



Beaverton Climate Action Plan

2020 Progress Report

Year One:

November 2019 – November 2020

Background

The Beaverton Climate Action Plan (BCAP) was adopted by city council in November 2019. It was developed out of a need to address the community's role in – and response to – climate change. The impacts of climate change are already visible. Last year, 2020 tied 2016 as the hottest year on record, capping off what was the hottest decade on record (2011-2020), with the warmest six years all occurring since 2015.

The catastrophic wildfires in Oregon and the western United States (as well as Australia and the Amazon) this year are not an anomaly. They are a result of a changing climate caused by the release of greenhouse gases (GHGs). These emissions reside in our atmosphere for varying lengths of time, trap heat, and over time, warm the planet. These higher temperatures will affect natural conditions – and lead to altered weather patterns, causing drought; more extreme weather, like stronger storms; rising sea levels; and habitat and species loss.

These impacts are not limited to the “natural world” we see on documentary television. They affect society on a grand scale – increasing competition for resources, driving conflict, and accelerating human migration. We tend to think of these issues as removed from our everyday lives. But how many people arriving in Oregon as new residents have done so out of a need or a desire to escape hotter, drier, and smokier summers to our south? Traffic clogged cities? A lack of access to nature? There is plenty of evidence to suggest this migration will increase, and in turn place greater impact on the community.

There is vast consensus that business as usual will be catastrophic. A shift is required in how we operate – as a city, as a society, and as individuals. Climate action in Beaverton plays a small, but important role in that. The BCAP sets out goals in line with recommendations needed to keep global average temperatures below levels that result in catastrophic change. This involves reducing GHG emissions to zero by 2050. This is no longer a year in the far-off future. To achieve a 100% reduction of community GHG emissions, the BCAP has set targets of carbon neutral city operations by 2035; community net-zero emissions for electricity, also by 2035; and community net zero emissions for fossil gas by 2040. These goals will require changes to the status quo. They will require action. At every level.

The COVID-19 pandemic slowed initial progress on the BCAP's implementation during 2020. However, ongoing work performed aligned with 42 of the plan's 86 actions. This report outlines the activities that occurred in each of the plan's five chapters, as well as an overview of opportunities for implementation during the coming year.

Emissions in Beaverton

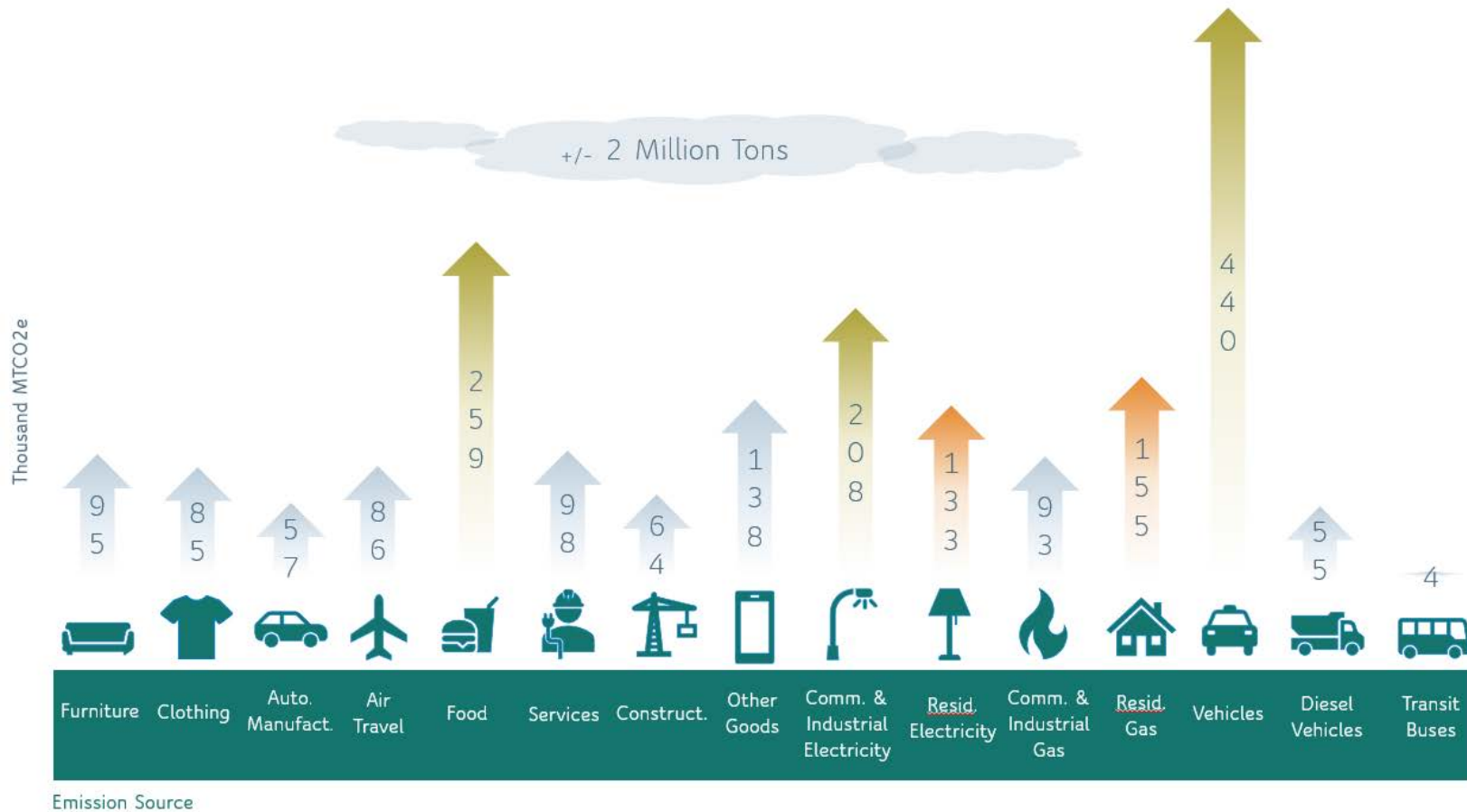


Figure 1. Community-wide emissions inventory, Beaverton, OR (2017)

Figure 1 illustrates the main sources of emissions in Beaverton. The largest sources are emissions associated with vehicles; emissions from use of commercial and industrial electricity; and those related to the production, consumption – and increasingly waste – of food. Emissions from other goods (i.e. consumption that does not fall into one of the other displayed categories) follow close behind along with emissions from residential gas and residential electricity.

These numbers are presented here as context for the priorities and progress mentioned in remainder of the report.



2020 Highlights

The **first year** of implementation of the **BCAP** saw progress towards **42** of the plan's **86 actions**

Shared Economy

Access to community sharing programs (CA#2) helps reduce consumption and emissions. The **Library of Things** (LOT) at the Beaverton City Library aims to increase community sharing options, curbing consumption of products a household might use on an infrequent basis and reducing the need to purchase that item outright. Since its launch in June 2018, **7200 circulations have occurred** in the LOT, from kitchen appliances to board game to small electronics and more. Before a pause due to the COVID-19 pandemic the circulation of items in the LOT was nearly **double the previous year**. This highly successful program anticipates future growth.

Repair fairs, with the aim of increasing access to product repair (CA#3) and extending the life of goods have shown strong interest from the community. Unfortunately, COVID-19 led to the cancelation of all but **two events** near Beaverton in 2020.

Food Systems

The production, consumption, and increasingly waste of food is one of the largest categories of emissions in the community – second only to emissions from vehicles. This year saw the start of the development of a **Food Waste Strategic Plan** to coordinate efforts toward reducing food waste from both the business and residential sectors (CA#5), including different household types, and to expand participation in food scraps collection programs (CA#6). An **update to the regional Eat Smart, Waste Less Program** was also begun. It includes reexamination of messaging that shifts from shame-based to a focus on household savings and planning.

Efforts to increase *business* participation in food donation and food scraps collection programs (CA#7) included **coordinated collection opportunities to increase distribution of donated food**; and, until a program pause due to COVID-19, **expansion of participation in Metro’s Business Food Scraps Mandate** beyond the 141 business that currently participate.

Recycling & Policy Development

City staff participated in a statewide planning effort to increase the recovery of recycled materials (CA#8) that resulted in **a proposal to modernize the state’s recycling system** to be considered by the 2021 Oregon Legislature. Beaverton’s advocacy for DEQ’s proposed

Consumer Choice and Waste



modernization of the recycling system included resources to reduce contamination (CA#10), modifications to **requirements for product labeling** (CA#15) and introduce product stewardship to Beaverton and Oregon (CA#16).

The city has continued to **utilize Metro's regional Recycle or Not campaign** to bring awareness to the community about common recycling contaminants to decrease contamination in recycling (CA#10).

A scope of work was finalized, and research begun to explore the feasibility of **policies to reduce single-use items** (CA#17) such as foodwares. COVID-19 and general public perception about the reuse of foodwares temporarily paused this work.

Consumer Choice and Waste



Energy Sourcing

All electricity for City operations is currently renewably sourced (CA#20) through programs offered by the City's electrical utility partner, Portland General Electric (PGE). Additionally, solar installations at the city library, Sexton Mountain reservoir and the newly completed Safety Center all provide locally generated renewable energy to the system. During the past 12 months **solar panels on the City Library generated 20,968 kWh of electricity; those at Sexton Mountain generated 275,400 kWh.**

In partnership with the utility (PGE) **a pilot project** was completed at the City's Safety Center to demonstrate the feasibility of **micro-grid** and energy storage systems (CA#21). This system combines solar panels and battery storage options to allow the building to function should lose connectivity to the power grid. PGE also **continued the installation of smart meters** (CA#30) throughout the community, reducing transit related to reading of meters.

Throughout the year, City staff were involved in ongoing conversations with the electrical utility about **development of options for community members to source clean energy** (CA#18)

Efficiency

The City's **water efficiency rebate program provided \$13,000 in rebates** between November 2019 and October 2020 to households for the installation of high efficiency fixtures, appliances, and irrigation controllers, to increase water conservation in buildings (CA#25, 29). This year also saw the **completion of a \$137,000 project funded by city funds and a federal Energy Efficiency and Conservation Block Grant** in which implementation partner, Community Action provided **weatherization repairs for 29 low income owner-occupied dwellings** (CA#29).

Housing and Development

Recent revisions to the **Downtown Design Code** include instances of **alignment with the BCAP including strategies to increase housing density** (CA#36). The ongoing Housing Options Project is also tackling this same action. Throughout the year the Oregon Department of Energy (ODOE) and advocacy groups have worked to develop **options to allow for local adoption of an energy Reach Code** (CA#38), above and beyond the proposed 2021 BCD energy code updates. Transportation

Buildings, Energy, and Urban Form



The **transportation sector** represents the largest source of emissions in the state. As shown in Figure 1, vehicles, by far, represent the largest source of emissions in Beaverton. A transition away from the use of internal combustion engine transportation will be essential to reducing these emissions.

Electric Vehicles

This year, in partnership with PGE, **the City opened Beaverton's first Electric Avenue, with six publicly available EV chargers** in the city right of way near the intersection of Canyon Road and Broadway Street (CA#46). Additionally, Beaverton School District received a grant from PGE to install **two electric school bus charging stations**, with the possibility to expand to four (CA#48).

Transit Systems

TriMet rolled out Frequent Service two high ridership lines - Line 20-Burnside and Line 76-Greenburg/Hall. This expansion of public transit service (CA#49) increased arrivals to every 15 minutes or better, most of the day, every day. The City also endorsed TriMet's proposed service boundary expansion into South Cooper Mountain.

In a continued effort to support the Safe Routes to Schools program (CA#50) the City entered into an IGA with Washington County and the Beaverton School District (BSD) to provide \$60,000 in funds via the Major Streets Transportation Improvement Program (MSTIP) as a local match to a three-year \$150,000 Regional Travel Options grant. These funds facilitated **the creation of two district Safe Routes to Schools (SRTS) coordinator positions**.

As part of efforts to address last mile connection in transportation policy (CA#51), Beaverton staff **participated in Washington County's First and Last Mile project** aimed at the development of strategies for transit access projects; programs and partnerships for safe, accessible, viable transit; and the identification of policy considerations to improve transit access, especially in relation to emerging on-demand and shared mobility transportation options.

While transit buses represent the smallest source GHG emissions within the community, they are a highly visible one. **TriMet continues to test electric buses on Line 62-Murray Blvd as part of their 2040 non-diesel fleet goal** (CA#52). Metro's Get Moving 2020

Transportation



funding measure included \$9M in annual funding to support TriMet's goal, however the measure did not pass on election day.

A shift towards biking and pedestrian options is another path toward reducing transportation emissions (CA # 53,55). During 2020, staff **continued to develop construction plans to create new connection options as part the Laurelwood, Western Avenue, and Allen/92nd projects.**

Smart traffic management technology (CA#56) can be used to actively manage the transportation system, making travel more efficient. The city installed smart signals on Murray Blvd between Farmington Road and Millikan Way and is currently designing expansion plans for the smart signal system on Allen Blvd between Murray Blvd and Western Ave.

The COVID -19 pandemic and resulting measures to safeguard public health, **drastically reduced employee commutes (CA#60) and expanded remote work options.** Emissions from personal vehicles are the *largest single source of emissions* within the community. This year's demonstration of the elimination – or drastic reduction – of their use for commuting was an entirely unexpected, yet powerful development with the potential for long-lasting impact on business-as-usual.

Transportation



Water

The conveyance of water requires large amounts of energy and therefore holds the potential to be a large source of emissions. This makes water conservation not just an effort to reduce use of water, but also an effort to reduce unnecessary emissions. This year saw **three major projects to upgrade water storage pumps** (CA#66) including a \$3M project at Meridian pump station an \$11M project at Aquifer Storage and Recovery Well 5 and Sorrento pump station; and the start of a \$5.5M project at the Sexton Mountain pump station.

Urban Flora

Enhancements to the City's tree strategy (CA#69) in 2020 included the addition of biochar to **increase water retention and availability to promote a healthier urban canopy**; the increased reuse of pruned trees as mulching material, and the infill of right of way areas via volunteer plantings, as well as a program to increase diversity in significant tree groves. The City **updated its street tree list** to reflect hardiness and future conditions (CA#75)

Since expanding to Beaverton in June 2019, the Audubon Society's Backyard Habitat Program (CA#70) has completed 18 certifications with 34 still in progress (as a result of a backlog from the suspension of site visits due to COVID-19). The program **promotes the use of native species** that not only serve as a habitat for wildlife but **eliminates the use of irrigation and pesticide/herbicide/industrial fertilizer** use and there associated GHG emissions.

Natural Disasters

In January 2020, the City **approved the second revision of the Natural Hazards Mitigation Plan** which among other things identifies areas with slopes over 25% and debris flows (CA#72). It also determined that less than 1% of the city's population and/or property would be affected by landslide hazards.

Natural Systems



Community Wellbeing

To improve access to warming centers (CA#82) this year saw the expansion of services in partnership with the Washington County Severe Weather Shelter Network. **Shelter nights were increased by four times the amount provided since services began in 2017.** This year was also the first to offer 24/7 service with nightly space for 30 enrolled adults.

Food security efforts (CA#85) this year prioritized the needs of vulnerable populations during the pandemic – by partnering to **distribute 20,000 items to food pantries and assistance organizations.**

**Community
Wellbeing**





2021 Opportunities

Looking ahead to 2021, the following action items in each chapter of the BCAP have been identified as opportunities. These items reflect either work that is **currently planned**, builds off **existing momentum**, or is necessary to **being immediately** in order to reach climate action goals. Priority areas need to **respond to the evidence on emissions sources** and pressing adaptation needs while ensuring that they **address the needs of the entire community**.

Consumer Choice and Waste

- ▶ To Increase Access to Community Sharing programs (CA# 2) through the continued **expansion of the Library of Things at the Beaverton City Library**.
- ▶ Expand residential and business participation (CA#5,7) in **food scraps collection programs** and the reduction of food waste (CA#6) through: the **completion of the Food Waste Strategic Plan and begin implementation**; Updates to residential outreach materials and production of a video for presentations; **Continue implementation of the Business Food Scraps Program**, whereby the largest food generators will begin separating food scraps and donating edible food.
- ▶ Continued utilization of **Metro's Recycle or Not Campaign** to decrease contamination in recycling (CA#10) with a new contaminant focus on padded envelopes, and an increased regional focus on **equitable service opportunity at multifamily communities**.
- ▶ Begin the **development of a deconstruction and salvage policy** (CA#13)
- ▶ Build on past research to develop an internal **sustainable procurement policy** for city operations. Use the outcome as the basis to inform model policies and resources for local business (CA#14)
- ▶ To further **policies to reduce single use items** (CA#17) staff will complete a report of policy research and options. Education on public health concerns for reusable items during COVID-19 will ongoing.



Buildings, energy and urban form

- ▶ Continue engagement with the utility provider (PGE) and with the Public Utilities Commission on **plans for community clean energy options** in order to achieve net zero emissions for electricity by 2035 (CA#18)
- ▶ Continue to **power City government operations from renewable energy** (CA#20). In late 2021, Pačwáywit Fields will come online as Oregon's largest solar facility. The City will source 2/3rds of its electricity from this **in-state renewable resource**. The remainder of the City's electrical energy will continue to be sourced through purchase of renewable products offered through the utility.
- ▶ Strategies that allow for net-zero emissions in new development (CA#26) will be essential to reaching the goals of net-zero emissions for electricity by 2035 (CA#18) and net zero emissions for fossil gas by 2040 (CA#19).
- ▶ Leverage the resources and expertise of the Oregon Department of Energy (ODOE) and neighboring municipalities to **adopt a Home Energy Score program** (CA#28); potentially tailoring it to help multifamily buildings meet minimum energy efficiencies standards (CA#27)
- ▶ Advocate for the development of **smaller homes** (CA#35) and increases in **housing density** (CA#36) through planned updates to residential zoning.
- ▶ Continue engagement with the ODOE Energy Code Stakeholder Panel, Zero Coalition, and OBOA to **advocate for improvements to the state building code to achieve net zero energy consumption in new buildings by 2030** (CA#31); along with the **adoption of Oregon's Energy Reach Code** (CA#38)
- ▶ Continue the City's **LED streetlight replacement** program.



Transportation

- ▶ Monitor State of Oregon rulemaking on transportation electrification and **opportunities for investment in response to Governor Brown's Executive Order 20-04** on Greenhouse Gas Reduction (CA#45).
- ▶ Prepare **amendments to the Transportation System Plan**, the City's guiding transportation document, to **incorporate the goals and policies of the Active Transportation Plan** (CA#45).
- ▶ Consider prioritizing an update to city code to incorporate EV charging infrastructure at multifamily and commercial developments (CA#47).
- ▶ **Continue to support to the Safe Routes to Schools (SRTS) program** (CA#50) and the promotion of walking, biking, and active lifestyles with the support of teachers during the COVID-19 pandemic.
- ▶ **Fund the installation of fiber optic cable** - the backbone of smart transportation - in order to connect all city signals with regional traffic signal management system by 2030 (CA#56).
- ▶ **Embrace remote work options** post-pandemic as a no-cost solution to reducing vehicle miles traveled by commuters (CA#60).
- ▶ Advance the **transition of the city fleet to electric vehicles** through improved city policy (CA#45)



Natural Systems

- ▶ **Expansion of greywater collection** (CA#64) is a potential outcome of the purple pipe project depending on the outcome of design considerations.
- ▶ Continue to improve **energy efficiency in water storage pumps** (CA#66) during upgrade of Sexton Mountain Pump Station and the construction of new infrastructure at Cooper Mountain Reservoir.
- ▶ Continued attention to the urban canopy and tree strategy (CA#69) including tree plantings and the development of a heat island map to identify areas of vulnerability and aid in action prioritization/geographic focus.
- ▶ Continued **expansion of backyard habitat program** (CA#70).
- ▶ Support projects that mitigate flooding/erosion (CA#71,74) through participation on the Tualatin Watershed Enhancement Collaborative (TWEC) infrastructure subcommittee, the development of a Downtown Stormwater Sub-Basin Strategy; and an **upgrade of the Stormwater Drainage Master Plan**.
- ▶ Continued **removal of invasive species** that threaten the health of the urban canopy via integrated pest management plan (CA#75).



Community Wellbeing

- ▶ Identify heat islands within the city (CA#84) using GIS data including factors like the extent of tree canopy, impervious surface, and albedo (surface reflectivity). There's also an opportunity to use this information to better understand how these areas overlap with **historically marginalized communities and to use that information to inform equitable climate action decision making.**
- ▶ Continued food security efforts (CA#85) involving partnerships with local organizations to **increase food donation, prevent food waste, and create infrastructure** to meet increasing demand.
- ▶ **Wildfire Smoke refuge** (CA#83) options. The late summer of 2020 demonstrated how unprepared we are for dealing with wildfire smoke. As climate change continues to make the threat of wildfires more and more likely there is a need to explore how to adapt and provide **safe spaces for vulnerable populations and communicate safety concerns** with the public.



Across all opportunities we need to expand on the equity considerations for each action that we intend to implement – better defining measures, identifying barriers, and adjusting the action where needed. **Climate impacts will disproportionately affect members of the community least able to deal with them.** Implementation of the plan must ensure the needs of the entire community are met and that the needs of vulnerable communities are prioritized.

The opportunities presented above directly address individual items from the BCAP by incorporating them into both new and existing City projects, programs, and other efforts. In addition to these opportunities, climate action work in 2021 will prioritize education and awareness on behalf of City staff to **incorporate a climate lens by which to plan, implement, and evaluate City of Beaverton activities.**

