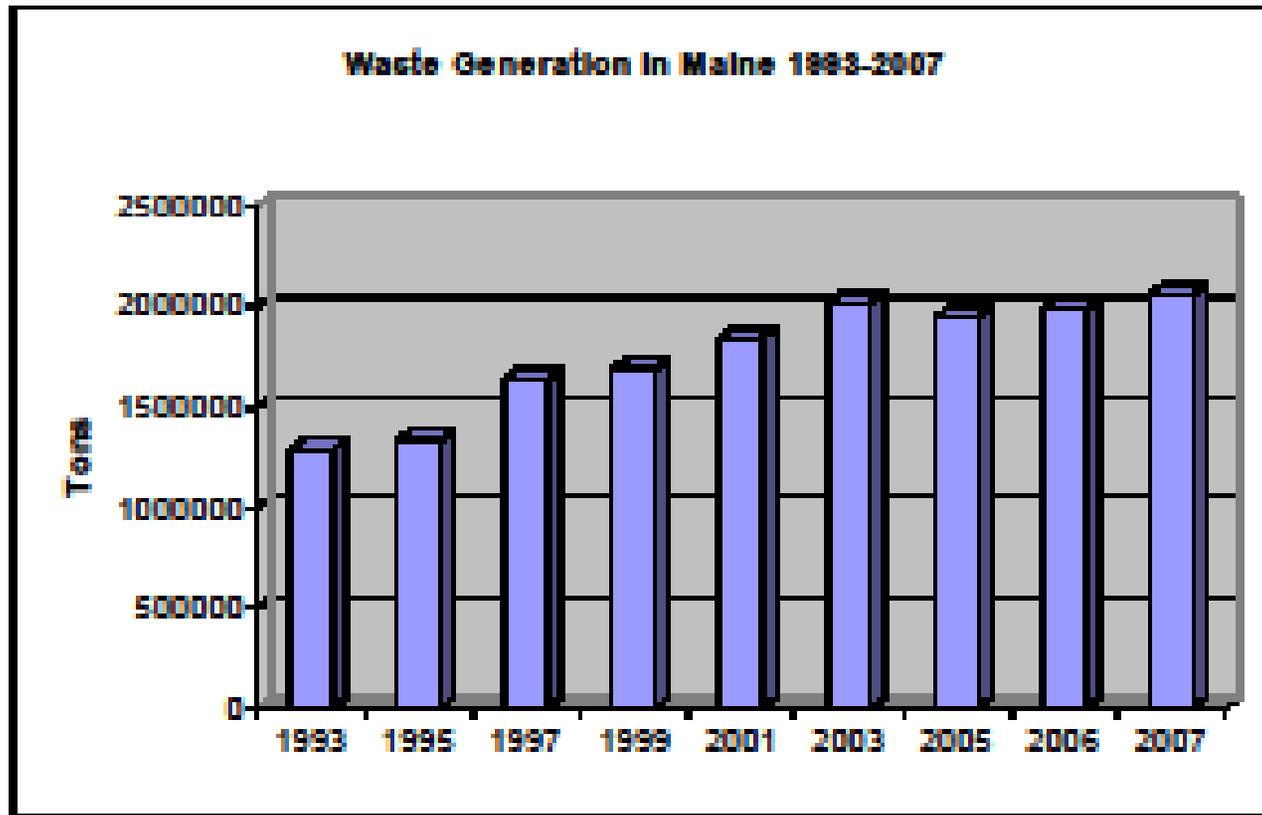


Figure 1: Maine Waste Generation, 1993-2007

Source: State Planning Office

State Recycling Rate

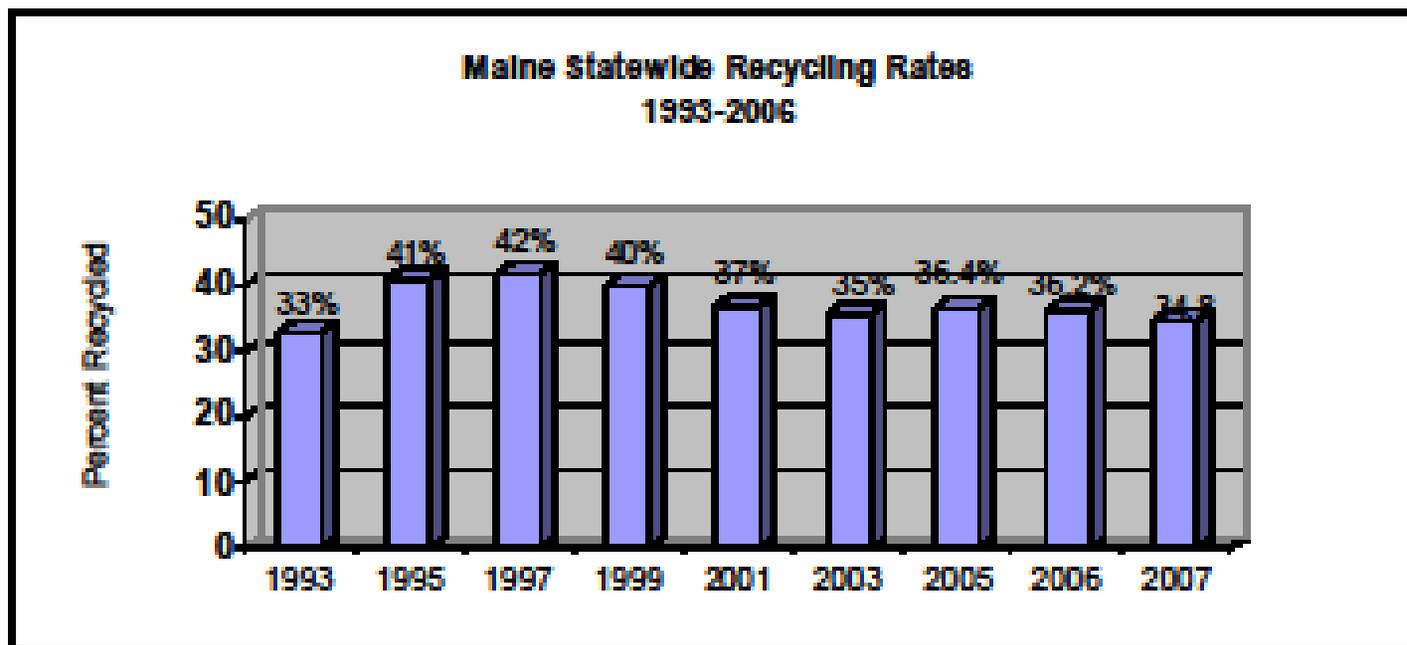


Figure 4: Maine Recycling Rates, 1993-2007
Source: State Planning Office

State Disposed vs. Recycled

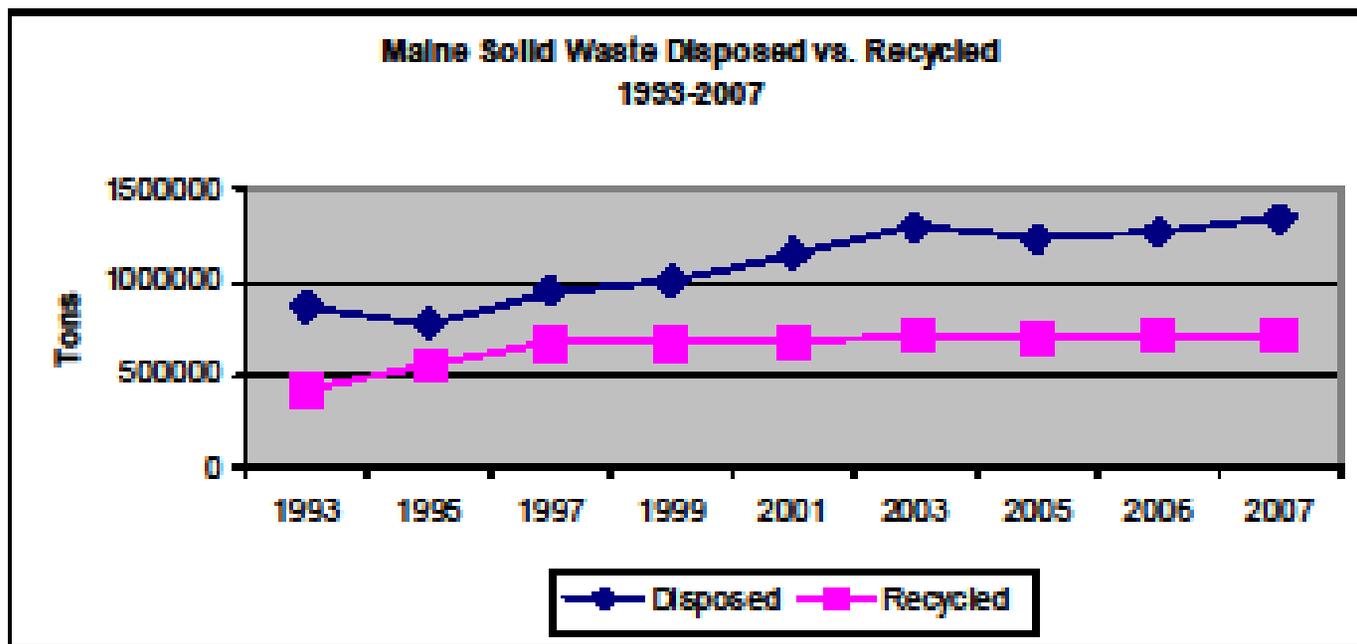


Figure 5: Maine Solid Waste Disposed vs. Recycling, 1993-2007

Source: State Planning Office

Estimated Recovery Rate of Recyclables

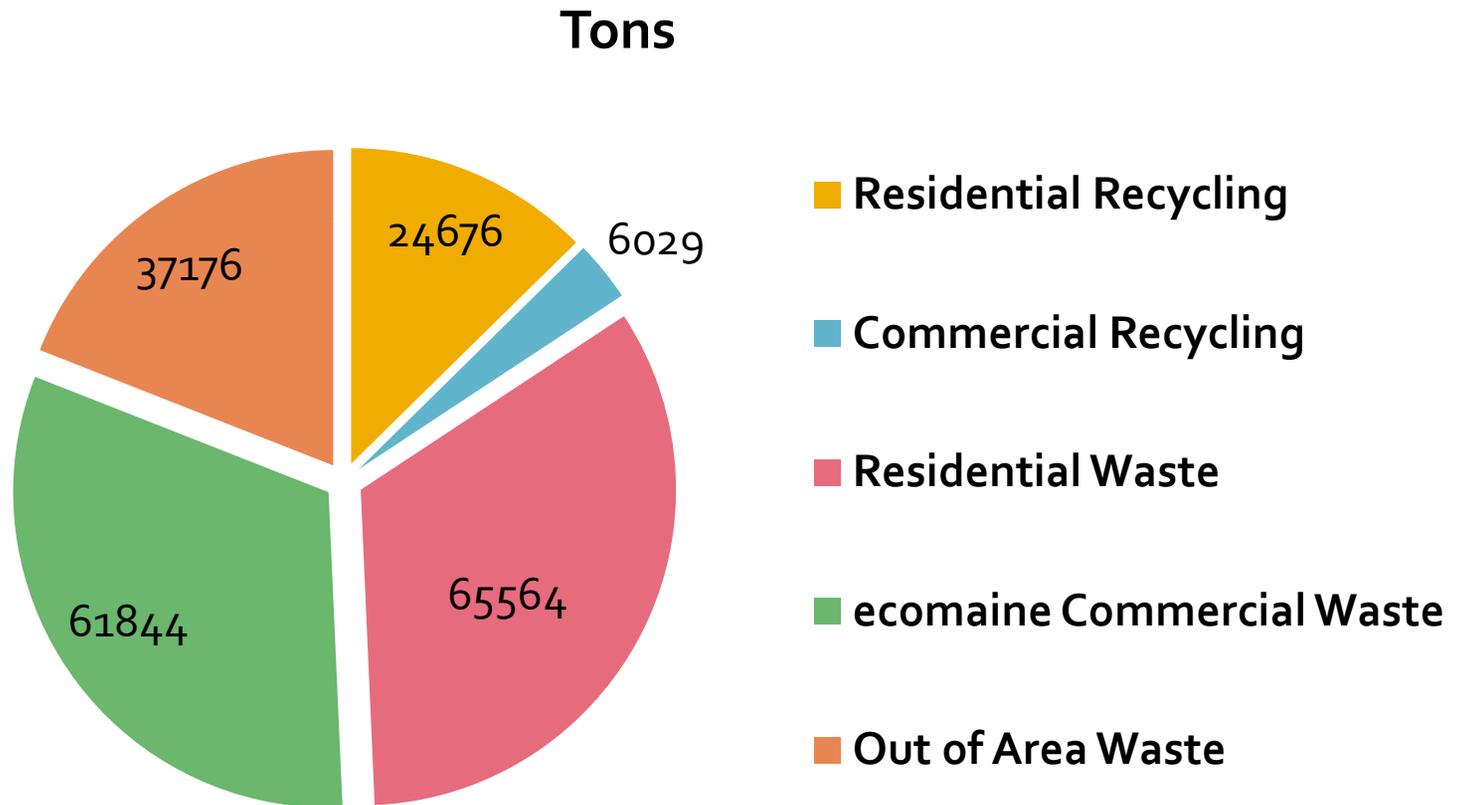
State Planning Office

**Table 2: Recovery Rates of Selected Recyclable Materials
2007**

Waste type	Amount generated	Amount recovered	% recovered
Paper/ paperboard	571,910	286,164	50%
Yard waste	223,867	29,948	13.3%
Food scraps	218,620	214	minimal
Plastic	211,624	15,181	7%
Household Metal	143,415	86,936*	61%
Textile/rubber/leather	132,920	9,498	7.1%
Wood waste	97,942	**	
Glass	92,695	49,520	53.4%

* includes white goods ** no corresponding definition

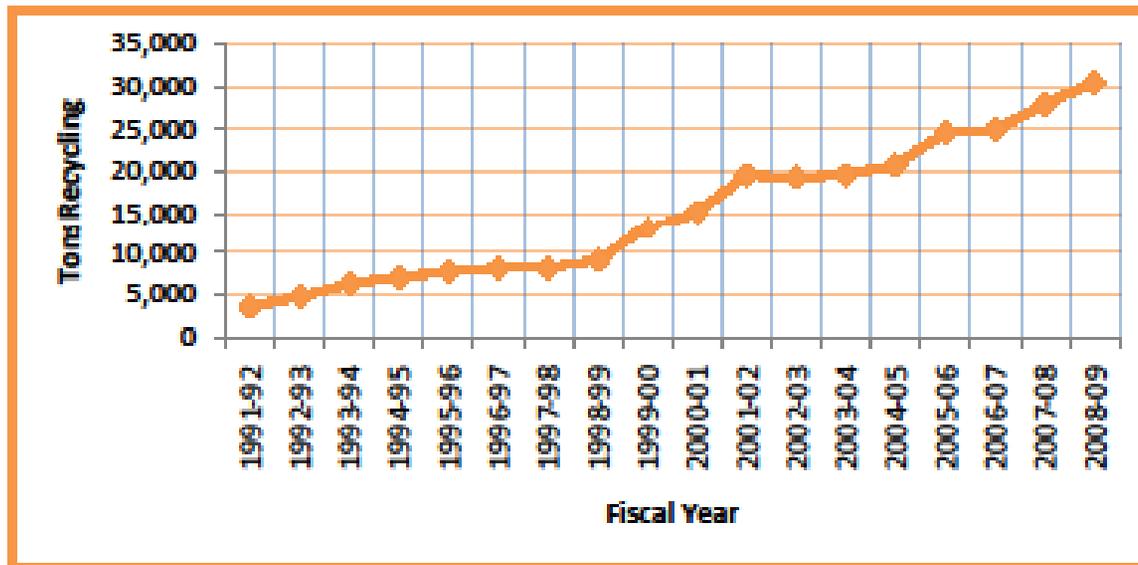
Deliveries to ecomaine FY 09



Recycling Highlights

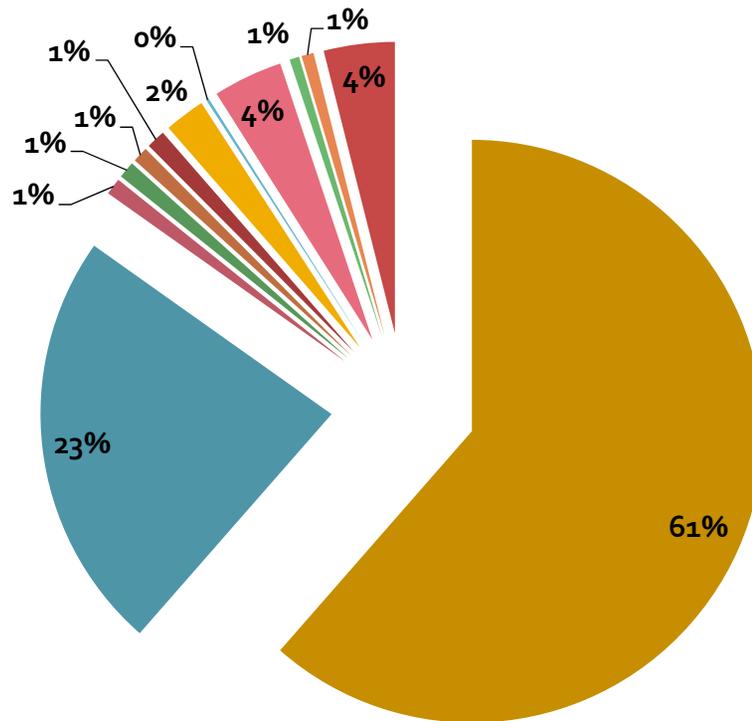
- Original recycling plant opened in 1991 and recycled less than 5,000 tons per year
- Portland adopts curbside recycling in 1999
- Single Stream MRF opened in 2007, enabling several towns including Scarborough and Falmouth adopt curbside recycling
- In FY09 ecomaine recycled more than 30,000 tons of recyclables

Recycling: Annual Tons



Recycling Processed by Percentage

- Newspaper
- Cardboard
- NATURAL
- COLORED
- PET
- #3-7PLASTIC
- STEEL CANS
- ALUMINUM
- GLASS
- LOOSE METAL
- Mixed Paper
- Residue



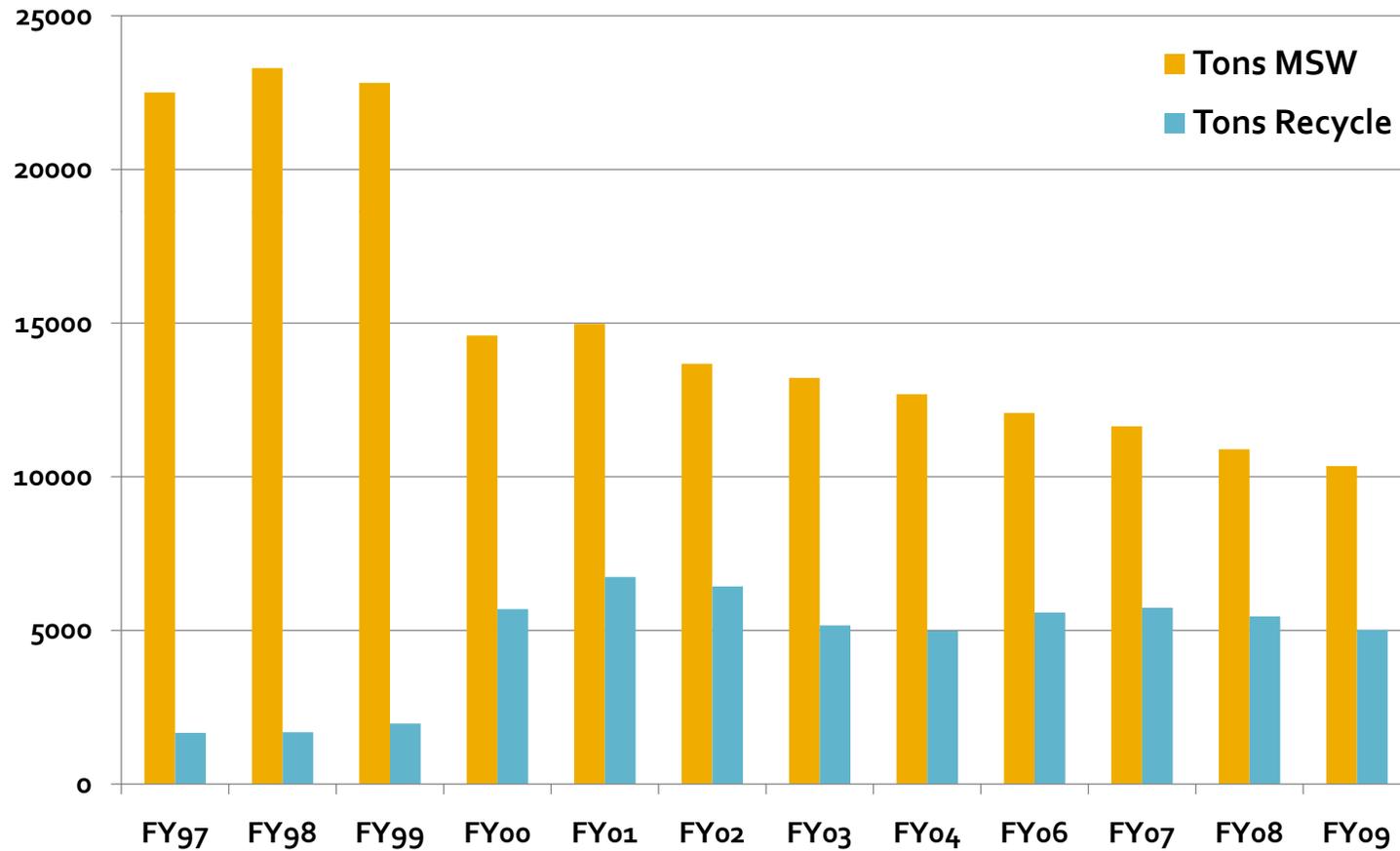
ecomaine Recycling

Handout 2

ecomaine Neighborhood Recycling Year to Date Totals For July 1, 2008 Through June 30, 2009

Town	Town Tons-MSW To Date	Town Tons-Rec Drop off To Date	Town Tons-Rec Curb To Date	Town Tons-Rec Total To Date	Town Total MSW+Rec	Town % Rec To Date
Bridgton	1325.80	378.30	0.00	378.30	1702.28	22.11%
Cape Elizabeth	2856.90	1146.85	0.00	1146.85	4003.75	28.64%
Casco	920.71	224.24	0.00	224.24	1144.95	19.59%
Cumberland	1709.86	0.00	723.51	723.51	2433.37	29.73%
Falmouth	2188.27	1175.37	735.14	1910.51	4098.78	46.83%
Freeport	1970.46	476.32	0.00	476.32	2446.78	19.47%
Gorham	2192.45	261.63	1093.12	1354.75	3547.20	38.19%
Harrison	1049.19	164.39	0.00	164.39	1213.58	13.55%
Hollis	961.57	0.00	342.59	342.59	1304.16	26.27%
Limington	1965.77	73.28	0.00	73.28	2039.05	3.59%
Lyman	1186.71	200.94	0.00	200.94	1387.65	14.48%
Naples	1123.39	274.02	0.00	274.02	1397.41	19.61%
No. Yarmouth	786.81	222.57	261.68	484.25	1271.06	38.10%
Ogunquit	668.60	118.55	0.00	118.55	787.15	15.06%
Parsonsfield	1013.15	0.00	84.35	84.35	1097.50	7.69%
Portland	10345.04	1192.21	3822.56	5014.77	15359.81	32.65%
Pownal	336.95	132.23	0.00	132.23	469.18	28.18%
Saco	4959.57	179.03	1610.31	1789.34	6748.91	26.51%
Scarboro	5407.99	858.65	2121.13	2979.78	8387.77	35.53%
S. Portland	6946.24	309.29	2118.42	2427.71	9373.95	25.90%
Standish	3026.87	669.20	0.00	669.20	3696.07	18.11%
Tri-Town	1703.73	114.85	0.00	114.85	1818.58	6.32%
Waterboro	2548.80	477.81	0.00	477.81	3026.61	15.79%
Windham	2210.50	117.77	1457.44	1575.21	3785.71	41.61%
Yarmouth	2459.16	946.13	0.00	946.13	3405.29	27.78%
	61,862.58	9,711.72	14,370.25	24,081.97	85,944.55	28.02%

Portland Trash vs. Recycling

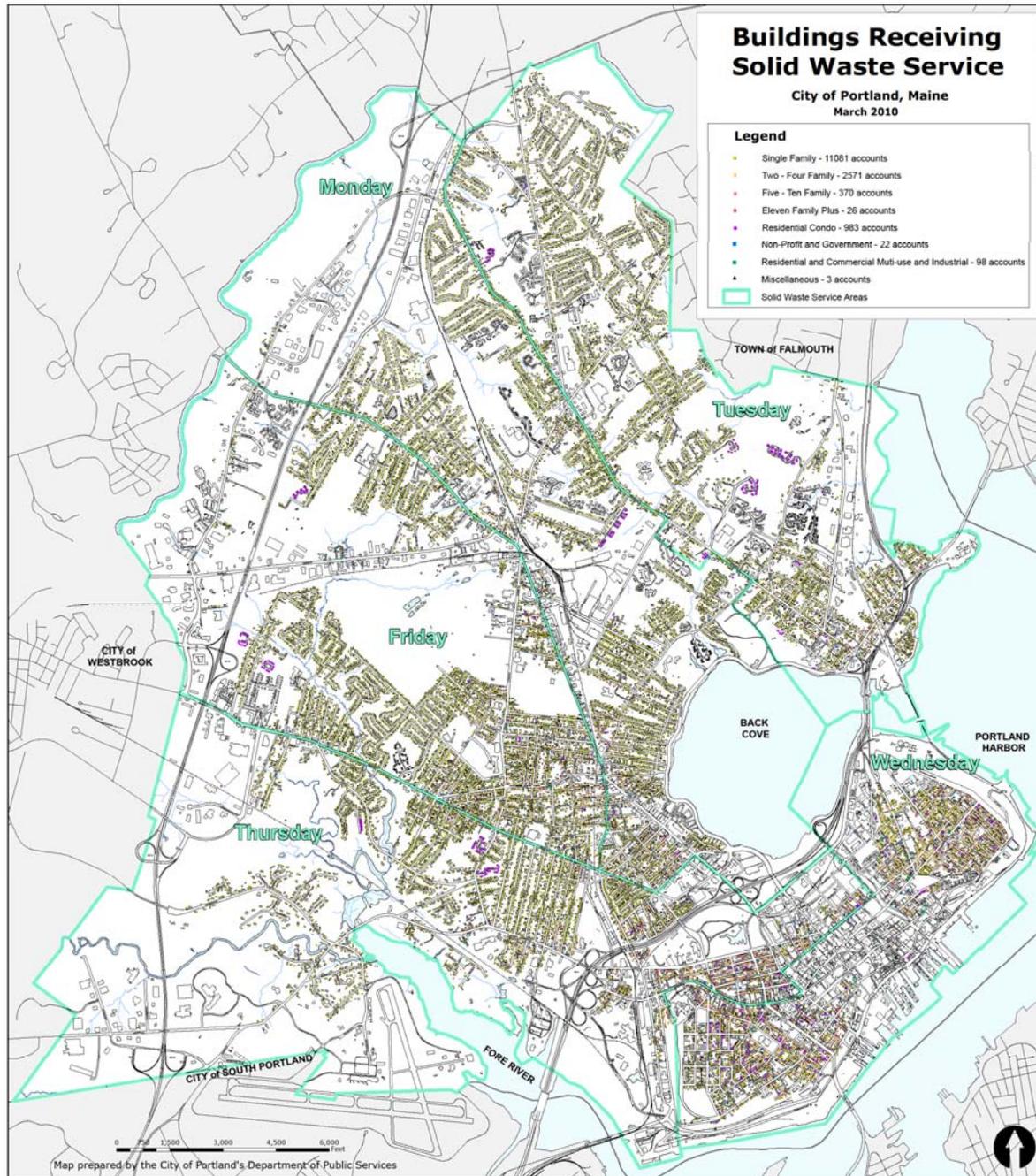


Buildings Receiving Solid Waste Service

City of Portland, Maine
March 2010

Legend

- Single Family - 11081 accounts
- Two - Four Family - 2571 accounts
- Five - Ten Family - 370 accounts
- Eleven Family Plus - 26 accounts
- Residential Condo - 983 accounts
- Non-Profit and Government - 22 accounts
- Residential and Commercial Multi-use and Industrial - 98 accounts
- Miscellaneous - 3 accounts
- Solid Waste Service Areas



Map prepared by the City of Portland's Department of Public Services

City Services

- Single Family Homes: **11,081**
- Apts with 2- 4 units: **2,571**
- Apts with 5 – 10 units: **370**
- Apts with 11 – 20 units: **26**
- Condos: **983**
- Misc. units: **123**

About 15,000 buildings served weekly

City of Portland

- Who Provides Service?
 - City serves residential properties
 - Single family homes
 - Apartment buildings with up to 9 units
 - Condominiums who opt in and sign a release
 - Apartment building with up to 19 units who opt in
 - Private haulers serve commercial properties
 - Most condos
 - Large apartment buildings,
 - Businesses & industry

Leaf Collection

- Annual leaf and yard waste collection
 - Last week in October – Thanksgiving
 - Curbside pick up of bagged leaves
 - No limit on amount of bags at curb
 - 750 tons collected annually

Island Services

- Curbside collection of trash and recycling provided weekly on Peaks, GDI, LDI and Cliff
- 3 “Silver Bullets” located at the Peaks Island transfer station
- Annual HHW collection for all islands
- Bulky item collection on GDI, LDI & Cliff
- Peaks Island residents bring bulky items to transfer station

Waste Disposal Programs Comparison

2010 Greater Portland Area

	Bulky Waste	Construction Debris	Yard Waste	Brush	Universal Waste	HHW	Multi-family allowance	Pay per bag?
Falmouth	Purchase permit sticker \$5, \$5-\$10 each item	Bring to RRF, pay posted fee	Purchase permit sticker \$5, \$10 per pick-up load at transfer station. Free curbside collection spring and fall	Purchase permit sticker \$5 \$10 per pick-up load	Purchase permit sticker \$5, \$5 - \$10 per item	Purchase permit sticker \$5, Oil Paint accepted free, other items to RRF, pay fee	none	33gal & 20gal \$2.08 / \$1.46 ea
Windham	Bring to RRF or Plan-It, pay posted fee	Bring to RRF or Plan-It, pay posted fee	Free drop of for homeowners, 3 weeks in spring & fall	Free drop of for homeowners, 3 weeks in spring & fall	Bring to RRF, pay fee	Bring to RRF, pay fee	none	30gal & 13gal \$2.50 / \$1.25 ea
Scarborough	Bring to RRF or Community Recycling, pay posted fee	Bring to RRF or Community Recycling, pay posted fee	Household quantities accepted free at Community Recycling	Bring to RRF or Community Recycling, pay posted fee	Bring to RRF or Pine Tree Waste, pay fee	3 Annual collection events in conjunction with Biddeford & Saco	none	no
Saco	up to 3 cubic yards of bulky and/or debris free annually with permit	up to 3 cubic yards of bulky and/or debris free annually with permit	free with permit	free up to 3 cubic yards - \$6 per additional cy with permit	Fee per item	3 Annual collection events in conjunction with Biddeford & Scarborough	3 cy first unit, 1 cy per additional unit up to 10 cy of bulky items per year	no
Gorham	Burnables only -\$5 - \$10 each at curb, all other items to RRF or Plan-It for posted fee	Bring to RRF or Plan-It, pay posted fee	Free drop of for homeowners, April - November	Free drop of for homeowners, 2 Saturdays each spring & fall	Bring to RRF or Plan-It, pay fee	Motor oil accepted free. Other items bring to RRF, pay fee	none	30gal & 15gal \$2.50 / \$1.25 ea
Brunswick	Bring to landfill, pay \$60 - \$80/ton, other material bring to RRF for posted fee	Bring to landfill, pay \$80/ton	\$5 dump permit Free from homes with permit	\$5 dump permit Free from homes permit	\$5 dump permit Accepted for free	1 Annual HHW drop off (usually Oct) otherwise to Lewiston, pay fee	none	33gal & 15gal \$1.00 / \$0.50 ea
Portland	Up to 10 items free annually with E-card	Bring to RRF, pay posted fee	Each cubic yard counts as 1 bulky item, charge in 1/2 cubic yard increments -- curbside collection for free each fall	Each cubic yard counts as 1 bulky item, charged in 1/2 cubic yard increments	Accepted for free with E-card	Up to 10 gallons free. Collection events 1st & 3rd Saturday, April - November	Multi-family buildings get free up to 10 Bulky items free annually with E-card	30gal & 15gal \$1.50 / \$0.75 ea

Solid Waste Task Force
Draft Goals and Objectives – April 22, 2010

Goal: Achieve [amount – how measured: %; absolute tons?] waste diversion by 2020

Objective steps to achieve goal:

- **Reduce – eliminate [amount] from waste stream by 2020 by “upstream” reduction**
 - **Lead by Example (City/Schools)**
 - Example: Pilot a zero waste building (City and School side) to develop BMPs
 - **City Programs**
 - **Voluntary, Education and Incentives**
 - **Rules, Regulation and Advocacy (inc. ecomaine)**
- **Reuse - eliminate [amount] from waste stream by 2020 by reusing materials previously recycled or waste**
 - **Lead by Example (City/Schools)**
 - **City Programs**
 - Example: Establish swap shop / reuse center
 - **Voluntary, Education and Incentives**
 - **Rules, Regulation and Advocacy (inc. ecomaine)**
- **Recycle - eliminate [amount] from waste stream by 2020 by recycling materials previously waste**
 - **Lead by Example (City/Schools)**
 - **City Programs**
 - Example: Implement larger container sizes for residential program.
 - Example: Allow small business participation in City curbside program
 - **Voluntary, Education and Incentives**
 - Example: Educate employers about state law setting minimum paper/cardboard recycling requirements for business of > 15 employees
 - **Rules, Regulation and Advocacy (inc. ecomaine)**
 - Example: Promote source separation to facilitate recycling (pricing at facility and/or building permit requirements)
- **Compost - eliminate [amount] from waste stream by 2020 by composting materials previously waste**
 - **Lead by Example (City/Schools)**

- **City Programs**
 - Example: Curbside food waste collection
- **Voluntary, Education and Incentives**
- **Rules, Regulation and Advocacy (inc. ecomaine)**
- **HHW / Universal Waste - eliminate [amount] from waste stream by 2020 using all 4 strategies above**
 - **Lead by Example (City/Schools)**
 - **City Programs**
 - **Voluntary, Education and Incentives**
 - **Rules, Regulation and Advocacy (inc. ecomaine)**

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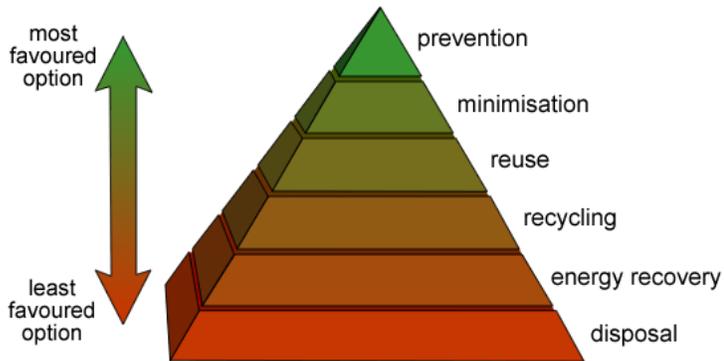
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Integrated Solid Waste Management vs. Zero Waste

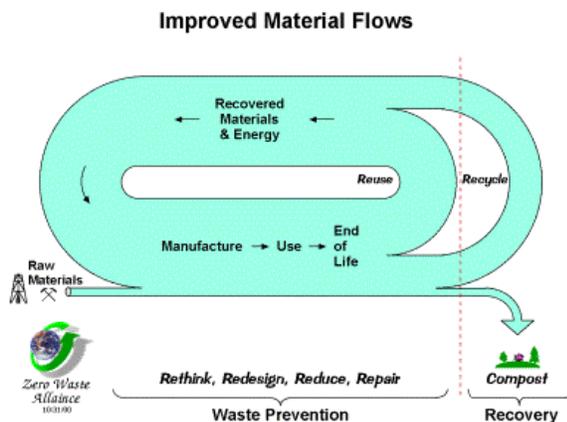


Integrated Solid Waste Management:

Follows the following waste reduction hierarchy: source reduction, reuse, recycling, composting, energy recovery, landfilling.

Waste material should be handled in the most environmentally friendly manner available

This approach feels that there will be at least a small portion of the waste stream remaining after following the steps on the hierarchy.



Zero Waste:

Follows similar waste handling hierarchy as ISWM but stops at composting.

This approach suggests that all waste can be eliminated by redesigning products to be reusable or repairable thereby eliminating the need for incineration or landfilling.

This approach sees waste management as a closed loop system, any waste product should be the feed stock for another product.