



City of Ferndale Climate Element

Thursday, October 30, 2025



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AGENDA

- Overview of state requirement (2 min.)
- Greenhouse gas inventory (5 min.)
- Public outreach process and feedback (5 min.)
- Climate risk analysis (3 min)
- Climate Element goal and policy summary (5 min.)
- Questions (30 min.)

Climate planning requirements

- 2023 legislation (HB 1181) added a climate goal to the Growth Management Act (GMA).
- RCW 36.70.70A now requires counties and cities to include a climate change and resiliency element in their comp plans.
- Two sub-elements to the chapter:
 - A. Greenhouse gas (GHG) emissions reduction
 - B. Climate resiliency
- Climate element can be stand-alone chapter or integrated into other chapters.

What are the minimum requirements?

- **GHG reduction** sub-element must:
 - Address Transportation, Buildings & Energy, and Zoning & Development.
 - Identify actions that will reduce overall GHG emissions within the jurisdiction.
 - Reduce per-capital vehicle miles traveled.
 - Prioritize reductions that benefit overburdened communities.
- **Resiliency** sub-element must:
 - Include 1+ goal and supportive policy for each relevant climate-exacerbated hazard.
 - Identify, protect, and enhance both human communities and ecological systems to foster climate resilience.
 - Prioritize actions that benefit overburdened communities.



GHG Inventory Approach



Replicability and Transparency

Inventories can be conducted for Ferndale in future years using the same methods and compared to the baseline inventory (2023)



Consistency

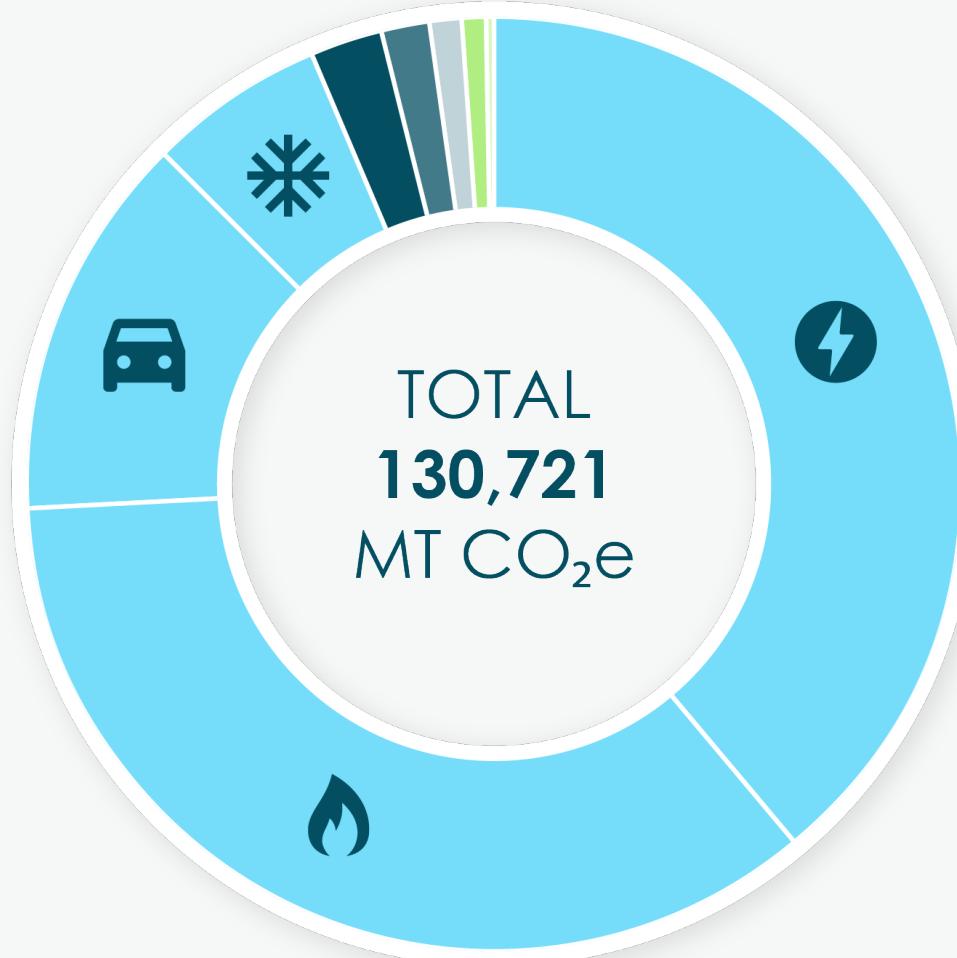
Inventory scope and methods were developed based on the 2022 Whatcom County GHG Emissions Analysis



Accuracy

Relevant emission sources are included, and locally specific data are used where available

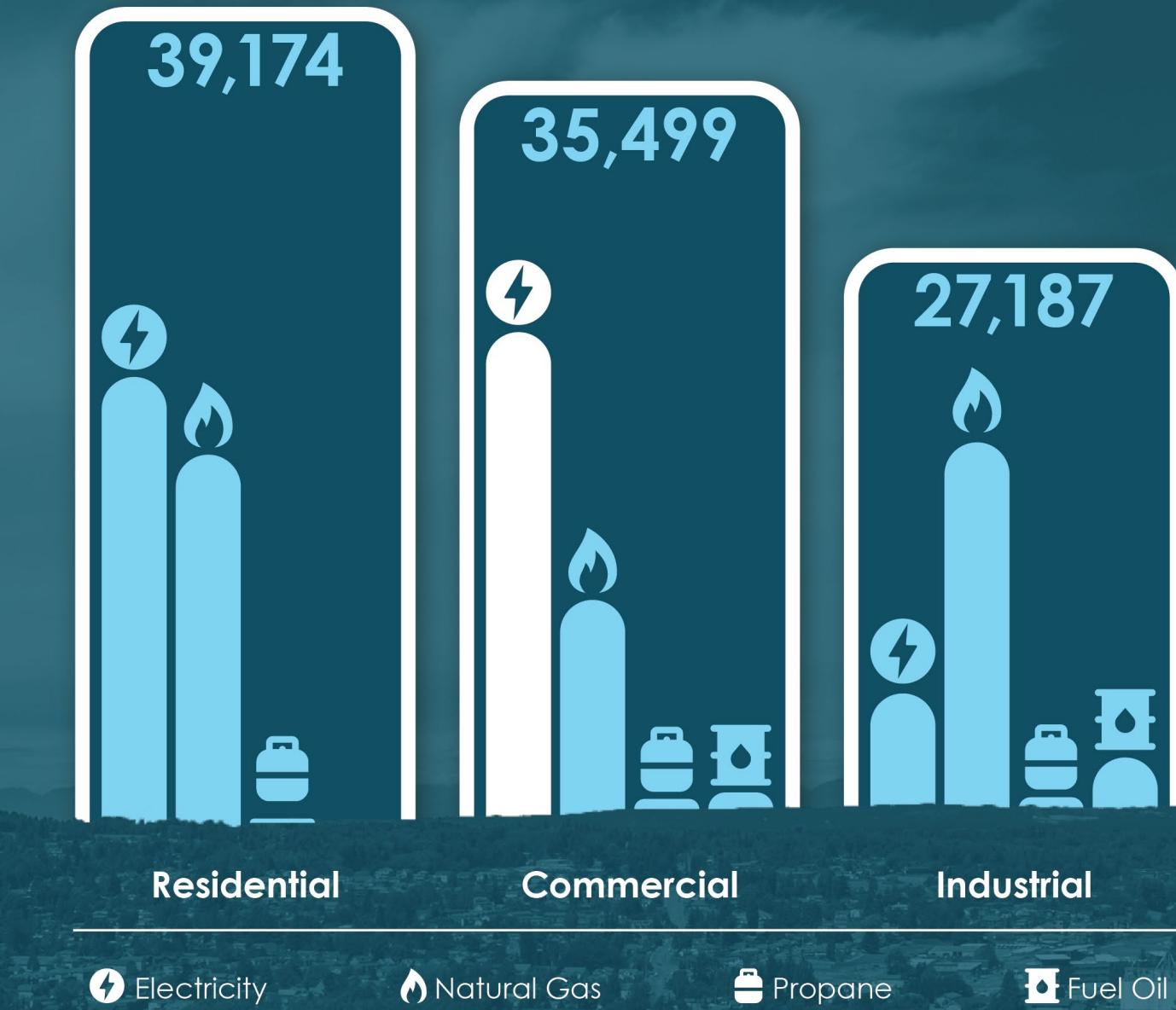
Breakdown of Ferndale's 2023 Community-Wide GHG Emissions by Source (MT CO₂e)



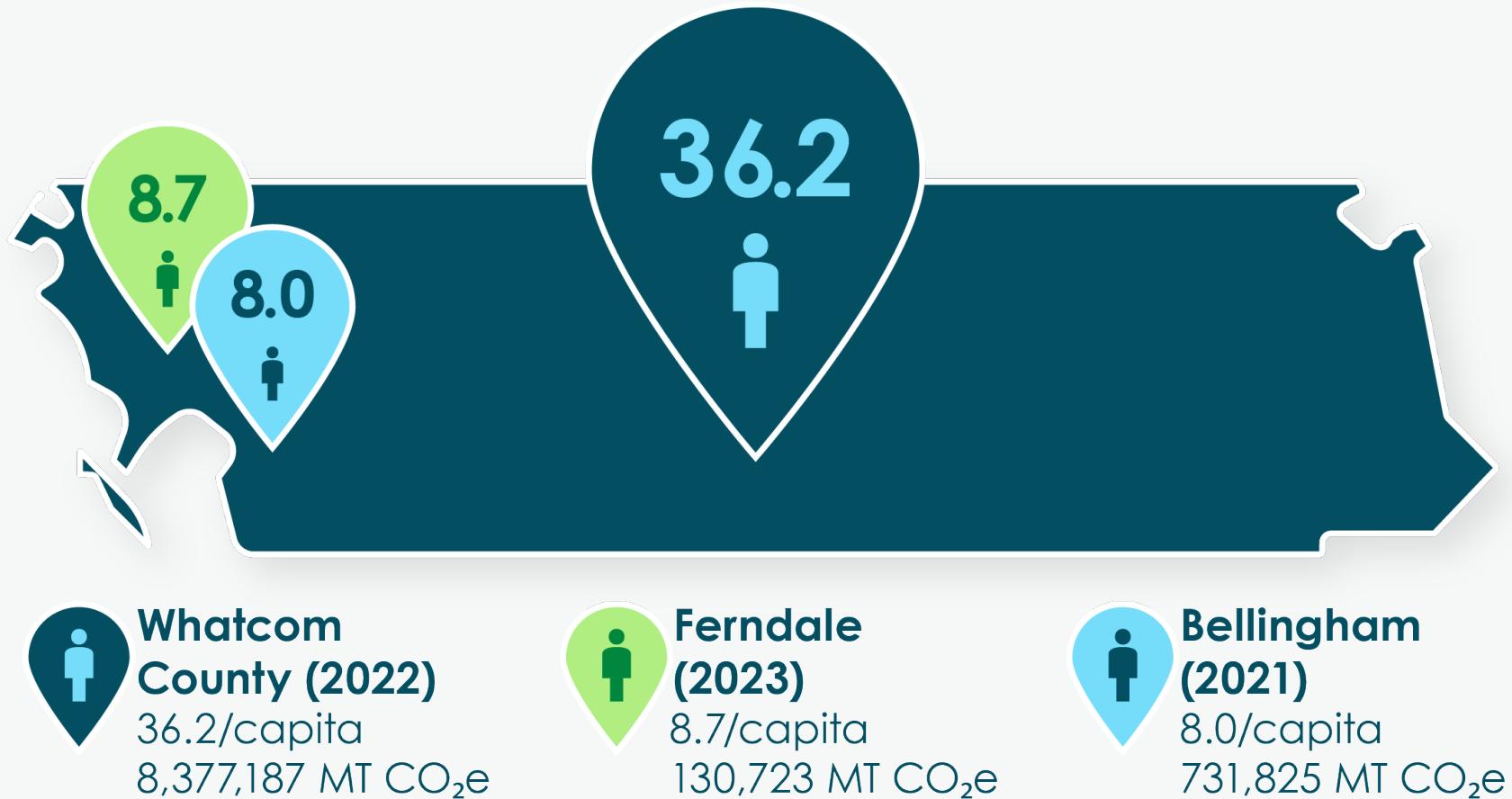
 Electricity	50,984 39%
 Natural Gas	46,301 34%
 Transportation	17,170 13%
 Refrigerants	8,086 6%
 Fuel Oil	3,418 3%
 Solid Waste	1,962 2%
 Tree Cover Loss	1,377 1%
 Propane	1,164 <1%
 Wastewater	261 <1%



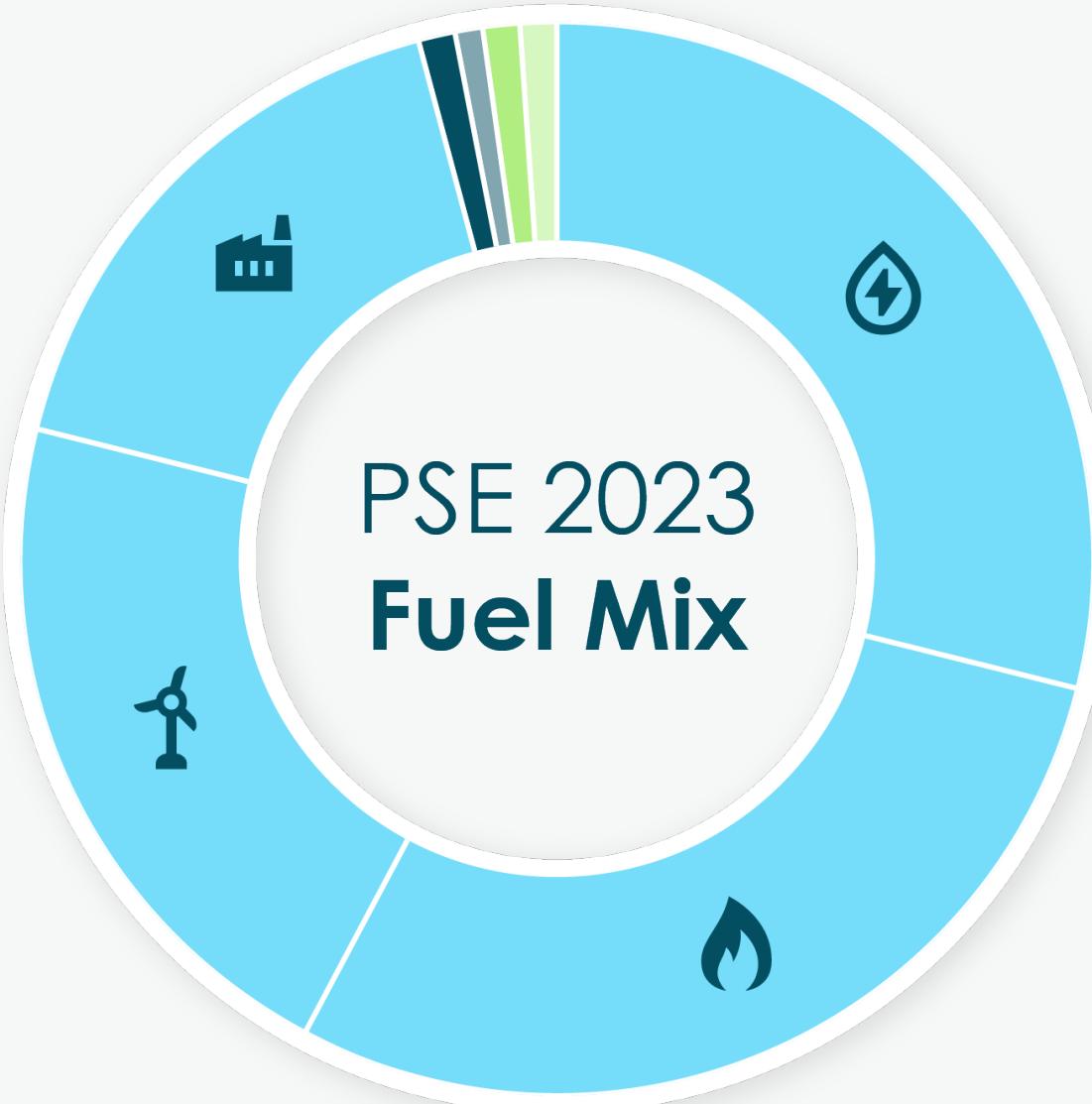
Ferndale's 2023 Built Environment GHG Emissions by Category and Source (MT CO₂e)



Per Capita GHG Comparison with Bellingham and Whatcom County



This figure provides a high-level comparison between Whatcom County, Bellingham, and Ferndale per capita GHG emissions. Since GHG inventory scopes and reporting years differ by jurisdiction, direct comparisons aren't valid. Whatcom County's per capita emissions are higher than Bellingham and Ferndale's because more emission sources are included in the County's inventory.



-  **Hydro**
30%
-  **Natural Gas**
30%
-  **Wind**
22%
-  **Coal**
18%
-  **Nuclear**
<1%
-  **Solar**
<1%
-  **Unspecified**
<1%
-  **Other**
<1%



Public and tribal outreach

- December 2024
 - Invitation letters to Lummi Nation and Nooksack Indian Tribe
- January 2025
 - Convene a Climate Policy Advisory Team
- March – April 2025
 - Launch www.ferndaleclimateplans.org
 - Survey seeking feedback on greenhouse gas emission priorities
- August – September 2025
 - Update project website
 - Survey seeking feedback on climate risks and resilience priorities
 - Interviews with stakeholders

Public feedback on GHG element

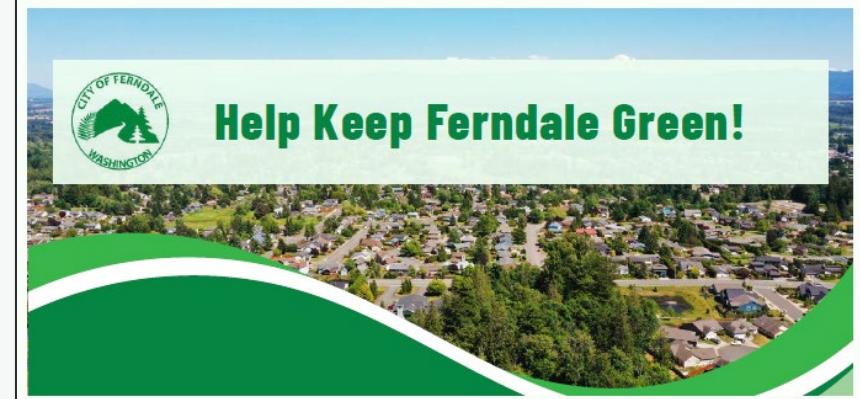
Top co-benefits of GHG reduction policies:

- Water quality
- Public health
- Air quality

Sectors for policy focus: Transportation and industrial processes.

Top concern: flooding (by a lot)

Policy suggestions: Better public transportation or transportation alternatives.



Help Keep Ferndale Green!

Complete the Survey by Earth Day, April 22, 2025
The City of Ferndale is developing a Climate Element for our Comprehensive Plan, and we need your input! Participate in our public survey to share your priorities for climate policies.

Why Participate?

- Your feedback helps us develop effective climate policies.
- Support goals that reduce greenhouse gas emissions and build resilience.
- Ensure our policies reflect community values and priorities.



Visit FerndaleClimatePlans.org or scan the QR code to complete the survey by 11:59 p.m. on Earth Day, April 22, 2025.
El sitio web también está disponible en español.



Together, we can make Ferndale a resilient and sustainable community!



Public feedback on Resilience element: Hazard experiences and concerns

Topic	Personally Experienced	Moderately / Extremely Concerned	Top Comments (# of respondents who mentioned)
Wildfire smoke	62%	48%	<ul style="list-style-type: none">Used tools like air filters to deal with the smoke (11)Experienced health conditions exacerbated by smoke (8)Experienced impacts to recreational activities (4)
Extreme heat	39%	43%	<ul style="list-style-type: none">Concerned that extreme heat is dangerous without A/C (4)Experienced impacts to recreational activities (5)Ferndale has insufficient cool spaces and shade trees (2)
River flooding	37%	36%	<ul style="list-style-type: none">Experienced severe or catastrophic flood damages to property (15)Caused bad traffic/Slater Road closure (4)Disappointed with flood response (2)
Other flooding	12%	25%	<ul style="list-style-type: none">Experienced impacts to recreational activities (2)

Public feedback on Resilience element: Impacts of greatest concern

Topic	Concerns most frequently rated in Top 3	% rating in top 3
Health and Well-being	Health problems such as heat stress, breathing issues, or mental health issues	51%
	Life-threatening scenarios related to flooding or fire	35%
	Hospitals and clinics becoming overwhelmed	28%
Environmental	Poor air quality	55%
	Reduced drinking water quality	43%
	Loss of forest or urban trees	31%
Economic/Financial	Insurance costs going up	65%
	Personal budgets strained by lost wages or property damage	41%
	City budgets strained by emergency response and damage	36%
Infrastructure	Power outages or unstable electricity	52%
	Flooding or storm damage to homes and businesses	49%
	Damage to water, stormwater, or sewer infrastructure	44%

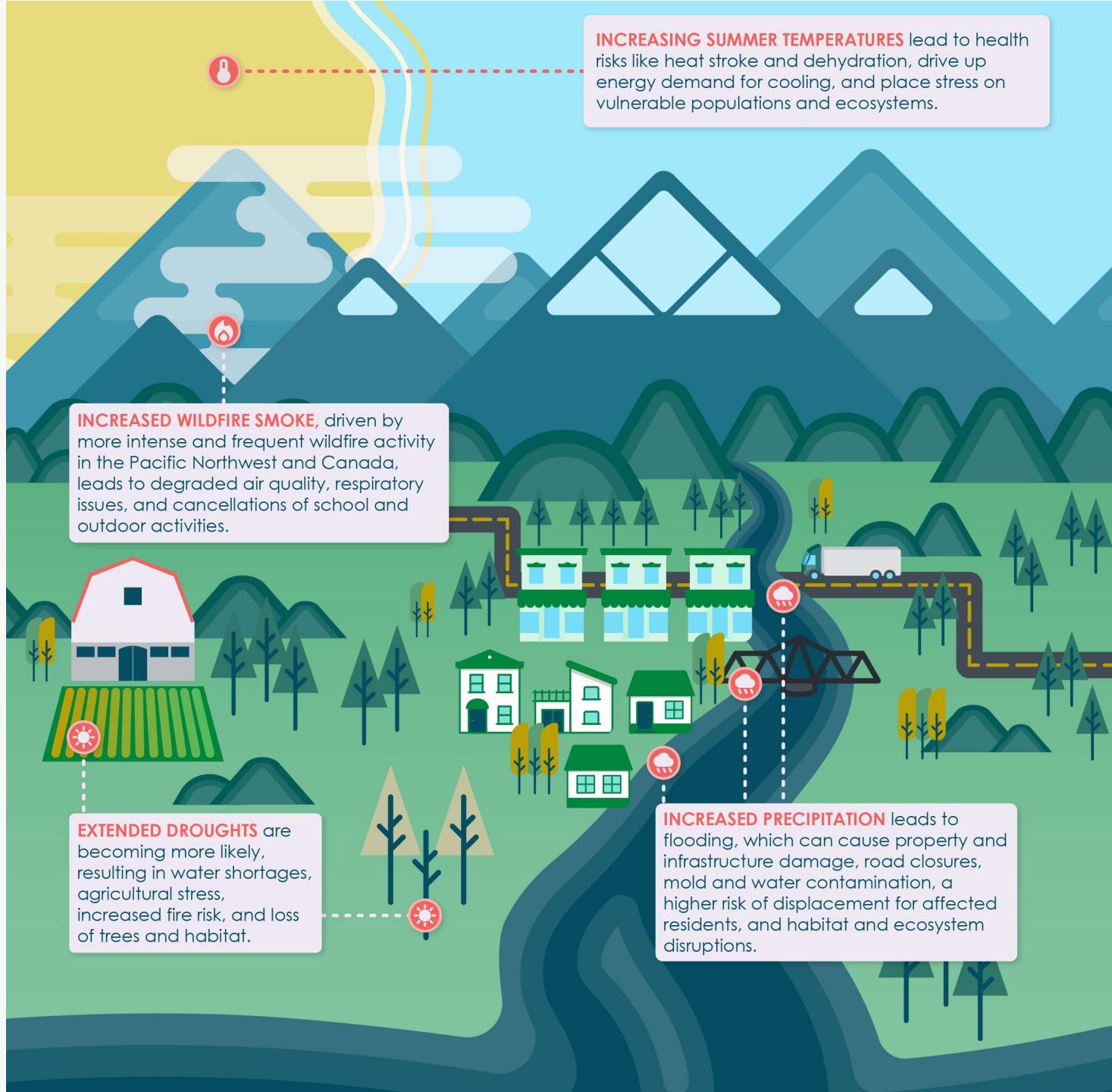
INTERVIEWS

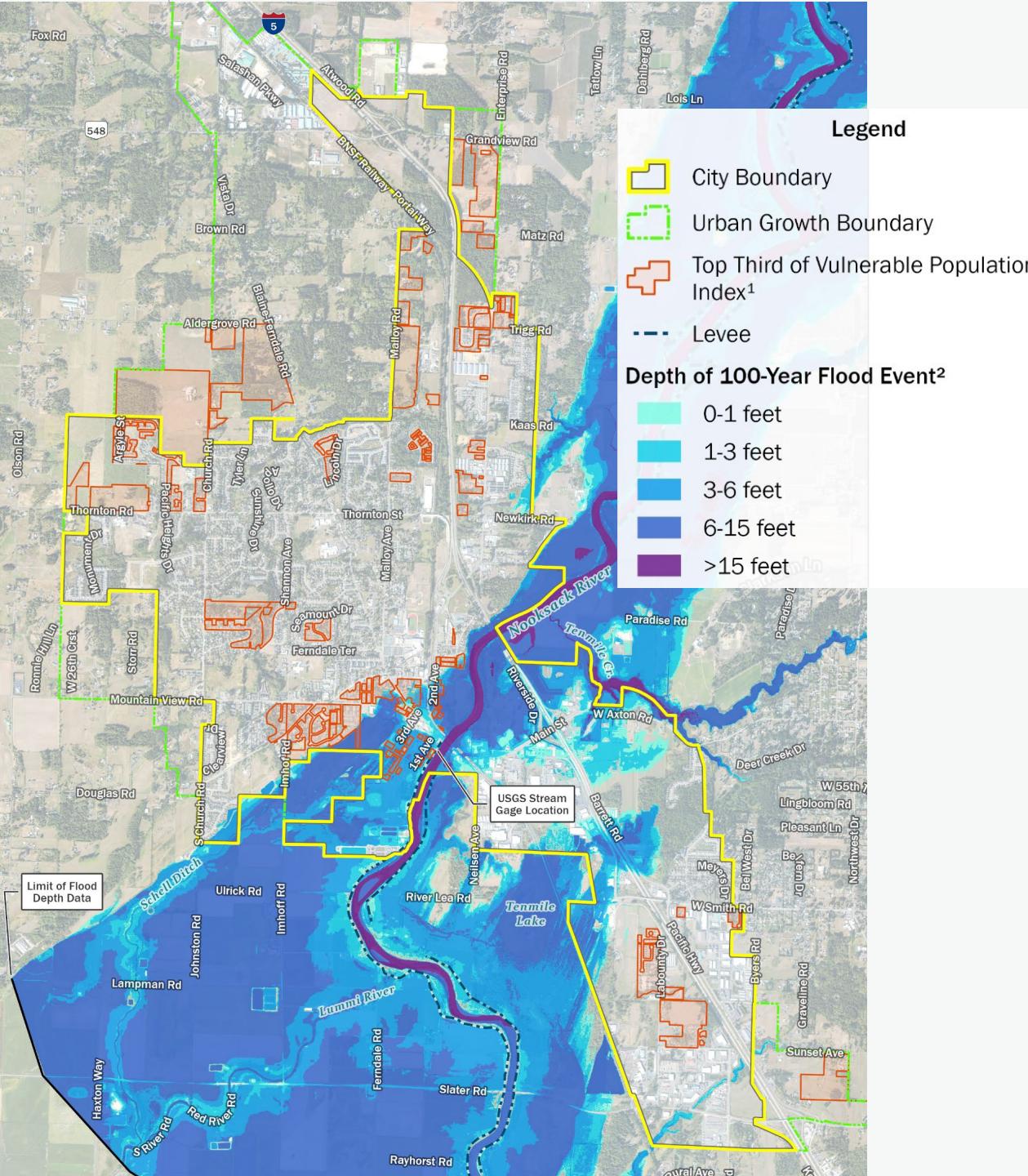


- Five interviews completed between August 25 – September 15, 2025
 - United Church of Ferndale (UCF)
 - Ferndale Community Services (FCS)
 - Whatcom Co. Fire District 7
 - Ferndale School District
 - Whatcom County Library System
- Priority opportunities identified:
 - Improved/increased reach of emergency alerts
 - Agency/organization coordination
 - Severe weather shelter capacity expansion
 - Community disaster preparedness
 - Emergency funding and support

CLIMATE HAZARD IMPACTS

- Increasing Summer Temperatures
- Increased Wildfire Smoke
- Extended Droughts
- Increased Precipitation





Flooding

CLIMATE IMPACT ASSESSMENT FINDINGS

- Peak flood flows on the Nooksack River are projected to increase by 9 to 12 percent by 2050.
- Some of the city's most vulnerable populations reside in areas exposed to the deepest and most destructive conditions in a major flood (e.g., residences in downtown along 1st and 2nd avenues).
- Low points in the levee system exist adjacent to the city's water and wastewater treatment facilities and an electrical substation.

Goals and policies in draft element

Subject area	Policy topics covered
Buildings and energy	<ul style="list-style-type: none">• Energy retrofits, LEED certification, battery storage options in City-owned buildings• Encouraging solar panels, energy efficiency and weatherization in private buildings
Transportation	<ul style="list-style-type: none">• Promoting multimodal transportation through planning, coordination with WTA, and roadway design
Land use	<ul style="list-style-type: none">• Zoning and permitting to promote housing diversity and density.• Improving tree canopy in parking lots and right-of-way.

Goals and policies in draft element

Subject area	Policy topics covered
Emergency management	<ul style="list-style-type: none">• Partnering with Whatcom County and other agencies on resources and event planning.• Community education and outreach before and during emergencies.
Capital facilities	<ul style="list-style-type: none">• Assess public facilities' vulnerability to climate hazards and design new facilities with hazards in mind

Next steps

November 2025

- Final revisions to draft Climate Element

December 2025

- Planning Commission work session

January 2026

- Hearing
- City Council work session



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**Thank you!
Questions?**

Goal 1: Promote energy-efficient technologies and practices in buildings throughout Ferndale to reduce GHG emissions.

Supporting policies:

- A. Prioritize energy retrofits of City-owned buildings when updating capital project lists.
- B. Evaluate LEED certification for City-owned buildings and pursue LEED standards when building or retrofitting City-owned buildings.
- C. Prioritize the preservation and weatherization of housing in overburdened communities, particularly at higher densities, to reduce emissions and increase resilience.
- D. Encourage private owners of buildings to pursue energy efficiency retrofits and technologies by promoting grants and other financing opportunities.

Goal 2: Support the advancement of reliable energy technology and systems that reduce GHG emissions and maintain functionality during climate-related disruptions.

Supporting policies:

- A. Encourage solar installations on new residential and commercial buildings, where practicable.
- B. Reduce permitting barriers to the installation of residential and commercial on-site energy storage and backup systems.
- C. Explore opportunities to install distributed renewable energy generation and battery infrastructure at public facilities to store renewable electricity generated on site and provide emergency power to support continuity of operations.
- D. Explore developing local microgrid solar and/or battery storage facilities in allowable use sites.

Goal 3: Support reliable and low-carbon mobility options and infrastructure that help reduce GHG emissions and VMT.

Supporting policies:

- A. Align Ferndale's development code with current Washington State requirements for electric vehicle charging infrastructure.
- B. Coordinate with the Whatcom Transportation Authority to promote public transit expansion and use by aligning transit-supportive land uses near existing transit corridors and locating transit stops near commercial, residential, and employment areas.
- C. Establish a green belt of parks to support connectivity and nonmotorized travel between housing, schools, and businesses.
- D. Create a safe, well-connected, and attractive bicycle and pedestrian transportation network to encourage active transportation.
- E. Increase multimodal capacity in coordination with the location of higher-density housing and commercial centers.
- F. Integrate Complete Streets principles into roadway designs.
- G. Develop and implement strategies to improve multimodal transportation and reduce reliance on single-occupancy vehicles.
- H. Improve multimodal connectivity by considering a grid street requirement that reduces cul-de-sacs.

Goal 4: Foster higher-intensity land uses and housing diversity and supply within city limits and the unincorporated urban growth area.

Supporting policies:

- A. Allow middle housing types, such as duplexes, triplexes, and ADUs, in residential areas.
- B. Expand inclusionary zoning as a tactic for supporting greater income diversity in housing types.
- C. Establish minimum residential densities within UGAs.
- D. Prioritize infill development through streamlined permitting and development incentives.
- E. Implement complimentary mixed land uses, such as locating business districts, neighborhood commercial centers, parks, and schools within neighborhoods, to promote multimodal transportation.

Goal 5: Increase tree canopy cover to boost carbon sequestration, reduce heat islands, and improve air quality.

Supporting policies:

- A. Increase tree canopy coverage in surface parking lots.
- B. Improve urban forest management to enhance tree health and canopy coverage.
- C. Evaluate and update street tree requirements in public rights-of-way.
- D. Designate general location and uses of land for green spaces, urban forests, and community forests within the UGA.
- E. Ensure that tree species selection and planting guidance are updated to be resilient to drought and other climate-exacerbated hazards.

Goal 6: Protect community health and well-being from the impacts of climate-exacerbated hazards in Ferndale.

Supporting policies:

- A. Work with partner agencies to evaluate and address the effects of climate change on overburdened communities.
- B. Partner with Whatcom County and community organizations to expand the capacity of severe weather shelter services, including facilities that offer cooling, warming, and clean air during extreme temperature and smoke events.
- C. Develop a wildfire smoke resilience strategy that increases community awareness of resources and strategies for reducing smoke exposure.

Goal 7: Encourage owners of existing and new capital facilities to consider safety and operational resilience from the impacts of climate-exacerbated hazards.

Supporting policies:

- A. Conduct vulnerability assessments of public facilities to identify public assets and infrastructure that may be at short-, mid-, or long-term risk from climate hazards.
- B. Develop or support adaptation plans to relocate, retrofit, or replace public assets at risk of climate hazards in order to maintain essential services and reduce future impacts.
- C. When designing, siting, and constructing City-funded capital infrastructure, plan for changing climate hazards to help keep assets safe and functional throughout their intended lifespans.

Goal 8: Improve the resilience of Ferndale's built environment and transportation system to flooding.

Supporting policies:

- A. Use up-to-date flooding maps during land use planning to reduce public and private exposure to floods.
- B. Coordinate across local, regional and state agencies and planning efforts to reduce vulnerability of Ferndale's local roads to flooding.

Goal 9: Strengthen emergency preparedness, response, and recovery efforts to mitigate climate impacts.

Supporting policies:

- A. Update Ferndale's chapter of the Whatcom County 2021 *Natural Hazards Mitigation Plan* (Whatcom County 2021) to include an assessment of future climate-exacerbated hazards, including flooding, extreme temperatures, wildfire, and compound flooding due to sea level rise.
- B. Coordinate with Whatcom Transportation Authority to establish and maintain procedures that respond to climate-exacerbated hazards, including route planning, service continuity, and communication protocols.
- C. Coordinate with Whatcom County to plan for debris removal and waste disposal in post-emergency scenarios.
- D. Work with Whatcom County to increase the number of Ferndale residents enrolled in emergency alerts and evacuation notices.
- E. Formalize interagency communication networks to support coordinated planning, response, and recovery efforts across local jurisdictions and agencies, schools, nonprofits, and emergency service providers.
- F. Regularly update emergency communication strategies with outreach materials that are accessible, multilingual, and culturally relevant.
- G. Consider climate-exacerbated hazards such as flooding in future projections in emergency route planning.

Goal 10: Strengthen climate action and resilience through local coordination and collaboration.

Supporting policies:

- A. Collaborate with local jurisdictions and organizations on climate and natural hazard planning and preparedness efforts to share knowledge, advocate for Ferndale's priorities, and contribute to coordinated climate solutions.
- B. Coordinate regularly with regional partners to align GHG reduction strategies and leverage resources across jurisdictions to increase collective impact.
- C. Foster government-to-government relations with the Lummi Nation and the Nooksack Indian Tribe to support the preservation of archaeological sites and traditional cultural properties vulnerable to climate impacts, and to collaborate on shared climate resilience and GHG reduction goals.
- D. Coordinate with agencies responsible for real-time air quality monitoring to improve communications and guidance during smoke events.

Goal 11: Provide all residents an equitable opportunity to learn about climate impacts, influence policy decisions, and take actions to enhance climate resilience and reduce GHG emissions.

Supporting policies:

- A. Work with local, state, and federal partners and organizations to support community conversations and programs that build awareness of climate-exacerbated hazards, available resources, and how to access them before, during, and after emergencies.
- B. Work with local organizations to provide community-wide opportunities for residents to participate in educational workshops, activities, and engagement efforts focused on energy efficiency and other GHG reduction strategies, with targeted outreach to overburdened communities.

Goal 12: Strengthen Ferndale's economy by supporting local industries, businesses, and workforce initiatives that reduce GHG emissions and strengthen Ferndale's ability to withstand and recover from extreme weather disruptions.

Supporting policies:

- A. Prioritize City of Ferndale purchasing from local businesses to reduce GHG emissions associated with the transportation, production, and distribution of goods.
- B. Retain the EAGLE Program to encourage retail development to build to higher standards of energy conservation.
- C. Develop targeted campaigns for recycling material with the highest GHG-reduction impact (e.g., paper, metal, food waste).
- D. Coordinate with the Port of Bellingham to update the *Whatcom County Comprehensive Economic Development Strategy 2022–2026* (Port of Bellingham 2022) to plan for climate impacts.