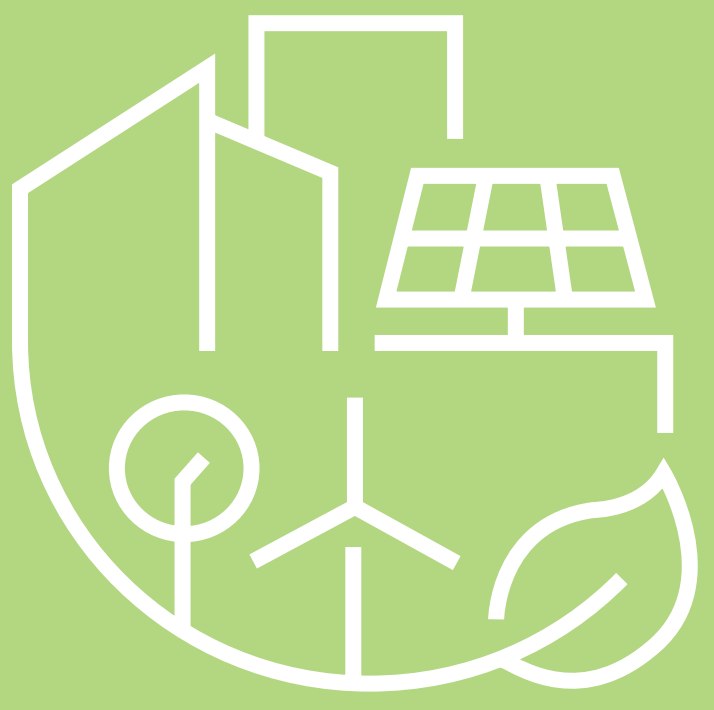




CLIMATE & SUSTAINABILITY

CLIMATE MITIGATION

What is Climate Mitigation?

Climate mitigation, or **GHG emissions reduction**, means taking action to reduce or eliminate carbon dioxide and other heat-trapping emissions, which can determine the extent and severity of climate change over time.

Thurston County Emissions (2022)

Total 2022 GHG emissions in Thurston County are estimated at 3.2M metric tons of CO₂ (or equivalent emissions)—about 10.9 metric tons per person. 2022 emissions are approximately 6.6% higher than the 2015 baseline, but 5.8% lower than the peak in 2019. Per the 2022 Thurston County GHG Inventory conducted by the Thurston Climate Mitigation Collaborative.

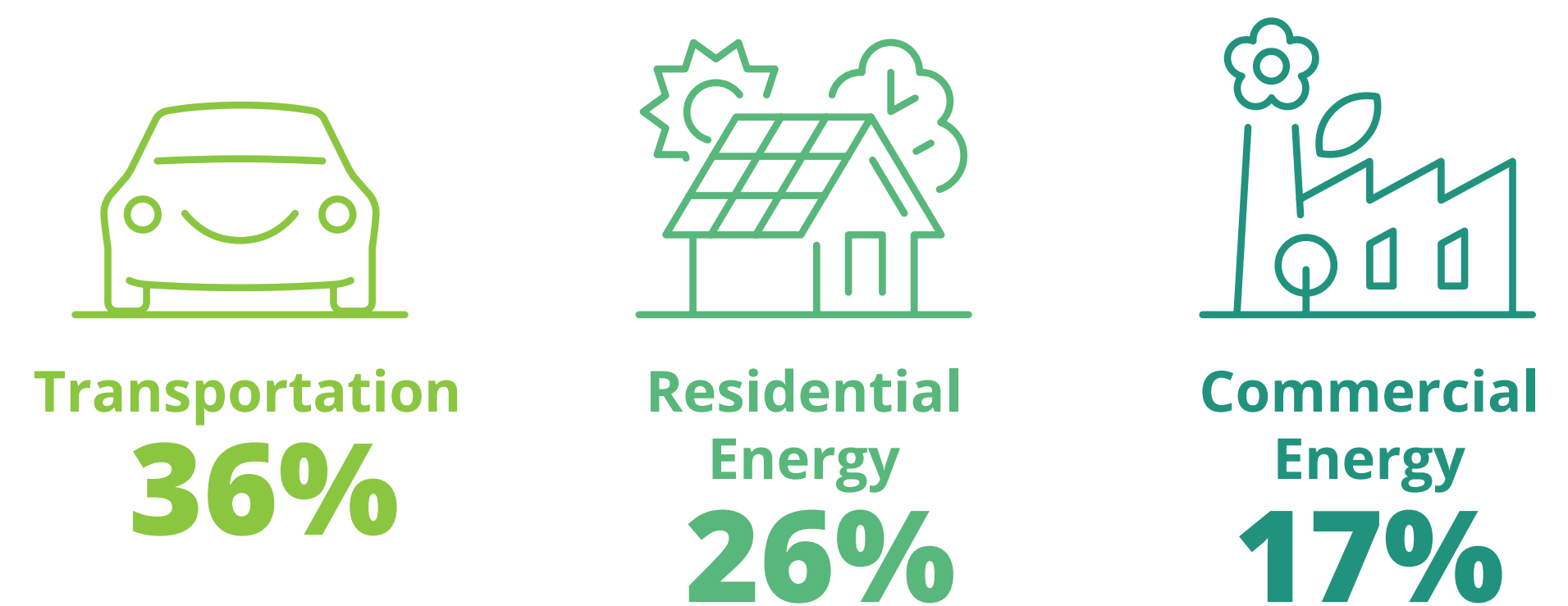
The largest single-sector contributor is Transportation with 36% of emissions. However, emissions from all Energy sectors combined account for 54% of total emissions.

This data provides a baseline against which the City can compare future performance and demonstrate progress in reducing emissions.

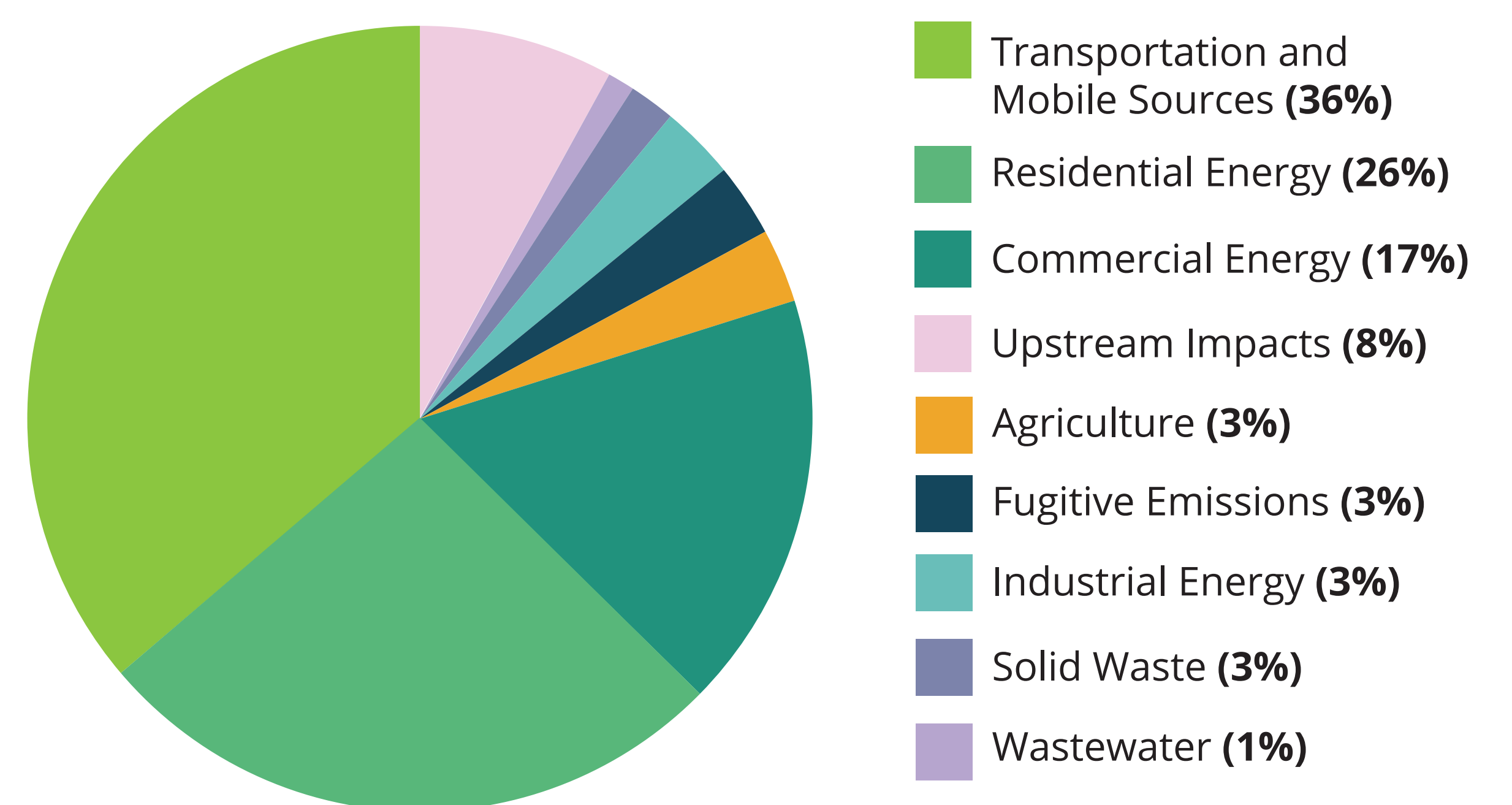
Sub-Element Goals

1. **Reduce Greenhouse Gas Emissions** to 45% below 2022 levels by 2035, 75% below 2022 levels by 2040 and Net-Zero by 2050.
2. Reduce GHG emissions by **incentivizing buildings to use renewable energy**, conservation, and efficiency technologies and practices to reduce greenhouse gas emissions.
3. **Increase tree canopy cover** to boost carbon sequestration, reduce heat islands, and improve air quality, and prioritizing overburdened communities while increasing solar access, where practicable, for new solar-ready residential and commercial buildings.
4. **Convert public fleets to zero-emission vehicles** by 2040.
5. **Reduce vehicle miles traveled** to achieve greenhouse gas reduction goals and develop infrastructure that supports all users and expands electric vehicle infrastructure.
6. **Set land use policies** that support increased urban density and increased housing diversity supported by efficient transportation networks.

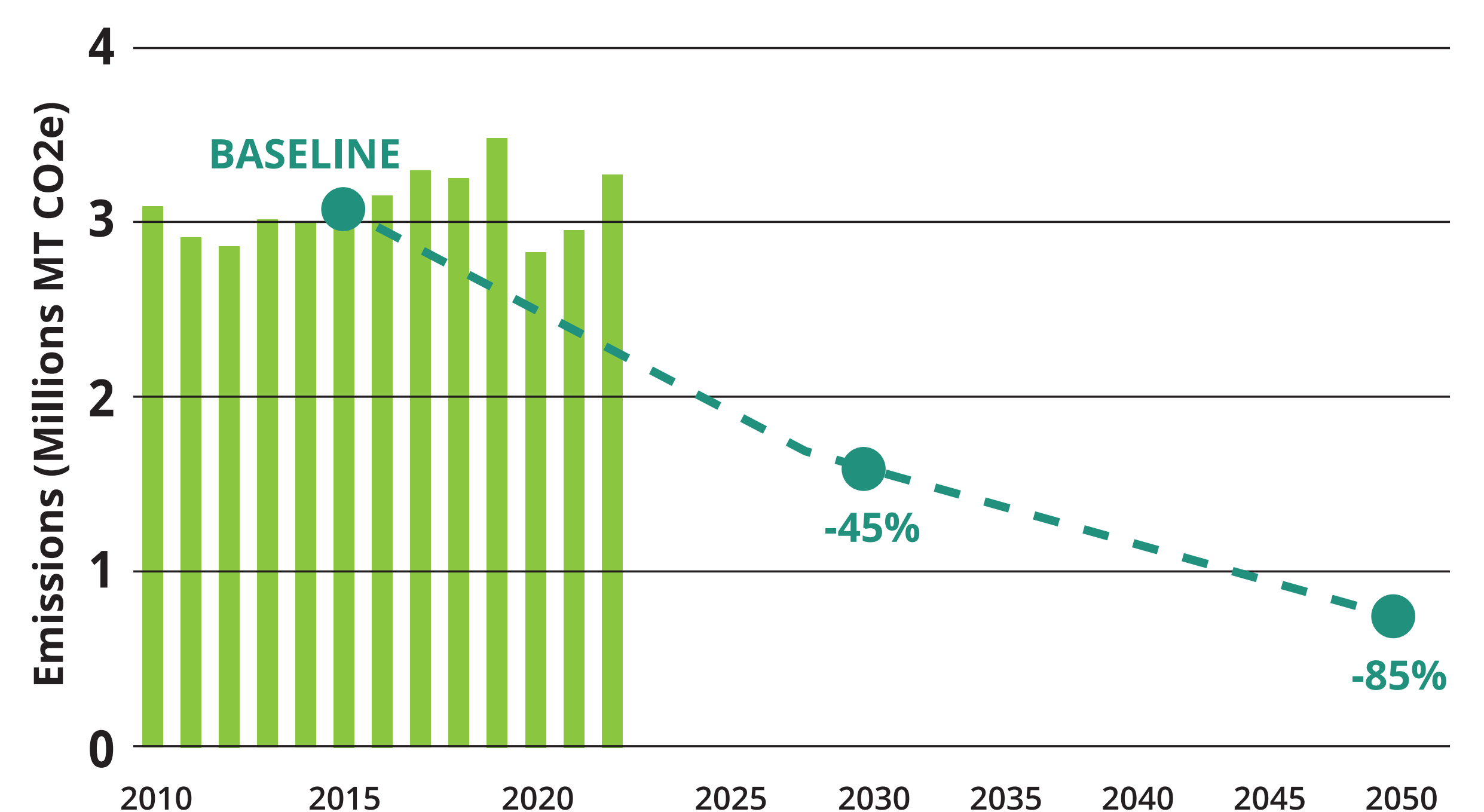
Highest Emissions

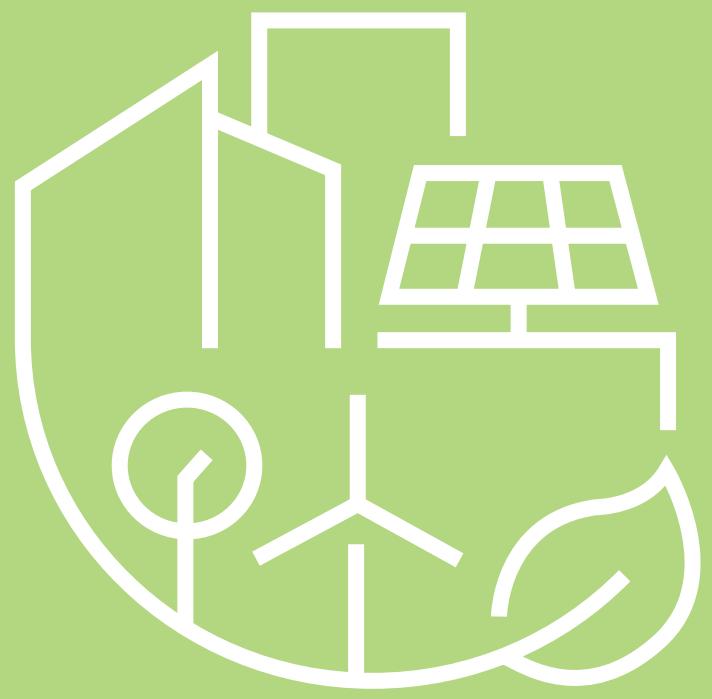


Thurston County Emissions by Sector



GHG Reduction Goals





CLIMATE RESILIENCE

What is the Resilience Sub-Element?

In 2023, the State Growth Management Act was amended to include “climate change and resiliency” and to require a Resilience Sub-Element in Comprehensive Plans. Lacey’s Resilience Sub-Element will have goals and policies to help the city prepare for natural hazards exacerbated by climate change. These include more frequent and/or intense storms, floods, droughts, wildfires, and changes in temperatures.

What Does Resilience Mean?

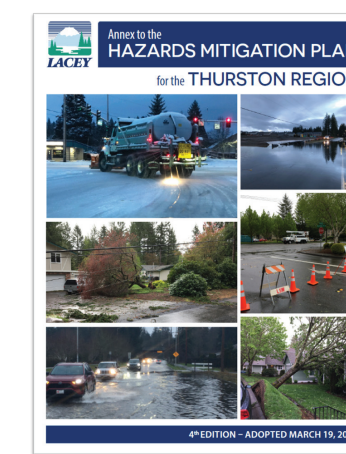
Climate resilience is the ongoing process of anticipating, preparing for, and adapting to changes in climate and minimizing negative impacts to our natural systems, infrastructure, and communities.

- Washington Department of Commerce

What have we learned so far?

PLAN AND POLICY AUDIT

The Plan and Policy Audit is an assessment of eight City and regional plans related to climate resilience. The Audit identifies existing resilience goals, policies, initiatives, and activities as well as gaps, maladaptation policies, and considerations when drafting policies for the Resilience Sub-Element.



CLIMATE VULNERABILITY AND RISK ASSESSMENT

The Climate Vulnerability and Risk Assessment identifies potential climate-related hazards that will affect Lacey and determines their impacts on key assets and populations within the city and its urban growth area (UGA).

CLIMATE-RELATED HAZARDS



Extreme Heat
Increasing temperatures and number of hot days
Risk: Medium



Wildfire
More days with wildfire and smoke potential
Risk: Low



Precipitation and Storms
More intense storms and seasonal variation
Risk: Medium



Flooding
More flooding from storms
Risk: Low



Changes in Streamflow
More flow in the winter, less in the spring
Risk: Not Rated



Sea Level Rise
Higher sea levels, higher tidal/storm surge
Risk: Low

KEY FINDINGS

Overall, Lacey has a low level of vulnerability and risk associated with climate change hazards. Even so, events like heat waves, microburst storms, and wildfires that have not historically been part of Washington’s climate are projected to be more frequent and extreme by mid- and end-of-century. People, infrastructure, and buildings can be impacted by these hazards.

Vulnerable Populations

Age, health status, poorer housing quality, and homelessness make people more vulnerable to negative impacts from climate-related hazards, especially heat and wildfire smoke.

Electrical Grid

Electrical grid outages can be caused by storms, wind, extreme heat, and even wildfire. They can last many days and impact people’s health, City operations, and the economy.

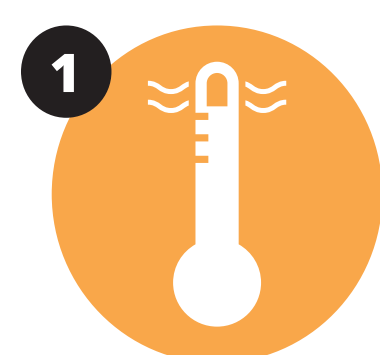
Existing Buildings

Existing buildings without air conditioning or sufficient ventilation can become dangerous during extreme heat events or wildfire smoke conditions.

COMMUNITY ENGAGEMENT

During Listening Sessions, community members shared local experiences with climate change and ideas for how to make Lacey more climate resilient. In the Envision Tomorrow survey, community members also identified what climate-related hazards they have observed as well as what resources they think are most important to protect from the impacts of climate change.

OBSERVED HAZARDS



37% of survey respondents have observed warmer temperatures and heat waves.



24% of survey respondents have observed wildfires or wildfire smoke.



20% of survey respondents have observed heavy rain events and flooding.

RESILIENCE PRIORITIES

Priority Hazards

Increase resilience to heat and wildfire smoke.

Outreach and Education

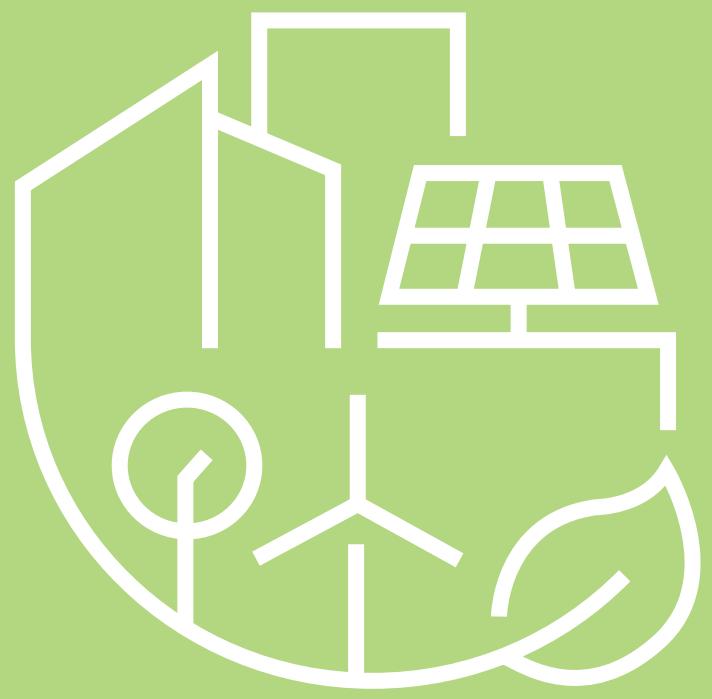
Grow community members’ understanding of climate change impacts and how to prepare for hazard events.

Nature-Based Solutions

Increase resilience to climate-related hazards in ways that protect, restore, and sustainably manage natural ecosystems.



↓ INSIGHTS INFORM DRAFT GOALS ↓



CLIMATE RESILIENCE

- Related Elements Key**
- Climate & Sustainability
 - Transportation
 - Housing
 - Future Land Use
 - Economic Development

- Parks and Recreation
- Public Services
- Greenhouse Gas Reduction

What do you think?

The Draft Resilience Sub-Element Policy Framework identifies an initial set of goals and policies for increasing climate resilience in Lacey. The goals and policies reflect the findings from the Plan and Policy Audit, the Climate Vulnerability and Risk Assessment, and community engagement. Please let us know what you think in the purple boxes below. Do you agree with the draft goals? Do some need refinement? Are any missing?

GOAL 1: Outreach and Education—Ensure public awareness of current and future climate hazard risks, hazard-specific adaptation steps to take, resources available, multi-hazard emergency preparedness, and evacuation options	GOAL 2: Community Leadership—Recruit, train, and support cadres of community resilience volunteers	GOAL 3: Resilience Resources—Expand the City’s access to resilience resources	GOAL 4: Best Data and Analysis—Use the most up-to-date data and analysis to regularly monitor changes in climate hazard impacts and related forecasts and to update resilience plans and strategies accordingly
GOAL 5: Resilient Land Use—Prioritize resilience when planning future land uses	GOAL 6: Nature-Based Resilience—Expand and preserve natural habitat and open space to reduce risks from flooding, wildfire, extreme heat, or other hazards	GOAL 7: Thriving Urban Forest—Implement the Urban Forest Management Plan and update it as conditions change	GOAL 8: Resilience Development Standards—Update development standards to maximize resilience
GOAL 9: Resilient Infrastructure—Enhance infrastructure to reduce vulnerabilities to hazards	GOAL 10: Resilient Transportation—Enhance transportation systems to reduce vulnerabilities to hazards and to maximize accessibility, particularly for the most vulnerable residents	GOAL 11: Resilient Facilities—Harden public facilities against hazard risks, including wildfire, wildfire smoke, extreme heat, high winds, and power outages, giving priority to critical facilities	GOAL 12: Accessible Shelters—Ensure that residents, especially the most vulnerable residents, have easy access to shelter when faced with hazards, including extreme temperatures, wildfire, wildfire smoke, and power outages
GOAL 13: Recovery Planning—Prepare plans that guide post-disaster recovery, including changes in land use, modifications to infrastructure and facilities, and resilient development standards	GOAL 14: Resilience Advocacy—Advocate for State and federal policies that support resilience to climate change	ADDITIONAL THOUGHTS/IDEAS	

