

# Solid Waste Task Force

Councilors John Anton and Cheryl Leeman

Co-Chairs

Report to the

## Portland City Council

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# **ACKNOWLEDGEMENTS**

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## Executive Summary

In 1998, the Recycling Advisory Committee, chaired by Councilor Cheryl Leeman, issued a report containing recommendations that would retool the City of Portland's solid waste programs and change the way Portland residents handle their household waste. The report received unanimous support from the City Council, who in 1999 approved implementation of several recommended programs including the blue bag "Pay As You Throw" (PAYT) program and the curbside recycling program that Portland residents use to today. These changes led to marked improvements in the City's waste handling practices and significantly reduced the amount of waste disposed of by Portland residents. For example:

- The residential recycling rate rose from a dismal 7% in FY 1998 to approximately 33% in FY 2010;
- Residential waste disposal at ecomaine fell from a high of almost 23,000 tons in FY 1998 to less than 10,000 tons in FY 2010;
- Recycled tonnage increased from less than 1,000 tons per year in FY 1998 to about 5,000 tons per year FY 2010.

These statistics indicate that residents have embraced the waste reduction programs the City has made available to them and suggest a deep seated desire by most Portland residents to handle their waste in environmentally sound ways

While the City has made great strides during the past decade, significant opportunities remain to further reduce municipal waste generation, to increase the municipal recycling rate and to provide greater access to municipal waste management programs. The City Council tasked the Solid Waste Task Force (SWTF), led by Councilors Anton and Leeman, with identifying these opportunities and recommending policies and programs to advance them.

To guide its work, the SWTF determined that an effective waste management program should:

- Reduce waste production and increase recycling by expanding opportunities for residents to participate in City sponsored waste management programs;
- Provide leadership by ensuring that City facilities and operations demonstrate waste reduction and recycling practices;
- Provide residents with clean streets and open spaces by providing well managed, cost-effective waste management services;
- Provide equitable access to solid waste services for all residents;
- Chart a practical and achievable course toward achieving a 50% recycling rate in accordance with the State of Maine's statutory goal.

The SWTF has identified several areas in the City's current solid waste program that could be improved to more fully correspond to these characteristics. These include:

- Providing a curbside bulky waste collection program that is accessible to the tenant population and to residents who do not have access to a vehicle with which to transport bulky items to Riverside Recycling
- Adopting larger curbside recycling containers that have covers
- Expanding organics collection
- Increasing efforts within City operations to reduce waste, re-use materials and recycle
- Providing opportunities for the public to recycle in all City buildings and in public spaces
- Setting specific, achievable goals for waste reduction and monitoring progress with solid, published data.

Implementing any of these recommendations will help reduce the City and its residents reduce waste. As the Recycling Advisory Committee pointed out in 1998, however, an integrated approach to waste management that provides the public with a range of

recycling and composting options offers the most effective way to achieve significant waste reduction. Furthermore, residents lacking a way to easily dispose of materials such as furniture or leaf and yard waste may feel an incentive to dump illegally, resulting in unwanted material left on streets, sidewalks and open spaces.

The members of the SWTF feel that the City needs to adopt a clear policy statement and a comprehensive strategy to guide the development and implementation of solid waste management programs. It is important that these align closely with important documents already endorsed by the City Council including *the Sustainable Portland Report* and the *Municipal Climate Action Plan* as well as *AR 42, Recycling Policy* issued by then City Manager Robert Ganley in 1996. Staff and elected officials should check regularly to ensure that the City's efforts conform to this strategy and should report to the public about progress toward achieving waste reduction goals.

In 1998 the integrated approach to waste management recommended by the Recycling Advisory Committee was innovative. It positioned the City of Portland as a leader regionally and nationally and demonstrated that programs such as pay as you throw can achieve great success in reducing municipal waste generation. Now, more than ten years later, technology and collection practices have changed. In many communities, cart based collection systems provide residents with large, secure containers for their recyclables and an increasing number offer their residents curbside collection of organic material, including food waste. The City of Portland should respond to these changes and re-establish its leadership position in the field of solid waste management.

The benefits of this leadership would be numerous. The City would realize cost savings by reducing the amount of waste in need of disposal each year. It would also demonstrate the importance of resource conservation and recycling to residents and businesses, while providing effective models for them to follow. In a City that has achieved national recognition as one of the most livable cities in the country, the Task Force believes that the City should make a visible commitment to waste reduction, reuse, recycling, and composting.

## **Policy Statement**

It is the policy of the City of Portland to be an environmental leader in municipal solid waste (MSW) management by minimizing the generation of solid waste, diverting waste from landfill disposal, reducing the environmental impacts of waste, and promoting the demand for recovered materials.

## **Municipal Solid Waste Strategy**

**A. OVERARCHING STRATEGY:** Portland's overarching waste management strategy will be based on redefining MSW as a resource, rather than trash; therefore, the City will manage its solid waste resources by:

1. Adopting the Maine State Waste Management Hierarchy
2. Promoting the purchase and use of products and materials that are durable, made from recycled materials and recyclable; and discouraging the purchase and use of products and materials that cannot be recycled and can only become trash after their use
3. Creating opportunities to turn discarded resources into new products and new jobs

**B. GUIDING PRINCIPLES:** The City will adopt the following principles to guide the formulation, adoption and implementation of City ordinances and policies regarding municipal solid waste:

**Waste Management Hierarchy:** The waste management hierarchy will be the foundation of the City's policies and ordinances related to municipal solid waste, which follows the Maine Solid Waste Management hierarchy (adopted in 1989) and the National Pollution Prevention Act of 1990. Because this is a hierarchy, preference will be given to source reduction to the greatest extent practicable. The waste management hierarchy, by order of priority from the most desirable to least desirable method of waste management (for both residential and commercial waste streams) is as follows:

- Reduce (Source Reduction): Activities that, singularly or in combination, reduce the quantity and/or toxicity of solid waste at the point of generation;
- Reuse: To use products or materials again in their present form after serving their original function;
- Recycle: The collection, separation, recovery and sale of materials that would otherwise be disposed of or processed as waste or the mechanized separation of waste and the recovery of reusable materials;
- Composting: The biological decomposition of organic residuals;
- Energy Recovery: The recovery of energy from MSW;
- Land Disposal: The placement of MSW in or on the land.

**Education:** The City will develop and implement an ongoing education program designed to promote a greater understanding of the City's waste management hierarchy, greater participation in reducing, reusing and recycling MSW resources and a reduction in littering and illegal dumping. Where education is insufficient to achieve compliance with solid waste ordinances, rules, regulations, and ordinances, enforcement will be used.

**City Procurement:** The City will modify its current procurement policy for City purchases and services (direct and through contract) that will maximize the



purchase, to the greatest extent practicable, products and/or services employing (1) recovered materials and recoverable/recyclable materials, and (2) the least toxic materials, to include, but not be limited to, vehicular products, construction products, transportation products, park and recreation products, landscaping products, and office products.

**Public Health, Safety and Equitable Access:** The City will develop and provide MSW services and disposal options that protect and maintain the public health, safety and welfare of its residents. These services shall be equitable, accessible and consistent with the waste management hierarchy.

**Fiduciary Responsibility:** The City will use cost benefit analysis as a tool to maximize the efficient use of resources and influence decision making in solid waste issues.

### **C. Specific Program Recommendations That Support of the City's MSW Policy:**

The Solid Waste Task Force recommends that the City adopt the following specific measures to support the MSW policy and Guiding Principles:

**1. Waste Management Hierarchy:** The waste management hierarchy should govern all decision making regarding solid waste management policy.

**2. Recycling Rate:** Increase the MSW curbside recycling rate of Portland and its residents by 2% per year to achieve a goal of 50 percent by 2020<sup>1</sup>.

**3. Commercial/Institutional Recycling (inc. Construction Debris Management):** Establish a working group to study methods that other communities have used to maximize the reuse, recovery and recycling of traditional recyclables as well as construction and demolition debris and food waste. The working group should make recommendations to the City Council for

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<sup>1</sup> The recycling rate shall be determined by dividing the tons of recyclables delivered to ecomaine by the City by the total of tons of trash and recyclables delivered to ecomaine. (recyclables/recyclables + trash)

policy changes that will help Portland's businesses achieve the State of Maine's 50% recycling goal.

**4. Multi-family Recycling:** Require by ordinance that the 132 multi-family properties with 20+ dwelling units not eligible for City services and those buildings with 11 -19 units that do not participate in the City's waste management program shall provide their tenants with an equitable recycling program. To be considered equitable, the program shall accept all of the materials accepted for recycling by ecomaine and shall have collection containers located on the building premises. A working group should be established to develop the final ordinance to ensure appropriate input of key stakeholders.

**5. City Property Recycling:** Require recycling on City property, whether at events (e.g., Hadlock Field, Portland Expo, Farmer's Market, Old Port Festival, Deering Oaks, etc.) or at City buildings (e.g., Portland Public Schools, Barron Center, City Hall, etc.). In addition, it will be City policy to co-locate a recycling container with every trash receptacle at City buildings and facilities and in public spaces by December 2016.

**6. Organic Composting:** Investigate options for a curbside residential and commercial organic waste composting program to include all organic sources.

**7. Illegal Dumping:** Develop and implement a program to prevent illegal dumping while maximizing the capture of recyclables and trash. This should include an accessible and equitable bulky item disposal program that serves tenants as well as property owners.

**8. Education and Incentives:** Establish a comprehensive education and outreach program to encourage waste reduction activities and participation in the City's waste diversion programs. The City should partner with outside agencies such as ecomaine to leverage efforts.

**9. Product Stewardship:** Advocate for and support product stewardship legislation at the state and national level to require manufacturers to assume responsibility for the end-of-life care of their products.

**10. Waste Management Scorecard:** On an annual basis, the City will produce, publish, and distribute an MSW scorecard at the end of the fiscal year, which, at a minimum, will specify (a) progress toward the City's guiding principles and recycling goal, (b) major achievements/initiatives over the past year that affect the recycling rate, and (c) plans for the upcoming fiscal year to further move toward the City's guiding principles and recycling goals.

**11. Comprehensive Program Review:** The City will conduct a comprehensive review of its MSW policies, ordinances, practices, and operations every 5 years to determine what systems are working most effectively, from both an operational and revenue standpoint, and what systems need improvement to move toward the City's Guiding Principles and recycling goals.

## **Solid Waste Task Force Report of Findings**

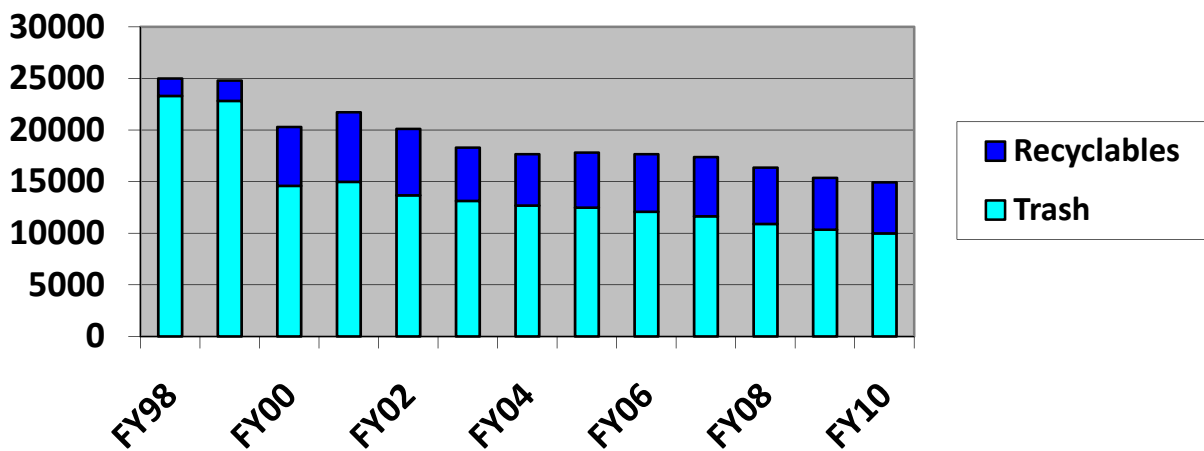
In 1998, the City Council established the Recycling Advisory Committee to perform the first comprehensive review of the City's solid waste programs and to recommend changes that would help the City to reduce waste generation and increase recycling. This group, led by Councilor Cheryl Leeman, developed a series of recommendations addressing residential service, City in-house waste reduction and recycling efforts and commercial recycling.

City residents are very familiar with the changes that resulted from this Committee's recommendations – the implementation of curbside recycling and the adoption of “pay as you throw” (PAYT) trash collection in the summer of 1999. These programs made it much easier for residents to recycle while providing them with a financial incentive to do so. Largely because of these two programs, the City's has significantly reduced the amount of household waste it disposes of, as demonstrated by these statistics:

- The City's residential recycling rate rose from a dismal 7% in FY 1998 to 33% in FY 2010.
- Residential waste disposal fell from a high of almost 23,000 tons in FY 1998 to less than 10,000 tons in FY 2010.
- Recycled tonnage increased from less than 1,000 tons per year in FY 1998 to about 5,000 tons per year FY 2010.

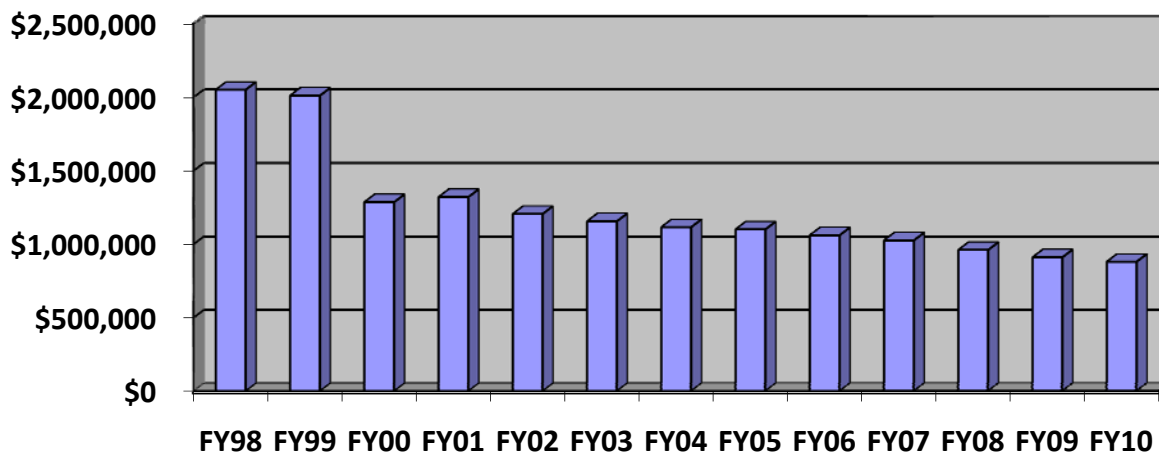
Importantly, the overall quantity of material (trash + recyclables) produced by residents of the City of Portland has fallen dramatically. In FY98, City vehicles delivered about 25,000 tons of material to ecomaine (then RWS) facilities. Only 7% of this was recyclable. In FY10, City vehicles delivered only about 15,000 tons of material to ecomaine facilities, 33% of which were recyclables.

City of Portland Material Deliveries to ecomaine (RWS) in Tons



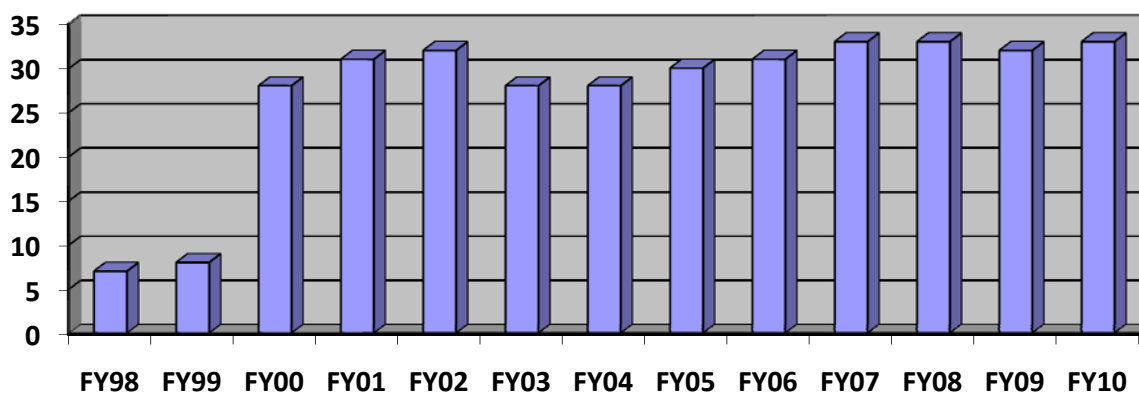
Beyond the environmental benefits, this is significant because the City does not pay a tipping fee for recyclables or for waste that is not generated and set out for collection in the first place. In FY98 the City spent over brought over 23,000 tons of waste to RWS (now ecomaine). This resulted in tipping fees of over \$2,000,000. By FY10 waste deliveries had fallen to less than 10,000 tons and tipping fees amounted to less than \$900,000. This means that the City's waste reduction efforts have resulted in several millions of dollars in avoided costs over the past decade and freed up funds for other important services.

**Tipping Fees Paid to ecomaine (RWS) per FY**



While the overall trend of waste generation has fallen, the City's recycling rate has risen only slightly since the program changes in FY00. For the past several years, the rate has hit a plateau of 32% - 33%. The lack of significant education and outreach in recent years undoubtedly contributes to this plateau. Some residents may not be aware that

**% of Portland Waste Recycled**



the curbside recycling program began accepting plastic containers labeled with #3 - #7 back in 2007. Other residents may find that the 18 gallon recycling bins issued by the City cannot hold the amount of recyclables generated in the household each week.

This could lead them to put recyclables in the trash. Finally, without a convenient way to dispose of yard waste, many residents put their leaves and grass clippings in the trash.

### **The Work of the 2011 Solid Waste Task Force**

In March, 2010 the Portland City Council created the Solid Waste Task Force. This group, co-chaired by Councilors John Anton and Cheryl Leeman, conducted the first comprehensive review of the City's solid waste programs since the *Recycling Advisory Committee's Report* in 1998.

The Task Force's work focused on examining two sets of issues:

**Level of Service:** In recent years the City has made a number of changes to core programs that have impacted the level of service provided to residents as well as the fees residents pay to access service. Some of these changes include:

- Increases in the cost of City trash bags
- Elimination of the curbside bulky waste collection (HIP)
- The discontinuation of the yard waste drop off sites
- Changes in the bulky waste "e-card" program at Riverside Recycling.

Task Force members wished to review these changes and determine whether the City is providing an appropriate level of service at an appropriate cost to residents.

**Alignment with Policy:** The Portland City Council has adopted a number of sustainability goals that are described in documents such as the *Sustainable Portland Report*, the *Municipal Climate Action Plan* as well as the *Recycling Advisory Committee Report* in 1998. The SWTF believes that waste reduction and recycling are core components of the City's sustainability efforts and wish to ensure that the City's waste management programs align with the City's stated commitments and objectives.

In order to address these two areas, The Solid Waste Task Force took the following actions:

- I. Review of policy documents from the state and local level;
- II. Review of the Recycling Advisory Committee Report;
- III. Conduct an inventory of the City's current solid waste management policies and practices, and;
- IV. Recommend improvements to existing City solid waste management policies and practices with the goal to reduce waste and provide more equitable service to Portland residents.

This Report serves as a summary record of the Task Force's work, details the Task Force's findings and provides specific recommendations to improve the City's solid waste management program and better align us with our local, regional and state-wide goals.

## **I. Policy Review**

The Task Force's examination of existing policy documents related to waste management indicated significant prior commitment to waste reduction and recycling.

- State of Maine: In 1989 the State of Maine adopted the Maine Waste Management Hierarchy which incorporated the well known "3 Rs" of waste management practice – reduce, reuse, recycling – into statute. At the same time, the legislature adopted a statewide goal of recycling 50% of the waste generated in the state.
- City of Portland: The City of Portland has adopted similarly ambitious policies. In 1996, City Manager Robert Ganley promulgated Administrative Regulation 42 (AR42). This document adopted the state's Waste Management Hierarchy as the formal policy for City operations and suggested specific steps City staff should



take to reduce waste. Two years later, the *Recycling Advisory Committee Report*, recognizing the importance of AR42, recommended additional in-house waste reduction efforts. More recently, the *Sustainable Portland Report*, issued in 2007 and recently incorporated into the City's Comprehensive Plan, calls for the City to “adopt a policy of pollution prevention as a guiding principle in all City decision making” and “adopt a citywide net zero waste goal for solid and hazardous waste”.

(See Appendix B for more information about prior City policy commitments to waste reduction.)

- Principles of Zero Waste: As part of its review of solid waste policies, the Solid Waste Task Force reviewed the principles of Zero Waste. These principles ask communities to view waste from one process as a raw material for another process as part of a closed loop system. Composting organics exemplifies this process. Unwanted food waste can be composted. The compost can then be applied to gardens and fields as a soil amendment. If the food waste had been sent to a landfill or incinerated instead of a compost facility, the nutrients contained in it would have been lost (“wasted”) and replaced by chemical fertilizers that require raw materials and energy to produce and transport.

Several large cities including San Francisco, CA and Austin, TX have adopted the Zero Waste philosophy as the framework for their solid waste management programs. The members of the SWTF recognize the value of striving to make Portland a Zero Waste community but feel this goal should be achieved incrementally by achieving a series of attainable short term goals.

For more information about Zero Waste and the SWTF’s discussion, see Appendix C.

## II. Review of the 1998 Recycling Advisory Committee Report

In 1998, the Recycling Advisory Committee recognized the ambitious policy goals already established by the State in the areas of waste reduction, reuse and recycling. To move the City of Portland toward achieving a similar level of sustainability in its solid waste management practices, the Committee recommended



that the City adopt an integrated approach to solid waste management. The Committee's Report called for a synergistic group of services made up of the following components to give City residents the opportunity, in a fairly convenient manner, to take a more sustainable approach to MSW:

- Curbside collection of recycling,
- A PAYT waste collection system to provide a financial incentive for residents to reduce waste,
- Yard waste drop-off program,
- Household hazardous waste program, and
- Curbside bulky waste collection provided by appointment.

In the twelve years since these recommendations were made, the integrated approach envisioned by the Recycling Advisory Committee has not been fully realized:

- Curbside recycling, PAYT trash collection, and household hazardous waste collection, are currently operating successfully.
- The yard waste drop-off program operated for several years but has since been discontinued by the City.

- The bulky waste collection by appointment program was never implemented. The City has subsequently discontinued all curbside bulky waste collection, requiring residents to self-transport their bulky waste to the Riverside Recycling Facility.

While the programs that are operating have proven successful in their own right, they would have been more effective had the full range of recommended programs been implemented and managed as an integrated system as recommended by the Recycling Advisory Committee.

Echoing *AR 42, Recycling Policy*, which was issued in 1996 by then City Manager Robert Ganley, the Recycling Advisory Committee also recommended that the City lead by example and establish an ambitious waste reduction and recycling program for all City departmental operations and personnel. Recommended practices included the following:

- Aggressive re-use of equipment and commodities,
- Expanded recycling of paper and other consumable products,
- Composting food from City owned kitchens,
- Development and implementation of a purchasing policy that incorporated full life-cycle analysis, waste reduction goals, recycled content and toxicity levels into purchasing decisions, and
- Development and implementation of an aggressive in-house education campaign to raise awareness and knowledge of waste reduction goals and practices among City employees.

As with the residential programs, some of these recommendations have been implemented more fully than others. Overall, recycling within City operations has increased since 1998, particularly since the adoption of single-stream recycling and the incorporation of City and Portland Public School buildings into the curbside collection routes. Many opportunities still remain, however, to dramatically reduce waste and increase recycling of a broad range of materials within City departmental operations.

While the Recycling Advisory Committee focused its attention on residential programs and City operations a sub-committee consisting of business owners, property managers and local environmental groups examined commercial recycling. This group recommended that the City's Site Plan Ordinance be amended to require builders to submit a plan describing the types of recyclable material generated on-site, a description of the storage facilities and a plan for timely removal of recyclables. This ordinance has not yet been adopted.

### **III. Inventory of City's Current Solid Waste Management Policies and Practices**

**1. Curbside Collection:** The Department of Public Services (DPS) currently (as of FY 2010) provides curbside collection to approximately 15,000 individual buildings that house approximately 22,000 units (over 70% of all housing units in the city). DPS



provides this service Monday through Friday, using three rear-loading rubbish packers, with a crew of two on each truck.

By ordinance, all single-family homes and all multi-family buildings with fewer than ten units receive sanitation services provided by the City. In 2009 the City

Council amended the ordinance to allow apartment buildings with up to nineteen units to opt-in to the City solid waste program, provided they subscribe to all of the services offered. At the same time, the Council also allowed condominium associations to opt into City services if they agree to indemnify the City against property damage if collection vehicles must traverse private ways to access the property. Approximately 1,000 condominium and apartment units have subscribed to the City's collection program since the ordinance was amended. The City does not provide solid waste services to Portland Housing Authority units.

**2. PAYT Trash Bag:** The City of Portland has operated a PAYT trash collection program since 1999. To participate, residents must set their trash at the curb in special City trash bags, available for purchase at nearly 90 retail outlets around the Greater Portland area. As of July 2010, the cost per 30-gallon bag is \$2.00 and \$1.00 per 15-gallon bag. This program provides residents with a financial incentive to recycle and provides revenue that contributes to the cost of providing solid waste services.

Residents of Portland's island neighborhoods receive weekly curbside collection in the same manner as mainland communities.

**3. Public Trash Receptacles:** DPS provides daily collection of the 150 public trash receptacles located on the street and in other public spaces. Each day a single rear-loading rubbish packer with a one person crew empties approximately 60 trash barrels in the Portland Downtown District (PDD) and approximately 90 trash barrels located in parks, street locations outside the PDD and in other areas of the City.

**4. Waste Collection Services at City Owned Buildings and Other Locations:** DPS also provides waste collection services to several City buildings including City Hall, Public Safety, DPS, Hadlock Field, and all fire stations. Several enterprise operations also receive service including the Portland Fish Exchange, Riverside Golf Course and the Portland Expo. A single employee provides this service using a rear-loading rubbish packer.

School buildings and many enterprises, including the Barron Center and the Jetport, currently contract with a private hauler for trash collection.

**5. Recycling:**



- **Residential Curbside Collection:** The City provides weekly curbside recycling collection of recyclables Monday through Friday to the same households that receive trash collection. The

three rear-loading packer trucks DPS uses for recycling pick-up are identical to the trucks used for trash collection, and each carry a two-person crew. Since 2007, the City has offered a single-sort program that allows residents to commingle all of their recyclables in a single container.

The City provided each participating household with a 16- or 18-gallon blue recycling bin when the curbside program began in 1999 or when the household subscribed to City services. Residents may purchase additional bins from DPS for \$7 each. Many residents set their recyclables out in multiple bins or use larger containers purchased by their household because the volume of material they generate each week exceeds the capacity of a single recycling bin. Residents of Portland's island neighborhoods also receive weekly curbside collection.

- **Drop-off Recycling (silver bullets)**: In addition to the curbside program, Portland residents and businesses may drop off their recyclables in one of the “silver bullet” recycling containers located on Somerset Street. A DPS employee is responsible for emptying the containers at the ecomaine recycling facility using a roll-off truck. The silver bullets are open 24 hours each day, and accept all of the materials collected at the curb. Because the lot where the containers are currently located is for sale, DPS is seeking a suitable alternate location for the containers in the event the lot is purchased. Peaks Island residents may use the Silver Bullets located at the transfer station.
- **City and School Buildings**: DPS provides recycling collection for City and School Department buildings on a weekly or twice weekly basis, depending on the need for service. Each participating building has a number of 96-gallon wheeled carts for storing recyclables that accumulate between collections. The collection service for recyclables at these public buildings is provided by the three residential recycling trucks as part of their normal routes.

- **E-Cards:** Individuals who own residential property (defined as properties with 1 to 9 units) in Portland are eligible to receive one E-Card for each of their eligible properties. City ordinance also allows condos and multi-family buildings with up to 19 units who choose to “opt in” to the City’s collection program to receive cards.



Currently, there are just over 15,000 eligible properties in the City. Tenants are not eligible to receive an e-card, although card holders can lend their card to their tenants if they choose to do so.

The E-Card entitles the eligible property owner to the following City services at the Riverside Recycling Facility:

- Disposal at no charge of no more than ten items per year, equaling ten bulky items or ten cubic yards of yard waste (each cubic yard of yard waste counts as an item) or a combination of bulky items and yard waste. Examples of bulky items include such things as mattresses, non-freon appliances, desks, and stuffed furniture.
- Disposal at no charge of up to 10 gallons of household hazardous waste per year (does not count toward E-Card limit).
- Unlimited disposal at no charge of electronic and universal waste.

The electronic nature of the E-Cards allows Public Services to closely track usage patterns. Data shows that only about 50% of the E-cards in circulation get used on any given year. Of the cards that get used, the vast majority only get used once or twice. A small minority of E-card holders use up their entire balance of “free” disposal each year. This indicates that a relatively small portion of the City’s population benefit from this program.



The old “HIP” program was difficult to manage and led to scenes such as this. The recommended program will have more controls to prevent abuse.

**Bulky Waste Disposal:** The City discontinued the curbside bulky waste collection program (Heavy Item Pick-up or “HIP”) on the mainland in 2008. Residents must now bring their unwanted heavy items to Riverside Recycling Facility for disposal using the E-Card program. Residents without an E-Card or those who have used up their annual allowance of ten items must pay

the posted fee to get rid of their items.

Peaks Island residents may bring their heavy items to the Peaks Island Transfer Station for disposal, using their punch cards that provide benefits similar to the Riverside Recycling E-Card. DPS continues to offer curbside bulky item collection for residents of Cliff Island, Great Diamond Island and Little Diamond Island because it is not practical for these residents to transport their bulky waste to Peaks Island to access a transfer station or to the mainland.



HHW event at Peaks Island Public Services Facility

- **Household Hazardous Waste:** On the first Saturday of the month from April through November the City offers a household hazardous waste (HHW) drop-off at Riverside Recycling. Residents may deliver up to ten gallons of items from their homes that are not appropriate for the regular curbside collection waste stream, such as oil based paints, pesticides, fertilizers, acids, lye, harsh cleaning products, chemicals, petroleum products, and other materials labeled hazardous or toxic.



Every summer, DPS organizes a HHW collection event for residents of Portland's island communities. On the designated day, the HHW contractor sets up at the Peaks Island Transfer Station to provide service to Peaks Island residents, and supplies another crew who travels by barge to visit Cushing Island, Great Diamond Island, Little Diamond Island and Cliff Island.

- **Universal and Electronic Waste:** Riverside Recycling accepts a wide range of electronic and universal waste items at no charge during regular business hours, Monday through Saturday. This includes computer equipment, television sets, video game consoles, fluorescent lamps, compact fluorescent lamps, batteries and mercury added items, such as thermostats, thermometers and blood pressure cuffs.

Peaks Island residents may bring their unwanted electronic items and fluorescent lamps to the Peaks Island Transfer Station for recycling. The Peaks Island crew transports these items to Riverside Recycling after accumulating enough e-waste to fill two or three large containers. Peaks residents may also bring their items to the island's annual HHW collection. Residents of Casco Bay islands without transfer stations (Cliff I., Great Diamond I., Little Diamond I. and Cushing I.) set their e-waste out during their annual bulky collection. Collection crews sort the e-waste from the bulky waste and send it to Riverside Recycling.

- **Leaf and Yard Waste/Organics:** DPS provides an annual curbside collection of leaf and yard waste each fall. Generally, the program occurs between the last week of October and the third week of November. Residents set out their full Kraft paper lawn and leaf bags on their regular trash collection day. Trash and recycling crews complete their regularly assigned routes, dump their loads at the appropriate facility and then return to collect the bagged yard waste.

Residents of Peaks Island may bring their leaf and yard waste to the Peaks Island Transfer Station.

Every spring, DPS collaborates with the Maine Resource Recovery Association (MRRA) to offer compost bins for sale to interested residents. MRRA works with a manufacturer to provide home composting units at prices significantly below normal retail prices.

DPS is working with a private Portland firm, Maine Waste Solutions, to site a food waste composting operation at Riverside Recycling. This facility will begin accepting commercial and institutional food waste in the summer of 2011. It is anticipated that the Portland Public Schools and City owned food kitchens and cafeterias, including the Barron Center and the School Department's Central Kitchen, will deliver their food waste to this facility instead of to ecomaine's WTE Facility.

- **Waste Handling Facilities**

- **ecomaine** – The City of Portland is a member/owner of ecomaine, a publicly owned waste management company owned and operated collaboratively by twenty one southern Maine communities. An additional twenty two communities deliver their waste or recyclables to ecomaine facilities under contract. Each of the owner communities has representation on the board of direct in proportion to the amount of waste their community delivers. Based on this, the City of Portland controls approximately 20% of the votes on the board. The board establishes the annual budget and ensures the efficient and environmentally operation of ecomaine facilities. The general manager oversees day to day operations and ensures compliance with board policies.

ecomaine operates a waste to energy facility, a single stream recycling facility and a landfill. The City delivers all of the household trash and recyclable material it collects from residents and City buildings to these facilities.

The waste to energy facility receives and combusts about 175,00 tons of waste each year from ecomaine's municipal and commercial customers.

The heat from this process drives a turbine that generates about 110,000 megawatts of electricity annually – enough to power 12,000 – 14,000 homes. The process of combustion reduces the volume of the trash by about 90%. The resulting ash is disposed of at ecomaine's landfill, which is used almost exclusively for ash from the plant.

The recycling facility processes approximately 35,000 tons of material each year from residential and commercial customers. The facility accepts a comprehensive range of material including most kinds of paper and cardboard, metals, plastic containers labeled #1 - #7 as well as colored and clear glass. In 2007, ecomaine upgraded the equipment in order to accept single stream recycling. This meant that residents could begin to commingle all of their recyclables in one bin instead of separating their paper and their containers. This investment allowed haulers to use more efficient collection equipment, which reduced costs. The City of Portland, for instance, retired the split bodied recycling trucks and began collecting recyclables with rear loading packer trucks. Doing so allowed collection crews to cover the daily routes with three trucks instead of four and with two fewer people on the collection crew.

The ecomaine website provides extensive information about the organization's structure and facility operations: [www.ecomaine.org](http://www.ecomaine.org)

- **Riverside Recycling** – The City of Portland owns Riverside Recycling, a recycling and transfer facility for bulky waste, leaf and yard waste, construction debris, wood waste, inert materials and electronic waste. The facility is open to the public and serves the disposal and recycling needs of businesses, municipalities, private waste haulers and residents across southern Maine. The City has contracted with CPRC Group of Scarborough, ME to operate the facility and manage its day to day operations. This contract runs through September, 2016. The

Department of Public Services holds the operating permits and ensures safe and compliant operations at the site.

Under the terms of the contract with CPRC, the City of Portland commits to deliver 20,000 tons of material from City operations and residential e-cards to the Riverside Recycling for \$1,020,000 per year, adjusted annually based on the consumer price index. This arrangement results in an aggregated tipping fee for material deliver under the City’s account – the cost for each ton of material delivered is the same regardless of what the material type. If the City delivers less than 20,000 tons in a year, CPRC applies a credit to be used the following year.

The facility focuses on the recovery of recyclable and reusable material. To encourage this, private customers receive reduced tipping fees for source separating their loads and delivering clean materials that can be recycled more easily. CPRC has staff on hand to help customers find the right place to dump their load and to ensure that piles of segregated materials remain contaminant free. The company also attempts to recover material from deliveries of mixed waste. Personnel on foot pull small items from the pile while other personnel remove large pieces of wood and metal for recovery. In total, Riverside Recycling accepts about 50,000 tons of material per year. About 50% of this is recovered for reuse or recycling.

<b>Material Delivered to Facility</b>	<b>End Use</b>
Brush, Tree Waste	Biomass Fuel, Mulch
Yard Waste	Mulch, Compost
Demolition Wood	Biomass Fuel
Metals	Recycled
Asphalt Shingles	Reclaim Gravel Products
Inert Materials (brick, block, gravel)	Reclaim Gravel Products
Drywall	Reclaim Gravel Products

## Solid Waste Task Force Recommendations

**1. Waste Management Hierarchy:** The Solid Waste Task Force recommends that the State of Maine's Waste Management Hierarchy serve as the foundation of the City's policies and programs related to waste management.

This approach suggests an integrated solid waste management strategy that educates residents about ways to reduce the amount of waste they generate and offers a variety of programs to reuse and recycle the waste they produce. While the City's PAYT program provides residents with a financial incentive to reduce the amount of waste they dispose of in City trash bags, the current program emphasizes recycling more than source reduction or reuse. The City or DPS does not have a formal program in place to encourage source reduction or reuse and it is difficult to determine to what extent residents may already apply source reduction and reuse practices to their daily lives. (These would include using canvas grocery sacks instead of plastic or paper bags, reusing plastic containers, buying in bulk and donating reusable goods to charities like Goodwill or the Salvation Army).

The Task Force recommends that the City ramp up its education and outreach effort to inform residents about the benefits of resource conservation and educated the community about ways to reduce waste generation. The City should also explore opportunities to provide an outlet for residents to share or swap reusable durable goods that they no longer need. Emphasizing the first two rungs of the Waste Management Hierarchy is the most sustainable approach to waste management because it reduces the amount of natural resources needed to produce consumer goods and it reduces the amount of material – trash or recyclables – that need to be handled by the City's collection and waste processing infrastructure.

**2. Recycling Rate:** It is important for the City to set a specific, quantifiable goal to guide its waste management efforts. To this end, the Solid Waste Task Force recommends increasing the residential recycling rate by 2% per year to achieve a 50% recycling rate by 2020<sup>2</sup>. The residential recycling rate is the best metric to use because the underlying data is very reliable -- ecomaine and the DPS carefully track the amount of material delivered to ecomaine's WTE plant and recycling facility -- and it is widely understood by the public. If the City's efforts to place greater emphasis on reducing waste are successful, the tracking data would indicate that: 1) the total amount of waste collected for recycling or disposal in the City was less, but 2) the majority of material collected was being recycled.

The Solid Waste Task Force recommends these specific measures to increase the recycling rate:

- **Explore cart based recycling collection** -- The Solid Waste Task Force believes that the 18-gallon bins currently used by the City's recycling program are too small to hold a week's worth of recyclables for most households. Many residents are putting out multiple bins but others may be putting recyclables in the trash once their bin is full. The City should switch to a cart based collection system in order to provide residents with a covered container that can hold more recyclables.
- **Find a permanent location for the Silver Bullet recycling containers** -- The City needs to ensure the future of the drop-off recycling containers program by finding a permanent and accessible location for the Silver Bullets. Their current location, a lot on Somerset Street, is designated for development and will be sold. In recent memory the Silver Bullets have been located at Jack Elementary before being displaced to build the East End Community School and on Marginal Way before being displaced to build the student housing and the Intermed building. The drop-off location collects nearly 1,200 tons of recyclables annually

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<sup>2</sup> The recycling rate shall be determined by dividing the tons of recyclables delivered to ecomaine by the City by the total of tons of trash and recyclables delivered to ecomaine. (recyclables/recyclables + trash)

(nearly 25% of the City's total tonnage) from a variety of users, including small businesses, condominium owners and residents who missed their recycling collection. The Task Force believes that the Silver Bullets need to remain a component of the City's solid waste program and recommends that the City identify a permanent location for the containers as soon as possible.

- **Revise the E-Card program to incentivize recycling** -- The current E-Card program allows residents to dispose of ten bulky items per year. This includes items such as stuffed furniture, large plastic toys and other non-recyclable items. The City should look at ways to provide for the acceptance of source separated items that can be recycled at no charge to residents instead of incentivizing disposal.

**3. Commercial/Institutional Recycling & Construction Debris:** In the City of Portland commercial waste and construction debris are handled largely by the private sector. Business owners and other private entities contract with the waste hauler of their choice in order to receive waste handling services. Businesses and haulers mutually agree on the type and level of service required and the price for the services. The City maintains a regulatory role in that it requires waste haulers to obtain a license to operate in the City. It does not collect or haul waste for businesses.

Given these significant differences in the way residential and commercial waste is handled, the Solid Waste Task Force has chosen to focus its efforts on the residential waste stream. The City Council should establish a separate group with representation from business owners, waste haulers and City officials to achieve the following: 1) explore the most appropriate ways to reduce waste and increase reuse and recycling in the commercial sector, 2) study methods that other communities have used to maximize the reuse, recovery, and recycling of traditional recyclables as well as construction and demolition debris and food waste, and 3) develop and submit policy changes to the City Council that help Portland businesses recycle 50% of their waste by 2020.

**4. Multi-family Recycling:** Require by ordinance that all buildings containing dwelling units that do not participate in the City's solid waste program provide their tenants with an equitable and accessible recycling program. This includes the multi-family properties with 20+ dwelling units that do not participate in the City's curbside recycling as well as the buildings with 11 – 19 units not currently enrolled in the City program. To be considered equitable and accessible, the program would accept all of the materials accepted for recycling by ecomaine and would have collection containers located in a convenient place on the property.

Experience in other communities suggests that recycling programs in large multi-family buildings face several challenges including storage of materials, location of recycling and trash containers and education and outreach to building occupants. The Solid Waste Task Force recommends that a working group of stakeholders should be established to identify any obstacles to launching on-site recycling and to develop an appropriate implementation strategy for this constituency.

**5. City Property Recycling and Waste Reduction:** The Solid Waste Task Force believes that one way the City could demonstrate leadership in the area of waste reduction and recycling would be to ensure that all City buildings and City sponsored events provide access to recycling containers co-located with waste receptacles. The City's policies and practices encourage residents to recycle at home but we undermine this message by not consistently providing recycling containers in our public buildings and public spaces.

Currently, there are no recycling containers on the street or in the City's parks and squares. City workers are able to recycle in their offices but there are no recycling containers available to the public in City buildings. Public facilities, such as the Expo, Merrill Auditorium, the Ice Arena and Hadlock Field, offer very limited options for recycling, primarily just for plastic beverage containers. The Task Force believes these public venues are valuable opportunities to communicate a message about the importance of recycling in the City. For example, many people are familiar with the



“Trash Monster” who roams the stands at Sea Dogs games. The Trash Monster’s high-profile presence may be effective at reducing the amount of waste left behind by fans, but this mascot’s message does not encourage fans to recycle.

The Solid Waste Task Force has several specific recommendations regarding City recycling:

- **Raise the visibility of recycling in City buildings**, especially at City Hall, by providing a recycling kiosk and signage demonstrating that the City is taking a leadership role to support recycling.
- **Advocate for custodial staff to empty only office recycling containers** and pass on the responsibility for emptying office trash container to employees as an incentive to recycle. Most waste generated in City buildings is recyclable. Therefore, recycling bins should fill up more quickly than trash bins.
- **Explore ways to offer more comprehensive recycling at Public Facilities.** While there are challenges to offering a recycling program during concerts and sporting events, many facilities around the country have found a way to overcome the obstacles and run successful programs. City staff should consult resources available from the U.S.EPA about recycling at facilities and look at the successful programs established at stadiums and venues around the country. See <http://www.epa.gov/osw/conserves/rrr/rogo/venues/stadiums.htm> for examples.
- **Require recycling at City sponsored and City permitted events.** All event organizers are currently required to handle the waste generated during their event. The permit process should be amended to require them to submit a waste management plan to include recycling as part of the permit process. The City should provide organizers with information about how to recycle at their event. (Cities as large as New York have already adopted such policies

and can serve as models for Portland.) For large City sponsored events, such as the 4th of July, City personnel should co-locate recycling containers with trash receptacles to allow the public to recycle.

- **Make the commitment to co-locate a recycling container with every public trash receptacle by December 2016.** In the interim, recycling containers and educational kiosks should be installed at strategic, high-traffic areas to capture recyclables and to send the message to the public that recycling is a fundamental part of the City's waste management strategy and practice.
- **Develop and implement an environmentally preferable purchasing policy (EPP)** per the recommendation of the Recycling Advisory Committee Report (1998) and the Sustainable Portland Report (2007). The Solid Waste Task Force reiterates this recommendation and recommends that the City adopt a purchasing policy that reflects its commitment to sustainability. City staff should review policies developed by other communities and collaborate with partners, such as the U.S.EPA and ICLEI, with resources to assist local government in developing effective EPPs.
- **The City Manager should review and update the City's recycling and resource conservation policy (AR42)** to reflect current recycling and reuse opportunities. (see Appendix B, Statutes and Policies, for further information).
- **The City should more closely integrate City and School Department waste management programs.** The City currently provides recycling services for Portland Public School buildings with the same trucks that provide residential curbside service. DPS staff should evaluate whether this approach would work for trash collection as well. The City/School collaboration demonstrated by the Waste Reduction Group's effort should serve as a model for future efforts. (See Appendix E for more information on the Lunchroom Recycling Pilots in Portland Public Schools and the WRG.)

- **Explore restructuring the City’s waste disposal contract with CPRC** to provide a lower tipping fee for reusable and recyclable materials and a higher tipping fee for materials that cannot be reused or recycled. This would provide City departments with the incentive to separate recyclable materials from non-recyclables in order to reduce costs. Under the current contract with CPRC, the City pays an aggregated tipping fee for City-generated material delivered to Riverside Recycling Facility. This means that the disposal costs for yard waste and other re-usable or compostable materials are the same as disposal costs for material bound for a landfill.

**6. Composting of Organics:** Cities across North America including Halifax, Toronto and San Francisco have implemented successful curbside collection programs for food waste and other organic materials. Portland, OR has just begun a pilot program. All of these cities have found that they cannot achieve their ambitious waste reduction goals unless they capture and compost organic material. The Solid Waste Task Force recommends that the City begin actively exploring ways to develop composting capacity in the region to support large-scale composting of organic waste collected from both residential and commercial sources.

The composting project underway at Riverside Recycling Facility represents a good first step that will help develop a market for commercial composting. However, the City should work with ecomaine to develop a long-term strategy for handling organic waste in the member communities. This could involve advocating that ecomaine invest in the facilities necessary to support large-scale composting.

In the short term, the City of Portland should take the following steps to promote increased composting:

- **Continue to promote home composting** by conducting the annual compost bin sale in conjunction with the Maine Resource Recovery Association. Public Services should inventory compost units in order to make them available to

residents year round. Support home composters with additional education and training opportunities

- **Reinstate the yard waste drop-off program** that was begun in 1999 in conjunction with the curbside recycling program and then phased out in several years later. This program offered residents a convenient way to dispose of their yard waste at a collection point in or near their neighborhood. It prevented them from having to drive to Riverside Recycling and wait in the queue of vehicles waiting to enter the facility on Saturday.
- **Offer curbside collection of yard waste in the spring.** The City already collects yard waste for several weeks each fall. Many residents generate significant quantities of yard waste during the spring months as they work on their lawns and gardens. The lack of a curbside program in the spring leads many residents to put yard waste in their regular trash. Some residents resort to dumping their yard waste in the street, which contributes to clogged storm drains and storm water contamination. Providing a convenient way to dispose of yard waste will minimize this behavior and ensure that organic material is composted instead of disposed of as waste.
- **Make arrangements to deliver food waste from the City owned kitchens and school lunchrooms** once the composting facility becomes operational, including the Barron Center kitchen, the Portland Public School Department's Central Kitchen, and Portland Public School lunchrooms. The contract with the private hauler providing waste collection service for the Portland Schools and the Barron Center expires in February, 2012. This is an ideal opportunity to reduce waste disposal costs by diverting food waste to a lower cost and environmentally preferable facility.

**7. Illegal Dumping and Litter:** Illegal dumping and litter are serious problems for any community. Loose trash blows into catch basins and into local waterways, degrading water quality. Trash bags, discarded furniture and windblown detritus give an

appearance of neglect and decay that detracts from the City's quality of life. City workers and neighborhood volunteers need to spend hours picking up material that should not be on the street.

The Solid Waste Task Force recommends that the City develop and implement a program to prevent illegal dumping while maximizing the capture of recyclables and trash. In order to be successful, this program needs to address the root causes of the problem. We believe these include inequitable access to bulky waste disposal options, open top recycling containers that expose their contents to the wind and the elements, and lack of enforcement, of existing anti-dumping ordinances.

- **Bulky Waste** – The current option for bulky waste disposal does not allow for equal access by all City residents. The City currently provides all residential property owners with an E-Card that allows the property owner free disposal of up to ten bulky items per year at Riverside Recycling Facility. Tenants, who make up more than 50% of the City's population, are not eligible for this program and must pay to dispose of all of their items. Many residents, homeowners as well as renters, do not have access to a vehicle with which to deliver large items, such as furniture or appliances, to Riverside Recycling Facility. With access to this important City service limited in these ways, a portion of the population chooses to set their material at the curb illegally. In order to alleviate this aspect of the dumping and litter issue, the City should implement a convenient and affordable curbside bulky waste collection program. This program should be fee based in order to recover some or all of the City's administrative and operating costs.
- **Litter** – The City has provided residents with a 16- or 18- gallon open-top bin for collecting recyclables to set out at the curb for weekly collection. The comprehensive nature of the recycling program allows residents to set out a large range of items for collection. The result is that most bins are very full, with items protruding over the top and exposed to the elements. The bins are also

prone to tipping over and spilling their contents onto the street and sidewalk. A windy day coupled with loose recyclables adds considerably to the litter on the street. To alleviate this problem, the City should offer large wheeled carts with covers to residents for their recyclables. The carts offer much more recycling capacity than the traditional bins and cover their contents to protect them from the elements.

- **Enforcement** – Enforcing City ordinances related to illegal dumping and litter has traditionally fallen on the Code Enforcement division of Planning and Urban Development. The inspectors in this division are tasked with a wide variety of duties including life safety inspections, issuing building permits and restaurant inspections. It was not always easy for them to focus on issues related to trash. In February 2011, the City Manager established a new position, the Sanitary Compliance Officer, to focus exclusively on enforcing solid waste ordinances. The position is housed in the Environmental Programs Division of the DPS. Based on the results so far, this position seems to be having a positive impact on the illegal dumping problem in the City. The Solid Waste Task Force recommends that the DPS continue to track the impact of this new position and report back the City Council on the results.
- **Street sweeping** – DPS should review neighborhood street sweeping schedules and work towards coordinating the timing of the sweeping service so that it takes place soon after trash and recycling collection.

**8. Education:** The City's waste reduction and recycling efforts cannot succeed without the establishment of a comprehensive education program. Such a program needs to inform residents about the City's waste management strategy, educate them about the importance of meeting the City's goals, and let people know how to participate in the waste reduction and recycling programs that the City offers. The education program must also be ongoing in order to repeat and reinforce the message over a long period of time.

Many communities and initiatives have benefited by employing community based social marketing strategies, based on the pioneering work of Doug McKenzie-Mohr as presented in his book, *Fostering Sustainable Behavior*. This approach attempts to establish socially desirable behaviors (like recycling) as a community norm by identifying factors that prevent people from embracing the behavior and designing operational strategies that attempt to remove these barriers.

The Solid Waste Task Force recommends several operational strategies:

- **Enhance the City's Web Page** – The City's web page should be a primary tool to provide information about waste reduction and recycling. Staff should update it regularly in order to keep the information current. Residents will visit more frequently if the content remains fresh and valid. The layout and design of the web page should also be appealing and easy to navigate. The City may wish to seek assistance from a web designer to consult in this area.
- **Work with Portland School Students** – Many students in the Portland Schools are extremely conscious and well informed about the need to reduce waste and recycle. The Task Force believes it is important to harness their energy where possible. During the past year, a portion of Portland's elementary, middle, and high schools has implemented lunchroom pilots for recycling of milk cartons and are learning about composting. By participating in such programs at a young age, the students are developing an ethic of conservation and stewardship that they bring back to their families and neighborhoods. Older students are able to assist with the development and production of education material that can be shared with the community at large. Past examples of this include PSAs written and produced by Portland High School students on the subjects of recycling and curbside leaf collection.
- **Provide Information About Waste Reduction and Recycling at Public Events** – Public events present a unique opportunity to educate large and diverse groups of people about recycling and waste reduction. The City

should take advantage of such occasions by providing recycling options to event participants and by having staff present to answer questions and provide information. While it may not be possible to attend every event, staff should be present at the largest venues, including the 4th of July and the Old Port Festival. It may be possible to recruit volunteers who are willing to serve as community educators and supplement City staff.

- **Work with ecomaine to implement an educational/awareness campaign**

As the regional waste handling agency, part of ecomaine's mission is to promote waste reduction and recycling by residents of its member communities. The City of Portland's representatives on the ecomaine Board of Directors should continue to advocate for expanding ecomaine's efforts in this area. City staff should work closely with ecomaine's staff to develop materials and assist in disseminating it throughout the city.

- **Education and Enforcement** – The primary vehicle for promoting compliance with solid waste ordinances should be education. People who dump waste illegally may not be aware of the City programs and resources available to help them get rid of unwanted items properly. However, if an educational approach fails to achieve success with particular residents, the City should enforce strict penalties. It is important to send the message to such individuals that illegal dumping detracts from the City's quality of life and will not be tolerated.

**9. Product Stewardship:** In recent years, the State of Maine has been a leader in the area of product stewardship, also known as extended producer responsibility. Product stewardship laws require manufacturers to assume responsibility for the end of life care of the products they manufacture. This provides them with an incentive to design their products in a way that facilitates easy recycling or recovery of valuable components of the product. Maine has enacted laws requiring the manufacturers of the following products to assume responsibility for the cost of recycling their products:



- [Dry cell mercuric oxide and rechargeable batteries](#)
- [Mercury auto switches](#)
- [Electronic waste](#)
- [Cell phones](#)
- [Mercury thermostats](#)
- [Mercury-added \(fluorescent\) lamps](#)

These producer responsibility laws have allowed the City to provide free or low cost recycling of electronic waste to its residents as well as residents of neighboring communities. The Task Force supports the efforts of the City to continue to advocate in favor of such legislation at the state level and participate in state and national forums on product stewardship (see Appendix D, Product Stewardship, for more information).

**10. Annual City MSW Scorecard:** It is important that the City provide elected officials and members of the public with a regular update on the performance of the City's MSW program. Therefore, the Solid Waste Task Force recommends that the City Manager produce, publish, and distribute to the Council and the public a MSW scorecard at the end of each fiscal year. The Scorecard Report should, at a minimum, specify the following:

- The progress made by the MSW program during the year toward meeting the City's guiding principles and recycling goals,
- The major achievements/initiatives over the past year that increased the recycling rate, and
- The plans for the upcoming fiscal year that will further move the MSW program toward the City's guiding principles and recycling goals.

Such regular updates will keep the City's attention focused on the ways in which the City is achieving its objectives and provide important information about which aspects of

the City's MSW program are working well and which areas need adjustment to perform at a higher level.

**11. Five-year Comprehensive Review of City MSW Program:** Every five years, the City should conduct a comprehensive review of its MSW policies, ordinances, practices, and operations. This review would determine which elements of the solid waste program systems are working most effectively, from both an operational and financial standpoint, and what systems need improvement to better match up with the City's guiding principles and recycling goals. This review would guide decisions by staff and elected officials about when and how to make program modifications or enhancements.

In order to ensure the validity of the review process, it is important that the City collect and maintain valid and accurate data about the solid waste program's performance. The City should attempt to generate data on specific aspects of the program wherever possible instead of aggregating data.

## **Conclusion**

Providing the public with efficient and effective waste management services is a core responsibility of any city. The City of Portland's program provides reliable curbside collection of household trash and recyclables for its residents. The pay as you throw (blue bag) program combined with a comprehensive single stream recycling program has helped the City steadily reduce the amount of waste collected over time. At the same time, the recycling rate has remained in the low 30% range, one of the highest rates in the region. The institution of a permanent facility at Riverside Recycling to collect hazardous waste and electronic waste has effectively diverted significant amount of toxic material from the household waste stream. Over the past several years, however, budget considerations have driven the City to modify several programs that many residents relied on to help them effectively manage their household wastes. These changes include the discontinuation of the popular heavy item pick up (HIP) program, the yard waste drop off program and restrictions on the amount and type of

materials accepted at Riverside Recycling as part of the “e-card” program. The SWTF believes that these reductions have increased illegal disposal of bulky and organic wastes as residents without access to convenient ways to properly dispose of these items resort to other means.

This report presents a series of recommendations to address these concerns and to set the City of Portland on a trajectory to further reduce its waste stream and achieve a residential recycling rate of 50% by 2020. Many of these recommendations echo or amplify recommendations contained in other policy documents already adopted by or endorsed by the City Council. These include the Recycling Advisory Committee’s Report of 1998 as well as the Sustainable Portland Report, which was adopted into the City’s Comprehensive Plan in 2010. Portland residents clearly see waste reduction, resource conservation and recycling as an important part of community life. They will be receptive to program changes that provide additional ways for them to reduce their waste and responsibly handle organics and bulky items.

The members of the Solid Waste Task Force appreciate the opportunity to provide recommendations to the Portland City Council that will, if implemented, enhance the quality of life in the City, conserve natural resources and make Portland a more sustainable community.

# Appendix A -- Council Order

Order 136-09/10

Passage: 1/4/10 8-0 (Skolnik absent)

NICHOLAS M. MAVODONES (MAYOR)

CITY OF PORTLAND

JOHN R. COYNE (5)

KEVIN J. DONOGHUE (1)

IN THE CITY COUNCIL

JOHN M. ANTON (A/L)

DAVID A. MARSHALL (2)

DORY RICHARDS WAXMAN (A/L)

DANIEL S. SKOLNIK (3)

JILL C. DUSON (A/L)

CHERYL A. LEEMAN (4)

## ORDER ESTABLISHING INTEGRATED SOLID WASTE MANAGEMENT TASK FORCE

WHEREAS, it is the policy of the State of Maine to implement an integrated approach to solid waste management based on the following order of priority:

- a. reduction of waste generated at the source;
- b. reuse of waste;
- c. recycling of waste;
- d. composting of biodegradable waste;
- e. waste processing which reduces the volume of waste needing land disposal, including incineration; and
- f. land disposal of waste.

WHEREAS, it is the goal of the State to recycle or compost fifty percent (50%) of the municipal solid waste tonnage generated each year within the State; and

WHEREAS, it is the goal of the State to reduce the biennial generation of municipal solid waste tonnage by five percent (5%); and

WHEREAS, the State requires that any person employing 15 or more people at a site shall implement an office paper and corrugated cardboard recycling program; and

WHEREAS, the State regulates hazardous waste (e.g., paint, batteries, electronics) and sets management standards to protect public health and the environment, and to conserve natural resources; and

WHEREAS, the City of Portland is a member municipality of ecomaine which owns and operates a state-of-the-art single stream recycling facility; and

WHEREAS, the City of Portland recycled approximately 33% percent of municipal solid waste tonnage generated within the City; and

WHEREAS, there are facilities in Portland and surrounding areas that can effectively reuse, recycle, compost or otherwise process and market most materials discarded in Portland and, thereby, divert such materials from the waste stream while creating jobs; and

WHEREAS, achieving the State's recycling goals is ambitious and will require businesses and consumers to take responsibility to ensure that all discarded materials are diverted from the waste stream; and

WHEREAS, the City of Portland has made several changes to its solid waste program in recent years that have caused concern among many community members;

NOW, THEREFORE, BE IT RESOLVED that an Integrated Solid Waste Management Task Force is hereby established for the following purposes:

- Review and assess existing municipal and commercial solid waste policies and programs;
- Inventory refuse receptacles on City property and recommend changes (if needed) to types and locations;
- Seek input on City solid waste policies and programs from stakeholders and the general public;
- Develop policies and programs to achieve the State's recycling goal, including increased business and consumer responsibility, by diverting discarded materials from the waste stream through recycling, composting or other means;
- Develop a five-year plan to implement the policies and programs necessary to achieve the State's recycling goal, including estimated cost and timeline; and
- Report recommendations to the City Council no later than September of 2010.

BE IT FURTHER ORDERED, that the Mayor shall appoint an Integrated Solid Waste Management Task Force that will include, in addition to interested residents of Portland, representatives of the following stakeholder groups:

- ecomaine;
- Commercial property managers and/or owners;
- Multifamily property managers and/or owners;
- Waste haulers; and
- Environmental advocates.

BE IT FURTHER ORDERED, that the City Manager shall designate the primary staff person or persons responsible for assisting the Task Force and for the participation of such other City departments as are necessary and appropriate.

## Appendix B -- Statutes and Policies

### State Statutes

#### 38 §2132. STATE GOALS

**1. State recycling goal.** It is the goal of the State to recycle or compost, by January 1, 2009, 50% of the municipal solid waste tonnage generated each year within the State.

[ 2005, c. 220, §2 (AMD) .]

**1-A. State waste reduction goal.** It is the goal of the State to reduce the biennial generation of municipal solid waste tonnage by 5% by January 1, 2009 and by an additional 5% every subsequent 2 years. This reduction in solid waste tonnage, after January 1, 2009, is a biennial goal. The baseline for calculating this reduction is the 2003 solid waste generation data gathered by the office.

[ 2005, c. 220, §3 (AMD) .]

**2. Goal revision.** The office shall recommend revisions, if appropriate, to the state recycling goal and waste reduction goal established in this section. The office shall submit its recommendations and any implementing legislation to the joint standing committee of the Legislature having jurisdiction over natural resource matters.

[ 2005, c. 220, §4 (AMD) .]

**3. Beneficial use of waste.** The use of waste paper, waste plastics, waste wood, including wood from demolition debris, used motor vehicle tires or corrugated cardboard as a fuel in industrial boilers or waste-to-energy facilities for the generation of heat, steam or electricity constitutes recycling only for the purposes of determining whether the goals in subsection 1 are met and for determining municipal progress as provided in section 2133. In order for the use of waste under this subsection to constitute recycling, the office must determine that there is no reasonably available market in the State for recycling that waste and the wastes must be incinerated as a substitute for, or supplement to, fossil or biomass fuels incinerated in the industrial boiler or waste-to-energy facility.

[ 1995, c. 552, §1 (AMD) .]

**4. Reduction in dioxin.** It is the policy of the State to reduce the total release of dioxin and mercury to the environment with the goal of its continued minimization and, where feasible, ultimate elimination.

#### 38 §1305. MUNICIPALITIES; POWERS AND DUTIES

**1. Disposal services.** Each municipality shall provide solid waste disposal services for domestic and commercial solid waste generated within the municipality and may provide these services for industrial wastes and sewage treatment plant sludge.

[ 1989, c. 585, Pt. E, §17 (RPR) .]

## 38 §2133. MUNICIPAL RECYCLING

**1-A. Recycling progress.** Municipalities are not required to meet the state recycling goal in section 2132, but they must demonstrate reasonable progress toward that goal. The office shall determine reasonable progress.

[ 1995, c. 465, Pt. A, §44 (NEW); 1995, c. 465, Pt. C, §2 (AFF) .]

**7. Recycling progress reports.** Municipalities shall report annually, on forms provided by the office, on their solid waste management and recycling practices. The annual report must include how much of each type of solid waste is generated and how that solid waste is managed. The office shall assist municipal reporting by developing a municipal waste stream assessment model. The model must rely on actual waste data whenever possible, but incorporate default generation estimates when needed. Default generation estimates must incorporate factors such as commercial activity, geographical differences and municipal population.

[ 1995, c. 656, Pt. A, §38 (NEW) .]



## City Ordinances and Policies

### Municipal Climate Action Plan, 2007 (excerpt):

#### 4. Develop an Environmental Preferable Procurement Policy

The choices the City makes regarding the goods and services it purchases can have a major impact on the environment and offer an important opportunity to visibly demonstrate a commitment to sustainability. Ensuring that City purchasing policies include green standards such as a mandate for recycled content, a local vendor/provider preference, reduced toxicity and a full life cycle analysis of major purchases such as heavy equipment and vehicles would model sustainable spending to Portland residents and businesses.

Many communities around the country have already instituted green procurement policies and can provide the City with valuable case studies. ICLEI is currently developing an implementation guide for green procurement. The Green Team should work closely with their staff to implement this measure.

For the complete document, see:

<http://www.portlandmaine.gov/energy/climateactionplan.pdf>

### Sustainable Portland, 2010 (excerpt)

**Drafted in 2007, incorporated in the Comprehensive Plan in 2010**

...To address what has become one of the defining challenges of our time, *Sustainable Portland* has established as a key goal the protection and enhancement of public and ecological health through pollution prevention: the elimination or reduction in volume and/or toxicity of toxic and hazardous materials, air emissions, water discharges, solid and hazardous waste, pesticides, and existing environmental contaminants such as lead. In achieving this goal, it is imperative that no sector of Portland's population or area is exposed unfairly to toxic substances and/or pollution.

**Pollution prevention** is an essential component of achieving environmental sustainability. Pollution prevention means reducing or eliminating waste at the source by modifying production processes, promoting the use of non-toxic or less-toxic substances, implementing conservation techniques, and re-using materials rather than putting them into the waste stream. Pollution prevention means "source reduction," as defined under the federal Pollution Prevention Act, and other practices that reduce or eliminate the creation of pollutants. Pollution prevention methods can help Portland minimize municipal wastes. Emissions and pollution prevention assistance programs can help residents, institutions, and businesses further reduce the amount of solid, liquid, and toxic wastes they generate while increasing profits and decreasing health hazards...

## Goal

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G.1 Pollution prevention and source reduction.

## Policies

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- P.1.1 Explore development of and implementation of an Environmental Management System (EMS) with a goal of certification under ISO 14000.
- P.1.2 Under the EMS, adopt a policy of pollution prevention as a guiding principle in all city decision making.
- P.1.3 **Under the EMS, adopt a citywide net zero waste goal for solid and hazardous waste.**
- P.1.4 Develop a comprehensive storm water management and pollution prevention program to eliminate toxics and excess nutrient run-off from entering Portland's surface waters and sediments.
- P.1.5 Continue the work of the Casco Bay Estuary partnerships to identify and reduce toxic pollution.
- P.1.6 Coordinate City efforts within a regional framework and develop stronger relationships with other communities to achieve common environmental sustainability goals.

## Implementation

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- I.1.1 Adopt a reasonable and enforceable no-idling policy throughout the city – including maritime and aviation uses.
- I.1.2 Continue to upgrade and separate our combined sewer/water system to minimize release of untreated sewage.
- I.1.3 Encourage households and business properties to reduce storm water runoff volume and increase storm water quality through use of improved site design, decreased impervious surfaces, use of rain barrels and other best management practices.
- I.1.4 Reduce the incidence of lead poisoning among children by expanding the dissemination of information regarding lead poisoning and lead safe work practices, particularly targeted to Portland homeowners with pre-1950's housing and children under the age of six.
- I.1.5 **Use City purchasing to support cost-effective local and green products using recycled products where possible.**

For the complete report, see:

<http://www.portlandmaine.gov/energy/sustainableportlandreporttextonly.pdf>

**Administrative Regulation No. 42, Recycling Policy (1996)**

Approved By: Robert Hanley  
City Manager

Effective Date: Aug 7, 1996

ADMINISTRATIVE REGULATION NO. 42

Recycling Policy

PURPOSE

This Administrative Regulation (AR) is intended to set forth the basis and procedures for controlling waste generation and disposal practices. Consistent with the State of Maine's waste management priorities, the City's first priority of waste management is to "reduce" both in amount and toxicity of wastes generated. The City's second priority is the "reuse" of waste. Our third priority is the "recycling" of our waste. Collectively these are referred to as the "3 R's".

Reduction

The City of Portland has established "reduction" as its first waste management priority because it prevents the creation of waste; other methods only manage waste after its creation. By reducing waste generation, the City will decrease the amount of materials that must be reused, recycled or disposed of and will reduce its total costs of handling materials. Suggestions or questions regarding "reduction" should be directed to the City's Purchasing Agent.

Listed below are some recommendations of reducing waste generation:

- minimize paper usage by using E-Mail, voice mail, using routing slips instead of issuing multi-copies of documents, photocopying two sides of paper, using clean side of paper for note pads, editing work on P.C./Word processing C.R.T. versus paper copy, etc.
- Investigate option of returning unused materials to the original supplier for credit. The same option should be used for unneeded and expired supplies.
- Keep all inventories to the minimum. Return to the supplier any out-of-date inventory for credit. Audit inventory monthly to identify any over-stocked items.

- Where cost effective, purchase products whose packaging is not excessive, consistent with the City's goals of controlling costs and minimize waste generation.

The City of Portland has identified reuse as its second waste management priority. By recognizing materials and items that are still usable and by identifying uses for these materials, the City reduces its purchases, recycling and disposal costs.

Materials that may be appropriate to reuse include:

- Fire trucks, rehabilitated, refitted, and modernized.
- Construction equipment rehabilitated and modernized.
- Brick and granite curb removed during reconstruction can be reused.
- Office furniture can be cleaned and repainted.
- Obsolete equipment to be sold by public auction or donated to needy organization.
- Excavated earth can be blended into suitable construction material.
- Wood waste chipped into bark mulch.
- Leaves and grass clippings compacted into a soil conditioner and fertilizer.
- Sale of obsolete items to salvage company.

Suggestions or questions regarding "reuse" should be directed to the City

Purchasing Agent, Recycling

The City of Portland has identified "recycling" as its third waste management priority. After waste reduction and reuse have been maximized, materials that remain may be appropriate for recycling. By recycling materials that cannot be reused, the City minimizes the amount of materials requiring disposal, as well as the environmental and monetary cost associated with disposal.

State law requires recycling of office paper and cardboard at all facilities where 15 or more people are employed. The City is meeting this requirement by implementing an office paper collection and recycling at its facilities.

The City recycles a wide range of materials, and it continues to search for reuse or recycling options for materials which are disposed of currently.

All employees are encouraged to investigate and pursue recycling options for all materials, where such recycling is cost effective.

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All employees are required to purchase materials and items which are made from waste (recycled) materials or contain recycled content. The City's policy is to support a strong market for recycled products to ensure that recycling will be cost effective.

The City will require the contractors to purchase and use recycled construction and landscape materials available at its Riverside Street Recycling facility whenever these materials meet City construction standards and specifications. The City also encourages its contractors to use recycled materials when available and appropriate.

Suggestions or questions regarding "recycling" should be directed to the Purchasing Agent and/or the City's Recycling Coordinator.

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## Appendix C – Zero Waste Principles

Zero waste is a philosophical approach to solid waste management that views wastes generated in our society as potential resources. It takes inspiration from the endless cycling of resources in nature and advocates for a cyclical, closed loop approach to raw material extraction, product design, consumer use and reuse/recycling. Instead of extracting virgin resources to produce new manufactured goods, the “resources” from previous products would be recovered, refined and remanufactured into new goods. This closed-loop system results in considerable overall energy, cost, resources and environmental savings as compared to traditional linear resource extraction, production and waste.

Examples of closed-loop systems already exist in the form of recycling programs. Used metal, paper, glass and plastic goods are collected, separated and transported to manufacturing plants as feed stocks for the creation of new products. Many recyclable materials, like aluminum, plastics and glass, can be recycled almost indefinitely without any loss of quality. Increasingly, products are beginning to be designed not only with recyclable materials, but with end-of-life recycling in mind. Composting of food scraps, yard waste and other organics is another form of closed-loop recycling, as the breakdown of this organic matter forms rich fertilizers that can be used grow new resources.

Though not yet a reality, large-scale zero waste is an ideal to strive towards. The principles of zero waste can be supported by prioritizing management practices that seek to reduce the creation of unusable waste products. In 1989, the State adopted the Maine Solid Waste Management Hierarchy, which outlines the management of waste from most desirable to least desirable methods in order to reduce pollution and save resources. Following this Hierarchy to increase source reduction, reuse, recycling, and composting will help move our City closer to a closed-loop, zero waste system.

Solid Waste Task Force reviewed the concept and principles of zero waste and used them to inform their deliberations regarding the creation of Portland's Solid Waste Strategy. Task force members recognized that there was support for zero waste as a management goal, and that the Sustainable Portland Task Force had called for the adoption of zero waste principles by the City in their 2007 Report. They also recognized that creating a zero waste system required widespread participation from every link of the production supply chain: designers, manufacturers, consumers, collectors, processors and government.

Ultimately, the influence of zero waste principles on the Task Force can be seen in the Guiding Principles and Specific Recommendations created and endorsed by SWTF members. Adoption of the Maine Waste Management Hierarchy; educating City residents to increase reduction, reuse and recycling of goods; incorporating recycled product requirements into City procurement policy; investigating the implementation of curbside composting programs; and leading by example all demonstrate the value of zero waste in developing actionable City waste management policy.

**Zero Waste, a visionary goal that strives for:**

- Zero Waste of resources
  - 100% Efficiency of energy, materials and human resources
- Zero Solid Waste
- Zero Hazardous Waste
- Zero Emissions – to air, water, or soil
- Zero Waste in Production Activities
- Zero Waste in Administrative Activities
- Zero Waste in Product Life Cycle
- Zero Toxics



**Resulting in:**

- Reduced risks to employees
- Reduced risks to the environment
- Reduced presence of toxics creates less hazardous waste
- Closed loops for materials
- Reduced costs

For more information see [www.zerowaste.org](http://www.zerowaste.org).



## **Appendix D -- Product Stewardship**

Product stewardship is a policy approach designed to extend and broaden the economic responsibility for post-consumer management of products and packaging. While product stewardship promotes the sharing of responsibility among all parties (producers, municipality, retailers, and consumers) involved in the lifecycle of a product, Extended Producer Responsibility (EPR), a component of product stewardship, specifically identifies end-of-life management as the responsibility of the producers of the product.

Nationwide, the adoption of these two approaches has gained significant popularity over the past five years. In addition to many states adopting product stewardship and EPR policies, in June 2010, the US Council of Mayors passed a resolution to adopt EPR for managing MSW. Maine has consistently been at the forefront of adopting product stewardship, starting in 1976 with the passage of the state's bottle bill through a citizen referendum. Since then Maine has consistently led the nation through the adoption of product stewardship laws for rechargeable batteries (1991), mercury automobile switches (2001), electronic waste (2004), mercury wall thermostats (2006), cell phones (2007), and fluorescent lighting (2009).

Traditionally it has been the responsibility of the municipality (and its taxpayers) to safely manage MSW within its jurisdiction. The intent of product stewardship is to foster equity by shifting some of the economic responsibility for the environmentally safe disposal or recycling of products and packaging away from municipalities and onto those responsible for creating the product or the waste: producers and consumers.

The goals of product stewardship are to promote source reduction by creating an economic incentive to use less hazardous components, increase the recyclability at the end of the product's life, increase the recovery of valuable materials, and to extend the life of landfills. The result of this incentive, as is the case with Maine's experience, is that the total cost of environmentally sound recycling and management decreases. A system that relies on each municipality to manage MSW is much less efficient and thus

more expensive than a statewide producer-financed system that can lower costs and maximize the economies of scale to reduce costs.

As the popularity and economic attractiveness of product stewardship has been increasing in Maine, there was a realization that Maine's product-by-product approach was inefficient and somewhat duplicative. As a result, in March 2010, Maine was the first state to pass a product stewardship framework law, "An Act to Provide Leadership Regarding the Responsible Recycling of Consumer Products" (LD 1631). The law established a three-step review and recommendation process, as described below, as a means to evaluate, recommend, and modify product stewardship programs, with the intent of increasing the consistency of the review process.

- Step 1 - Review and Prioritization: The Maine DEP reviews existing product stewardship programs and conducts a prioritization process to identify potential candidate products for product stewardship status.
- Step 2 - Report Development: The MeDEP prepares an annual report to the Maine Legislature on the state of existing product stewardship programs, proposed changes to existing products stewardship programs, and recommendation of potential candidates for product stewardship.
- Step 3 - Legislative Review: The Maine Legislature's Joint Standing Committee on Natural Resources reviews the MeDEP report and has the authority to report out legislation as necessary to modify existing programs and/or to list new products or create new programs. Following the Committee's action, final approval is through the full legislature and then the governor.

***Excerpt from Maine Department of Environmental Protection Report  
“Implementing Product Stewardship in Maine: 2011 Report to the Joint Standing  
Committee on Natural Resources” p. 3***

***Maine’s product stewardship laws***

In 2010, Maine became the first state in the U.S. to enact a “product stewardship framework” law. The Maine Revised Statutes Annotated, Title 38, chapter 18 (38 MRSA §§1771-1775) establishes the promotion of product stewardship as a policy to support the reduction, re-use and recycling of materials in Maine’s solid waste stream. This law defines "product stewardship" to mean “a producer's taking responsibility for managing and reducing the life-cycle impacts of the producer's product, from product design to end-of-life management.” (Using this definition “product stewardship” may also be referred to as “extended producer responsibility” or “EPR”.) Product stewardship shifts the cost of the end-of-life management of products from municipalities and taxpayers to producers and the consumers who buy their products. It provides producers with new opportunities to move toward sustainable production in which they design products so that materials can be recaptured and reused to make new products (“cradle-to-cradle” production).

Along with recognizing product stewardship as a critical tool to support solid waste reduction, re-use and recycling, Maine’s *Product Stewardship* framework law sets out a process by which the state can routinely improve upon and add to its extended producer responsibility programs. This process includes an annual report to the legislature by the Department of Environmental Protection (Department), in which the Department may propose new product stewardship programs and changes to existing programs. Prior to submitting this report, the Department must solicit comments from interested parties for 30 days, and provide these comments along with the report for legislative consideration. At its discretion, the Joint Standing Committee on Natural Resources may then introduce legislation based on the report. This process provides all interested parties with a predictable process for the development of product stewardship legislation. It ensures that, for any product stewardship proposal, a certain amount of foundational work is performed by the Department and all interested parties have the opportunity

to provide additional information to the Legislature for consideration along with the Department's report.

From 1992 to 2009, Maine enacted five product-specific laws which require producers to establish programs to recover their products from Maine's waste stream and ensure proper handling and recycling or disposal of these products. These products include dry mercuric oxide and rechargeable batteries (38 MRSA §2165), mercury auto switches (38 MRSA §1665-A), electronic waste (38 MRSA §1610), mercury thermostats (38 MRSA §1665-B), and mercury lamps (38 MRSA §1672). Although originally driven by the goal of reducing the release of toxics (e.g., mercury, lead) into Maine's environment, product stewardship programs are now recognized as achieving the additional environmental and economic benefits of providing lower cost commodities for production of new products, and reductions in life-cycle impacts of products, <sup>4</sup> including greenhouse gas savings and avoiding environmental degradation from the extraction of new materials (e.g., metals mining, petroleum extraction).

<sup>4</sup>“A **life cycle assessment** ... is a technique to assess each and every impact associated with all the stages of a process from cradle-to-grave (i.e., from raw materials through materials processing, manufacture, distribution, use,

## **Appendix E -- Portland Public Schools' Recycling and Composting Initiative in collaboration with the Waste Reduction Group**

Portland Public Schools are turning a little greener because a pilot program in the lunchrooms of several schools is giving students the opportunity for hands-on learning about recycling, waste reduction, and composting.

This pilot program is being carried out in collaboration with the Waste Reduction Group (WRG). WRG is made up of stakeholders in Portland's community and public school system who began meeting in 2009 with the common goal of boosting recycling efforts and developing programs to reduce waste in the Portland Public Schools (PPS). In partnership with the City of Portland's Energy and Environmental Sustainability Committee (EESC), WRG is carrying out the goals and objectives of the Sustainable Portland Plan, working to help PPS and the larger Portland community move toward achieving zero-waste (see links below). WRG is working with Dan Chuhta, PPS STEM (Science, Technology, Engineering, Math) Curriculum Coordinator, and PPS Superintendent Dr. Jim Morse on this pilot program.

The program's overall goals: 1) integrate sustainable principles into PPS's curriculum; and 2) achieve greater waste minimization in the PPS, and the resulting cost savings, by incorporating more recycling and composting. The pilot is focusing on PPS lunchrooms because the majority of a school's trash is generated in this location.

Students are setting up recycling stations in their lunchrooms to separate trash and recyclables (and will eventually be separating out food waste as well), and working to educate their school community on why it's important to reduce the amount of trash that goes to the school dumpster every day. Student Green Teams at each school, with teacher guidance, form the core group that is launching and monitoring the pilot along with a school-wide training and education effort to bring about this "change of habit."

The first stage of this recycling pilot program began in 2009-2010 in the lunchrooms at Nathan Clifford Elementary (now Ocean Avenue Elementary), with K-5 students recycling milk cartons, and at Lincoln Middle, where students tested a separation program for food waste, trash, and

recyclables. Portland schools participating in the lunchroom pilot program as of May 2011: East End Elementary School, Ocean Avenue Elementary, King Middle School, Lincoln Middle School, Lyman Moore Middle School, Casco Bay High School and Portland High School. Thanks to the support of the Portland Department of Public Service through donation of recycling carts and staff time, the pilots have been launched without any additional cost to the PPS.

One of WRG's priorities is the push to replace the Styrofoam trays used in PPS lunchrooms. In 2010, Huhtamaki Packaging of Waterville generously donated recyclable/compostable paper trays for use in Lincoln's pilot. The long-term goal: use the savings realized by lower trash hauling and disposal costs as a result of this waste reduction effort to purchase a more sustainable alternative to Styrofoam trays for PPS.

This pilot program is preparing PPS for the next stage of waste reduction in the lunchroom: separating out food waste for composting. Waste audits show that, in general, 40-60% of the trash in school lunchrooms is food waste. The WRG anticipates that during the Fall of 2011, food waste from two to three pilot schools will be collected for transport to a nearby commercial composting facility. The end result: An even greater amount of waste will be diverted from the school dumpsters, and PPS food waste will be turned into an organic soil amendment for gardening and landscaping.

The Sustainable Portland Report emphasized zero-waste as a goal for the entire Portland community. The efforts of the PPS and WRG on behalf of this Lunchroom Recycling Pilot program in our schools are another step in the same direction to achieve zero-waste in the City.

### Members of the WRG

- Co-Chairs: Martha Sheils and Susan Webster
- Ron Adams, Food Service Director, PPS
- Dan Chuhta, STEM Curriculum Coordinator, PPS
- David Hilton, Lyman Moore Middle School, history teacher
- Missi Labbe, Program Development Manager, ecomaine
- Craig Lapine, Director, Cultivating Community

- Troy Moon, Environmental Programs and Open Space Manager, City of Portland
- Marnie Morrione, Portland School Committee
- Doug Sherwood, Facilities and Property Services Director, PPS
- Ed Suslovic, Portland City Councilor, District 3

### Links

- For more information about the Waste Reduction Group and its work in the Portland Schools, see <http://www2.portlandschools.org/lunchroom-recycling-pilot>