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MAKING A GREAT PLACE

Metro

Sustainability Report: Appendix

FY 2012-2013

December 2013

greenMetro

ABOUT METRO

Clean air and clean water do not stop at city limits or county lines. Neither does the need for jobs, a thriving economy, and sustainable transportation and living choices for people and businesses in the region. Voters have asked Metro to help with the challenges and opportunities that affect the 25 cities and three counties in the Portland metropolitan area.

A regional approach simply makes sense when it comes to providing services, operating venues and making decisions about how the region grows. Metro works with communities to support a resilient economy, keep nature close by and respond to a changing climate. Together we're making a great place, now and for generations to come.

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TABLE OF CONTENTS

Introduction 1

Meet the teams 4

Sustainability project highlights 5

Goal 1: Reduce greenhouse gas emissions 7

GHG Measure 1: Electricity consumption 8

GHG Measure 2: Natural gas consumption, therms 10

GHG Measure 3: Metro employee commute data 12

Goal 2: Choose nontoxic 14

Goal 3: Prevent waste 15

Goal 4: Conserve water 17

Goal 5: Enhance habitat and reduce stormwater 19

Additional data: energy efficiency and utility costs 21

Sustainable procurement 24

Status of priority Sustainability Plan projects 25

About the Metro Sustainability Program 28

INTRODUCTION

As a regional government committed to promoting sustainable communities, Metro is working to reduce its own ecological footprint. This report describes the efforts to reduce the environmental impact of Metro's public venues, parks, buildings and solid waste facilities.

In 2003, the Metro Council set an ambitious target for internal operations to be sustainable within one generation. To this end, the council adopted goals in five key categories to reduce the agency's environmental impact:

Reduce carbon — Reduce direct and indirect greenhouse gas emissions to 80 percent below 2008 levels.

Choose nontoxic — Eliminate the use or emissions of persistent bioaccumulative toxics (PBTs) and other priority toxic and hazardous substances.

Prevent waste — Reduce overall generation of waste, and recycle or compost all remaining waste.

Conserve water — Reduce water use to 50 percent below 2008 levels.

Enhance habitat — Ensure that Metro's parks, trails, natural areas and developed properties positively contribute to healthy, functioning ecosystems and watershed health.

Metro's comprehensive sustainability plan identifies strategies plus nearly 100 actions to achieve the above goals. **The goals are slated for completion by 2025 or, in the case of greenhouse gas emissions, 2050.** The Metro Council adopted this plan by resolution on Oct. 7, 2010. The plan is available online at www.oregonmetro.gov/greenmetro.

The sustainability plan guides operations objectives for six types of facility operations: public event venues, including the Portland'5 Centers for the Arts, Oregon Convention Center and Portland Expo Center; the Oregon Zoo; solid waste transfer stations and household hazardous waste facilities; the Metro Paint recycling facility; multiple regional parks; and Metro Regional Center.

This detailed appendix contains information at the facility or venue level on performance metrics in each goal area.

A note about data quality

Staff make every effort to continuously improve data quality for tracking the indicators in this report. Data collection systems, tracking tools and reporting protocols improve each year. Data presented in this report in Metro's goal indicators for fiscal year 2012-2013 is more accurate than for the baseline year of 2008 overall.

The intent of this report is to provide a sense of scale of operational areas with higher environmental impacts, show trends over time in utility consumption and other indicators and illustrate how far the organization needs to go to meet the long-term sustainability goals set by the Metro Council.

MEET THE TEAMS

Portland'5 Centers for the Arts Green Team members: Robyn Williams (Director), Stephanie Viegas Dias, Rich Wehring (Chair), William Stitt, Jeannie Baker, Dave Woodman, Courtney Dykstra, Jeanne Uding, Andrea Gratreak.

Oregon Zoo Green Team members, in front of the "Zoo Doo" compost area: Jeremy Kirby, Philip Fensterer, Nancy Kluss, Ivan Ratcliff, Rick Hanes (Chair), Karen Lewis, Michael Weatherman, Terri Pelham. *Not pictured:* Tyson Stoianoff, Rick Horton, Paul Bosch.

Metro Sustainability Steering Committee members: Rick Hanes, Oregon Zoo; Erin Rowland, OCC; Molly Chidsey, Sustainability Coordinator; Susan Boase, Metro Regional Center; Jim Mitchell, Oregon Zoo (guest); Rory Greenfield, Metro Regional Center; Jim Caldwell, Portland Expo Center; Matthew Uchtman, OCC; Aidan Gronauer, Sustainability Center (guest); Richard Wehring, Portland'5 Centers for the Arts.

Parks and Environmental Services Green Team members: Kristina Prosser, Jim Quinn (chair), Shellie Moran, Chelsea Althauser. *Not pictured:* Andrew Judkins, Evan Hardwood, Therese Mitchell.

Not pictured: Metro Regional Center Green Team and Oregon Convention Center Sustainability Team.

SUSTAINABILITY PROJECT HIGHLIGHTS

Richard Wehring, senior operations supervisor for Portland'5 Centers for the Arts, shows off the new chiller system at Hatfield Hall, which is home to three theaters. The new system is estimated to save 87,566 kWh of electricity and 2,338 therms of natural gas and result in avoided operations costs of over $24,000 annually.

Oregon Convention Center's **Erin Rowland**, sustainability coordinator, and **Matthew Uchtman**, operations manager, accept the award for recertification of the facility as Salmon Safe. The certification requires management practices that protect water quality and restore habitat, reduce storm water runoff and non-point source pollution to protect Pacific Northwest salmon watersheds. For more information, see *www.salmonsafe.org*.

Virginia Houston, day porter with Metro Regional Center's custodial team, uses the facility's newest line of green and non-toxic cleaning products.

Expansion of Metro's **M. James Gleason Memorial Boat Ramp** on the Columbia River included the addition of over 117,000 square feet of native plantings, including infiltration bioswales that treat stormwater runoff from the parking lot, preventing it from entering the river, thereby improving water quality.

Rick Hanes from the Oregon Zoo shows off the electric carts that replaced three gas-powered vehicles for transport on the zoo grounds. The zoo now uses approximately 150 fewer gallons of gas per year by using the new electric vehicles.

The **Portland Expo Center lobby** was refreshed with over 150 gallons of recycled latex paint, courtesy of Metro Paint. The custom-blended colors now create a welcome space for visitors and events.

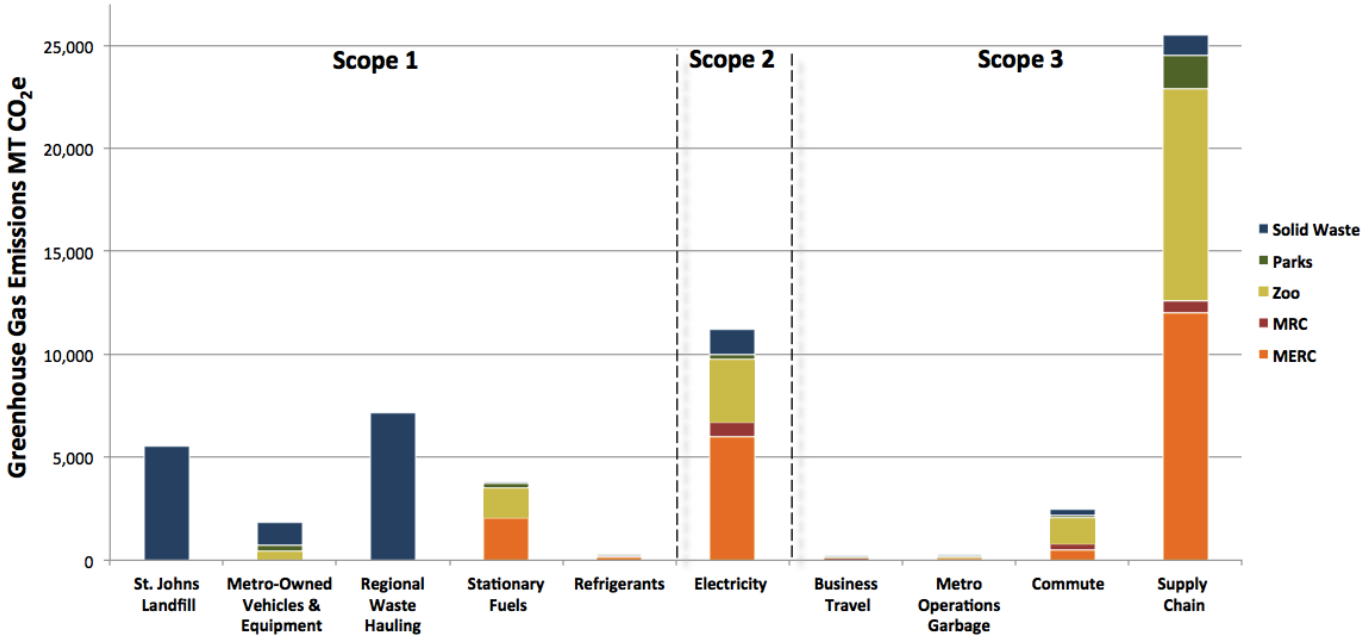
GOAL 1: REDUCE GREENHOUSE GAS EMISSIONS

Goal	Reduce greenhouse gas (GHG) emissions 80 percent below 2008 levels by 2050.
Indicators	Greenhouse gas emissions for Scopes I, II and III, reported in metric tons of carbon dioxide equivalent (MT CO_2e). Electricity consumption from Metro facilities reported in kilowatt hours consumed (kWh).
2013 target	Arrest GHG emissions at the 2008 level.

Metro completed a comprehensive greenhouse gas (GHG) emissions inventory for internal operations using 2008 as the baseline year.[1] Metro repeated this inventory for the FY 12-13 year; the results of that analysis are in the graph below. A full report will be available in December 2013.

For the purposes of the annual sustainability report, however, Metro includes year-over-year comparison data of electricity and natural gas consumption, two of Metro's key GHG emissions sources which are tracked on an annual basis. 2013 data on utilization of Metro's Employee Commute Options program and distance traveled to work are also included in this report.

FY 12-13 Metro agency-wide emissions from regional government operations, by functional area



[1] Metro GHG Emissions Baseline Inventory for Metro internal and business operations, August 2010. http://library.oregonmetro.gov/files/metro_internal_ghg_inventory_8-10.pdf.

GHG Measure 1: Electricity consumption (kWh)

Site	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13	% change over baseline (FY09-10)
Oregon Zoo	7,420,929	6,943,183	7,187,460	7,518,906	**7,700,021**	4%
Oregon Convention Center	10,070,371	10,690,641	10,584,885	9,277,110	**8,729,443**	-13%
Portland Expo Center	3,300,198	2,995,153	2,874,039	3,062,346	**2,793,633**	-15%
Antoinette Hatfield Hall – Portland'5	1,803,642	1,783,113	1,540,820	1,434,208	**1,511,379**	-16%
Keller Auditorium – Portland'5	1,448,495	1,276,462	1,203,401	1,216,614	**1,085,421**	-25%
Arlene Schnitzer Concert Hall – Portland'5	1,186,160	1,124,452	1,079,901	1,037,174	**946,730**	-20%
Metro Regional Center	2,220,226	2,222,805	2,183,565	1,818,167	**1,774,512**	-20%
Metro Central Transfer Station	1,878,316	1,919,756	1,805,321	1,637,252	**1,479,053**	-21%
Metro South Transfer Station	1,662,963	1,670,860	1,336,227	1,292,748	**1,179,570**	-29%
Latex Paint Facility	200,103	198,694	214,520	218,360	**245,785**	23%[2]
Glendoveer Golf Course	*Insufficient data*	359,830	338,388	343,885	**315,956**	-12%
St. Johns Landfill	243,105	240,321	216,857	186,176	**152,305**	-37%
Blue Lake Regional Park	138,886	156,714	165,040	172,201	**176,886**	27%
Oxbow Regional Park	80,580	77,186	91,846	87,966	**74,628**	-7%
Chinook Landing Marine Park	46,390	46,509	46,865	47,101	**43,095**	-7%
Howell Territorial Park[3]	14,017	13,425	7,518	4,955	**3,985**	-72%
Borland Field Station	16,825	20,821	22,503	22,594	**20,581**	22%
Cooper Mountain Nature Park[4]	2,686	0	0	0	0	
Graham Oaks Nature Park[5]	0	291	1,417	1,888	**1,902**	34%
Annual totals kWh	**31,733,892**	**31,740,216**	**30,900,573**	**29,379,651**	**28,234,885**	**-11%**

All quantities rounded to the nearest kWh.

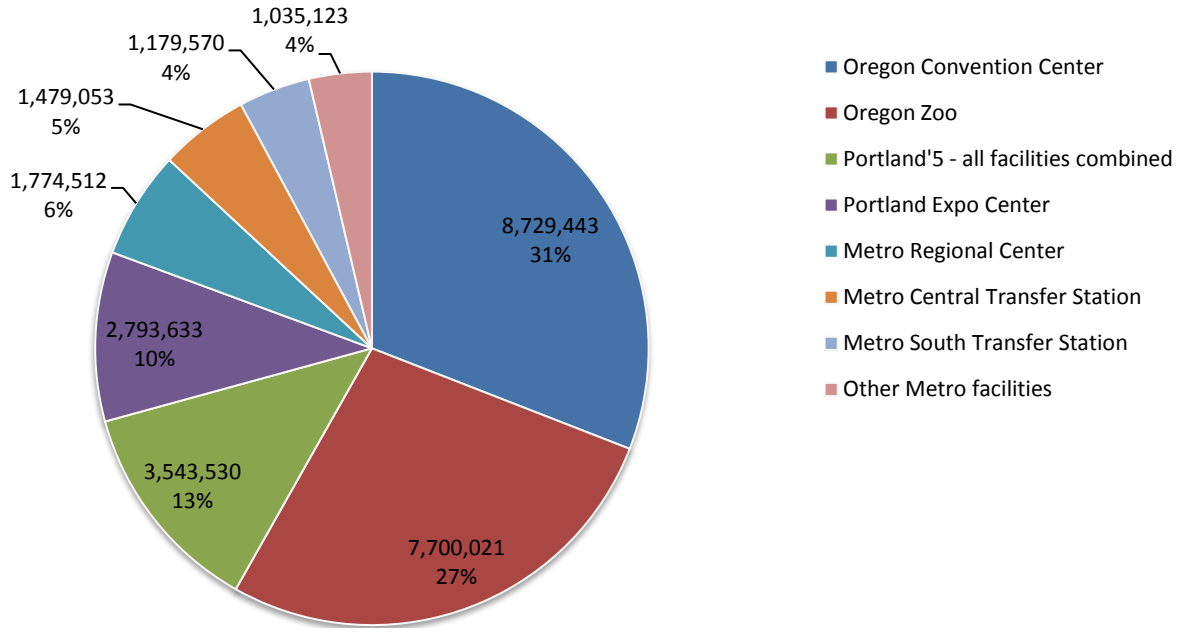
[2] The increase in electricity consumption at the Latex Paint facility is largely attributable to the increased volume of paint processed for recycling due to Paint Care legislation. Notably, the amount of electricity consumed per gallon of paint processed at the facility remains steady at less than one kilowatt per gallon of paint processed.

[3] Use of the Howell Territorial Park facility has been scaled back which results in reduced electricity consumption.

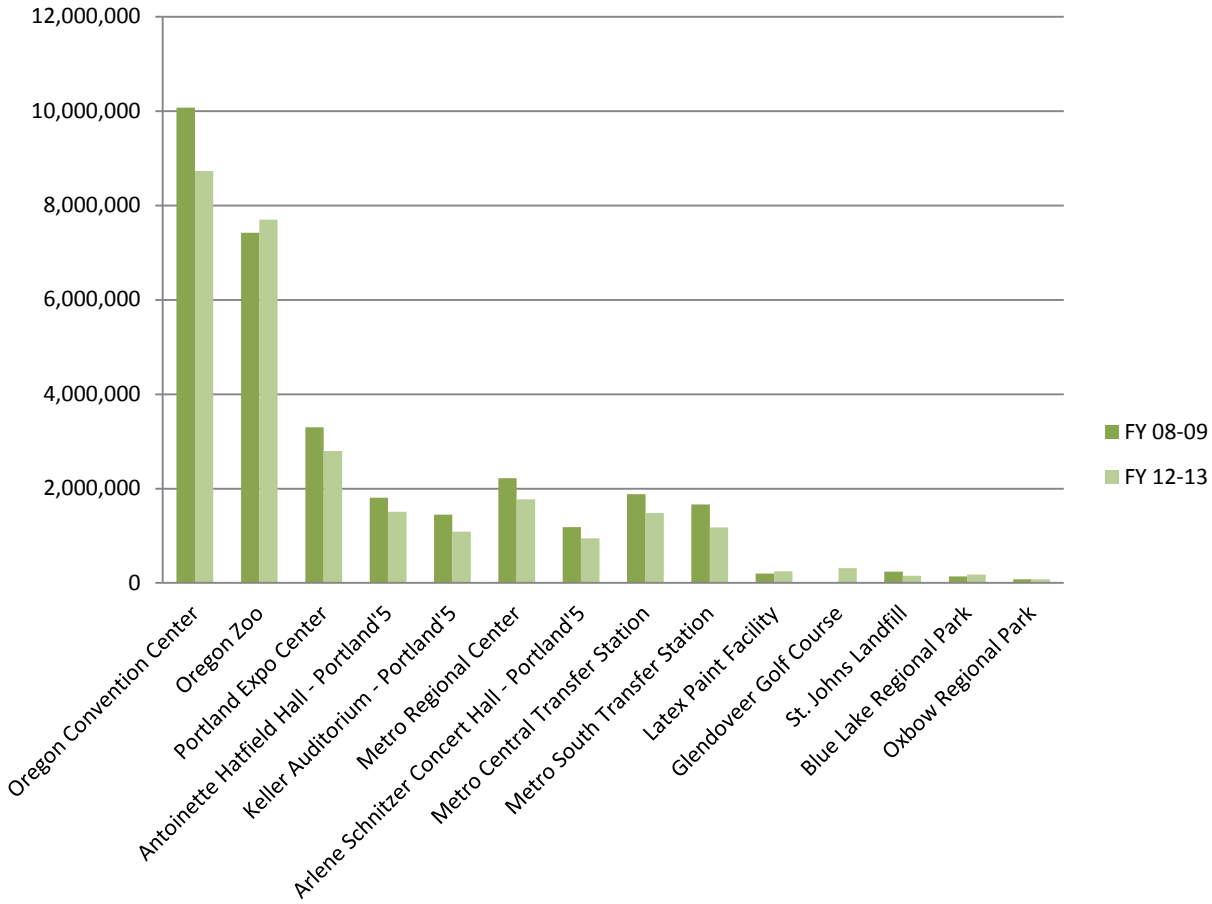
[4] Cooper Mountain Nature Park is now operated by Tualatin Hills Parks and Recreation District, which pays utility bills.

[5] Graham Oaks Nature Park is a new facility which opened to the public in 2011.

FY 12-13 Electricity consumption Metro facilities (kWh)



FY 12-13 Electricity usage compared with FY 08-09 baseline (kWh)



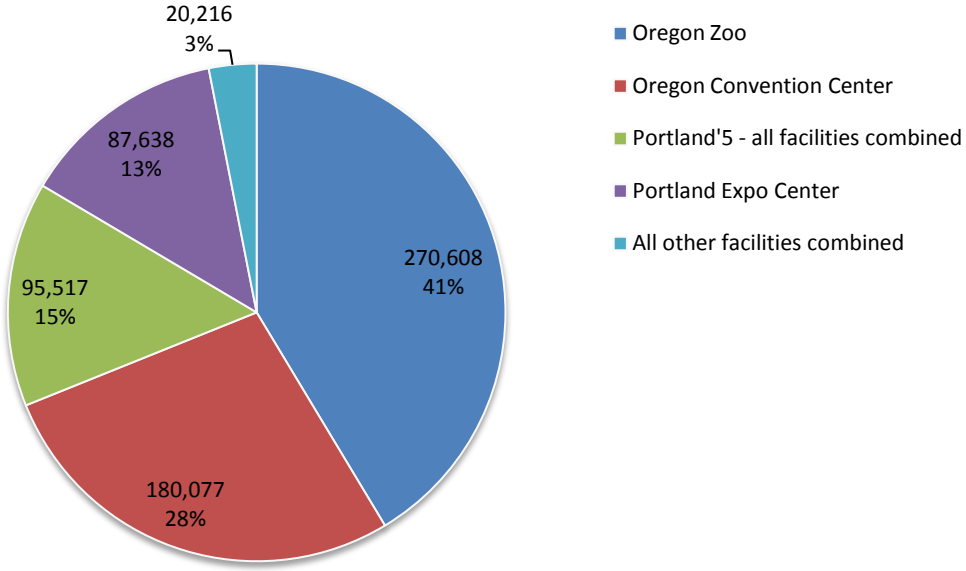
GHG Measure 2: Natural gas consumption, therms

Site	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13	% change over baseline
Oregon Zoo	308,392	297,202	345,670	258,480	**270,608**	-12%
Oregon Convention Center	193,433	177,651	218,199	218,478	**180,077**	-7%
Portland Expo Center	101,346	80,225	87,518	88,259	**87,638**	-14%
Antoinette Hatfield Hall – Portland'5	59,581	64,237	53,220	50,323	**49,857**	-16%
Keller Auditorium – Portland'5[6]	61,138	34,249	36,723	26,096	**24,222**	-60%
Arlene Schnitzer Concert Hall – Portland'5	29,924	28,654	25,154	21,704	**21,438**	-28%
Metro Regional Center	4,337	3,842	5,049	7,470	**3,526**	-19%
Metro Central Transfer Station	1,836	1,670	2,461	2,469	**1,580**	-14%
Metro South Transfer Station	*Insufficient data*	*Insufficient data*	6,490	5,519	**4,894**	-25%
Latex Paint Facility	10,586	7,750	11,534	8,975	**5,639**	-47%
Glendoveer Golf Course	4,015	4,144	4,364	4,346	**4,146**	3%
Howell Territorial Park	432	382	639	633	**431**	-0.23%
Annual total therms	***775,020***	***700,006***	**797,021**	**692,752**	**654,056**	**-18%**

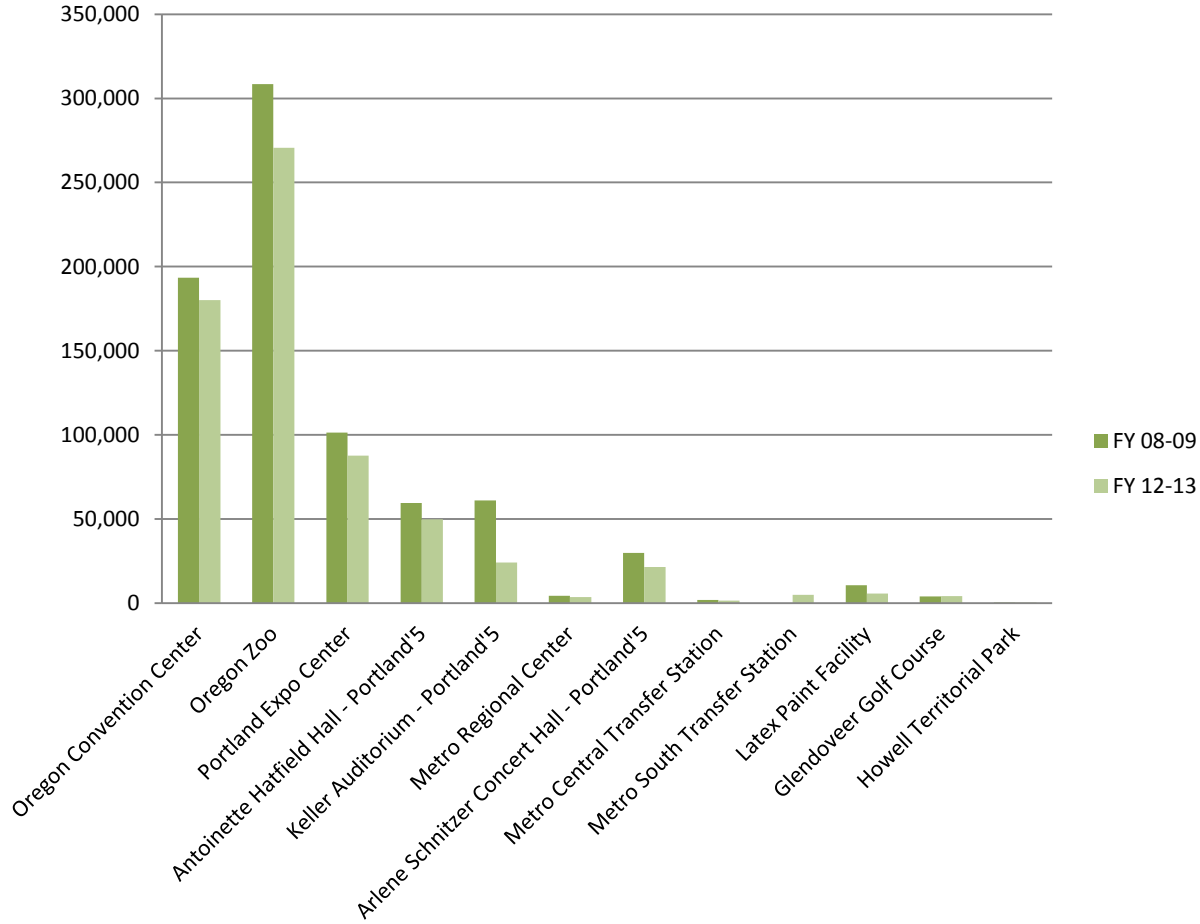
All quantities rounded to the nearest therm.

[6] Replacement of an old, inefficient boiler at the Keller Auditorium in 2011 is a major reason why natural gas use is down significantly at this facility.

FY 12-13 Natural gas consumption (therms)



FY 12-13 Natural gas usage compared with FY 08-09 baseline (therms)

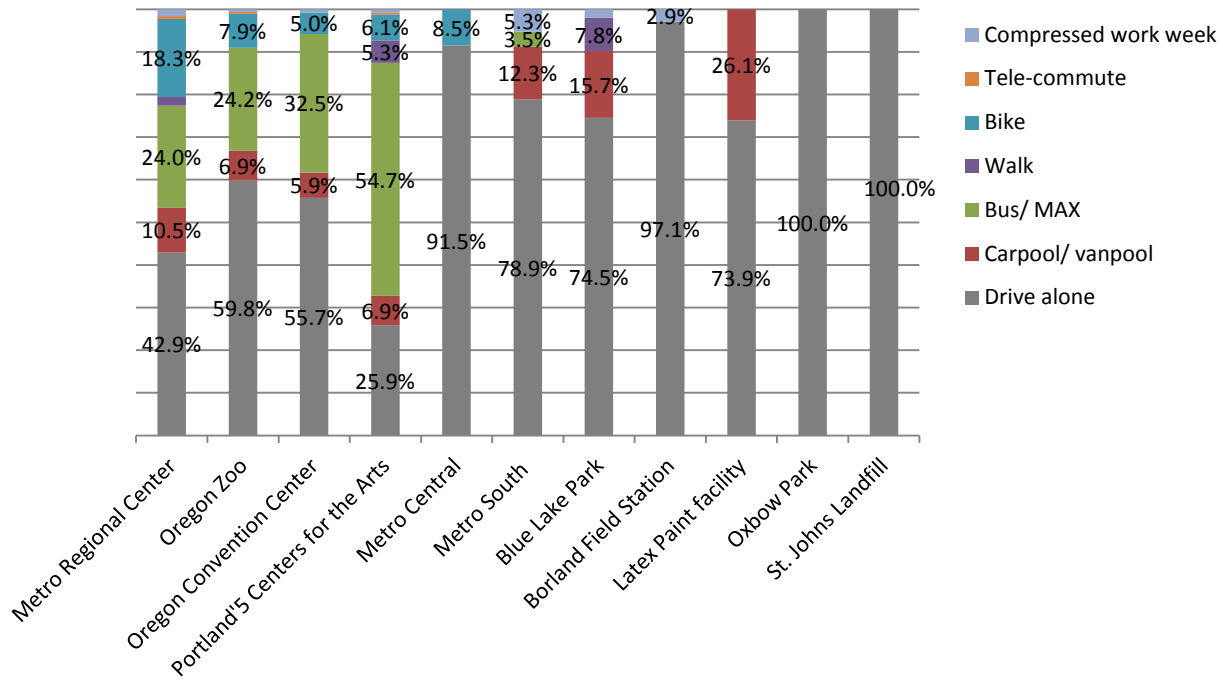


GHG Measure 3: Metro employee commute data, 2013

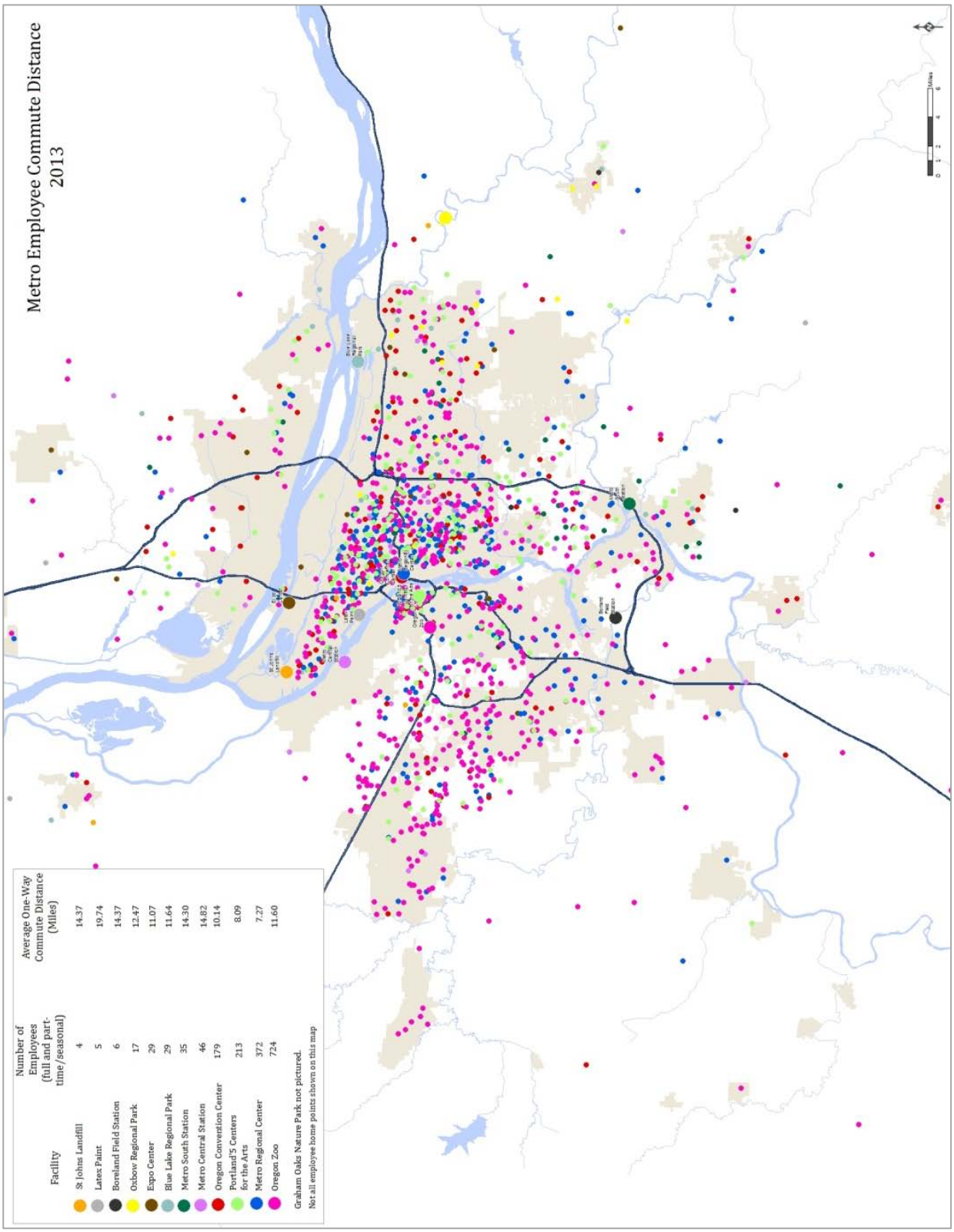
2013 Metro employee commute options (ECO) survey results[7]

Site	Number of employees	Survey response rate	Drive alone	Carpool/ vanpool	Bus/ MAX	Walk	Bike	Tele-commute	Compressed work week
Metro Regional Center	326	94%	42.9%	10.5%	24.0%	2.0%	18.3%	0.7%	1.6%
Oregon Zoo	167	89%	59.8%	6.9%	24.2%	0.0%	7.9%	0.5%	0.6%
Oregon Convention Center	102	85%	55.7%	5.9%	32.5%	0.0%	5.0%	0.0%	0.8%
Portland'5 Centers for the Arts	59	92%	25.9%	6.9%	54.7%	5.3%	6.1%	0.4%	0.8%
Metro Central	19	95%	91.5%	0.0%	0.0%	0.0%	8.5%	0.0%	0.0%
Metro South	17	88%	78.9%	12.3%	3.5%	0.0%	0.0%	0.0%	5.3%
Blue Lake Regional Park	10	100%	74.5%	15.7%	0.0%	7.8%	0.0%	0.0%	2.0%
Borland Field Station	7	100%	97.1%	0.0%	0.0%	0.0%	0.0%	0.0%	2.9%
Latex Paint facility	5	100%	73.9%	26.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Oxbow Regional Park	3	100%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
St. Johns Landfill	4	100%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

2013 Metro employee commute mode-split



[7] Data in this table is compiled from the biannual employee commute survey of Metro employees administered by Lloyd Transportation Management Association. Portland Expo Center does not participate in the TriMet Universal Pass program at this time; therefore the commute survey is not completed at this venue facility. Surveys include only benefits-eligible employees. This survey does not include temporary or seasonal employees.



Metro employee commute distances, average by work site

GOAL 2: CHOOSE NONTOXIC

Goal	Eliminate the use or emissions of persistent bioaccumulative toxics (PBTs) and other priority toxic and hazardous substances by 2025.
Indicator	Percentage of chemical products used at Metro facilities that have ingredients with the worst rating (a 3 on a 1-3 scale)[8] for health, environmental or physical hazard.
2013 target	20 percent reduction from 2008 levels of chemical products in use at Metro with a "3" rating for health, environment and/or physical hazard.

Metro uses an inventory of chemical products and corresponding material safety data sheets (MSDS) to track toxicity of products used in Metro operations. Some products are rated high hazard in more than one category, so the total exceeds 100 percent. Metro is in the process of transitioning management of the MSDS database to a new vendor, so historical data is not available at this time.

2013 chemical inventory toxicity, measured by Material Safety Data Sheets (MSDSs)

	MSDSs in inventory with high hazard rating	Total inventor (active MSDSs)	Percent of MSDSs with a high hazard rating
High health hazard	856	2,105	41%
High environmental hazard	452	2,105	21%
High physical hazard	795	2,105	38%
High hazard rating in one or more categories	1,130	2,105	54%

[8] About hazard ratings in Metro's MSDS database, hosted by the Chemical Risk Information System at OHSU: Health ratings are based on criteria including the constituent's acute toxicity, irritant properties, and potential to cause cancer or produce developmental or reproductive toxicity. Environmental ratings are based on toxicity to aquatic organisms and other indicator species, persistence and tendency to accumulate in the environment, and potential to damage the ozone layer. Physical hazard ratings consider flammability risk level and potential for reactivity. A score of 3 indicates high hazard, 2 indicates intermediate hazard and 1 indicates low hazard.

GOAL 3: PREVENT WASTE

Goal	Reduce overall generation of waste, and recycle or compost all remaining waste by 2025.
Indicators	Weight of waste generated (garbage plus recycling and compost). Percent of waste recovered for recycling or compost.
2013 targets	Recycle or compost 50 percent of waste (Metro-wide average). Arrest waste generation at 2008 levels; reduce waste generation 10 percent from 2008 levels by 2015.

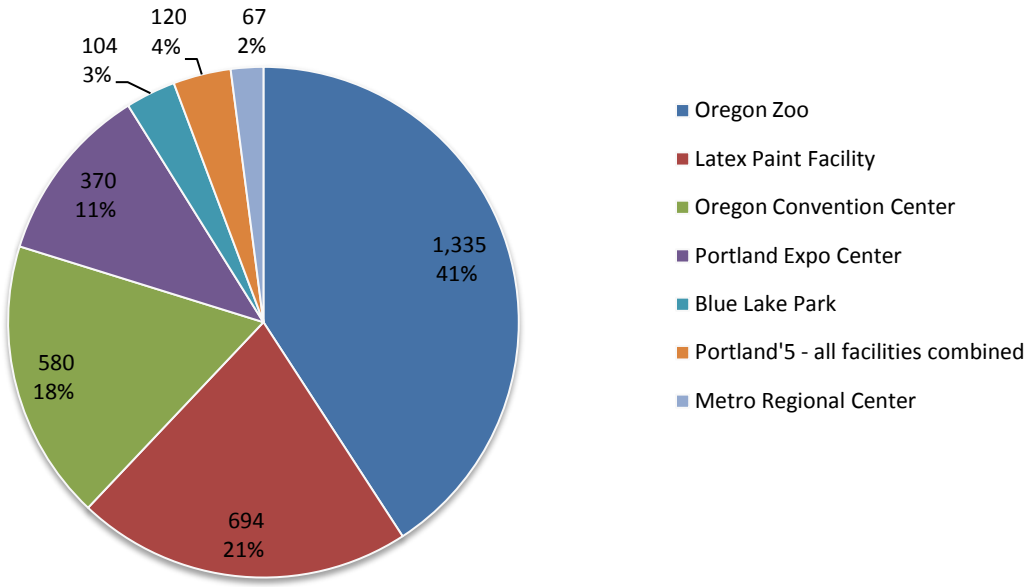
To measure progress toward the goal of recycling or composting all waste, as well as waste reduction, Metro tracks recycling rates and overall waste generation (weight of garbage, recycling and compost) from the major facilities in the agency's portfolio.

Site	Tons of waste 2008	Recycled 2008	Tons of waste 2009	Recycled 2009	Tons of waste FY10-11	Recycled FY10-11	Tons of waste FY11-12	Recycled FY11-12	Tons of waste FY12-13	Recycled FY12-13
Metro Regional Center	76	62%	70	64%	58	49%	67	56.9%	**67**	**56.9%**
Oregon Convention Center	472	55%	547	56%	660	67%	568	69.0%	**580**	**69.1%**
Portland Expo Center	398	13%	280	17%	260	48%	294	58.1%	**370**	**54.1%**
Latex Paint Facility	468	29%	381	0.2%	535	12%	628	14.7%	**694**	**16.0%**
Oregon Zoo	1,287	69%	1,257	72%	1,288	75%	1,471	78.8%	**1,335**	**76.9%**
Antoinette Hatfield Hall – Portland'5[9]	N/A	N/A	26	39%	34	57%	25	59.2%	**40**	**75.7%**
Arlene Schnitzer Concert Hall – Portland'5	N/A	N/A	N/A	N/A	24	13%	22	15.4%	**28**	**39.2%**
Keller Auditorium – Portland'5	N/A	N/A	N/A	N/A	50	37%	57	42.9%	**52**	**48.0%**
Oxbow Regional Park	N/A	N/A	43	8%	21	8%	39	8.8%	**38**	**4.8%**
Blue Lake Regional Park[10]	N/A	N/A	N/A	N/A	N/A	N/A	126	1.8%	**104**	**2.4%**
Glendoveer Golf Course	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**43**	**9.3%**
St. Johns Landfill	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**4**	**11.4%**
Electronics (all facilities)	N/A	N/A	N/A	N/A	N/A	N/A	5.48		**4**	
Total	**2,701**	**51.1%**	**2,604**	**50.7%**	**2,931**	**56.9%**	**3,172**	**59.9%**	**3,205**	**57.6%**

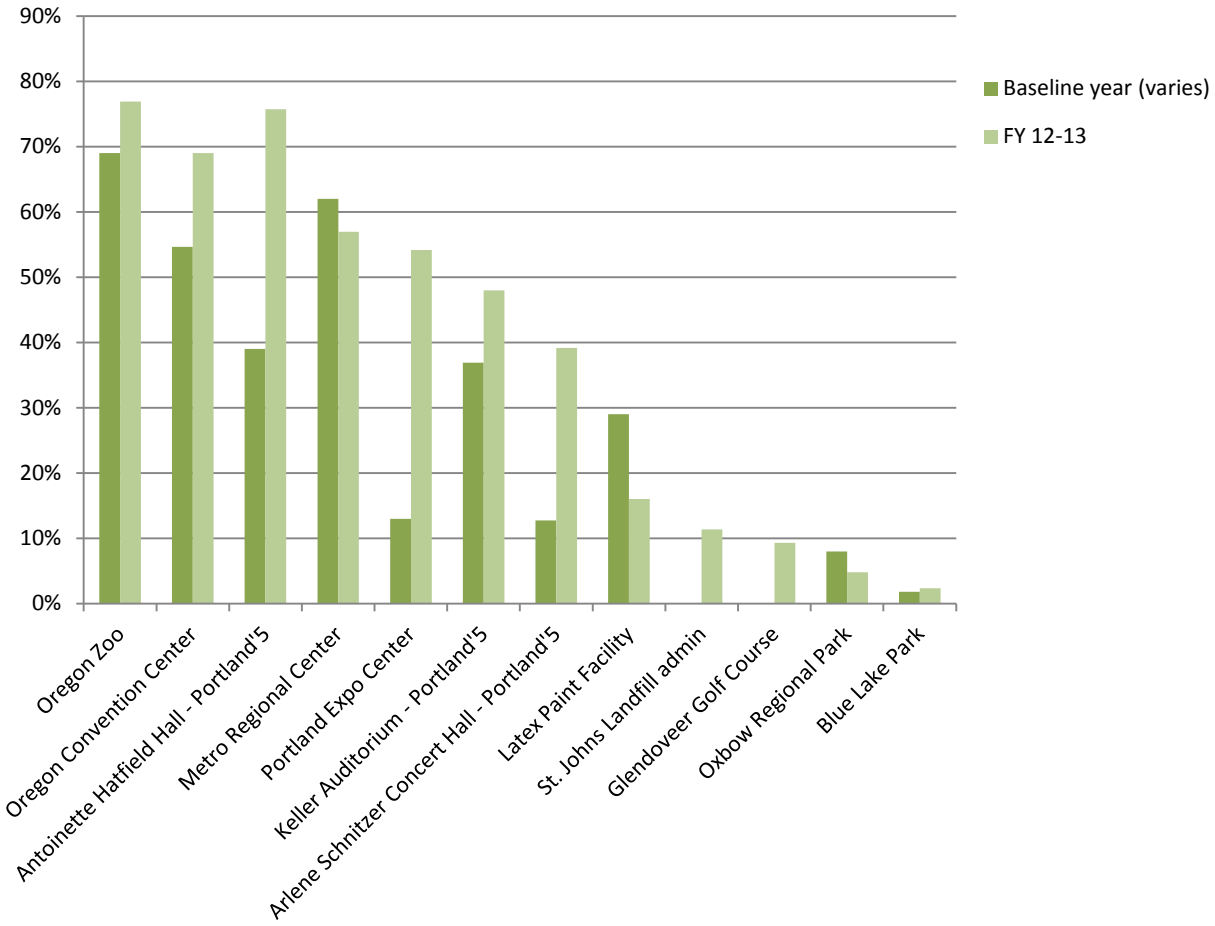
[9] Antoinette Hatfield Hall is the location for the commercial catering kitchen that serves all of the Portland'5 Centers for the Arts venues. This facility has a higher portion of food preparation waste that is collected for organics recycling and is a major reason why this facility has a higher recycling recovery rate than the other Portland'5 facilities.

[10] Waste generation and recycling numbers for Blue Lake Regional Park also include the Gleason and Chinook Landing boat launch sites. This is attributed to the maintenance crew bringing waste and recyclables from the boat launch sites to Blue Lake Regional Park for pickup by the garbage and recycling hauler.

FY 12-13 Total waste generation (waste plus recycling, tons)



FY 12-13 Recycling recovery rate at Metro facilities compared with baseline year



GOAL 4: CONSERVE WATER

Goal	Use 50 percent less water from 2008 levels by 2025.
Indicator	Gallons of water consumed from water utilities and on-site sources.
2013 target	15 percent decrease in water consumption from 2008 levels.

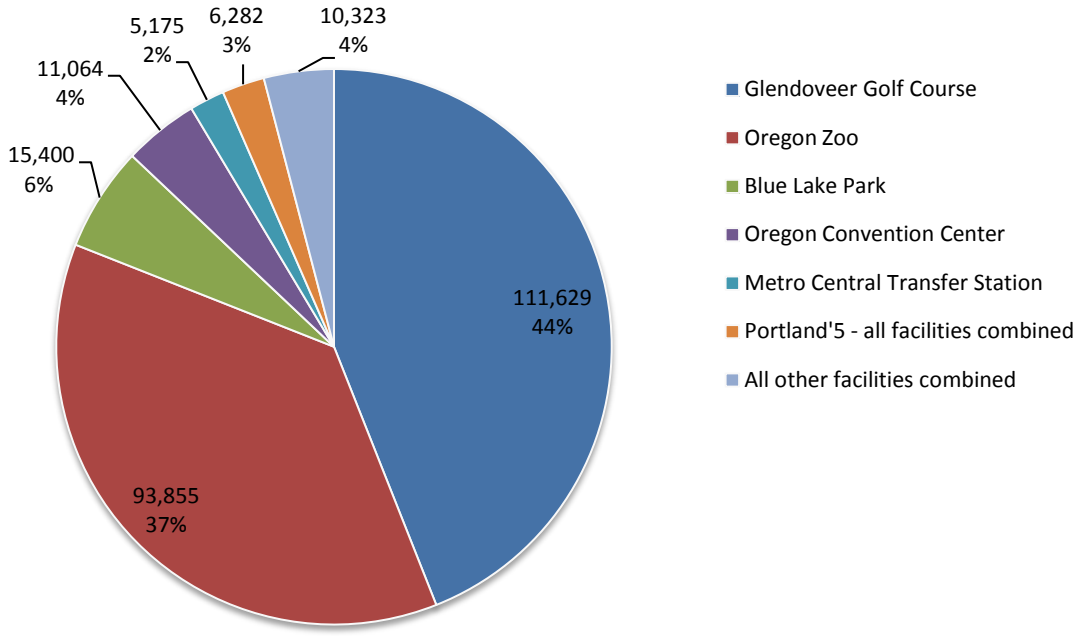
Water usage data for Metro facilities is collected from water-providing utilities and from well water usage records. Water use is reported in CCF, or hundred cubic feet (equivalent to 748 gallons). Glendoveer Golf Course and the Oregon Zoo continue to be the top water users of the Metro facilities.

Water consumption at Metro facilities, CCF (hundred cubic feet)

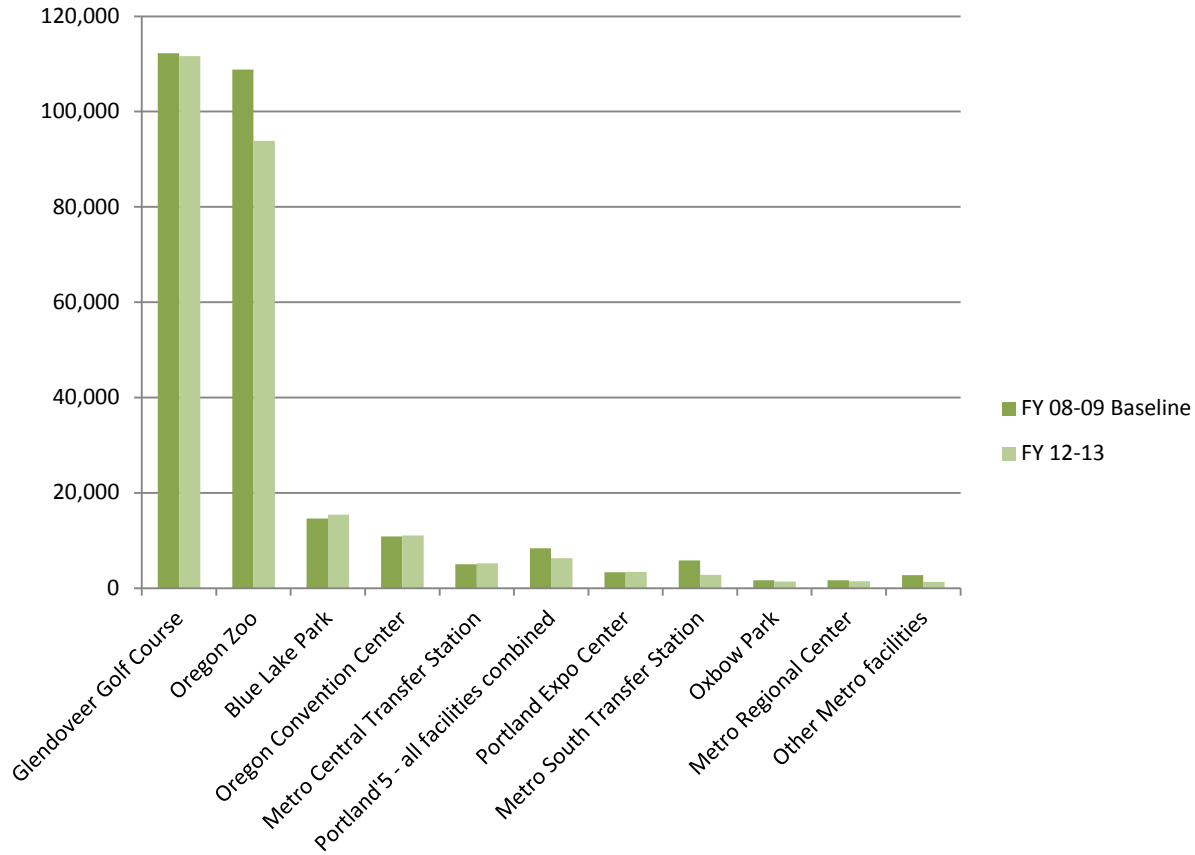
Site	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13	% change over baseline (FY08-09)
Oregon Zoo	108,828	95,586	87,341	96,477	**93,855**	-14%
Oregon Convention Center	10,818	11,016	9,113	8,963	**11,064**	2%
Portland Expo Center	3,356	3,474	2,837	3,895	**3,400**	1%
Antoinette Hatfield Hall – Portland'5	2,850	2,744	2,777	2,254	**2,332**	-18%
Keller Auditorium – Portland'5	2,721	2,222	1,964	2,265	**1,897**	-30%
Arlene Schnitzer Concert Hall – Portland'5	2,823	1,997	2,199	1,649	**2,053**	-27%
Metro Regional Center	1,662	1,790	1,622	1,055	**1,455**	-12%
Metro Central Transfer Station	4,995	4,283	4,169	7,532	**5,175**	4%
Metro South Transfer Station	5,800	11,192	3,420	2,882	**2,757**	-52%
Latex Paint Facility	668	740	561	549	**498**	-25%
Glendoveer Golf Course (wells)[11]	109,626	109,626	109,626	109,626	**109,626**	0%
Glendoveer Golf Course (drinking water)	2,633	2,108	1,933	1,778	**2,003**	-24%
St. Johns Landfill	213	121	264	66	**51**	-76%
Blue Lake Regional Park (well)	14,639	10,194	9,995	12,277	**15,400**	5%
Oxbow Regional Park (well)	1,671	2,352	1,806	1,559	**1,384**	-17%
Chinook Landing Marine Park	412	543	538	275	**456**	11%
Cooper Mountain Nature Park	312	918	584	313	**91**	-71%
Smith & Bybee Wetlands Natural Area	1,063	2,203	638	180	**196**	-82%
Lone Fir Pioneer Cemetery	40	26	31	73	**35**	-13%
Total (including wells)	**275,131**	**263,134**	**241,417**	**253,668**	**253,728**	**-8%**

[11] Glendoveer Golf Course irrigation usages are estimates. Flow meters installed last year are functional and the contracted facility operator is now keeping records. This number will be updated in 2014.

FY 12-13 water usage (CCF)



FY 12-13 Water usage compared with FY 08-09 baseline (CCF)



GOAL 5: ENHANCE HABITAT AND REDUCE STORMWATER

Goal Ensure that Metro's parks, trails, natural areas and developed properties positively contribute to healthy, functioning ecosystems and watershed health by 2025.

Indicator Percentage of effective impervious area[12] on Metro's developed properties; impervious surfaces directly connected to a stream or drainage system and not directed to a green roof, swale or other pervious area.

2013 targets Arrest to 2008 levels and begin to reduce effective total impervious area on developed properties. Identify habitat-friendly improvement opportunities for developed properties.

Tracking the effective impervious surface areas is a way to monitor the quantity of stormwater runoff from Metro's developed properties and impacts to habitat health.

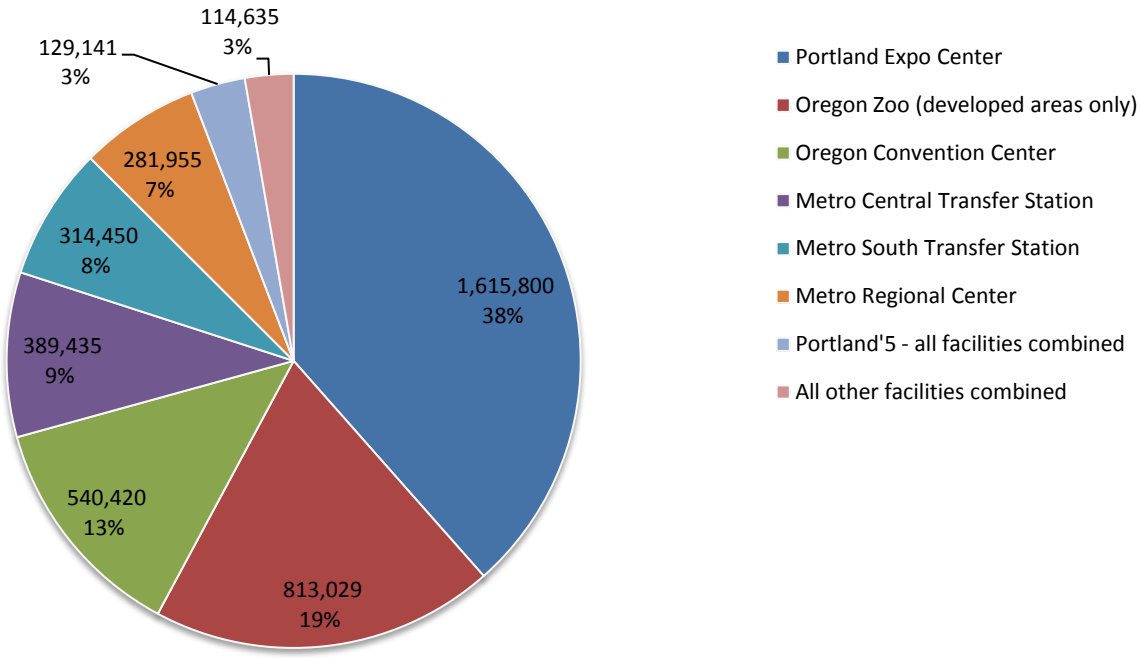
Site [13]	FY 12-13 effective impervious area (square feet)	FY 12-3 effective impervious area (percentage)
Oregon Zoo (developed areas only)	813,029	**96%**
Oregon Convention Center	540,420	**69%**
Oregon Convention Center Plaza (built 2011)	0	**0%**
Portland Expo Center	1,615,800	**100%**
Antoinette Hatfield Hall - Portland'5	41,689	**100%**
Keller Auditorium - Portland'5	45,763	**100%**
Arlene Schnitzer Concert Hall - Portland'5	40,885	**100%**
Metro Regional Center	281,955	**99.2%**
Metro Central Transfer Station	389,435	**99.3%**
Metro South Transfer Station	314,450	**100%**
Latex Paint Facility (leased portion only)	42,500	**100%**
Lone Fir Cemetery (roads and sidewalks inside cemetery)	72,135	**100%**
M. James Gleason Memorial Boat Ramp[14]	0	**0%**
	Total: 4,198,061	**Average: 75.4%**

[12] An impervious area that collects and drains rainwater directly to a stream or wetland system via pipes or sheet flow is considered an "effective impervious area" because it effectively drains the landscape. An impervious area that drains to landscaping, swales, parks and other impervious areas allows water to infiltrate through the soil and into ground water, without a direct connection to the stream or wetland.

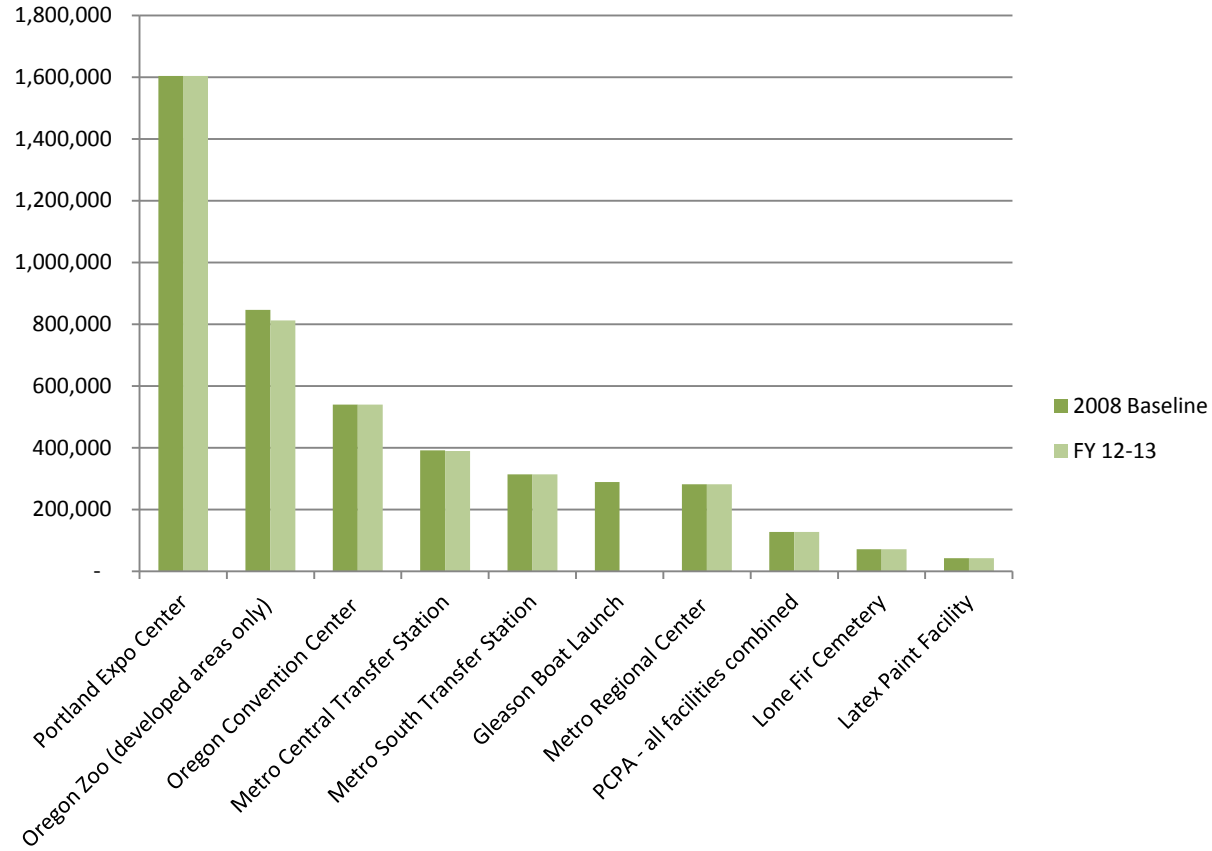
[13] The following facilities are not represented on this table because they do not discharge stormwater to a waterway: Blue Lake Regional Park, Oxbow Regional Park, Glendoveer Golf Course (stormwater treated by drywells, no storm drains at this site), Chinook Landing Marine Park, Cooper Mountain Nature Park and Smith and Bybee Wetlands.

[14] The Gleason boat launch facility added stormwater treatment bioswales in the past year with a major overhaul of the parking lot, reducing stormwater runoff from the lot by nearly 290,000 square feet.

FY 12-13 effective impervious area (square feet)



FY 12-13 effective impervious area compared with 2008 baseline (square feet)



ADDITIONAL DATA: ENERGY EFFICIENCY AND UTILITY COSTS

FY 12-13 Energy efficiency projects

Venue/ department	Project location	Project status	Description	Est. electricity savings (kWh)	Est. natural gas savings (therms)	ETO incentive[15]
Oregon Zoo	Africafe		New boiler		2,471	$6,000
	Vet Medical Center	COMPLETE	New building, design and custom track	42,027	2,814	$9,121
	Admin building	ACTIVE	Energy efficiency study	-	-	$3,500
	Africafe/Aviary	ACTIVE	Energy efficiency study	-	-	$6,000
	Penguin exhibit	COMPLETE	Lighting	7,044	-	$1,355
Oregon Convention Center	Meeting rooms	COMPLETE	Lighting	1,194,770	-	$206,802
	Kitchen	COMPLETE	Walk-in refrigeration units	33,391	-	$2,588
	Whole facility	ACTIVE	Strategic energy management services	-	-	$7,525
	Whole facility	ACTIVE	Study of demand control ventilation	-	-	$3,200
	Whole facility	COMPLETE	Controls for air handler unit	164,477	14,461	$55,000
	Meeting rooms	COMPLETE	Occupancy sensors	3,517	3,410	$4,289
	Whole facility	COMPLETE	Implement demand control ventilation	54,473		$13,643
	Metro Data Center	ACTIVE	Study for data center	-	-	$5,626
Portland'5 Centers for the Arts	Arlene Schnitzer Concert Hall	ACTIVE	Energy efficiency study	-	-	$6,200
	Antoinette Hatfield Hall	COMPLETE	Chiller replacement	87,566	2,338	$24,660
	Antoinette Hatfield Hall	COMPLETE	Lighting	5,160		$1,032
	Antoinette Hatfield Hall	COMPLETE	Variable frequency drives	14,764		$3,431
	Antoinette Hatfield Hall	COMPLETE	Ice machine replacement	2,491		$500
	Arlene Schnitzer Concert Hall	COMPLETE	Ice machine replacement	1,515		$300
	Keller Auditorium	COMPLETE	Ice machine replacement	1,515		$300
Parks & Environmental Services	Metro Regional Center	COMPLETE	Lighting and occupancy sensors	23,725	-	$5,606
	Server room	COMPLETE	25 servers virtualized	58,634	-	$8,750
Total				**1,695,069**	**25,494**	**$375,428**

[15] Cash incentives from the Energy Trust of Oregon are paid for projects completed at Metro facilities that meet certain energy efficiency criteria with prior approval from ETO. Funding from ETO's Existing Buildings Program comes from Oregon's Public Purpose Charge paid to Portland General Electric, Pacific Power and NW Natural.

Many of Metro's sustainability activities revolve around improving facility systems and operations to make them more energy and water efficient. This data provides financial context and a sense of scale to the resource consumption that accompanies operating Metro facilities and visitor venues.

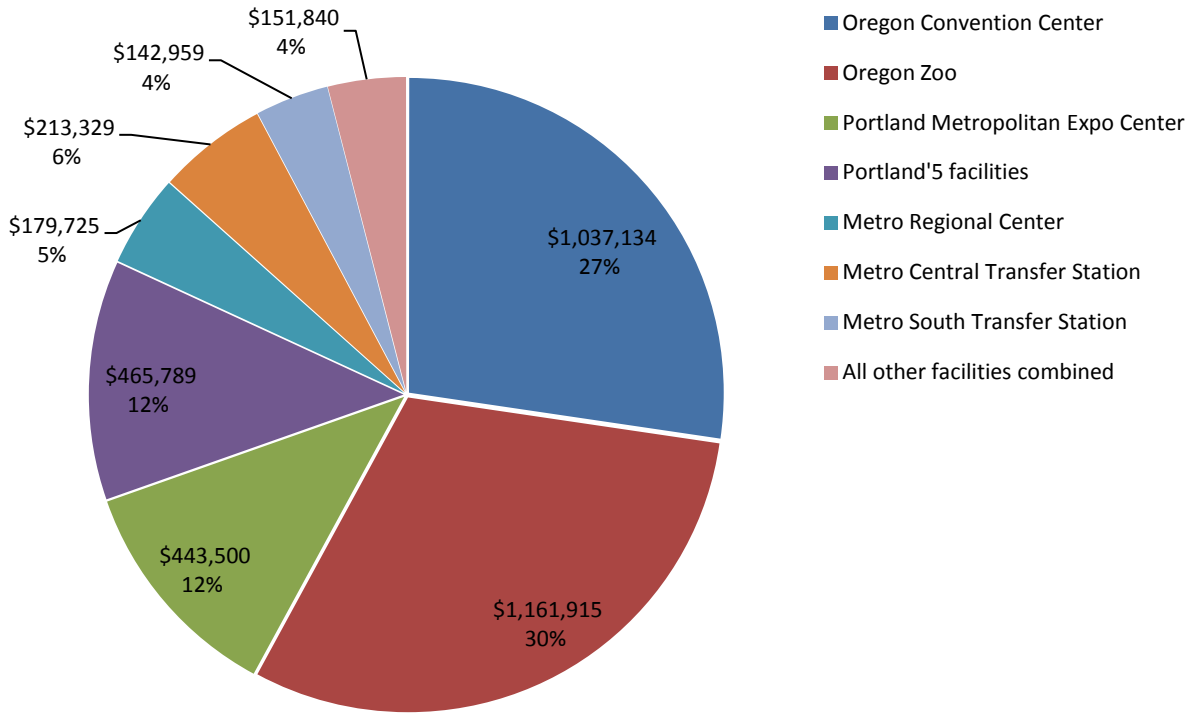
Utility consumption costs[16] for Metro facilities, FY 12-13

Site	Electricity	Natural gas	Water	Irrigation	Stormwater fees	Facility total
Oregon Zoo	$587,563	$181,365	$324,470	$386	$68,130	$1,161,915
Oregon Convention Center	$764,017	$165,274	$35,206	$9,025	$63,612	$1,037,134
Portland Expo Center	$332,476	$79,875	$17,149	-	$14,000	$443,500
Metro Regional Center	$153,404	$3,433	$7,771	-	$15,116	$179,725
Antoinette Hatfield Hall – Portland'5	$127,558	$40,276	$10,230	-	$3,797	$181,861
Keller Auditorium – Portland'5	$111,361	$22,268	$7,568	-	$6,318	$147,516
Arlene Schnitzer Concert Hall – Portland'5	$103,769	$18,823	$10,432	-	$3,388	$136,412
Portland'5 Centers for the Arts subtotal						***$465,789***
Metro Central Transfer Station	$145,059	$1,753	$18,293	-	$48,225	$213,329
Metro South Transfer Station	$115,494	$4,499	$9,419	-	$13,547	$142,959
Glendoveer Golf Course[17]	$33,112	$4,153	$5,683	-	-	$42,948
Latex Paint Facility	$25,095	$5,236	$4,296	-	$7,224	$41,852
Blue Lake Regional Park	$21,287	-	-	-	-	$21,287
St. Johns Landfill	$17,213	-	$2,436	-	$304	$19,952
Oxbow Regional Park	$8,987	-	-	-	-	$8,987
Chinook Landing Marine Park	$5,027	-	$2,541	-	-	$7,568
Borland Field Station	$2,504	-	$96	-	-	$2,600
Howell Territorial Park	$556	$706	-	-	-	$1,262
Graham Oaks Nature Park	$493	-	$462	$1,563	$600	$3,118
Lone Fir Pioneer Cemetery	$225	-	$353	$357	-	$935
Beggars-Tick Wildlife Refuge	-	-	$48	-	-	$48
Columbia Pioneer Cemetery	-	-	$118	-	-	$118
M. James Gleason Memorial Boat Ramp	-	-	$1,165	-	-	$1,165
Total	**$2,555,200**	**$527,662**	**$457,737**	**$11,332**	**$244,260**	**$3,796,191**

[16] Data in this table are from Metro's Utility Manager database and include utility consumption costs only, not additional fees on utility invoices. This database is not the official system of record for accounting purposes so these numbers are provided for purposes of scale only. Includes costs for irrigation that is submetered separate from other water usage; does not represent all irrigation costs. Does not include irrigation for Metro cemeteries; these costs are less than $1,000 for the year. Stormwater fees from the Portland Expo Center FY 12-13 are estimated from the Expo Center budget. These costs will be tracked in the Utility Manager database starting with FY 13-14. Table does not include sewer costs which typically appear on the water bill for a facility. *Source:* Utility Manager Database, Monthly Utility Comparison report, September 17, 2013.

[17] Data in this report for Glendoveer Golf Course do not include data from the Ringside Restaurant which leases a building from Metro and operated it at the golf course.

FY 12-13 Utility costs by facility or venue



SUSTAINABLE PROCUREMENT

Metro adopted a sustainable procurement administrative procedure in 2012 which implements Metro Code chapter 2.04.500-540, "Sustainable Procurement Program." FY 2012-13 was the first fiscal year that Metro tracked purchases in multiple sustainable purchasing categories for goods and services. **5.6 percent of Metro's total procurement expenses were for sustainable products or services**.

	Total FY 12-13 total purchases (excluding grants)	Amount spent on sustainable products or services	Percent of total expenses identified as sustainable products or services
TOTAL	**$74,705,188.25**	**$4,158,687.62**	**5.6%** (3.4% without "Other" category, see footnote)
MERC	*$27,547,738.19*	*$1,331,764.71*	*4.8%*
Metro	*$47,157,450.06*	*$2,826,922.91*	*6.0%*
Detail of sustainable purchasing categories:			
	$171,862.42	0.230%	Certified Energy Efficient Equipment
	$14,665.03	0.020%	Certified EPEAT[18]
	$38,706.59	0.052%	Certified Green Cleaners[19]
	$8,170.00	0.011%	Certified Wood Product
	$12,505.44	0.017%	Certified Organic
	$218,078.72	0.292%	Habitat Friendly
	$147,240.04	0.197%	Recycled Paper
	$97,829.53	0.131%	Recycled Content
	$358,695.61	0.480%	Other Product
	$1,090,277.03	1.459%	Habitat Friendly Services[20]
	$331,081.71	0.443%	Energy Efficient Services
	$69,951.27	0.094%	Sustainable Feasibility/Design
	$1,599,624.23	2.141%	Sustainable Services – Other[21]
	$70,546,500.63	*94.433%*	*Not Sustainable or Not Identified*
Total	**$74,705,188.25**		

[18] The Electronic Product Environmental Assessment Tool (EPEAT) is an ecolabel system which helps purchasers evaluate, compare and select electronic products based on their environmental attributes. Products in the registry are rated as gold, silver or bronze based on a set of environmental performance criteria. www.EPEAT.net

[19] Green cleaners certified by a third-party ecolabel such as Green Seal are tracked in this category.

[20] Habitat Friendly services include contracts for professional services related to Metro's Natural Areas Program for habitat and planting area restoration.

[21] "Sustainable Services – Other" is a catchall category for sustainable purchases that do not fit in the other tracking categories. These include contracts with consultants supporting community sustainability, recycling or toxics reduction programs, Metro sponsorships of sustainability conferences or events and various other services not always related to Metro's sustainable procurement policy.

STATUS OF PRIORITY SUSTAINABILITY PLAN PROJECTS as of October 2013

Key: ✓ Completed
● In progress

Sustainability program actions[22]

Strategy	Sustainability Plan action and reference number	Status
Program Strategy 1: Integrate accountability into implementation of the sustainability plan.	**Program Action 1.1:** Create and adopt an implementation process for the Sustainability Plan.	✓ Completed 2011
	Program Action 1.2: Integrate sustainability goals and desired outcomes into PACe and other performance measures for Metro employees, starting with managers.	✓ Completed 2012
	Program Action 1.3: Conduct annual program evaluation with program stakeholders to evaluate what works well and what needs to be improved. Include check-in on barriers and opportunities.	• Ongoing
Program Strategy 2: Create a comprehensive sustainability training program for Metro employees.	**Program Action 2.1:** Provide basic sustainability training to all Metro employees.	• Ongoing
Program Strategy 3: Build funding and staff capacity to implement sustainability plan.	**Program Action 3.1**: Create a comprehensive funding strategy for sustainability projects, including sustainability requirements for new capital assets. (Also supports GHG Action 5.1 and Water action 6.1 regarding project funding.)	• Complete – CAMP policy approved October 2013
	Program Action 3.1: Identify and address staff capacity needed to coordinate site-specific sustainability activities.	• Ongoing
Program Strategy 4: Create policies and procedures to support sustainability plan and goals.	**Program Action 4.1:** Develop and adopt a sustainable procurement policy as directed by Metro Code, "Sustainable Procurement Program."	✓ Completed 2012
	Program Action 4.2: Adopt a Metro-wide green building policy to set standards based on LEED for new construction and operations of existing buildings.	✓ Completed 2011
	Implement green building policy; complete assessments for solar, ecoroof, LEED-EBOM and habitat feasibility.	• In progress
Program Strategy 5: Update sustainability goals and interim targets on a regular basis.	**Program Action 5.2**: Create new sustainability goals to address sustainability gaps of social equity and economic aspects of Metro's operations.	• In progress
Program Strategy 6: Track progress of sustainability plan implementation and impact on goal areas.	**Program Action 6.1:** Develop an ongoing tracking and monitoring system for all five goal areas. Include: ✓ Utility Manager database (electricity, gas, water) ✓ GHG inventory updated 2013 ✓ Waste and recycling database ✓ Effective impervious area tracking • MSDS database: seeking new database host	• Four of five complete
	Program Action 6.2: Report annually on progress in five goal areas, and on sustainability projects completed each year.	✓ Completed 2011, 2012, 2013
GHG Strategy 1: Reduce GHG emissions from building operations, maintenance and siting through energy efficiency and resource conservation.	**GHG Action 1.1:** Audit buildings for energy efficiency opportunities and develop recommendations for an energy efficiency plan specific to each site.	✓ Completed 2012
	GHG Action 1.2: Implement energy efficiency plans and develop supporting policies for each site audited.	• In progress

[22] Actions from Metro Sustainability Plan: http://library.oregonmetro.gov/files//metro_sustainability_plan_final_2010.pdf

Strategy	Sustainability Plan action and reference number	Status
	GHG Action 1.3: Identify and evaluate options for reducing GHG emissions from the St. Johns Landfill, particularly the flaring of methane and resulting carbon dioxide emissions.	✓Completed 2012
	GHG Action 1.4: Increase on-site generation of renewable energy at Metro locations. Assess locations for opportunities. Implement according to greatest opportunities (i.e. solar, small wind, etc.)	• In progress
GHG Strategy 3: Reduce GHG emissions related to supply chain and service providers through contracts and procurement.	**GHG Action 3.1:** Include energy efficiency criteria in all vendor and facility service and equipment contracts.	• In progress
GHG Strategy 4: Reduce GHG emissions related to supply chain and service providers through contracts and procurement.	**GHG Action 4.1:** Establish process for ongoing tracking of all GHG-related data sources from Metro's internal operations (related to regular updates to Metro's internal GHG emissions inventory).	• In progress
GHG Strategy 5: Develop and implement funding mechanism for projects that reduce GHG emissions, including new and existing capital.	**GHG Action 5.1:** Develop and implement funding mechanism for projects that reduce GHG emissions, including new and existing capital.	• In progress
GHG Strategy 6: Support and encourage employee opportunities to reduce GHG emissions through behavior changes related to their Metro work day, as well as opportunities for visitors to reduce their emissions.	**GHG Action 6.1:** Reduce emissions from Metro employees commuting to and from Metro work sites.	• In progress
Toxics Strategy 1: Complete and update Metro's comprehensive chemical product inventory.	**Toxics Action 1.1:** Establish process for ongoing tracking and inventory of chemicals and products that contain toxics in use at Metro.	✓Completed 2012
Toxics Strategy 2: Reduce and/or eliminate the most toxic products and materials first.	**Toxics Action 2.1:** Identify the most toxic products in Metro's inventory and replace them with less-toxic alternatives.	• In progress
	Toxics Action 2.2: Reduce the use of herbicides and pesticides in all Metro operations. Create and implement an Integrated Pest Management (IPM) policy for all Metro properties.	• In progress
Toxics Strategy 3: Identify and implement methods for procurement of less-toxic goods and materials through purchasing policies and procedures.	**Toxics Action 3.1**: Reduce purchase of toxic products by requiring or requesting least-toxic options from contractors and suppliers in bids and RFPs.	• In progress
Waste Strategy 3: Improve and expand recycling programs at Metro facilities and properties.	**Waste Action 3.1:** Meet Business Recycling Requirements at all Metro facilities.	✓Completed 2011
Waste Strategy 6: Identify tools needed to reduce dependency on materials (such as paper) to prevent waste.	**Waste Action 6.1:** Implement a paper reduction strategy for Metro operations that fosters a transition to a paperless Metro workplace. (Note: Do this action AFTER Action 7.2: Track paper use by department.)	✓In progress
Waste Strategy 7: Improve tracking and reporting on waste generation and recycling from haulers, as well as internal tracking by department.	**Waste Action 7.1:** Track waste generation and recycling data for all Metro locations.	✓Completed 2012
	Waste Action 7.2: Track paper use by department or facility; set goal for reducing paper consumption and track progress. (Note: Do this action BEFORE Action 6.1: Paper Reduction Strategy.)	• In progress

Strategy	Sustainability Plan action and reference number	Status
Water Strategy 1: Assess and prioritize water conservation opportunities on all Metro properties.	**Water Action 1.1:** Audit water usage at all Metro locations that have not had a recent water audit to develop recommendations for water conservation strategies specific to each site.	• In progress (Complete at MRC, Zoo, OCC, Expo)
Water Strategy 2: Reduce water usage through improvements to water use prevention and water efficiency, starting with biggest water users.	**Water Action 2.1:** Ensure implementation of water conservation projects identified in the Zoo Master Plan.	✓Completed 2011 (Penguin filtration)
	Water Action 2.2: Integrate sustainable operations and water conservation requirements into operations contract for Glendoveer Golf Course.	• In progress
	Water Action 2.4: Retrofit existing buildings' water fixtures and equipment to high-efficiency where highest opportunity areas are found in water audits.	• In progress
	Water Action 2.5: Create requirement that all water fixtures and equipment purchases be water efficient.	✓Completed 2011 (see green building policy)
Water Strategy 4: Establish an ongoing tracking and reporting system for all water usage at Metro properties.	**Water Action 4.1** Create ongoing tracking system for all water uses at Metro locations. Include on-site water sources such as wells.	✓ Completed 2011 (Utility Manager database)
Water Strategy 5: Educate and train Metro employees, facility managers and public visitors on water conservation.	**Water Action 5.1** Create water conservation training for employees responsible for most water use, including parks operations, animal keepers, transfer station operations and building maintenance.	• In progress
Water Strategy 6: Create a funding strategy for water conservation projects.	**Water Action 6.1** Create funding mechanisms for water conservation projects, including new and existing capital. Evaluate water-related projects in advance of Renewal and Replacement schedule and leverage R&R funds to implement. Establish return on investment (ROI) standards for water conservation projects that would enable them to be prioritized and selected for funding.	• In progress
Habitat Strategy 1: Assess and prioritize habitat and stormwater improvement opportunities on all Metro properties.	**Habitat Action 1.1:** Conduct habitat and stormwater site assessments at all Metro properties, especially developed properties. Use assessments to develop habitat and stormwater improvement site plans.	• In progress
Habitat Strategy 2: Improve habitat value and ecological function of, and reduce stormwater runoff from all Metro properties.	**Habitat Action 2.2** Implement stormwater improvement site plans for all properties, using low-impact development strategies that reduce runoff and treat stormwater onsite.	• In progress
	Habitat Action 2.3 (repeat of Toxics Action 2.2): Reduce the use of herbicides and pesticides in all Metro operations. Create and implement an Integrated Pest Management (IPM) policy for all Metro properties.	• In progress
Habitat Strategy 4: Educate Metro employees on habitat-friendly development practices, especially property and project managers.	**Habitat Action 4.1** Create a list of habitat-friendly development practices and sustainable stormwater best management practices for property managers, and train them on how to use it.	• In progress
Habitat Strategy 5: Track habitat and stormwater improvements on Metro Properties.	**Habitat Action 5.1** Establish effective reporting and monitoring system for improvements to habitat and stormwater at Metro locations. Include reductions in impervious surface area and number of habitat-friendly development practices installed at Metro locations.	• In progress

ABOUT THE METRO SUSTAINABILITY PROGRAM

Metro's Sustainability Program coordinates implementation of the agency's Sustainability Plan for internal operations. Actions are spread across Metro's departments and visitor venues.

Sustainability steering committee

Oversight and accountability for implementation of the Metro Sustainability Plan is provided by a steering committee of representatives from the major facilities in Metro's operations.

- Richard Wehring, Portland'5 Center for the Arts
- Rick Hanes, Oregon Zoo
- Matthew Uchtman and Erin Rowland, Oregon Convention Center
- Jim Caldwell, Portland Expo Center
- Penny Erickson, Parks and Environmental Services – solid waste operations
- Lydia Neill, Parks and Environmental Services – parks operations
- Rory Greenfield, Parks and Environmental Services – Metro Regional Center operations

Green teams

In addition to the work of the sustainability steering committee and the facility operations managers, four green teams support implementation of sustainable practices in Metro workplaces.

The following Metro employees served as chairs of the following green teams during FY 12-13:

- Oregon Zoo green team: Rick Hanes
- Metro Regional Center green team: Resa Thomason
- Oregon Convention Center sustainability team: Erin Rowland
- Parks and Environmental Services green team: Jim Quinn
- Portland'5 Centers for the Arts: Richard Wehring

Special thanks to Aidan Gronauer in Metro's Sustainability Center for assistance with management of the Utility Manager database and data analysis and to Karen Scott-Lowthian in Metro's Data Resource Center for creating the Metro Employee Commute Distance map on page 13.

For more information about Metro's Sustainability Program and this report, contact:

Molly Chidsey, Sustainability Coordinator
Metro Sustainability Center
600 NE Grand Avenue
Portland, OR 97232
503-797-1690
molly.chidsey@oregonmetro.gov
www.oregonmetro.gov/greenmetro