CHERRIOTS

SALEM AREA MASS TRANSIT DISTRICT

Climate Action Plan

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ACKNOWLEDGEMENTS

For their numerous contributions to the development of this Climate Action Plan, we thank the following individuals and partners.

Board of Directors

Joaquín Lara Midkiff
(he/him)
Director
Subdistrict 1

Ramiro Navarro Jr.
(he/him/el)
Director
Subdistrict 2

Sadie Carney
(she/her)
Treasurer
Subdistrict 3

Maria Hinojos Pressey
(she/her/ella)
President
Subdistrict 4

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(he/him)
Vice-President
Subdistrict 5

Sara Duncan
(she/they)
Secretary
Subdistrict 6

Bill Holmstrom
(he/him)
Director
Subdistrict 7

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Deputy General Manager
Shofi Ull Azum
Chief Planning and Development Officer
Cliff Carpentier
Chief Safety Officer
Tom Dietz
Chief Operations Officer
Denise LaRue
Chief Financial Officer
Jaél Rose
Chief Employee and Labor Relations Officer

Project Manager

Bobbi Kidd
Strategic Initiatives Administrator

Community Partners

Boys & Girls Club, Salem Area Chamber of Commerce, Salem Leadership Foundation, Willamette University

Local Government Partners

City of Keizer, City of Salem, Marion County, Mid-Willamette Council of Governments, Polk County

Transit Partners

Cherriots Community Advisory Committee, Lane Transit District, Oregon Department of Transportation, TriMet

WELCOME LETTER

Cherriots Board President Hinojos Pressey and General Manager Pollock

Maria Hinojos Pressey
Board President

Allan Pollock
General Manager

Cherriots is pleased to share its Climate Action Plan (CAP), which reflects our dedication to providing accessible transit and bolstering climate resilience for the Salem-Keizer community. This CAP has been created with input from Cherriots employees, external transit partners, and the Salem-Keizer community. We are excited to highlight the sustainable progress completed so far, reflect on our lessons learned throughout the CAP development process, and share our new strategies aimed at reducing emissions. Our agency believes in the power of community connection, improving climate resiliency, and creating safe, reliable access to transit. This plan outlines our commitment and strategy to achieve this mission.

As climate events increase in frequency and intensity, we recognize the impact on our riders, along with our impact on the environment and surrounding communities. Our role in local environmental changes is interconnected with our mission of creating safe, accessible mobility options for the Salem-Keizer community. Increasing ridership is inherently sustainable, as it takes cars off the road and reduces emissions.

Throughout this CAP, we present a strategic framework that is aligned with Oregon's emission reduction goals. We identify areas where we can reduce our carbon footprint at the lowest cost and impact on our operations and riders. This plan embraces new and forthcoming technologies to create systematic efficiencies, while providing transparency and accountability to riders along the way. We understand the importance of incorporating rider feedback in our strategies—understanding opportunities to make transit more accessible is imperative for creating an efficient, resilient, transportation system.

We recognize the effort in developing this plan, and express our gratitude to the Cherriots team, partners, and riders for their support and engagement. We also understand the hard work ahead to meet the goals outlined in this plan. Cherriots invites you to join us in our endeavor in continuing to promote a vibrant, sustainable, and accessible Salem-Keizer community and transit system.

Maria Hinojos Pressey
Board President

Allan Pollock
General Manager

EXECUTIVE SUMMARY

As the impacts of climate change become ever more apparent, decisive action must be taken to mitigate its effects by reducing our greenhouse gas (GHG) emissions. In Oregon, the transportation sector is the largest source of statewide GHG emissions, underscoring the urgency for transit agencies like Cherriots to decarbonize. Public transit service providers are uniquely positioned to reduce community-wide reliance on single-occupancy vehicles, alleviate traffic congestion, and improve air quality—benefits that are especially significant for underserved and frontline communities.

Recognizing this responsibility, Cherriots has developed its first *Climate Action Plan* (CAP). This comprehensive strategy establishes goals, identifies decarbonization pathways, and positions Cherriots to enhance infrastructural and community-wide resilience to climate-related disruptions. Our CAP was shaped by extensive stakeholder engagement, which included community input and collaboration with local partners and experts to ensure that the plan reflects the needs and aspirations of the communities we serve.

Cherriots CAP builds on recent sustainability achievements, including deploying battery-electric buses, switching to renewable fuels, installing efficient water- and energy-saving infrastructure, and embedding environmental stewardship into operations. Our 2022 GHG inventory shows that most of our emissions come from fleet operations, highlighting a critical opportunity for action. Without intervention, emissions could rise by over a third by 2045. However, by instituting planned investments and leveraging cleaner technologies and regulatory incentives, Cherriots can reduce its emissions by 92%. The CAP also addresses the mid-Willamette Valley's climate vulnerabilities, including rising temperatures, increased extreme heat days, and flood risks to key transit facilities, with an emphasis on protecting socially vulnerable populations who depend on transit the most.

Through this CAP, Cherriots will pursue seven overarching goals to drive climate mitigation, resilience, and adaptation:

1. Grow ridership to reduce regional greenhouse gas emissions.
2. Deploy a diversity of decarbonization technologies to reduce fleet emissions.
3. Build and retrofit transit infrastructure and operations facilities where possible to bolster climate and energy resilience.
4. Increase community engagement and strengthen messaging around transit as climate action.
5. Establish and grow partnerships with regional governments and employers to promote climate action and adaptation.
6. Establish and monitor progress towards milestone greenhouse gas emissions targets.
7. Institutionalize sustainability, climate action, and monitoring across Cherriots.

Our goals are supported by a set of more specific strategies that will drive their achievement. Implementation of these strategies will be prioritized based on certain criteria—such as cost-effectiveness, emissions impact, co-benefits, and alignment with other agency priorities—and funded through a mix of grants, incentives, and capital investments. Progress will be measured through routine GHG inventories, public reporting, and five-year plan updates.

Pursuing climate action is not merely an environmental imperative—it is a commitment to the health, equity, and future of our community. By aligning with state and federal climate targets, Cherriots aims to deliver cleaner, more reliable, and more inclusive transportation options. This *Climate Action Plan* will serve as a roadmap to a sustainable transit future, reinforcing Cherriots mission to create community connections and inspire regional pride through valued mobility options.

GLOSSARY

Greenhouse Gas (GHG)

A gas with properties that allow it to capture heat (e.g., carbon dioxide).

Climate Change

Shifts in short- and long-term climate patterns that can be caused by greenhouse gases and other planetary phenomena.

Carbon Footprint

The total greenhouse gases generated by an individual or an entity and its actions.

Climate Mitigation

Reducing or preventing greenhouse gas emissions.

Climate Adaptation

Adjusting to the current and expected impact of climate change.

Climate Resilience

Ability to prepare for, respond to, recover from, and thrive in the face of climate-related events.

Climate Stressors

Environmental and ecological changes caused by climate change that can lead to negative impacts on natural systems and human societies.

Climate Vulnerability

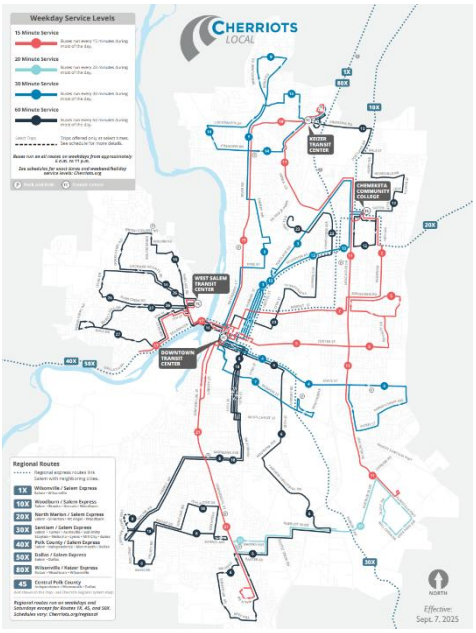
The degree to which people, communities, ecosystems, or the built environment are susceptible to harm from the impacts of climate change and their ability to adapt and recover.

1. INTRODUCTION

1.1 About Cherriots

Cherriots is a public agency that provides vital bus services over 78 square miles across Salem, Keizer, and the mid-Willamette Valley. Officially formed as the Salem Area Mass Transit District in 1979, Cherriots provides services across 21 Local bus routes and 6 Regional routes, connecting residents across both Marion and Polk counties (see Figure 1). Our Cherriots Local fleet consists of 71 buses, and our Cherriots Regional fleet consists of 14 buses. We also operate Cherriots LIFT, a paratransit service for those who cannot safely and independently use our regular bus service. It is our mission to create community connections, and in service of that mission we recognize that Cherriots plays a central role in fostering equitable mobility and economic vitality in the region.

Figure 1. Cherriots Local service and routes



1.2 Cherriots and Climate Change

As a public transit agency, we also play a critical role in regional sustainability and climate action. Transportation is responsible for over a third of Oregon's greenhouse gas (GHG) emissions, and all aspects of our operations—from the fuels we use to power our buses to the energy we use to power our buildings and transit centers—contribute to the emissions that are contributing to climate change. Given that climate change has been linked to direct harm on our communities, from long bouts of unprecedented extreme heat and drought to increased flooding risk, we recognize that we have a responsibility to reduce our emissions to protect communities both here in the Mid-Willamette Valley and beyond.

However, public transit in and of itself is a strategy to combat climate change. Buses and other forms of shared rides can take cars off the road, which in turn reduces GHG emissions, harmful air pollution, and road congestion. In addition, public transit infrastructure can also enable land use that not only reduces car use, but also promotes forms of active, zero-emission transportation like walking, cycling, and rolling. Consequently, we continue to think about opportunities to grow as a service provider and expand mobility access to even more communities across the region. This is especially critical for individuals who are already facing challenges in accessing bus services due to extreme weather events and rely on transit to help them reach their destination safely.

1.3 About this *Climate Action Plan*

Recognizing the harsh realities of climate change as they play out here in the mid-Willamette Valley, we are embracing the responsibility to act. Cherriots has prepared this *Climate Action Plan* (or "CAP") as a commitment to tackling the climate crisis head on. The CAP outlines the steps we will take to reduce our greenhouse gas (GHG) emissions, as well as to bolster systemwide and community-wide resilience to the impacts of climate change. The CAP is aligned with the state of Oregon's 2035 Goal (Executive Order 20-04) to commit to two emission reduction goals. Oregon is committed to reducing GHG emissions at least 45% below 1990 levels by 2035, and at least 80% below 1990 emissions levels by 2050. The CAP is a message to our riders and partners that we are devoted to these goals and the communities amidst the growing challenges faced from the climate crisis.

The CAP is intended to function as an actionable framework for Cherriots to implement programs, projects, and initiatives that are tied to GHG emissions reduction and climate resilience. Cherriots consulted with stakeholders across the region to devise concrete solutions to integrate climate action and sustainability across all of our operations. The strategies in this plan build upon existing efforts at Cherriots, but they also include new ideas that align with the needs and expectations of our staff, regional partners, and riders.

1.3.1 Our Planning Process

Our planning process spanned nearly a year and comprised three phases of analysis and engagement (Figure 2).

Our Values

Communication - *I promote an open, respectful dialogue with our customers, community partners, and teammates.*

Humility - *I will serve others with compassion and empathy.*

Excellence - *I will deliver a world class customer experience.*

Respect - *I will honor our team and community with my words, actions, and behaviors.*

Resourceful - *I will adapt to find efficient and innovative ways to overcome challenges and be willing to take initiative to achieve success.*

Inclusive - *I recognize and honor diversity and will act with integrity, promoting decisions and actions that are equitable and align with being an inclusive agency.*

Ownership - *I am empowered to take actions that contribute to good stewardship and community trust.*

Transparency - *I invite trust by fostering honesty and credibility in the eyes of others.*

Safety - *I own my role in ensuring Cherriots provides a safe, clean, and secure experience.*

Figure 2. CAP planning process

Phase 1: Baseline Conditions Assessment

Our process began with an evaluation of baseline conditions, which included the following:

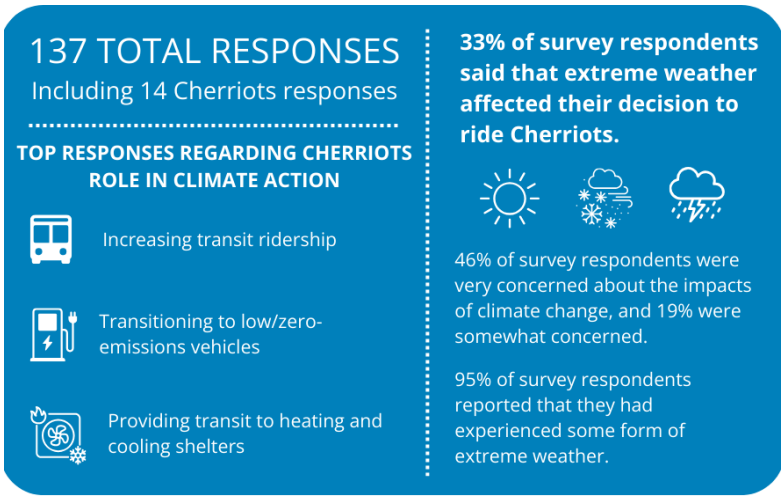
- A comprehensive review of existing Cherriots plans, projects, and initiatives that are relevant to or may be impacted by Cherriots climate action planning efforts;
- Research into regulatory drivers and funding resources at the local, state, and federal level that could affect the ability of Cherriots to implement climate action;
- Review of Cherriots 2022 greenhouse gas emissions inventory and the development of emissions projections through 2050; and
- an assessment of climate vulnerability and risk across the Cherriots service area and communities across the region.

Phase 2: Visioning

Cherriots organized and facilitated eight 'visioning' meetings with internal stakeholders and regional partners to gain an understanding of participant aspirations and expectations around climate action at Cherriots. These meetings also included discussions on opportunities for partnership and collaboration around regional climate action.

In April 2025, Cherriots also launched a public visioning survey to raise awareness and integrate community priorities and feedback into the CAP. The survey asked similar questions to the visioning stakeholder meetings, as well as additional community-oriented and climate vulnerability questions. The survey received 137 responses from Cherriots riders, the community, and staff. Important themes from the visioning sessions and survey were translated into goals for the CAP. Figure 3 summarizes key findings.

Figure 3. Community CAP Visioning Survey responses and themes



Phase 3: Strategizing

Cherriots then developed a preliminary set of proposed GHG reduction and climate resilience strategies based on the findings of the first two phases. These strategies were vetted by internal

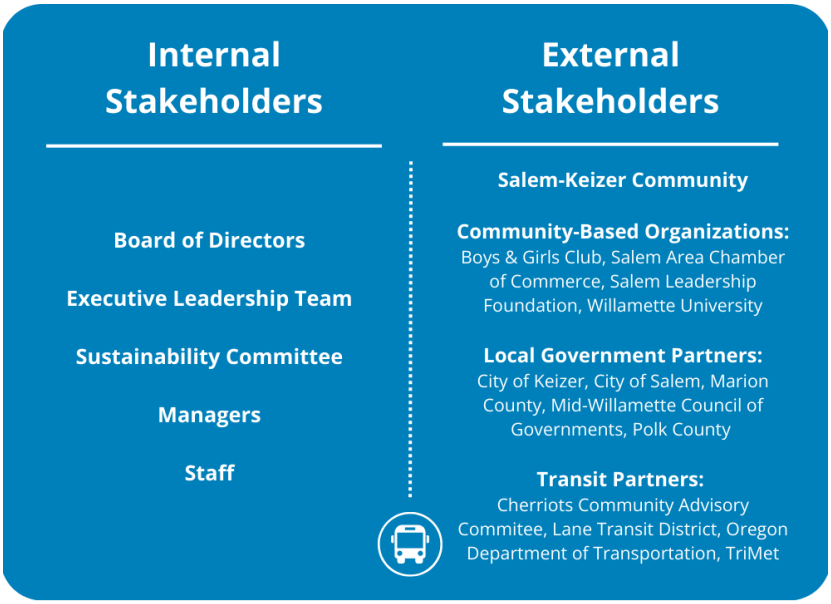
staff and were subsequently shared with internal stakeholders and regional partners through four strategizing meetings. Discussion focused on Cherriots responsibility and jurisdiction over certain emission-generating activities, public transit best practices, and impacts to riders and the region.

Cherriots also facilitated a small workshop with community-based organizations, with the intent to better incorporate community experience and perspective into the CAP. This coincided with a brief public comment period to get additional community-wide feedback on the Plan.

1.3.2 What We Heard

The input from stakeholders throughout the Visioning and Strategizing phases was deeply valuable, and Cherriots drew on that feedback as we devised the strategies in this plan. The stakeholders engaged are summarized in Figure 4.

Figure 4. Stakeholders engaged in Cherriots CAP development



Key themes that emerged from stakeholder sessions throughout the CAP development process included:

- **Ridership as a driver of climate action**: Stakeholders expressed that increasing ridership was critical to addressing climate change, as it correlates with taking cars off the road and consequently reducing emissions from the transportation sector.
- **Fleet diversification as a resilience tactic:** While stakeholders were generally enthusiastic about fleet electrification, stakeholders expressed that vehicles powered by a diverse portfolio of low-to-zero-carbon fuels would be valuable in the case of grid outages, allowing Cherriots to keep buses running during such events.
- **Infrastructure resilience**: Internal staff commented frequently on the importance of devoting resources to retrofitting or upgrading assets to help them stay up and running during major storm or flooding events. This step would ensure that services are available when riders may need them the most.
- **Climate action as a marketing tool**: Some stakeholders expressed that an emphasis on Cherriots climate action planning efforts may align with individual values and encourage community members to ride Cherriots buses.
- **Leverage partnerships wherever possible**: In engaging with multiple cities and public transit agencies, we were encouraged by and reminded of the wealth of partners in the region with whom Cherriots should collaborate to advance climate action.

- **Monitor and show progress**: Stakeholders emphasized the importance of communicating progress towards the agency's climate action goals on a routine basis through public-facing dashboards or reports.
- **Embed sustainability into operations and culture**: All stakeholders commented on the value of integrating sustainability and climate action into institutional processes wherever possible, which could be overseen by a steering committee.

1.3.3 What is in Our Plan

This Climate Action Plan features two key sections, including:

- **Baseline Conditions**: A summary of Cherriots current state with respect to climate action, greenhouse gas emissions, and systemwide climate vulnerability.
- **Roadmap and Implementation Plan:** A complete list of the strategies to be implemented towards achieving Cherriots climate action goals, as well as our approach to prioritizing projects and monitoring our progress.

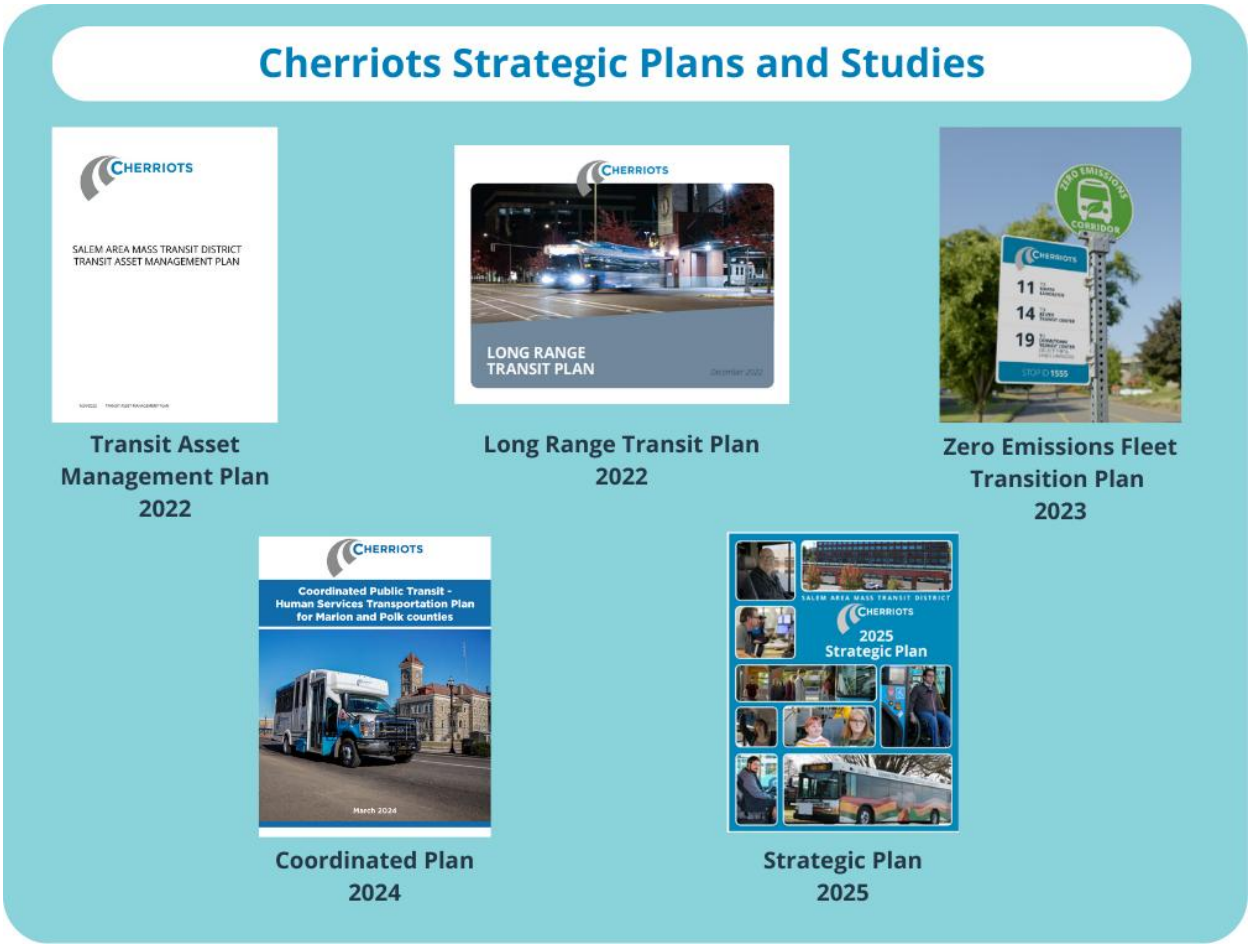
2. BASELINE CONDITIONS

2.1 Climate Action to Date

While this is Cherriots first Climate Action Plan, our agency has worked on a range of strategic plans, studies, capital projects, and other operational initiatives to reduce GHG emissions, improve climate resilience, and integrate sustainability across our operations.

Some of our key strategic plans and studies are highlighted in Figure 5, each of which include actions, design components, or programs related to climate action. When developing this CAP, Cherriots evaluated and synthesized each of these efforts to get an understanding of where we could build upon existing work and where there were critical gaps in our activities to date. Furthermore, Cherriots reviewed relevant local, regional, and statewide plans, policies, and regulations to understand where there may be opportunities to do this work in partnership with other stakeholders and with funding from external sources, as well as where there may be regulatory barriers or funding gaps.

Figure 5. Cherriots Strategic Plans and Studies



2.1.1 Operational Sustainability

To date, Cherriots has implemented the following activities to embed sustainability into its operations and reduce its contributions to climate change:

- **Transitioning to a zero-emission bus fleet**: Cherriots operates a fleet of diverse low-emission fuel types, including a growing segment of battery-electric buses (BEBs), renewable natural gas (RNG), and R-99 renewable diesel.

- **Upgrading our bus wash:** Cherriots recently replaced its existing bus wash with a more efficient system, including a water reclamation system to reuse water and a reverse osmosis rinse to reduce water spots on glass and reduce the need for blow drying. The upgrade has reduced soap use by 70% and reduced water consumption for bus washes by 80%.

- **Using re-refined oil**: Cherriots conducted a test on the benefits of using re-refined oil, whereby oil is processed back to a pure base stock and reinserted with additives to preserve oil. As of January 2024, Cherriots has used 15,714 gallons of re-refined oil. This is estimated to have prevented the production of approximately 109,998 gallons of crude oil.

- **Installing LED lighting**: Cherriots has installed LED lighting at several locations to reduce energy demand, including Keizer Transit Center, the transit mall at our downtown transit center, the exterior of our administrative and maintenance facilities, and all bus working areas within our maintenance shop.

- **Opting for sustainable building design**: With support from local organizations and federal and state funds, Cherriots opened its Keizer Transit Center (KTC) in July 2013. KTC features several sustainability and resilient design elements, including a green roof, bioswales, and in-floor heating through geothermal technology. Solar panels are installed on the roof of KTC and the bus shelters have bi-facial solar, with panels on top and underneath the roofs. To date, it is estimated that through the solar panels at KTC alone, Cherriots has generated enough energy to power 18 homes for one year.

2.1.2 Leadership and Programming

In addition to operations, Cherriots demonstrates its commitment to institutional sustainability through various internal leadership groups and programs, including but not limited to:

- **Sustainability Committee**: Our internal Sustainability Committee facilitates initiatives across operations, including recycling programs and green procurement efforts.

- **Security and Emergency Management Team:** Our Security and Emergency Management Team has incorporated climate resilience into its emergency planning scope of work, which includes devising safety solutions for responding to major climate events.

- **Memberships and Commitments**: In 2013, Cherriots became a certified member of Marion County EarthWISE, a sustainable business network that provides environmental assessments and a network of businesses and non-profits interested in sustainability and climate action. Further, Cherriots is also a signatory to the American Public Transportation Association's (APTA) Sustainability Commitment, which recognizes agencies who are committed to developing more sustainable operations.

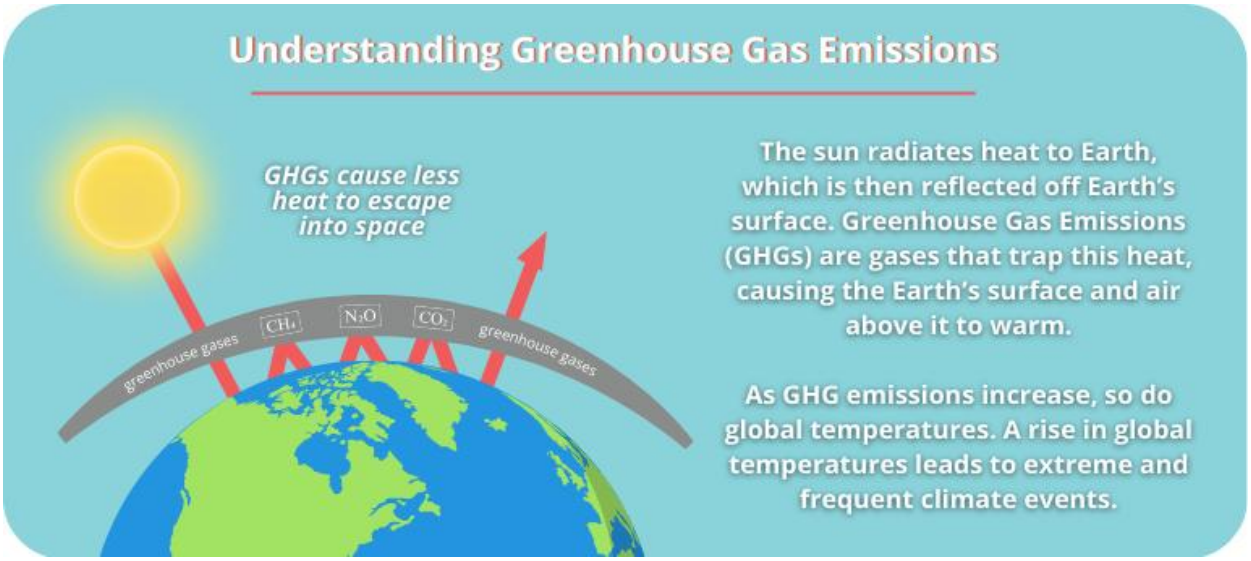
- **Commuter Options Program**: This program was designed by Cherriots to provide greater access to sustainable transportation choices, such as biking, walking, transit, vanpooling, carpooling, and telecommuting. The program places a focus on education and uses outreach strategies to spread awareness about various types of public transportation.

- **Expanded Service**: Increasing service and ridership is sustainable as it takes vehicles off the road. Cherriots most recent service expansion plan, *A Better Cherriots,* was adopted by the Board in 2018, implementing later evening, Saturday, and Sunday bus service.

2.2 Greenhouse Gas Emissions

In 2022, Cherriots prepared a GHG emissions inventory, which measures the amount of emissions from various sources across operations (e.g., buildings, vehicles). That inventory was reviewed as part of the CAP's development and was used to inform emissions projections and develop GHG reduction strategies.

Figure 6. Greenhouse gas emissions

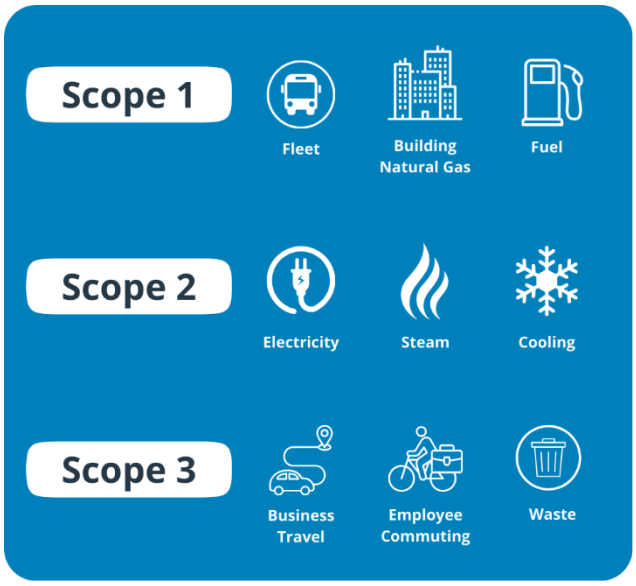


2.2.1 Understanding Greenhouse Gas Emissions

GHG emissions are measured in metric tons of carbon dioxide equivalent ($MTCO_2e$), which allows us to aggregate emissions of different types of greenhouse gases into a singular unit. Emissions are typically evaluated by scope, which are differentiated by the level of control an entity has over those sources of emissions, summarized below and in Figure 7:

- **Scope 1**: These are emissions generated by assets directly owned and operated by Cherriots, including natural gas in buildings and fuel used by our fleet vehicles.
- **Scope 2**: These are indirect emissions from electricity procured by Cherriots through the grid, though Scope 2 can also account for purchased steam and cooling.
- **Scope 3**: These are indirect emissions from upstream or downstream activities that are related to our value chain, such as employee commuting, business travel, and solid waste.

Figure 7. Scope emissions



Understanding emissions in terms of source and volume is critical, as it allows an agency like ours to determine where it should prioritize activities for reducing emissions. In the case of many transit agencies, including Cherriots, vehicle fuel combustion makes up the majority of greenhouse gas emissions and thus prompts the need for actions that decarbonize fuels. Cherriots GHG inventory does not measure Scope 3 emissions, and only accounts for Scope 1 and Scope 2 emissions.

2.2.2 2022 Baseline Greenhouse Gas Emissions

Our baseline GHG emissions inventory found that, as of 2022, Cherriots total annual emissions amounted to 4,332.05 $MTCO_2e$ (Figure 8 and Table 1). 88.32% of our baseline emissions are a result of mobile combustion (i.e., fuel used by our fleet vehicles). 9.51% of our emissions are a result of electricity purchased to power Cherriots facilities and electric vehicles. The remaining 2.17% of emissions are attributed to stationary combustion in Cherriots facilities (i.e., burning natural gas to heat buildings).

Figure 8. Cherriots 2022 GHG emissions by source

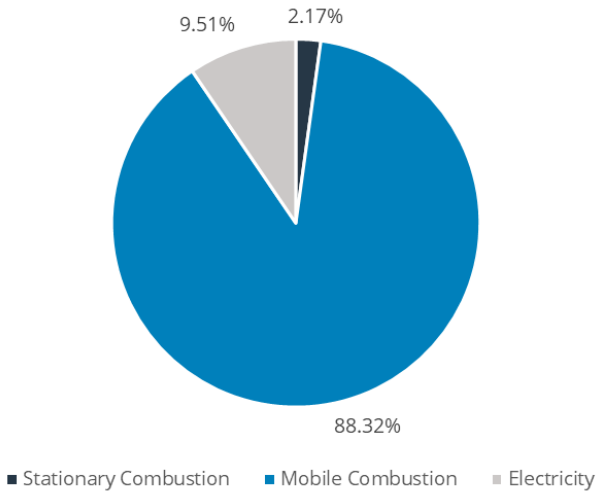


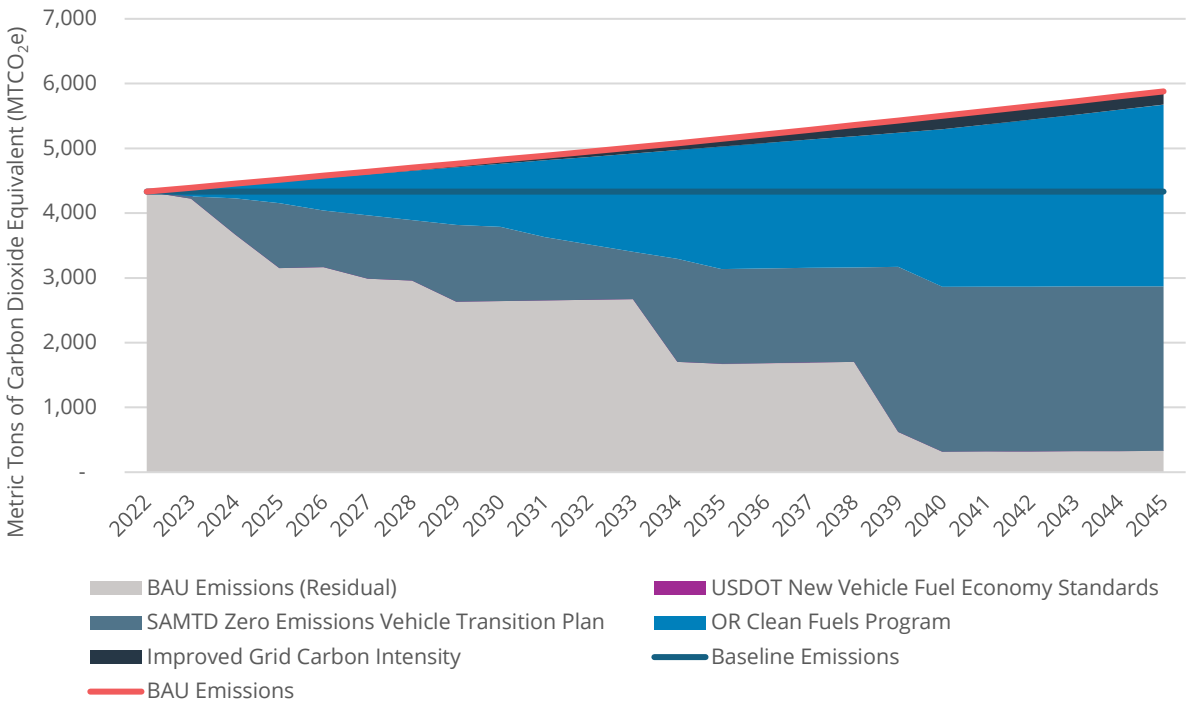
Table 1. Cherriots 2022 GHG emissions by source and type

Scope	Source	Emissions Type	$MTCO_2e$
1	Local Buses	Mobile Combustion	2,322.14
	Regional Buses	Mobile Combustion	666.19
	LIFT Buses	Mobile Combustion	697.47
	Shop & Ride Buses	Mobile Combustion	61.75
	Other Support Vehicles	Mobile Combustion	78.31
	Del Webb Facilities	Building Stationary	88.71
	Downtown Transit Center	Building Stationary	5.45
		Scope 1 Total	**3,920.02**
2	Del Webb Facilities	Stationary Combustion	216.60
	Downtown Transit Center	Stationary Combustion	176.26
	Keizer Transit Center	Stationary Combustion	14.50
	Park & Rides	Electricity	4.67
		Scope 2 Total	**412.03**
		Total Scope 1 and 2 Emissions Baseline	**4,332.05**

2.2.3 Projected Greenhouse Gas Emissions

To better understand how Cherriots should prioritize activities to reduce emissions over time, Cherriots drew on its 2022 baseline inventory and various other inputs to forecast its GHG emissions through 2045. Figure 9 shows projected emissions in both a **business-as-usual (BAU)** or 'do nothing' scenario, as well as a **business-as-planned (BAP)** scenario, which shows the impact of regulatory drivers and existing initiatives on Cherriots emissions over time.

Figure 9. Cherriots Projected GHG Emissions through 2045



The orange line at the top of the stacked area chart represents Cherriots emissions in BAU scenario. Specifically, that scenario highlights how Cherriots emissions portfolio would change if all that were accounted for were external factors outside of Cherriots' control and if we do not consider the impacts of regulatory action. The main driver of emissions growth would solely be ridership growth (as an extension of population growth). It is estimated that, in a BAU scenario, Cherriots emissions would increase by 35.7% by 2045 (from 2022 levels). In this scenario, higher emissions would increase, causing climate events to be more extreme and frequent. The graph can be used to gauge the intensity of protected climate events and allows Cherriots to develop strategies that are tailored to protect its riders.

The BAP scenario accounts for anticipated emissions reductions from the following regulations: U.S. Department of Transportation (USDOT) New Vehicle Fuel Economy Standards, Oregon's Clean Fuels Program, the Cherriots *Zero Emissions Fleet Transition Pla*n, and improvements to grid carbon intensity per the Oregon Renewable Portfolio Standard (i.e., 50% renewable electricity by 2040). The

diminishing grey wedge at the bottom of the chart reflects Cherriots emissions after accounting for these drivers. Consequently, Cherriots emissions are expected to fall by 92.3% by 2045 despite anticipated population growth. Decreasing emissions slows down the frequency and intensity of extreme climate events. As a result, Cherriots can develop climate resiliency strategies that are better aligned to this scenario, and provide safe, accessible transit options for its riders.

2.3 Climate Vulnerability Assessment

Cherriots recognizes that the impacts of climate change stand to damage transit infrastructure, leading to interruptions in service and potentially resulting in harmful economic and social impacts to the communities that rely on our services. As we prepared this Climate Action Plan, we performed a high-level, geospatial evaluation of climate vulnerability and risk with respect to our infrastructure and service areas.

A **climate vulnerability assessment** tells a story of how prepared a system, whether it be a community, organization, or ecosystem, is for the impacts of climate change. That preparedness is assessed relative to relevant **climate hazards** or **stressors**, which refer to specific climate impacts such as extreme heat, wildfire and smoke, inland and coastal flooding, drought, and extreme precipitation. A climate vulnerability assessment typically evaluates three key concepts relative to these stressors:

- **Exposure**: This refers to the extent to which an area or community are subjected to climate stressors (e.g., the degree to which an area is exposed to extreme heat based on the number of high heat days in a year)
- **Sensitivity**: This refers to the extent to which an area or community could be harmed by its exposure to a certain climate stressor (e.g., the density of vulnerable populations in an area with high heat exposure).
- **Adaptive capacity**: This refers to the ability of an area or a community to adjust to the stressor and mitigate harm (e.g., the number of splash pads and cooling centers given exposure to extreme heat).

While Cherriots used this assessment to assess the impacts of climate stressors on our infrastructure, we also considered how these hazards would negatively affect vulnerable populations that rely on transit services, such as elderly and low-income communities.

2.3.1 Methodology

Cherriots reviewed and modeled various climate stressors to understand where the most vulnerable infrastructure, assets, and people are within the District's service area. By layering climate models over maps of Cherriots facilities and routes, key areas for prioritizing climate adaptive strategies were identified. The climate hazards or stressors reviewed for this assessment were heatwaves, wildfire and smoke exposure, flooding, drought, and ice storms. With respect to these stressors,

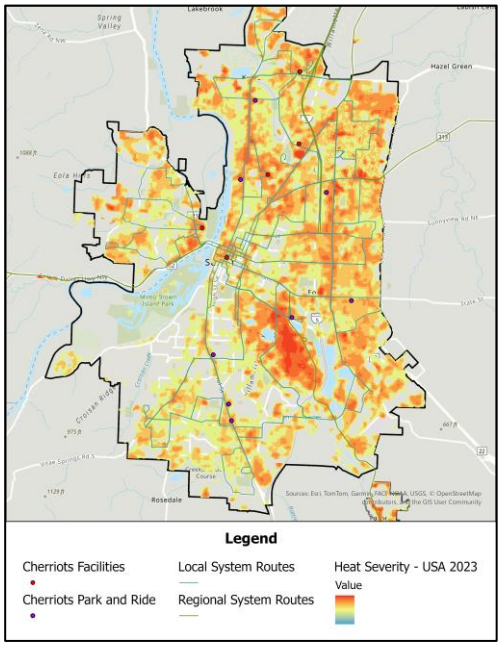
facilities assessed included park and rides, transit centers, offices, charging facilities, and bus storage and maintenance locations. Cherriots also assessed social vulnerability to understand where in the service area the most vulnerable riders were located.

2.3.2 Findings: Climate Stressors

Our region faces a range of climate stressors driven by changing precipitation patterns, warming temperature, and more frequent extreme weather events, resulting in increased risks of flooding, droughts, and wildfires. These stressors are projected to intensify in coming decades, posing risks to both communities and critical infrastructure, including transit.

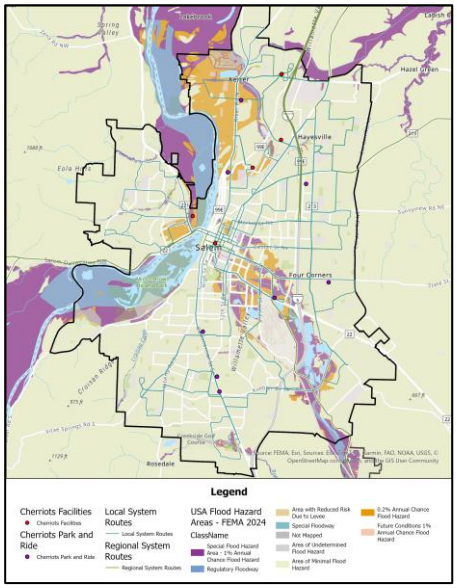
Extreme Heat

Projections indicate that by 2100, the Mid-Willamette Valley could see temperature increases ranging from 1°C to 7°C (2°F to 13°F). This warming trend is accompanied by more frequent and intense heatwaves, with Salem projected to experience an average of 24 days per year exceeding 92.3°F by 2050. The National Integrated Heat Health Information System shows heat severity throughout the United States. Heat severity refers to a period of heat and humidity with temperatures above 90°F (32°C) for two or three days.

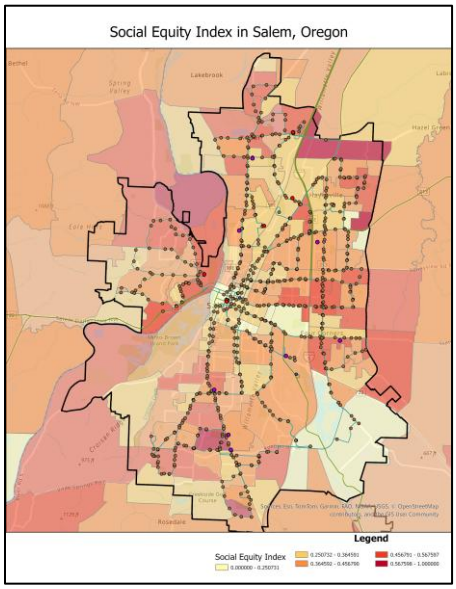


The analysis showed that in Salem, there is a concentration of higher heat areas around the Salem Municipal Airport, due to aircraft fuel emissions and larger amounts of concrete, which absorb heat. Cherriots routes and stops near this area, such as the Airport Road Park and Ride, are at greater risk for extreme heat, which can damage Cherriots infrastructure and provide unsafe conditions for Cherriots riders. Extreme heat can create unsafe conditions for riders to commute to the bus stop. Further, extreme heat can overheat bus infrastructure, causing transit delays and cancellations. Additionally, Cherriots Contracted Services and Charging Facility at Hyacinth is in a highly paved industrial area with significant heat impacts and could face heat impacts to charging infrastructure. Thus, resiliency to extreme heat is important to ensure safe, accessible transit.

Flooding



To assess flood risk, Cherriots analyzed the Federal Emergency Management Agency's (FEMA) special flood hazard area data. A special flood hazard area is the area that will be inundated by the flood event having a 1% chance of being equaled or exceeded in any given year, shown in purple on the map. Due to its location along the Willamette River, the Salem-Keizer area is particularly prone to flood risks as climate change exacerbates the frequency and intensity of flood-causing precipitation. Cherriots West Salem Transit Center, Keizer Safeway Park and Ride, Fred Meyer North Park and Ride, and Del Webb Maintenance Facility and Operations Headquarters are particularly vulnerable to flood risk. Additionally, routes and stops adjacent to the Willamette River are more likely to experience flooding, which could cause bridge or road closures, delays, re-routes, or cancellations. Flooding can damage infrastructure, requiring maintenance periods to fix. Further, flooding provides unsafe conditions for riders to commute to the bus stop, preventing riders from accessing transit. Climate adaptation and resilience strategies are essential to strengthen infrastructure and ensure that riders can access transit safely.



Social Vulnerability

Social vulnerability is the degree to which people and communities are more susceptible to harm from climate-related hazards due to their social, economic, health, and demographic characteristics. Cherriots used the Oregon Department of Transportation's TransGIS social equity index, which includes poverty rates, disability rates, vulnerable and youth populations, and demographic data to understand where in the service area the most vulnerable riders were located.

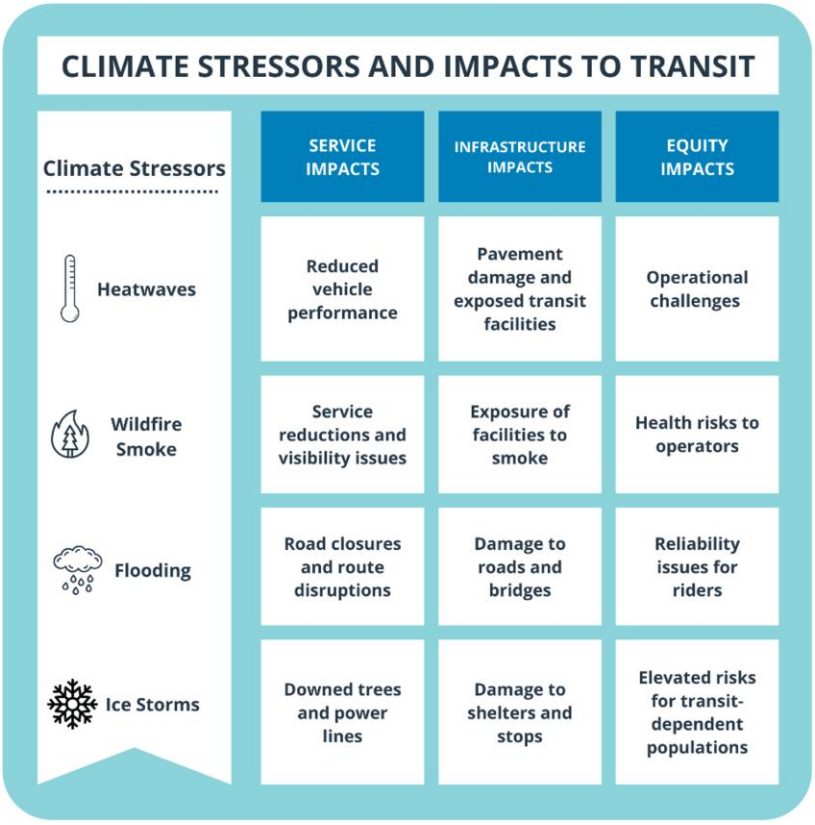
Areas with a higher social equity index, such as Northeast Salem, indicate vulnerable populations with a greater need to access public transit, especially during climate events. Vulnerable populations may use public transit as their only source of transportation. These communities rely on Cherriots to commute to work, medical facilities, or grocery shopping. Cherriots is committed to providing accessible transit to all communities, so riders can safely and comfortably reach their destinations. Cherriots will use this information to plan climate mitigation and adaptation strategies that address community needs and access to safe, reliable transit. Addressing social vulnerability in Cherriots CAP planning helps ensure climate resilience is equitable and protects those most at risk.

2.3.3 Effects on Transit

Climate stressors put pressure on natural and built systems, including transportation networks, by creating challenges that affect their safety, reliability, and long-term performance (Figure 10). Cherriots relies on safe roads, functioning vehicles, dependable infrastructure, and healthy riders and operators to deliver consistent service. It is expected that, without action, climate stressors can disrupt all of these by:

- **Interrupting Service:** Flooded streets, icy roads, wildfire smoke, or extreme heat can lead to canceled routes or unsafe operating conditions.
- **Damaging Infrastructure:** Heat can buckle pavement, storms can wash out roads, and power outages can halt electric bus charging.
- **Impacting Equity:** Riders who rely solely on transit may face longer wait times, unsafe conditions, or a complete lack of service during climate-related events.

Figure 10. Climate stressors and impacts to transit



Service Disruptions

Based on our climate vulnerability assessment, Cherriots determined that the following stressors should be considered as posing serious risks of disruption to our services:

- **Heatwaves:** Extreme heat can degrade vehicle performance (e.g., battery efficiency for electric buses, risk of overheating engines), increase passenger health risks at unshaded stops, and reduce road surface integrity (e.g., asphalt softening).
- **Wildfire Smoke:** Poor air quality may require service reductions to protect operators and passengers, while visibility issues increase driving hazards.
- **Flooding:** Road closures from flash floods or landslides can sever routes, delay service, and require detours or temporary suspension of operations.
- **Ice Storms:** Downed trees, icy roadways, and power outages can halt transit service for days at a time.

Infrastructure Vulnerability

Cherriots determined that the following infrastructure would be particularly exposed to climate stressors, resulting in unique vulnerabilities that must be addressed:

- **Road and Bridge Damage:** Repeated flooding and heat stress can degrade pavement, bridge joints, and culverts, increasing maintenance costs.
- **Transit Facilities:** Bus depots, maintenance yards, and park-and-ride lots located in floodplains or near rivers are vulnerable to inundation risks.
- **Passenger Amenities:** Shelters and stops without climate-resilient design (e.g., shading, storm drainage) leave riders exposed to heat, rain, or smoke hazards.
- **Electrical Systems:** Electric bus charging infrastructure is vulnerable to power outages caused by storms or wildfire-related grid disruptions.

Systemic Impacts

Based on the above, Cherriots determined that the short- and long-term impacts to the system of leaving these climate risks unaddressed primarily include the following:

- **Reliability and Equity:** More frequent climate disruptions may disproportionately impact transit-dependent populations, especially those with fewer alternatives during service outages.
- **Costs and Maintenance:** Increased repair needs for vehicles and infrastructure raise operational costs, straining agency budgets.
- **Long-term Planning Challenges:** Uncertain climate patterns complicate future transit scheduling, facility siting, and infrastructure investment decisions.

3. ROADMAP AND IMPLEMENTATION PLAN

3.1 Roadmap Overview

Through the planning process, we observed several important themes, including ridership, fleet diversification, infrastructure resilience, marketing, partnerships, showing progress, and operational sustainability. The CAP's goals and strategies are informed by those themes and target three key approaches to climate action:

1. Direct emissions reductions from Cherriots fleets and infrastructure (climate mitigation).
2. Behavioral change focused on increasing ridership to reduce regional greenhouse gas emissions.
3. Infrastructural and community-wide climate adaptation and resilience.

3.2 Goals, Strategies, and Actions

The hierarchical framework of goals, strategies, and actions for the Climate Action Plan, as presented in this Roadmap are as follows:

- **Goals:** Seven goals frame the strategies and present thematic groupings.
- **Strategies:** Strategies are both short and long-range approaches to achieving the goals.
- **Actions:** Actions are practical steps for advancing the strategies.

For the purpose of this plan, only the goals and strategies are included in the CAP. As described further in Section 3.3, Cherriots has prepared an internal list of actions that support the strategies. The purpose of this internal list is to guide departments by providing tangible steps for implementation and additional details to support prioritization.

Cherriots will pursue **seven goals** to drive climate mitigation, resilience, and adaptation:

1. Grow ridership to reduce regional greenhouse gas emissions.
2. Deploy a diversity of decarbonization technologies to reduce fleet emissions.
3. Build and retrofit transit infrastructure and operations facilities where possible to improve climate and energy resilience.
4. Increase community engagement and strengthen messaging around transit as climate action.
5. Establish and grow partnerships with regional governments and employers to promote climate action and adaptation.
6. Establish and monitor progress towards milestone greenhouse gas emissions targets.
7. Institutionalize sustainability, climate action, and monitoring across Cherriots.

Goal 1: Grow ridership to reduce regional greenhouse gas emissions.		
Strategies	**Primary Climate Impacts**	**Co-Benefits**
Strategy 1: Improve service frequency, span, and coverage.	Emissions Mitigation (GHG)	Service Continuity, Equity, Economic Mobility
Strategy 2: Enhance first/last mile infrastructure and service.	Emissions Mitigation (GHG)	Public Health, Safety
Strategy 3: Invest in safety and comfort for riders.	Emissions Mitigation (GHG)	Rider Comfort, Public Safety

Goal 2: Deploy a diversity of decarbonization technologies to reduce fleet emissions.		
Strategies	**Primary Climate Impacts**	**Co-Benefits**
Strategy 1: Continue to transition fleet to a balanced mix of low emissions vehicles.	Emissions Mitigation (GHG)	Operational Resilience
Strategy 2: Use lifecycle emissions and cost analyses to support flexible, cost-effective vehicle procurement.	Emissions Mitigation (GHG)	Fiscal Responsibility
Strategy 3: Reduce idling at transit centers and depots where there is extended bus idling during layovers and maintenance/cleaning.	Emissions Mitigation (GHG)	Operator Comfort, Air Quality

Goal 3: Build and retrofit transit infrastructure and operations facilities where possible to improve climate and energy resilience.		
Strategies	**Primary Climate Impacts**	**Co-Benefits**
Strategy 1: Invest in climate-conscious waiting areas (bus stops, park and rides, transit centers).	Climate Adaptation	Rider Comfort, Public Safety
Strategy 2: Make climate-ready enhancements to critical facilities to protect against flood, heat, and power outages.	Climate Adaptation	Service Continuity
Strategy 3: Decarbonize facilities by partnering with local utilities around energy sourcing and charging infrastructure installations.	Emissions Mitigation (GHG)	Operational Resilience
Strategy 4: Utilize green building design for new or renovated facilities.	Emissions Mitigation (Scope 2)	Infrastructure

Goal 4: Increase community engagement and strengthen messaging around transit as climate action.		
Strategies	**Primary Climate Impacts**	**Co-Benefits**
Strategy 1: Conduct targeted outreach by audience (youth, low-income, employers, partners in health and emergency sectors, etc.).	Emissions Mitigation (GHG)	Behavioral Change, Broader Public Support
Strategy 2: Frame transit as a "community health and resilience" asset and use positive marketing to drive ridership.	Climate Resilience, Emissions Mitigation (GHG)	Behavioral Change, Public Health, Broader Public Support
Strategy 3: Implement sustainability-focused communication initiatives.	Emissions Mitigation (GHG)	Behavioral Change, Broader Public Support, Community Engagement

Goal 5: Establish and grow partnerships with regional governments and employers to promote climate action and adaptation.		
Strategies	**Primary Climate Impacts**	**Co-Benefits**
Strategy 1: Engage employers to boost commuter programs and incentives.	Emissions Mitigation (GHG)	Community Engagement
Strategy 2: Partner with local jurisdictions on transit-oriented, climate-friendly urban development and land use (e.g. housing near transit).	Emissions Mitigation (GHG)	Political Support, Infrastructure, Land Use Efficiency
Strategy 3: Support local partners in climate goals related to transportation.	Climate Adaptation	Emergency Preparedness, Political Support
Strategy 4: Integrate transit plans into local/regional resilience and health frameworks and emergency response coordination.	Emissions Mitigation (GHG)	Infrastructure, Land Use Efficiency, Emergency Preparedness

Goal 6: Establish and monitor progress towards milestone greenhouse gas emissions targets.		
Strategies	**Primary Climate Impacts**	**Co-Benefits**
Strategy 1: Define clear short-, medium-, long-term climate and emissions reduction targets.	Climate Adaptation, Emissions Mitigation (GHG)	Measurability, Organizational Alignment
Strategy 2: Integrate climate metrics (GHG reductions, resilience measures) into agency KPIs, decision frameworks, and performance measures.	Emissions Mitigation (GHG)	Measurability, Transparency, Continuous Improvement

Goal 7: Institutionalize sustainability and climate action across Cherriots.		
Strategies	**Primary Climate Impacts**	**Co-Benefits**
Strategy 1: Prioritize green procurement for office needs and operations.	Emissions Mitigation (Scope 3)	Cost Savings, Organizational Culture
Strategy 2: Train staff on climate and sustainability principles tailored to administrative roles and operations staff.	Climate Adaptation, Emissions Mitigation (GHG)	Cultural Change, Staff Empowerment
Strategy 3: Develop internal capacity for climate and sustainability leadership.	Climate Adaptation, Emissions Mitigation (GHG)	Organizational Alignment
Strategy 4: Incorporate sustainability into budgets and action plans across departments.	Climate Adaptation, Emissions Mitigation (GHG)	Organizational Alignment, Organizational Culture

3.3 Implementation

Implementation of the Cherriots CAP will be guided by four key steps as shown in Figure 11 below.

Figure 11. Implementation steps

3.4.1 Assessing and Prioritizing Actions

The strategies presented in this plan are neither intended to be implemented concurrently, nor presented in order of importance or expected implementation. Cherriots has prepared an internal list of actions steps that support each strategy. This list of actions will guide Cherriots by providing tangible steps for implementation and additional details around cost, suggested partners, lead departments, and prospective timeframes.

Cherriots will initiate a Sustainability Advisory Committee with representatives from operations, leadership, the Sustainability Committee, and other departments across Cherriots to annually review, prioritize, and select approximately 5-7 actions per year to pursue. All actions must be assessed for feasibility and reviewed against additional criteria to prioritize their implementation.

To ensure that Cherriots can execute all selected strategies and actions, we will apply a multi-criteria decision framework when annually evaluating actions ahead of each fiscal year. Cherriots will consider the following criteria when prioritizing actions:

- **Financial Costs and Benefits:** Estimated capital and operating costs, life-cycle savings, and potential cost avoidance.
- **Emissions Reduction Impact:** Expected contribution toward reducing GHG emissions.
- **Resourcing:** Internal staff capacity or need for additional expertise or external support.
- **Funding Availability:** Potential to leverage grants, incentives, or other funding sources to offset costs.
- **Co-Benefits:** Additional benefits beyond emissions reductions, such as improved rider experience, public health, safety, accessibility, or equity outcomes.
- **Alignment with Existing Plans:** Consistency with Cherriots adopted guidance documents such as the Long-Range Transit Plan (LRTP), Transit Asset Management Plan, Strategic Plan, and other local or state transportation and climate policies.
- **Regional and Stakeholder Priorities:** The degree to which an action supports regional climate targets, meets community needs, or reflects stakeholder input.
- **Maturity of Strategy and Technology:** Readiness of the action for deployment, proven effectiveness of similar initiatives elsewhere, and anticipated technological advancements that may affect timing or costs.

Using these criteria, priority actions will be identified and sequenced to align with available resources, funding cycles, and other planned capital or service improvements to maximize synergies. This prioritization framework is designed to be adaptive, allowing Cherriots to reassess actions annually or as new information emerges. Factors such as changing market conditions, grant availability, evolving regulatory requirements, or innovative technologies may alter the timing or priority of certain actions. This flexibility ensures that Cherriots remains agile in pursuing the CAP goals, while staying grounded in fiscal responsibility, operational practicality, and stakeholder needs. The Sustainability Advisory Committee receive input from the Executive Leadership Team, Senior Management, and the Board, to finalize priority actions and then establish a workplan.

3.4.2 Securing Funding

Cherriots conducted a comprehensive analysis to identify viable funding opportunities that can support the successful implementation of the CAP goals and strategies. Table 2 aligns Cherriots climate strategies with actionable funding opportunities at the local, state, and federal levels. The matrix can serve as a planning and prioritization tool to help Cherriots identify the most viable implementation pathways based on available resources and strategic goals.

Table 2. Funding Sources and CAP Alignment

Funding Source	Eligible Assets	Cherriots Application	CAP Alignment
Local Utility			
PGE Drive Change Fund	Electric vehicles, chargers, outreach programs	Fund transit EV purchases and charging infrastructure with equity and GHG benefits	Goal 3.3
Salem Electric Solar Rebate	Small solar PV systems (≤25kW)	Add solar to small buildings within Salem Electric territory	Goal 3.2 Goal 3.3 Goal 3.4
ETO + PGE Electric Mobility Grant	EV charging infrastructure, site assessments, fleet electrification support	Fund depot chargers and design planning for EV buses; supports community-serving transit electrification	Goal 2.1
Salem Electric Energy Efficiency Rebates	Lighting, HVAC, insulation, windows, appliances (electric and gas)	Efficiency upgrades at Cherriots facilities served by Salem Electric, including lighting and HVAC improvements	Goal 3.3 Goal 3.4
PGE Green Future Renewable Development Fund	Solar PV systems (required), battery storage (required for public agencies)	Install solar + battery storage at public-facing facilities for resilience and GHG reductions	Goal 3.2 Goal 3.3 Goal 3.4

Funding Source	Eligible Assets	Cherriots Application	CAP Alignment
State			
Energy Trust of Oregon/PGE Energy Efficiency Incentives & SEM (Utility-Funded)	Lighting, HVAC, building controls, facility upgrades	Upgrade lighting and HVAC at admin and maintenance sites to reduce energy use	Goal 1.3 Goal 3.3 Goal 3.4
DEQ Medium & Heavy-Duty ZEV Rebate	Electric buses, support fleet vehicles, charging equipment	Rebates for purchasing new electric buses and fleet vehicles, up to 100% for public agencies	Goal 2.1
DEQ Zero-Emission Fueling Grant	DC fast chargers, Level 2 chargers, site infrastructure	Reimburse up to 80% of the cost to install depot EV charging for fleet electrification	Goal 2.1 Goal 3.3
Energy Trust + ODOE Solar & Storage Incentives	Solar PV, battery storage	Install solar panels and battery systems at depots for resilience and demand offset	Goal 3.2 Goal 3.3 Goal 3.4
ODOT Innovative Mobility Grant	Microtransit, mobility hubs, shared mobility infrastructure	Pilot last-mile transit or electric van programs in underserved areas	Goal 1.2 Goal 3.1 Goal 4.1
Oregon Clean Vehicle Rebate Program	Light-duty EVs and PHEVs (new or used)	Rebates for light-duty electric fleet vehicles used for service or support functions	Goal 2.1
Oregon DEQ Reduce, Reuse, Reimagine Materials Management Grant	Waste reduction equipment, reuse/repair systems, composting, public engagement tools	Fund depot-based composting, reuse of bus parts, or materials diversion projects with equity focus	Goal 3.3
Federal			
FTA Low-No Emission Grant (5339c)	Zero-emission buses and charging infrastructure	Fund purchase of electric buses and associated depot charging	Goal 2.1
FTA Bus and Bus Facilities Grant (5339b)	Bus facility construction, maintenance improvements, fleet upgrades	Expand and modernize maintenance facilities to support electric fleet	Goal 3.2 Goal 3.3 Goal 3.4
Inflation Reduction Act – Sec. 45W / 30C / 48	EVs, chargers, solar, storage (via direct pay)	Claim direct-pay credits for new fleet vehicles, depot chargers, and solar installations	Goal 7.4
EPA Clean Heavy-Duty Vehicle Grant	Class 6–7 ZEV buses, infrastructure, training	Comprehensive funding for bus replacement, charging, workforce upskilling	Goal 2.1

Funding options range from utility-administered efficiency incentives and mobility grants to federal transportation electrification programs. Various funding options will be applicable to different components of the CAP. Certain funding sources may also be strategically combined to achieve greater cumulative results. Due to recent volatility in federal funding, Cherriots must utilize a mixed approach to securing funding that emphasizes local and regional partnerships and other in-state options. Securing diverse financial resources is of the highest priority, as it will help us ensure adaptability in executing this CAP and accessing relevant funding streams as needed.

3.4.3 Implementing Projects and Programs

Projects and programs emanating from the CAP strategies and actions will be designated to Cherriots departments in alignment with their key functions and responsibilities. Those departments will refer to the prioritization criteria to help determine which actions can proceed into the implementation phase. Cherriots will run relevant projects through its capital project planning process, whereas programs will fall under the purview of department heads and program managers for implementation. Departments will integrate priority programs and projects into their annual workplans and budgets ahead of each fiscal year.

The Sustainability Advisory Committee will oversee climate action and sustainability across Cherriots. It is our vision that this committee will comprise a mix of executive and managerial leaders, creating accountability for our departments to the commitments made through this CAP.

3.4.4 Monitoring, Evaluation, and Reporting

A robust monitoring, evaluation, and reporting process is essential to ensure successful implementation of the Cherriots CAP and to track progress toward meeting climate goals. This process establishes accountability, provides transparency to stakeholders, and allows Cherriots to adapt its strategies over time.

Monitoring

Monitoring entails the ongoing collection and tracking of data to measure performance against established goals, targets, and key performance indicators (KPIs). Cherriots will establish a clear set of metrics to assess emissions reduction, energy consumption, ridership, low- and zero-emission fleet adoption, and climate resilience improvements. Data will be collected regularly from operational systems, fuel and energy usage records, vehicle telematics, ridership data, facility performance monitoring, and procurement records. A complete GHG emissions inventory should be completed and analyzed every two years to monitor shifts in Cherriots total GHG emissions and assess how operational developments affect our emissions portfolio.

Evaluation

Evaluation builds on monitoring by assessing whether the CAP actions are being implemented, if they are achieving intended outcomes, and identifying any barriers or opportunities for

improvement. Evaluation activities may include annual reviews of performance data, assessment of co-benefits, and qualitative feedback from staff, riders, and community stakeholders. Evaluation findings will guide adjustments to the CAP, prioritization of future actions, and integration of new technologies or practices as they become available.

Reporting

Cherriots reporting will consist of quarterly, bi-annual, and comprehensive updates. Quarterly updates for leadership and department heads to assess progress, flag implementation challenges, and adjust actions is particularly important, especially in the first year of implementation. Cherriots will also publish a *Biennial Climate Action Progress Report* summarizing key achievements, challenges, and lessons learned. This report will include updates on GHG emissions inventory trends, progress toward short- and long-term targets, and highlights of completed or ongoing initiatives. The report will be shared with Cherriots leadership and presented to the Board of Directors, as well as to the broader public. In addition, Cherriots will conduct a comprehensive CAP evaluation every five years to update strategies and actions in alignment with new technologies, progress, funding opportunities, and emissions reduction potential.

4. CONCLUSION

Cherriots recognizes that public transit and climate action are not merely related concepts; public transit is inherently *a part of the solution* to the climate crisis. It is our belief that creating community connections and bolstering our collective resilience to the impacts of climate change are outcomes of the same endeavor: to provide safe, clean, and secure public transit to all across the Salem-Keizer community and the mid-Willamette Valley.

As such, we are not starting from zero; we are building on years of work creating a more sustainable future. This CAP is both a testament to that work, as well as a commitment to keep going. It folds in our ongoing efforts to reduce harmful climate and air pollution, as well as our plans to fortify our infrastructure to stay up and running when people need our services the most.

This CAP is an achievement that we celebrate, but the hard work remains ahead of us. We look forward to working with our partners across the region, and to sharing our progress over the coming years. In the meantime, we invite you to join us in our shared endeavor to build a better climate future for all.

APPENDIX A: GREENHOUSE GAS EMISSIONS PROJECTIONS

A1. Methodology

Cherriots previously prepared a baseline greenhouse gas (GHG) emissions inventory for calendar year 2022. It is this baseline inventory against which emissions projections were prepared for this CAP, using two different scenarios: business-as-usual and a business-as-planned.

A1.1 Business-as-Usual Scenario

Cherriots first prepared a business-as-usual (BAU) or 'do nothing' emissions scenario. The BAU scenario accounts for no existing or new actions being implemented and non-compliance with regulatory requirements around building and transportation emissions. The key driver of change to emissions is solely based on anticipated growth in ridership, which is informed by expected population growth across the region. Growth in Cherriots service area population is based on data from Cherriots 2022 Transit Asset Management Plan.

A1.2 Business-as-Planned Scenario

Following the BAU scenario, Cherriots prepared a business-as-planned (BAP) scenario. The BAP scenario accounts for any major existing initiatives (e.g., fleet transition) and regulatory drivers that may affect emissions. For the BAP scenario, Cherriots evaluated the projected impact of transitioning its fleet to 100% zero-emissions based on the *Zero Emissions Vehicle Transition Plan*, as well as the anticipated impact of key federal and state regulatory drivers:

1. **Grid Carbon Intensity:** The BAP scenario accounts for the impacts of House Bill (HB) 2021, which requires electricity providers to reduce greenhouse gas emissions from electricity sold in Oregon to 80% below 2010 levels by 2030 and 90% below by 2035. HB 2021 sets a goal for 100% carbon-free electricity by 2040.

2. **U.S. Department of Transportation Vehicle Fuel Economy Standards:** The BAP scenario accounts for vehicle fuel economy standards established by the U.S. DOT, which for this analysis were applied to all relevant fleets operated by Cherriots.

3. **Oregon Clean Fuels Program:** Finally, the BAP scenario accounts for the impacts of Oregon's Clean Fuels Program, which sets annual carbon intensity benchmarks for transportation fuels. The rule requires a 10% reduction in average carbon intensity from 2015 levels by 2025, a 20 percent reduction by 2030, and a 37 percent reduction by 2035. These reductions are applied to applicable fuels used across Cherriots fleet operations.

The BAP scenario shows how each of these drivers subtracts from emissions each year, leaving a residual set of emissions that require new programs or projects to either eliminate or offset.

APPENDIX B: CLIMATE VULNERABILITY ASSESSMENT

B1. Methodology

Cherriots used GIS mapping to understand the vulnerability of various facilities to select climate hazards. Both the Local and Regional system were modeled using Cherriots service area and facility maps as the base.

B1.1 Climate Hazards

Cherriots conducted a high-level climate vulnerability assessment, evaluating a pre-determined set of climate hazards informed by Oregon's Climate Action Commission and distilled into a smaller set of regionally pertinent hazards in coordination with Cherriots Operations:

1. Extreme heat
2. Wildfire and smoke exposure
3. Flooding
4. Ice Storms

Extreme heat and flooding were selected for closer evaluation using geospatial mapping tools. GIS mapping layers showing heat severity were overlaid on Cherriots service area and on markers indicating Cherriots facilities and transit centers. The heat severity index drew on data available from the Federal Heat Severity Index. Flooding layers utilized data from the Federal Emergency Management Agency (FEMA).

B1.2 Social Vulnerability

Cherriots prepared a third map overlaying a social equity index atop of Cherriots service area (including facilities, transit centers, bus routes, and stops). The social equity index uses data available from the Oregon Department of Transportation (ODOT).

Creating Community Connections

SALEM AREA MASS TRANSIT DISTRICT
Cherriots.org

Prepared by

CUMMING
GROUP