

Solid Waste Management System Briefing Report

Introduction

Last spring, City Council directed the Office of Sustainable Development (OSD) and the Noise Control Office to review the commercial waste and recycling system and report back on potential changes. While initially driven by the issue of noise associated with nighttime collection, the resulting analysis revealed several additional concerns:

- Recycling rates in the city have leveled off over the past five years at about 53%, falling short of the 60% goal for 2005.
- Waste produced by businesses in Portland accounts for 75% of the total. While the residential sector produces less waste than the commercial sector, there are important synergies between the two in recycling behavior and collection practices.
- While the recycling rate is relatively flat, total waste generation is increasing and more waste is going to landfill disposal. In 2004, overall waste generation was up 3.3% over the previous year and solid waste disposed grew by 7.4%. If these trends continue, recycling performance will fall further and further behind the 60% goal.
- A voluntary commercial food waste collection program has yielded limited results due to economic barriers within the existing system.

These developments make it clear that there are broader issues at hand than the noise concerns which prompted the review. Any reform of the garbage and recycling collection system must address the structural barriers that are preventing higher performance and long-term sustainability.

Current Commercial System

Unlike most other cities and counties in the metropolitan region, Portland's commercial garbage and recycling system is defined by free market conditions and competitive pricing of services. While this competitive system provides an opportunity for choice by local firms, and may provide lower prices for some of the City's larger businesses, it does not give adequate incentives to either businesses or haulers to reduce garbage or recycle more waste, and is inequitable to smaller businesses. A key weakness of Portland's existing commercial collection system is that it does not provide a reliable means for compensating haulers for the cost impacts of new recycling requirements. Consequently, haulers are not rewarded for promoting recycling and businesses may not have the means or the motivation to expand their recycling systems.

OSD staff believes that all the gains to be expected from the commercial sector under the current system of regulations and collection programs have been achieved. Unfortunately, a detailed look at commercial garbage reveals that more than half (60%) of what Portland businesses **still throw away** is material they could recycle.

A More Sustainable Approach

The review of the commercial system also spurred a broader discussion about what goals should be driving any proposed reform. Members of City Council expressed concerns over the broader environmental and human health impacts of waste generation and collection. In addition to achieving higher recycling levels, the system should be moving toward reductions in energy use, greenhouse gas and other toxic emissions, and in the amount of waste produced overall. In short, a more sustainable approach is needed to define success and guide the evolution of the system, one that is predicated not just on greater recycling but more aggressive waste prevention as well.

Such an approach is consistent with the Sustainable City Principles adopted by Council in 1994 that require the City to promote a sustainable future and follow a set of comprehensive principles incorporating environmental quality, social equity and economic vitality. These goals are mirrored in the Local Action Plan on Global Warming adopted by the City and Multnomah County in 2001, which directs the City to “promote solid waste management practices that reduce greenhouse gas emissions and promote community understanding of the relationship between solid waste reduction and global climate change.”

The concept of Extended Producer Responsibility is an emerging product stewardship approach to achieving greater waste prevention that has been utilized by local and state governments (San Francisco, New York (proposed), Washington, Maine, Maryland). In general terms, the approach calls for shifting the waste management burden from local governments to producers and manufacturers for the collection, recycling and disposal of their products. When manufacturers must absorb the end-of-life costs of their products and these costs are reflected in product pricing, manufacturers have an incentive to design, and consumers to purchase, goods that are more durable, easier to recycle and less toxic.

Environmental and Human Health Benefits

Research into the benefits of greater recycling and waste prevention presents some compelling evidence but also points out some important considerations. First, it is important to note that waste prevention activities capture most of the same benefits as recycling but in greater magnitude by virtue of the avoided resource use in extraction, processing, transportation and disposal. Also, where and how the recovered materials are used makes a difference. For example, recovered paper used to produce newsprint has a much greater environmental benefit than using the same recovered paper as animal bedding.

Some of the gains specific to recycling include:

- Energy savings – It takes 95% less energy to recycle aluminum than it does to make it from raw ore. Making recycled steel saves 60%; recycled newspaper 40%; recycled plastics 70% and recycled glass 40%.
- Global warming - Portland's current recycling rate is a significant factor in reducing CO₂ emissions and reaching global warming goals for the city and the region. For example, every ton of food waste diverted to composting prevents approximately one ton of CO₂ equivalent in greenhouse gas emissions from the landfill.
- Air quality improvements - The Metro area recycled 437,000 tons of paper in 2003, which is equivalent to taking 200,237 cars off the road for one year in the reduction of carbon monoxide, hydrocarbons and nitrogen oxides.
- Resource conservation - In 2003, our region recycled \$79 million worth of materials that otherwise would have been thrown away. The Portland area recycles enough paper each year to save about 8.2 million trees, equivalent to the number of trees in eight Forest Parks.
- Job growth - Recycling provides a large number of jobs that generally pay above the national average wage. Sending 10,000 tons of waste to the landfill supports 6 jobs, while recycling the same amount supports 36 jobs. In the Portland area, 1,000 people work in the recycling industry.
- Economic development – Demand for recycled materials has never been greater and, in many cases, exceeds the supply currently provided by the public. New business and product opportunities associated with recycled materials will add to the growth of the sustainable industries sector of our local economy.

Options for Change

If we are to meet the City's recycling goals and take steps toward more aggressive waste prevention, specific changes must be introduced to improve the performance of the system. Attention should be given not only to the commercial sector, but to the residential sector and city government operations as well.

Commercial

For the commercial program, there are several options to consider:

- 1) Continue current commercial structure, yet require additional business recycling.
- 2) Establish a uniform rate structure for various levels of service, and require additional recycling.
- 3) Develop a commercial franchise system based on the existing haulers. Include additional recycling requirements and waste prevention goals as part of the franchise.

- 4) Develop a commercial franchise system with fewer haulers that are chosen through a competitive process. Include additional recycling requirements and waste prevention goals as part of the franchise.

There are many tradeoffs between 1) allowing businesses the freedom to choose their hauler and negotiate price and 2) regulating services and rates that result in new more effective programs and increased waste reduction and recycling. It has been widely assumed that if the City set rates to compensate haulers for recycling and other mandatory services, then overall costs to businesses would rise. Research conducted by OSD indicates that may not always be the case and that small businesses in particular may be paying more under the current system than their counterparts in neighboring suburban communities with franchised service.

To gather specific information on these tradeoffs from the perspective of various stakeholders, OSD held a series of professionally facilitated meetings. The primary and most obvious finding: *There is no agreement among commercial haulers, the business community, environmental organizations or neighborhood associations on the preferred option for improving the commercial collection system.*

Residential

Changes may also be warranted in the residential curbside collection program to see greater overall sustainability in the system. With hauling services franchised for this sector, the advantage of a rate-setting mechanism that provides for cost recovery allows for the implementation of a wide range of system improvements. Some examples under consideration include:

- Use of alternative or biofuels and retro-fitting of trucks to reduce emissions associated with collection
- Use of roll carts and automated collection to increase convenience and participation in curbside recycling and yard debris composting and reduce worker injuries
- Expansion of the curbside program to include food scraps in with the yard debris for composting

City Operations

It is important that the City lead by example in its own recycling and waste prevention activities. Opportunities exist in the full range of purchase, reuse or recycling and disposal practices. Several relevant initiatives are underway including the Sustainable Procurement and Sustainable Paper Use policies, a draft Toxics Reduction Strategy and consolidation and redevelopment of waste hauling contracts for city facilities. An expansion of these efforts and identification and implementation of other prospects is an appropriate addition to the overall strategy.

Recommendations

OSD recommends Council adopt a resolution directing OSD to undertake the following actions:

1. Produce a new Solid Waste Management Plan, including a strong focus on sustainability, waste prevention, commercial solid waste collection and recovery.
2. Develop a planning process with the Solid Waste Advisory Committee to include all stakeholders and review all options.
3. Engage the broad community and specific stakeholders to identify issues and options for new policies, programs and systems. These options should include actions for the City to take affecting all sectors of the community and specific actions related to preventing waste within City government operations.
4. Develop a draft plan and circulate for public review, discussion and comment.
5. Integrate comments and recommendations from the public review, develop the final plan and take to City Council for approval.

To address the noise issue associated with nighttime collection, it is expected that any changes in policies, programs or regulatory framework for the solid waste and recycling system will significantly influence the collection practices that have been the source of complaints. OSD recommends that any further action to resolve the noise issue be considered in light of proposed system changes coming from the Solid Waste Management Plan process.