

A G E N D A

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METRO

MEETING: REGIONAL SOLID WASTE ADVISORY COMMITTEE (SWAC)

DATE: Thursday, June 26, 2008

TIME: 10:00 a.m. to 11:55 a.m.

PLACE: Council Chambers, 600 NE Grand Avenue, Portland

5 mins. **I. Call to Order** **Mike Hoglund**

*Introductions and announcements
Approval of minutes**

10 mins. **II. Director's Update** **Mike Hoglund**

25 mins. **III. Business Recycling Requirements (BRR) Ordinance*** **Marta McGuire**

***Action item:** After review of the ordinance and outreach results last month, SWAC is now asked to make a recommendation to Metro Council.*

60 mins. **IV. Sustainable Operations Workplan*** **Matt Tracy et al**

***Update and discussion item:** Presentation of 13 opportunities for implementing sustainable practices in public and private sector operations of the regional solid waste system.*

15 mins. **V. Roll-out of RID Patrol** **Steve Kraten**

***Information item:** Presentation of the re-branded regional illegal dumping clean-up program and adjournment to the outdoor entry plaza to view equipment display.*

*Denotes material included in the meeting packet

All times listed on this agenda are approximate. Items may not be considered in the exact order listed.

Chair: Council President David Bragdon
(503-797-1889)

Staff: Matt Korot
(503-797-1760)

Committee Clerk: Gina Cubbon
(503-797-1645)

JM:gbc

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ATTACHMENT
SWAC Agenda Item I
June 26, 2008

Regional Solid Waste Advisory Committee (SWAC)
May 22, 2008 Meeting Minutes



METRO

600 NE Grand Ave.
Portland, OR 97232-2736

MINUTES OF THE METRO SOLID WASTE AND RECYCLING COMMITTEE (SWAC) MEETING

Metro Regional Center, Council Chambers
Thursday, May 22, 2008

Members / Alternates Present:

David Bragdon, Chair
Scott Keller
Glenn Zimmerman
Janet Malloch
Mike Leichner
Dave Garten
Audrey O'Brien

Bruce Walker
Susan Steward
Dave White
Ray Phelps
Rick Winterhalter
Warren Shoemaker
Steve Schwab

Theresa Koppang
Anita Largent
Mike Miller
Jeff Murray
Dean Kampfner
Paul Edwards

Guests and Metro staff:

Doug Anderson
Steve Apotheker
Segeni Mungai
Matt Korot
Easton Cross
Sarah Keirns

Warren Johnson
Larry Harvey
Matt Tracy
Wendy Fisher
Meg Lynch
Kevin Six

Marta McGuire
Jennifer Joe
Heidi Rahn
Jeff Gage
Julie Cash
Gina Cubbon

I. Call to Order..... Council President David Bragdon

Council President Bragdon called the meeting to order.

- The Councilor introduced new SWAC member Warren Shoemaker, who will represent Clackamas County Rate-Payer Citizens. Mr. Shoemaker has worked on bio-fuel project development and waste-to-energy projects, spurring his interest in joining SWAC to help diversion of the region's waste.
- Approval of meeting minutes: Washington County's Theresa Koppang moved to adopt the minutes of the April 24 meeting as submitted. Several voices seconded the motion simultaneously; the motion passed unanimously.

II. Director's Update Doug Anderson

- With both Mike Hoglund and Janet Matthews unable to attend the meeting, Doug Anderson gave the update.
- The Metro Council will be holding a public hearing and take final action on the FY 2008-09 rate ordinance. Pending approval, the new rate will be \$75.75, a \$4.61 increase from the FY 2007-08 rate, and will become effective September 1.

The increase is \$1 higher than that recommended by the Rate Review Committee because of an amendment put forth by Councilor Burkholder to help fund waste reduction and environmental education in Outdoor School. The amendment was adopted by a vote of 4-3 (Councilor Bragdon noted that his was a "no" vote).

Dave White of the Oregon Refuse and Recycling Association (ORRA) commented that he feels it's counterintuitive to give \$1.4 million dollars to the Outdoor School program at a time that some jurisdictions have already had to do away with their programs. As it stands, he said, most of the money will end up in Multnomah County. He maintained that it is an inappropriate expenditure for solid waste funds. Councilor Bragdon suggested he bring his points before the Council.

Allied Waste's Ray Phelps added that the Rate Review Committee had identified a number of issues they wanted Council to consider, and asked if any movement had been made on those. Mr. Anderson said that a memo outlining those issues had been prepared and distributed at the May 1 Council Work Session. RRC members should have received a copy of the memo; he apologized for the oversight and said it would be rectified promptly. Councilor Bragdon, who had chaired the committee, noted that the memo did accurately portray the RRC's concerns.

- The compliance ordinance for the Regional Solid Waste Management Plan (RSWMP) went before MPAC for discussion on May 14 and will be voted on June 11. If MPAC takes action then, Councilor Bragdon added, the ordinance will go before Metro Council on June 19 and final action would be scheduled for June 26.
- Walsh Trucking submitted the winning proposal for Metro's Solid Waste Transport Contract. Negotiations are scheduled to begin in mid-June, with an August 1 target date for contract signing. Most bids were from trucking firms, Solid Waste & Recycling's Jim Watkins explained. One barge company submitted a proposal that was part barge, part trucking. It included trucking waste from Metro Central to Washington state, then using barges to Boardman and trucking back to Arlington from there (21 miles). There were no proposals received from the rail option.

A variety of environmental issues were considered in the proposal criteria, Councilor Bragdon added. It would have been possible for rail or barge to succeed, but cost would have been significantly higher. Walsh has 53-foot rigs that could hold up to 35 tons in a "perfect" load; the average is expected to be 34 tons, Mr. Watkins concluded.

Bruce Walker of the City of Portland said that it would be helpful for local jurisdictions to be given a short, written explanation of how this process worked so that they can explain when asked.

- Metro has issued an operating license to Fuel Processors, Inc. (located at N. Suttle Road, Portland), to accept petroleum-contaminated soil for thermal processing and disposal.
- Metro's budget goes before the Multnomah County Tax Supervising and Conservation Commission (TSCC) for a public hearing on June 5. Council will take final action on the proposed budget approximately two weeks after the hearing.

III. Business Recycling Requirements Ordinance Marta McGuire

Marta McGuire introduced this item as a refresher to the subject of mandatory recycling for businesses to help the region reach its recycling goals. The issue was first brought before SWAC in November 2007. The ordinance was included in this meeting's agenda packet; the Committee will be asked to vote on it at the June meeting. (MPAC will review the program in June and vote in July.)

Ms. McGuire and Heidi Rahn used PowerPoint slides (attached) to outline the program and illustrate stakeholder feedback.

Questions / Comments:

- Dave Garten asked how much business paper is currently being recycled. 75% (300,000 tons), Ms. McGuire replied. An additional 80,000 tons is expected to be recovered through this program. Some businesses don't recycle at all, but many who do only recycle one or two items.
- Susan Steward asked Metro to look into a way to separate the "big box" stores who don't recycle from those businesses who do. Lumping all businesses together does a disservice to businesses who are doing a good job. It would send a tremendous message, Ms. Steward said, and show appreciation to the businesses that have responded well to the outreach efforts.
- Can EDWRP (the Enhanced Dry Waste Recovery Program) successfully glean the recovery needed without bringing in mandates? EDWRP will be helpful, but only applies to customers with large drop boxes, Ms. McGuire answered.
- The City of Portland has adopted some business sector mandates (for organics, C&D, commercial paper, and containers), Mr. Walker noted. He agrees fully that coming in to assist businesses before moving to compliance measures is a good approach.

IV. Waste Allocation Project Doug Anderson

This project was first announced last winter, Mr. Anderson reminded the group, and in the last few months staff has worked with stakeholders and discussed it with the Council. The goal of this update is to not only inform, but to get comments from SWAC.

The basic question has to do with private transfer stations: How much wet waste should these facilities be allowed to handle (as of January 1, 2009). Some companies maintain that the current caps are too small for efficient use of their facilities. However, it's important to look at the public good aspects of this issue. If the caps are increased, for instance, space for dry waste processing could be crowded out, encroaching on the goals of EDWRP. On the other hand, self-haul and traffic may benefit from increases. Mr. Anderson used a PowerPoint presentation (attached) and information from the agenda packet to outline the objectives and next steps.

Large issues, he continued, include rate transparency and self-haul. While private operators have said they would open their books to their own local governments, those governments may not have the resources or time to interpret them. Regarding self-haul, very few facilities allow it, but there are enough facilities in the region to offer choices to those customers.

The Council wants net ratepayer benefits maximized, taking current and future costs, access to services, and waste reduction into consideration. Private operations must be able to earn normal profits, and local governments should have cost information. Metro, too, has considerations, such as contracts, costs, and flow control issues.

Options for waste allocation include making minor changes to the status quo system (such as caps growing over time to track with local growth), or Metro presenting one total cap and letting facilities work out who gets what.

Questions / Comments:

- Where is waste exported, Mr. Shoemaker inquired. Mr. Anderson responded that Non-System Licenses (NSLs) allow haulers to use facilities that are outside the Metro region. Waste Connections, for example, owns transfer stations in Clark County. There is one school of thought that would like to see local waste be taken only to local transfer facilities.
- Are numbers from NSLs included in Ms. McGuire's recycling figures? Mr. Anderson was unsure, but will look into that. The waste allocation numbers primarily involve putrescible waste, however.

- Mr. White suggested that Council be trained in collection rate-setting to understand what haulers go through to set rates. The word “transparency,” he said, “drips innuendo.” Local governments should - and do scrutinize facilities that charge noticeably more than Metro’s rates. Reasonable costs include sometimes paying a higher tipping cost in order to save on fuel.
- From the audience, Jeff Gage asked that the term “allowable expense” for transfer stations be given more definition. Local governments define that individually, Mr. Anderson responded. The City of Portland, Mr. Walker said, has specific guidelines for what is and isn’t allowable, though they do not set rates in the commercial sector.
- Mr. Phelps referenced a 2006 report in which the cost of transfer is \$0.04 per dollar. He can’t understand why, in that case, so much time and energy is being expended upon the concept of “transparency.” If it’s determined that Willamette Resources transfer rate is unacceptable, Wilsonville’s waste would go to Oregon City, resulting in at least a 15% rate hike for those ratepayers. Customers benefit from lower collection costs, not transfer costs. Mr. Anderson replied that the issue continues to be raised by some quarters. If it turns out to be a non-issue, at least that decision has been made after thorough consideration.
- Transfer stations have no guarantee of tonnage flow, Waste Management’s Dean Kampfer commented. That is a huge factor in analyzing rates.
- Metro is “de-facto regulating rates” by using caps, which restrict how many tons can be taken, Mike Leichner (Pride Disposal) added. Fixed costs, therefore, are spread over a finite number of tons. Local jurisdictions do investigate when a company’s rates are noticeably higher than Metro’s.

V. Other Business and Adjourn..... Councilor Bragdon

No other business or comments were voiced; the meeting was adjourned by Councilor Bragdon at 11:21 a.m.

Prepared by:

Gina Cubbon
Administrative Specialist
Metro Solid Waste & Recycling Department

gbc
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Proposed Business Recycling Requirements Review and Discussion



Solid Waste Advisory Committee
May 22, 2008
Marta McGuire, Senior Planner



Overview

- Background
- Proposed Program
- Stakeholder Feedback
- Questions
- Next Steps

Why do we need to increase business recycling?

3

**Businesses throw away more than
100,000 tons of recyclable paper and
containers annually - *one ton per minute.***



Business Recycling Policy Development



Key Elements of a Mandatory Program

- Uniformity of approach
- Education and assistance
- Exemptions
- Enforcement



Proposed Program

7

Purpose and Intent

5.10.310

- Increase business recycling of paper and containers
- Increase delivery of Recycle at Work Services
- Create consistent standard



8

5.10.330

Business Recycling Requirement

- Recycle paper and containers
- Provide containers and post signs for recycling
- Exemptions
- Compliance program
- Expanded education and assistance



9

5.10.320

Local Government Implementation

1. Adopt model ordinance OR demonstrate existing code that complies
2. Establish compliance program or enter into agreement with Metro
3. Provide documentation of program adoption

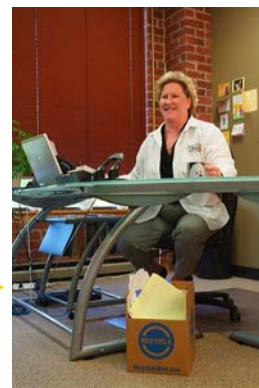


10

Model Ordinance

5.10.350

- Paper and container recycling requirement
- Exemptions
- Compliance program
- Education and assistance



11

Metro Compliance Program

5.10.340

1. Notice of noncompliance
2. Issue a citation
3. Assess fine



12



Proposed Timeline

January 2009	Requirements effective
July 2009	Compliance program begins
July 2010	Program evaluation

13

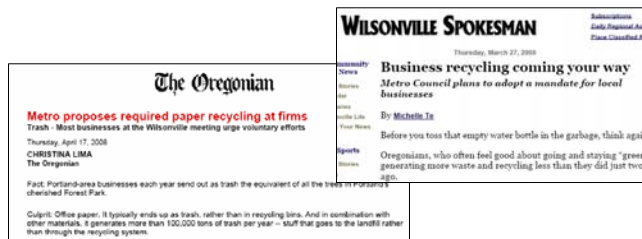


**What do businesses and local partners
think of the proposed program?**

14

Stakeholder Outreach

- 18 presentations and briefings
- +300 participants
- Newspaper and newsletter coverage



15

Stakeholder feedback

- Support overall project objective
- Education and economic incentives are preferred
- Mandate is necessary to make recycling a priority
- Regulations and enforcement should be implemented gradually

16



Questions

17



Next steps

June 26

SWAC vote

June/July

MPAC discussion and vote

July 15

Metro Council work session

18

Waste Allocation Project Update



SWAC

May 22, 2008

Douglas Anderson



SWAC Comments Invited

- ***Content***
- ***Issues***
- ***Work Plan***

The Questions

How much wet waste should private facilities be allowed to handle, beginning January 1, 2009?

What are the public interests these waste allocations should serve?

Public Interests and Issues

Public Interests & Issues: Findings

1. **Tip fees ("rate transparency")**
2. **Services**
3. **Capacity utilization**
4. **Dry waste**
5. **Consistency with DSP 1**
6. **Waste exports**
7. **Waste reduction and sustainability**
8. **Metro rate model**

"Rate Transparency"

- **"Rate transparency"**
= **"cost transparency"**
- **Using rate transparency**
 - **Allowable and disallowable costs**
 - **Ratepayers protected**
- **Private operators' position**
- **Barriers?**

Proposed Planning Statement

Planning Statement: Objective

Set waste allocations so that *net ratepayer benefits* are maximized.

Consider

- **Current and future costs**
- **Location and access to services**
- **Waste reduction and sustainability goals**

Planning Statement: Constraints

Optimize the objective subject to:

- **Private operations → normal profits;**
- **Local governments have cost info;**
- **Metro considerations:**
 - **Contract and bond obligations**
 - **Transfer and transport costs**
 - **Influence on the system**
 - **Flow control risk**

**Next
Steps**

Next Steps

Return to stakeholders and:

1. **Confirm planning statement**
Omissions or fatal flaws?
2. **Establish evaluation criteria**
3. **Generate options for:**
 - **Allocating waste**
 - **Delivering ratepayer benefits**

Allocating Waste: Options

1. **Status quo, perhaps with tweaks**
2. **Calculated**
3. ***Quid pro quo***
4. **Market-driven**
 - **Metro sells or auctions cap authority**
 - **Facilities trade cap authority**
5. **Negotiated**
6. **Others that may be identified**

Delivering Ratepayer Benefits

"Rate transparency" options

1. **Status quo**
2. **Local government control**
3. **Foster competition**
4. **Regulate rates**
5. **Others that may be identified**

Delivering Ratepayer Benefits

Services & sustainability options

Issues to be resolved

<u>Issue</u>	<u>Critical Path</u>
➤ Self-haul	self-haul study
➤ Dry waste	EDWRP
➤ Waste exports	landfill stds study
➤ HW collection	research need?

May need placeholders or reopener clauses in franchises.

Waste Allocation Project

Questions?
Comments?
Discussion?

ATTACHMENT
SWAC Agenda Item III
June 26, 2008

Business Recycling Requirements Ordinance

--DRAFT--
CHAPTER 5.10
REGIONAL SOLID WASTE MANAGEMENT PLAN

****The following will be added to the existing elements of Chapter 5.10:**

5.10.010 Definitions

Business Recycling Requirement

- 5.10.310 Purpose and Intent
- 5.10.320 Implementation Alternatives for Local Governments
- 5.10.330 Business Recycling Requirement Performance Standard
- 5.10.340 Metro Enforcement of Business Recycling Requirement
- 5.10.350 Metro Model Ordinance Required

5.10.010 Definitions

() "Business" means any public or private corporation, industry, partnership, association, firm, city, county, special district, and local governmental unit, excluding entities that occupy less than 50 percent of the floor area of a residential building.

() "Business Recycling Service Customer" means a person who enters into a service agreement with a waste hauler or authorized recycler for business recycling services.

() "Person" shall have the meaning assigned thereto in Metro Code Section 1.01.040.

() "Recyclable Material" shall have the meaning assigned thereto in Metro Code Section 5.01.010

() "Recycle" or "Recycling" shall have the meaning assigned thereto in Metro Code Section 5.01.010.

() "Source Separate" or Source Separated" or "Source Separation" shall have the meaning assigned thereto in Metro Code Section 5.01.010.

Business Recycling Requirement

5.10.310 Purpose and Intent

A significant increase in business recycling will assist the Metro region in achieving waste reduction goals. The Business Recycling Requirement provides an opportunity for businesses to work with local governments to provide recycling education, to create a consistent standard throughout the Metro region, and to increase recycling, thereby assisting the Metro region in meeting recovery goals.

5.10.320 Implementation Alternatives for Local Governments

(a) By January 1, 2009, local governments shall comply with this title by implementing the Business Recycling Requirement in one of the following ways:

- (1) Adopt the Business Recycling Requirement Model Ordinance and either establish compliance with that Model Ordinance or enter into an intergovernmental agreement with Metro that provides for Metro to establish compliance for the local government; or
- (2) Demonstrate that existing local government ordinances comply with the performance standard in Section 5.10.330 and the intent of this title.

(b) The local government shall provide information related to the local government's implementation of the Business Recycling Requirement at the Director's request or as required by the administrative procedures.

5.10.330 Business Recycling Requirement Performance Standard

(a) The following shall constitute the Business Recycling Requirement performance standard:

- (1) Businesses shall source separate all recyclable paper, cardboard, glass and plastic bottles and jars, and aluminum and tin cans for reuse or recycling;

- (2) Businesses and business recycling service customers shall ensure the provision of recycling containers for internal maintenance or work areas where recyclable materials may be collected, stored, or both; and
- (3) Businesses and business recycling service customers shall post accurate signs where recyclable materials are collected, stored, or both that identify the materials that the business must source separate for reuse or recycling and that provide recycling instructions.

(b) Local governments shall establish a method for ensuring business compliance.

(c) Local governments may exempt a business from some or all of the Business Recycling Requirement if:

- (1) The business provides access to the local government for a site visit; and
- (2) The local government determines during the site visit that the business cannot comply with the Business Recycling Requirement.

5.10.340 Metro Enforcement of Business Recycling Requirement

Upon a request by a local government under Section 5.10.320 to enter into an intergovernmental agreement, Metro shall perform the local government function to ensure business compliance the Business Recycling Requirement as follows:

- (a) Provide written notice to a business that does not comply with the recycling requirement. The notice of noncompliance shall describe the violation, provide the business an opportunity to cure the violation within the time specified in the notice, and offer assistance with compliance to the business.
- (b) Issue a citation to a business that does not cure a violation within the time specified in the notice of noncompliance. The citation shall provide the business

with an additional opportunity to cure the violation within the time specified in the citation and shall notify the business that it may be subject to a fine.

(c) Assess a fine to a business that does not cure a violation within the time specified in the citation. The notice of assessment of fine shall include the information required by Metro Code Section 5.09.090. Metro shall serve the notice personally or by registered or certified mail. A business may contest an assessment by following the procedures set forth in Metro Code Section 5.09.130 and 5.09.150.

5.10.350 Metro Model Ordinance Required

Metro shall adopt a Business Recycling Requirement Model Ordinance that includes a compliance element. The Model Ordinance shall represent one method of complying with this title. The Model Ordinance shall be advisory and local governments are not required to adopt the Model Ordinance, or any part thereof, to comply with this title. Local governments that adopt the Model Ordinance in its entirety shall be deemed to have complied with the requirements of this title.

Model Ordinance - Business Recycling Requirements

Business Recycling Model Ordinance

(a) Businesses shall recycle as follows:

- (1) Businesses shall source separate all recyclable paper, cardboard, glass and plastic bottles and jars, and aluminum and tin cans for reuse or recycling;
- (2) Businesses and business recycling service customers shall ensure the provision of recycling containers for internal maintenance or work areas where recyclable materials may be collected, stored, or both; and
- (3) Businesses and business recycling service customers shall post accurate signs where recyclable materials are collected, stored, or both that identify the materials that the business must source separate for reuse or recycling and that provide recycling instructions.

(b) A business may seek an exemption from the requirement in subsection (a) if:

- (1) The business provides access to the [name of local government] for a site visit; and
- (2) The [name of local government] determines during the site visit that the business cannot comply with the Business Recycling Requirement.

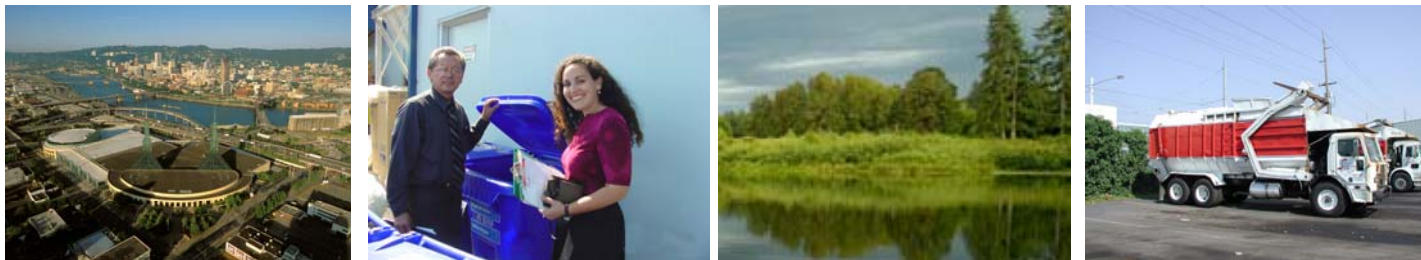
(c) To assist businesses in compliance with this section, the [name of local government] shall:

- (1) Notify businesses of the Business Recycling Requirement;
- (2) Provide businesses with education and technical assistance to assist with meeting the requirements of this section; and

(3) Monitor and verify business compliance with this section.

(d) [name of local government] shall ensure business compliance with this section by doing one or more of the following:

- (1) Providing a business with an opportunity to cure any noncompliance with this section.
- (2) Developing a compliance schedule.
- (3) Issuing civil fines.



Metro | *People places. Open spaces.*

Proposed Business Recycling Requirements Stakeholder Feedback Summary May 2008

BACKGROUND

Businesses generate almost half of the region's garbage and each year dispose more than 100,000 tons paper and containers that could otherwise be recycled. Over the past eight years, Metro and its local government partners have invested \$3.5 million to encourage more business recycling by providing free technical assistance. Now, Metro is considering mandatory recycling of paper and containers for all businesses in the region.

Metro explored options for increasing business recycling by convening public/private work groups and conducting stakeholder outreach from 2003 to 2007. More than 1,000 people provided advice on approaches for increasing business recycling.

The proposed program, Business Recycling Requirements, would make it mandatory for local businesses to recycle all types of paper and certain containers such as plastic bottles, aluminum cans and glass. If the Metro Council approves this proposal as currently drafted, all local governments in the region would be responsible for formally adopting these business recycling requirements by January 1, 2009.

STAKEHOLDER OUTREACH

In an effort to solicit input on the proposed program, Metro councilors and staff conducted meetings with local business associations and elected officials. Metro staff coordinated outreach efforts with the City of Portland, which was expanding its commercial recycling program at the same time.

Between February and May 2008, councilors and staff met with 13 business groups and five elected councils and boards (Table 1). The outreach efforts were supported by article submissions in local chamber newsletters, a survey and a web page. The program also received coverage in the Oregonian and other local publications.

The outreach efforts attracted a wide array of business representatives from across the region. More than 300 business representatives and elected officials participated in the meetings, and 103 surveys were completed at the meetings and online.

Table 1. Stakeholder Outreach Summary

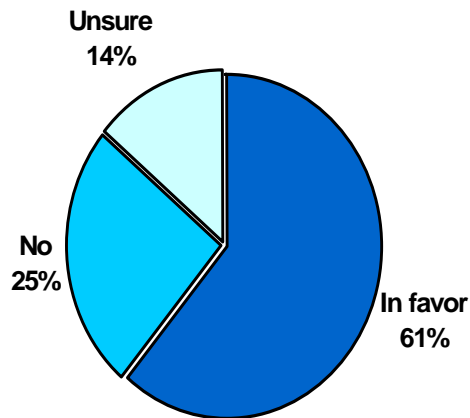
Organization	Outreach Format	Date
Building Owners and Managers Association	Breakfast forum	Feb. 6
Wilsonville Chamber of Commerce Governmental Affairs Committee	Membership meeting	Feb. 6
Oregon Lodging Association Board Members	Special meeting	Feb. 13
Westside Economic Alliance	Membership meeting	Feb. 20
Lake Oswego Chamber Governmental Affairs Committee	Membership meeting	Feb. 21
Recycling Advocates	Membership meeting	Feb. 29
Clackamas County Board of Commissioners	Work session	Feb. 26
Gresham Chamber of Commerce Governmental Affairs Committee	Membership meeting	Feb. 28
Wood Village City Council	Work session	March 11
Oregon City Chamber of Commerce Economic Development Committee	Membership meeting	March 13
North Clackamas Chamber of Commerce	Membership meeting	March 17
Milwaukie City Council	Work session	March 18
Lake Oswego City Council	Work session	April 1
Hillsboro Chamber Public Policy Committee	Membership meeting	April 2
Wilsonville Chamber of Commerce	Lunch forum	April 9
Hillsboro City Council	Work session	April 15
Sustainable Business Network	Lunch forum	April 16
Forest Grove Chamber of Commerce	Lunch forum	May 19

KEY FINDINGS

Overall, participants agree that business recycling efforts can be improved. Both elected officials and business representatives expressed support for the overall objective of the program.

Although participants support increasing business recycling through expanded education and economic incentives, support for a regulatory approach varied. Some viewed a regulatory approach as a contingency strategy if economic incentives and education fail to increase participation, while others felt a mandate was necessary to make recycling a priority for businesses. This was reflected both in the meetings and in the survey responses. As shown in Figure 1, survey results show that 61 percent of the respondents support required recycling, while 25 percent did not and 14 percent were unsure (see Attachment A for full survey).

Figure 1. Business Support for Proposed Requirements



Source: Proposed Business Recycling Requirements Survey, Metro, 2008.

Key items identified by the participants during the meeting discussions and in survey comments included:

- Recycling is a benefit to businesses. Practicing waste reduction attracts customers, and employees want to recycle.
- Education and economic incentives are the best way to encourage businesses to recycle. Some businesses, however, will not make it a priority unless it is mandatory.
- Education efforts should be tailored to the needs of businesses and should be directed at the owner, manager and employee level. Educational materials should also be available for multi-tenant businesses and janitorial companies. Recycling messages need to be simple and consistent across the region.
- Government regulation should be used only if education and economic incentives fail to increase participation.
- Regulations should be implemented gradually. Six months is a sufficient amount of time for businesses to improve their recycling programs to meet the requirements. Consider delaying fines until after the requirements have been in effect for one year.

NEXT STEPS

The proposed program and stakeholder feedback will be presented to the Metro Solid Waste Advisory Committee and Metro Policy Advisory Committee between May and July 2008. The results will be presented to Metro Council in July 2008.

HOW TO GET MORE INFORMATION

For more information on the proposed Business Recycling Requirements contact:

Marta McGuire, Senior Planner
Metro Solid Waste & Recycling Department
(503) 797-1806
marta.mcguire@oregonmetro.gov

Or, visit www.oregonmetro.gov/businessrequirements

Attachment A:

Proposed Business Recycling Requirements

Survey Response Summary

1. What type of business are you in?		
Answer Options	Response Percent	Response Count
Office-related such as financial, medical, or professional service	50.5%	48
Personal services such as hairdresser or plumber	2.1%	2
A retail store selling goods	3.2%	3
Restaurant, fast food, or grocery	5.3%	5
School, library, or educational institution	6.3%	6
Hotel or motel	0.0%	0
Hospital or medical clinic	9.5%	9
Manufacturer	3.2%	3
Wholesaling or warehousing business	3.2%	3
Government agency	6.3%	6
Non-profit organization	10.5%	10
	Other (please specify)	8
	<i>answered question</i>	95
	<i>skipped question</i>	8

2. What materials do you currently recycle?		
Answer Options	Response Percent	Response Count
Cardboard	91.1%	92
Office paper	92.1%	93
Newspaper	86.1%	87
Magazines, catalogs, phone books	82.2%	83
Plastic bottles	73.3%	74
Aluminum cans	79.2%	80
Steel cans	39.6%	40
Glass bottles	64.4%	65
	Other (please specify)	21
	<i>answered question</i>	101
	<i>skipped question</i>	2

3. Do you think businesses in the region should be required to recycle paper and containers?		
Answer Options	Response Percent	Response Count
Yes	61.0%	61
No	25.0%	25
Unsure	14.0%	14
Comments: <ul style="list-style-type: none"> ▪ YES! ▪ How could you enforce this? Unless you lock trash bins, anyone could throw recyclables in the trash. ▪ Use public award notifications that businesses can post. ▪ Make stronger voluntary program first. ▪ But encourage them with incentives. ▪ Education should do the trick. ▪ What a shame it needs to be a requirement! ▪ Reward system. ▪ Yes, if voluntary compliance is tried with renewed vigor and it still doesn't work. ▪ My company's recycling program is handled by someone other than me. ▪ The mandatory aspect is concerning. Just an example of poor communications & partnerships. ▪ I think they would recycling-I think they want to....I don't think a hard mandate is necessarily the best idea. ▪ This is a hostile idea to businesses, not very measurable, & will have unintended consequences. ▪ As long as the charge is nominal to get small business booked in. Education is also key. ▪ I don't like the idea of mandating it, but I don't understand why more businesses aren't recycling. It's so easy! ▪ Absolutely NO mandatory recycling. ▪ More could be done to teach recycling, should not be mandatory yet. How will code enforcement officers be paid? ▪ Not sure if this will do anything other than cost us for what we already do. If you use a cleaning service, will you be fined if THEY dump recyclable bins into general trash? How to monitor? ▪ I think there needs to be more specific info on the cost added with this service. 		13
answered question		100
skipped question		3

4. Does six months provide adequate time for your business to get its recycling program in compliance with the proposed requirements?		
Answer Options	Response Percent	Response Count
Yes	80.2%	77
No	6.3%	6
Unsure	13.5%	13
Comments: <ul style="list-style-type: none"> ▪ Already done ▪ Already doing it. ▪ Already recycling ▪ We already do it. ▪ I don't think that requiring recycling would be effective. Incentives and awareness of recycling programs would be much more effective. 		6
answered question		96
skipped question		7

5. Has your waste hauler offered to provide your business with recycling services?		
Answer Options	Response Percent	Response Count
Yes	52.6%	50
No	10.5%	10
Unsure	36.8%	35
Comments: <ul style="list-style-type: none"> ▪ Not a proactive ""ask"" from the waste haulers. ▪ Probably because we recycle a lot. ▪ Home-based. ▪ My apartment complex has recycling. ▪ We have a large mixed recycling bin but nothing for glass. ▪ Seasonal businesses, we don't currently have regular trash service. 		6
answered question		95
skipped question		8

6. Are you aware of the free technical assistance and resources provided by the Recycle at Work program?		
Answer Options	Response Percent	Response Count
Yes	51.6%	49
No	48.4%	46
answered question		95
skipped question		8

7. Would you like a Recycling Specialist to follow up with your organization to provide free resources and assistance?

Answer Options	Response Percent	Response Count
Yes	23.0%	20
No	77.0%	67
	<i>answered question</i>	87
	<i>skipped question</i>	16

8. Do you have any questions you'd like us to answer for you regarding the proposed recycling requirements?

Answer Options	Response Percent	Response Count
Yes	10.6%	9
No	89.4%	76
Questions: <ul style="list-style-type: none"> RE: E-waste 1) get co's to reduce their waste, help my clients w/recycling resources (I'm a professional organizer). Don't feel that Metro should be requiring property owner to enforce recycling if tenant does own trash disposal service. Would Metro consider a partnership w/businesses to get out into schools & work w/recycling in schools & looking into ways that we can support each others efforts & educate ourselves? (This was clearer in my head than when I actually wrote it out!) Shred-It takes our paper recycling from our locations. Are they recycling this paper? I have a business that has no need to recycle. My biggest waste is the gas I burn. We haul our cardboard to local facility-office cleaning crew handles the rest. Hopefully "mandatory" won't give recycling a bad name. Is there a way to get schools set up with a composting program. 		8
	<i>answered question</i>	85
	<i>skipped question</i>	18

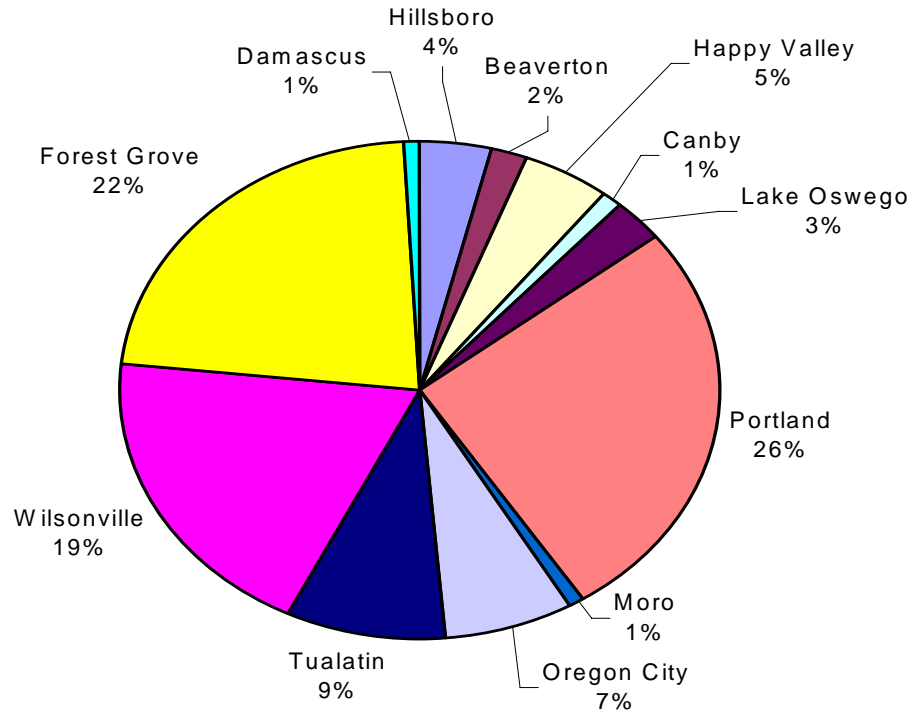
9. Please provide your contact information so we may follow up with your request for assistance and/or any questions you may have.

Answer Options	Response Percent	Response Count
Name	95.1%	58
Title	82.0%	50
Organization	90.2%	55
Phone	83.6%	51
Email Address	80.3%	49
	<i>answered question</i>	61
	<i>skipped question</i>	42

10. Please share any additional comments you may have regarding the proposed Business Recycling Requirements.

	Response Count
<p>Comments:</p> <ul style="list-style-type: none"> ▪ This program should be national! ▪ Businesses and individuals need to get moving and recycle some more. ▪ I think mandated recycling is important. Our company has only very recently started doing any recycling, and it only happened because myself & co-worker made it a priority. Before I was employed here, I didn't realize businesses that don't recycle still existed! People need to push. ▪ We have a RecycleWorks Award. Great work - keep it up! ▪ We should dialog with manufacturers and get them to make products that lend themselves toward being recycled (eg: cradle to cradle manufacturing). Thank you much. ▪ I am very much in favor of recycling but I don't think you should require recycling. Business has economic incentive to do so-it lowers the garbage bill. Education is the key-educate business, show how it is economically better to recycle & they'll do it. There is enough government regulation without a recycling requirement. If you require recycling-make it apply only to large businesses with over a certain # of employees or waste. ▪ Recycling Rocks! ▪ Let's find a way to help get education out there instead of a hard mandate (with financial consequences) on businesses....tenants only have so much control over their waste programs. ▪ Your target is arbitrary. ▪ As a chamber, we would be happy to partner with Metro to educate our businesses. ▪ I wasn't aware that shredded paper wasn't recyclable. ▪ #8, unless you have ideas on what else we might recycle. ▪ The answers I gave are primarily for our home. The guild is made up of individual artists and currently we have no location for recycling. ▪ I'm just a tenant in the executive suites, so I don't have a lot to do with recycling. ▪ You have not provided the regulations which are enforced on a business for this program. Please do not propose a program without complete regulations which will be enforced on a business. We are not interested on a proposal which does not give full information to the subject of your plan(a business).We are in Wahington County and we have Waste Management in Forest Grove. ▪ Perhaps a gradual/stepped method of charging fees. ▪ Need boxes for recycling & info on segregating shredded paper from other recyclables. ▪ Office is open Jan-1 - April 15 ▪ Very glad to hear about the potential for Styrofoam. ▪ Is there an alternative recycle outside of Metro or can I have this in any color as long as I want black. ▪ Very interesting 1st-time info. I would think it's better to require education w/fines than recycling w/fines. ▪ Recycling is vital for our state and our world. However, I believe much more could be done to motivate before we have to regulate it. ▪ Why does glass have to be separate from paper & plastic? ▪ An interesting idea for businesses would be to provide shred-boxes at a competitive price that would be serviced by waste haulers... By the way, the new recycling containers provided by WM are great! ▪ Already working with someone on Recycle At Work. Thanks! 	
<i>answered question</i>	26
<i>skipped question</i>	77

11. Survey Respondent by City



answered question 103

Regional Solid Waste System

Sustainable Operations

2008 - 2009 Work Plan

Greenhouse gas and
particulate air emissions

Resource conservation and
pollution prevention

Procurement and
construction

Work life and community/
health and safety





Contents

Getting started.....	3
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Greenhouse gas and particulate air emissions

Implement energy reduction and efficiency programs.....	4
Utilize renewable energy.....	5
Purchase power from renewable resources.....	6
Install particulate matter filters on diesel vehicles.....	7
Implement engine idling reduction policies.....	8

Resource conservation and pollution prevention

Implement water saving programs	9
Mitigate stormwater run-off	10
Phase-out toxic materials	11

Procurement and construction

Implement sustainable purchasing guidelines	12
Support local vendors who employ sustainable practices	13
Build to LEED or equivalent standards	14

Work life and community/health and safety

Promote community service	15
Implement zero tolerance policies for unsafe actions and behaviors ...	16

Appendix A - Sustainable operations guidance in the RSWMP.....	17
Appendix B - Resources.....	19
Glossary.....	21



Getting Started

What is this?

Concerns about global climate change and resources for future generations have led to a growing awareness of sustainability and an emphasis on sustainable practices at home and work. This plan is intended to further the implementation of sustainable practices in the region's solid waste system. Its target audience: public and private sector solid waste service providers. Its contents: 13 opportunities for implementing sustainable practices in operational and administrative settings.

Where did it come from?

Two groups convened by Metro developed this guidance. The first group created sustainable operations goals for the Regional Solid Waste Management Plan (see appendix A). Based on that general direction, a second group developed this work plan. Solid waste service providers and regulators participated in both groups.

How will it work?

Implementation of the opportunities in this work plan relies on the motivation and voluntary actions of the target audience: haulers and disposal transporters, as well as processing, transfer and disposal facility owners in the regional solid waste system.

Participants will use the work plan to identify:

- (a) opportunities they have already implemented;
- (b) their priorities for implementation in 2008/09;
- and c) to collect data needed for measuring results. Priorities may differ among companies and agencies using the work plan.

Metro will coordinate with all users of this work plan to:

1. Identify previously implemented and newly chosen opportunities;
2. collect measurement data for annual progress reports; and
3. recognize achievements.

How can I find out more?

The implementation of this work plan will be coordinated by Metro, in cooperation with the region's solid waste service providers and regulators. Implementation details and information on sustainable practices generally will be provided through a networking meeting that Metro will convene on a regular basis. Companies and public agencies can share information regarding successes, struggles, and best management practices -- potentially saving time and money by not having to reinvent the wheel!

For further information, contact:
Matt Tracy, principal planner
Metro
503.797.1673
matt.tracy@oregonmetro.gov

Implement energy reduction and efficiency programs.

Overview

Approximately 30 - 40% of all electrical energy supplied to the Metro region comes from coal-fired power plants. These coal-fired plants are a significant source of pollution and greenhouse gas emissions. By implementing a comprehensive energy reduction program for administrative and operational activities, dependence on coal, natural gas and other non-renewable energy sources can be reduced.

Implementation

Power providers such as PGE and Pacific Power work in cooperation with the Energy Trust of Oregon in providing free energy audit and reduction assessments to commercial and residential customers. After receiving an audit, the best plans for energy reduction and conservation can be determined and implemented. There are numerous program options available for accomplishing a reduction in energy use (www.energytrust.org).

Operational and maintenance energy reduction opportunities include:

- variable frequency drive on industrial motors

- energy efficient lighting
- timing systems to ensure that certain areas are not illuminated during daytime hours

Administrative services will realize energy reduction by:

- turning off lights
- not allowing computers to stay on overnight
- replacing high energy use incandescent bulbs with energy efficient compact fluorescent bulbs
- replacing aging inefficient appliances and tank water heaters with energy efficient appliances and tankless water heaters

Measurement

A history of the previous two years of energy usage will be used to determine a baseline. From the inception of the program, energy usage will be measured and comparisons made between the baseline and future energy use. (See Appendix B for energy reduction and efficiency programs.)



Install renewable onsite power generation.

Overview

Examples of onsite generation in the solid waste industry include: solar, wind, and biomass/biogas power generation. Not all sites are ideal for onsite energy generation, therefore, an evaluation should be done. An onsite audit will provide a step-by-step process to thoroughly address a site's energy generation potential.

Implementation

Onsite energy generation evaluation and assessments can be obtained by contacting the Energy Trust of Oregon. In addition to giving technical advice, the Energy Trust also has incentive programs for qualified companies. Several options may be available for significantly reducing or eliminating the first cost of installing onsite generation technologies. It is important to contact the Energy Trust during the early planning phases of a project to take full advantage of available cost saving strategies and incentives.

Measurement

A two-year historical energy usage baseline should be obtained from the local power provider. Upon installation of the onsite energy generation system, comparisons between the current power usage and the historical power usage will be established. In addition, if energy is sold back to the power provider, the amount of energy sold back will be recorded. (See Appendix B for additional onsite power generation information resources.)



Implement programs for purchasing power from renewable resources.

Overview

Non-renewable energy sources supply over 50% of the Metro region's electrical energy needs. Participating in renewable energy purchasing options will not only increase the development of renewable energy in the state, but will also reduce CO₂ equivalent emissions.

Implementation

Investigate options and purchase renewable energy options through local power provider.

Measurement

Renewable power should be recorded over quarterly periods; CO₂ offsets can be determined based on that usage. (See Appendix B for renewable power purchasing resources.)



Install diesel particulate matter filters on diesel transportation and processing vehicles where applicable.

Overview

The health and environmental effects of emissions from combustion engines (diesel emissions in particular) have been the subjects of extensive research worldwide. A growing consensus among health experts is that diesel exhaust is a likely carcinogen to humans at sufficiently high exposure levels. The pollutants of greatest concern are:

- particulate matter (PM)
- toxic compounds
- nitrogen oxides (NOx)

These experts have also concluded that older on-road diesel engines pose the greatest health risks, emitting PM and NOx levels that are up to 80% higher than emissions from diesel engines being sold today.

Implementation

Using the existing Metro diesel retrofit program database, identify all relevant vehicles. For equipment and vehicles not covered by the retrofit database, use year of manufacture and manufacturer's data to establish applicability.

- Determine best available technologies for mitigating PM and other emissions.
- Explore funding mechanisms for the retrofit.

Measurement

Diesel particulate reduction will be determined using data on particulate filter installation. (See Appendix B for diesel particulate matter filter and retrofit resources.)



Implement engine idling reduction policies.

Overview

As a rough rule of thumb, a modern diesel engine typically consumes about one gallon per hour while idling at 1,000 RPM. Reducing idling time for both diesel and gasoline engines has numerous benefits, including:

- Reduced emissions
- Reduced fuel consumption
- Extended engine life
- No vibration and less noise
- Longer oil change intervals

Implementation

Idle reduction can be accomplished by:

- Establishing an idle reduction policy to change vehicle and equipment operation behavior
- The use of idle reduction technologies

A variety of technology approaches are available to reduce idling emissions. Those with greatest potential for use in refuse/recycling truck operations include automatic engine shutdown/startup, and direct-fired heaters (for winter operation).

Measurement

The success of engine idling reduction policies will be reflected in cost savings from fuel conservation and reduced engine wear. (See Appendix B for engine idling reduction resources.)



Implement water-saving programs; install necessary equipment upgrades.

Overview

Business, industry and government (BIG) are the biggest user class of water services. In Portland, BIG customers use about 9.4 billion gallons of water per year, or about 44% of the water used by retail customers. Due to special industrial needs, these customers have the opportunity to take advantage of special conservation programs tailor-made for their water use habits.

Implementation

Schedule water audit, identify all potential conservation actions, savings and costs. Select and implement cost effective recommendations. Monitor and manage onsite water conservation programs.

Operations and Maintenance services will realize water savings by:

- capturing onsite stormwater for irrigation use
- utilize a closed-looped wash down system
- sweeping property instead of using water to wash down asphalt and concrete areas
- using Xeriscaping principles in property and landscape management

Administrative services will realize water savings by:

- installing low-flow toilets, faucet aerators and efficient showerheads
- installing water conservation signage in restrooms and kitchen areas
- installing tankless water heaters
- landscaping using Xeriscape landscape design to incorporate rain water harvesting, drought resistant species, and limited lawn areas

Measurement

Compare historical flow amounts with flow amounts after water conservation measures have been implemented. Record these and note any changes to water usage habits over periods of time.



Implement stormwater mitigation practices.

Overview

Stormwater mitigation practices support both environmental protection and water conservation efforts. Stormwater run-off from onsite structures can be diverted or harvested rather than put an unnecessary burden on municipal wastewater treatment systems. Stormwater can be diverted for natural filtration and recharge of groundwater systems. Harvesting of this stormwater can provide onsite uses that will lessen dependency of potable water for irrigation and wash down purposes.

Implementation

Design and develop stormwater mitigation systems that take full advantage of site characteristics. These could include: bioswale installation, dry wells, water harvesting systems, porous concrete and asphalt applications and closed-loop irrigation systems and eco-roofs.

Measurement

Stormwater mitigation results should be identifiable through changes in sewage discharge rates and potable water usage measurements. (See Appendix B for stormwater mitigation resources.)



Implement a phase-out program for toxic materials.

Overview

Exposure to small doses of toxic chemicals can accumulate over time and potentially affect human health. Avoiding sources of toxic substances may allow a longer, healthier life.

Unfortunately, many people live and work in unhealthy environments. It has been estimated that most Americans spend up to 90% of their time indoors, often in highly synthetic environments that may compromise their health.

Implementation

Complete an inventory of toxic materials used in operational and administrative activities. After completion of the inventory, determine potential non-toxic substitutes for your toxic materials. Develop company and agency wide policies for the phase out and reduction of toxic materials.

Measurement

Completion of the inventory, introduction of policy for the phase out of toxic materials, produce record of toxic materials eliminated and the non-toxic alternatives that have replaced them. (See Appendix B for non-toxic alternative resources.)



Develop sustainability guidelines and checklists for purchasing.

Overview

With millions of purchasing dollars expended by companies and agencies throughout the regional solid waste community, there is a great opportunity to address social and environmental concerns through procurement practices. Many local governments already have successful sustainable purchasing and procurement policies in place.

Implementation

Adopt sustainable procurement programs. The joint City of Portland/Multnomah County program is a successful comprehensive program that can be used as a model.

There are many options for sustainable procurement and contracting by the private and public sectors. Sustainable procurement strategies and plans, specialized contractor lists, and local vending companies that specialize in environmentally friendly and sustainable materials and services are available through various internet and local government resources.

Examples of sustainable products for use in operation and maintenance services include: bio-based fuels and oils, low VOC and low-toxic paints and solvents, and reusable protective wear laundered by an eco-friendly laundry company.

Examples of sustainable products for administrative use include: 100% recycled content paper, earth friendly cleaning products, earth friendly electronics and energy saving appliances.

Measurement

Use baseline data from the past two years of procurement practices, measure changes in purchasing and contracting behavior, highlighting sustainable products and services. If a procurement database is in place, use information on new sustainable purchases and new sustainable vendors to report successes. (See Appendix B for sustainable procurement resources.)



Support local vendors and contractors who employ sustainability practices.

Overview

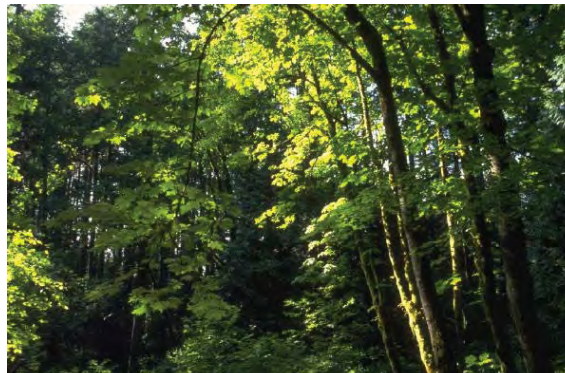
The Portland metropolitan area is rich with vendors and contractors who walk their talk in employing sustainable practices. From office supplies to sustainable construction, almost any service or product a company desires may be purchased from a local company that is engaged in sustainability efforts.

Measurement

Measurement will include dollars spent in the local sustainable business community. Upon establishing quarterly goals, review purchases at the end of the quarter to determine whether or not your organization achieved these goals. (See Appendix B for local vendor and procurement resources.)

Implementation

Implement procurement and purchasing policies to “buy local and sustainable.” Use existing networks such as the Sustainable Business Network to locate sustainable vendors and contractors in the Metro region. Set quarterly purchasing goals for businesses that engage in sustainable practices.



Build to LEED standards when constructing new facilities or conducting a major facility renovation/expansion project.

Overview

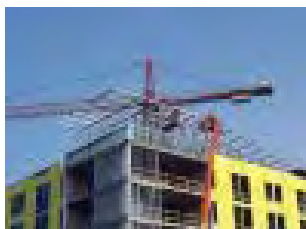
Green building is rapidly coming into greater use. There are several LEED-certified transfer stations and MRFs around the country. With so many resources and professionals providing support for green building standards, there is great opportunity to integrate green building practices in any new building or renovation project.

Implementation

Prior to any construction of new or major facility renovation/expansion projects, seek out accredited or qualified professionals to realize full potential of green building and sustainable construction standards.

Measurement

Provide results of the project's green building attributes and specific certification if applicable. (See Appendix B for LEED and greenbuilding resources.)



Promote community service.

Overview

There are many ways in which a company or agency can promote community service. Organizing a blood drive, food drive or volunteering to participate in a neighborhood cleanup program are but a few. Organized community service programs within a company or agency not only benefit others but also have the potential of raising morale among the employees in the organization.

Implementation

Set community service goals for the organization. Sponsor a blood drive or charitable giving campaign. Coordinate a food donation drive during seasons when food bank supplies are at the lowest.

Measurement

Though one may not be able to measure all aspects of community service, measurements including dollars donated to charity, employee hours contributed, pints of blood and pounds of food donated are easily obtained. (See Appendix B for community service resources.)



Implement zero tolerance policies for unsafe actions and behaviors.

Overview

As with many industries, accidents occur in the solid waste industry. According to the National Solid Waste Management Association, both injury and fatality accident rates among solid waste industry workers have decreased over the past two years. These decreases may be attributed to more comprehensive safety programs.

Measurement

Compare historical accident statistics with statistics compiled after changes made in safety education and/or implementation of new safety programs. (See Appendix B for safety program resources.)

Implementation

Implement a zero tolerance company policy for unsafe actions and behaviors. Maintain safety-briefing meetings focusing on zero tolerance for unsafe actions, conditions, equipment, decisions and attitudes. Develop intra-company education campaigns to promote positive attitudes toward safety among the staff and management.



Appendix A

Sustainable operations guidance in the Regional Solid Waste Management Plan

Definition

To guide a common understanding of “sustainable” and “sustainability,” the following definition, consistent with the State of Oregon, will apply:

“Sustainability” means using, developing and protecting resources in a manner that enables people to meet current needs and provides that future generations can also meet future needs, from the joint perspective of environmental, economic and community objectives [ORS 184.421 (4)].”

Framework

The Natural Step’s four system conditions are the framework for examining and developing opportunities to increase sustainability in the solid waste system.

“The sustainable operation of the solid waste system considers economic, environmental and societal resources and is consistent with the Natural Step system conditions so that nature is not subject to systematically increasing:

1. Concentrations of substances from the Earth’s crust;
2. Concentrations of substances produced by society, or
3. Degradation by physical means; and in that system
4. Human needs are met worldwide.”

Priorities

The following goals and objectives are intended to guide the implementation of sustainable practices at public and private solid waste facilities and services over the next ten years. This first sustainable operations workplan addresses seven of nine goal areas.

Goal 1.0 Reduce greenhouse gas and diesel particulate air emissions

- Objective 1.1: Implement plans for greater energy efficiency.
- Objective 1.2: Utilize renewable energy sources.
- Objective 1.3: Reduce direct emissions of greenhouse gases from landfills and other facilities.
- Objective 1.4: Reduce diesel particulate emissions in existing trucks, barges and rolling stock through best available control technology.
- Objective 1.5: Implement long-haul transportation and collection alternatives where feasible.

Goal 2.0 Reduce stormwater run-off

- Objective 2.1: Implement stormwater run-off mitigation plans.

Goal 3.0 Reduce natural resource use

- Objective 3.1: Implement resource efficiency audit recommendations.
- Objective 3.2: Implement sustainable purchasing policies.
- Objective 3.3: Reduce disposed waste.

Goal 4.0 Reduce use and discharge of toxic materials

- Objective 4.1: Implement toxics reduction and management plans.

Goal 5.0 Implement sustainability standards for facility construction and operation

- Objective 5.1: Implement sustainability standards for site selection.
- Objective 5.2: Require new construction to meet the Leadership in Energy and Environmental Design (LEED) or equivalent program standards.
- Objective 5.3: Provide incentives for existing facilities to meet LEED or equivalent program standards.

Appendix A (cont.)

Goal 6.0 Adopt best practices for customer and employee health and safety

Objective 6.1: Reduce injuries by automating operations where effective.

Objective 6.2: Implement health and safety plans that meet or exceed current minimum legal standards.

Goal 7.0 Provide training and education on implementing sustainability practices

Objective 7.1: Train key regional waste industry employees, government waste reduction staff and political officials in adopted sustainability practices.

Objective 7.2: Inform suppliers, contractors and customers of the adoption of sustainability goals and practices.

Goal 8.0 Support a quality work life

Objective 8.1: Pay a living wage and benefits to all workers.

Objective 8.2: Promote community service.

Objective 8.3: Strive to employ a diverse work force.

Goal 9.0 Employ sustainability values in seeking vendors and contractors

Objective 9.1: Request sustainability plans from potential vendors and contractors.

Objective 9.2: Assist vendors and contractors in achieving sustainable practices.

Objective 9.3: Support local vendors when feasible.

Appendix B

Resources

Implement energy reduction and efficiency programs

www.energytrust.org
<http://www.eere.energy.gov/>
www.energystar.gov/
www.bpa.gov/Energy
<http://www.aceee.org/industry/index.htm>

Install renewable onsite power generation

www.energytrust.org
www.oregon.gov/ENERGY/index.shtml
www.oregonseia.org/
<http://www.dsireusa.org/library/includes/map2.cfm?CurrentPageID=1&State=OR>
<http://www.greenpoweroregon.com/>

Implement programs for purchasing power from renewable resources

www.energytrust.org
www.rnp.org/greenpower/ORutilities.html
http://www.rnp.org/greenpower/cec_info.html
<http://www.pacificpower.net/Homepage/Homepage35816.html>
<http://www.portlandgeneral.biz/RenewablePower/>

Install diesel particulate matter filters on diesel transportation and processing vehicles where applicable

<http://www.westcoastdiesel.org/>
<http://www.epa.gov/otaq/retrofit/index.htm>
<http://epa.gov/oms/retrofit/contacts.htm>
<http://www.deq.state.or.us/aq/diesel/>
http://www.ecy.wa.gov/programs/air/cars/diesel_exhaust_information.htm
<http://www.deq.state.or.us/aq/factsheets/03-AQ-007CleanDiesel.pdf>

Implement engine idling reduction policies

<http://www.westcoastdiesel.org/programs.htm>
<http://www.epa.gov/diesel/idle-ncdc.htm>
http://www1.eere.energy.gov/vehiclesandfuels/pdfs/idling_news/oct05_network_news.pdf

Implement water-saving programs; install necessary equipment upgrades

<http://www.portlandonline.com/WATER/index.cfm?c=29334>
<http://www.pprc.org/pubs/greencon/h2oener.cfm>
http://www1.eere.energy.gov/femp/water/water_va_portland.html
http://www.portlandgeneral.com/business/save_energy/technologies/water_efficiency.asp?bhcp=1
<http://www.allianceforwaterefficiency.org/default.aspx>

Implement stormwater mitigation practices

http://www.stormwaterauthority.org/regulatory_data/state.aspx?id=158
http://findarticles.com/p/articles/mi_qn4184/is_20040430/ai_n10046661
<http://www.oconline.org/rivers/stormwater/>
<http://www.fhwa.dot.gov/environment/workshop/fhwa.htm>
<http://www.epa.gov/ebtpages/watstormwater.html>
<http://www.deq.state.or.us/wq/stormwater/stormwater.htm>

Implement a phase-out program for toxic materials

<http://www.oregontoxics.org/>
<http://www.zerowaste.org/>
<http://www.deq.state.or.us/pubs/general/AlternativeCleaning.pdf>
<http://www.ecocycle.org/hazwaste/recipes.cfm>
<http://www.turi.org/>

Appendix B (cont.)

Develop sustainability guidelines and checklists for purchasing

<http://www.newdream.org/procure/activities.php>
http://www.sustainableoregon.net/toolkit/green_purchasing.cfm
<http://www2.co.multnomah.or.us/Public/EntryPoint?ch=93471c5808c57010VgnVCM1000003bc614acRCRD/>
<http://sustainprocure.com/category/about/>

Support local vendors and contractors who employ sustainability practices

<http://www.sbnportland.org/marketplace>
http://thinklocalportland.org/index.php?option=com_frontpage&Itemid=1
<http://www.oeconline.org/livinggreen/shopping/buylocal>

Build to LEED or equivalent standards when constructing new facilities or conducting a major renovation/expansion project

<http://www.portlandonline.com/osd/index.cfm?c=41481>
<http://www.usgbc.org/>
<http://www.nrdc.org/buildinggreen/leed.asp>
<http://www.gbci.org/>
<http://www.gvrd.bc.ca/sustainability/casestudies/surreytransferstn.htm>
<http://www.metrokc.gov/exec/news/2008/0213Transfer.aspx>

Promote community service

<http://www.handsonportland.org/>
<http://www.earthshare-oregon.org/partners>
<http://www.solv.org/>
<http://www.portlandimpact.org/volunteer.htm>
<http://www.redcross-pdx.org/>

Implement zero tolerance policies for unsafe actions and behaviors

<http://www.orosha.org/>
<http://www.lni.wa.gov/>
<http://www.oregon.gov/BOLI/>
<http://www.nswma.org/>
<http://www.croetweb.com>
http://wasteage.com/Waste_Safety/
<http://www.swana.org/www/default.aspx>
<http://www.safetyonline.com/?VNETCOOKIE=NO>

Glossary

Baseline data - Baseline data is basic information gathered before a program begins. It is used later to provide a comparison for assessing program impact.

CO2 equivalent or carbon dioxide equivalent - Carbon dioxide equivalent is a measure used to compare the emissions from various greenhouse gases based upon their global warming potential. For example, the global warming potential for methane over 100 years is 21 to 1. This means that an emission of one million metric tons of methane is equivalent to an emission of 21 million metric tons of carbon dioxide.

Energy audit - An inspection, survey and analysis of energy flows in a building, process or system with the objective of understanding the energy dynamics of the system under study.

Greenhouse gases (GHG) - Greenhouse gases refer to carbon dioxide, nitrous oxide, methane, ozone and chlorofluorocarbons occurring naturally and resulting from human (production and consumption) activities, and contributing to the greenhouse effect (global warming).

LEED - (Leadership in Energy and Environmental Design) is an ecology-oriented building certification program run under the auspices of the U.S. Green Building Council (USGBC). LEED concentrates its efforts on improving performance across five key areas of environmental and human health: energy efficiency, indoor environmental quality, materials selection, sustainable site development, and water savings.

Porous concrete - A concrete pavement that by unique qualities, is porous in nature allowing water to percolate through to the ground beneath the surface. By capturing stormwater and allowing it to seep into the ground, porous concrete is instrumental in recharging groundwater,

reducing stormwater runoff, and meeting U.S. Environmental Protection Agency (EPA) stormwater regulations

Renewable resources - Energy and materials that are either totally replaced through natural processes or are practically inexhaustible.

Renewable energy - Renewable energy effectively uses natural resources such as sunlight, wind, water, tides and geothermal heat, which may be naturally replenished. Renewable energy technologies range from solar power, wind power, and hydroelectricity/micro hydro, to biomass and biofuels for transportation.

VOC (Volatile Organic Compounds) - Volatile organic compounds are compounds that have a high vapor pressure and low water solubility. Many VOCs are human-made chemicals that are used and produced in the manufacture of paints, pharmaceuticals, and refrigerants. VOCs typically are industrial solvents, such as trichloroethylene; fuel oxygenates, such as Methyl Tertiary Butyl Ether (MTBE), or by-products produced by chlorination in water treatment, such as chloroform. VOCs are often components of petroleum fuels, hydraulic fluids, paint thinners, and dry cleaning agents. VOCs are common groundwater contaminants.

Xeriscape - landscaping designed specifically for areas that are susceptible to drought, or for properties where water conservation is practiced. Derived from the Greek xeros meaning "dry," the term, xeriscape means literally "dry landscape."