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MAKING A GREAT PLACE

Metro

Sustainability Report

FY 2013-2014

October 31, 2014

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.

Stay in touch with news, stories and things to do.

www.oregonmetro.gov/connect

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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 and past years' progress reports are available online at www.oregonmetro.gov/greenmetro.

The sustainability plan is one part of a larger framework of sustainability and services at Metro. Metro defines sustainability as one of a triple bottom line: outcomes that support not only a healthy environment but also an equitable community and a strong regional economy.

For more information about Metro's work on organizational diversity and regional equity, please see Metro's Diversity Action Plan and Equity Strategy Program.

Metro's Diversity Program: www.oregonmetro.gov/diversity

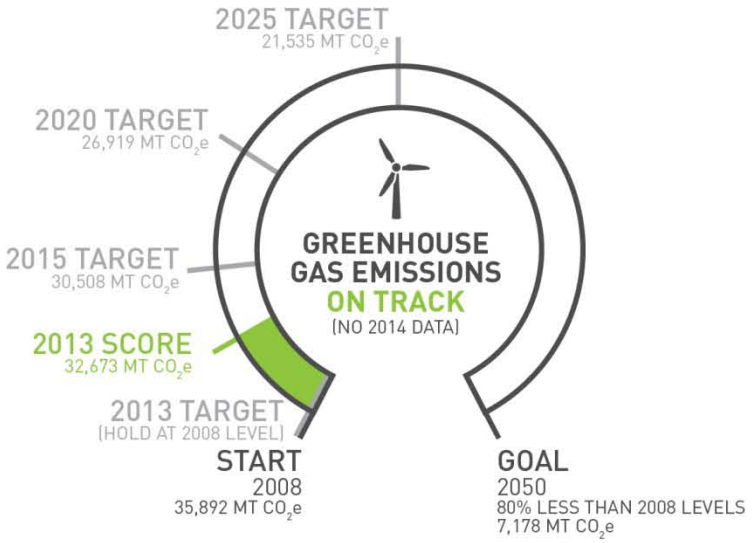
Metro's Equity Strategy: www.oregonmetro.gov/equity

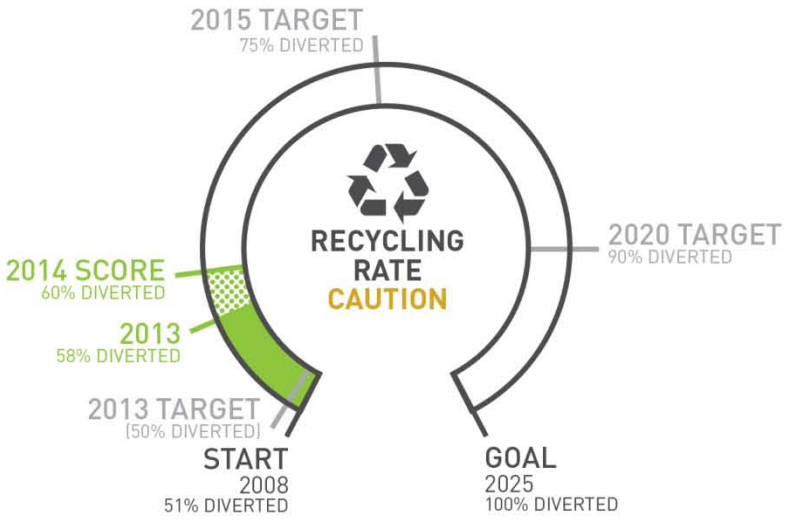
Metro Value of Sustainability

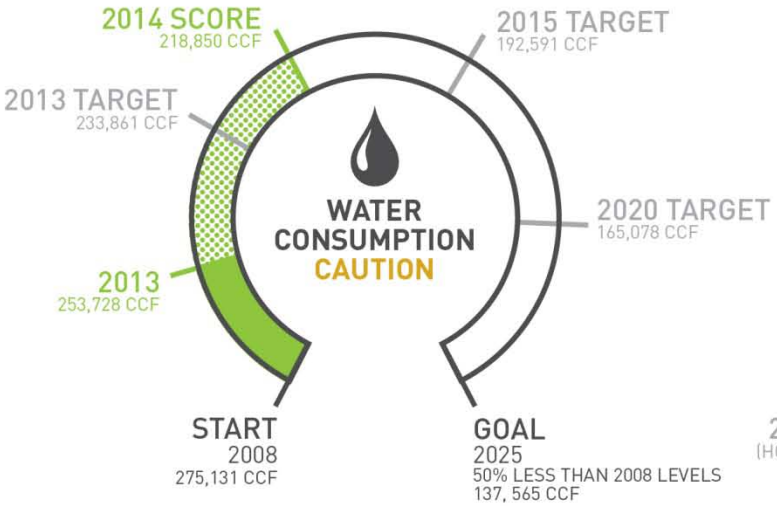
We are leaders in demonstrating resource use and protection in a manner that enables people to meet current needs without compromising the needs of future generations, and while balancing the needs of the economy, environment, and society.

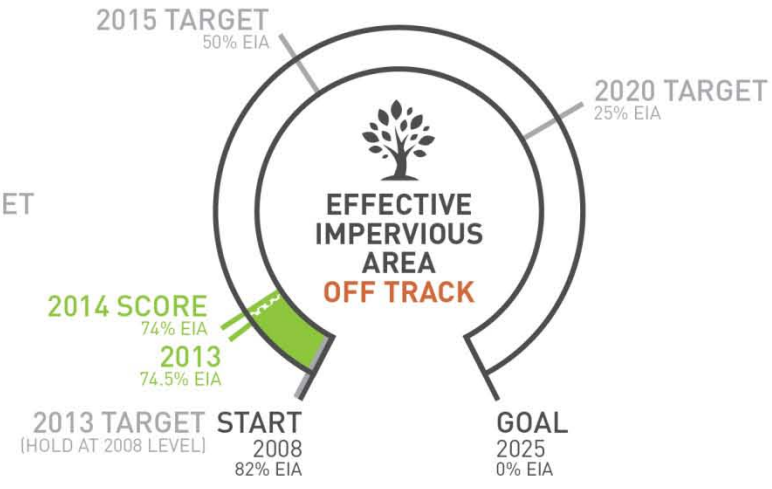
FY 2013–14 METRO INTERNAL OPERATIONS

SUSTAINABILITY SCORECARD









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MT CO_2e: Metric tons carbon dioxide equivalent
CCF: Hundred cubic feet, equivalent to 748 gallons
EIA: Effective impervious area

MEET THE GREEN TEAMS FY13-14

OCC Sustainability Team members: Larry Buskrud, Stefanie Arnold, Claire Papas, Sara Zeck, Lindsey Newkirk, Shauna Ladue, Erin Rowland (chair), Bill Stratton, Nathan Dickie, Matt Nicoll. Not pictured: Matthew Uchtman and Lisa Grau.

Metro Regional Center Green Team members: Robyn Brooks, Jodi Wacenske, Patrick Morgan, Sabrina Gogol (chair). *Not pictured:* Ramona Perrault, Paulette Copperstone, Marina Nelson.

Metro Sustainability Steering Committee members: Jason Blackwell, Rick Hanes, Matthew Uchtman, Jim Caldwell, Rory Greenfield, Molly Chidsey, Lydia Neill, Susan Boase, Erin Rowland. *Not pictured:* Penny Erickson, Ed Williams.

Oregon Zoo Green Team members pictured: Jeremy Kirby, Philip Fensterer, Nancy Kluss, Rick Hanes (chair), Karen Lewis, Michael Weatherman, Terry Pelham. *Not pictured:* Anya Bogorad, Tyson Stoianoff.

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.

Parks and Environmental Services Green Team members: Jim Quinn, Shellie Moran, Andrew Judkins, Greg Chavira, Therese Mitchell, Chelsea Althauser, (not pictured) Evan Harwood.

PART 1:

KEY ACCOMPLISHMENTS

OREGON CONVENTION CENTER
METRO

Oregon Convention Center achieves LEED platinum rating

In March 2014, the Oregon Convention Center learned from the Green Building Certification Institute that the facility had achieved LEED Existing Building Certification at the Platinum level. Platinum is the highest rating level achievable and the Oregon Convention Center is now one of only three in North America to be certified as platinum.

Supports all goals

Oregon Convention Center staff are leaders in operating a sustainable center. Starting in 2004, the convention center was the first to be LEED Certified for Existing Buildings, followed by a Silver certification in 2008. To earn LEED certification, a facility meets points within seven categories with an emphasis on building efficiency. In the past year, Oregon Convention Center sustainability coordinator Erin Rowland saw a significant increase in the building's energy efficiency score due to overall impacts of lighting replacements and other projects, as well as a focus on alternative commuting for employees. "We felt platinum was within our reach," says Erin. "It's a pretty intense process, but the final result was well worth it."

Watch OCC's video highlighting their sustainability accomplishments, and see the next page for a summary of the year's accomplishments and online at http://www.oregoncc.org/sustainability/.

Oregon Convention Center first in the world to achieve highest level of international sustainability certification

The Oregon Convention Center is the first venue in the world to be awarded a Level Four international sustainability certification, the highest level of certification achievable, from the international standards organization ASTM (formerly known as the American Society for Testing and Materials). The ASTM Venue Standard measures environmentally sustainable meetings, events, trade shows and conferences.

Supports all goals

The ASTM Venue Standard, in partnership with the Green Meeting Industry Council, defines requirements and performance criteria for staff management, communications, waste management, energy, air quality, water, procurement and community partners.

OREGON CONVENTION CENTER
2013–14

Year in Review:

Sustainability Highlights

GOAL 1

Contribute to the social and economic vitality of the Lloyd district and residents of surrounding neighborhoods

35,000 meals

Donated **20.86 TONS OF FOOD** to Blanchet House of Hospitality and the Oregon Food Bank

Increased staff participation in our **ANNUAL GIVING CAMPAIGN** from 3% of staff to 22%

Committed three staff members to **SERVING ON THE LLOYD ECO-DISTRICT BOARD** and advisory committees

GOAL 2

Increase operational efficiencies in energy, water, waste, and toxics

Developed a strategic **ENERGY MANAGEMENT** program and policy

ENERGY SAVINGS

2013 Saved 66,654 Therms
2012 Saved 15,609 Therms

2013 Saved 1,506,369 kWh
2012 Saved 447,117 kWh

Increased **RECYCLING OPTIONS** to attendees in the building

GOAL 3

Boost our sustainability communication to employees, exhibitors and guests

Installed a permanent **SUSTAINABILITY EXHIBIT**

Updated sustainability resources for clients, including a **NEW VIDEO**

GOAL 4

Strengthen our position as an innovative leader in sustainable practices for convention centers and the industry

One of two convention centers in the U.S. to earn **LEED PLATINUM**

First convention center in the world to be GMIC verified as a Level 4 APEX/ ASTM Venue for environmentally sustainable meetings

Re-certified as a **SALMON-SAFE FACILITY**

GOAL 5

Create an annual report to document our progress toward our goals

Developed an internal **REPORTING TOOL** to evaluate progress

Highlighted our major achievements with a **"YEAR IN REVIEW"** fact sheet

PORTLAND'5
CENTERS FOR THE ARTS

Retrofitting toilets saves water with every flush

54 toilets and urinals were retrofitted with low-flow valves or replaced completely at Antoinette Hatfield Hall and the Newmark Theater. The retrofits will save nearly 420,000 gallons of water and at least $6,000 in water costs annually.

Dual-flush valves at Antoinette Hatfield Hall will help save 420,000 gallons of water a year.

Brighter, more efficient bulbs light Portland'5 Centers for the Arts

The lights on Broadway are shining brighter but not hotter. Thanks to a partnership with Energy Trust of Oregon, the Portland'5 Centers for the Arts is moving towards a more sustainable future – one light bulb at a time.

In July, 7,642 light bulbs were changed at different areas outside Arlene Schnitzer Concert Hall, the Newmark, Brunish and Winningstad Theatres, including the marquees over both entrances of the Schnitzer Concert Hall and along both sides of the iconic Portland sign. Familiar but energy-draining 11-watt bulbs were finally replaced by longer-lasting and energy efficient two-watt LED bulbs. This process will help Portland'5 save energy, staff time, and, of course, dollars – $18,069 annually, to be exact.

The new bulbs will save 186,000 kilowatt hours – enough to power 16 homes. For the Portland'5 lighting project, Energy Trust's lighting experts helped Portland'5 find the proper kind of bulbs and also chipped in $46,582 in incentives, or 26% of the $182,200 cost to replace and install the bulbs.

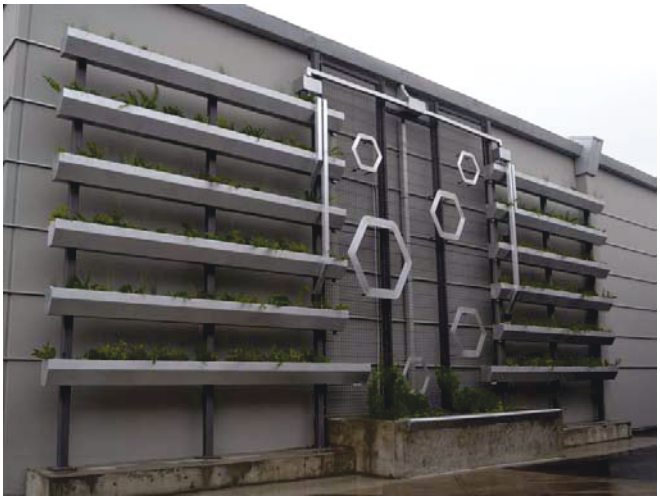
For the whole story, go to www.portland5.com/news/brighter-more-efficient-bulbs-light-portland%E2%80%995-centers-arts-theatres.

Energy hogging 11-watt bulbs were swapped out for super efficient 2-watt LED's on the Portland marquee. Photo by December Carson.

Portland Expo Center debuts unique living stormwater green wall

A new stormwater green wall installed at Portland's Expo Center is unique, even by this city's already high standards. Located at the Expo Center's Hall E, the green wall is special because it manages stormwater runoff. Green walls are traditionally built for their ability to cool down warm climates and provide a sense of nature in urban environments.

Habitat goal



Portland Expo Center green wall. Photo courtesy of GreenWorks

Funded largely by a grant received by Portland's Bureau of Environmental Services from the U.S. Environmental Protection Agency, the green wall was designed, engineered and constructed by Portland-based GreenWorks Design, Cascade Design and Colton Construction. Standing 30-feet tall and 60-feet long, the free-standing structure is made of steel and aluminum and is adorned with soil and vegetation native to Oregon, particularly the Columbia River Gorge, and receives rain water runoff from a roof area of 9,500 square feet.

For more information visit www.oregonmetro.gov/news/portland-expo-center-debuts-unique-living-stormwater-green-wall.

Expo donates recyclable, returnable bottles and cans to local youth groups

The Portland Expo Center donated 3.5 tons of returnable beverage containers to local schools and youth-serving nonprofit organizations last year. Beverage containers like metal cans, plastic bottles and glass bottles consumed by visitors to the Expo Center are collected for recycling. Those with a refundable five cent deposit are donated to organizations that turn in the containers for the deposit, which in turn is used to fund their education programs.

Waste goal

Recipients of these recyclables include Roosevelt High School, Jefferson High School, King Elementary School, Boy Scouts of America, and Sea Scouts. Programs benefitting from these donations include sports, after school education and robotics. Expo Center is proud to contribute to youth education throughout the neighborhoods surrounding the Expo Center, while promoting sustainable practices.

The Oregon Zoo aspires to be a model of sustainability by putting conservation of natural resources at the forefront of its daily operations and planning for future improvements. In 2008, voters supported a $125 million bond for improvements to the zoo. Upgrades included transforming existing facilities to increase water conservation, new animal habitats and new veterinary and education centers. The Veterinary Medical Center, completed in 2011, is LEED Gold certified by the U.S. Green Building Council. Upcoming projects, including Elephant Lands – slated to open in 2015 – incorporate cutting-edge technology to reduce the impact on wildlife while enriching the lives of animals at the zoo. Educating and inspiring the community to take action on behalf of the natural world is essential to the Oregon Zoo's mission, and the zoo aims to lead by example. For a summary of sustainability projects underway, watch this video produced by Portland's KATU news: www.katu.com/familymatters/go_green/OREGON-ZOO--SUSTAINABILTY-255872561.html?tab=video&c=y

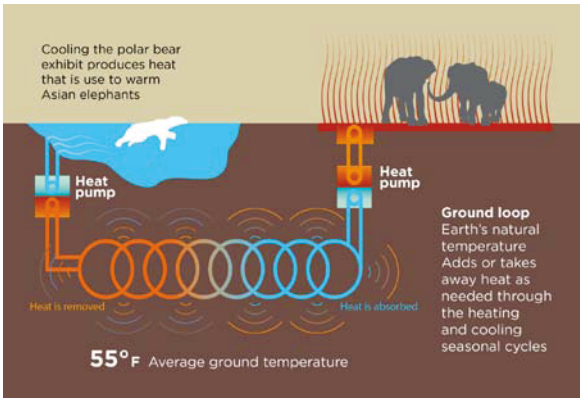
Zoo goes geothermal with underground heating-cooling system for elephant and polar bear exhibits

Polar bears like it cool, elephants like it warm and the Oregon Zoo likes it sustainable. Zoo construction crews have begun work on a project that will let these two endangered species keep each other's thermostats at comfy levels via an innovative high-tech system buried 12 feet underground. This geothermal loop captures heat that is created as a byproduct of cooling the polar bear swimming pools at the zoo and directs it through coiled pipes buried deep in the Elephant Lands exhibit. This and other energy-efficient design systems are expected to cut Elephant Lands' energy use in half.

Climate goal

For the full story, see www.oregonzoo.org/news/2014/09/zoo-polar-bears-will-use-slinky-warm-elephants.

See the latest in Oregon Zoo sustainability news: www.oregonzoo.org/news/category/sustainability.



How the new geothermal heating-cooling system will work at the Oregon Zoo.


Subterranean geothermal system installation in progress at the Oregon Zoo.

PARKS AND ENVIRONMENTAL SERVICES

Glendoveer Golf and Tennis Center: solar golf cart barn

Climate goal

When the time came to build a new barn to house golf carts at Metro's Glendoveer Golf and Tennis Center, the team at Parks and Environmental Services incorporated solar into the design. This gave them the ability to replace 90 gas powered carts with 75 electric golf carts that could be charged by the solar panels while they are parked in the barn. This saves more than 465 gallons of gasoline per month in peak golf season. The 26 kW solar electric system has 96 solar panels manufactured by SolarWorld in Hillsboro, Oregon and is expected to produce 23,737 kWh of electricity per year. Energy Trust of Oregon contributed $36,288 in incentives for the project.

Lizzie Rubado from Energy Trust of Oregon presents a check for the Glendoveer solar array to Metro Councilor Shirley Craddick and Tom Isaac, President of CourseCo.

The solar array on the Glendoveer golf cart barn will produce 23,737 kWh of electricity per year.

Glendoveer irrigation system upgrades and stormwater retrofits

Water goal

In partnership with its golf course operator, CourseCo, Metro's Parks and Environmental Services department upgraded the irrigation system by adding programmable irrigation system controls. This system gives the operator the flexibility to control individual irrigation stations based on their unique watering needs. The team also removed a small pond from the golf course, which eliminates the need to fill it throughout the summer. These changes resulted in a dramatic change in water use, from 109,626 CCF[1] to 69,126 CCF (equivalent to a savings of more than 30 million gallons) in FY 13-14, a 37 percent reduction.

Habitat goal

In addition, 21,280 square feet of impervious surfaces at Glendoveer were converted to sustainable stormwater management areas this past year. Bioswales were added to capture runoff from the cart barn and half the roof of the tennis center, permeable pavers were installed for a patio replacement and a small ecoroof was installed on the roof of a new enclosure for recycling bins.

[1] CCF is a unit of measure for water, equivalent to 748 gallons.

Metro Regional Center

Metro Regional Center is the primary office location for Metro and houses many central services departments including human resources and fleet services.

Human Resources: Paperless payroll campaign

The Green Team at Metro Regional Center worked with Metro's Payroll office on a campaign to promote paperless payroll notification for Metro employees. This campaign, designed with a New Year's resolution theme during January 2014, resulted in 190 employees making the switch to paperless payroll notification for a total of 415 employees opting to go paperless.

Waste goal

Fleet Services: Metro fleet bike rodeo

The Metro Regional Center fleet services team promoted use of Metro's fleet bikes at a fun and informative Fleet Bike Rodeo in June. Employees had a chance to take a spin on the bikes, learn about bike safety, operate an electric bike, and learn how to use a Metro bike for work-related transportation.

Climate goal

Metro's "Paperless Payroll" campaign convinced 190 employees to switch to paperless paycheck notification.

Metro employee Randy Tucker gets a lesson in how to ride the electric fleet bike from Tom Bordenkircher at the fleet bike rodeo.

Adding native plants to the landscape at Blue Lake Regional Park

Habitat goal

In 2013, voters across the Portland metropolitan area approved a five-year levy to help care for regional parks and natural areas. The levy raises about $10 million per year, going toward six major initiatives representing hundreds of projects on the ground. One of the initiatives is park maintenance and improvements. Capital improvements such as new restrooms, playgrounds and parking enhance Metro's developed parks, which attract more than 1.3 million visitors every year.

At Blue Lake Regional Park, 53,500 square feet – more than an acre – of non-native landscape areas were converted to native and low water use plantings. Of 40 different species planted, 35 are Oregon native plants. Zoo Doo, compost made from herbivore waste at the Oregon Zoo, was used to mulch the planting beds. This mulch helps keep weeds down without herbicides and keeps the soil cool and moist. To create the triple-bottom line sustainability for this project, the consultant team included a Woman-owned Business Enterprise (WBE), Disadvantaged-Business Enterprise (DBE) certified landscape architecture firm and a DBE/WBE certified surveyor.

As a testimony to the habitat value of the project, while the planting project was underway a nesting pair of cooper's hawks raised a baby chick in a tree in the middle of the project area.

An acre of grass was converted to native plants at Blue Lake Park, creating habitat for birds and other wildlife.

GLEAN program encourages artists to make art, not landfill

The art displayed below comes from trash – some of the 2.1 million tons of garbage and recyclables generated each year by our region's residents and businesses – destined for a landfill. It's the work of local artists given safety gear and scavenging privileges at Metro Central Transfer Station through a program called GLEAN. Metro helped launch the GLEAN program in 2010 and the first art exhibition was in 2011 .

Waste goal

GLEAN is managed by Cracked Pots in partnership with Metro and Recology, an employee-owned company that manages the Metro Central transfer station. The program prompts people to think about their consumption habits, inspire new ways of conserving resources and support the arts and environment. To learn more about GLEAN and what you can do to waste less, visit www.GLEANPDX.org.

The 2014 GLEAN artists at work.


2014 Glean exhibit at Disjecta Contemporary Art Center.


A typical day at the solid waste transfer station.

METRO-WIDE ACCOMPLISHMENTS IN FY 13-14

Updated Integrated Pest Management Plan becomes Metro policy

Metro manages a lot of real estate that pests call home – 14,000 acres of natural areas, regional parks, cemeteries, animal habitats at the Oregon Zoo, areas around the Oregon Convention Center and the Expo Center, as well as the buildings where we do business.

Toxics goal

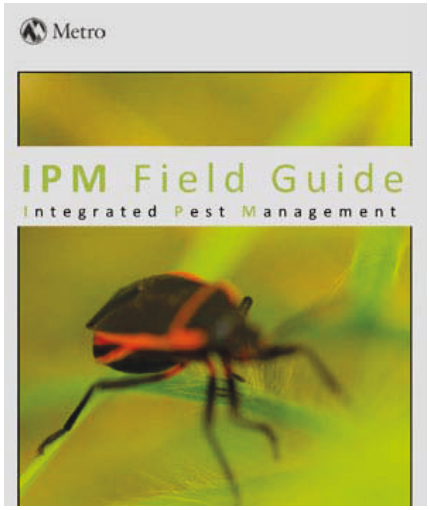
Dan Moeller and Matt Tracy

In response, project manager Matt Tracy and project sponsor Dan Moeller, along with a team from across Metro, developed the Integrated Pest Management plan. All Metro sites and properties will roll this plan out in the coming year.

Habitat goal

Dan Moeller, Metro's natural areas land manager, described it this way: "Integrated pest management is an effective and environmentally responsible approach to managing pests (weeds, insects, etc.). Information about targeted pests along with the best available pest control methods are used to manage damage or infestations by the most effective and economical means, and with the least possible hazard to people, property and the environment."

The pest management plan begins with staff identifying the pest. They determine how bad the pest problem is and what to do about it, if anything. Finally, they document what they did to solve the problem and monitor the results. If it's determined that a pesticide must be used (a last resort), staff reference an approved chemical list; use public notification signs when appropriate; refer to a protocol for checking for special events, mowing or irrigation; use guidelines for protective gear and safety equipment; and determine if the chemical used will drift because of wind or rain. The team also developed guidelines around the transportation, application and storage of chemicals and what to do if there is a chemical spill.



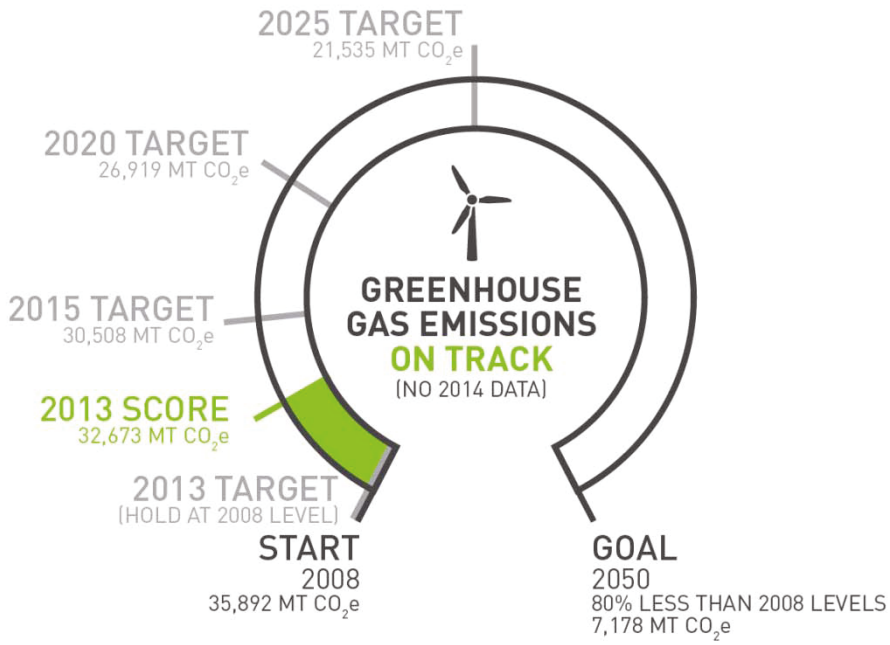
This new pest management plan replaces one from 1995. Matt, Dan and the Integrated Pest Management working group focused on current best practices and how to develop them into standards that could be flexible and site specific.

PART 2: PROGRESS TOWARD SUSTAINABILITY GOALS

GOAL 1: REDUCE GREENHOUSE GAS EMISSIONS

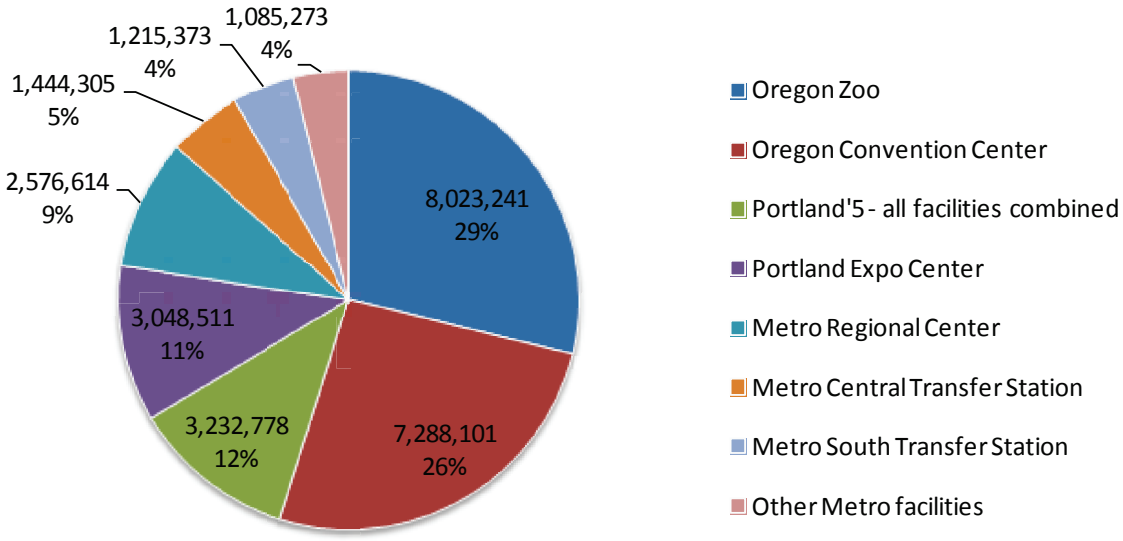
Goal	Reduce greenhouse gas (GHG) emissions 80 percent below 2008 levels by 2050.
Indicators	Greenhouse gas emissions for Scopes I, II and III, reported in metric tons of carbon dioxide equivalent (MT CO_2e). Electricity consumption from Metro facilities reported in kilowatt hours consumed (kWh).
2015 target	15 percent reduction in GHG emissions from 2008 levels.

Metro completed a comprehensive greenhouse gas (GHG) emissions inventory for internal operations using 2008 as the baseline year. Metro repeated this inventory for the FY 12-13 year; the results of that analysis are shown in the graph below. A full report is available at www.oregonmetro.gov/greenmetro.

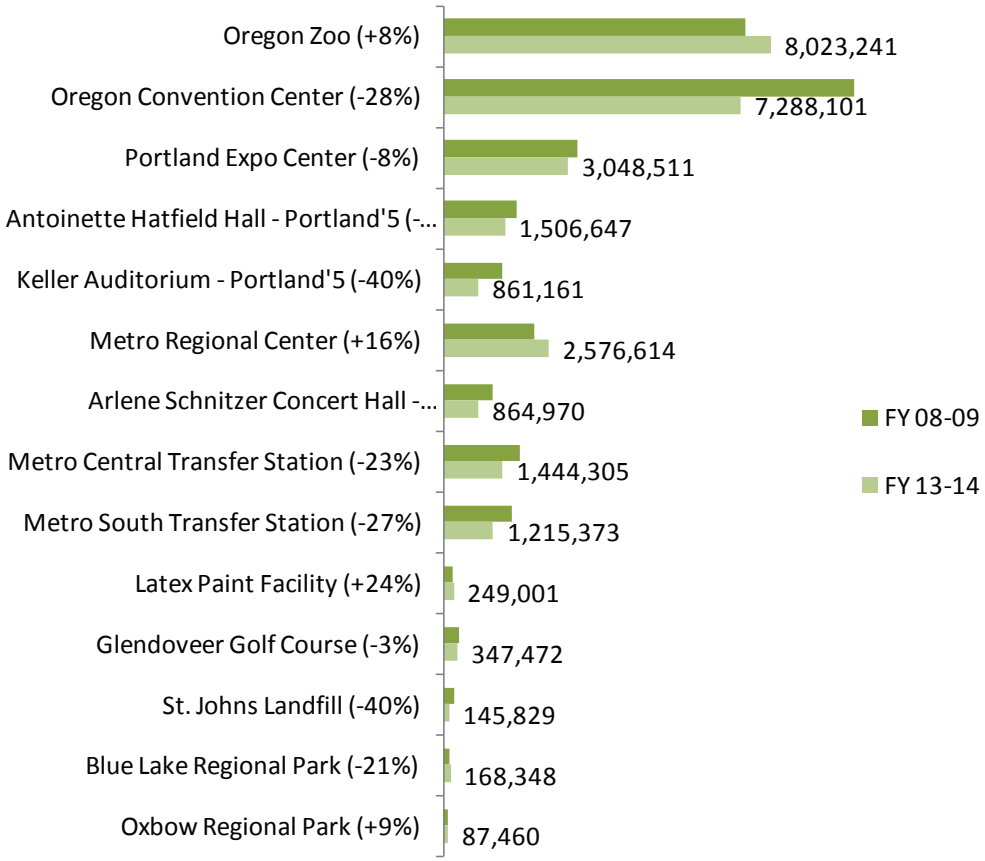


For the purposes of the annual sustainability report, however, Metro includes year-over-year comparison data of electricity and natural gas consumption, two of Metro's key GHG emissions sources which are tracked on an annual basis.

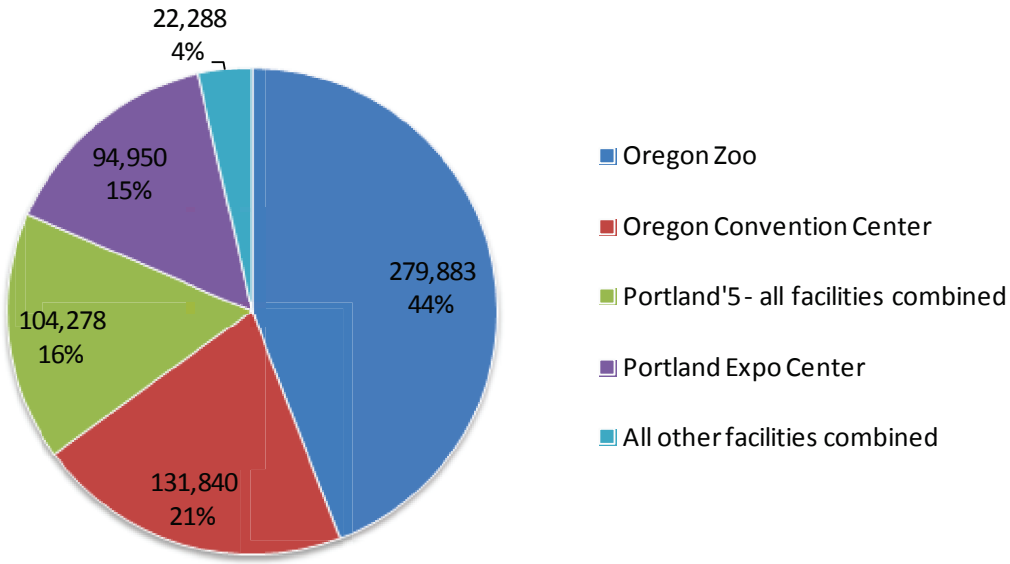
FY 13-14 electricity consumption Metro facilities (kWh)



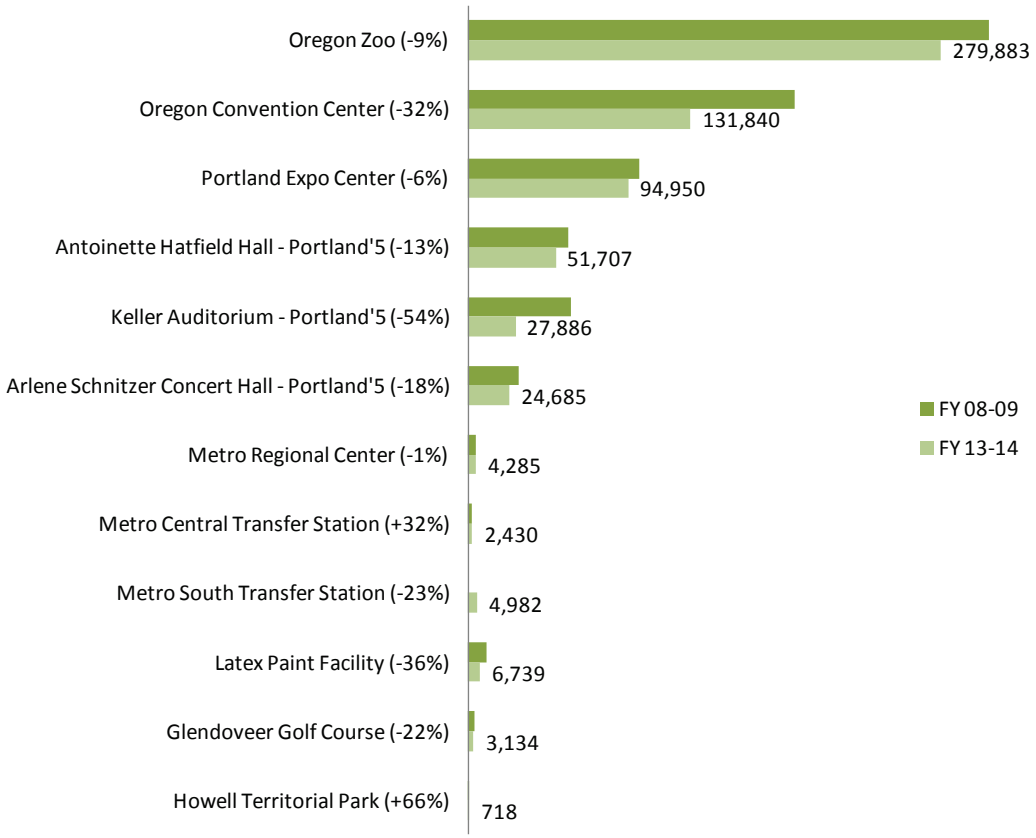
Electricity kWh usage FY 13-14 (percent change over baseline 2008-09)



FY 13-14 natural gas consumption (therms)



Natural gas usage FY 13-14 (% Change over Baseline 2008-09)



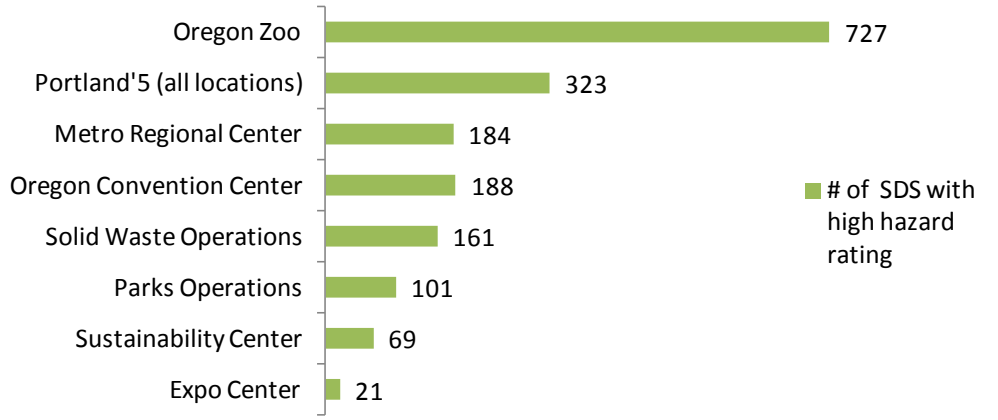
GOAL 2: CHOOSE NONTOXIC

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 that have a high human health or environmental toxicity hazard.
2015 target	45 percent reduction from 2008 levels of chemical products in use at Metro which are persistent, bioaccumulative and toxic or have a high human health or environmental toxicity hazard.

Metro uses chemical information from material safety data sheets (SDS) to track toxicity of products used in Metro operations. Metro developed a toxicity assessment tool in partnership with KHA-Online SDS, which is also the host for Metro's online SDS database. The toxicity assessment tool uses a variety of regulatory chemical lists cross referenced with the information contained in the SDS to make toxic hazard determinations.

In future years, the toxicity assessment tool will align with information available in the recently adopted Globally Harmonized System of Classification (GHS).

FY13-14 products (SDS) with a high hazard rating and listed persistent, bioaccumulative or toxic (PBT)



Metro recently updated the methodology used for tracking toxicity of its product inventory which includes persistent, bioaccumulative and toxic chemicals (PBT). This methodology is more consistent with the intent of Metro Council's adopted toxics reduction goal to eliminate persistent bioaccumulative toxics and other priority toxic and hazardous substances. A summary of the findings with the old and new methodologies is below.

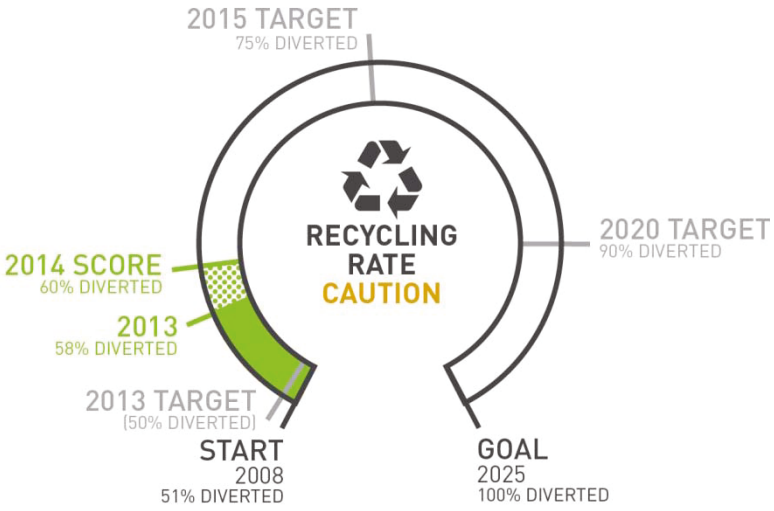
This information helps focus attention on products in the inventory nicknamed "The Worst of the Worst," SDS that receive a high hazard rating across all categories (health, environment, physical hazard, persistent, bioaccumulative and inherently toxic).

FY13-14 Toxicity of Metro SDS inventory using different methodologies		
Total Safety Data Sheets (SDS) in Metro inventory	2190	
SDS with high hazard rating in health, environment or physical categories (old methodology)	847	39%
SDS with high hazard rating in any category: health, environment, physical, persistent, bioaccumulative OR toxic (see graph above)	1649	75%
"Worst of the Worst", SDS with high hazard rating in all categories: health, environment, physical, persistent, bioaccumulative AND toxic (new methodology)	141	6%

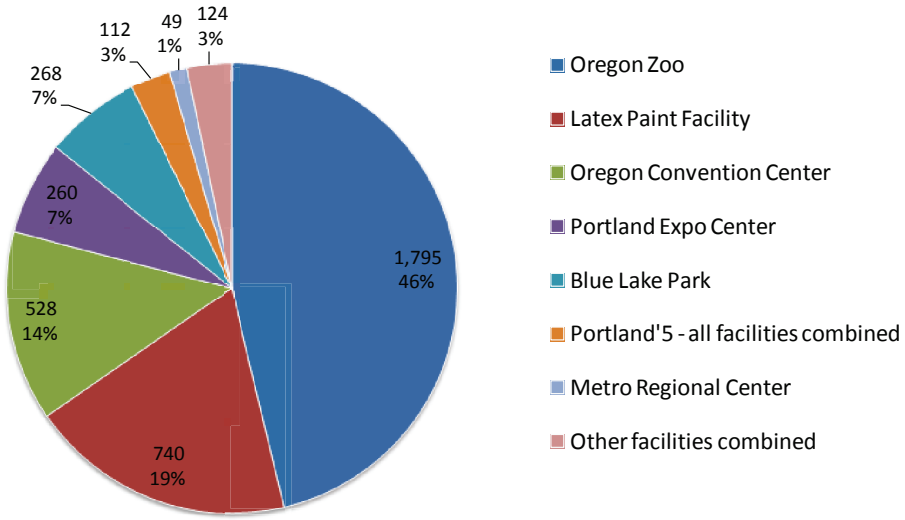
GOAL 3: REDUCE WASTE

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.
2015 targets	Recycle or compost 75 percent of waste (average); parks goal 25 percent recovery. Reduce waste generation 10 percent from 2008 levels by 2015.

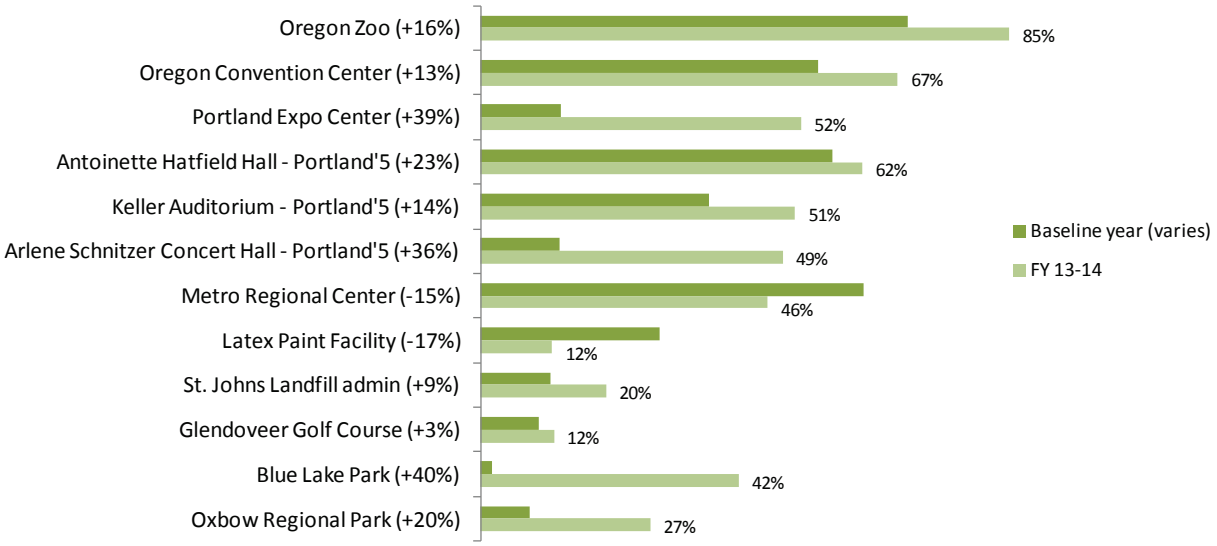
To measure progress toward the goal of recycling or composting all waste, as well as waste reduction, Metro tracks recycling rates and overall waste generation (weight of garbage, recycling and compost) from the major facilities in the agency's portfolio. In FY13-14 Metro facilities diverted an average of 60 percent of the total waste for recycling, including food scraps and yard debris. The average recovery rate is up nine percent since the 2008 baseline year. Metro facilities generated 3,876 tons of waste in FY 13-14.



FY 13-14 total waste generation (disposal plus recovered, tons)



FY 13-14 recovery rate at Metro facilities[2] compared with baseline year (varies)

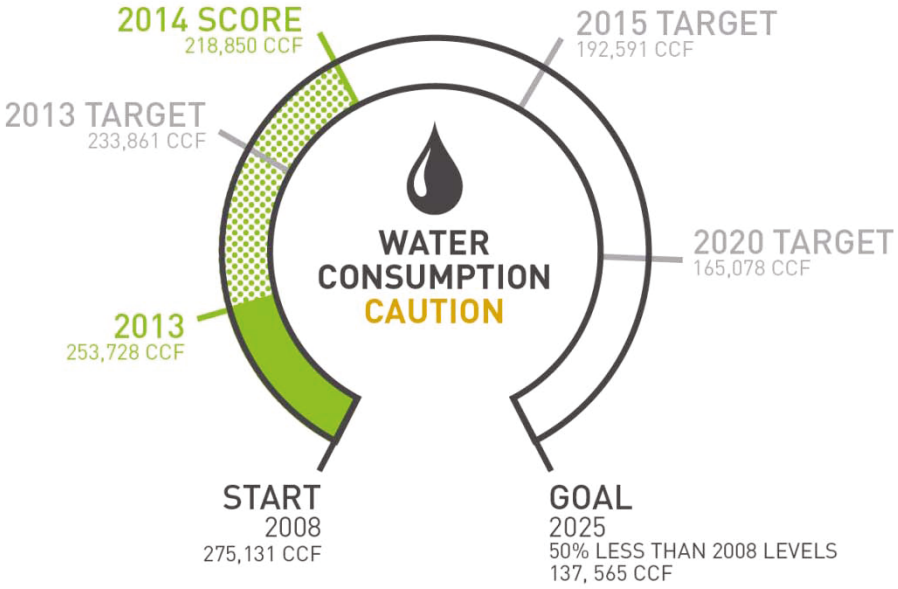


[2] Blue Lake and Oxbow parks recently began tracking weight of yard debris, downed wood and trees as part of their recycling recovery rate thus dramatically increasing their recovery rates. In addition, FY13-14 recovery numbers for Blue Lake Park are higher than normal due to a one-time cleanup of accumulated downed wood at the park.

GOAL 4: CONSERVE WATER

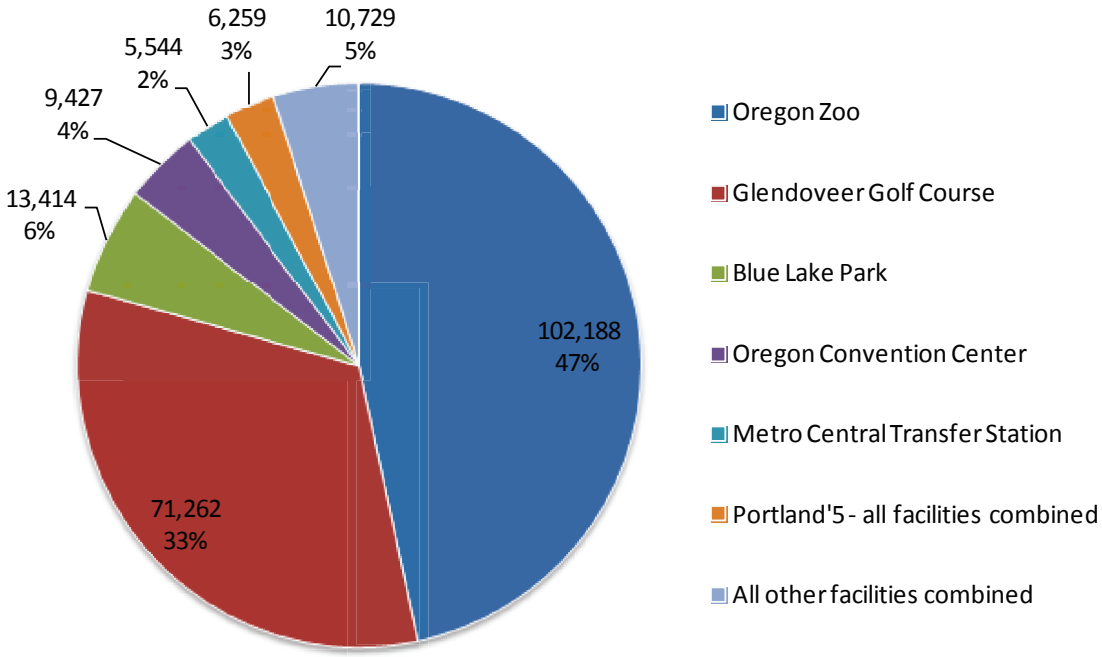
Goal	Use 50 percent less water from 2008 levels by 2025.
Indicator	Gallons of water consumed from water utilities and on-site sources.
2015 target	30 percent decrease in water consumption from 2008 levels.

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). The Oregon Zoo and Glendoveer Golf Course continue to be the top water users. Notably, changes in irrigation practices at Glendoveer Golf Course over the past year resulted in a dramatic change in water use, from 109,626 CCF[3] to 69,126 CCF (equivalent to a savings of more than 30 million gallons) in FY 13-14, a 37 percent reduction. These water conservation efforts are a primary reason why Metro's overall water usage improved during FY14-15. See page 10 for additional details.

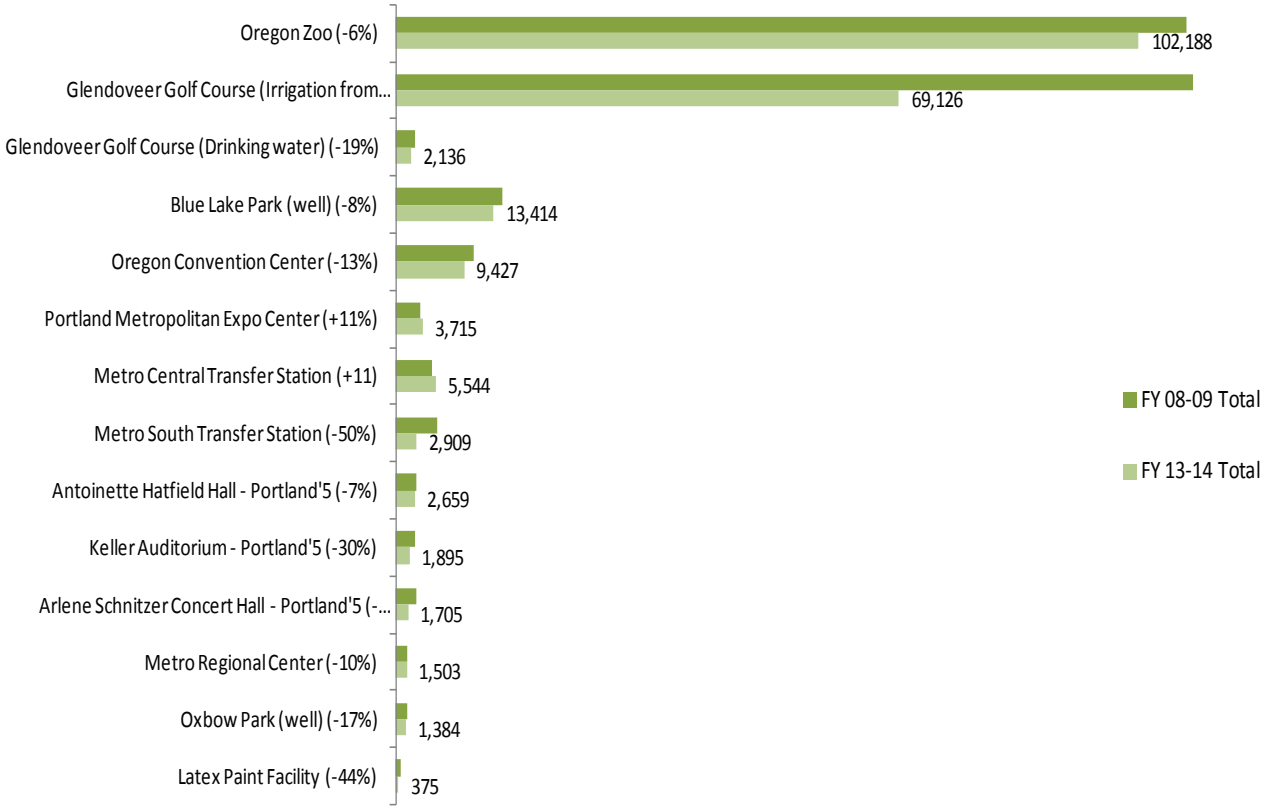


[3] CCF is a unit of measure for water, equivalent to 748 gallons.

FY 13-14 water usage (CCF)



FY 13-14 water usage compared with FY 08-09 baseline (CCF)



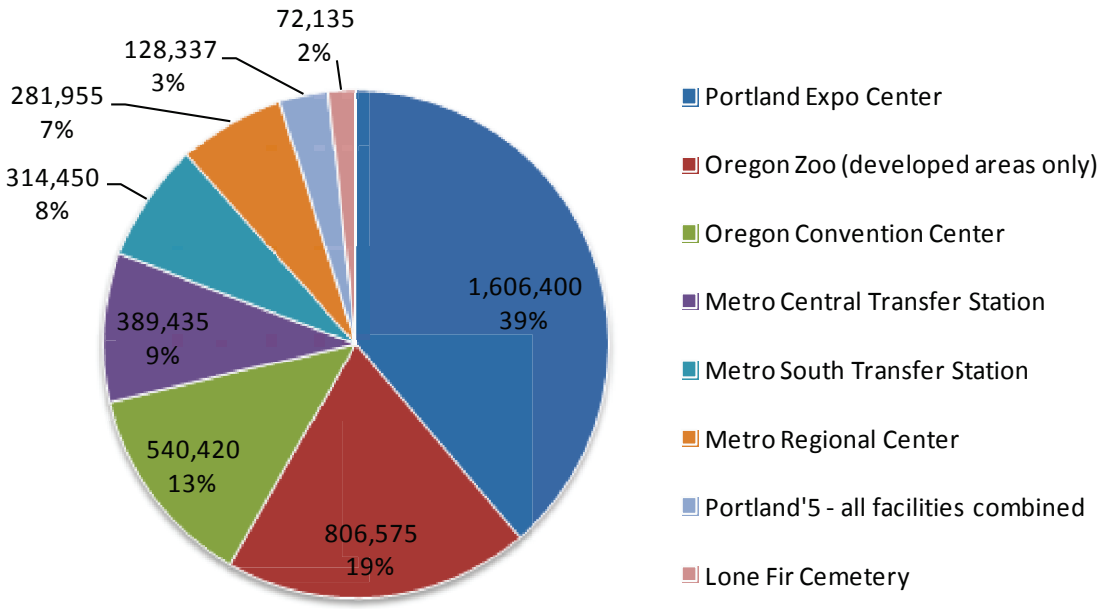
GOAL 5: ENHANCE HABITAT AND REDUCE STORMWATER

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[4] 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.
2015 targets	Reduce effective total impervious area on developed properties 50 percent from 2008 levels. Identify habitat-friendly improvement opportunities for developed properties.

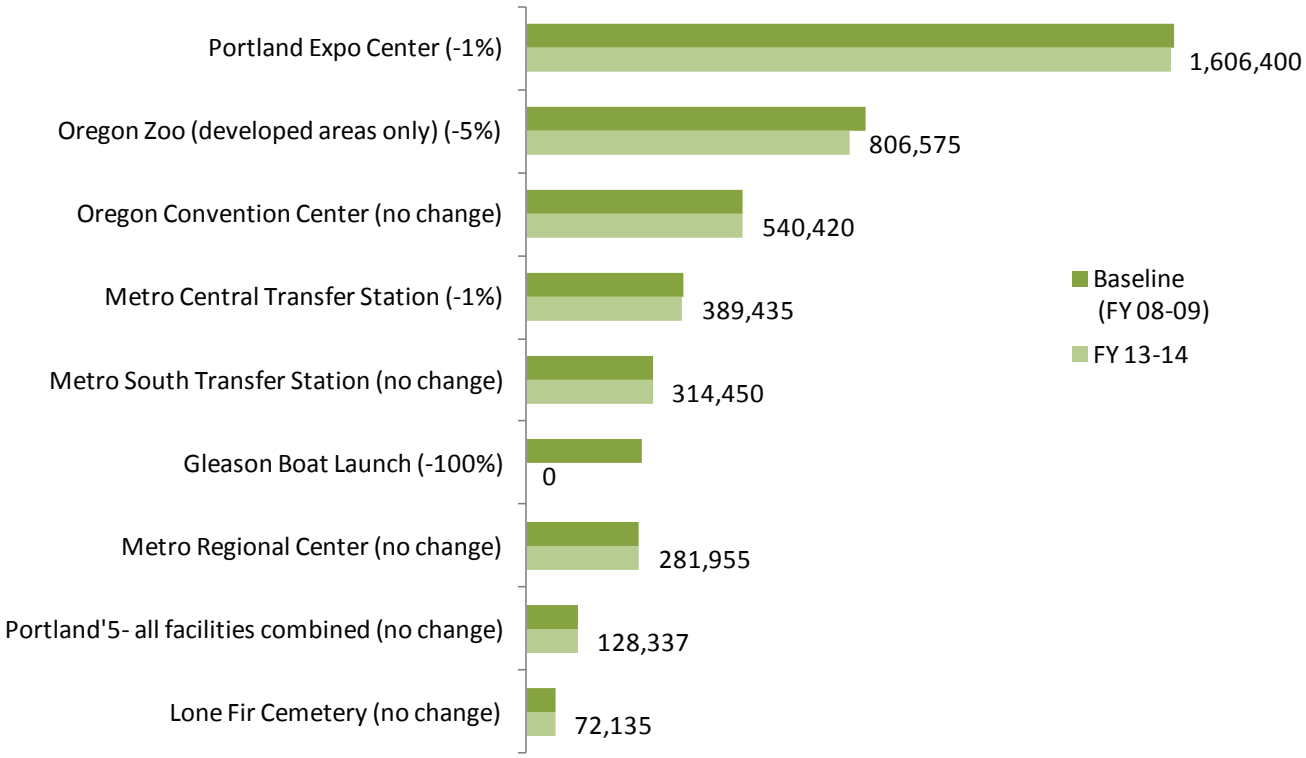
Tracking effective impervious surface areas is a way to monitor the quantity of stormwater runoff from Metro's developed properties and impacts to habitat health. In the past year, the Oregon Zoo, Portland Expo Center and Glendoveer Golf and Tennis Center retrofitted portions of their campuses to treat stormwater runoff onsite, keeping that stormwater out of local waterways.

[4] 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.

FY 13-14 effective impervious area (square feet)



Effective impervious area FY 13-14, square feet (percent change over baseline 2008-2009)



PART 3:

APPENDIX

UTILITY COSTS

ENERGY EFFICIENCY INVESTMENTS

SUSTAINABLE PROCUREMENT

GHG EMISSIONS (FY12-13)

ABOUT THE METRO SUSTAINABILITY PROGRAM

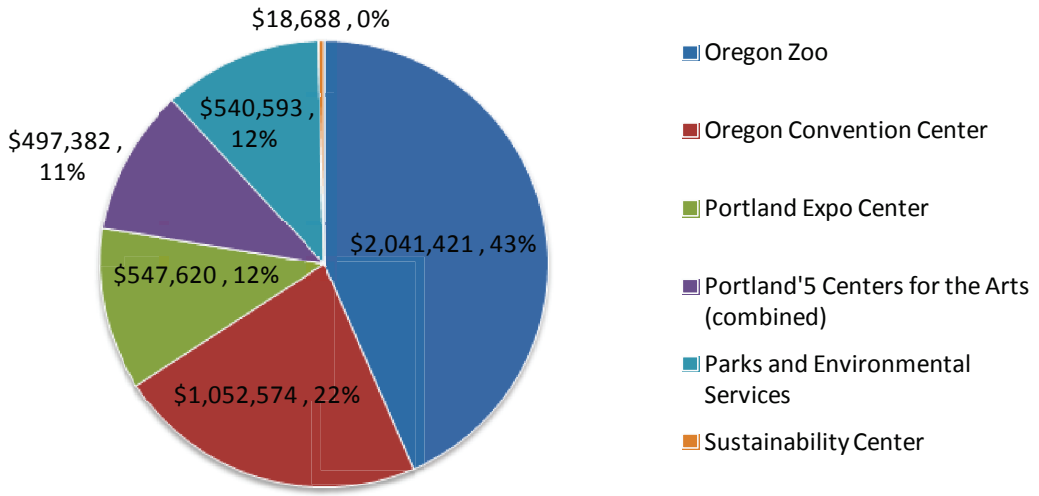
UTILITY COSTS FY13-14

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 for Metro facilities[5], FY 13-14

DEPARTMENT OR VENUE	UTILITY SERVICES (GENERAL)	ELECTRICITY	NATURAL GAS	SOLID WASTE	WATER AND SEWER	TOTAL FY13-14 UTILITY EXPENSES
Oregon Zoo	$ -	$619,124	$203,222	$44,687	$1,174,389	$2,041,422
Oregon Convention Center		$734,051	$115,313	$28,671	$174,539	$1,052,574
Portland Expo Center		$341,918	$91,639	$29,729	$84,334	$547,620
Portland'5 Centers for the Arts (combined)		$302,138	$90,622	$21,229	$83,394	$497,383
Parks and Environmental Services	$20,007	$246,721	$16,422	$155,701	$101,743	$540,594
Sustainability Center	$1,614	$8,073	$ -	$6,185	$2,816	$18,688
TOTALS	**$21,621**	**$2,252,025**	**$517,218**	**$286,202**	**$1,621,215**	**$4,698,281**

FY 13-14 utility costs by facility or venue



[5] Metro does not track utility costs for Glendoveer Golf and Tennis Center in the central accounting system from which the data in this chart was obtained because they are paid by a third party operator. However, Metro does track all utility usage in Utility Manager Pro database, which indicates that utility costs for this facility in FY13-14 were approximately $88,000 excluding waste and recycling services.

ENERGY EFFICIENCY INVESTMENTS FY13-14

Metro works closely with the Energy Trust of Oregon to implement energy efficiency and renewable energy projects at Metro facilities and visitor venues. Projects last year included lighting upgrades, building systems replacements, design for energy efficiency for new buildings, a solar project and participation in Energy Trust of Oregon's Strategic Energy Management Program at the Oregon Convention Center.

The table below does not include $46,582 received from Energy Trust of Oregon in September 2014 for LED lighting upgrades at Arlene Schnitzer Concert Hall and Hatfield Hall which houses the Newmark, Brunish and Winningstad Theaters. This incentive will be included in the FY14-15 sustainability report.

Summary of incentives from Energy Trust of Oregon, FY13-14

LOCATION	MEASURE DESCRIPTION	ELECTRICITY (kWh)	NATURAL GAS (therms)	ELECTRIC INCENTIVE	GAS INCENTIVE
ETO Existing Buildings Program					
Oregon Convention Center	Demand control ventilation and other projects implemented in Strategic Energy Management program	355,812	87,136	$51,161	$24,966
Portland'5 Centers for the Arts	Antoinette Hatfield Hall lighting upgrade to LEDs and ice machine upgrade	5,239		$1,432	
Portland Expo Center	Upgraded lighting controls and occupancy censors for Halls A, B and "Dairy Barn"	276,679	4,256	$37,669	$11,062
Oregon Zoo	Efficient gas over, exterior lighting upgrades	23,131	894	$2,480	$1,200
Glendoveer Golf and Tennis Center	Lighting upgrades at driving range and clubhouse; flow controls in irrigation system	51,618		$13,580	
Total		**712,479**	**93,286**	**$106,322**	**$37,228**
ETO Commercial Solar Program					
Glendoveer Golf and Tennis Center	26 kW solar electric system (96 PV panels) to charge electric golf carts	23,737		$36,288	
ETO New Buildings Program					
New Zoo Elephant Lands exhibit	Exhaust only mode, heat recovery, daylighting and reduced power density for lights, air curtain, condensing gas water heater, solar thermal domestic hot water			$31,320	
				Total ETO cash incentives FY 13-14: $211,159	
ETO Strategic Energy Management Program; consultant services (not cash incentives)					
Oregon Convention Center	Strategic Energy Management			$6,940	$11,340
				Total value of ETO Strategic Energy Management consulting services FY13-14: $18,280	

SUSTAINABLE PROCUREMENT FY13-14

Metro adopted a sustainable procurement administrative procedure in 2012 which implements Metro Code chapter 2.04.500-540, "Sustainable Procurement Program."

In fiscal year 2013-2014, Metro spent over $1.3 million on sustainable goods and services. This represents roughly 3 percent of Metro's overall spending on goods and services for that year.

The full Sustainable Procurement Policy can be found online at www.oregonmetro.gov/greenmetro.

METROWIDE SPEND TOTALS BY CATEGORY	(NO "SUSTAINABLE SERVICES - OTHER")
Certified Energy Efficient Equipment	$60,027
Certified EPEAT[6]	$9,900
Certified Green Cleaning Product	$33,730
Certified Wood Product	$15
Certified Organic	$2,765
Habitat Friendly	$18,348
Local Product	$0
Recycled Content	$61,456
Recycled Paper	$101,431
Recycled Content Product	$126,156
Product - Other - does not match any other codes	$143,851
Services - Habitat Friendly	$79,219
Services - Energy Efficiency	$484,325
Services - Feasibility/Design	$108,584
Sustainable Services - Renewable Power	$136,401
Total Sustainable Procurement FY13-14	**$1,366,208**
Green Building - Zoo Bond program construction	$22,192,372
Metro total purchasing expenses FY13-14	$51,392,043
% sustainable purchases	**3%**
% sustainable purchased including Zoo Bond construction	46%

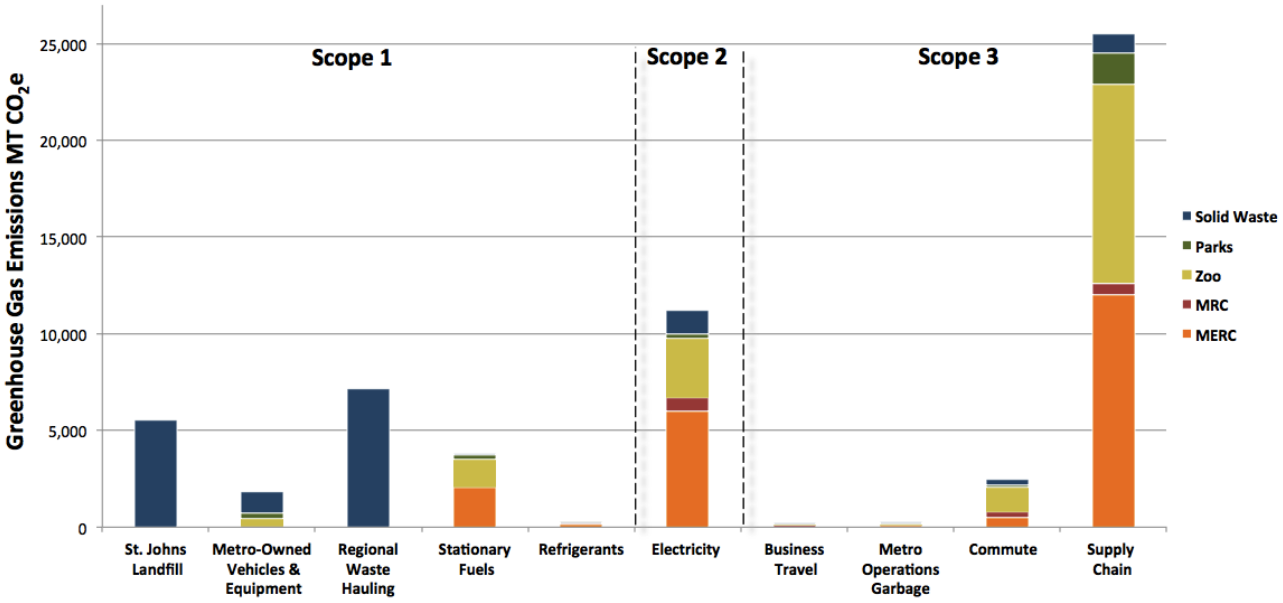
[6] EPEAT is the Electronic Product Environmental Assessment Tool, a national standard and certification program for sustainable electronics.

Greenhouse gas emissions inventory, FY12-13

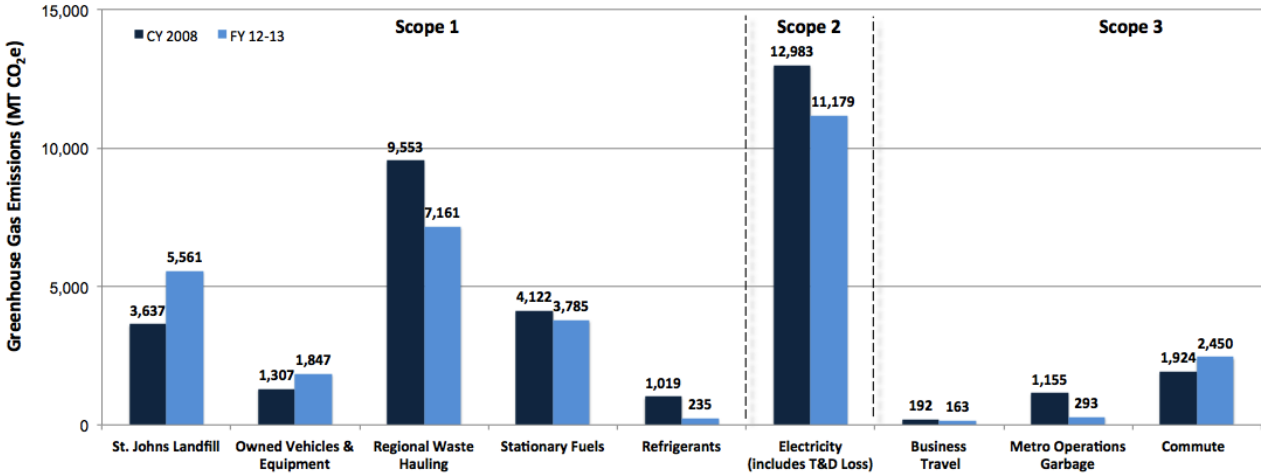
Metro completed a comprehensive greenhouse gas (GHG) emissions inventory for internal operations using 2008 as the baseline year and repeated this inventory for the FY 12-13 year; the results of that analysis are in the graph below. GHG emissions are reported in metric tons of carbon dioxide equivalent (MT CO2e).

In FY 12-13 Metro operations generated a total of 58,173 MT CO2e from both direct and indirect sources. Overall, non-supply chain emissions decreased nearly 9 percent from 35,892 MT CO2e in CY 2008 to 32,673 MT CO2e in FY 12-13. While this is a significant reduction, it is not quite on pace to meet Metro's ambitious goal of an 80 percent reduction of non-supply chain emissions over CY 2008 levels by 2050. The full report is available at www.oregonmetro.gov/greenmetro.

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



Emissions comparison between CY 2008 and FY 12-13, by emissions source and scope



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 are provided by a steering committee of representatives from the major facilities in Metro's operations.

- Ed Williams, 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 green teams during FY 13-14:

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

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

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In addition to Metro's goals for internal operations, Metro works with communities, businesses and residents in the Portland metropolitan area to chart a wise course for the future while protecting the things we love about this place.

Learn more at oregonmetro.gov/regional-leadership/what-metro.