

Milwaukie Community Climate Action Update



August 9, 2022

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Overview

- GHG Inventory Overview
 - PGE Green Tariff
- CAP Update
- Tree Permit Update



Updated Climate Goals



2030

Net zero electricity

By becoming more energy efficient and using renewable electricity sources, Milwaukie's net emissions from electricity are zero.

2035

Net zero building energy

By sourcing renewable natural gas and offsetting gas emissions, Milwaukie's net building energy emissions are zero.

2045

Carbon neutral city

By changing our habits, switching to lower-emission fuels and offsetting emissions, Milwaukie's net CO₂ emissions are zero.

Increasing canopy cover to 40%

Expanding our urban forest from 26% to 40% by planting, protecting, and promoting healthy trees in Milwaukie



2040

Greenhouse Gas Inventory Update



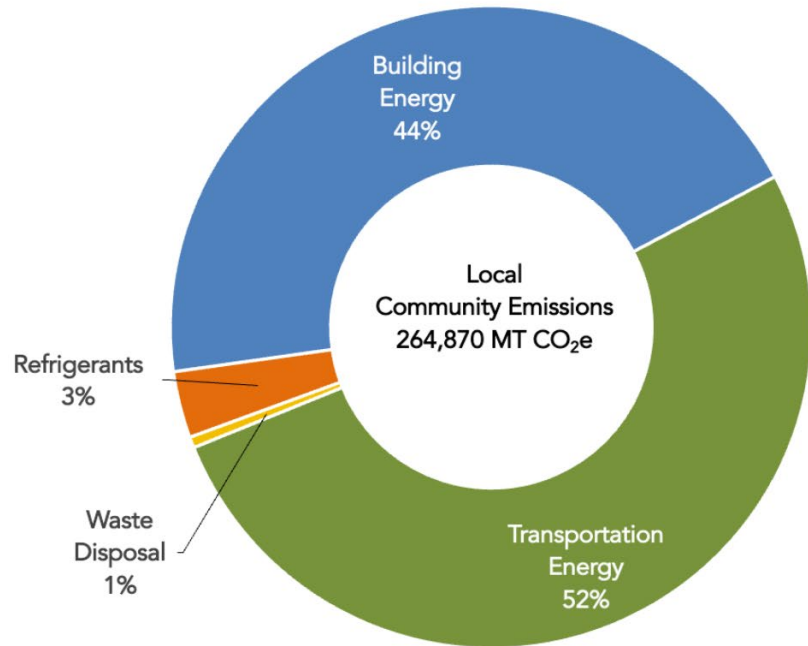
Takeaway message:

- **Building energy emissions are down**
 - City has big focus on this sector, seeing results
- **Transportation emissions are up**
 - 2016 transportation emissions may have been higher than originally presented
 - Consistent with regional trends
 - Individual community member behavior key to reducing emissions
- **Community consumption-related emissions are up**
- **2020 was a weird year, will take time to see data impacts**

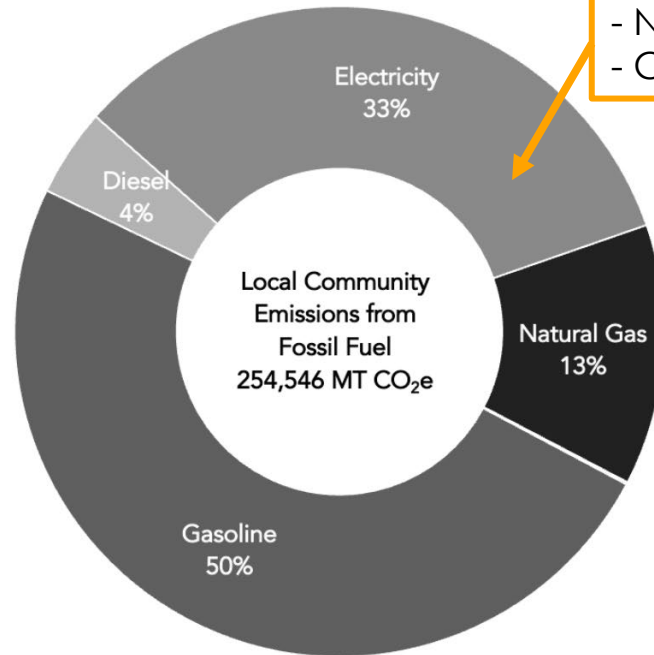
2020 GHG Summary



Sector Emissions

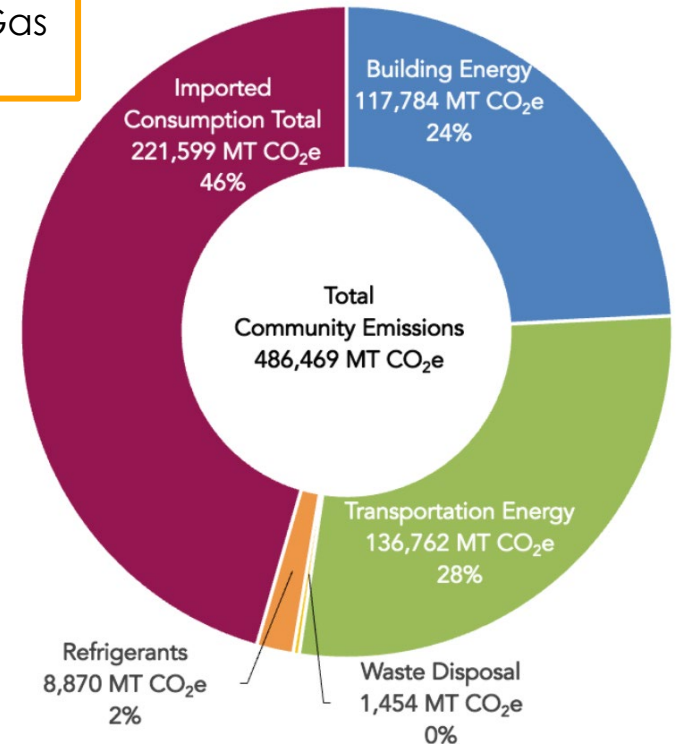


Fossil Fuel Emission Sources



- Natural Gas
- Coal

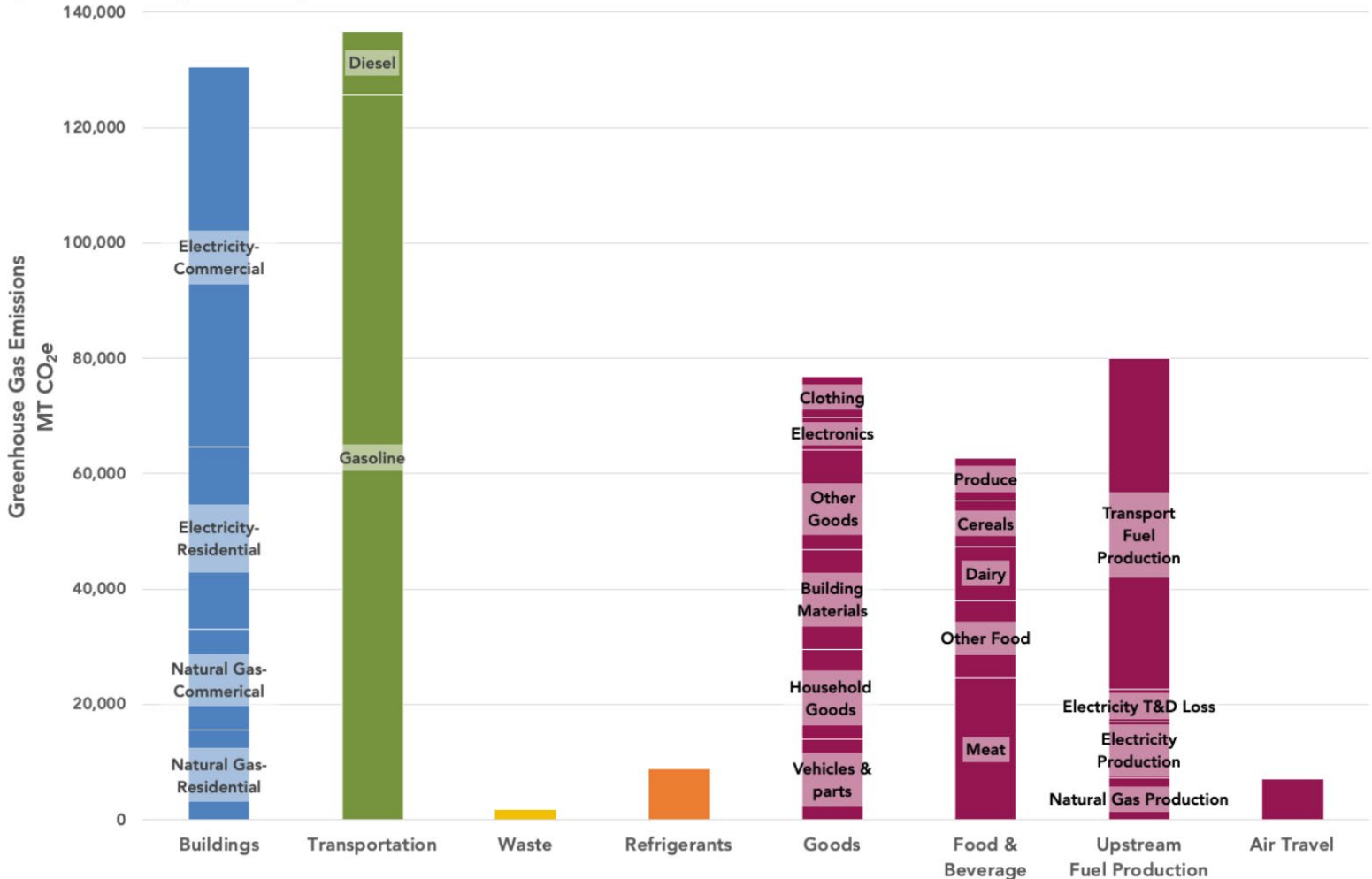
Local and Imported Community Emissions



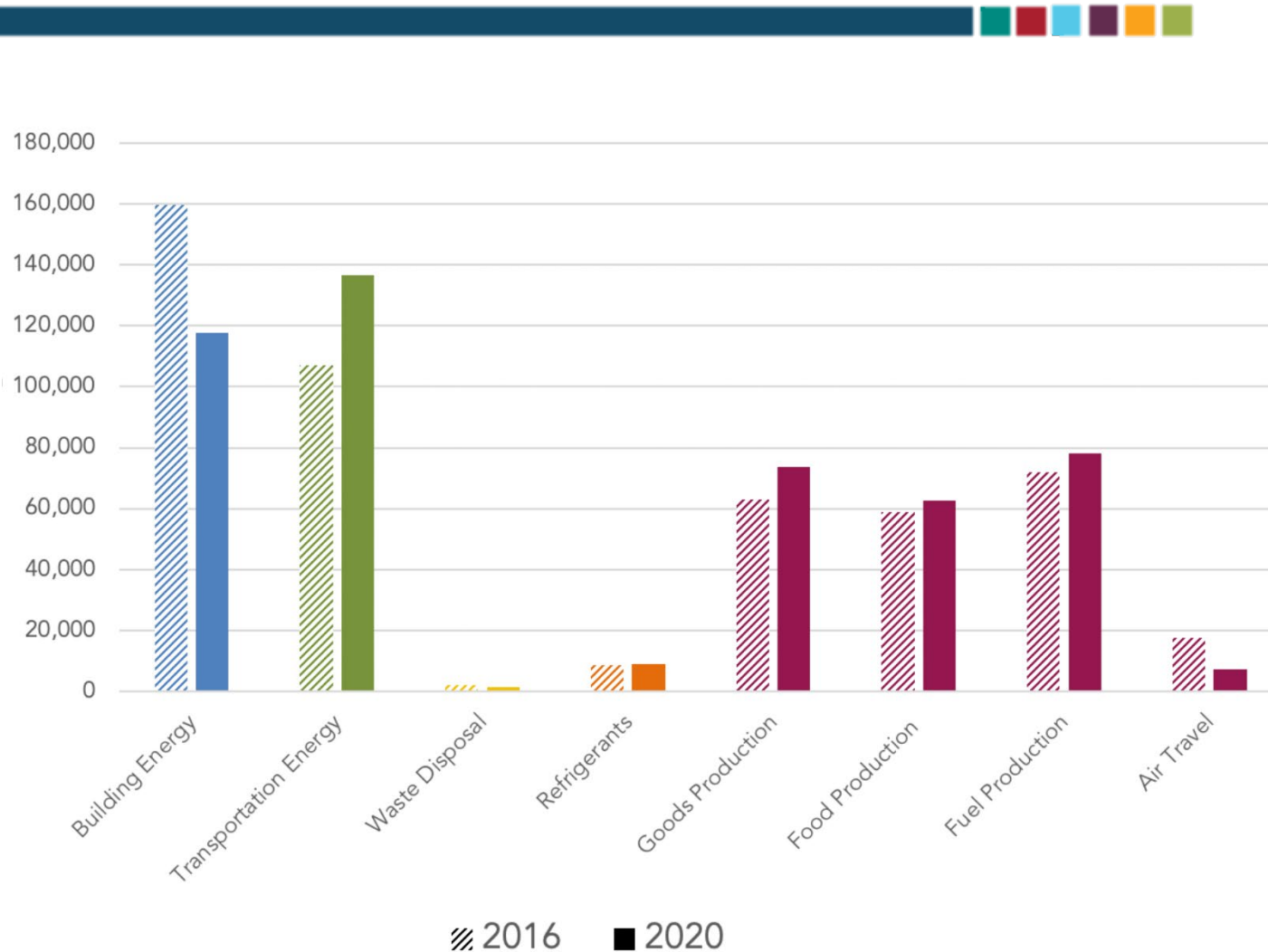
Local Emission Total: 264,870 MT CO₂e
Carbon-intensive electricity generation: 85,000 MT CO₂e
Natural Gas: 33,000 MT CO₂e

Emissions Sources

Figure 3: Sources of Community Emissions



2016 vs 2020 Emissions



Energy emission reduction efforts

- Voluntary renewables
 - Community Green Tariff
- City 100% clean
- Green power challenge
- SEM programs
- Home Energy Score
- HB 2021

Transportation emission reduction efforts

- State reporting changes
- Alternative transportation infrastructure
 - Short term vs long term
- City vehicle electrification
- Renewable diesel

Consumption emissions

- 2020 pandemic influence

2020 CAP Update

- **5 year periodic update on CAP actions**
- Focus on community narrative
 - What has been done?
 - What results are we seeing in the community?
 - What barriers exist for implementation?
 - Where do we need more help from stakeholders?

Fall/Winter 2022 Deliverable



CAP ACTION: Adopt a commercial and residential building energy score program based off of the City of Portland

Why this action matters:

2018 ACTION IMPACT GRAPHIC:



Residential energy scores provide information about home asset specifications, energy efficiency of homes, estimated utility costs and carbon emissions on home sale listings. The program increases transparency for consumers and provides community insights for building energy stakeholders. Commercial programs increase transparency for community emission profiles and provide stakeholder education opportunities.

How far has Milwaukie gotten:



ACTION STATUS: IMPLEMENTED AND REFINING

In February 2020, Milwaukie adopted a residential Home Energy Score program. Over 320 homes in Milwaukie have been scored through private assessment companies. Milwaukie has an average score of 4.3, which is comparable to regional averages. By adapting HES for small community implementation and sharing learnings, Milwaukie has assisted other communities in implementing their own HES programs, including Hillsboro (implemented 2021), Corvallis and Bend (in council discussions).

Current compliance is estimated at 40% before outreach by staff is performed. After outreach to property owners and real estate agents, compliance reaches upwards of 90-100% for monitored home listings. While notice of violations have been delivered, no citations have been required. No low-income assistance has been required as of August 2022.

Regional commercial building energy score programs were evaluated internally, and staff determined that the resources required would not justify the value gained through the program due to small numbers of participating buildings and businesses not already participating in energy efficiency programs.

LEARN MORE ABOUT MILWAUKIE'S HES PROGRAM:

milwaukieoregon.gov/sustainability

homeenergyscore@milwaukieoregon.gov

HES Hotline: 503-786-7688

Thoughts for the future:



Expanding the program to rental properties could help a larger number of Milwaukians

More compliance checks are needed, potentially through a city internship.

HES reports provide insight to residents looking to purchase a home and use energy asset and costs in their decision making. **Milwaukie and other regional communities are looking at HES programs for renters, tying HES scores to utility incentives and innovative technology, and incorporating other hard-to-find home information like wildfire safety.**

Compliance with program requirements can be challenging to increase due to the fast-paced housing market, limited regulatory oversight for home listing processes and frequency of monitoring required. Milwaukie could explore increasing monitoring through a city internship along with more robust outreach and education to stakeholders through the city website and HES hotline and email.

Lifting Community CAPs



Thanks to the city of Milwaukie

We want to thank Milwaukie City Mayor Mark Gamba for permission to use Milwaukie's climate action plan as a template for the development of our Lincoln County climate action plan. The city of Milwaukie has saved us much time and money, and we are quite grateful for their help. We used a number of their sections nearly verbatim, such as the greenhouse effect and causes of the rise in emissions and the science behind our goals. We used their general structure for our climate plan, but we tailored our plan for Lincoln County.



	Adopted CAP Scores												
	Ashland	Beaverton	Bellingham	Bend	Boulder	Corvallis	Eugene	Evanston	Fort Collins	Milwaukie	Portland	Tacoma*	Salem **
Total Actions and Policies Score	77	71	99	62	71	43	86	82	83	88	94	48	31
Total Possible Actions and Policies Score	117	117	117	117	117	117	117	117	117	117	117	117	117
Plan Actions and Policies Score (%)	66%	61%	85%	53%	61%	37%	74%	70%	71%	75%	80%	41%	26%
Total Overall Score	108	98	128	90	102	67	115	114	113	118	127	77	34
Total Possible Overall Score	154	154	154	154	154	154	154	154	154	154	154	154	154
Plan Score (%)	70%	64%	83%	58%	66%	44%	75%	74%	73%	77%	82%	50%	22%



* Denotes Tacoma having two other plans that feed into their CAP significantly. Much of the content is located within the other plans, reflecting a lower score for Tacoma.

** Salem does not have a CAP, therefore it lacks many plan specific elements such as: goals, implementation strategy, public participation and organizational coordination.



2022 Climate Collaborative



Español

**COMING
TOGETHER
FOR THE
CLIMATE**



JOIN THE MOVEMENT

Climate Collaborative is based on Milwaukie's [Climate Action Plan](#) adopted in 2018 and designed to give everyone in Milwaukie the tools and knowledge to keep building a brighter, cleaner future for the community we love. There are lots of ways to get involved – from small changes at home to big energy upgrades – but it all starts with one simple action: pledging to make a difference.

I'm a proud Milwaukian and by signing this pledge, I'm committing to doing my part for a sustainable and completely carbon-neutral Milwaukie.

First Name*

Last Name*

Email*

Learn more and sign the pledge at www.climatecollaborativenw.com!

August Events:

- 8/8 CareFree Sunday – Ball Michel Park!

September Events:

- 9/17 2pm – 6pm MESH Sustainability Fair
- TBD PGE/Dark Horse Comic – Comic Release!

October Events:

- 8/22 Arbor Day Celebration Extravaganza
 - Friends of Trees Planting
 - Electric Tool Exchange
 - All-electric tiny home
 - Spooky Halloween theme!

Tree Permit Update

2022 Permits Approved:

- **7 Public Tree Permits**
 - 6 replantings, 1 fee in lieu
 - 1 denied (insufficient proof)
- **17 Private Type 1 Permits**
 - No opted fee in lieu
 - 1.5 denied (insufficient info/partial denial)
- **1 Private Type 2 Permits**
 - Pending
- **4 Pre-development meetings**
- **0 Submitted Development Permits**
 - Application submitted with building permits unless variance pursued



Outreach Materials

Need to remove a tree?

Follow this decision tree to determine what is required for a tree removal in Milwaukee

PRIVATE RESIDENTIAL CODE

LEGEND
 Time to Apply for a Permit!
 Apply for public and private tree permits online at Milwaukeeonline.org.
 Additional requirements may apply. Tree removal permit may still be required.

START HERE

Is the tree in a mapped natural resource area?
 YES: Contact Planning Department for plan review and more information. Additional requirements may apply. Tree removal permit may still be required.
 NO: Is the tree on residential private property or public property?
 Residential Private Property: Are you building an additional housing unit or subdividing your property?
 YES: Contact the city to discuss the development tree code process (MMC 16.32.042).
 NO: No permit tree permit required for removal.
 Public Property: Is the tree a street tree or in an adjacent right-of-way to your property? OR Is the tree in a park or on public lands? Public tree permit required for removal and planting over 20% of canopy.
 YES: Public tree removal permit required.
 NO: No permit tree permit required for removal.

Why are you removing the tree?
 General landscaping/aesthetics: Have you removed a healthy tree in the last 12 months through a type 1 permit?
 YES: Type 1 tree removal permit required.
 NO: No permit application or removal fee imposed. Replanting may be required.
 Is it less than 12" in diameter?
 YES: Type 2 tree removal permit required.
 NO: Removal fee may apply. Replanting may be required.

Is it in or near one or more of the following approved standards:
 • It is dead/dying or diseased and cannot be saved
 • It is causing serious infrastructure impacts
 • It is a safety hazard
 • It has triggered a stormwater management system
 • It conflicts with public transportation improvements
 • It conflicts with permitted building design or land use approvals
 • It conflicts with utility infrastructure installation
 • It is recommended for removal by a designated fire marshal
 OR
 • It is recommended for removal for thinning purposes as determined by an ISA certified arborist.

WHAT IS A MAPPED NATURAL RESOURCE AREA?
 A mapped natural resource area is a zone of environmental importance and has additional approval requirements due to natural resource impacts. Visit milwaukeeonline.org/maps or contact the Milwaukee planning department to determine if a tree is located in these areas.

HOW TO DETERMINE IF A TREE IS ON PUBLIC OR PRIVATE PROPERTY:
 • Do an initial search using the Milwaukee property and utility search map: milwaukeeonline.org/maps
 • Contact the city for confirmation of tree location.

HOW TO DETERMINE TREE DIAMETER:
 For single stemmed trees, diameter at breast height can be measured by taking a measurement of the circumference of a tree trunk 4.5 feet up from the ground and dividing by 3.14. For more instructions and tips on measuring a slanted tree or multi-stemmed tree, visit milwaukeeonline.org/trees

HELPING MILWAUKIE'S CANOPY:
 The city is working to preserve tree canopy as trees are proven to improve property values, provide community health benefits and essential habitats. Contact Milwaukee's urban forest to talk about what can be done to help you and your tree.

FOR QUESTIONS OR MORE INFORMATION, CONTACT:
 (414) 794-7445
urbanforest@milwaukeeonline.org
Milwaukeeonline.org/trees

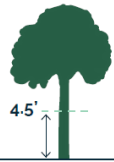
MILWAUKIE URBAN FOREST
 Growing Trees Growing Community



Diameter at breast height, or DBH, is the standard for measuring trees. DBH refers to the tree diameter measured at 4.5 feet above the ground.

Measuring Single Trunk Trees on Level Ground

DBH can be measured quickly with a specially calibrated diameter tape, often referred to as a d-tape, that displays the diameter measurement when wrapped around the circumference of a tree. Simply wrap the d-tape around the tree at 4.5 feet above the ground. One side of the tape automatically converts the circumference to tree diameter. This is the side labeled "diameter equivalents of circumference." The other side of the tape does not convert the measurement. You will need to divide the value by π (~3.14) if using this side to convert to diameter. If you don't have access to a d-tape, you can find the diameter of the tree using a string, a measuring tape, a thumbtack, and a calculator.



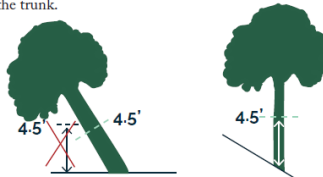
- With the measuring tape, measure 4.5 feet up the trunk of the tree from the ground. Use a thumbtack to mark the height on the tree.
- Wrap your string around the tree trunk at 4.5 feet. Make sure the string is straight and tight around the trunk, and mark or cut the circumference on the string.
- Measure the length of string to get the circumference of the tree.
- Convert the circumference measurement to diameter by dividing the circumference by π (~3.14).

How to Measure Tree Diameter Factsheet

2022

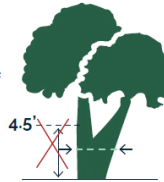
Measuring Trees at an Angle or on a Slope

When the trunk is at an angle or is on a slope, the trunk is measured at right angles to the trunk 4.5 feet along the center of the trunk axis, so the height is the average of the shortest and the longest sides of the trunk.



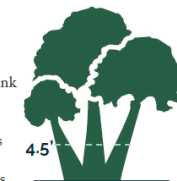
Measuring Trees with a Split Trunk

When the trunk branches or splits less than 4.5 feet from the ground, measure the smallest circumference below the lowest branch. If the tree has a branch or a bump at 4.5 feet, it is better to measure the diameter slightly below or above the branch/bump.



Measuring Multi-stemmed Trees

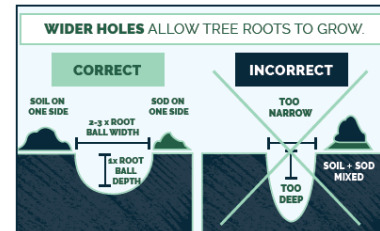
For multi-stemmed trees, the size is determined by measuring all the trunks, and then adding the total diameter of the largest trunk to one-half the diameter of each additional trunk. A multi-stemmed tree has trunks that are connected above the ground and does not include individual trees growing close together or from a common rootstock that do not have trunks connected above the ground.



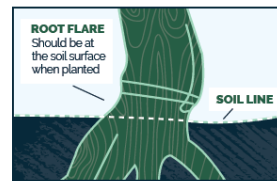
How to Plant a Tree

Planting trees properly will ensure their long-term success. The following is a guide on how to plant a new tree. The best time to plant trees is fall-spring. Trees planted outside of this window may require additional care.

- Ensure that a utility locate has been performed before digging. Be mindful of utility marks on the ground while planting a tree.
- Start by digging a hole that is 2-3 times the width of the tree's root ball. Wider holes allow tree roots to grow!



Proper planting depth should be determined after removing excess soil from the trunk to expose the root collar and find the highest major root. Be sure that the top-most root is level with the soil surface. The number one cause of tree mortality is planting a tree too deeply.

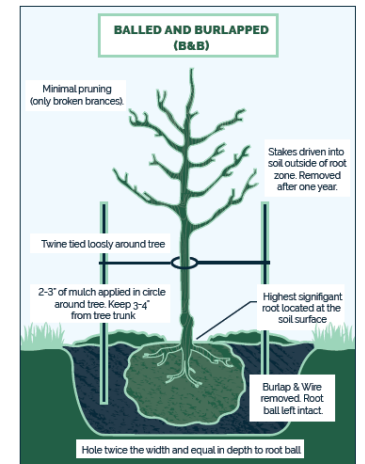


Planting Balled & Burlapped (B&B) Trees

- Remove any wire baskets and unwrap the tree's burlap
- Gently remove extra soil from around the tip of the root ball to locate the root flare of the highest major root
- Dig the planting hole the same depth as the root ball but 2-3 times the width
- Gently lift the tree and lower it into the hole. The root flare should be level with the soil surface

MAKE SURE TO:

- Stabilize and straighten the tree with backfill and double check to ensure the highest major root is even with the soil surface
- Add the rest of the soil back into the hole and gently press down to avoid air pockets
- After planting, water the tree thoroughly
- Apply a 2-3" layer of mulch around the tree. Be sure to keep it 3-4" away from the trunk of the tree. Organic wood chip mulch is ideal for newly planted trees. It slowly decomposes and improves soil structure over time
- Install two stakes on either side of the tree trunk. Tie twine loosely around the tree and the stakes for support. These can be removed after one year



Questions?

Milwaukieoregon.gov/sustainability

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CITY OF MILWAUKIE

Milwaukie Community
Climate Action Plan



CITY OF MILWAUKIE

March 6, 2019

2019 Urban Forest Management Plan



CITY OF MILWAUKIE

Milwaukie Community
Climate Action Plan



Household Strategies

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Milwaukie Community
Climate Action Plan



Business and Organization
Strategies



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