



Metro



# Sustainability report

## FY 2019-20

May 2021

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If you picnic at Blue Lake or take your kids to the Oregon Zoo, enjoy symphonies at the Schnitz or auto shows at the convention center, put out your trash or drive your car – we’ve already crossed paths.

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## INTRODUCTION

### Advancing sustainability in Metro's operations

As a regional government committed to promoting sustainable communities, Metro also strives to walk its talk and make its own operations sustainable. With an extensive portfolio of buildings, including visitor venues, parks, office buildings and solid waste facilities, and serving millions of visitors and customers each year, Metro has a significant opportunity to reduce its impacts and advance positive progress on the region's quality of life.

To that end, in 2003, the Metro Council set an ambitious vision for business operations to be sustainable within one generation, by 2025. The Council adopted goals in five key categories: climate, waste, toxics, water and habitat, and adopted a Sustainability Plan in 2010 that identifies strategies and actions to achieve these goals. Metro's Sustainability Program coordinates implementation of the agency's Sustainability Plan and Integrated Pest Management Plan for internal operations to achieve these goals. In recognition of the tenth anniversary of the Sustainability Plan, this report includes a status report on progress made in implementing the actions in the Plan.

Metro produces a report each year on progress toward achieving these sustainability goals; this story is told by data in key indicators for

each goal and by key accomplishments across the agency. The indicator data for FY20 is not reflective of a typical year of operations due to the closure of many of Metro's facilities during the fourth quarter as a result of COVID-19, as well as the Oregon Convention Center hosting a temporary COVID homeless shelter and Portland Expo Center serving as a COVID testing site. As such, this year's report focuses on key accomplishments, along with a summary of data on progress toward Metro's climate goal. Discussion of progress toward each of Metro's sustainability goals may be found in previous reports.

In addition, the facility closures and budget impacts from the pandemic caused a shift in priorities for sustainability work in the last quarter of FY 2019-20 and beyond. Work since the end of FY 2019-20 has focused on supporting venues with heightened needs for facility maintenance and integrated pest management, as well as advancing climate action, including adoption of clean diesel requirements, transitioning to renewable diesel in regional waste hauling and operations,

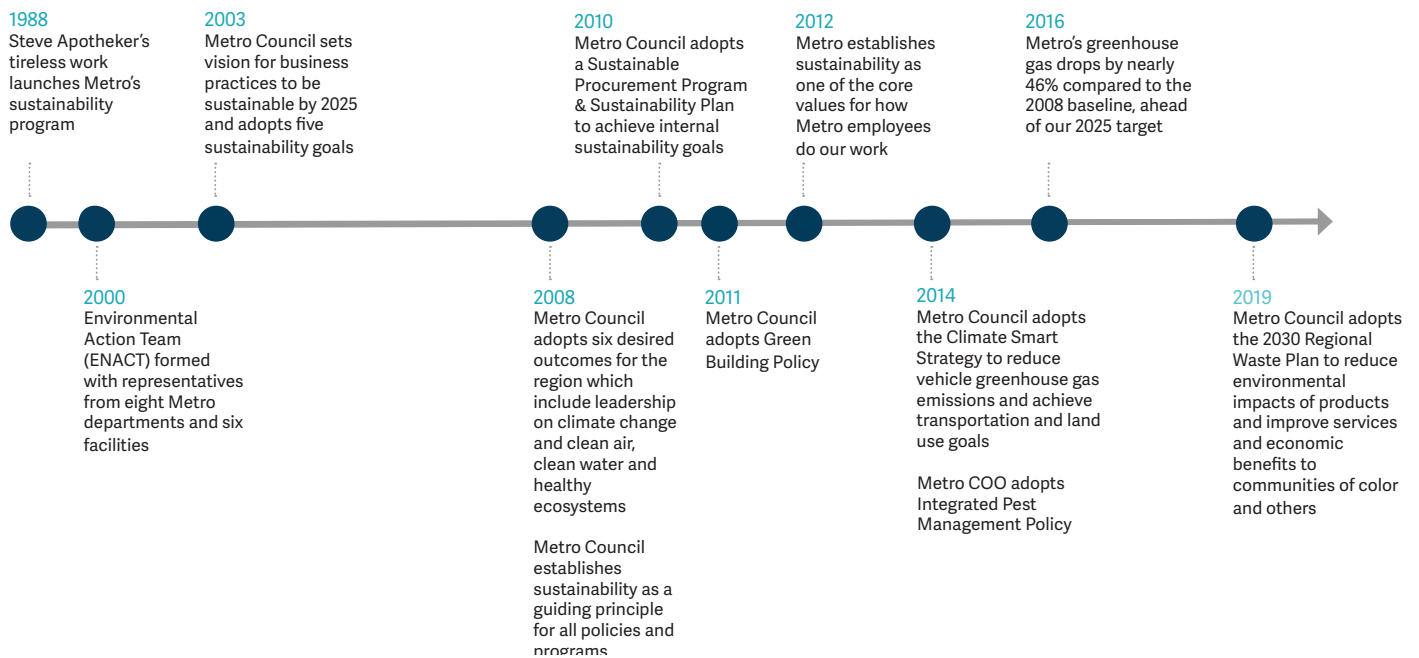
integrating climate into planning for future capital and fleet investments and preparing for increased telework and other sustainability opportunities when the Metro Regional Center reopens. Highlights from this work will be shared in the FY 2020-21 sustainability report.

Learn more about Metro's Sustainability Program including the Sustainability Plan, policies, annual reports and greenhouse gas inventories: [oregonmetro.gov/greenmetro](https://oregonmetro.gov/greenmetro)

## Sustainability Plan history and achievements

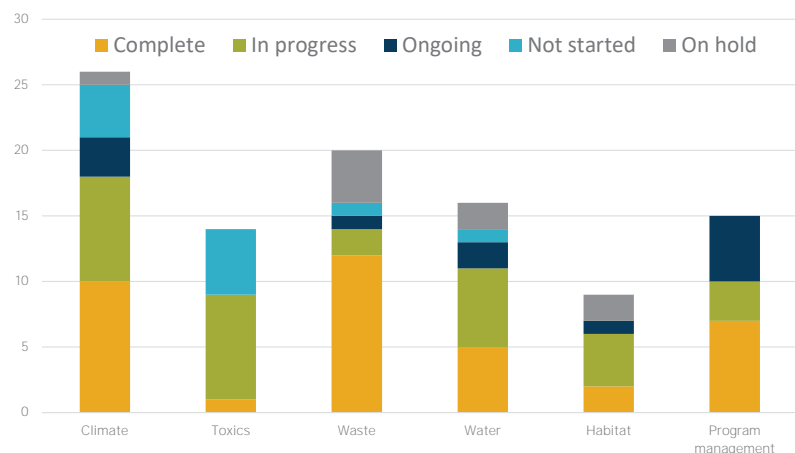
In recognition of the tenth anniversary of launching Metro's Sustainability Plan, the graphic below highlights some of the key milestones and accomplishments since Metro

started to focus on sustainable operations. Much of this started with Metro staff Steve Apotheker, the namesake for Apotheker Plaza at the Metro Regional Center.



Metro's Sustainability Plan identifies strategies and actions to achieve the goals. The graphic to the right illustrates the progress made in implementing those actions. Of the 100 actions in the Plan, 80 actions are either complete, in progress or ongoing.

**Sustainability Plan actions implementation**





# About the Sustainability Program

Metro's *Sustainability Plan*, adopted by the Metro Council in 2010, identifies strategies and 100 actions to accomplish Metro's sustainability goals. This work is coordinated by the Sustainability Program and implemented by staff across all Metro properties and departments. In FY 2019-20, the Sustainability Program underwent significant organizational change, including hiring a new climate analyst, creating a program manager position, and adding the integrated pest management coordinator to create a Sustainability Program team. This team was moved from the Waste Prevention and Environmental Services Department to the newly formed Capital Asset Management Department to more effectively integrate with capital projects and operations, and in recognition that the program provides a central service to all departments.

*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.*

*- Metro value of sustainability*

## Sustainability Program Team

Jenna Garmon, Sustainability Manager

Rob Hamrick, Integrated Pest Management Coordinator

Dana Visse, Climate Analyst



## Metro's sustainability goals



**Reduce carbon** Reduce direct and indirect greenhouse gas emissions to 80 percent below 2008 levels by 2050.



**Choose nontoxic** Eliminate the use or emissions of persistent bioaccumulative toxics (PBTs) and other priority toxic and hazardous substances by 2025.



**Prevent waste** Reduce overall generation of waste, and recycle or compost all remaining waste by 2025.



**Conserve water** Reduce water use to 50 percent below 2008 levels by 2025.



**Enhance habitat** Ensure that Metro's parks, trails, natural areas and developed properties support healthy, functioning ecosystems and watersheds.



## Sustainability Steering Committee

A steering committee of representatives from Metro's major facilities and venues and key departments provides oversight and accountability for implementation of the Metro Sustainability Plan. Committee members in FY 2019-20 were:

- Ed Williams and Julie Bunker, Portland's Centers for the Arts
- Will Cortez, Oregon Zoo
- Matthew Uchtman and Ryan Harvey, Oregon Convention Center
- Chuck Dills, Portland Expo Center
- Nicole Lewis, Parks and Nature
- Michael Guebert, Property and Environmental Services, Solid Waste Operations
- Nancy Strening, Construction Project Management Office
- Rory Greenfield, Metro Regional Center
- Tracy Fisher, Finance and Regulatory Services, Procurement Services division
- Phillip McCreary and Cinnamon Williams, Finance and Regulatory Services

## Green Teams

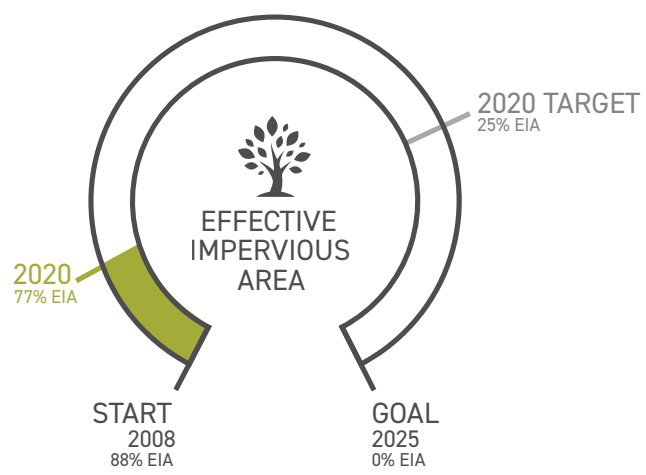
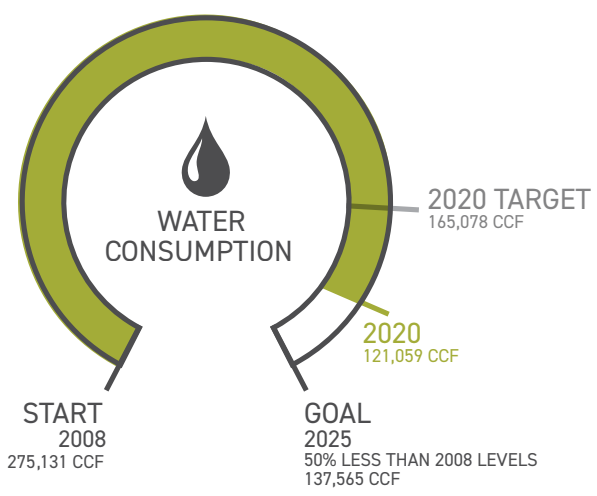
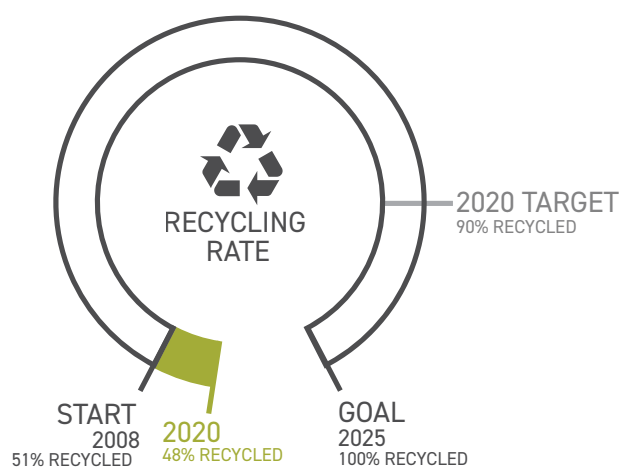
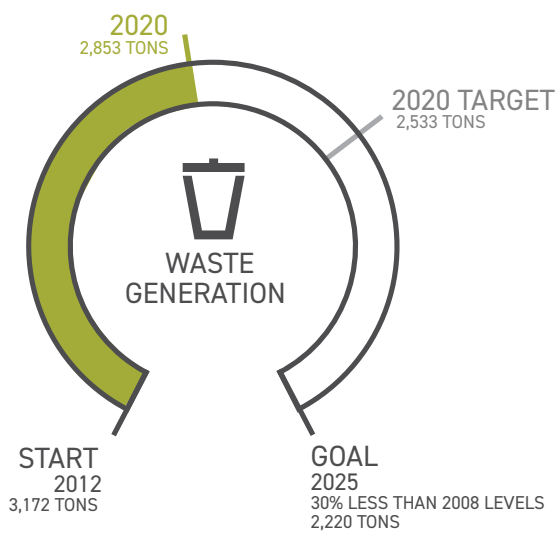
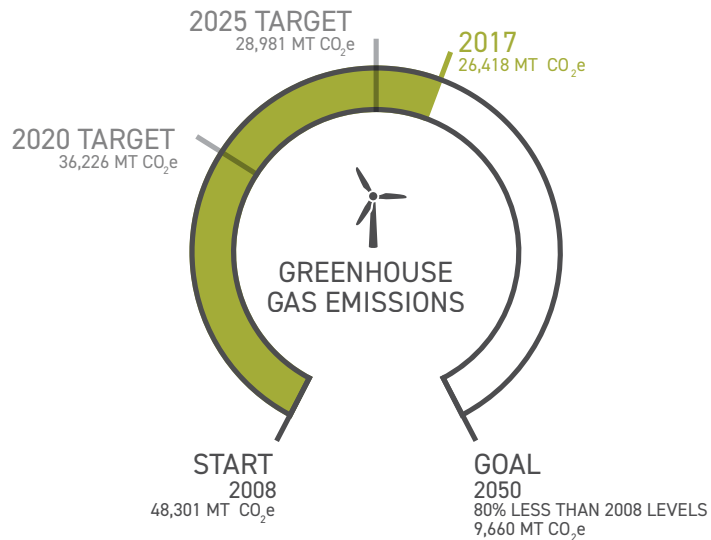
Green teams engage employees and advance implementation of sustainable practices at Metro workplaces.

The following Metro employees served as chairs of the green teams during FY 2019-20:

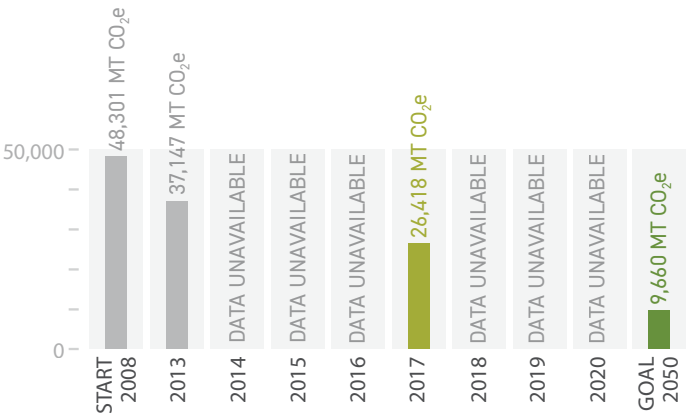
- Patrick Morgan, Metro Regional Center
- Sarah Vaca, Waste Prevention and Environmental Services/ Parks and Nature
- Ryan Harvey, Oregon Convention Center
- Andrea Abbott, Portland's Centers for the Arts
- Chuck Dills, Portland Expo Center
- Will Cortez, Oregon Zoo
- Carolyn Sherman, Glendoveer Golf and Tennis Center



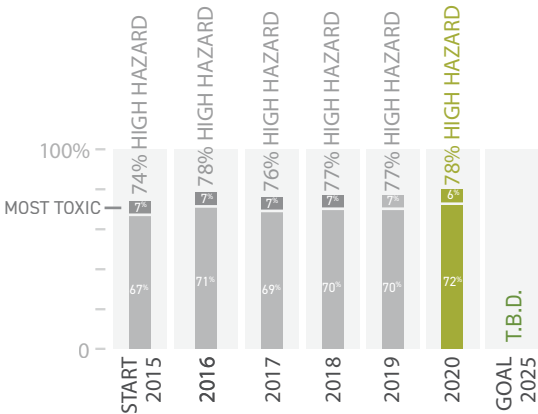
# FY 2019-2020 Sustainability scorecard



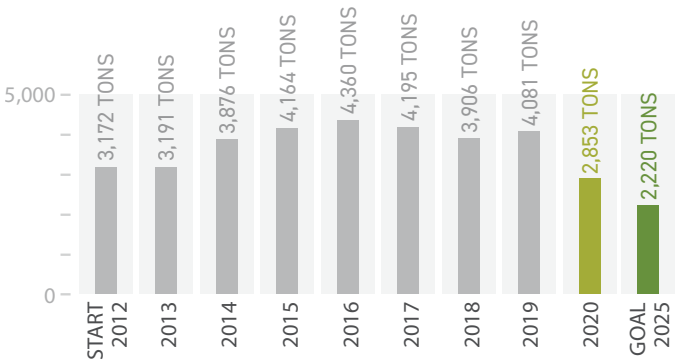
# FY 2019-20 Sustainability scorecard



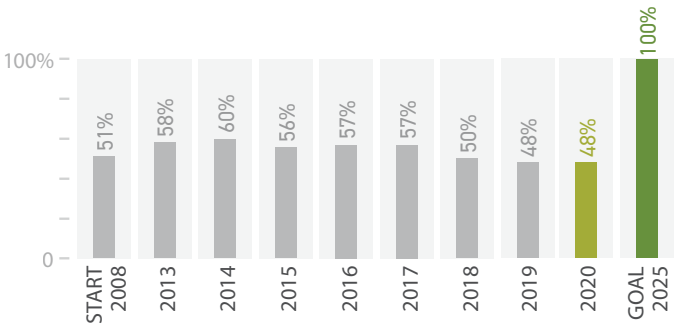
GREENHOUSE GAS EMISSIONS



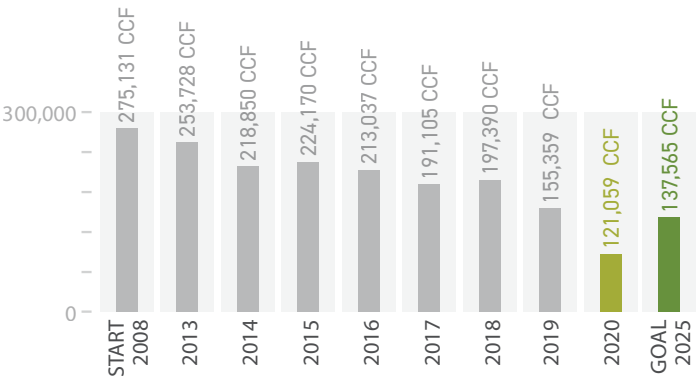
TOXIC INVENTORY



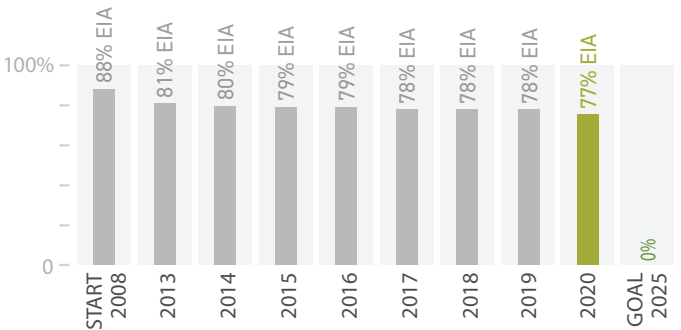
WASTE GENERATION



RECYCLING RATE



WATER CONSUMPTION



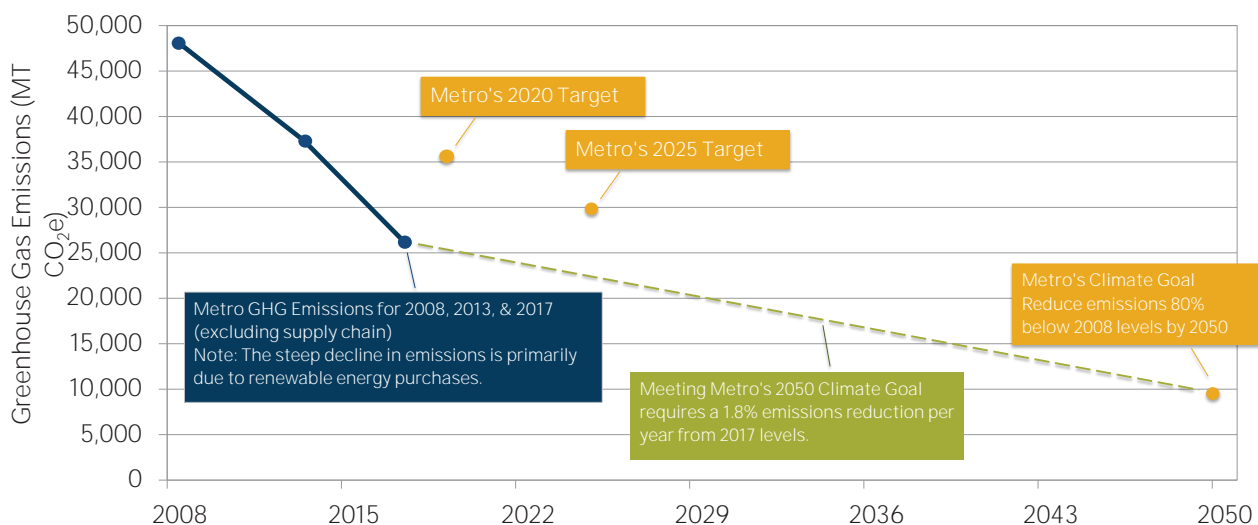
EFFECTIVE IMPERVIOUS AREA



## Progress toward climate goal

Due to the anomalies in operations for FY 2019-20 as a result of COVID-19-related facility closures, this report does not include a discussion of progress made in each sustainability goal indicator. Rather the report focuses on climate data to help inform next steps for climate action given the urgency of the climate crisis.

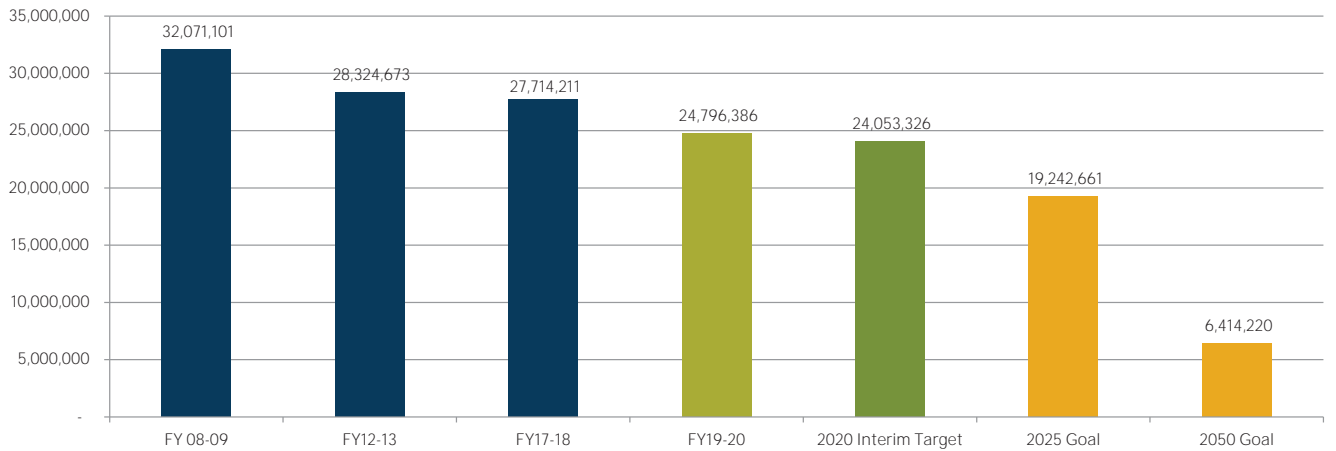
Metro's most recent greenhouse gas (GHG) emissions inventory for internal operations was completed in 2018 using FY 2016-17 data. In FY 2016-17, Metro operations generated 26,418 metric tons carbon dioxide equivalent (MT CO<sub>2</sub>e) from GHG sources included in Metro's climate reduction goal (non-supply chain emissions), a 46 percent decrease from baseline. This is equivalent to the emissions from energy used by 2,800 homes in one year, or from 5,600 cars driven for a year. At that time, the largest source was the diesel fuel used by Metro-contracted trucks to transport community-generated solid waste from transfer stations to landfills. Since then, Metro has switched to using renewable diesel, expected to reduce Metro's overall emissions by 20 percent or more. Other significant emissions sources include building energy use, employee commute, St. Johns Landfill and Metro's fleet.



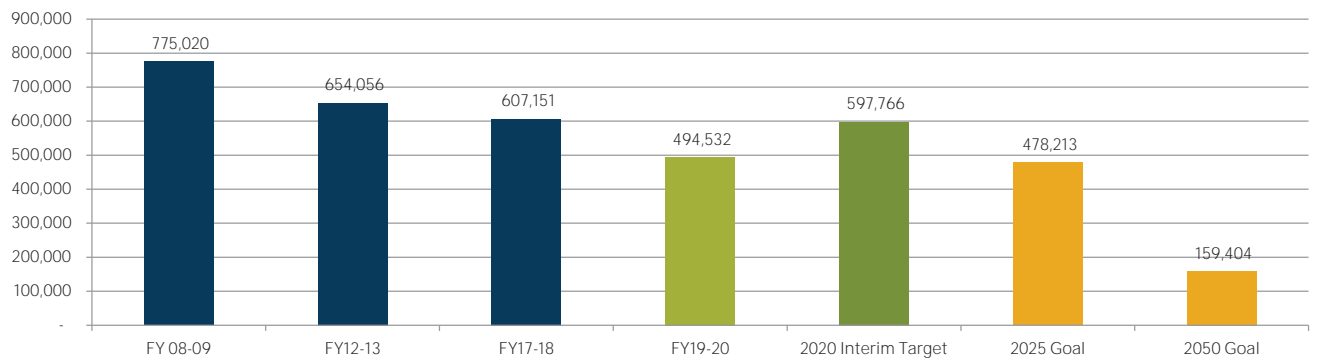
Metro also tracks electricity and natural gas consumption data annually for the purposes of this annual report. The FY17 GHG inventory indicated that these two sources comprise 29 percent of Metro's non-supply chain emissions. Following are graphs showing electricity and natural gas use across Metro compared to baseline and benchmarks. In FY 2019-20, Metro facilities consumed 24.8 million kWh of electricity, a 23 percent decrease from the 2008 baseline and 8 percent lower than the previous year. Note that energy use includes both grid purchased energy and renewable energy generated onsite. Metro facilities used 494,532 therms of natural gas in FY 2019-20, a 38 percent decrease from the FY 2010-11 baseline and 13 percent lower than the previous year. These reductions are notably given that the addition of buildings to Metro's facilities as well as an increase in visitors to Metro's venues over the years.

Metro worked closely with the Energy Trust of Oregon to capture energy savings on projects at Metro facilities and visitor venues in FY 2019-20, receiving \$191,310 in funding for projects that are projected to save 1,237,743 kilowatt-hours of electricity and 34,780 therms of natural gas annually.

### Electricity usage in kilowatt-hours at Metro facilities FY 2019-20



### Natural gas usage in therms FY 2019-20







## KEY ACCOMPLISHMENTS

### Metro invests in climate action

An infusion of one-time funding in FY 2019-20 from the Metro Council facilitated key investments across Metro to drive down operational greenhouse gas emissions. Metro hired its first climate analyst for internal operations, Dana Visse, to continue implementation of a climate action plan focusing on high impact actions across all sources of Metro's emissions. Following are highlights of the key climate investments made in FY 2019-20.

#### **Metro invests in electric vehicle infrastructure**

Metro installed two "smart" electric vehicle (EV) chargers in the Metro Regional Center garage to enable staff and Councilors to charge their personal electric vehicles during the work day. These networked chargers allow Metro to track electricity usage associated with vehicle charging, and allow users to check charging station availability and charging status via a mobile app. Metro also installed electrical infrastructure in the Metro Regional Center parking garage to allow future installation of EV chargers for Metro's fleet.

#### **OCC deploys advanced energy management information systems**

Climate funds also helped implement an energy-saving software tool at the Oregon Convention Center. Energy Management and Information Systems are a broad family of tools to monitor, analyze, and control building energy use. One such tool, Fault Detection and Diagnostics (FDD) helps to find and diagnose hard-to-detect errors in building systems, saving energy, reducing utility and preventative maintenance costs from wear and tear on equipment, and improving occupant comfort. FDD systems can result in significant energy savings. A Better Buildings Alliance analysis found a median energy savings of 9% for FDD systems with a two-year simple payback.



### **Metro pilots use of electric landscaping equipment across our facilities**

In addition to posing a noise nuisance, gas-powered leaf blowers pollute the air with toxic chemicals, burn fossil fuels, and create health risks for both operators and the public. They use two-cycle and four-cycle unfiltered gasoline engines which produce hundreds of times more hazardous pollutants and particulates than automobiles. According to the California Air Resources Board, one hour of operation of a commercial leaf blower emits smog-forming pollution comparable to driving a 2016 Toyota Camry about 1,100 miles. To address this, Metro purchased 23 pieces of electric landscaping equipment and 30 batteries and chargers to pilot across Metro facilities, including leaf blowers, chain saws, string trimmers, power washers, hedge sheers and pole saws. Results of this pilot will inform future electric equipment purchasing.

### **Facilities target remaining energy and water efficiency improvements**

Several key investments targeted additional energy and water efficiency opportunities across Metro facilities. At the Oregon Zoo, funding was used to purchase 13 smart water meters and four smart water meter retrofit heads for existing meters to incorporate into the existing water monitoring system. This will allow more accurate, real-time data monitoring of water usage, helping zoo staff identify and fix leaks by flagging water losses earlier. Projected water savings are estimated at 10-15 percent. The zoo also purchased two on demand water heaters to replace old tank heaters. In addition to being more efficient, on demand water heaters reduce natural gas usage by eliminating the need to keep the water continually heated. Zoo staff also replaced an old ultra-low temperature freezer, eliminating legacy refrigerants that have a higher global warming potential than newer models. LED lighting upgrades were also installed in Hall E at the Portland Expo Center, and at the tennis courts and driving range at the Glendoveer Golf and Tennis Center.







## KEY ACCOMPLISHMENTS

### **Comprehensive audits across Metro inform waste reduction strategies**

The adage, “you can’t manage what you don’t measure” motivated Metro to conduct waste audits at Metro’s largest facilities in FY 2019-20, with the goal of accelerating progress toward Metro’s ambitious waste reduction goal. Metro hired a consultant to conduct objective, third party audits to establish a baseline and better inform and evaluate waste prevention and reduction strategies. Community Environmental Services collected and sorted all of the waste generated over a 24-hour period at Metro Regional Center, Oregon Convention Center, Oregon Zoo and the Portland Expo Center. The audit reports documented the composition of the waste stream (garbage, recyclables and food waste), contamination rates, and where particular materials were generated within the facilities. These audits identified opportunities to prevent waste in the first place, as well as increase recycling, composting and food donation rates. Metro plans to act on the audit recommendations when operations are fully resumed at these facilities.

### **Oregon Zoo develops Sustainability Plan**

One of the first endeavors undertaken by the newly launched Oregon Zoo Green Team in FY 2019-20 was to develop a sustainability plan for the zoo. Tiering off Metro’s agency-wide Sustainability Plan, and drawing from the Association of Zoos and Aquariums’ Green Guide, the zoo’s Sustainability Plan focuses on seven key themes that have the potential to significantly reduce the zoo’s ecological footprint: Reducing Carbon, Choosing Nontoxics, Preventing Waste, Conserving Water, Enhancing Habitat, Sustainable Sourcing & Purchasing, and Sustainable Design & Construction. For each theme, the Plan describes current data and practices, goals, key indicators, and possible actions to be pursued. The plan will help guide the zoo toward reaching its sustainability vision to “work diligently to integrate sustainability into all daily operations and planning for the future, and to inspire both staff, volunteers and guests to practice sustainability in our own lives.”



## Metro Green Teams take action

Green teams across Metro took action in FY 2019-20 to seize opportunities to engage employees and implement projects to advance sustainability at their sites, including:

- Hosting the EcoChallenge in October 2019 to support staff in building better habits to create environmental and social change
- Pivoting from a robust suite of in-person activities planned for the 50th anniversary of Earth Day in April to an interactive virtual EcoBingo game that staff could participate in remotely
- Conducting a solar study for the Borland Native Plant Center
- Installing dishwashers in break rooms at the zoo to facilitate the use of durable dishware





## KEY ACCOMPLISHMENTS

### Renovation of Oregon Convention Center advances sustainability and equity

With the goal of maintaining its status as one of the most sustainable convention centers in the world and its LEED Platinum certification, the Oregon Convention Center's ambitious renovation completed in October 2019 centered sustainability and equity.

The renovation included all LED lighting that is automatically controlled to brighten or dim depending on the amount of natural light in the space at a given time. As part of the changes to OCC's actual building and functionality, a corridor built as an alternative route makes it possible for event attendees to forego using OCC's elevators while traveling across the first floor. This improves accessibility, and lighter use of escalators lighter usage of escalators and elevators means less time, energy use, and cost to maintain and repair them. OCC's single level escalators each use approximately 15,000 kilowatt-hours of electricity annually to operate 12 hours per day, equivalent to the

energy consumed by about three average American households.

Environmentally-friendly materials were used whenever possible. Modular tiles were selected for the new carpet, which reduces waste and embodied carbon when areas of carpet need to be replaced. The carpet, manufactured in the U.S., is made of 53 percent pre-consumer recycled materials and is certified as Green Label Plus, the highest standard for reducing volatile organic compound (VOC) emissions. Instead of letting the 110 tons of old carpet go to waste, it was recycled and repurposed. The carpet padding was remade into new carpet padding, while the carpet itself was shipped to Seattle to be used to filter waste coming from cargo ships to help to prevent pollution of the Puget Sound. In addition, a particular focus was placed on recycling construction waste, including metals and gypsum.

An important focus of the renovation project



was OCC's outdoor plaza. The plaza sits directly adjacent to the Hyatt Regency Portland at the Oregon Convention Center, linking the two venues, and can be used for flexible outdoor events. The design of the plaza incorporated new stormwater planters in the north plaza and in the main entry which significantly increased the amount of stormwater treated onsite, as well as decreased the amount of impervious surface by 14,000 square feet. In addition, over 100 rose bushes were donated to the Portland Rose Society and bike racks and park benches were donated to the Rebuilding Center.

The OCC renovation project was also the largest public contract in Oregon ever awarded to a certified Minority Business Enterprise. This was a goal of the project from the outset. Of the total contract dollars, 51 percent were awarded to businesses that were registered with Oregon's Certification Office for Business Inclusion and Diversity as Minority-owned or Women-owned Businesses. Forty percent of hours worked on site were by people of color and seven percent of hours worked were by women.







## KEY ACCOMPLISHMENTS

### IPM program reduces toxics across Metro operations

Visitors to the Oregon Convention Center may not be aware of a unique, commissioned piece of art installed in the northeast plaza – a 600-year old Douglas fir downed log discovered in the Mount Hood wilderness in the 1960s. Artist Buster Simpson brought it to the convention center in 1991 as the Host Analog, “an urban nurse log serving to exemplify a living laboratory of diversity, adaptability and resilience”. Recently the Host analog has been experiencing an infestation of the hemlock woolly adelgid, a tiny sap sucking insect. Rather than use a pesticide treatment that could also kill non-target insects like pollinators, Metro’s IPM coordinator worked with the artist, OCC facility staff, and the landscaper to devise an alternative approach that involved adding compost, fertilizer, and a horticultural oil that eliminates egg hatching and ultimately reduces the pest population.

Some of the other ways the IPM program helped Metro reduce toxics across venues, parks and natural areas in FY 2019-20 include:

- Helping coordinate on-call contractors for stinging insect management such as in-ground yellow jacket nests at the Oregon Zoo and Blue Lake Park
- Providing facility inspections primarily focused on rodent exclusion. The use of a trail camera helped identify the pest and

entry points such as attics and crawl spaces.

- Offering technical assistance to the Native Plant Center to address eastern gray squirrels that were eating the plants used for native seed harvest. Adding mesh screens on and filter fabric around the base of the planters helped discourage digging.
- Providing the Oregon Zoo with direct support and technical assistance to address pest issues, maintain animal health, reduce toxics and implement best management practices.
- Continuing to support the Oregon Department of Agriculture’s Japanese beetle eradication project in Washington County. This involved working with multiple stakeholders including yard debris facilities, haulers, and local governments.







## Looking ahead

For FY 2021-22, Metro plans to continue to amplify climate action in recognition of the urgency of the climate crisis. In alignment with Metro's Strategic Framework, the sustainability program will drive integration of climate justice and resilience into Metro's policies, capital investments and operations. Planned work includes implementing the Clean Air Construction Standard, updating Metro's climate goal and strategies, and rolling out an updated green building policy. The program will also support the transition to increased telework, and advance progress in key sources of Metro's emissions including capturing remaining energy efficiency opportunities, developing a renewable energy goal and financing strategy, and pursuing key opportunities to electrify Metro's fleet and transition to low carbon fuels. To better coordinate agency-wide climate work, Metro plans to convene a climate task force to articulate Metro's climate strategy, strengthen accountability and build climate justice and

resilience knowledge across Metro. Other priorities include continued reduction of toxic chemicals and deeper integration of racial equity into Metro's sustainability work.

**Learn more about Metro's internal sustainability program at:**

[oregonmetro.gov/greenmetro](https://oregonmetro.gov/greenmetro)

