City of Lake Forest Park

Climate Element

Review Draft
June 2025

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Volume 1 | Goals & Policies

CITY OF LAKE FOREST PARK

INCORPORATED 1961

Introduction

The Lake Forest Park Comprehensive Plan Climate Element guides the future of climate change action and resilience in the City of Lake Forest Park. It includes policies that reduce the city's contributions to climate change and that will support Lake Forest Park's communities in preparing for and withstanding climate impacts into the future.

Amendments to Washington's Growth Management Act (GMA) in 2023 newly require a Climate Element within cities' comprehensive plans. The Climate Element fulfills the requirements of RCW 36.70A.070(9) and RCW 36.70A.095 to plan for reductions in greenhouse gas emissions and enhance community resiliency to the adverse impacts of climate change. The Element also aligns with the Department of Commerce's Climate Planning Guidance.

The policies within this Element (Volume I) represent opportunities to prioritize the Lake Forest Park communities' health and well-being, protect and expand valuable ecosystems, and shape an innovative and efficient future for the city.

The Climate Element Background Analysis (Volume II) contains background data and analysis that provide the foundation for the Climate Element goals and policies. Major topics addressed in the Climate Element Background Analysis (Volume II) include:

- **Planning context,**
- **Public participation,**
- **Climate change in Lake Forest Park,**
- **Greenhouse gas emissions in Lake Forest Park.**

Goals and Policies: Resilience Sub-Element

Goal CE-1: Smoke and Heat Resilience

Enhance community resilience to wildfire smoke and extreme heat by strengthening infrastructure, public and emergency services, and natural areas to reduce impacts on residents, workers, and critical services.

Policy CE-1.1: Integrate cooling low-impact development measures, such as trees, vegetation, permeable pavement, and other heat-resistant infrastructure near high-traffic transportation areas with elevated temperatures.

> ***Low impact development (LID)****is a stormwater and land use strategy that strives to mimic hydrologic processes before the area was developed or disturbed. LID measures emphasize conservation, use of on-site natural features, site planning, and integration of stormwater management practices into project design. Rain gardens and permeable hardscapes are examples of LID measures.*

Policy CE-1.2: Strengthen Lake Forest Park's critical areas and wildlife habitats by prioritizing natural cooling strategies such as planting shade-providing trees, expanding native vegetation, preserving and restoring wetlands and riparian buffers along creeks, adding shaded water sources, and creating connected habitat corridors to support salmon passage and ecological resilience.

> ***Critical areas*** *are defined by the Growth Management Act and municipal code and refer to wetlands, streams, areas with a critical recharging effect on aquifers used for potable water, fish and wildlife habitat conservation areas, frequently flooded areas, and geologically hazardous areas such as erosion hazard areas, landslide hazard areas, seismic hazard areas, and steep-slope hazard areas.*

Policy CE-1.3: Partner with local community groups, school districts, libraries, and government agencies to expand access to cooling and clean air resources during extreme heat and wildfire smoke events—especially for low-income households, older adults, people with disabilities, and those with respiratory conditions. Support initiatives such as education on do-it-yourself (DIY) clean air shelters (example, HEPA filter box fans), air conditioner (A/C) and air purifier rebates, cooling kits, and improved infrastructure in public spaces.

Policy CE-1.4: Develop or support public education campaigns to raise awareness of heat risks and connect residents with available resources during heat waves, ensuring widespread distribution through multiple channels such as online, community centers, local events, and multilingual outreach.

Policy CE-1.5: Establish or partner to support resilience hubs that provide cooling, clean air, and essential services during extreme heat, wildfire smoke, and other natural hazard events, and serve as year-round community support and resource centers.

> ***Resilience hubs*** *are trusted, community-serving facilities that support communities in everyday life and before, during, and after an emergency. Although climate change affects everyone, low-income communities and communities of color are disproportionally impacted by climate-related events. Resilience hubs help neighbors access resources and services and build trust and community cohesion in their day-to-day lives.*

Goal CE-2: Environmental Justice

Advance environmental justice and community well-being by prioritizing equitable climate policies, inclusive decision-making, and access to healthy, resilient environments for all residents.

Policy CE-2.1: Prioritize neighborhoods facing higher exposure to climate impacts and pollution to receive resilience investments such as increased tree canopy, canopy retention, and green infrastructure, which help mitigate environmental stresses and improve quality of life.

Policy CE-2.2: Support monitoring of urban forestry's climate impacts, focusing on high-risk and underserved areas. Protect heritage trees, expand canopy coverage, and partner with King County's heat mapping to guide resilience planning.

Policy CE-2.3: Support nonprofit organizations that provide education and engagement in forest conservation strategies while also prioritizing the protection of natural areas and ecosystems, with a focus on safeguarding local waterways and local salmon species.

Policy CE-2.4: Provide all residents, especially vulnerable populations, an opportunity to learn about climate impacts, influence policy decisions, and co-develop equitable emissions reduction and climate adaptation strategies that reflect community needs and priorities.

> ***Vulnerable populations*** *are groups that are more likely to be at higher risk for poor health outcomes in response to environmental harms, due to adverse socioeconomic factors and sensitivity factors. Includes, but is not limited to racial or ethnic minorities, earners of low incomes, and populations disproportionately impacted by environmental harms.*

Goal CE-3: Drought and Flood Resilience

Preserve and protect Lake Forest Park water resources by advancing drought and flood resilience.

Policy CE-3.1: Integrate water conservation and protection strategies into City planning to address drought, extreme heat, and other climate-related risks impacting water resources in Lake Forest Park.

Policy CE-3.2: Coordinate with water providers in Lake Forest Park and explore collaboration with the Saving Water Partnership to provide financial incentives such as rebates or tax credits for residents and businesses to install water-saving technologies and systems, including cisterns, drip irrigation, leak detection kits, and smart irrigation controllers.

Policy CE-3.3: Promote drought resilience and water efficiency in urban planning through compact development, minimized impervious surfaces, and the use of water-saving design strategies to reduce runoff and promote efficient land use.

Policy CE-3.4: Encourage the use of green infrastructure and low-impact development measures to manage stormwater runoff and flooding amid increasing storm intensities.

Policy CE-3.5: Collaborate with local partners to restore floodplains and improve stream and river connectivity as a strategy to reduce flood risk.

Policy CE-3.6: Integrate flood resilience into the planning, investment, and maintenance of transportation infrastructure—including roads, sidewalks, trails, parks, and transit—and water infrastructure in Lake Forest Park to reduce future flood risk and ensure these assets remain safe, accessible, and functional during and after flood events.

Policy CE-3.7: Collaborate with water providers to plan and implement resilience measures for critical water infrastructure such as wells and reservoirs in flood-prone areas to reduce vulnerability to flooding and other climate-related hazards.

Policy CE-3.8: Partner with local agencies, water providers, and community organizations to apply sediment control practices, enhance watershed stability, and support water quality and storage.

Policy CE-3.9: Coordinate with land managers and community partners to implement erosion and landslide control techniques—including mulching, native grass seeding, and silt fencing—to stabilize soils and safeguard local waterways.

Policy CE-3.10: Support inclusive public education and outreach programs on flood risk and water conservation, prioritizing support for communities in flood-prone areas.

Goal CE-4: Emergency Management

Strengthen emergency response systems to climate hazards by improving coordination, infrastructure, and community preparedness.

Policy CE-4.1: Develop a comprehensive waste management plan to address debris removal and waste disposal in post-emergency scenarios, in partnership with local waste services, emergency management agencies, and regional partners. Ensure alignment with the Comprehensive Emergency Management Plan (CEMP).

Policy CE-4.2: Encourage on-site energy storage and backup systems for neighborhoods, businesses, and municipal buildings, while ensuring that resilience strategies provide equitable access for low-income households, seniors, and others at higher risk during power outages.

Policy CE-4.3: Collaborate with the Puget Sound Clean Air Agency (PSCAA) and other regional partners to enhance real-time air quality monitoring and community guidance to protect public health during smoke events, building on existing communication systems and expanding outreach efforts to reach more residents, especially vulnerable populations.

Policy CE-4.4: Coordinate with local agencies (example, King County Emergency Management, Public Health – Seattle & King County, first responder agencies, and community-based organizations) to identify risk areas, develop targeted response plans, and ensure equitable access to education, outreach, resources, and recovery assistance. Prioritize clear, proactive communication and access to information before emergencies occur.

Goals and Policies: Greenhouse Gas (GHG) Emissions Reduction Sub-Element

Goal CE-5: Buildings and Energy

Reduce emissions from buildings by supporting low-carbon building energy sources and energy-efficient building design and retrofits.

Policy CE-5.1: Encourage adoption of standards for sustainability, environmental design, and energy conservation in public buildings.

> *Examples of **green building standards** the City could adopt include Leadership in Energy & Environmental Design (LEED), Living Building Challenge Green Globes, and the National Green Building Standard.*

Policy CE-5.2: Implement renewable energy sources and reduce energy use, refrigerant emissions, and potable water consumption in City buildings and operations.

Policy CE-5.3: Participate in regional efforts to create a state-wide clean energy policy and use the legislative agenda to advocate for clean energy projects in Washington.

Policy CE-5.4: Work with regional partners and stakeholders to seek and support funding for programs that focus on energy efficiency, clean energy technology, building electrification updates, weatherization, and community solar—emphasizing support for rentals, lower-income households that are currently energy burdened.

Policy CE-5.5: Build on existing utility-provided energy efficiency and building electrification programs and initiatives through expanding outreach and education programs. Educate residents about incentives for emerging clean energy technology, such as tax exemptions for solar installations. Increase resident awareness of existing technology such as solar arrays, heat pumps, and other energy efficient home heating/cooling and water heating systems.

Policy CE-5.6: Support permitting and approval processes for energy efficiency upgrades, building electrification retrofits, and clean energy projects, with the goal of reducing GHG emissions from buildings while maintaining grid affordability, capacity and reliability.

Goal CE-6: Alternatives to Driving

Promote and enhance alternatives to single-occupancy vehicle travel.

Policy CE-6.1: Prioritize, develop, and maintain mobility hubs in the Town Center and other transportation-efficient locations, especially near overburdened communities that lack sustainable transportation options.

> ***Mobility hubs*** *are locations where people can access multiple types of transportation modes in a central location (such as bike share, public transit, micro mobility devices). Often located adjacent to transit stops and stations, mobility hubs serve as a transfer point for multiple transportation modes and offer first and last mile connections between the hub and one's origin or destination.*

Policy CE-6.2: Support expansion of bicycle rack and locker capacity at appropriate transit stops, mobility hubs, and park & rides in a manner that meets Community Protection through Environmental Design guidelines.

Policy CE-6.3: Support collaboration among neighboring cities to promote streamlined and connected alternative transit options, including a shared-use electric bicycle or scooter program that provide transportation between cities.

Policy CE-6.4: Develop a connected and complete multimodal network that prioritizes access to key destinations throughout Lake Forest Park—including transit stations, parks, trails, and the Town Center—and that provides safe access for all ages and abilities. Implement the Safe Streets and Town Center Connections Plans to ensure safe, efficient, and direct pedestrian and bicycle access to major community hubs and transit services.

Policy CE-6.5: Expand Lake Forest Park's "Safe Routes to School Program" participation, including an education and encouragement component, and continue to apply for local, state, and federal grants to enhance safe routes to schools.

> ***Safe Routes to School*** *is a program for projects within two miles of primary, middle, and high schools to improve safety and mobility for children by enabling and encouraging them to walk and bicycle to school.*

Policy CE-6.6: Create and support outreach and education initiatives and materials that inform the community about transit travel options, in partnership with community groups.

Policy CE-6.7: Explore pricing for on-street parking and publicly owned off-street parking based on demand, time of day, and location.

Goal CE-7: Electric Vehicles

Facilitate a transition to electric vehicles by expanding charging and education.

Policy CE-7.1: Align with existing building codes and regulations to draft an electric vehicle (EV) charging plan and support the expansion of electric vehicle charging infrastructure throughout the community, including municipal buildings, multifamily and affordable housing developments, major commercial areas, parking garages, parks, and other community-serving locations to advance transportation decarbonization.

Policy CE-7.2: Determine funding sources and establish clear priorities and prioritization criteria to support a phased transition of the City fleet to electric vehicles starting with high-use, high-emissions, and cost-inefficient vehicles.

Policy CE-7.3: Promote the use of electric off-road equipment in City operations and among community members by providing educational resources, guiding access to available funding or rebate programs, and incorporating electric equipment options into City operations where feasible.

> ***Electric off-road equipment*** *can include electric versions of excavators, forklifts, skid steer loaders, utility vehicles, backhoes, ride-on or push mowers, agricultural tractors, and compact wheel loaders.*

Goal CE-8: Climate-Friendly Development

Promote development that advances climate planning, resilience, and greenhouse gas emissions reduction.

Policy CE-8.1: Foster transit-oriented development by increasing density in areas that are well-served by transit and prioritize infill development through the zoning and permitting process.

> ***Transit-oriented development*** *is an approach to creating dense, walkable residential neighborhoods with easy access (e.g., within a radius of up to 0.5 miles) to public transportation and commercial/retail uses.*

Policy CE-8.2: Implement complementary, mixed land use zoning in low-density residential neighborhoods to promote cycling and walking and to reduce driving.

Policy CE-8.3: Reduce parking minimums near transit-oriented development to encourage sustainable transportation choices, reduce development costs, and improve housing affordability.

Policy CE-8.4: Incentivize developments that use clean energy or reduce energy consumption, including affordable housing and rental units.

Goal CE-9: Waste Management

Reduce waste generation and increase recycling and composting.

Policy CE-9.1: Set and achieve specific goals around waste generation and periodically measure waste via waste characterization studies, in partnership with the City's waste collection service provider.

Policy CE-9.2: Focus on reducing generation and disposal of high-emissions materials, such as organic waste, via outreach and support for composting at homes and businesses. Consider creating a food rescue and/or food waste prevention technical assistance program to support the state's goal of 50% food waste reduction by 2030.

Policy CE-9.3: Facilitate the City's 70% recycling rate goal (as adopted by King County) and expand current recycling efforts, such as the battery recycling program at City Hall.

Policy CE-9.4: Incentivize reuse and recycling of construction and demolition waste.

Policy CE-9.5: Support equitable outreach and engagement around waste reduction (including reuse and repair), recycling, and composting in partnership with the City's waste collection service provider.

Volume II |
Background Analysis

CITY OF LAKE FOREST PARK

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Introduction

Climate change refers to significant, long-term changes in temperature, precipitation patterns, and other atmospheric conditions that are primarily driven by human activities such as the burning of fossil fuels and deforestation. In Washington State, the effects are already evident—from hotter summer temperatures and increased wildfire risks to more frequent and intense storms. In response, the Washington State Legislature enacted House Bill 1181 in 2023, amending the Growth Management Act (GMA) to require local governments to integrate climate change considerations into their comprehensive planning processes. This mandate introduces a Climate Element, comprising two sub-elements:

- The **Resilience Sub-Element** is mandatory for all fully planning counties and cities under the GMA. It is aimed at enhancing climate preparedness, response, and recovery efforts and includes identifying and managing risks associated with climate hazards such as flooding, wildfires, and extreme weather events.

- The **Greenhouse gas (GHG) Emissions Reduction Sub-Element** is mandatory for the state's 11 most populous counties and their cities with populations over 6,000 as of April 1, 2021, which includes Lake Forest Park. This sub-element focuses on establishing goals and policies to reduce GHG emissions and vehicle miles traveled, contributing to the state's overarching goal of reducing GHG emissions by 95% by 2050.

Incorporating climate change into long-term plans enables communities to proactively address and adapt to the inevitable impacts of a changing climate and ultimately safeguard public health, infrastructure, and ecosystems. This climate planning can help lead to long-term economic benefits, such as reduced disaster recovery costs and enhanced energy efficiency. It also provides an opportunity to address environmental justice by ensuring that vulnerable and overburdened communities receive the support and resources they need to thrive in the face of climate challenges.

The policies within this Climate Element promote community well-being, address key climate vulnerabilities, and aim to reduce emissions from the sectors in the city that are the largest contributors. By implementing these policies, the City and community can take decisive steps toward achieving the state's climate objectives and ensuring a livable and thriving environment for all.

This chapter provides further information about the background information used to develop the updated goals and policies in the Climate Element:

- **Planning context,**
- **Public participation,**
- **Climate change in Lake Forest Park,**
- **Greenhouse gas emissions in Lake Forest Park.**

Planning Context

Several strategic and issue-specific plans have been developed to address climate change, hazard mitigation, and sustainability needs throughout the city. These issue-specific plans informed the development of the Climate Element goals and policies, and they collectively reflect Lake Forest Park's commitment to fostering sustainability and resilience. These plans include:

- 2008: The Legacy 100-Year Vision
- 2013: Lake Forest Park Shoreline Master Program
- 2017: Safe Streets: Recommendations for Improving Safety and Connections to Transit and Amenities
- 2018: Parks, Recreation, Open Space, & Trails Plan
- 2018: Safe Highways Report
- 2018: Safe Streets: Town Center Connections
- 2019: King County Comprehensive Solid Waste Management Plan
- 2019: King County Hazard Mitigation Plan, Lake Forest Park Annex
- 2023: Stormwater Management Program Plan
- 2024: Urban Forest Ecosystem Services and Values Report
- 2024: Lake Forest Park Climate Action Plan

Aligning the Climate Element with these plans ensures that goals and policies reflect both immediate priorities and the community's long-term vision. Of this list, the Climate Action Plan and the Legacy 100-Year Vision were particularly informative for the Climate Element and are described in further detail below.

Lake Forest Park Climate Action Plan (2024)

The Climate Action Plan contains robust policies on climate resilience and GHG emissions reduction. It acts as a roadmap for the Lake Forest Park community to address climate change by setting goals to reduce community-wide emissions, enhance ecosystem health and carbon sequestration, and increase the Lake Forest Park community's resilience to climate impacts. The Climate Action Plan was developed by the Climate Action Committee (Resolution number 1836 and 1844) through extensive research and the engagement of the broad Lake Forest Park community and adopted by the City Council on June 13, 2024.

> *The **Climate Action Plan** is available online at https://www.cityoflfp.gov/DocumentCenter/View/11748/LFP-Climate-Action-Plan?bidId=*

Lake Forest Park Legacy 100-Year Vision (2008)

The Lake Forest Park *Legacy 100-Year Vision* provides a framework to begin to integrate sustainability, resilience, and equity into the Comprehensive Plan by focusing on green infrastructure. The *Vision* notes that green infrastructure "encompasses a wide range of

landscape elements, including: natural areas—such as wetlands, woodlands, waterways, and wildlife habitat; public and private conservation lands—such as nature preserves, wildlife corridors, greenways, and parks; and outdoor recreation and trail networks."

The *Vision* identifies existing green infrastructure, sets goals for how this green infrastructure will be enhanced in the next century, and identifies projects that can be undertaken in the near-term. This visionary document, which incorporates extensive community feedback, influences several elements of the Comprehensive Plan, including Climate; Environmental Quality & Shorelines; and Parks, Trails, & Open Space.

> *The **Legacy 100-Year Vision** is available online at www.cityoflfp.gov/DocumentCenter/View/362*

Supporting Technical Materials

Several activities, including technical and qualitative analyses and community engagement, were conducted to ensure that the Climate Element is grounded in the city's planning context, up-to-date local data, and community priorities, as well as to ensure alignment with the Washington State Department of Commerce climate planning guidelines. The following technical materials resulting from these activities contain further details about the City's methods and results:

- Engagement Strategy
- Climate Impacts Summary
- Policy Audit Memorandum and Policy Audit Workbook
- Climate Vulnerability Assessment
- GHG Summary Memorandum
- Vehicle Miles Traveled (VMT) Study
- GHG Wedge Memorandum
- Climate Element Policy Workbook

> *These **technical materials** are available at https://cityoflfp.gov/696/2025-Comprehensive-Plan-Climate-Element*

Public Participation

The Climate Element has been developed collaboratively with a community-based Climate Planning Advisory Team (CPAT) and using input from City staff, youth, and the public through engagement initiatives. This inclusive process underscores the City's commitment to developing a comprehensive and actionable plan that addresses the unique challenges presented by climate change.

Community engagement in 2024-2025 was critical to developing the Climate Element. The City built upon the methods used during the public participation program that occurred during the Comprehensive Plan update in 2023–2024. The project team developed and implemented

engagement strategies to reach Lake Forest Park's community members to meaningfully hear feedback and integrate community input. Findings from the community engagement informed the development of actionable policies.

Between October 2024 and June 2025, the City conducted the following engagement initiatives:

1. **Climate Policy Advisory Team.** The City established the CPAT to shape the strategies and policies by advising the City throughout the Climate Element development process (Resolution No 24-1948, Section 2). The CPAT included representatives from Planning Commission, the Climate Action Committee, and Tree Board. The CPAT met 9 times between October 2024 and June 2025, where they reviewed supporting materials and content, provided feedback on draft goals, and helped to shape policies for the Climate Element.
2. **Webpage.** The City shared information about the Climate Element project, background information, and opportunities for engagement on a project webpage.
3. **Community Survey.** The City hosted an online survey to learn about Lake Forest Park community members' understanding of climate change, experience of climate impacts, and about potential Climate Element policy areas. The City distributed survey invitation postcards to all Lake Forest Park residential addresses.
4. **Group Interviews with Youth.** Group interviews were conducted with the Environmental Club and the Interact Club at Shorecrest High School to gather youth perspectives on the actions that Lake Forest Park should prioritize to reduce greenhouse gas emissions and strengthen resilience to climate hazards, and outcomes from the interviews informed the Climate Element.
5. **Community Open House.** The City held one in-person public open house to engage the broad public on the Climate Element. The open house provided an opportunity for participants to share feedback on the draft policies, voice concerns, and identify priorities to shape the final Climate Element. The community open house was advertised through the City's listserv, newsletter, emailed notices, and postings at community gathering places.

In June 2025 and beyond, the City will conduct the following additional engagement initiatives:

6. **Public Comment Period.** The City will launch the public comment period June 16 through August 11, 2025 to support the Climate Element review and adoption process.
7. **Planning Commission Meetings.** Staff will present the draft Climate Element to Planning Commission in the latter half of 2025.
8. **City Council Meetings and Hearings.** Staff will present the draft Climate Element to City Council in the latter half of 2025.

Climate Change in Lake Forest Park

Lake Forest Park is already seeing the impacts of climate change, including rising temperatures, wildfire smoke, and flooding. These climate impacts affect the city's infrastructure and natural resources, as well as the health of Lake Forest Parks' communities. Lake Forest Park community members who responded to the community survey expressed concerns about wildfire smoke, severe storms, and heatwaves, and they noted experiencing those climate impacts firsthand.

- **Rising Temperatures and Extreme Heat.** Average summertime temperatures are projected to increase. This increase can harm public health, damage infrastructure, and threaten wildlife habitat.
- **Wildfires and Smoke.** Wildfire risk and wildfire smoke are expected to increase. Wildfires can harm property, wildlife, and public safety. Wildfire smoke worsens air quality and exacerbates health problems, such as asthma.
- **Changing Precipitation and Flooding.** Extreme rain events are expected to increase in the winter, leading to more water in Lyon and McAleer Creeks that may result in more flooding, landslides, and erosion. Flooding and landslides can damage homes, businesses, roads, and infrastructure such as stormwater systems, sewer lines, and other utilities.
- **Drought and Water Supply.** Summer rainfall is projected to decrease, which will make drought conditions worse, reduce water availability, and harm fish and wildlife habitat through lower and warmer streamflows in Lyon and McAleer Creeks.

Community Vulnerability to Climate Change

Everyone in Lake Forest Park will be affected by climate change, but some individuals and groups are at greater risk because they are considered more vulnerable to a range of economic, social, and built environment factors. People with health conditions like asthma, diabetes, or heart disease may also face greater risks. Additionally, those with limited income, language barriers, or no access to healthcare may have a harder time preparing for and recovering from extreme weather. Some potentially vulnerable populations are described in

Table *1.* Individuals or groups are more likely to be particularly vulnerable to climate change impacts if they experience more than one category of vulnerability, live in areas that are particularly susceptible to climate impacts like extreme heat or wildfires, and/or live in areas with outdated infrastructure.

Table 1: Potential Vulnerable Communities in Lake Forest Park and Example Vulnerability Considerations

Vulnerable Populations	Percent of Residents[1]	Example Vulnerability Considerations
Total non-white residents	27.5%	Communities of color often face disproportionate health risks linked to exposures to environmental hazards and may be more vulnerable to health effects associated with climate impacts due to racialized health and socioeconomic disparities.[2] For example, in 2021, the asthma mortality rate in the United States was more than twice as high for black individuals than for white individuals.[3]
Renter-occupied housing units	19.2%	The cost burden for renter households is higher than for owner households in Lake Forest Park, and renting is more common among non-white households in the city, according to the racially disparate impacts analysis conducted for the Comprehensive Plan in 2024. Renters typically have less ability to take actions such as making energy efficiency upgrades and adding air conditioning.
People in poverty	3.6%	People with low incomes have fewer economic resources to cope with potential climate impacts like property loss and health impacts.[4]
People with disabilities (under 65 years old)	4.2%	People with disabilities (such as those with low vision, blindness, hearing loss, or mobility issues) may face barriers in evacuating during extreme weather events.[4]
Youth under 5 years old	3.9%	Young children are especially vulnerable to the harmful impacts of extreme heat and wildfire smoke.[4]
Seniors 65 years or older	18.1%	Seniors tend to have reduced mobility and higher susceptibility to heat-related illnesses.[4]

[1] *U.S. Census Bureau, "QuickFacts Lake Forest Park city, Washington," 2024.* *https://www.census.gov/quickfacts/fact/table/lakeforestparkcitywashington/PST045224*

[2] *Berberian AG, Gonzalez DJX, Cushing LJ. "Racial Disparities in Climate Change-Related Health Effects in the United States." Curr Environ Health Rep. 2022.* *https://pmc.ncbi.nlm.nih.gov/articles/PMC9363288/*

[3] *U.S. Center for Disease Control, "Most Recent National Asthma Data," 2021.* *https://www.cdc.gov/asthma/most_recent_national_asthma_data.htm*

[4] *Gamble, J.L., et al. U.S. Global Change Research Program. "Ch. 9: Populations of Concern." In: The impacts of climate change on human health in the United States: A scientific assessment, 2016: 252.* *https://health2016.globalchange.gov/downloads#populations-of-concern*

Infrastructure Vulnerability to Climate Change

Climate vulnerability is the degree that a community or system is at risk of harm from hazards or impacts driven by climate change. In Lake Forest Park, the climate vulnerability of infrastructure overall is medium. The types of infrastructure with the highest vulnerability are transportation and water resources.

- **Transportation and Economy.** Key elements of transportation and economic infrastructure include SR 104, SR 522, bus routes, bridges, and the City Center. These aspects of the city have generally high overall vulnerability because they intersect with flood-prone areas, heat islands, and landslide-risk zones—all of which are likely to cause damage and disruptions. Much of SR 522, all bridges, the City Center, and Third Place Commons overlap with areas in the city that have higher-than-average surface temperatures (Figure *1*).
- **Water Resources.** Water resources—including drinking water, stormwater, and sewer systems— can enhance water quality and ensure that residents have drinkable water. As climate change drives longer and more intense drought conditions and heatwaves, water systems could see reductions in water storage as well as increases in demand, while more intense precipitation events could lead to increased stormwater runoff that can potentially overwhelm stormwater and wastewater systems. Water resources have high vulnerability to climate hazards overall and face the most risk from landslides and flooding out of all climate hazards. All water resource assets are located within at least 500 meters of a landslide hazard zone (Figure *2*).
- **Critical Facilities.** Critical facilities include the library, police and fire stations, schools, City Hall, and the city's only grocery store. These facilities provide essential services and serve as emergency shelters, gathering spaces, or cooling centers. Climate hazards could directly damage critical facilities or block access to the facilities through obstructed roads. In Lake Forest Park, critical facilities have medium overall vulnerability to climate hazards. The library, police station, City Hall, and grocery store are highly exposed to extreme heat because they are located within the Town Center plaza, which has very few trees to provide shade and lots of asphalt and concrete surfaces to absorb heat (

Figure 3).

- **Community Resources and Housing.** Community resources include trails, parks, and streams that provide opportunities for recreation, community gathering, and time outside. Community resources may be impacted by climate impacts but may also help residents and the city manage impacts. For example, parks can help residents manage extreme heat events by providing a cool place to rest. Community resources and housing in Lake Forest Park have medium vulnerability overall and out of all climate hazards, they are most at risk of damage and disruption from the climate hazard of landslides. Grace Cole Nature Reserve, Horizons View Park, creeks, low-income housing, and urban trails are all located within or intersect with landslide hazard areas (Figure 4).

Figure 1. Transportation assets and heat severity.
Map by Cascadia Consulting Group.

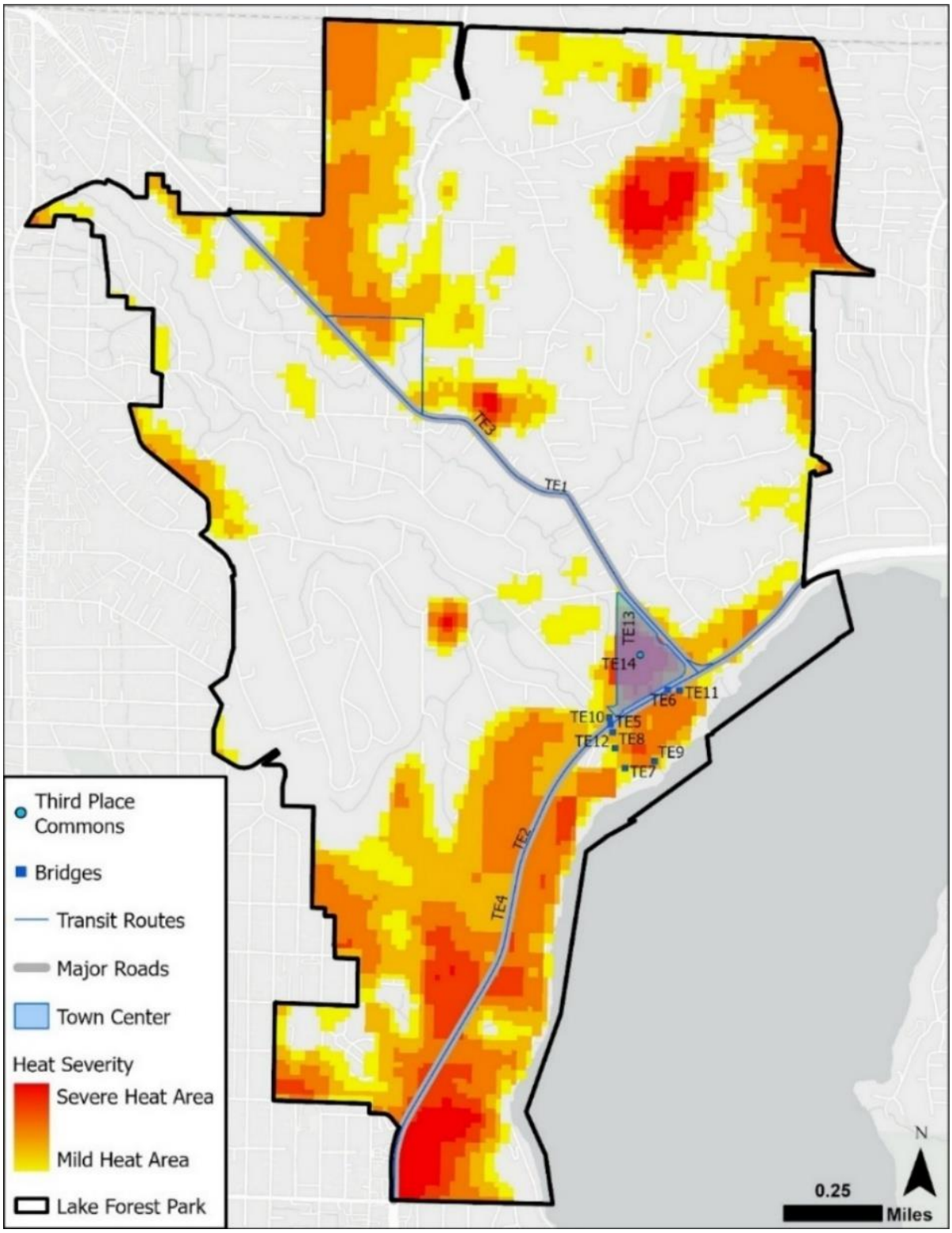


Figure 2. Water resource assets in landslide risk areas.
Map by Cascadia Consulting Group.

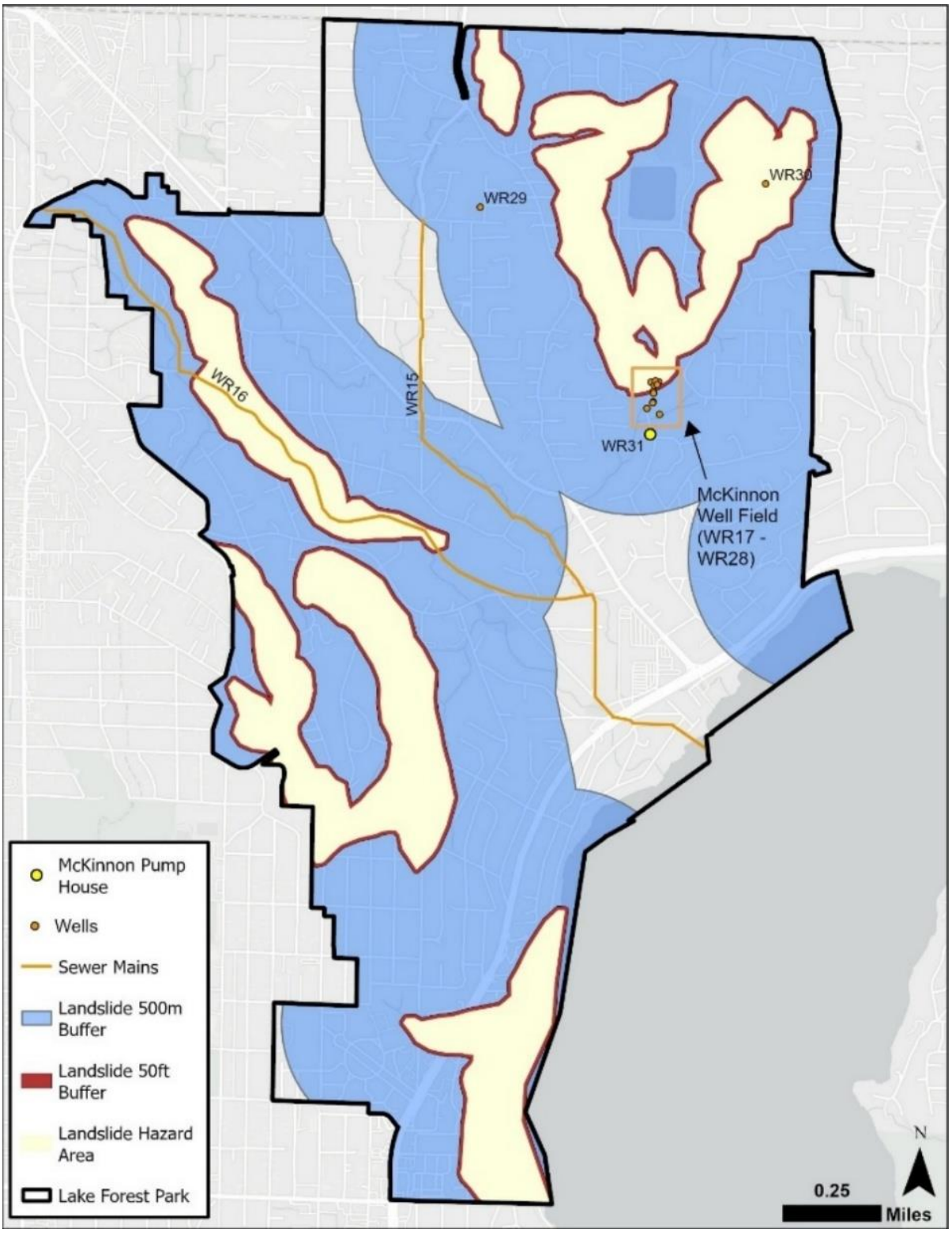

WR29
WR30
WR16
WR15
WR31
McKinnon Well Field (WR17 - WR28)
McKinnon Pump House
Wells
Sewer Mains
Landslide 500m Buffer
Landslide 50ft Buffer
Landslide Hazard Area
Lake Forest Park
N
0.25
Miles

Figure 3. Locations of critical facilities relative to heat severity areas.
Map by Cascadia Consulting Group.

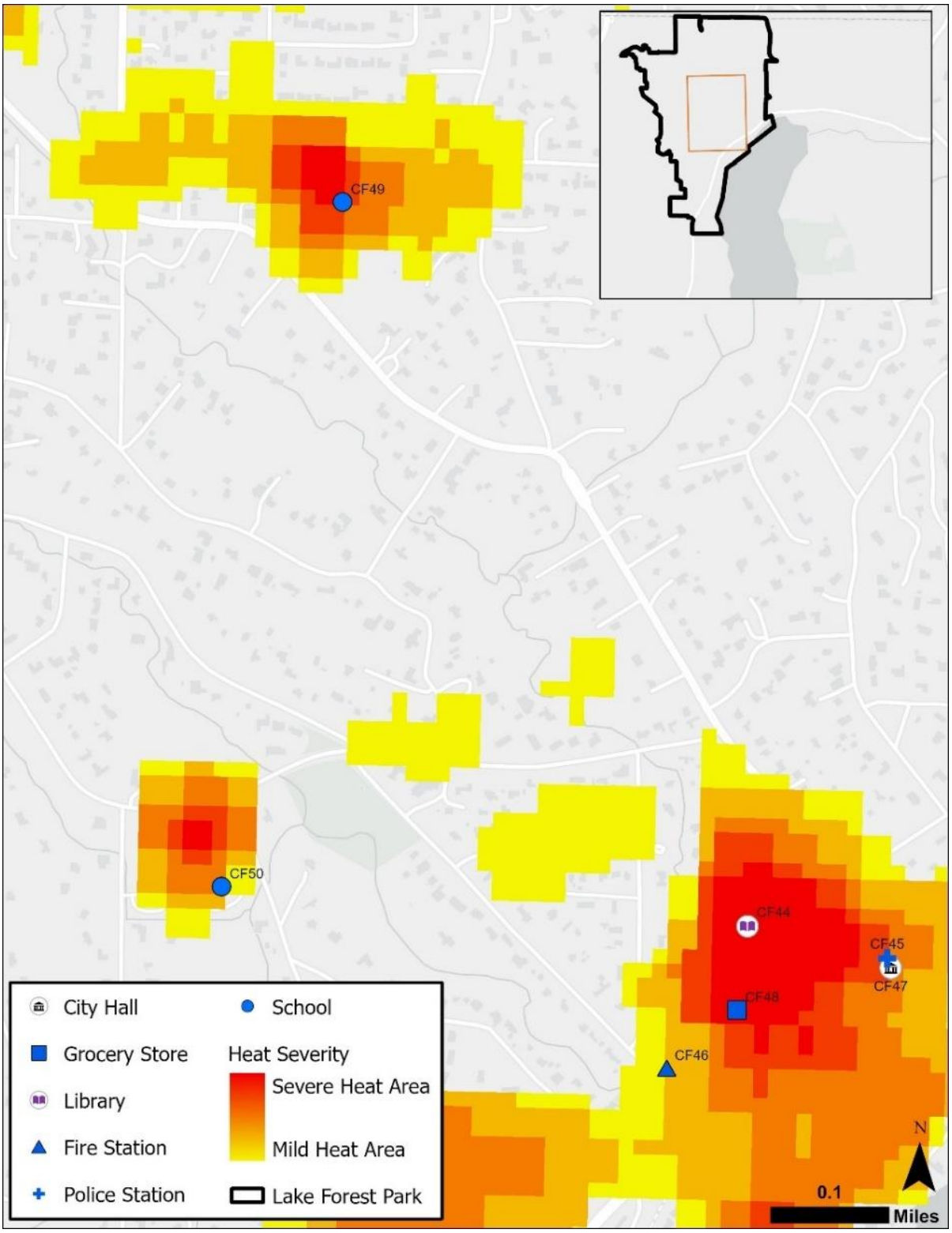
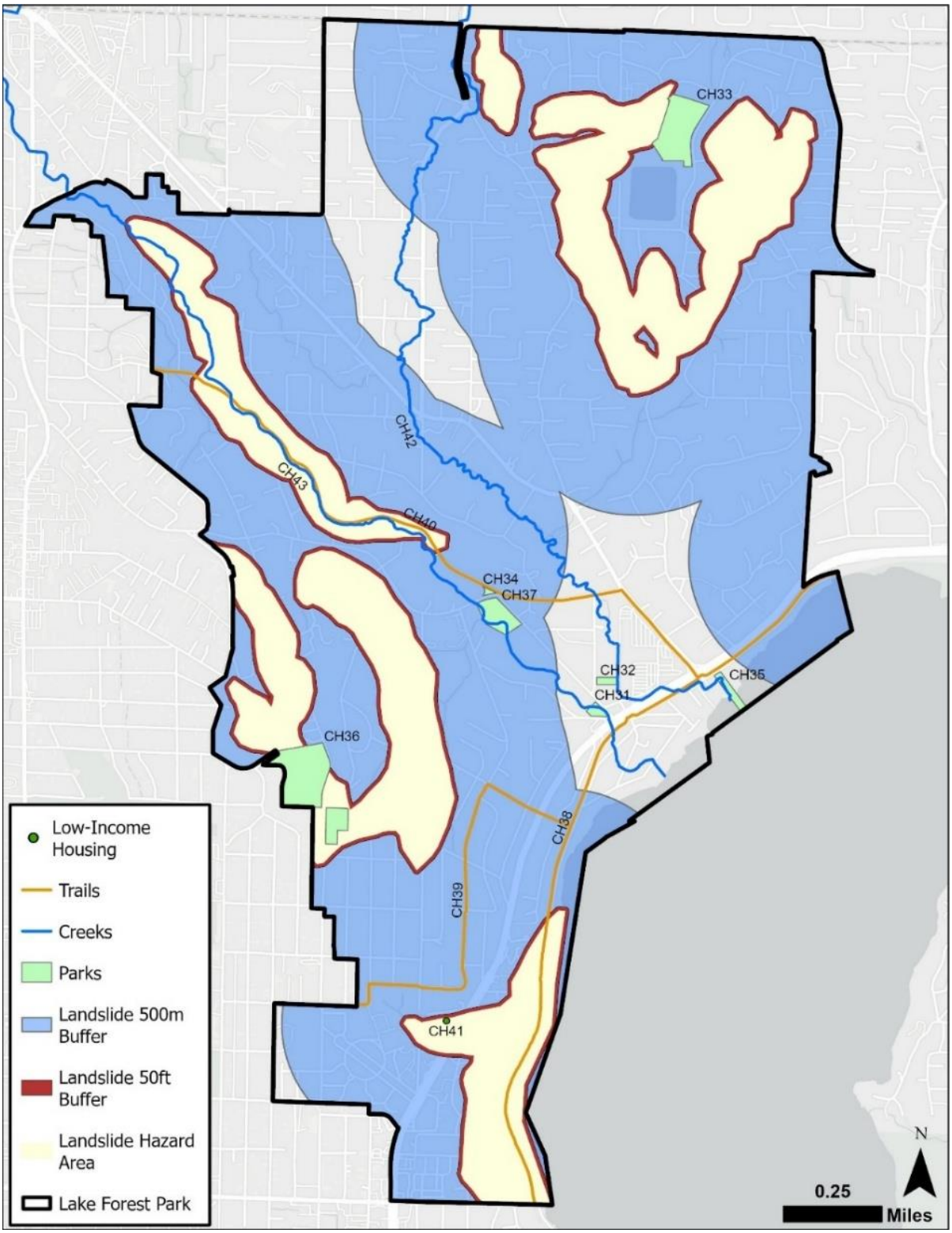


Figure 4. Map of community resources and landslide exposure.
Map by Cascadia Consulting Group.



Greenhouse Gas Emissions in Lake Forest Park

Climate change is primarily caused by burning fossil fuels, including natural gas and gasoline, to heat and cool homes and to power cars and other vehicles. As part of the Climate Element development process, the City conducted two studies—one study at the community scale and another study for municipal operations—to understand what emissions the city contributes to climate change.

Emissions Overview

Within City operations and across the community, transportation is the most significant source of greenhouse gas (GHG) emissions.

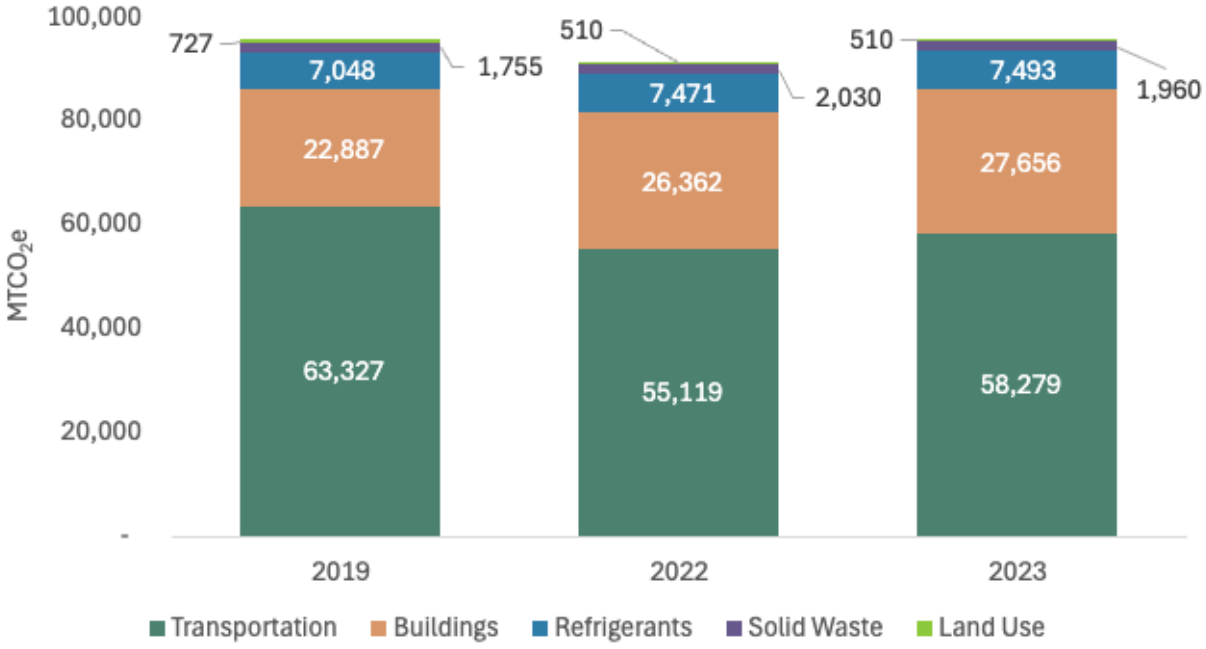
- **Lake Forest Park's municipal operations.** In 2023, the municipal vehicle fleet (71%) was the greatest contributor to municipal GHG emissions, followed by refrigerants (23%), solid waste generation and disposal (5%), and electricity (1%). Municipal operations are included in the communitywide emissions estimates below and make up less than 1% of total community emissions.

Lake Forest Park community. In 2023, the community—which includes residents, visitors, businesses, and municipal operations—generated 95,897 metric tons of carbon dioxide equivalent ($MTCO_2e$), a measure of GHG emissions. Emissions came from transportation (61%), buildings and energy (29%), refrigerants (8%), solid waste (2%), and land use, primarily from tree loss (less than 1%).[5] Community transportation (61%) includes on-road vehicles (24%), air travel (30%), and off-road equipment (7%). Buildings and energy (29%) includes electricity (3%), natural gas (22%), and fuel oil and propane (4%). Of the Lake Forest Park community emissions, 2019 represents the baseline year from which the City of Lake Forest Park will measure future emissions reductions (

[5] Percentages are rounded to the nearest whole number. While the total may not appear to equal sum of the parts, each percentage is independently calculated to be the most accurate rounded amount.

- Figure 5*5*).

Figure 55. 2019, 2022, and 2023 communitywide GHG emissions, by source ($MTCO_2e$).



The City of Lake Forest Park is aiming for the following **emissions reduction targets** (compared to the 2019 baseline year):

- **50% by 2030**
- **75% by 2040**
- **95% and net zero by 2050**

> *With the development of this Climate Element, the **City and CPAT updated the City's GHG emissions reductions targets to compare against a 2019 baseline**, rather than 2007, to have a baseline year for which the City has measurable GHG inventory data.*

GHG Emissions from Vehicles

To better understand the transportation emissions and how people are currently traveling within Lake Forest Park and to destinations outside of the city, the City conducted a study of vehicle-miles-traveled (VMT) and a travel market assessment. The following results focus on VMT and GHG emissions from on-road transportation sources within Lake Forest Park's city limits.

Passenger vehicles contribute the most to overall VMT in Lake Forest Park. Key takeaways related to VMT, including all vehicle trips that start and/or end in Lake Forest Park include:

- **Passenger vehicle VMT increased between 2022 and 2023 but emissions decreased slightly due to electric vehicles making up a larger share of total miles.** Between 2019 and 2023, the number of vehicle trips per person increased, reflecting shifts in travel behavior after the COVID-19 pandemic including a greater reliance on private vehicles over shared modes like transit. Between 2022 and 2023, electric vehicle miles increased more than vehicle miles from gas powered vehicles. Although average trip lengths decreased between 2019 and 2023, which resulted in a slight reduction in VMT, the rise in trip frequency suggests that Lake Forest Park is not yet on a clear path toward meaningful VMT reduction.
- **The majority of trips in Lake Forest Park are interjurisdictional, meaning the trips either start or end in Lake Forest Park and include a neighboring city.** Over 85% of all vehicle trips are interjurisdictional trips, making them the dominant contributor to total VMT.
- **Non-work trips by residents are the most frequent trip type and the top contributor to overall VMT.** While most of these trips are interjurisdictional, non-work trips by residents also account for the highest number of trips within Lake Forest Park and have overall shorter trip lengths, with about 30% of trips that are 2 miles or less and an additional 40% of trips that are between 2 and 5 miles.
- **Work trips contribute disproportionately to overall VMT in Lake Forest Park**. The bulk of VMT from work trips comes from interjurisdictional trips between 3 and 18 miles. These longer, interjurisdictional commutes significantly increase the City's total on-road emissions footprint.
- **Non-work trips by visitors occur in similar volumes as work trips but contribute far less to total VMT.** These trips are typically shorter than work trips because visitor trips usually originate from neighboring jurisdictions, with people traveling to destinations within Lake Forest Park, such as the Town Center. In contrast, employment centers are often located further away.

Contributions of State and Federal Policies

Addressing greenhouse gas emissions requires the combined efforts of local, state, federal, and regional policy change. There are a number federal, state, and regional policies that advance GHG emissions reductions and will support the City of Lake Forest Park in meeting GHG emissions reduction targets:

- **Washington State Energy Code (SB 5854)**
- **Washington Clean Buildings Act (HB 1257)**
- **Federal Vehicle Regulations (CAFE)**
- **Washington Clean Fuel Standard (HB 1091)**
- **Washington Zero Emission Vehicle (ZEV) Standards**
- **Washington Hydrofluorocarbon Policies (HB 1112 & HB 1050)**
- **Washington Clean Energy Transformation Act (CETA)**
- **Washington Climate Commitment Act (E2SSB 5126)**

The GHG emissions reduction sub-element goals seek to address Lake Forest Park's remaining emissions after accounting for the reductions driven by these state and federal policies. Local policies that help the city reduce emissions from on-road transportation and natural gas use in buildings will be especially critical in the coming decades, as these will increasingly make up a large percentage of remaining emissions. Implementing the Utilities Element goal U-5: Climate Commitment will advance Lake Forest Park's ability to meet its GHG emissions reduction targets by supporting the transition from fossil fuels to electricity in new and existing buildings. Remaining emissions will need to be addressed through stronger and more ambitious policy or other advancements at the state, federal, or local level.

Glossary

Please note that this glossary is provided for reference during Planning Commission review and will ultimately be incorporated into the overall Comprehensive Plan Glossary.

Term	Definition
Climate resilience	The ongoing process of anticipating, preparing for, and adapting to changes in climate and minimizing negative impacts to our natural systems, infrastructure, and communities. Codified in RCW 70A.65.010.
Critical areas	As defined by the Growth Management Act and municipal code, these refer to wetlands, streams, areas with a critical recharging effect on aquifers used for potable water, fish and wildlife habitat conservation areas, frequently flooded areas, and geologically hazardous areas such as erosion hazard areas, landslide hazard areas, seismic hazard areas, and steep-slope hazard areas. Codified in RCW 36.70A.030.
Environmental justice	The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, rules, and policies. Environmental justice includes addressing disproportionate environmental and health impacts in all laws, rules, and policies with environmental impacts by prioritizing vulnerable populations and overburdened communities, the equitable distribution of resources and benefits, and eliminating harm. Codified in RCW 70A.02.010.
Green building standards	Examples of green building standards include Leadership in Energy & Environmental Design (LEED), Living Building Challenge Green Globes, and the National Green Building Standard.
Greenhouse gas emissions	Gases, such as carbon dioxide, methane, and nitrous oxide, that trap some of the Earth's outgoing energy, thus retaining heat in the atmosphere and contributing to climate change.
Low impact development (LID)	A stormwater and land use strategy that strives to mimic hydrologic processes before the area was developed or disturbed. LID measures emphasize conservation, use of on-site natural features, site planning, and integration of stormwater management practices into project design. Rain gardens and permeable hardscapes are examples of LID measures.
Mobility hubs	Locations where people can access multiple types of transportation modes in a central location (such as bike share, public transit, micro mobility devices). Often located adjacent to transit stops and stations, mobility hubs serve as a transfer point for multiple transportation modes

Term	Definition
	and offer first and last mile connections between the hub and one's origin or destination.
Overburdened community	A geographic area where vulnerable populations face multiple environmental harms and health impacts that combine to further increase burdens. Codified in RCW 70A.02.010.
Resilience hubs	Trusted, community-serving facilities that support communities in everyday life and before, during, and after an emergency. Although climate change affects everyone, low-income communities and communities of color are disproportionally impacted by climate-related events. Resilience hubs help neighbors access resources and services and build trust and community cohesion in their day-to-day lives.
Safe Routes to School	A program for projects within two miles of primary, middle, and high schools to improve safety and mobility for children by enabling and encouraging them to walk and bicycle to school.
Transit-oriented development	An approach to creating dense, walkable residential neighborhoods with easy access (e.g., within a radius of up to 0.5 miles) to public transportation and commercial/retail uses.
Vulnerable populations	Groups that are more likely to be at higher risk for poor health outcomes in response to environmental harms, due to adverse socioeconomic factors and sensitivity factors. Includes, but is not limited to racial or ethnic minorities, earners of low incomes, and populations disproportionately impacted by environmental harms. Codified in RCW 36.70A.030.