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, July 26, 2007

Members / Alternates Present:

Councilor Kathryn Harrington	Audrey O'Brien	Dave Garten
Mike Hoglund	Anita Largent	JoAnn Herrigel
Glenn Zimmerman	Bruce Walker	Mike Miller
Paul Edwards	Susan Ziolko	Adam Winston
Janet Malloch	Ray Phelps	Theresa Koppang
Mike Leichner	Lori Stole	

Guests and Metro staff:

Courtney Dale	Wendy Fisher	Easton Cross
Segeni Mungai	Larry Harvey	Karen Feher
Steve Kraten	Jim Watkins	Mike Dewey
Roy Brower	Chuck Geyer	Lee Barrett
Matt Tracy	Michelle Bellia	Gina Cubbon

I. Call to Order and Announcements.....Councilor Kathryn Harrington

- Councilor Harrington opened the meeting at 10:03 a.m.
- Multnomah County citizen representative Dave Garten announced that he's putting together a tour of Oregon's only bio-diesel plant, SeQuential Pacific Biofuels (Mr. Garten is CEO of SeQuential). He'll get more information to the group as the plans develop.
- Approval of minutes: Bruce Walker moved to accept the minutes as written; Mr. Garten seconded the motion. With one abstention and no nays, the motion passed.

II. Council Update.....Councilor Kathryn Harrington

- Councilor Harrington reported that the July 12 Council meeting included a public hearing of the Enhanced Dry Waste Recovery Program (EDWRP). The project spurred "extensive testimony," she said. A set of amendments was introduced at the meeting, including removal of a surcharge contained in the original version. Council voted to postpone action on the amendment package until August 2. Final vote will likely be August 16.
- Options for the Business Recycling Program were reviewed by Council and at a recent MPAC meeting. At MPAC, the presentation suffered by being late in the agenda; those members who stayed took a straw poll. Results favored a business standards approach over mandates.
- Council is exploring financial measures to support conservation education and regional parks maintenance. There is no actual project proposal yet, but if one is drawn up, it may result in a ballot measure.

III. Citizen Communications for Non-agenda Items .....Councilor Kathryn Harrington

The Councilor introduced this new agenda item, which has been very helpful on other committees. No items were raised.

IV. Solid Waste & Recycling Director's Update.....Mike Hoglund

- Mike Hoglund handed out a sheet illustrating the FY 2007-2008 rates (attached). The new rates become effective September 1. A letter will be going out to haulers.
- An informational bulletin was developed for haulers with the help of Oregon Refuse & Recycling's Dave White. The piece (attached) outlines material recovery facility (MRF) rules and standards for those interested in running such an operation. The sheet will also be sent to local government solid waste authorities, Mr. Hoglund said.
- There will be no SWAC meeting in August; November and December's meetings will be on a different Thursday because of the Christmas holiday and room availability problems. November 29, December 6 and December 13 are under consideration.
- The public comment period for the Regional Solid Waste Management Plan (RSWMP) closes on August 3. Responses will be published sometime in the Fall.
- Member Wade Lange has resigned from the Committee because of work / time constraints. Mr. Hoglund asked that the record show Mr. Lange's ideas and perspective have always been very appreciated by staff. Mr. Lange has suggested a replacement, who will be contacted and considered.

V. Metro's Illegal Dumping and Enforcement Program.....Roy Brower

Regulatory Affairs Division Manager Roy Brower gave a PowerPoint overview, including several of what he referred to as "dirty pictures" – photos of illegal dumpsites (presentation attached). The program, he explained, began in 1993 and the Ordinance formally adopted in 1994. The program employs both Metro and local law enforcement staff. (Two additional deputies work primarily on flow control matters.)

Nearly all dumpsite investigations and cleanup are on public property; staff won't usually become involved in private property matters, though they will occasionally help landowners find the culprit and assist in prosecution. While 1,500 tons of illegally-disposed trash has been recovered since the program's inception (an average of eight incidents a day last year), and $369,000 in fines levied, Mr. Brower reported that less than 20% of those fines have been collected. People who dump illegally, he noted, "tend to not pay their fines." While such dumpsites (and people) will always exist, the program has helped keep large and chronic dumping in check. Unfortunately, dumping on farm and forest land increases as the region becomes more densely populated.

Each dumpsite is photographed, scanned for evidence, and then low-risk inmates are used to clear the area (through an intergovernmental agreement). Surveillance equipment has had mixed success because of technical problems (failed batteries, and interference from wildlife, for example). Citizens can report illegal dumping issues through Metro Recycling Information, the Metro website, or by contacting Regulatory Affairs staff. Crews also re-check areas that have chronic incidents.

The program is not equipped to handle hazardous waste, but will work on such sites enough to be able to turn them over to the EPA and DEQ. The program also helps clean up transient camps if requested. Plans are underway for a clear branding for the program and expansion of education and outreach (particularly to neighborhood groups).

The City of Milwaukie's JoAnn Herrigel commented that it would be very helpful if Metro could help inform neighborhood groups about what is under whose jurisdiction.

VI. Reducing Emissions Impacts from Collection Vehicles: A Regional Approach..... Jim Watkins

Jim Watkins, Manager of the Engineering & Environmental Services Division, was up next with a PowerPoint presentation (attached) describing Metro's involvement with a workgroup of local government and solid waste industry representatives who looked at the issue of retrofitting garbage and recycling collection vehicles with diesel particulate filters. The group met three times and developed a draft program.

The issue of health impacts from commercial vehicle emissions is important. While the risk of cancer from emissions is expected to decrease with new, improved vehicles, fitting existing rolling stock with particulate filters can make a significant difference now. Mr. Watkins showed estimates for emission reduction over a five-year period for various retrofit options. The overall fleet is old and many trucks may not be suitable for retrofitting, in which case a replacement program may be necessary.

The workgroup recommended that Metro be responsible for implementation of a retrofitting program, and that local governments require participation. The total program is estimated at just under $7 million; first year maintenance is included in that estimate. Financing options suggested by the workgroup included increasing the Regional System Fee for a period of three years (since the program would benefit all residents), and/or local governments adjusting their rates to help with retrofitting and replacement of those vehicles unsuitable for retrofitting. Funding the program through the RSF would be the most equitable way because lowering vehicle emissions benefits the entire region, and because the fleets vary widely. If the RSF was used, Metro could contract with a provider who would then bill Metro directly.

Next step: Briefing Metro Council. Both SWAC and the Council will review the issue in the Fall.

Questions / comments:

- Have alternative fuels been looked into? Yes, Mr. Watkins said, and the group made sure that any retrofits implemented would work with biodiesel. Audrey O'Brien of DEQ added that alternative fuels are being looked at nationally, so retrofitting is simply a way to further reduce emissions from the technological side. The highest priority reductions are being looked at first.
- What percentage of the region's air pollution would be reduced? Ms. O'Brien offered to look for those figures.
- Why retrofit at all, when replacement would reduce emissions more, Allied Waste's Ray Phelps queried. He suggested not raising the Regional System Fee (RSF), but letting local governments work with the rates to pay for new vehicles. Mike Leichner agreed that new vehicles would make sense and reduce emissions twice as much as retrofits.
- Vehicle replacement would be tricky and expensive, Waste Management's Adam Winston cautioned. It's unrealistic to think all haulers can replace all their older vehicles. A broader discussion is needed; garbage trucks aren't a primary cause of emissions.
- The City of Portland is actively looking at cost versus results. No matter that garbage trucks are a small percentage of the problem; there are significant benefits to the region, Bruce Walker stressed. He would like to see Metro move ahead with retrofitting while the issue of new vehicles is considered.
- Ms. Herrigel asked that options be presented for several scenarios, such as small haulers who can't afford to replace their vehicles.

More next steps: Staff will present expanded funding information at a future SWAC meeting, and will work with local governments about replacement possibilities.

VII. Other Business and Adjourn..... Councilor Harrington

Councilor Harrington reminded the group that there would be no meeting in August. September agenda items are listed on the back of this meeting's agenda.

The Councilor adjourned the meeting at 11:34 a.m..

Prepared by:

Gina Cubbon
Administrative Secretary
Metro Solid Waste & Recycling Department

gbc
Attachments: Disposal Charges as of September 1, 2007
MRF Informational Bulletin
Illegal Dumping Program
Diesel Retrofit Workgroup Results
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Disposal Charges at Metro Transfer Stations

FY 07-08 Rates Effective September 1, 2007 - August 31, 2008

The disposal charge for mixed solid waste at Metro transfer stations is comprised of two parts: a fixed charge ("transaction fee") for each use of the transfer station, and a variable charge ("tip fee") based on the amount of solid waste delivered for disposal in each transaction. The components of these fees recover costs of the various programs and services described below.

	Through August 2007	**FY 07-08**	Change
Transaction Fee *Recovers the cost of scalehouse operations, billing, finance changes, and related fixed costs of the transfer stations. Users of the automated scales pay a reduced amount of scalehouse costs.*	$8.50/$3.00	**$8.50/$3.00**	- 0 -
Metro Tip Fee (by component)			
Tonnage Charge *Recovers the cost of transfer, transport & disposal (primarily, the BFI/Allied, CSU, fuel and OWS contracts); a portion of Metro station management costs, depreciation, and the other costs of transfer station disposal services.*	$46.20	**$47.09**	$0.89
Fees & Taxes			
Regional System Fee *Recovers the costs of Metro's regional services and programs, excluding the costs of disposal services. See NOTES on back.*	13.57	14.08	0.51
Metro Excise Tax *Contributes toward Metro general government costs, regional parks, tourism development.*	8.35	8.23	(0.12)
DEQ Fees *Promotion fee, orphan site fund, etc. collected on behalf of Oregon State Department of Environmental Quality.*	1.24	1.24	- 0 -
Community Enhancement Fee *Collected on behalf of communities in which the transfer stations are located.*	0.50	0.50	- 0 -
Subtotal, Fees & Taxes	$23.66	**$24.05**	$0.39
Total, Metro Tip Fee	$69.86	**$71.14**	$1.28
Minimum Load Charge	*$17 (up to 240#)*	*$17 (up to 240#)*	*- 0 -*

——— See also NOTES on reverse ———

Notes:

Metro's transaction fee and tip fee are charged to Metro transfer station users only. Other facilities may charge different rates.

The Regional System Fee and Metro Excise Tax are charged on all solid waste that is generated in the region, regardless of the disposal site.

DEQ imposes its fees (totaling $1.24) on waste delivered to all DEQ-permitted disposal sites. The host fee (community enhancement), currently 50¢ per ton at Metro's transfer stations, is a local option.

Loads that weigh 240 pounds (0.12 tons) or less are charged a flat rate of $17 ($8.50 tonnage charge + $8.50 transaction fee.)

The Regional System Fee recovers the cost of waste reduction, hazardous waste, illegal dumpsite monitoring & cleanup, enforcement, latex paint recycling, Recycling Information Center call center, etc. It excludes costs of solid waste disposal operations.

Different rates are available on other wastes, including yard debris, wood waste, tires (on and off rim), and appliances. Source-separated recyclable material (such as cardboard, newsprint, scrap paper, metals, and other materials) and hazardous wastes are generally accepted at no charge. Call Metro's Recycling Information Center at 503-234-3000 for current information.

METRO

Metro Regulated Material Recovery & Reloading Activities
A Solid Waste Hauler Informational Bulletin

July 2007

Recently, a number of solid waste haulers have contacted Metro's Solid Waste & Recycling Department with an interest in conducting other regulated solid waste activities – such as operating a Material Recovery Facility ("MRF") or a reload facility. Some haulers that collect mixed dry waste, like construction and demolition debris, or provide drop-box services have indicated such an interest. The purpose of this informational bulletin is to help answer some questions that have arisen.

MATERIAL RECOVERY FACILITIES

What kind of MRFs are licensed by Metro?

Metro recognizes two types of MRFs. One type is currently exempt from having to obtain a Metro license, while the other type requires a Metro license to operate. Both types of MRFs are subject to Metro inspections to verify their regulatory status.

- "Clean" MRF – This type of facility exclusively receives source-separated recyclable material (e.g. residential curbside and source-separated commingled recyclables). A clean MRF is not required to obtain a Metro license. (Refer to Metro Code Section 5.01.040(a)(3))

- "Dirty" MRF – This type of facility receives mixed dry waste and recovers recyclable material from the mixed waste through processing, picking and sorting out recyclables. A dirty MRF must have a Metro license to operate. (Refer to Metro Code Section 5.01.045(a)(1))

Can I pick through my drop boxes and salvage recyclable materials like metal and wood without a Metro MRF license?

No. This type of activity is only allowed if you have applied for and received a Metro license to operate a MRF. If you collect construction debris, demolition debris or other "dry waste" in drop boxes, and pick through it to salvage recyclable materials like metal and wood, you are conducting material recovery activities and must obtain a Metro license. Otherwise, the collected materials should be delivered to a Metro-authorized facility that recovers materials from mixed dry waste. There are several such facilities in the Metro region that are authorized to accept mixed dry waste. For the nearest facility and directions, contact the Metro Recycling Information Center at (503) 234-3000.

RELOADING

Reloading is the activity of consolidating loads of solid waste into larger containers or vehicles for more efficient transportation to a recovery facility or a transfer station but not directly to a landfill or disposal site. Some types of reload activities are required to have a Metro license to operate.

What kind of reloading is licensed by Metro?

Metro recognizes two types of waste reloading operations that may be conducted by a hauler. One type is currently exempt from having to obtain a Metro license, while the other type is required to obtain a Metro license. All reloads are subject to Metro inspections to verify their regulatory status.

- "Exempt" reload – This type of operation does not need a Metro license if the hauler holds a city or county franchise and reloads only solid waste loads collected from its franchised collection area (if collecting from more than one franchise area, then the areas must be contiguous). In addition, all reloaded waste must be delivered to a Metro-authorized MRF or transfer station. (Refer to Metro Code Section 5.01.040(a)(7))

- Regulated reload – All other reloading activities that do not meet the conditions of an exempt reload, including yard debris reloading and mixed dry waste reloading, require a Metro license to operate. (Refer to Metro Code Section 5.01.045(a)(3) and (4))

Are certain hauling activities regulated by Metro?

Metro does not regulate the collection of solid waste and source-separated recyclable materials, or become involved in franchising haulers or setting rates. Cities and counties regulate the collection of solid waste and source-separated recyclable material.

Metro does, however, regulate certain solid waste activities conducted inside the Metro region including waste reloading, transfer stations, and MRFs that recover recyclables from mixed loads of dry waste. Metro attempts to draw a regulatory line between collection activities that do not require a license and solid waste processing activities that do require a license. Haulers should also be aware that certain activities may also require city or county land use approval, and may require a solid waste permit from the Oregon Department of Environmental Quality (DEQ).

How can I get more information?

Be aware that Metro has adopted new facility operating standards for a dirty MRF and dry waste reloads. These standards require such a facility to meet a number of operating requirements that include locating inside an enclosed building and on an impervious surface, such as asphalt or concrete.

For more Metro information on reloading, material recovery and Metro solid waste facility regulations, please contact Bill Metzler, Senior Solid Waste Planner at (503) 797-1666. You may also visit the Metro web site at www.metro-region.org. Note that the DEQ may also require permits for certain activities regardless of Metro's requirements. At the DEQ, please contact Amanda Romero for more information at (503) 229-5353.

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Metro's Illegal Disposal & Enforcement Program

Program Goals

- Quick & efficient cleanup
- Prevent chronic dumping
- Investigate & prosecute
- Coordinate

Program Background

- Started in 1993
- Illegal dumping ordinance in 1994 (Chapter 5.09)
- $500,000/year program
- Current staff = 4.00 FTE

Program Background

- Public property cleanups.
- Investigation of dumping.
- Assist local jurisdictions.
- Focus in Multnomah & Clackamas Counties, Portland & Beaverton.

NE 185th & Marine Drive, Portland (Multnomah County)

Program Milestones

- 12,000 dumps cleaned since 1993 (~1,000/year)
- 1,548 tons of waste removed since 1993
- $369,000 in fines since 1994

5916 SE 85th, Portland, (Multnomah County)

Work Crew Rig

Dumps Cleaned Up In 2007

NE Cully & Columbia Blvd. , Portland
(Multnomah County)

SE Palmquist – between Fleming & Hogan, Portland
(Multnomah County)

N. Portland Road & Old Marine Drive, Portland
(Multnomah County)

6640 NE Portland Blvd., Portland
(Multnomah County)

11620 SE Capps Road, Clackamas
(Clackamas County)

SE Mather Road by Railroad Tracks
(Clackamas County)

SW Grabhorn & Farmington Road, Aloha
(Washington County)

Dumps Cleaned Up In July 2007

N. Swift and Columbia Boulevard, Portland
(Multnomah County)

NE 203rd and Sandy, Portland
(Multnomah County)

N. Swift Court, Portland
(Multnomah County)

SE 72nd and Duke, Portland
(Multnomah County)

6956 N. Montana, Portland
(Multnomah County)

9501 N. Swift, Portland
(Multnomah County)

Public/Private Property Investigations

Sunrise Water Authority, Clackamas
(Clackamas County)

Public/Private Property Investigations

11601 SW Teal, Beaverton
(Washington County)

Public/Private Property Investigations

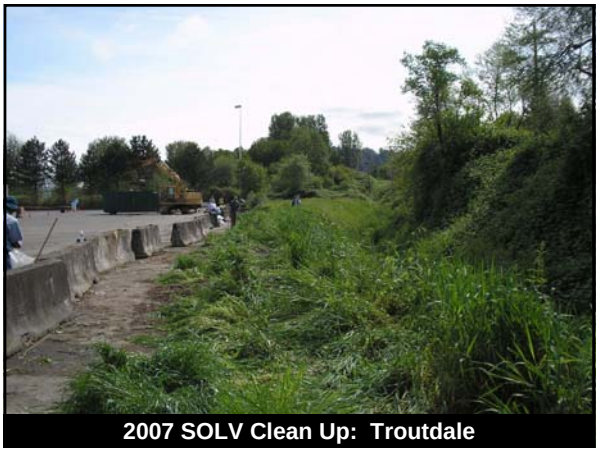
1300 NE 68th, Portland
(Multnomah County)

Transient Camp Grand Avenue Bridge Portland,
(near Metro)

Transient Camp

N. Albina &
N. Interstate, Portland,
(Multnomah County)

2007 SOLV Clean Up: Troutdale



2007 SOLV Clean Up: Troutdale

Program Trends

- Dumping is persistent
- Size of dumps are smaller
- Large dumps eliminated
- Quick response keeps large and chronic dumping under control
- Dumping on farm & forest land is increasing
- Dumping done by criminal/socially irresponsible or non-English speaking population unaware of disposal options

Program Direction

- Establish clear identity/brand for program
- Expand education/outreach to local code/law enforcement and neighborhood groups
- Add new dumping investigator (Tigard PD)
- Surveillance video equipment has had mixed success – future use under evaluation

Program Direction (cont.)

- Evaluate use of “real-time” geographic information to better pinpoint and identify dumping trends
- MCSO internal issues could disrupt personnel
- Metro will encourage Washington County to participate in regional program

Program Contact Information

Recycling Information Center:

(503) 234-3000

Barb Leslie:

(503) 797-1835

Web Address:

www.metro-region.org

(click on "*report illegal dumping*" under the Garbage, recycling and waste prevention section and follow instructions.)

Regional Diesel Retrofit Program

Regional Solid Waste Advisory Committee

July 26, 2007

Presenter: Jim Watkins

Desired Outcome

SWAC understanding of:

- Emissions related health issues
- Emission reduction technologies
- Strategy for emission reduction in Metro region
- Finance options
- Next steps

Agenda

Regional Diesel Retrofit Program

Item 1: Background

Item 2: Current Emission Inventory

Item 3: Program Overview and Goals

Item 4: Discussion

Why is Metro Involved?

Regional Diesel Retrofit Program

- Local governments and DEQ requested Metro assistance
- Haulers cross local governmental boundaries
- Metro has technical expertise
- Meets Council goals for environmental health and smart government
- Supports RSWMP sustainability goal of reducing greenhouse gases/ diesel emissions
- State's Toxics Reduction Program has targeted diesel PM reductions in the region

Regional approach needed to maximize diesel reductions.

Project Summary

Regional Diesel Retrofit Program

- Metro Hired Consulting firm Emissions Advantage to formulate reduction plan
- Major steps in plan development
  - Inventory collection vehicles (~1000)
  - Estimate pollutant volumes/types
  - Convene workgroup
  - Develop retrofit options and rank effectiveness
  - Develop goals
  - Draft program plan

Estimate pollutant volumes/types and inventory collection vehicles (± 1,000).

Air Quality Challenges – Health Impacts

Regional Diesel Retrofit Program

- Diesel pollutants of greatest concern are Particulate matter (PM), including fine particles, toxic pollutants, and oxides of nitrogen (NOx)
  - PM – linked to asthma and respiratory problems
  - NOx – linked to respiratory infection, decreased pulmonary function.
    - NOx combined with volatile organic compounds (VOCs) form ground-level ozone (smog)

Air Quality Challenges – Health Impacts (cont.)

Regional Diesel Retrofit Program

Oregon DEQ

- Has estimated the cancer risk posed by diesel PM in Oregon at 17 in one million in 2002, decreasing to 8 in one million by 2017
- Has established a goal to reduce the cancer risk to 1 in one million by 2017; diesel emissions reductions will help to meet that goal
- Estimates the health costs at $109,000 per ton of PM, and $11,000 per ton of NOx

Vehicle Inventory Summary Statistics

Regional Diesel Retrofit Program

- Estimated ±1,000 vehicles
- Estimated total annual 15.4 million vmt
- Range of annual vmt 3,000 to over 20,000/vehicle
- Estimated 260 vehicles - 15 years old or more (26% of combined fleet)
- Reported fuel economy range 2.2 to 5 mpg/vehicle
- Average vehicle speed 1.4 to 30 mph

Estimated Emission Inventory Distribution

Regional Diesel Retrofit Program

FLEET TOTALS
Est. Emission Inventory - T/Year

VOC	CO	NOx	PM
23.6	113.8	329.5	34.9

CONTRIBUTION TO CITY OF PORTLAND
Est. Emission Inventory - T/Year

VOC	CO	NOx	PM
12.0	58.1	163.0	17.6
50.6%	51.0%	49.5%	50.3%

CONTRIBUTION TO CLACKAMAS COUNTY
Est. Emission Inventory - T/Year

VOC	CO	NOx	PM
3.9	18.5	56.1	5.9
16.5%	16.2%	17.0%	16.9%

CONTRIBUTION TO MULTNOMAH COUNTY
Est. Emission Inventory - T/Year

VOC	CO	NOx	PM
1.7	8.1	21.8	2.4
7.2%	7.1%	6.6%	6.8%

CONTRIBUTION TO WASHINGTON COUNTY
Est. Emission Inventory - T/Year

VOC	CO	NOx	PM
6.0	28.8	87.1	8.9
25.3%	25.3%	26.4%	25.5%

City of Portland comprises ½ of emission inventory.

BASELINE 5 YEAR INVENTORY

	VOC	CO	NOx	PM
Baseline - 1,000 vehicles (tons)	113.30	542.60	1586.30	162.80

TOTAL PROGRAM 5 YEAR EMISSIONS REDUCTIONS

PERCENT REDUCTIONS FROM BASELINE

RETROFIT OPTION	ESTIMATED NO. OF AFFECTED VEHICLES	VOC REDUCTIONS	CO REDUCTIONS	NOx REDUCTIONS	PM REDUCTIONS
REPLACE VEHICLES OLDER THAN 15 Yrs	470	31.9%	25.8%	**35.4%**	**41.2%**
DPF	322	25.2%	24.2%	**0.0%**	**24.9%**
DOC+CCV	129	6.7%	4.3%	**0.0%**	**4.1%**
DOC	86	3.5%	2.9%	**0.0%**	**1.9%**
ECM REPROGRAM	157	0.0%	0.0%	**3.4%**	**0.0%**
TOTAL MAXIMUM REDUCTIONS		67.3%	57.2%	**38.8%**	**72.1%**

Program will utilize most effective emission reduction strategy feasible for each vehicle.

Program Goals

Regional Diesel Retrofit Program

1. Maximum feasible reductions of PM, including ultra-fine particles (with reductions in NOx emissions also being important and highly desirable)
2. Maximum certainty of continued use of EPA- or CARB-verified product implementation to achieve air quality objectives
3. Program that can be funded through existing funding/financing mechanisms
4. Maximum participation from all fleets

Program strives to reduce maximum volume of priority pollutants using certified technologies.

Emission Reduction Strategy

Regional Diesel Retrofit Program

- Encourage accelerated vehicle retirement for vehicles over 15 years old
- Installation of retrofit technologies
  - Diesel Particulate Filters
  - Diesel Oxidation Catalyst (with crankcase recirculation where possible)
- Engine reprogramming where possible

Program uses most effective emission reduction strategy or technology feasible for each vehicle.

Recommended Responsibilities

Regional Diesel Retrofit Program

- Metro: Implementation of Retrofit Program
  - Through a third party: arranges product vendors, product installation, and testing
- Local Governments will require participation
  - Encourage vehicle replacement through rates

Metro would be responsible for the retrofit portion of the emission reduction program, including funding, while local governments encourage participation of fleets.

Cost Estimate for Mix of Retrofit Products

Regional Diesel Retrofit Program

Retrofit Option		Unit Cost	Total
Replace vehicles older than 15 years	470	N/A	N/A
DPF	413	$13,000	$5,374,200
DOC+CCV	166	$3,000	$498,000
DOC	110	$1,500	$165,000
ECM Reprogram	157	$250	$39,250
Total Est. Product, Installation and 1st Yr Maint Cost			$6,076,450
Estimated admin and Project Mgmt Costs (over 3 year			$900,000
Total Est Program Cost			$6,976,450

Financing Options

Regional Diesel Retrofit Program

1. Increase regional system fee (approximately $1.65/ton for 3 years)
2. Vehicle replacement: Local Governments adjust through rate-setting process
3. Grants (e.g., congestion mitigation/air quality)

Question: Which funding mechanism seems most appropriate?

Next Steps

Regional Diesel Retrofit Program

- Metro staff briefs Metro Council
- Update funding options
- Council/SWAC review and presentation (fall)

Desired Outcome

Regional Diesel Retrofit Program

SWAC understanding of:

- Emissions related health issues
- Emission reduction technologies
- Strategy for emission reduction in Metro region
- Finance options
- Next steps

CITY OF PORTLAND
OFFICE OF SUSTAINABLE DEVELOPMENT
A BETTER FUTURE. A BETTER WAY.

Mission

The mission of the City of Portland Office of Sustainable Development is to provide leadership and contribute practical solutions to ensure a prosperous community where people and nature thrive, now and in the future.

Through outreach, technical assistance, policy and research, OSD promotes informed choices to:

- Increase the use of renewable energy and resources
- Reduce solid waste and conserve energy and natural resources
- Prevent pollution and improve personal and community health

OSD's work supports Portland City Council's goal of protecting and enhancing the natural and built environment. OSD brings together community partners to advance improvements and innovation in energy use and technologies, waste disposal, recycling, sustainable purchasing, environmental education and high-performance, green building practices. OSD programs, policies and partnerships are key to community health, economic and environmental opportunities for Portland, its businesses and residents.

FOR MORE INFORMATION ON ABOUT **OSD**, PLEASE CALL: **(503-823-7222)** OR VISIT US ONLINE AT **WWW.SUSTAINABLEPORTLAND.** ORG

History

OSD was created in September 2000 by merging the Solid Waste & Recycling Division, previously part of the Bureau of Environmental Services, with the Energy Office, which housed the City's energy and green building programs and staffed the Sustainable Development Commission. OSD currently has a staff of about 30.

In 2004 OSD completed a strategic planning process that revised its mission and identified high-level goals, core service areas, a unifying vision and set of values. The effort sought to address both OSD's external role in the community and its internal organizational culture. The process included a series of interviews and focus groups with OSD staff, key stakeholders, clients and partners.

Core Areas

OSD's programs and policy efforts focus on four areas:

- Solid waste
- Energy
- Greenhouse gases
- Food systems

We envision a Portland in which our choices and actions create a healthy and prosperous community where:

- **Water and air are pure and clean**
- **Land is productive and used in ecologically sound ways**
- **Natural resources are used wisely**
- **Energy is renewable**
- **People, plants, salmon and other animals thrive in a healthy ecosystem**
- **Rewarding work supports families**
- **Neighborhoods are vibrant and green**
- **People participate in community life as active, responsible citizens**
- **Buildings are beautiful and efficient**
- **Food is healthy, plentiful and accessible**
- **Residents can easily walk, bicycle, carpool, or ride public transit as their first choice of transportation**

For these areas, OSD has primary responsibility within the City for setting the agenda and goals and implements programs to accomplish these goals.

In addition, we work closely with other City agencies to complement and in some cases jointly implement programs and activities to reach goals addressing the following areas, for which primary responsibility rests with partner agencies:

- Water efficiency
- Stormwater
- Jobs
- Equity (e.g., affordable housing, diversity development)
- Toxics
- Air quality
- Land use
- Contaminated land (brownfields)
- Parks/open space
- Transportation

Recent Successes

Recycling

Portland consistently ranks among the top U.S. cities for its recycling rate, which is currently at about 55%. Recycling is required of Portland businesses and major construction projects, and the residential sector consistently recycles over half its waste as

well. OSD provides high-quality customer service to residents and businesses, regulates collection of recycling and garbage, and provides training and outreach around waste reduction and recycling.

Green Building

With more than 40 high-performance, LEED buildings completed or under construction and a booming sustainable architecture community, Portland has become a national leader in green building. City policy requires municipal facilities and private projects with City funding to meet green criteria, and OSD provides technical and financial assistance to several hundred construction projects a year, including administering a $500,000 per year Green Incentive Fund for innovative green building efforts.

Energy

OSD pursues energy efficiency and renewable energy both as corporate policy and in efforts throughout the community. OSD has facilitated energy-efficiency improvements in 20,000 apartment units in the past 10 years, and efficiency projects in the City's own facilities now save $2 million annually in energy bills.

The City currently generates or buys 10 percent of its electricity from renewable sources, including a fuel cell and microturbines powered by waste sewage gas.

Global Warming

In 1993 Portland became the first local government in the U.S. to adopt a plan to address global warming. Since then, per capita local emissions have decreased by 13 percent, and in 2004 total emissions fell below 1990 levels, the benchmark year established in the Kyoto Protocol.

Of equal note, Portland has limited emissions over a period when the local economy expanded by more than 60 percent.

Food Policy

The Portland-Multnomah Food Policy Council, a joint effort between the City and County, seeks to improve the availability and affordability of fresh, healthy, locally produced food.

Building on a host of community partnerships, the Food Policy Council has held workshops for immigrant farmers, carried out a pilot project that brought local food into Multnomah County corrections facilities, and developed tools to improve protections for local farmland.

Employees of the Office of Sustainable Development:

1. **Take a long-term perspective while providing immediate solutions**
   - **Lead by example in promoting sustainability**
   - **Seek innovative solutions while recognizing that the best ideas are sometimes conventional.**
   - **Value technical excellence**
   - **Respond creatively to change**
2. **Partner with public agencies, community organizations, businesses, and residents**
   - **Take pride in providing responsive customer service**
   - **Are committed to public service**
   - **Engage with and listen to customers, colleagues, and partners**
   - **Take an entrepreneurial approach**
3. **Embrace diversity and value the strength it brings to our office**
   - **Create a vibrant work environment**
   - **Promote equity in our long-term work and in everyday interactions**
   - **Communicate openly and respectfully**
   - **Appreciate humor and friendship as creative forces for success**

OSD Goals

	2050 Goals	2006 Goals
Solid waste	All materials in Portland are recovered or reused.	• Recycle 60% of solid waste community wide. • Ensure efficient and safe collection of solid waste and recycling. • Recycle 65% of solid waste in City government facilities.
Energy	All Portland energy needs are met through renewable resources and energy efficiency.	• Reduce per capita energy use in residential and commercial buildings by 8% from 2000 levels. • Provide 10% of all energy from renewable sources. • Achieve $2.2 million in annual savings on City government energy bills compared to 1990. • Provide 100% renewable electricity for City government operations.
Greenhouse gases	Portland generates zero net greenhouse gas emissions	• Reduce community-wide greenhouse gas emissions to 1990 levels. • Reduce City government greenhouse gas emissions by 10% below 1990 levels.
Food systems	Healthy, regionally produced food is available to all Portland residents.	Metrics currently in development.

Major Initiatives

1. City acquisition of wind power for 100% of its electricity needs

The City's Local Action Plan on Global Warming calls for the City to meet 10% of its electricity needs from renewable resources by 2003 and 100% by 2010. The 10% goal was accomplished through a combination of on-site generation (fuel cell at the Columbia Blvd. Wastewater Treatment Plant, for example) and purchased wind power.

To supply 100% renewable power to City facilities, OSD has invited proposals from utilities and renewable energy developers to optimize financial and environmental benefits of a City power purchase. The City uses about 140 million kilowatt-hours of power annually—equivalent to the usage of about 12,000 households. If the City ultimately meets its needs using wind power, for example, about 30 large turbines would be installed in an appropriate site in eastern Oregon, benefiting the economy of urban and rural Oregon alike.

2. Food composting

In early 2005, OSD launched its commercial food-composting program. Food scraps and other compostable materials are now collected from restaurants, grocery stores, and large institutions. The food scraps are turned into compost that is sold in retail and wholesale markets by the composter.

When the program reaches full volume, an estimated 45,000 tons of food waste will be diverted from the landfill each year. This is expected to raise the recycling level to nearly 60%, the City's goal for 2005. It has the added advantage of significantly reducing the production of greenhouse gas by avoiding methane production in the landfill.

3. Green Incentive Fund and Green Building Assistance

In early 2005, OSD issued a request for proposals for the first round of funding from the five-year, $2.5 million Green Incentive Fund, which includes funding from the Bureau of Environmental Services, Water Bureau, and Energy Trust of Oregon, in addition to OSD. Projects awarded funding from the new round of innovation grants will be selected beginning in spring 2005.

In addition to offering financial incentives, OSD will provide technical assistance to more than 200 construction projects in 2005.

4. Food

Based on research it completed in 2004, the Portland-Multnomah Food Policy Council will

Working in Our Communities

In Our Neighborhoods

OSD's Fix-It-Fairs deliver money-saving solutions and healthy, environmentally friendly home, yard and garden ideas directly to Portland residents. Visiting a variety of Portland neighborhoods throughout the year, more than 1,500 people annually attend these free community events. Fix-It-Fairs feature educational sessions addressing common household problems from mold to household budgeting. Home energy and green building experts teach ways to cut water and energy costs in the home, protect families from lead hazards, improve tree care and much more.

The annual Build It Green! Home Tour and Information Fair is an opportunity for homeowners, builders and consumers to share their green building experiences with the community. Launched in 2002, BIG! offers a first-hand look at green building practices and the latest products and technologies. The self-guided tour welcomes visitors into some of Portland's greenest homes, displaying practical, healthy and affordable green building ideas for new and remodeled homes.

Just for Businesses

The Businesses for an Environmentally Sustainable Tomorrow (BEST) Awards annually draw nearly 500 business people, environmental and community advocates to an event recognizing the best practices of businesses working for a healthy, thriving Portland. These local companies are pioneers transforming both the marketplace and the culture of doing business in this city and region. Together with our partner organizations, OSD supports businesses working with the environment – resulting in sustainable, financial excellence.

New in 2004, the OSD Blueworks program expands workplace recycling assistance into a comprehensive education and information resource for Portland businesses. Blueworks helps companies find innovative ways to go beyond recycling office paper into new areas of waste prevention and waste disposal.

Transforming the Building Industry

OSD's green building training program, ReThink, is an interactive case study-based green building education program with classes exploring high-performance design through local projects. ReThink features a comprehensive slate of local, regional and international experts offering an inside look at how local practitioners are mastering the art and challenge of green building.

convene hunger relief programs, government agencies, community partners and neighbors to collaborate on nutrition and food security initiatives in the Lents neighborhood. This process will create a blueprint for food planning in other neighborhoods.

In a related effort, the Food Policy Council will work with planners, local governments and businesses on ideas from simple site improvements at existing farmers markets, to the development of new public plazas to house markets and other functions. Markets form the thriving centers of cities around the world. Our own farmers markets can awaken the same vibrant energy.

Sample Plans and Templates

Tools for Developing Your Bureau's Sustainability Plan

A written Sustainability Plan provides a road map for staff and key decision-makers as they work on sustainability efforts. Creating your bureau's plan can strengthen buy-in and ensure the continuous improvement of your bureau's sustainability activities.

There is no single formula or approach to sustainability planning. The key is to develop a planning process and functional documents that add value to the work of your bureau. Many other cities and states have developed comprehensive sustainability plans – take a few minutes to look at the results of their efforts to get ideas about what your bureau include in your plan.

At a minimum, your bureau's sustainability plan must include:

- A sustainability vision, mission or commitment statement.
- A summary of existing sustainability efforts (in future years, this section will become a summary of your activities/results of implementing your sustainability plan).
- A minimum of three (3) actions your bureau will do in the coming year to work toward sustainability (including the responsible party(s), measures of success and timeline for each action).
- An employee communication strategy (how will you ensure that staff are aware of your bureau's sustainability goals and plan?).
- Bureau Director approval (e.g., via signature on the document).

Below you will find examples and templates of a variety of approaches to developing a sustainability plan. You can use one of these templates for your bureaus plan, or take the bits and pieces you like from several of them and create your own.

"Planning Workshop Template"
This template is the simplified sustainability plan used in the Sustainability Planning Workshops. This template meets the minimum requirements for the bureau sustainability plans. You can also download the worksheets that are used in the workshops as well.

Download the workshop template: Workshop Sustainability Plan Template.doc
Download the workshop worksheets: Sustainability planning worksheets.doc

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"Activities Assessment" Approach

In this approach, you will step back and assess all of the different activities and services your bureau undertakes. This is a typical approach done by many businesses that have an

"Environmental Management System." An Activities Assessment serves as a useful tool to help an organization understand all of the impacts associated with its activities and to then prioritize where to make changes first.
For each activity/service process your bureau does, ask yourself:

- What resources are consumed by the activity?
- What are the results or products?
- What wastes are generated?
- What are the sustainability impacts of the activity (can include positive impacts too)?

Once you have identified the impacts associated with your bureaus activities, develop a system for prioritizing the activities to determine where your bureau should focus energy and resources first.
The priority level can be based on a variety of characteristics, like:

- Scale of impact (e.g., are the impacts minor, or do they have long-term detrimental consequences?),
- Frequency of impact (e.g., does the impact happen consistently, only once in a while or only during accidents or emergencies?) level of control (e.g., how much control does your bureau have over that activity?),
- Cost (e.g., are there potential cost savings? Are there incentives, tax credits or grant funding available to assist with projects related to the activity or impacts?), and
- Connection with bureau mission (e.g., are the impacts directly related to the core mission of the bureau, like protecting water quality or community engagement?)

You may want to go with a simple categorical priority level setting system (e.g., High, Medium, Low) or a numerical ranking system where you weigh different evaluation criteria.

Review the "Activities Assessment" sustainability plan documents (below) to see what an activities and impacts assessment might look like.

Download sample plan template: Sust Plan Template - Activities Assessment & Priorities.pdf (contains ideas, resources and examples)
Download blank template: Sust Plan BLANK Template - Activities Assessment & Priorities.doc (you can fill in the blanks!)

<Return to Top of Page>

"Backcasting" Approach

"If you don't know where you are going, any road will get you there." *(Lewis Carroll)* The concept of "backcasting" is often used as a strategic approach for working toward sustainability. Backcasting is a way of planning in which a successful outcome is imagined in the future (e.g., 100% green power by 2015), followed by the question: "what do we need to do today to reach that successful outcome?"

There are two significant benefits of the backcasting approach. First, it encourages creative problem solving, as the vision of the successful outcome does not need to be limited by the conditions that exist today. Second, it helps to create a shared vision of what success will look like...both in the end, and along the way. The trick to a successful backcasting exercise is to remember that instead of asking "Can we?", ask "How can we?"

Download the "Backcasting" sustainability plan documents (below) to see what backcasting

approach might look like. You can also review how the City of Corvallis is using this backcasting approach to establish their sustainability goals and actions.

Download sample plan template: Sust Plan Template - Backcasting.pdf (contains ideas, resources and examples)
Download blank template: Sust Plan BLANK Template - Backcasting.doc (you can fill in the blanks!)

<Return to Top of Page>

"Sustainability Indicators" Approach

Many organizations develop their sustainability plans by using sustainability indicators. An indicator is something that helps you understand where you are, which way you are going (trends) and how far you are from where you want to be. The gauges in an automobile's dash (fuel gauge, speedometer, etc.) are classic indicators, and many organizations regularly use "dashboard indicators" to monitor key business trends and assist with decision making.

In taking a "sustainability indicators" approach, you will identify the specific things your bureau can measure to gage your level of sustainability. Consider including relevant requirements of existing citywide or bureau specific sustainability policies or programs. Remember, a good indicator alerts you to a problem before it gets too bad and can sometimes help you recognize what needs to be done to fix it. Characteristics of effective sustainability indicators:

- They are relevant and show you something that you need to know,
- They are easy to understand,
- They are reliable and you can trust what they are telling you, and
- They are based on accessible data that is available or can be gathered.

Download the "Indicators" sustainability plan documents (below) to see what a sustainability indicator approach might look like. You can also review how Whistler, B.C., and Santa Monica, CA, have used this approach to establish their sustainability goals and actions.

Download sample plan template: Sust Plan Template - Indicators.pdf (contains ideas, resources and examples)
Download blank template: Sust Plan BLANK Template - Indicators.doc (you can fill in the blanks!)

<Return to Top of Page>

"Department/Programmatic Opportunities" Approach

Many bureaus, particularly large bureaus with different departments or programs, may have success with an approach that includes creating mini-sustainability plans specific to those departments or programs. This approach is especially beneficial when a bureau has traditional "office functions" mixed with "field operations" as it allows bureaus to develop goals and actions that are specific to the unique opportunities and challenges of those groups.

Often, this approach results in a sustainability plan that includes a description of the specific department or program, an evaluation of the current practices (related to sustainability), the

identification of potential future opportunities to implement best practices, and a summary of key department/program goals, actions and performance measures. These mini-sustainability plans are then combined together into one larger bureau-wide plan.

Download the "Department/Program" sustainability plan documents (below) to see what a this approach might look like. You can also review how Seattle and Chicago both used a similar approach for their sustainability planning efforts. Seattle developed their plan based on programmatic focus areas, and Chicago did a combination of programs and departments.

Download sample plan template: Sust Plan Template - Department Opportunities Review.pdf (contains ideas, resources and examples)
Download blank template: Sust Plan BLANK Template - Department Opportunities Review.doc (you can fill in the blanks!)

<Back to Top of Page>

To: Metro Council

From: Mike Hoglund, Solid Waste and Recycling Department Director

Subject: Proposed Programs for Increasing Business Recycling Cost/Benefit

At the July 3, 2007 Metro Council Meeting on Options for Increasing Business Recycling, Council members requested further information on the costs and benefits of the proposed programs. Staff was also asked to further clarify any other goals or benefits of the programs that go beyond meeting the state waste reduction goal.

Business Recycling Program Goals

The proposed business recycling programs strive to achieve the regional waste reduction goal, recommendations from stakeholder work groups, prioritized values of Metro Council, the Metro Policy Advisory Committee, and the Solid Waste Advisory Committee, and Metro Council's goals and objectives. Specific goals and objectives include:

1. Align with Metro Council's Objective 2.3: The region's waste stream is reduced, recovered and returned to productive use, and the remainder has a minimal impact on the environment.
2. Meet the regional solid waste reduction goal of 64 percent by 2009.
3. Address stakeholder values beyond just cost and tons recovered, including environmental benefits, ease of implementation and consistency with the waste reduction hierarchy.
4. Pursue program recommendations of Council-directed Contingency Plan Work Group.
5. Address current program shortcomings including lack of entry to businesses, lack of information on who is not recycling and inconsistent standards throughout the region.
6. Achieve a 90 percent recycling rate for paper and containers.

Business Recycling Program Costs

There are two main financial effects anticipated for the proposed programs. One stems from changes in the cost of direct garbage and recycling service provided by haulers to the businesses who generate the waste. The other is a fiscal change that affects all disposers and arises anytime garbage is diverted to source-separated recycling.

- Direct Collection Costs: Collection costs are likely to increase for businesses, as more stops will be required to pick up the additional recyclables. Most of the increased collection costs will be offset by avoided disposal costs and sales of recyclables. For 80,000 tons of new recycling, staff estimate that businesses would pay about $900,000 more per year for collection across the region. In addition, businesses that need to make improvements to their internal recycling systems may spend up to $1 million or more for those improvements. Spread across the region's 64,000 businesses, that $1.9 million increase in costs—internal business costs plus increased collection—would amount to about $2.47 per month per business, or $23.75 per ton recovered.[1] Changes in collection costs would be recovered by haulers through the rates they charge their customers; and internal business costs would be fully internalized, presumably recovered through cost cutting elsewhere in the business or through increased revenue from sales of goods or services.

- Fiscal Impacts: In addition to those costs associated directly with enhanced recycling services, program oversight and tonnage diversion would impact Metro's Regional System Fee (RSF), which is charged upon the disposal of all waste generated in the region (note, the RSF is not levied on source-separated recyclables). Fiscal impacts would amount to a little more than a dollar per ton increase in Metro's Regional System Fee.

Generator garbage rates should not be impacted significantly. Like residential service regionwide, franchised commercial garbage rates are "bundled" and therefore already include recycling services, and rates are structured to encourage recycling, with different levels of services based on container size. For

[1] These figures do not reflect any increase in hauler-provided education for customers, which could be significant during the early phase of implementation.

Recycle at Work
from Metro and your local governments

Business Recycling Program Goals

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Importance Weightings for Recovery Program Values