

# City of Corvallis

## Sustainability Report

# 2018



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*Sustainability means using natural, financial and human resources in a responsible manner that meets existing needs without compromising the ability of future generations to meet their own needs.*

- City Council Policy on Sustainability

# City of Corvallis 2018 Sustainability Report

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### ***Imagine Corvallis 2040 Vision Statement***

Corvallis is a safe, sustainable, resilient, small city... that maintains the community's safety and security, protects its natural environment, addresses a changing climate, and prepares for emergencies with special attention paid to its most vulnerable populations.

On the cover: A view of Marys Peak by Lainey Morse.

## Highlights of Corvallis' Sustainability Efforts

### Ongoing Climate Action Plan Implementation

The Climate Action Plan (CAP) calls for reductions in greenhouse gas emissions generated by the community as well as by the City organization. The CAP was adopted in December 2016, and the City moved quickly to incorporate the Plan's action items into our existing Sustainability Work Plan. Among the action items achieved in 2018:

- Increased purchases of renewable electricity to offset streetlight and traffic signal power use.
- Identified energy efficiency projects at the Wastewater Reclamation Plant through Pacific Power's Strategic Energy Management program.
- Trained city staff on environmental design of facilities and infrastructure construction to ensure compliance with City's policy for LEED-Silver standards on new construction.
- Continued to convert remaining facility lighting to LEDs.
- Promoted employee use of alternate commute modes, including carpooling, transit, walking and biking.
- Implemented new waste management practices to reduce construction and demolition debris (asphalt and concrete) on capital improvement projects.



In addition, a number of citywide action items for 2019 are planned, including:

- Consider climate change in the update to the Water Master Plan.
- Complete a feasibility study and plan for additional onsite and rooftop solar electric and hot water for buildings.
- Develop a plan to replace lawn mowers, chain saws, leaf blowers and weed eaters with electric models.
- Develop a plan for replacing gas-powered vehicles with electric, including the necessary charging station facilities.

### Sustainability Work Plan

At the beginning of each year, the Sustainability Steering Committee and the City-wide Sustainability Core Team work to develop projects specifically focused on each of the City's sustainability goals. These goals, established in 2010, reflect the sustainable endpoints the organization seeks to achieve. The 2018 Sustainability Work Plan projects and a description of the progress made in each goal area are listed below.

2018 Objective	Progress
<b>Goal: Employer of Choice</b>	
Develop an action plan based on results from the 2017 Employee Engagement Survey.	Results shared with staff. Department-level meetings created feedback for action plans. Organization-level action plan with mission, vision and value statements underway.
Develop a feedback survey for the supervisor training program.	Completed. Feedback to be used in 2019 / 2020 management trainings.

2018 Objective	Progress
<b>Goal: Sustainable Facilities</b>	
Participate in Pacific Power's Strategic Energy Management program at the Wastewater Reclamation Plant to identify areas to improve energy efficiency, identify sources of funding, and implement feasible projects. (B&E MO-1) <sup>1</sup>	Program began in the fall with training and identification of areas for improvement, incentives and costs.
Public Works engineers attend trainings on LEED (or equivalent) for facilities and infrastructure construction to ensure compliance with City's policy for LEED Silver equivalence on new construction. (initial steps for B&E MO-10) <sup>2</sup>	Online sustainable infrastructure training course attended by several engineers with discussion.
Convert remaining City facilities lights to LEDs, prioritized by cost-effectiveness. (B&E MO-4) <sup>3</sup>	Senior Center and Transit parking lot completed. Municipal Court and Library garage are scheduled next.
<b>Goal: Sustainable Purchasing</b>	
Increase the City's purchases of renewable electricity to add usage equivalent to that from streetlights and traffic signals. (B&E MO-2) <sup>4</sup>	Completed by adding 1,950 one-hundred kilowatt-hour blocks per month of renewable energy through Pacific Power's Blue Sky program.
Review sustainable purchasing practices with key purchasing personnel in all departments.	Trainings provided to purchasing personnel in every department covering the reasons why, policies supporting, and tools to assist the process of sustainable purchasing.
<b>Goal: Vehicle Carbon Footprint</b>	
Promote employee use of alternate commute modes, including carpooling, transit system, walking and biking. Conduct surveys before and after to identify changes in behavior. (LU&T MO-3) <sup>5</sup>	Surveys conducted before and after employee education on alternate modes of travel. Observed a slight decrease in employees driving alone and a strong increase in those carpooling.

<sup>1</sup> From Corvallis Climate Action Plan (CAP), Buildings and Energy action concerning energy audits of the City's municipal facilities and studies to reduce their energy and fuel use.

<sup>2</sup> From CAP, Buildings and Energy action concerning LEED designation on new City facilities.

<sup>3</sup> From CAP, Buildings and Energy action concerning conversion of City lighting to LEDs.

<sup>4</sup> From CAP, Buildings and Energy action concerning the purchase of renewable electricity.

<sup>5</sup> From CAP, Land Use and Transportation action concerning the promotion of alternate modes of transportation for employee commutes.

2018 Objective	Progress
<b>Goal: Waste Reduction</b>	
Conduct waste audits at the Library and one of the Fire Stations and provide results and recommendations.	Waste audits conducted as baselines for comparison in future. Results, recommendations, and educational opportunities relayed to departments.
Implement at least one Capital Improvement Plan project using new Waste Management Plan practices to reduce construction and demolition debris. (early steps in C&W MC-1.1 <sup>6</sup> ), an offshoot of C&W MC-1 <sup>7</sup> )	Five projects tracked during the construction season. Contractor behavior was unchanged from previous projects. Our requirements for tracking and proper disposal of concrete and asphalt waste added costs to what was already their low-cost option for disposal.

### The Updated Strategic Operational Plan

The Strategic Operational Plan (SOP) was updated and adopted by City Council in 2018. Significant overlap exists between the SOP and the organization’s sustainability efforts. Some examples from the updated SOP include:

- Complete implementation of Commercial Property Assessed Clean Energy (C-PACE) program in Corvallis by December 2019, which helps make green energy upgrades more accessible and affordable.
- Increase transit service frequency and annual transit passenger trips per capita.
- Enhance the bicycle system with wayfinding signage.
- Update municipal operations GHG inventory using 2018 data.
- Increase renewable power used to provide City services (B&E MO-2).
- Convert transit fleet to electric vehicles (LU&T MO-2).
- Reduce GHG emissions from City fleet (LU&T MO-2).



### Progress Toward Organizational Goals

Since 2010, the City of Corvallis has been striving to achieve progress in five sustainability goal areas:

- Employer of Choice
- Sustainable Facilities
- Sustainable Purchasing
- Vehicle Carbon Footprint
- Waste Reduction

These goals were developed through guidance from the City Council’s Organizational Sustainability Policy, adopted in 2004, that uses a triple-bottom-line framework to enhance sustainability in all aspects of the organization’s activities. City departments, through changes in daily operations, ongoing programs, and long-range planning strive to simultaneously have a significant positive impact on the environment, the economic efficiency of municipal government, and the social character of the workplace.

<sup>6</sup> From CAP, Consumption and Waste action concerning the recycling of construction and demolition materials.

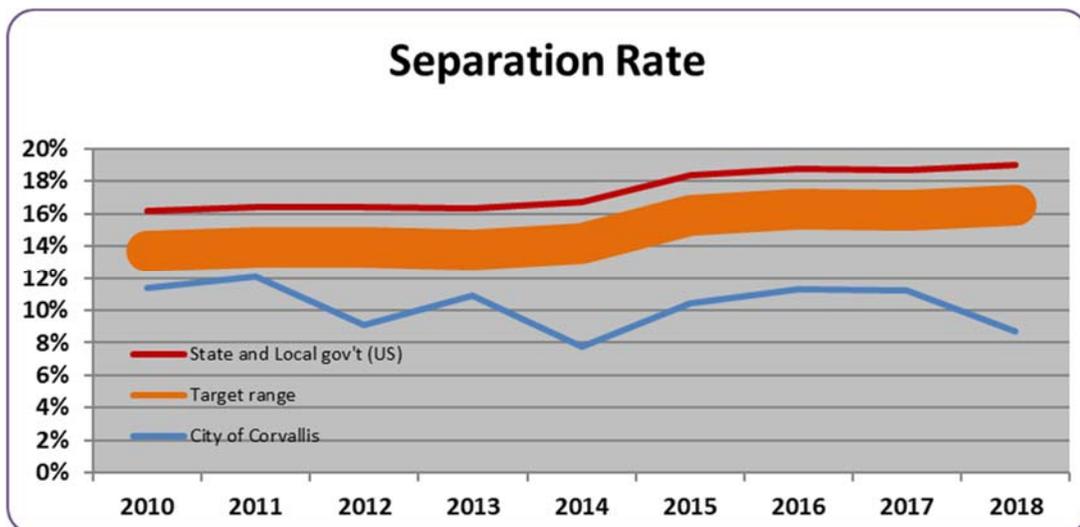
<sup>7</sup> From CAP, Consumption and Waste action concerning an increase in recycling in the community.

Below is a brief description of each goal area, the performance on measurable objectives and targets, and highlights from related projects completed over the past year.

### Employer of Choice

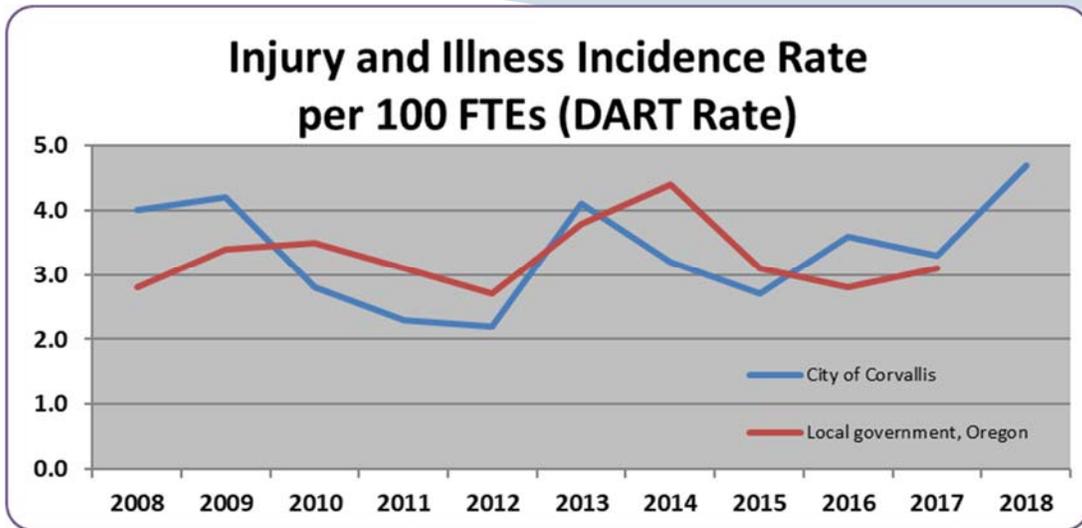
An Employer of Choice, as the City has defined it, is one whose practices, policies, benefits and overall work conditions enable it to successfully attract and retain talent. This social sustainability goal focuses on the issues of turnover, work-related injuries, and employee wellness. The City uses three indicators to assess progress: Separation Rate, Injury and Illness Incidence Rate, and Spring Fitness Challenge Participation. The first two are compared to industry standards and the third, Spring Fitness Challenge Participation, tries to examine employee wellness and engagement through this voluntary program. The organization's performance on these metrics are shown in the following charts.

**Separation Rate** - *Maintain a separation rate of 2-3 percentage points below the annual separation rate for State and Local Government as reported by the Bureau of Labor Statistics.*



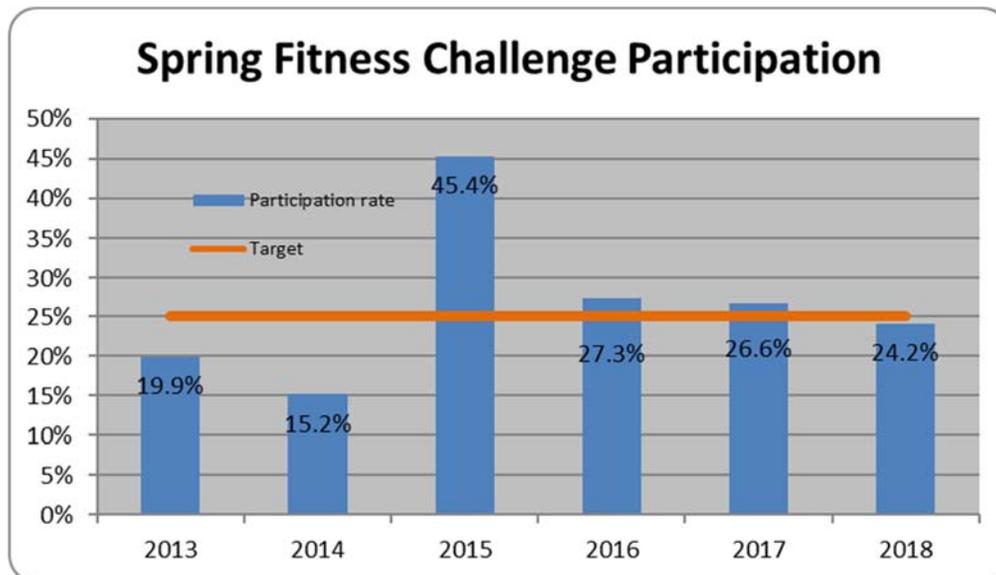
The Bureau of Labor Statistics of the U.S. Department of Labor compiles comparator data for this metric. The data includes job openings, hires, quits, layoffs, retirements, discharges, and other separations. The City's separation rate has consistently been below our comparators (nation-wide State and local governments) as well as below our target range (2-3% below comparator).

**Injury and Illness Incidence Rate** - *Maintain an annual nonfatal workplace injury and illness incidence rate below that of the Local Government (Oregon) industry sector through a comparison of the Bureau of Labor Statistics' DART Rates (Days Away from work, Restricted work activity, or job Transfer).*



The DART rate shows the relative level of injuries and illnesses among different industries or organizations. We compare the City’s DART rate to the rate for Local Government, Oregon. These rates can help determine both problem areas and progress in preventing work-related injuries and illnesses. Comparators for this rate lag about a year behind the City data, which is calculated at the close of every calendar year. The City’s DART rate for 2017 was above the industry comparator for the second year in a row.

**Spring Fitness Challenge Participation** - Track employee participation in the Spring Fitness Challenge, a voluntary employee wellness program, with target participation at 25%.



For the first time in several years, participation in this program dropped below our target of 25%. A significant outreach effort in 2015 boosted employee participation in that year. Since then, enrollment dropped to a level just above our target until 2018 when it fell slightly below. One of the Objectives in the 2019 Sustainability Work Plan is to find ways to increase participation.

## Related Actions – Employer of Choice

**Bottle deposits for the Linn Benton Food Share** – Last year, in conjunction with a former employee, over \$1,300 was raised from bottles and cans collected from City buildings. Each dollar buys 15 pounds of food.

**Moving forward after the 2017 Employee Engagement Survey** – Results from the survey were shared with staff via email. Departments held meetings in support, seeking feedback and ideas for next steps. Some departments then created action plans from that feedback, that will eventually lead to the creation of City-wide employee Mission, Vision and Value Statements.

**Develop a feedback survey for the supervisor training program** – The survey sought feedback as the Human Resources Department prepares for 2019/20 management training program.

## Sustainable Facilities

Sustainable facilities are those built, maintained, and operated in a manner that reduces energy, water, materials, and harm to human health and the environment. They include all occupied buildings and other facilities, such as parks and water pumping stations.

The objectives for the Sustainable Facilities goal are to reduce water use and emissions from energy used in City operations. Staff tracks electricity, natural gas, and water use at City facilities to compare against baseline years and to measure progress toward reduction goals.

**Greenhouse Gas Emissions from Energy Used in City Operations** – *Reduce emissions from energy used in City operations (e.g., facilities, streetlights, water, wastewater).*

### Targets

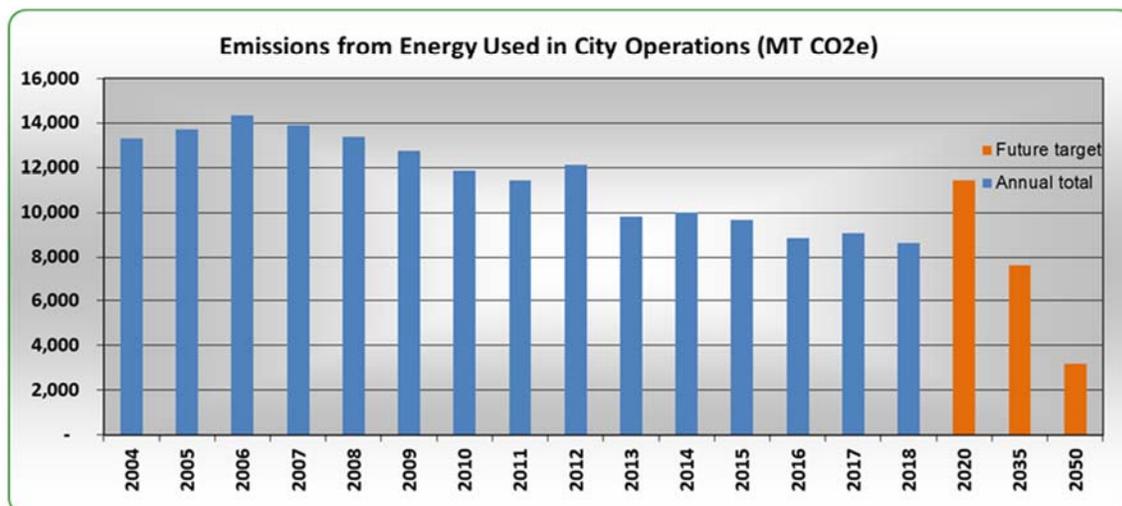
2020: 10% below 1990 emissions

2035: 40% below 1990 emissions

2050: 75% below 1990 emissions

### Baseline

1990: 12,735 MT CO<sub>2</sub>e



Emissions from Energy Used in City Operations continued its downward trend after a slight uptick in 2017. The City's four solar arrays continue to work as intended, but multiple instances of vandalism in the past year have reduced the energy production of our largest solar array,

located at Public Works. These interruptions have reduced our on-site solar electricity generation from 3.5% in 2016 and 2017 to 2.9% in 2018.

On the natural gas side, usage is down 19% since tracking began in 2004. The Osborn Aquatic Center is by far the biggest consumer of natural gas in the organization, using over 65% of the total.

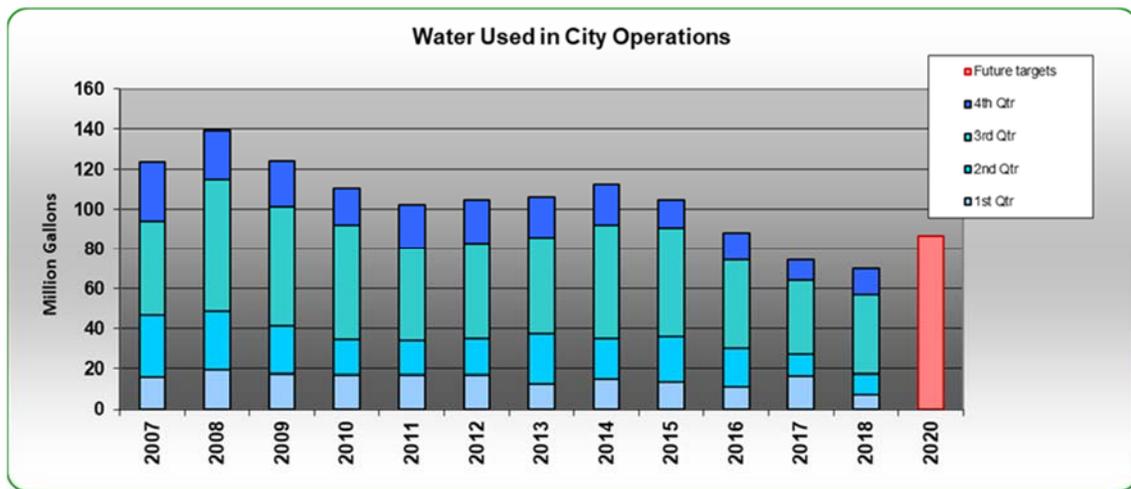
**Water Used in City Operations – Reduce water use in City operations.**

Targets

- 2011: 3% below 2007 use
- 2015: 15% below 2007 use
- 2020: 30% below 2007 use

Baseline

2007 – 123,824,684 gallons



Water use continues its steady decline since 2014 and is now down to about half of our peak usage in 2008. The reductions in 2018 were primarily related to the methods used to maintain water quality. The northern- and southern-most points in the water distribution system are dead-ends. Water quality will decline over time if water at those ends is not circulated regularly.

To avoid that, City staff monitor water quality at those end-points and release the water necessary to maintain quality at desired levels. Adjustments made in the frequency of monitoring and release brought water used for this purpose from 27.3 million gallons in 2017 to 15.3 million gallons in 2018, without compromising quality. This not only saves water, but also the energy and chemicals necessary to treat that water.

The expectation for 2019 is to replace equipment at those end-points to automate monitoring and water releasing, further reducing usage and staff time for this purpose.

## Related Actions – Sustainable Facilities

**Pacific Power Legacy Award** - The City of Corvallis received Pacific Power's Blue Sky Power Legacy Award recognizing more than a decade of renewable energy leadership and support. The City began supporting green power options for its electricity usage in 2001 with small purchases of renewable energy through Pacific Power's Blue Sky program. Then in 2005, the practice was formalized by way of a City Council Resolution requiring that 7% of all electricity used in city-owned facilities be renewable.



**More renewable electricity** – This past year, the City increased our purchases of renewable electricity to add the equivalent of all of our streetlight and traffic signal usage. This new addition equates to a reduction in greenhouse gas emissions of over 1,000 tons every year. To ensure efficiencies in this area, all new streetlight installations are LEDs.

**Wastewater Recovery Plant (WWRP) efficiencies** – Staff began initial steps to a Strategic Energy Management (SEM) project with Pacific Power and other partners. The goal is to identify and implement areas of energy efficiency along with locating funding for those improvements. Early milestones were hit, which garnered a \$1,000 incentive check to the City. In early 2019, staff moved into the Treasure Hunt Phase, an in-depth look at the facility and what can be done to become more efficient.

**Taylor Water Treatment Plant efficiencies** – Workers at the plant in south Corvallis conducted a SEM Treasure Hunt in early 2018 that identified 37 potential energy reductions. That program wrapped up with a 5.5% reduction in overall plant energy usage, representing \$17,000 in annual savings.

**Drought tolerant landscaping** – Further changes to the Library landscaping in 2018 eliminated 800 square feet of grass and, along with it, the need for watering, mowing, and fertilizing.



**Majestic Theater upgrades** – New occupancy sensors were installed to minimize lighting in the main theatre. Additionally, LED bulbs replaced house lights and outside lighting, cutting costs for the lighting under the outdoor awning to less than \$7 per year.

**Planting our natural areas** – Parks workers planted 34,460 plugs, bulbs, trees, shrubs and bare-root native plants at Herbert Farm and Natural Area. Of those, 4,885 were plugs of threatened and endangered species.

## Sustainable Purchasing

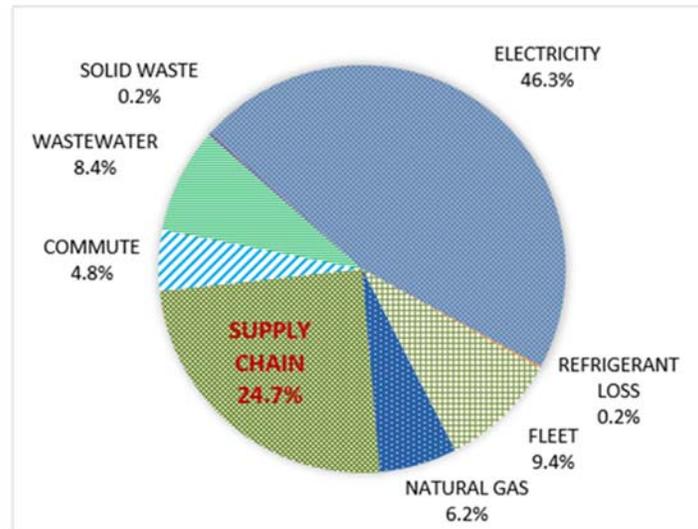
Sustainable purchasing considers the “Triple Bottom Line” of environmental, economic, and social impacts in purchasing decisions.

To reduce emissions, waste, and toxicity of City purchases, staff strives to create green purchasing standard operating procedures (SOPs) for areas of highest impact. This includes increasing purchases from local vendors and including emissions from purchased goods and services in the City’s organizational greenhouse gas inventory.

The most recent Organizational Greenhouse Gas Inventory, conducted for calendar year 2016, shows that emissions from the City’s purchase of goods and services comprised over 24% of total emissions. These purchases include machinery, operating supplies, services, vehicles, computer and electronics equipment, and many others. As a comparison, emissions from the supply chain were second only to those from electricity use (46%).

Several projects, described below, were completed or implemented into standard procedure in 2018. However, those efforts may not be evident in the greenhouse gas inventory that will be conducted for calendar year 2018 due to the imprecise methodology inherent in greenhouse gas calculation tools for measuring emissions from purchases.

City of Corvallis – Organizational Greenhouse Gas Inventory - 2016



### Related Actions – Sustainable Purchasing

**Reusable tableware** – The Library and Parks and Recreation Departments used Green Girl reusable tableware for several events, reducing the use of disposables. Green Girl is a local organization that provides zero-waste tableware options for interested groups.

**Repurposed materials** – The playground at Peanut Park was resurfaced for proper fall protection with reused materials. All of the edging to frame the playground and hold the fall material is wood from the original Marys River Boardwalk. Some of the boards were also used to create benches built into the edging material.

**IT efficiency and reduced toxicity** – The City of Corvallis uses over 800 desktop, notebook, and tablet computers, plus nearly 1,000 monitors. Add to that 98 copiers/printers and you have an incredible amount of devices to manage and maintain to keep our operations running smoothly. Those devices use a lot of energy and can create toxic environmental effects during their manufacture and disposal. The City’s Information Technology Department works to minimize the environmental impact by using two certification systems as part of their criteria for computer equipment purchases: Energy Star and EPEAT. Those efforts have helped the City receive gold-level certification from the



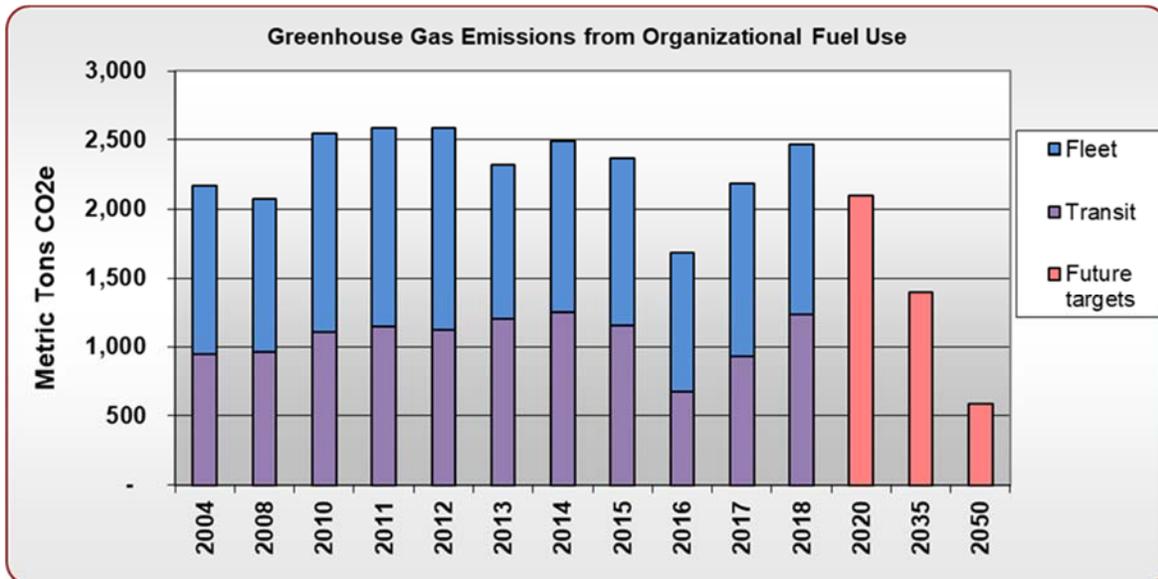
State Electronics Challenge for the seventh year in a row.

### Vehicle Carbon Footprint

Cars, trucks, heavy equipment, transit buses, lawnmowers, and utility vehicles are essential to City services, but they create considerable greenhouse gas emissions from petroleum-based products. The City aims to reduce its vehicle carbon footprint by decreasing fossil fuel use. This will be achieved by purchasing more energy-efficient and alternative-fuel vehicles, changing driving behavior, and increasing the use of lower carbon fuels.

**Greenhouse gas emissions from City vehicles** – *Reduce greenhouse gas emissions from City vehicles (fleet, transit).*

<u>Targets</u>	<u>Baseline</u>
2020: 10% below 1990 emissions	1990: 2,333 MT CO <sub>2</sub> e
2035: 40% below 1990 emissions	
2050: 75% below 1990 emissions	



The amount of fuel used by the organization decreased by over 7,300 gallons compared to 2017 but greenhouse gas emissions increased by almost 280 MT CO<sub>2</sub>e. This is due to the lack of availability of 99% renewable diesel (R99) due to state bans related to materials and

sourcing. Renewable diesel emits significantly fewer greenhouse gases than standard diesel fuel. In 2016, renewable diesel made up 98% of our diesel usage. In 2018, that percentage dropped to about 5%.

### Related Actions – Vehicle Carbon Footprint

**Use of non-fossil fuel equipment** – staff in the Parks and Recreation and Public Works Departments started working with electric chainsaws and leaf blowers. They have proven to be very effective in certain situations but they have not replaced all power tools yet. For example, electric blowers have not fared well against heavy, wet leaves and arborist saws are still only available in gas models. Aside from the greenhouse gas reductions and improvements to local air quality, these electric models do not require multiple pull-starts every day, saving wear and tear on employees' elbow, shoulder and wrist joints. As newer models appear in the marketplace and technology improves, staff will continue to seek opportunities to make the switch.



**Employee commute survey** – A survey of employee commuting habits was conducted in order to better understand how we get to and from work. Eighty-eight percent of the workforce completed the survey. Understanding commute habits allows the organization to identify tools and services available in our area to help reduce commute emissions, which account for approximately 5% of our organizational greenhouse gas emissions. Some of the interesting findings from the survey:

- The average City of Corvallis employee travels 21.8 miles round trip each working day.
- 77% of employees drive alone to work.
- 41% of employees live within five miles of their workplace and 59% live more than five miles.

Understanding that most of the workforce lives outside Corvallis, it is not too surprising that the main reason people choose to drive alone is because no high-frequency transit options exist. Other common reasons:

- Irregular work schedules
- A preference to drive our own vehicles
- We need vehicles for personal business, and
- Difficulty finding others to carpool / vanpool

These insights will be used to craft ways to encourage lower carbon choices for our commutes.

### Waste Reduction

The waste reduction goal encourages staff to not only reuse and recycle, but also to prevent waste by reducing consumption and considering the entire life cycle of a product. Staff conducts waste audits and measures success by the diversion of waste from the landfill, an increase in materials recycled or reused, and financial savings from smaller garbage containers.

**Waste from City operations – Reduce waste from City operations sent to landfill.**

Targets  
 2020: 50% reduction from 2009 baseline  
 2030: 90% reduction from 2009 baseline

Baseline  
 2009 - 310 tons of waste to landfill from City operations.

**City-collected public waste – Reduce City-collected public waste sent to landfill (from Library, parks etc.)**

Targets  
 2020: 50% reduction from 2009 baseline  
 2030: 90% reduction from 2009 baseline

Baseline  
 2009 - 78 tons of waste to landfill from the public collected by the City.



The total waste sent to the landfill in 2018 increased by 29 tons over 2017 to 431 tons. Approximately 6 tons of that increase were from the public waste collected by the City and the remaining 23 tons were generated by City operations. The primary contributor to the uptick in operational waste was cleanup of illegal campsites on City property. Parks and Public Works staff collected waste from illegal campsites and in fiscal year 2017/2018, Public Works alone collected an estimated 47 tons. Efforts are underway to better quantify the amount collected from those cleanups.



**Related Actions – Waste Reduction**

**Construction waste requirements** – Public Works Engineering required contractors to collect data on waste generated and disposal methods for several types of summer construction projects including street reconstruction, street resurfacing, water system rehabilitation, and sanitary sewer rehabilitation. The primary waste materials were concrete and asphalt and the

City placed a requirement on contractors to dispose of those at locations where they would be recycled or reused. The study showed that this requirement did not change contractor behavior as those sites were already their low-cost option for disposal. The reporting for that requirement did add a small cost to those contracts so that practice will be discontinued.

**Shredded documents** – The Library changed their confidential document discard practices, using a vendor that recycles or reuses shredded documents. This also eliminated the need for shredders for each department and the garbage from shredded documents (since they are no longer recyclable through curbside pickup), as well as provided a time-savings for staff.

## Sustainability in the Community

Although the primary focus of the sustainability program is internal operations, the City is also involved with community sustainability efforts primarily through collaboration with community groups and through the on-the-job and volunteer efforts of our employees. Some of the collaborative projects include:

- The Police Department helped coordinate the Corvallis Area Resource Event (CARE). CARE is a one-stop resource connection offering a wide array of support to anyone in need. The event took place in the Corvallis-Benton County Public Library parking garage. Booths



- were set up with representatives from dozens of service providers specializing in housing, medical and dental needs, job training, education, food, ID services, Veteran's services, mental health, pet assistance, and more. Over 300 people from Corvallis and surrounding communities received services of some type and it was such a success they are planning to have this be an annual event.
- The Library collects discarded children's books and donates them to several places, including Benton County's Women, Infants, and Children supplemental nutrition program, Oregon Department of Human Services, Camas Commons (for a lending library in their community room), Early Intervention (for kids 0-3 who have special needs).
- The Police Department is installing Rapid SOS software in the 911 center, which has a greater degree of reliability when locating individuals who call 911 on a cell phone. This product will greatly decrease staff time (dispatch and officers) in locating dropped and/or accidental dial 911 calls.

## Looking Ahead to 2019

As we do each year, the City's Sustainability Steering Committee and Sustainability Core Team work with the sustainability program to develop a work plan within each sustainability goal area. The 2019 Work Plan design process ensured that goals from both the Strategic Operational Plan and the Climate Action Plan were included. Departments, work groups, or individuals are identified as champions of each project, with projects expected to be completed within the year.

<b>2019 Objective</b>
<b>Goal: Employer of Choice</b>
Replace "Separation Rate" with a measure that better quantifies employee engagement
Increase participation in Spring Fitness Challenge
<b>Goal: Sustainable Facilities</b>
Update water master plan to include consideration of climate change impacts. (UNR AO-2)
Complete a feasibility study and plan for onsite and rooftop solar electric and hot water for buildings. (B&E AO-3)
<b>Goal: Sustainable Purchasing</b>
Use reusable tableware for at least one all-employee or all-department dining event.
Incorporate sustainable procurement language into at least one contract / Request For Proposals (RFPs) in each department. Strive for language that can be included/adapted for other contracts / RFPs.
<b>Goal: Vehicle Carbon Footprint</b>
Develop a plan for replacing gas-powered vehicles with electric, including the necessary charging station facilities. (LU&T MO-2)
Develop a plan to replace lawn mowers, chain saws, leaf blowers and weed eaters with electric models. (UNR MO-2)
<b>Goal: Waste Reduction</b>
Provide recycling/waste prevention trainings for casual and temp workers (Parks, Public Works especially).
To encourage waste reduction of community groups using City facilities, pilot a policy for the Library requiring groups to manage the waste that they generate.

## Conclusion

The City of Corvallis continues to take strides towards resource efficiency, toxics and waste reduction, and employee well-being. Much like sustainability itself, the end destination remains elusive and far in the future. Staff never waivers from our mission of serving the community and remains dedicated to reducing the impacts of the services that are provided.