

TOWN OF ERIE

RESILIENCE ACTION PLAN

PREPARED BY
MENV GRADUATE STUDENT
TEAM

NOVEMBER 2025



ERIE | CO

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Acknowledgements

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The Town of Erie Sustainability Division acknowledges that the Town of Erie occupies the ancestral homelands of the Hinono'eino (Arapaho), Núu-agma-tuvu-pu (Ute), and Tsitsistas (Cheyenne) peoples, among others who have lived on and cared for this land for countless generations. We honor the people, their history, their culture, and their enduring connection to this place we now call Erie. We also recognize that Indigenous peoples are still here today, and we commit to learning from their resilience and stewardship as we strive toward a more inclusive and respectful future.

We would like to thank the following Town divisions and groups as well as external community partners for their time and expertise, which greatly contributed to the improvement and impact of this plan.

Town of Erie Divisions and Groups

Organization	Name	Title
Cultural Arts Program	Taylor Ingro	Cultural Arts Supervisor
Planning Division	Josh Campbell	Senior Strategic Planner
Sustainability Advisory Board		
Town Council		
Transportation and Mobility Division	John Firouzi	Transportation Division Manager
Transportation and Mobility Division	Miguel Aguilar	Principal Transportation Planner

External Community Partners

Organization	Name	Title
Being Better Neighbors	Christina Pisano	Board Member
City of Boulder, Public Works – Utilities Department	Heather Bearnese-Loza	Water Conservation Program Manager
City of Lafayette, Sustainability Department	Elizabeth Bocon	Sustainability Director
Erie Community Food Bank	Robin Kitlowski	Co-Director
Lotus Engineering and Sustainability	Molly Marcucilli	Climate and Building Policy Associate
Lotus Engineering and Sustainability	Natalia Carminelli	Communications and Engagement Associate
Monarca Group	Berenice El Gharamti	Co-Founder and Managing Partner
Mountain View Fire Rescue	Paul Ostroy	Fire Management Officer

How To Use This Plan

This plan is designed for easy navigation via the clickable sections within the Table of Contents. Page numbers are located at the bottom-right of each page. A broad overview of the plan can be found within the Executive Summary and Plan Creation Timeline. The Community Engagement Recap and Community Engagement Timeline sections provide insights into how the team consulted residents and visitors at a variety of local events. The Vulnerability Assessment Summary provides a brief overview of major findings from the Vulnerability Assessment, included in full in Appendix A. The majority of this document consists of goals and strategies captured within three chapters, followed by a short “General Initiatives” section. Each of the three chapters contains background information, current Town progress and initiatives, overarching goals, and recommended strategies that support goal achievement. Hyperlinks, found throughout the document, are underlined.

Within each goal is a “Concept” note which provides a brief explanation of the benefits of the goal and the rationale for its inclusion. For instance, the goal of an increased tree canopy provides benefits related to extreme temperatures, air quality, and stormwater management, and those benefits are noted in the “Concept” within that goal.

The plan concludes with a glossary of definitions and acronyms and a list of references. Appendices include the complete Vulnerability Assessment and full results of community engagement efforts.

For readers with limited time and a specific area of interest, the three chapters are broken into smaller sections that are listed in the Table of Contents. For instance, someone wanting to learn more about air quality initiatives can proceed directly to the Air Quality section within the Infrastructure chapter. This presentation by section will support Town staff and other users as they locate sections pertinent to their areas of influence. Each section concludes with partnership opportunities, making these strategies key for understanding how individuals and organizations outside of the Town can contribute to the effort.



Old Town Erie, Colorado.²

Executive Summary

The Town of Erie, Colorado, is proud to present its first ever **Resilience Action Plan (RAP)**. This new plan is designed to strengthen the Town's ability to adapt, thrive, and grow in the face of climate, economic, and social challenges. Through this plan, risks and adaptive strategies were identified for the Town that improve community preparedness for extreme weather events and social vulnerabilities. Erie stands at a pivotal point in its development with evolving environmental concerns, rapid population growth, and increasing infrastructure demands. The RAP outlines a forward-looking vision with concrete actions to ensure the Town remains secure, sustainable, and equitable in the future.

This plan is grounded in an understanding of Town priorities, research, environmental sustainability, and best practices for long-term growth. Development of the plan was supported by a Vulnerability Assessment conducted by the University of Colorado Boulder's Masters of the Environment (MENV) Graduate Student Team. This assessment evaluated environmental risks and social equity hazards and was complemented by robust community engagement. Town staff, local and regional partners, and Erie residents played a vital role in shaping the recommendations presented in this plan. A summary of these community interactions can be found in the Community Engagement Recap.

The **three key areas** for building long-term resilience that are included in this plan are:



Each chapter provides background on the topic, a list of current progress, accomplishments, goals, strategies, and potential community partnerships. In addition to these chapters, there is a short "General Initiatives" section.

Plan Creation Timeline

1. Literature Review: April to June, 2025

a. The MENV Graduate Student Team reviewed Town of Erie plans for reference and information and looked at plans from nearby Colorado municipalities. The team also examined plans from locations across the United States to understand best practices and formatting.

2. Creation of the Vulnerability Assessment: June to July, 2025

a. The Vulnerability Assessment was created to inform the priorities of Resilience Action Plan goals and strategies.

3. Community Engagement: May to August, 2025

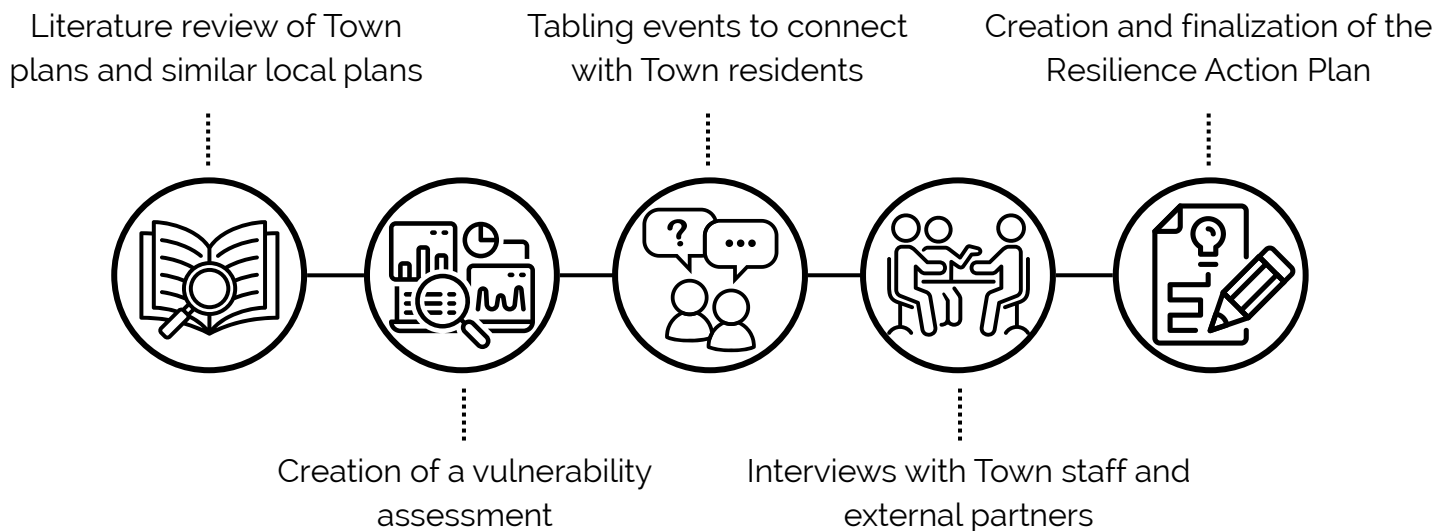
a. See the Community Engagement Recap or more information. Also, see Appendix B for data from Community Engagement.

4. Community Partner Interviews: June to August, 2025

a. See the Community Engagement Recap.

5. Creation of the Town of Erie Resilience Action Plan: July to October, 2025

a. Goals, strategies, and partnership opportunities were developed after the culmination of all the research, community engagement, and interviews.



Timeline of the steps the MENV Graduate Student Team took to create the Resilience Action Plan.

Community Engagement Recap

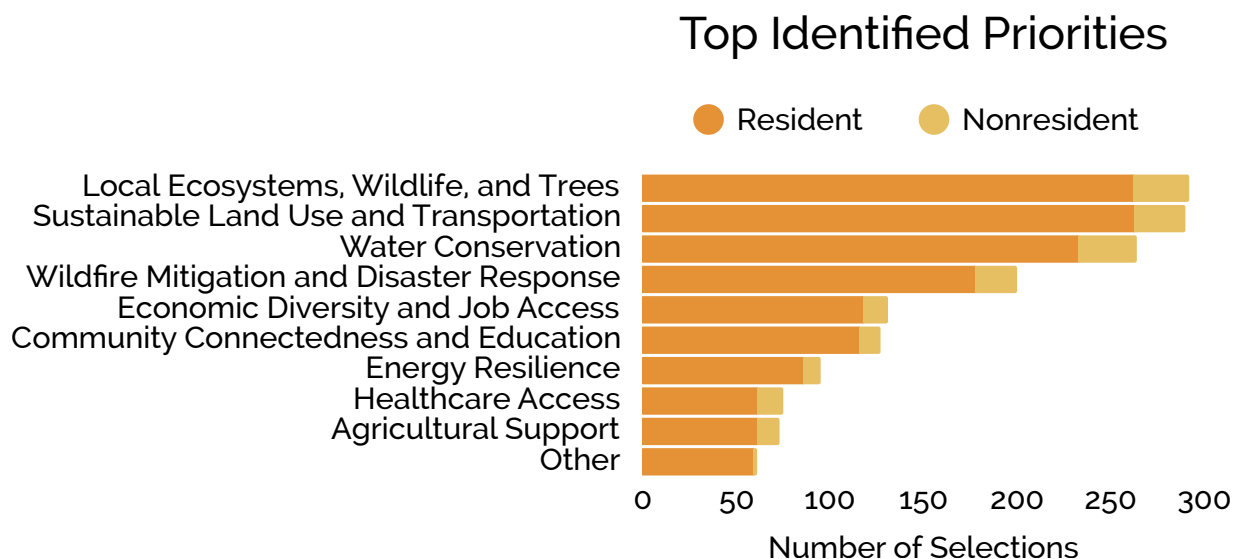
The MENV Graduate Student Team interviewed Town staff from various departments and divisions, local partners, regional partners, emergency responders, and Town Council members. The expertise and personal stories from interviewees provided the MENV Team with an understanding of where the Town needs the most support in improving its resilience efforts.

In addition to interviews, the MENV Team received community input at multiple Town events in collaboration with the Town of Erie's Sustainability Division and Sustainability Advisory Board. The MENV Team created three questions to generate meaningful resilience conversations and data collection. The data provided insight for the priorities of the Town's first Resilience Action Plan. The questions were presented with the same approach at each engagement event along with color coding to identify Erie resident and nonresident responses. An estimated 928 people interacted with these questions at eight separate events during the creation of this plan.

The first question was "In your opinion, what should be the top three priorities for Erie to build local resilience?" Respondents were instructed to mark their top three choices. The choices included:

- Energy Resilience (backup for power outages)
- Sustainable Land Use and Transportation Access
- Wildfire Mitigation and Disaster Response
- Local Ecosystems, Wildlife, and Trees
- Water Conservation
- Economic Diversity and Job Access
- Agricultural Support
- Community Connectedness and Education
- Healthcare Access
- Other

The most common response for the first question was local ecosystems, wildlife, and trees, which obtained 20% of the total vote. Sustainable land use and transportation access was a close second place with 19% of the vote.



Graph for responses to the top identified priorities across all Town events the MENV Graduate Student Team attended.

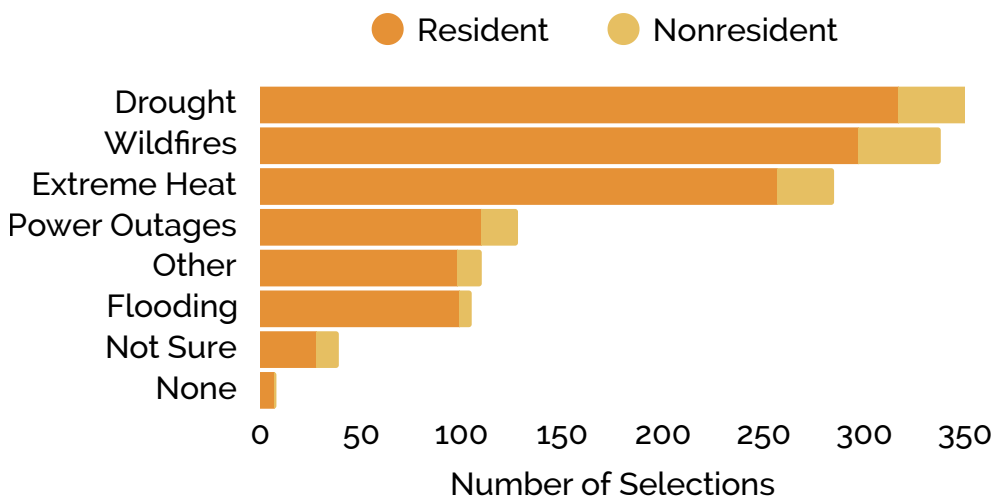
The second question was “What are the top three hazards that Erie is most vulnerable to?”

Respondents were instructed to mark their top three choices. The choices included:

- Extreme Heat
- Flooding
- Drought
- Wildfires
- Power Outages
- Not sure
- None
- Other

The most common response for the second question was drought, which received 26% of the total vote. Wildfires was second with 25% of the vote.

Top Identified Hazards



Graph for responses to the top identified hazards across all Town events the MENV Graduate Student Team attended.

The third question was “What is your definition of resilience?” This was an open-ended question for which respondents provided their written perspective.

The entirety of the results and data from this community engagement effort can be found in Appendix B.

Community Engagement Timeline



Arbor/Earth Day

April 26, 2025

The celebration of Erie's 27th Annual Arbor/Earth Day event spread awareness of the Town's conservation efforts. Free trees, prizes, a poster contest, talks from politicians, and food trucks were all a part of the celebration.

MENV Graduate Student Team at Arbor/Earth Day.

Town Fair

May 17, 2025

The 28th annual Town Fair was held by the Erie Chamber of Commerce to celebrate local businesses and resources. Arts, crafts, food, drink and community building were highlighted in this event.



MENV Team Member talking to Erie resident at the Town Fair.



Town of Erie Farmers Markets

May to July 2025

The Town of Erie Farmers Market provides local Colorado farms and vendors with a popular and inviting market to showcase their products. This market connects residents with local produce and expands business opportunities for farms and vendors.

MENV Team Member talking to residents at a Town of Erie Farmers Market.

Erie Fest

August 2, 2025

This was the first Erie Fest in Town history. The event was hosted by Being Better Neighbors and highlighted multiple cultures to build a more cohesive and welcoming community.



MENV Team at Erie Fest. **10**

Vulnerability Assessment Summary

As part of the creation of this document, the MENV Graduate Student Team prepared an assessment of hazards within and surrounding the Town, as well as of the vulnerability of Town populations. The following is a short summary of this document, which is appended in its entirety at the end of the plan.

Purpose and Methodology

The Town of Erie is facing increasing climate-related risks that threaten its residents, environment, and economy. This report focuses on five key hazards: air quality, drought, extreme heat, flooding, and wildfires. The goal of this assessment is to provide a scientific and historical context for each hazard, analyze vulnerabilities, and provide a rationale for the establishment of relevant goals and strategies that address them.

Vulnerability is defined by exposure, sensitivity, and adaptive capacity.³ The report also highlights the interconnections between hazards, such as drought increasing wildfire risk due to drier fuels, which in turn raises flood risk.⁴

Climate Hazards

Air Quality

Erie's air quality is impacted by ground-level ozone and particulate matter (PM_{2.5} and PM₁₀), originating from vehicles, wildfires, dust, and oil and gas operations, among other sources. Erie has deployed air monitoring stations to track pollutants. Short- and long-term exposure to air pollutants can affect both human and environmental health. Erie also faces indoor air risks from radon, a naturally occurring carcinogen present in many Colorado homes.⁵ Children, older adults, outdoor workers, and people with preexisting conditions like asthma are especially vulnerable to air pollution.⁶

Drought

Erie experienced major droughts in 2002 and 2012, prompting the development of tiered water restrictions and a Drought Management Plan.⁷ Droughts reduce water availability, threaten agriculture, and can bring significant economic impacts. Indicators like the Palmer Drought Severity Index and Standardized Precipitation Evapotranspiration Index show Erie and Colorado as a whole trending toward drier conditions.⁸ Vulnerable groups include the elderly, children, low-income households, and people with health conditions.⁹

Extreme Heat

Temperatures in Colorado have increased by 2.9°F since 1895, with projections showing Erie could face 20 to 83 days over 95°F annually by 2100.^{10,11} Rising heat increases risk of heat illness, especially for those without air conditioning, outdoor workers, older adults, and people with chronic health conditions.¹² Erie is expected to see up to 10 heatwaves per year by the 2060s, an increase from one per year historically. A heat wave is a period of days in which the average temperature peaks above a threshold typically only exceeded once per year.¹³

Flooding

Erie's most significant floods occurred in 1890, 1921, and 2013.¹⁴ The 2013 flood caused \$4 billion in statewide damage.¹⁵ A portion of Erie lies within FEMA Special Flood Hazard Areas (SFHAs), requiring flood insurance. In response, Erie partnered with the Mile High Flood District on mitigation projects such as the Coal Creek Expansion Project, improving drainage and levee systems. However, increased precipitation and impervious surfaces may elevate future risk.

Wildfires

Though not as prone to wildfires as other regions in Colorado, Erie has a medium wildfire risk, with 14% of buildings in direct exposure zones.¹⁶ Wildfire smoke contributes to poor air quality and increases flood risk due to soil degradation.^{17,18} Erie's wildfire vulnerability is mitigated by limited wildland-urban interface (WUI), though climate models project a 100 to 500% increase in burned area by 2050.¹⁹ Vulnerable populations include the elderly, manufactured home residents, and people experiencing mobility issues.²⁰

Social Vulnerability

Erie overall ranks low in social vulnerability, but disparities exist. Erie's population is 40,183 and is 83% white. The median income is \$163,644, and 67% of the population has a bachelor's degree or higher.²¹ Data from Headwaters Economics, the Climate and Economic Justice Screening Tool, and Enviroscreen 2.0 indicate that central Erie has greater vulnerability to climate and pollution-related risks compared to surrounding areas.²² Erie currently has three manufactured home communities, which the State of Colorado counts as disproportionately impacted (DI) communities.^{23,24}

Takeaways and Next Steps

Climate hazards in Erie are interconnected and are projected to increase in severity and frequency. Hazards affect public health and infrastructure, and they are especially impactful to vulnerable populations. The next major step is implementing the Resilience Action Plan, which outlines strategies for mitigating hazards, protecting vulnerable populations, improving emergency preparedness, and building long-term resilience.

Goals and Strategies

Infrastructure

Introduction

Resilient infrastructure is critical to the safety, economy, and well-being of residents. Building infrastructure that is able to withstand and operate during natural disasters will decrease the need for post-disaster rebuilding and ensure the continuation of essential services.

This chapter covers five topics: air quality, extreme temperatures, transportation, water management, and wildfires. The Town has a history of extreme weather events, such as the September 2013 flood and May 2023 hailstorm as well as the long-lasting regional impacts of the December 2021 Marshall Fire. These strategies focus on increasing resources to mitigate current and future hazards while also encouraging increased avenues to support Town residents.

Air Quality

Background

Particulate matter and ground-level ozone, among other pollutants, impact human health, especially in vulnerable populations like children, older adults, and people with preexisting medical conditions like asthma. Air monitoring, education, filtration, and elimination of pollutant sources all contribute to a reduction in exposure and improvement in air quality and health.

Current Town Progress

- In 2021, Erie received a Clean Air Champions Award from the Regional Air Quality Council (RAQC). The Town was recognized for its commitment to improving regional air quality and has been awarded Charge Ahead grant funds (in partnership with RAQC) to create a network of electric vehicle charging stations that are available to the public.
- The Town monitors air quality at five stations near oil and gas wells. These stations measure volatile organic compounds, particulate matter, and meteorological data. Erie hosts a Boulder Atmosphere Innovation Research (AIR) monitoring station at the Erie Community Center.
- The Town Sustainability Division offers radon mitigation system rebates and high efficiency particulate air (HEPA) purifier rebates.
- Erie residents are eligible to receive rebates for heat pumps, induction cooktops, electric lawn mowers, and other items that reduce impacts to air quality through the Sustainability Division's Energy Efficiency Rebate program.
 - The Energy Efficiency Rebate program was launched as a pilot in August 2023. That year, 44 participants received \$16,534 in rebates during the initial five month period. In 2024, 258 participants received rebates totaling \$27,550 during the first full year of the program. In 2025, as of July, there were \$32,800 in rebates distributed among 209 participants. Grant funding from Boulder County has supported this rebate program to date.

Goals and Strategies

- Goal 1: Support the improvement of indoor air quality at home and in high-use areas such as the library and the community center.
 - Concept: Increasing air filtration during times when particulate matter and pollution is high can reduce exposure to pollutants and reduce impact to vulnerable populations.
 - Strategy 1: Educate homeowners and maintenance staff about options to create safe indoor air such as heat pumps and air purification systems.
 - Strategy 2: Continue to offer and expand Town Sustainability Division rebates for heat pumps, air purifiers, and radon mitigation systems. Explore the creation of income-qualified opportunities.
- Goal 2: Support the increased adoption of efficient, all-electric appliances including heat pumps and induction cooktops to eliminate the indoor combustion of fossil fuels and resulting air quality impacts.²⁵
 - Concept: Benefits of efficient electric appliances and heat pumps include lower cooling costs and improved indoor air quality.
 - Strategy 1: Educate residents at tabling and educational events on the additional heat pump rebates available from local utilities and organizations.
 - Strategy 2: Continue to offer Town efficient appliance incentives for residents.
 - Strategy 3: Develop a healthy homes education event with local partners to support electric equipment adoption for residents.
- Goal 3: Reduce air pollution from outdoor power equipment and other common sources of outdoor air pollution.
 - Concept: Eliminating common sources of outdoor air pollution will reduce circulating pollutants and improve local air quality, especially on high ozone days.
 - Strategy 1: Continue to offer Town Sustainability Division rebates for electric versions of common gas-powered equipment.
 - Strategy 2: Consider expansion of Town rebates to include electric string trimmers, leaf blowers, and snowblowers.
 - Strategy 3: Continue to advocate for statewide air quality improvement via participation in programs such as the Mow Down Pollution Program.
 - Strategy 4: Explore replacing Independence Day fireworks with a drone show or other display that does not impact local air quality.
- Goal 4: Increase public awareness of outdoor air quality.
 - Concept: Continuing to monitor air pollutants and clearly communicating poor air quality events supports residents with understanding current conditions and reducing exposure.
 - Strategy 1: Educate residents about health impacts, available alert systems such as high ozone alerts from RAQC, and actions to take when measured air pollutants like particulate matter and ozone reach health-impacting thresholds.
 - Strategy 2: Continue to maintain an air quality dashboard and integrate data from new monitoring stations.

Extreme Temperatures

Background

Average annual temperatures and the frequency of sustained periods of unusually hot weather are on the rise. With this trend projected to continue, residents can benefit from home weatherization and access to temperature-controlled public spaces. Town-wide efforts to increase the urban tree canopy can provide additional refuge through the shade, air filtration, and cooling that trees provide.

Current Town Progress

- According to the [Boulder County Urban Tree Canopy Assessment](#), Erie's urban tree canopy is 4% of the total land area. This assessment identified 7,313 acres within Erie that could be suitable for tree planting.
- The [Erie Tree Planting Programs](#), funded by the Tree Impact Fund, include an annual residential tree rebate, a homeowners association (HOA) cost share, and a school and nonprofit cost share.
- The Town has an [approved tree species list](#) to ensure diversity and resilience in Erie's urban tree canopy.
- The Erie Tree Advisory Board educates residents about the importance of trees, maintains Erie's Tree City USA certification, and promotes and co-organizes the annual Arbor and Earth Day event. They also work with schools to educate students from first through third grade about the importance of trees, and they plant tree seeds with the students so that the students can plant trees at home.
- Erie has adopted the 2021 International Energy Conservation Code (IECC) standard, with adopted amendments. The Town requires solar-ready roofs in residential building code and offers [solar photovoltaics \(PV\) and battery back-up incentives](#).

Goals and Strategies

- Goal 1: Gather hyperlocal heat data to better understand Town trends.
 - Concept: Collect and document additional data that shows neighborhood heat trends. This data will help staff and residents prioritize the areas of Town that will most benefit from targeted heat resilience efforts.
 - Strategy 1: Facilitate a Town heat mapping event, similar to the [event led by the National Oceanic and Atmospheric Administration \(NOAA\) in Boulder in 2022](#). This information can guide future action and focus areas for heat reduction activities where most needed. It can also provide an opportunity for resident education and engagement.
- Goal 2: Improve residential building efficiency.
 - Concept: Improved efficiency can reduce heating and cooling costs and improve comfort during extreme temperatures.
 - Strategy 1: Continue to offer Town Sustainability Division [home energy efficiency rebates](#).
 - Strategy 2: Continue to update Erie building codes in line with the International Energy Conservation Code (IECC) standards and strengthen amendments where appropriate.

- Goal 3: Expand and support Erie's tree canopy with a diverse and resilient set of species appropriate to the region.
 - Concept: An expanded tree canopy will reduce ambient air temperature, increase shade and cooling, filter air pollution, and slow stormwater runoff, among other co-benefits.
 - Strategy 1: Continue to incentivize tree planting by individual homeowners, HOAs, schools, and nonprofit organizations.
 - Strategy 2: Offer saplings and plants at a fall community event such as Erie Fest to encourage fall planting. This would be complementary to the annual Arbor and Earth Day event that takes place in the spring and provides trees for participants.
 - Strategy 3: Collaborate with Play Boulder to develop a Tree Tenders volunteer program similar to other communities in Boulder County. This collaboration could ensure viability and health of the trees given away at Town events.
 - Strategy 4: Educate and create Town website resources for property owners on proper structural pruning of street trees to ensure long-term tree survival.
 - Strategy 5: Prepare an Urban Forestry Strategic Plan to identify and share the actions Erie will pursue to achieve its urban canopy goals.
 - Strategy 6: Consider an income-based tree canopy water rebate to support residents with watering new or already established larger trees throughout Town, as new and larger trees require significantly more water during times of drought.
- Goal 4: Explore a cool or green roof project on Town property.
 - Concept: Cool and green roof treatments can reduce local heating effects and building energy costs. Green roofs absorb stormwater to reduce local runoff and can support local pollinator populations.
 - Strategy 1: Consider the possibility of a cool or green roof treatment on a Town-owned building to serve as a demonstration project.
- Goal 5: Increase adoption of solar PV energy generation and associated battery backup systems.
 - Concept: Increased local solar generation reduces the strain on transmission lines, reduces emissions from peaker plants, and could provide energy during utility disruptions.
 - Strategy 1: Continue to incentivize local PV solar energy rebates and associated battery backup adoption.
 - Strategy 2: Continue to incorporate solar panels into Town-owned facilities where appropriate.
 - Strategy 3: Continue to explore community solar garden opportunities for Erie residents, whether Erie-based or somewhere else in Colorado.

Partnership Opportunities

- Strategy 1: Work with Energy Outreach Colorado to explore income-based programs to offset higher winter heating costs for heat pumps and to support other home efficiency efforts.
- Strategy 2: Continue to educate homeowners in Boulder County about standard and income-qualified rebates through EnergySmart for home retrofits.

- Strategy 3: Continue to collaborate and communicate with outside organizations such as Xcel's Home Energy Squad program for efficiency audits and actions such as insulation installation and window replacement. This could be an expansion of the existing block grant program.
- Strategy 4: Employ local youth via the Community Forestry Corps for assistance with tree care and watering.
- Strategy 5: Partner with a local building owner to pilot a green or cool roof project. Gather data and share progress via the Town website and newsletters, and offer public tours to increase education.

Transportation

Background

96% of Erie residents that work commute to their jobs site outside of the Town. This can place a large burden on individual household spending through the ownership and maintenance of personal vehicles.²⁶ The Town of Erie's Transportation Division is focused on increasing the safety and effectiveness of all transportation methods through the 2024 Transportation Mobility Plan (TMP). Emphasis is placed on improving access to walking and cycling in the effort to improve air quality and well-being, traffic congestion, and emergency vehicle response times.

Current Town Progress

- The TMP is aligned with the 2019 Sustainability Action Plan. The TMP's capital investment strategy and implementation plan aims to reduce single occupancy vehicle travel to 58% of the transportation mode-share by 2025.
- The Transportation Division created a traffic operations model simulating the impacts of constrained corridors that surround the Town as well as the impacts of congested Colorado Department of Transportation (CDOT) highways on all four sides of Erie.
- The Town has a 2008 anti-idling ordinance that applies to Town vehicles.
- The Transportation Division has a Neighborhood Speed Management Program that aims to incorporate resident feedback to reduce speeding and promote walking and biking.
- The Town continues to improve physical street quality through the Safe Streets For All Federal Grant, Weld County Safety Action Plan, I-25 improvement projects, and others.
- The Town of Erie currently has 20 miles of on-street walking paths and 77 miles of off-street walking paths.
- The Town Sustainability Division offers e-bike incentives, which are stackable with the state e-bike tax credit. Research was conducted by the Transportation Division to understand the efficacy of an e-bike share program.
- The Town of Erie was a part of the Northwest Regional Bike Share Feasibility Study to inquire if a bike share program was going to be beneficial for the community.
- In 2025, Erie received the Charging Smart Bronze Designation award from the Interstate Renewable Energy Council for its electric vehicle (EV) policies and adoption efforts. These are

supported by the municipal fleet electrification procurement policy and incentives from [Town of Erie Energy Efficiency Rebates](#) for at-home EV chargers. There are additional incentives from the [Xcel Energy EV Charger and Wiring Rebate](#) and [United Power EV Rebates](#).

- Regional Transportation District (RTD) bus access has increased to 15 bus stops in Erie through the JUMP bus route.
- Erie continues to strategically expand EV charging infrastructure. Erie will reach 35 public chargers by the end of 2025.
- A [Boulder to Erie bike path](#) is being developed to provide Erie and Boulder residents with a safe bike path as a method of transportation and recreation.
- RTD JUMP Bus Route Extension Plan Phase 1 and 2 is planned to extend into Weld County.
- The Transportation Division is developing traffic signal timing plans to support the risk analysis from emergency responders.

Goals and Strategies

- Goal 1: Support increased safety for pedestrians and cyclists that incentivizes cycling, walking, and multi-modal transportation for all age groups.
 - Concept: Ensure Erie residents have access to walkable and bikeable routes. These routes will also provide pedestrians and cyclists with increased safety in their travels.
 - Strategy 1: Educate residents on the importance of safety lights and reflective clothing in low light conditions.
 - Strategy 2: Work with vendors to pilot a shared mobility program with e-bikes and/or scooters to create additional emissions-free mobility options.
 - Strategy 3: Continue to increase bike parking and anti-theft infrastructure.
 - Expand bike garages for efficient land use while increasing parking opportunities and decreasing the opportunity for bike theft. For instance, [the City of Fort Collins provides secure downtown bicycle parking](#).
 - Use [BikeRackMap.com](#) to support best practices with bike parking. Offer Economic Development Department and Environmental Services Department incentives to private businesses to upgrade bike parking facilities to encourage biking.
 - Offer Town of Erie Economic Development Department and Environmental Services Department incentives to build mobility hubs that include covered solar parking for e-bikes and EVs at shared parking locations such as shopping centers.
 - Strategy 4: Work with vendors to provide a small fleet of e-bikes that can be checked out at the library or community center, or provide passes for bike share access at the Erie Community Library. Educate users on proper storage and charging practices to maximize safety and lifespan of the e-bikes.
 - For example, the [Telluride Townies program](#) allows residents and visitors to check out a bike for up to four days, and [Boulder BCycle provides fobs that can be checked out from Boulder libraries](#).
 - Strategy 5: Build raised sidewalks and bike paths, and incorporate physical barriers that are compatible with snow plowing and maintenance operations. By providing a physical barrier between pedestrians, bikes, and cars on the road, collision likelihood is decreased.

- Strategy 6: Explore the feasibility of reducing minimum parking requirements similar to the City of Boulder in their updated parking requirements in their [Access Management and Parking Strategy Code and Policy Updates](#).
- Goal 2: Improve bus stop quality and access.
 - Concept: Provide high quality bus stops to make travel by bus more comfortable, accessible, and safe.
 - Strategy 1: Prioritize new bus stop shelters with protection from extreme weather events such as heat, hail, snow, wind, and rain that include seating.
 - Strategy 2: Provide communication of nearest water refill stations at bus stops.
- Goal 3: Provide evacuation education and clear route signage for each major hazard in Erie. Review and update the TMP information related to emergency evacuation on an annual basis.
 - Concept: If an extreme weather event were to occur in Erie, it is important that people know where to go in times of crisis. Evacuation routes for wildfire and flooding require unique strategies.
 - Strategy 1: Provide emergency response educational presentations and climate preparedness classes at the Erie Community Center. Include partner agencies such as Mountain View Fire Protection District (MVFPD) and the Erie Police Department to help constituents understand the importance of Go Bags, emergency management operations, and available alert systems.
 - Strategy 2: Send emergency alerts with a link to a live updated evacuation route map for each type of major environmental hazard, such as floods, tornadoes, and wildfires.
 - Strategy 3: Deploy Variable Message Boards (VMBs) around Town that advise evacuation routes.
 - Strategy 4: Use cameras and artificial intelligence (AI) tools to monitor emergency conditions and provide alerts to emergency responders proactively.

Partnership Opportunities

- Strategy 1: Continue to partner with [Transportation Assistance and Options non-profits](#) for transportation accessibility.
- Strategy 2: Develop bike and walking trains with local businesses and schools to build community and safety in numbers when commuting.
 - The [City of Boulder Safe Routes to School Program](#) and [El Monte Walking School Bus Program](#) in California are examples of increased transportation safety efforts.
- Strategy 3: Develop financial incentive programs with local businesses for non-car commutes to work.
 - The Google Boulder Campus incentive program provides increased salary for non-car commuters.²⁷
- Strategy 4: Continue to invite local bike shops to Town events so that residents can learn about available incentives and mobility options such as bicycles and e-bikes while supporting the local economy.

Water Conservation and Stormwater Management

Background

To ensure residents have access to safe, clean drinking water, the Town has developed several measures to improve water quality, storage, and usage. In 2021, the Town of Erie finalized the [Water Efficiency Plan](#) and the [Drought And Water Supply Shortage Plan](#). This section of the plan works in partnership with these plans, as well as the water efficiency goals present in the 2025 [Parks, Recreation, Open Space, and Trails Plan](#). These goals support previous efforts and further protect water resources against potential hazards such as droughts, floods, and pollution.

Current Town Progress

- The Town has increased efficiency with its water use, as seen in the overall decrease in [Town water usage per capita per day](#). These impacts are the result of several Town programs such as the installation of smart water meters, tiered billing rates, [water efficiency rebates](#), and the launch of the Sustainability Division [Turf Replacement Rebate program](#) in 2021.
- The Town's [Stormwater Quality Program](#) ensures compliance with the Colorado Department of Public Health and Environment (CDPHE) municipal separate storm sewer system (MS4) permit. This program provides materials to educate residents and businesses about protecting water quality, supports the investigation and remediation of illicit discharges, trains Town staff on ways to identify pollutants and reduce pollution while doing their daily job tasks, and ensures that new development meets design standards for providing water quality.
- The Town has created a stormwater maintenance division within the Utilities Department that inspects, maintains, and repairs stormwater infrastructure.
- [Town of Erie's Floodplain Information website](#) provides resources for understanding flood risk.
- After the flood in 2013, the Town of Erie has improved floodplain data, mapping, and tracking. The Federal Emergency Management Agency (FEMA), Boulder County, Weld County, and the [Mile High Flood District \(MHFD\)](#) collaborate to alert and prevent floods from causing death and destruction of infrastructure.²⁸
- The Town of Erie design standards follow the [Mile High Flood District Criteria Manual](#) to include Permanent Control Measures that promote soil infiltration.
- [Town of Erie ordinances for flood hazard reduction](#) require floodplain development permits for construction in the [FEMA Special Hazard Flood Area \(SHFA\)](#).
- [The Coal Creek Expansion project](#) and [the Erie Wetlands](#) mitigate erosion, protect infrastructure, reduce flood risk, educate the public about wetland importance, and improve water quality.
- The Town holds commemorative events such as the Ten Years Later flood remembrance event which was held to educate people on flood risk and to honor those who lost their lives and homes.
- The Town is creating a waterwise landscaping ordinance to improve water usage in new developments. This ordinance will encourage use of vegetated swales.
- The Town is partnering with the [Weld County Youth Conservation Corps](#) to implement a Flush and Flow Program and install high-efficiency toilets in residential homes.

- The Coal Creek Channel Restoration and Flood Control project is upcoming. The project will realign Coal Creek to create a natural stream function, and County Line Bridge will be re-constructed. The result will be a functioning creek that removes several Erie and Weld County residents from the floodplain.

Vegetated Swale

Vegetated swales act as dry ponds with drains in the center to allow water to naturally pool in the area. Native flowers, grasses, and trees can also be planted to slow the speed at which the water is traveling and allows the water to infiltrate.



Image of how vegetated swales can be seamlessly integrated into urban design.²⁹

Goals and Strategies

- Goal 1: Use education and advocacy strategies in programs and resources focusing on residential, industrial, and commercial water demands, specifically in the case of drought conditions.
 - Concept: The Town has several opportunities to support residents in improving their water usage. This goal continues to increase education and equitable access in this area. It is important to educate the public about the likelihood of drought in their community. Once residents understand the likelihood, the community then needs to know how to respond.
 - Strategy 1: Educate Town residents on [rainwater storage regulations](#) and best practices for their homes and connect them with the [existing Town rain barrel rebate](#).
 - Strategy 2: Track water use in Town-owned properties and display the results on a public dashboard.
 - Strategy 3: Ensure government employees in charge of tracking and alerts are employed and adequately funded to conduct their duties and ensure emergency alerts for floods and drought conditions are timely and accurate.
- Goal 2: Integrate low impact development (LID) methods into all Town planning.
 - Concept: LID methods create a design process that upholds the ecosystems and water systems present in the environment of an area during development to protect or mimic its processes.³⁰ The systems of urban areas are often interconnected, and features within and near water systems can be altered to better support Town operations.
 - Strategy 1: Implement low impact development methods in new construction.
 - For example, the [City of Edmond Resiliency Action Plan](#) is currently working to expand their LID requirements for new construction and redevelopment.
 - Strategy 2: Explore installment of sump pumps in public buildings vulnerable to flooding.
 - Strategy 3: Create training opportunities for low impact development operation and maintenance strategies for the Town workforce.
- Goal 3: Retrofit public streets into green streets through reducing impervious and dark surfaces.
 - Concept: Streets are a key feature of urban areas and can be tailored to the needs of the community and environment to become multi use. Minimizing hard, dark surfaces such as asphalt reduces local heating and stormwater runoff.
 - Strategy 1: Create educational opportunities for Town residents to integrate features of green streets on their properties.
 - Strategy 2: Identify a pilot parking lot site for retrofitting. Consider replacing asphalt with permeable surfaces and lighter colored material, integrating green infrastructure for shading and stormwater filtration, increasing shading with elevated solar, or adding porous pavers similar to the [University of Colorado Boulder Stormwater Management and Performance Goals \(PDF\)](#).

- Strategy 3: Integrate rain gardens with native plants in vacant lots to improve stormwater control and provide water to the local soil and environments. Rain gardens are usually located near corners of sidewalks to improve pedestrian safety and comfort.
- Strategy 4: Review Town codes to determine where shading and porous surfaces can be incorporated, such as new parking lot construction, in a way that is compatible with snow plow and maintenance operations. Efforts can be combined with strategies from the Town ordinance for water wise landscapes.
- Strategy 5: Incorporate lighter colored road treatments where possible, such as cool pavement methods used by the City of Phoenix, Arizona.

Wildfires

Background

The Town works with several partners to decrease potential wildfire hazards during warm weather and dry conditions. The Parks and Recreation Department has implemented several methods that are nationally recognized to maintain the health of open space within Town limits. The aim of these strategies is to increase education and partnerships to continue improving the proactiveness of the Town to reduce wildfire impacts.

Current Town Progress

- The Town of Erie works with Wildfire Partners to improve wildfire mitigation for residents within Boulder County. These efforts include individual home assessments, a community chipping program, and rebates for mitigation strategies.
- The Town Recycling Center collects items that may act as wildfire fuels, such as yard waste.
- Weld County regulates open burning permits to mitigate potential wildfire risk.
- The Town provides resources for licensed arborists to begin the process of residential wildfire mitigation on resident properties.

Goals and Strategies

- Goal 1: Increase wildfire mitigation education and infrastructure strategies.
 - Concept: Several wildfire mitigation practices were identified by community leaders, and increasing access and implementation for these safety measures will better adapt the Town for future extreme weather events. For example, the Colorado Wildfire Resiliency Code Board developed changes to building codes to improve Colorado wildfire resilience.
 - Strategy 1: Hold seasonal workshops for Town residents to develop wildfire action plans for their residences and improve wildfire mitigation strategies in the area immediately surrounding and within their residences.
 - Additional resources are provided by Wildfire Partners' community advising, Cal Fire's Wildfire Action Plan website, the Communities Pathways Interactive Tool from the Fire Adapted Communities Learning Network, and safety awareness materials from the U.S. Fire Administration. Action plans also support Town residents in preparing for other extreme weather events.

- Strategy 2: Work with HOAs to integrate a strategy for noncombustible siding material on buildings. Wildfire Partners recommends a minimum of six vertical inches of noncombustible siding material.
- Strategy 3: Work with Xcel Energy and United Power to continue to bury electrical lines and distribution lines for critical operations to reduce the likelihood of ignition and reduce power disruptions during extreme weather events. United Power has specific funding resources the Town can utilize to support these efforts.
- Strategy 4: Increase awareness for proper disposal of toxic and flammable chemicals and other materials, such as lithium batteries, as well as their connection to wildfire resilience for residents at Town events.

Partnership Opportunities

- Strategy 1: Partner with relevant organizations to provide emergency response educational lectures at the Erie Community Center.
- Strategy 2: Incentivize residential and agricultural collection of wood chips and plant debris for fertilizer or additional biochar applications with Biochar Now or the Town Recycling Center.
 - For instance, the City of Edmond Resiliency Action Plan is planning to apply urban wood utilization practices to provide fertilizer and improve overall land use and urban design.
- Strategy 3: Work with wildfire mitigation experts such as Wildfire Partners to expand individual home assessments for regions within the Town that currently do not have access to these types of programs.
 - Community Mitigation Assistance Teams, Community Planning Assistance for Wildfire, the Fire Adapted Communities Learning Network, and the Wildfire Resiliency Code Board may provide further resources.
- Strategy 4: Explore the option of prescribed burning and regular brush management for grasslands where appropriate for fuels and ecosystem goals.
 - The Colorado Division of Fire Prevention and Control has resources for prescribed burning and a Certified Burner Program for private land. The Florida Department of Agriculture and Consumer Services also has resources for prescribed burning.

Land Management



Introduction

The planning area for Erie spans 48 square miles, of which 21 miles are incorporated. The Town boasts 1,500 acres of open space, including 285 acres of agricultural land. A common bond between both public and private lands is that they contribute to local biodiversity, stormwater management, and air and water filtration. Plants within this area also keep temperatures cool, provide shade, and create habitats for pollinators and other wildlife. Additionally, low water use and firewise landscaping practices contribute to greater water conservation and wildfire risk reduction. Open space and mountain vistas are an integral part to quality of life in Erie, and the Town has 70 miles of trails that support a healthy and active population and culture.

Areas of focus within this chapter include agriculture, landscaping, parks, and open space. Each focus area contains overarching goals supported by adaptive strategies. This chapter also includes partnership opportunities that further enhance Town-led efforts.

Agriculture

Background

The agriculture sector of Erie holds economic, ecologic, and historical significance. For over a century, local agriculture operations have supported the community with staple crops such as corn, alfalfa, wheat, and sugar beets, as well as livestock and dairy production. Agricultural lands in and around Erie's borders play a significant role in resilience as the Town continues to expand in population and urban development. Preserving agricultural land, promoting local food systems, supporting soil quality, conserving water, and enabling adaptive practices are essential components of building long-term community and environmental health.

Current Town Progress

- The Town of Erie currently manages 285 acres of agricultural land. The Agricultural Land Lease Program allows private landowners to lease Town-owned property for agricultural use.
- The [Erie Farmers Market](#) provides a place for farmers to sell Colorado-grown produce and goods directly to locals and visitors.
- The Town of Erie partnered with [Community Fruit Rescue](#) in 2025 to reduce food waste and increase access to local fruit.
- Redevelopment of the Schofield Farm property includes new event space and will soon provide an [Erie Makerspace](#) and classrooms for rent.

Goals and Strategies

- Goal 1: Consider creating a designated Sustainable Agriculture Plan for Erie.
 - Concept: It is important to develop a central hub of information including best practices and sustainable applications as agricultural operations continue to evolve. This plan is an opportunity for agriculture workers, scientists, and government officials to work together to solve complex environmental and economic problems.
 - Strategy 1: Review and consider combining aspects of multiple State of Colorado, Town of Erie, Boulder County, and Weld County plans to inform the first Town of Erie Sustainable Agriculture Plan. The information would build on local resources such as [Boulder County's agriculture management resources](#), [Weld County's Right to Farm Statement](#), [Colorado State University's sustainable agriculture resources](#), and the [Colorado Environmental Agriculture Program](#).
 - Strategy 2: Describe financial and environmental benefits of sustainable agriculture such as rotational animal grazing, reducing reliance on artificial fertilizers and pesticides, using cover crops to improve soil health, and others.
- Goal 2: Increase economic opportunities for small scale agriculture operations.
 - Concept: Increasing the economic opportunities for small agriculture operations ensures economic viability and survivability of their operations.
 - Strategy 1: Explore the interest in expanding access to local produce by partnering with the Erie Farmers Market or other partners to create a local food market similar to a [community supported agriculture \(CSA\)](#) model.
 - Strategy 2: Build agrivoltaics legislation into the next [Erie Unified Development Code](#) update. Agrivoltaics provides agricultural land owners with additional income from solar energy generation on cropland and grazing land.
 - Strategy 3: Continue to provide business plan assistance through the Economic Development Council. This could include planning tips for the business side of agriculture such as contracting with distributors, integrating event space, operating tours, and hosting field trips.
 - Strategy 4: Engage and promote current and future farm-to-table restaurants to expand local food distribution.

Partnership Opportunities

- Strategy 1: Advocate for sustainable agriculture lessons in K-12 classrooms through in-school presentations.
 - High school students could develop a project that would involve coming to elementary and middle schools to talk to younger students about the agriculture programs that Erie has such as the [Mountain Vista High School Agriculture Curriculum](#) and [Erie High School Agricultural Sciences Program](#).
- Strategy 2: Encourage private agricultural land owners to partner with the non-profits such as [MAD Agriculture](#) and [Frontline Farming](#) for education on sustainable agriculture and regenerative agriculture practices.

- Strategy 3: Explore partnerships that would provide incentives for agricultural practices to transition to drought-tolerant crops and technologies, such as agrivoltaics.
- Strategy 4: Partner with the Farmers of America Mentorship Program for new farmers and students.

Agrivoltaics

Agrivoltaics is a system where agricultural (crops or livestock) and solar energy production are taking place on the same piece of land. This creates a dual use parcel of land to maximize profits and improve environmental quality. Solar panels are a renewable energy source, and at the same time these solar panels provide shade to the soil and animals below. The shade provides a safer and more comfortable habitat for the livestock and prevents excess evaporation from the irrigated crops. Jack's Solar Garden is a local example of agrivoltaics in Longmont, Colorado.



Image of Jack's Solar Garden agrivoltaics system in Longmont, Colorado.³¹

Landscaping, Parks, and Open Space

Background

Erie's parks and open spaces provide endless opportunities for community events, recreation, and scenic vistas. These amenities include hundreds of acres of protected land that deliver services such as stormwater retention and filtration, habitats for wildlife, and areas for native trees, plants, and grasses to thrive.

Current Town Progress

- According to the [2025 Town of Erie Community Profile](#), Erie boasts 1,500 acres of parks and open space and 70 miles of trails. 99% of residents have access to at least one park within one mile of their home.
- Erie continues to improve irrigation efficiency in Town parks, as outlined in the [Parks, Recreation, Open Space, and Trails Plan](#) and [Water Efficiency Plan](#). Strategies have included the installation of smart irrigation controls and moisture sensors at Town parks, irrigating during times where evaporative loss is minimal, and maximizing reuse water for irrigation purposes.
- The Town Sustainability Division facilitates an array of rebates that incentivize residents to reduce outdoor water usage and integrate low water use landscaping. Since 2022, the [Turf Replacement Rebate Program](#) has provided \$269,510 to support the removal of approximately 206,127 square feet of turf. Additionally, 200 participants have received more than \$40,000 through [water efficiency rebates](#).
- The Sustainability Division supports volunteers in the [Adopt-a-Road program](#) to help maintain open spaces near roads.
- Resource Central, a local nonprofit, has supported outdoor water conservation via the [Lawn Replacement](#), [Garden in a Box](#), and [Slow the Flow](#) programs in Erie since 2004.
- Town efforts are bolstered by [Colorado Senate Bill 23-178](#), which prevents HOAs from requiring residents to maintain water-intensive turf grass.
- The [Open Space Management Plan](#) contains a list of plant species that can harm native species.
- Parks and Open Space Staff prune all Town property trees on a four year cycle to ensure tree health, removing potential wildfire ladder fuels in the process.
- [The Town of Erie floating solar project](#) will be 1.2 megawatts in size and is being installed at the North Water Reclamation Facility.
- Pollinator habitats have been prioritized in recent years.
 - Pollinator habitat exhibits and water wise landscaping can be seen throughout town. These exhibits include the Erie Town Hall front lawn, Thomas Reservoir, and Erie Community Park.
 - The Sustainability Advisory Board sponsored and passed Erie's first Pollinator Proclamation in June, 2025.
 - [Erie's Buzzing Gardens Mapping Program](#) is a "map showcasing public pollinator habitats and pollinator friendly gardens planted by Erie residents."

- Friends of Coal Creek Pollinator District Program is a map that highlights native pollinator gardens in towns connected to Coal Creek.
- Resource Central's Garden In-a-Box Program sells a variety of affordable native plant kits to support healthy residential ecosystems that are very popular with residents. The Town subsidizes the cost of these kits for residents.
- Erie's Sustainability Advisory Board hosts pollinator-focused events such as National Pollinator Week
- There are native bee house workshops from the High Plains Library District.
- Erie is in the process of becoming a Butterfly Pavilion Certified Pollinator District.

Why are pollinator species important?

As towns and cities expand, there is less native habitat for species to survive. Pollinators are keystone species, which means without a sufficient population of pollinator species such as birds, bees, butterflies, beetles, and bats, the biodiversity and health of ecosystems diminishes. Pollinators play a significant role in ecosystem health and the overall food supply, as these animals are responsible for 35% of all food production globally.³² Pollinator species are responsible for the reproduction of many fruits, vegetables, and nuts. These crops play a massive role in the economy of Colorado, the United States, and the rest of the world.



Bees pollinating an apple crop.³³

Goals and Strategies

- Goal 1: Increase public volunteer and educational opportunities.
 - Concept: Volunteer opportunities provide forums for educational messaging, increase community land stewardship, strengthen community bonds, and provide additional human resources to supplement staff efforts.
 - Strategy 1: Develop and support Town-led volunteer events at parks to perform nature restoration such as weed removal, streambank restoration, and trash cleanups.
 - Resources and support can be acquired from community partners such as projects led by Wildlands Restoration Volunteers and volunteer opportunities from Boulder Open Space and Mountain Parks.
 - Strategy 2: Create an advertising campaign for residents on plants, insects, and other species that can cause harm to native species.
 - The public awareness campaigns resources from the United States Department of Agriculture (USDA) and the North American Invasive Species Management Association's awareness campaign provide various resources for campaigns and general outreach to the public. The California Department of Fish and Wildlife also has a week-long awareness event that provides further examples.
 - Strategy 3: Provide Town resources or create an awareness campaign for residents to reduce wildlife conflicts.
 - The Town can join a committee in the Habitat Partnership Program for more resources and support. Jeffco Open Space provides a platform for park visitors to report interactions with local wildlife.
- Goal 2: Continue to minimize non-functional turf grass.
 - Concept: Removal of nonessential turf grass reduces outdoor water use.
 - Strategy 1: Pilot low-water grass in place of Kentucky Bluegrass in a park, and add signage for public education.
 - The City of Lafayette recently carried out its own low-water pilot project. Examples of low-water grasses include Tall Fescue, Sheep, Blue, and Hard Fine Fescues, Tahoma 31 Bermuda Grass, Texas Hybrid Bluegrass, and Dog Tuff Grass, among others, per the Town Turf Replacement Rebate Program.
 - Strategy 2: Conduct an assessment of Town properties to determine coverage by non-functional turf and noxious weeds. Prioritize replacement with low-water, drought-tolerant, fire-adapted, and pollinator-friendly native plants.
 - Strategy 3: Continue to provide incentives for residential turf replacement. Explore ways to increase resources for conversion projects for residents and businesses, including regular educational events.
- Goal 3: Perform strategic wildfire fuels mitigation in open spaces.
 - Concept: Continue to selectively reduce fuels in parks and open space to reduce risk to natural resources, infrastructure, and adjoining properties as well as to reduce cost to rebuild and retrofit damaged infrastructure.

- Strategy 1: Inform residents of more extensive fire mitigation strategies, such as prescribed burning and fuel breaks, before they are implemented, at Town events and on the Town website.
 - The [Colorado Department of Public Health and Environment's website for community outreach on prescribed fires](#) and the [Fire Adapted Communities Network's lessons learned for prescribed fires](#) provide resources for this strategy.
- Strategy 2: Continue to perform strategic mowing along property boundaries, in proximity to buildings, and where fuel breaks can reduce likelihood of fire spread and provide safe areas for firefighters to conduct their work.
 - Examples of fuel breaks are present within [Northern Colorado Fireshed Collaborative's prescribed fire projects](#) and [Summit County's fuel breaks](#).
- Strategy 3: Use fire-adapted landscaping principles near Town buildings, such as spacing plants appropriately, avoiding flammable species, and maintaining defensible space.

Partnership Opportunities

- Strategy 1: Staff continue to support the efforts of the Sustainability Advisory Board and local nonprofits such as Friends of Coal Creek for pollinator and low-water garden tours and firewise landscaping workshops.
- Strategy 2: Continue to explore a collaboration, including funding the [Arbor Day Foundation](#), to provide additional trees for residents.
- Strategy 3: Review the state of natural surface trails and identify potential barriers to accessibility by working with local partners, such as Monarca Group.
- Strategy 4: Connect residents with seed libraries of native plants that have low flammability and are water efficient.
 - The [Boulder Public Library's Seed Library](#) is a potential partner, and the [Jefferson County Extension Seed Library in Washington](#) provides a model for future seed libraries.
- Strategy 5: Increase connections with HOAs to promote pollinator habitats. Homeowners can also learn how to create native pollinator habitats through [Friends of Coal Creek garden assessments](#), a "leave the leaves" campaign, and reduction of pesticide use.
- Strategy 6: Expand education and efforts to become a [DarkSky Certified Town](#) to reduce artificial lighting and disruptions to pollinator species' circadian rhythms.
- Strategy 7: Integrate indigenous perspectives from local and regional partners in Town conservation efforts.
 - Resources are provided by [Right Relationship Boulder](#), the [Tribal Consultations website from the City of Boulder](#), the [Denver American Indian Commission](#), and the [Colorado Commission of Indian Affairs](#). [CU Boulder's previous conservation workshop](#) that may serve as a model for future actions.

What is a pollinator habitat?

A pollinator habitat has three different blooming native plants for each season (three in the spring, three in the summer, and three in the fall).



Erie Community Park has a Native Pollinator Garden within it.³⁴



People can create pollinator habitats in their own backyard with bee houses and native plants.³⁵

Community



Introduction

A stable community ensures that all people are given the opportunity to succeed through responsibility, safety, connectedness, opportunity, and health. This chapter provides information on the key components of accessibility, economic development, healthy lifestyles, the creation of a resilience hub network, and youth empowerment. This chapter also includes partnership opportunities that further enhance Town-led community building and engagement efforts. Building a well-rounded community takes persistent time, effort, and commitment. As a result of such efforts, the residents of Erie can continue to be proud of the place they call home.

Accessibility

Background

Accessibility ensures that all residents, regardless of age, ability, or background, can easily engage with their environment, explore educational opportunities, and have fulfilling experiences. While this includes compliance with the Americans with Disabilities Act (ADA), Town resources strive to go further with supportive and effective methods that improve overall quality of life.

Current Town Progress

- The Town of Erie Risk Management Division has various responsibilities, including managing the Town Safety Program as well as issues concerning physical compliance with the Americans with Disabilities Act (ADA).
- The Town Communications Team ensures the Town website complies with guidelines from the Web Accessibility Initiative and has a grievance procedure for ADA complaints. The Town Statement of Accessibility is also published online.
- The Erie Police Department has staff available to assist residents in accommodations to access Erie police services.
- The Town is updating their ADA Self-Evaluation and Transition Plan, which includes ADA self-evaluations being conducted on public right-of-ways within Erie.

Goals and Strategies

- Goal 1: Increase accessibility by expanding related learning opportunities within the local community.
 - Concept: As the age of Town residents advances, and to mitigate social vulnerabilities, increased resources and events focused on accessibility can improve the awareness, connectivity, and preparedness of the local community.
 - Strategy 1: Increase outreach and learning opportunities during Town events for accessibility support and resources, such as service animals, culture within the disability community, and ADA resources.

- Resources are available on the [United States Primer for State and Local Governments](#) and [University of California San Francisco's overview of disability culture and identity](#).
- [DisabilityResources.org's list of Colorado disability services](#) and the [Colorado Programs for Individuals with Physical or Developmental Disabilities](#) also provide other methods of support.
- Strategy 2: Advertise Erie Community Library resources and [Erie Uplink resources](#) during Town events, such as [Experience Passes](#), basic need resources, guides for parents, tax information, and more.
- Strategy 3: Establish partnerships to support regular training sessions on conflict de-escalation and accessibility for local government staff and local law enforcement.
 - [Colorado Circles for Change](#), [Conflict Transformation Works](#), [Right to Be](#), [The Circles Project](#), and the [National Conflict Resolution Center](#) have resources to build upon these workshops.
- Strategy 4: Continue to research methods and expand resources for translating Town and other important documents into different languages or providing translation services.
- Strategy 5: Continue to explore expanding access to free public WiFi with potential partners, such as Allo.
 - For instance, the [City of Boulder Connect Boulder initiative](#) and [Pearl Street's free WiFi partnerships](#) may provide guidance.
- Strategy 6: Look into joining the [Government Alliance on Race and Equity](#) (GARE) network to acquire resources to better support the community.
- Goal 2: Support increased access to community engagement and services for people with disabilities.
 - Concept: As the Town grows, continued assistance for support systems ensures all residents can meet their needs as locally as possible.
 - Strategy 1: Establish a Vocational Rehabilitation Process for Town residents with disabilities.
 - For example, the [Delaware Vocational Rehabilitation Process](#) has resources for creating this process and supporting participants.
 - Strategy 2: Create partnerships to increase funding and resources for Town residents seeking specialty care.
 - The [Colorado Health Assistance Programs](#) also provide various avenues for support.

Partnership Opportunities

- Strategy 1: Work with the Erie Community Library to advertise and expand language workshops for residents learning English as a second language, as well as for English speakers to learn regional languages such as Spanish, Nepali, Arapaho, and American Sign Language.
- Strategy 2: Work with Being Better Neighbors and the P.L.A.Y. Education Corporation to integrate opportunities for individuals with disabilities as well as youth training opportunities for cultural humility and social inclusion into Town events.
- Strategy 3: Continue to expand potential partnerships with other local community organizations to improve connection within the Town.

Economic Development

Background

Economic development plays a critical role in building long-term community resilience by supporting diverse industries and ensuring inclusive access to opportunity. By continuing to expand existing efforts that support small businesses, invest in workforce development, and encourage innovation, Erie can continue to create an economic foundation that can withstand disruptions and adapt to change while ensuring that prosperity is shared equitably across the community.

Current Town Progress

- Erie has a bilingual Small Business Development Center counselor available to provide free guidance to local entrepreneurs.
- The Town offers business incentive programs such as the Old Town Revitalization Grants, tax increment financing funds, and a Construction Mitigation Grant Program.
- The Economic Development Department and the Sustainability Division recognize sustainable businesses via Colorado Green Business Network of Erie recognition.
- The Town website provides a thorough list of available resources to help prospective entrepreneurs start their businesses.
- The Erie Chamber of Commerce has a local business membership program that provides local business support through advertising and access to Town events.

Goals and Strategies

- Goal 1: Provide Erie businesses and residents with the ideas, tools, and finances to become more inclusive, environmentally responsible, and resilient.
 - Concept: This goal can aid the Town by ensuring the economy flourishes well into the future by basing values in social equity, infrastructure efficiency, and expanded market reach.
 - Strategy 1: Explore providing resources for businesses to conduct racial equity analyses such as Allyship at Work and Equity In The Center.
 - Strategy 2: Continue work on establishing a plan to support a Black, Indigenous, and People of Color (BIPOC) marketplace.
 - Strategy 3: Continue to support and expand sustainability-related workshops for businesses to learn how they can improve efficiency and lower costs through Town rebates and other initiatives.

Partnership Opportunities

- Strategy 1: Partner with the non-profit United States Green Building Council (USGBC) and other community based organizations to provide support, technical assistance, and training for local businesses to learn about sustainability certifications for buildings and operations such as the Leadership in Energy and Environmental Design (LEED) certification.

Healthy Living

Background

An equal opportunity to live a healthy lifestyle is a key part in building a thriving community. This includes access to clean air and water, opportunities for physical activity, healthy food options, and support for mental and emotional well-being. Encouraging healthy lifestyles provides education, access, and opportunities for the prevention of common chronic health conditions. When people in a community are healthy, they are better able to adapt to change, recover from challenges, and support one another. As the Town continues to grow, it is crucial that health and wellness are considered in local decisions.

Current Town Progress

- The Town of Erie offers many [Specialty Fitness and Wellness Programs](#).
- Unique recreational fitness opportunities in Erie include the [Erie Singletrack Trails at Sunset Open Space](#), [Boulder Valley Velodrome](#), and [Erie Revolution Pumptrack](#).
- Senior Citizen fitness opportunities in Town include the [Tivity Health SilverSneakers Fitness Program](#), [Silver and Fit Program](#), and [both indoor and outdoor pickleball courts](#).
- Erie celebrates [National Family Health and Fitness Day](#).
- The Town provides [Erie Community Resources \(PDF\)](#) for mental health and other services.
- [Erie Community Food Bank](#) currently provides food assistance services to roughly 300 residents monthly.
- [Visitors to Serene Park have access to public outdoor gym equipment](#).
- [Boulder County provides free Healthy Home inspections for radon](#).
- [Weld County provides free short-term test kits for radon](#).
- The [Town of Erie Air Quality Monitoring Program](#) provides residents with access to air quality education and mapped data collection.
- The [2025 Town of Erie Drinking Water Quality Report \(PDF\)](#) showed no contamination above unsafe and legal thresholds for all potential contaminants.
- There are many [measures the Front Range Landfill takes to ensure compliance with local, state, and federal laws](#). The landfill has multiple levels of protection to prevent environmental contamination.
- The Town provides guidance on staying safe from stormwater and waterway contamination through [Coal Creek recreation recommendations](#).
- The [Oil and Gas Unified Development Code \(Chapter 12\)](#) aims to improve communication and health standards of oil and gas companies in an effort to protect the people that live and work near development sites.

Goals and Strategies

- Goal 1: Reduce potential exposure to contamination from oil and gas operations in and around the Town of Erie.
 - Concept: Oil, gas, and decommissioned mining sites are within Erie and surrounding areas. It is important to educate people on their possible exposure to environmental contaminants from these operations.

- Strategy 1: Ensure full transparency chemical-use disclosure from the oil and natural gas industries. This can be done by providing homeowners near fracking sites with a list of written legislation and potential exposure levels to chemicals.
 - State resources:
 - [Oversight Of Chemicals Used In Oil and Gas \(PDF\)](#)
 - [Colorado Chemical Disclosures website](#)
 - Federal resources:
 - [Resource Conservation and Recovery Act](#)
 - [Comprehensive Environmental Response](#)
 - [Compensation, and Liability Act](#)
 - [Emergency Planning and Community Right-to-Know Act](#)

Partnership Opportunities

- Strategy 1: Increase access to community gardens through collaboration with HOAs, specific neighborhoods, and organizations such as [Denver Urban Gardens \(DUG\)](#).
 - DUG provides resources on how to build a community garden and education on [the benefits of a community garden](#).

Resilience Hubs

Background

Resilience hubs are community assets that provide services during regular operations (blue sky days) and during emergencies and recovery efforts. They can be located within government buildings or at the facilities of trusted community partners. With the appropriate infrastructure, preparation, and coordination, resilience hubs can support the community during times of crisis. Common services provided at hubs include climate-controlled building access during extreme temperatures, backup power during utility disruption, poor air quality relief, reliable communications, and distribution of necessary resources.

Current Town Progress

- Erie does not currently have a holistic resilience hub, though it does have many nonprofit, religious, and community organizations that could support the creation of a resilience hub network. Additionally, the Erie Community Center provides a climate-controlled lobby with bathroom access to the public.

Goals and Strategies

- Goal 1: Explore potential resilience hub location(s) and network.
 - Concept: Resilience hubs provide access to critical resources during emergencies and a range of services during normal operations.
 - Strategy 1: Research and potentially establish Erie's first resilience hub at the Erie Community Center.
 - Strategy 2: Continue research and outreach to determine trusted community partners for hub network buildout and to identify needed resources such as refrigeration and device charging. Explore future community engagement opportunities.

- Strategy 3: Create a roadmap for community partners to become a part of the network. Identify Town staff who can support the creation of this document and guide partners toward participation and certification.
- Strategy 4: Consider piloting expanded rebate and grant programs for partners in alignment with resilience hub needs. Examples of where to focus resource support could include battery backup systems, onsite solar generation, air filtration, and building efficiency.
- Strategy 5: Work with the local transit provider to create an emergency operations plan to ensure residents have transportation to the hub(s) and needed mobility solutions.
 - The [upcoming Flex Ride service](#) could play a role in this plan.
- Strategy 6: Create a page on the Town website to share resources for extreme temperatures. Include temperature-controlled locations open to the public, water access locations such as splash pads and pools, and educational materials about avoiding and recognizing heat illness.

Partnership Opportunities

- Strategy 1: Create a tool library and provide access to Erie residents. The tool library could be incorporated into the planned [CO-Create Erie Makerspace](#) or into Erie Community Library operations. Examples of tool libraries in the Front Range include the [Denver Tool Lending Library](#), [Fort Collins Tool Lending Library](#), and [Longmont's Library of Things](#).
 - [Registering as a Repair Cafe](#) can provide an opportunity for tool funding.

Youth Engagement and Empowerment

Background

Providing pathways for young individuals to become leaders in their communities fosters a new generation of active community members, thus placing a municipality at the forefront of innovation for the future. Children can struggle with identity, sense of belonging, and fair representation. By expanding opportunities and mentorships for youth, the Town of Erie can ease the transition from childhood to adulthood and allow for young people to have a larger voice in local decision making. Through this effort, youth today will become the mentors and positive role models for the next generation of Erie residents.

Current Town Progress

- [Erie Youth for Change](#) recruits students in seventh through twelfth grade to work on issues, projects, and programs with the Town of Erie and other local organizations.
- The Town of Erie Sustainability Advisory Board and Tree Advisory Board both have positions for a youth member.
- The [Weld County Junior Fair Board](#) chooses members from the ages of 14 to 18 years to work on outreach and support the Weld County Fair.
- The [Erie Community Library](#) provides various events focusing on different age groups, ranging from infants to high school students.

- The [Erie Community Center](#) provides various summer programs and events for children of all ages and is establishing the Community Connections program, with events such as [Community Game Night](#) and [Connection through Creative Expression](#).
- The [Weld Community Foundation Scholarship program](#) supports students in funding their college education.
- The [Weld County Youth Conservation Corps](#) engages youth and young adults from the ages of 16 to 30 years in meaningful community and conservation service projects.

Goals and Strategies

- Goal 1: Increase opportunities and resources for youth engagement to improve connection within the community.
 - Concept: By providing focused events for young people, the Town can promote community connectedness, security, and growth.
 - Strategy 1: Provide mentorship, networking, and shadowing opportunities for youth in different Town departments and organizations to support future employment in growing industries that will improve Town resilience.
 - Additional support resources can be identified through the Erie Youth for Change and the [UNICEF Young People's Participation and Mental Health guide](#).
 - Strategy 2: Work with the Economic Development Department and Erie MakerSpace to develop a support network for young people interested in entrepreneurship and apprenticeships.
 - [IYF](#) and [Ashoka's Youth Initiative](#) have resources for funding and to support the creation of this network.

Partnership Opportunities

- Strategy 1: Work with the P.L.A.Y. Education Corporation and Town recreation and community centers to expand engagement events for youth, such as free late-night events for teens, in historically underserved communities.
 - UNICEF and Denver Youth provide resources, and nearby libraries in the [High Plains Library District](#) and [Baltimore City's Youth Engagement Strategy](#) have examples of events.
- Strategy 2: Work with the Erie Community Library and Erie Community Center to expand skill-focused workshops for high schoolers on topics such as financial education, media literacy, coding, and other job skills.

General Initiatives

- Strategy 1: Consider a ballot initiative for a sales tax to fund sustainability efforts, similar to [Denver's Climate Protection Fund](#) and [Boulder's Climate Tax](#).
- Strategy 2: Create a Resilience Specialist position within the Town of Erie.
 - This staff member can coordinate and accelerate the realization of the goals listed in this plan. Until established, incorporate these duties into the existing work of the Sustainability Division until funding is available for a new position.
 - This staff position can report annual resilience plan progress, make regular plan updates, and integrate best practices. They can also work between Town departments, facilitate community engagement, and increase intergovernmental cooperation to share progress, review and refine existing resilience actions, and identify new actions to pursue.



Party room mural at the Erie Community Center.³⁶

Conclusion

The Town of Erie's first Resilience Action Plan marks a significant milestone in advancing the community's sustainability and preparedness. Its effectiveness will depend on the sustained commitment of Town staff to regularly review, enhance, and adapt the plan in response to changing circumstances. This process of refinement is a hallmark of a responsive and forward-thinking approach.

Ongoing community engagement is equally essential. While no plan can fully anticipate all future developments, the willingness to incorporate new data, best practices, and public input will be critical to maintaining the plan's relevance.

Elements of resilience are already incorporated into Town initiatives, and resilience must now, like sustainability, become a foundational principle that guides future planning and decision-making. Resources invested in this area are a responsible use of funds, as reports suggest a return of \$13 on every \$1 spent.³⁷ Resilience extends beyond addressing immediate challenges; it encompasses the proactive identification of risks and opportunities, and the development of strategies that improve both current conditions and future outcomes. Through thoughtful planning and adaptive leadership, the Town of Erie is positioning itself to remain well-prepared for the decades ahead.



Photograph of hot air balloons over Schofield Open Space.³⁸

Glossary and Acronyms

Definitions

Agrioltaics: A process that integrates solar energy and productive farmland within the same space for more efficient land use paired with energy production, a potential second revenue source.³⁹

Co-benefits: Additional advantages beyond the intended advantages resulting from an action or strategy.⁴⁰

Cool Roof: A type of roof designed to absorb less heat and reflect more sunlight than a traditional roof.⁴¹

Cover Crops: A strategy used to improve the overall health of the farm and its soil by using crops that fixate nitrogen into the soil to reduce reliance on artificial fertilizers. This is typically accomplished by planting grass, legume, or a combination of the two.⁴²

Crop Rotations: A process that focuses on strategically planting crops based on season, soil quality, crop root depth, and other factors. By avoiding continuous repetition of a single crop, soil within an area can be used for agriculture for a longer period of time and more successful production.⁴³

Disaster: The Colorado Revised Statutes define a disaster to be "the occurrence or imminent threat of widespread or severe damage, injury, or loss of life or property resulting from any natural cause or cause of human origin, including but not limited to fire, flood, earthquake, wind, storm, wave action, hazardous substance incident, oil spill or other water contamination requiring emergency action to avert danger or damage, volcanic activity, epidemic, air pollution, blight, drought, infestation, explosion, civil disturbance, hostile military or paramilitary action, or a condition of riot, insurrection, or invasion existing in the state or in any county, city, town, or district in the state."⁴⁴

Emergency: The Colorado Revised Statutes define an emergency to be "an unexpected event that places life or property in danger and requires an immediate response through the use of state and community resources and procedures."⁴⁵

Green Roof: A type of roof designed with different layers for purposes such as drainage and insulation to support plant life while protecting the underlying infrastructure. It is also known as a vegetated roof.⁴⁶

Green Streets: A type of street design that uses vegetation, soil, and engineering to manage stormwater runoff and quality.⁴⁷

Low Impact Development Methods: A design process that upholds the ecosystems and water systems present in the environment of an area during development to protect or mimic its processes.⁴⁸

Mitigation: The Colorado Revised Statutes define mitigation as "the sustained action to reduce or eliminate risk to people and property from hazards and their effects."⁴⁹

Pollinator Habitat: A space that provides pollinators, such as bees and butterflies, with food, water, and shelter through a variety of native plants.⁵⁰

Prevention: The Town of Erie Emergency Operations Plan defines prevention as "actions taken to avoid an incident or to intervene in order to stop an incident from occurring."⁵¹

Rain Garden: A depressed area in the ground with grasses and other plants to collect, slow, manage, and filter stormwater.⁵²

Recovery: The Town of Erie Emergency Operations Plan defines recovery as "actions and implementation of programs necessary to help individuals, communities and the environment directly impacted by an incident to return to normal where feasible."⁵³

Resilience: The ability of a community to recover from a disaster or persist sustainably in the face of a new, ongoing hardship.

Resilience Hub: A location that supports residents and serves the community by distributing resources before, during, or after a disaster.⁵⁴

Rotational Grazing: A process in agriculture that consists of rotating livestock on grazing land to allow regeneration of healthy grass for the next rotation of livestock.⁵⁵

Sump Pump: A type of pump that removes large amounts of liquid, such as water, from an area, typically a basement of a house or building.⁵⁶

Vegetated Swale: A dry pond with plants and a drain in the center that allows water to naturally pool in the area.⁵⁷

Volatile Organic Compounds: Substances with a high vapor pressure and low water solubility and are typically human-made chemicals. Many products can emit these compounds as a gas and can cause air pollution, leading to adverse health effects.⁵⁸

Wildland-Urban Interface (WUI): An area of transition where undeveloped wildland and developed land, such as cities, meet.⁵⁹

Acronyms

ADA: Americans with Disabilities Act

AI: Artificial intelligence

AQI: Air Quality Index

BIPOC: Black, Indigenous, and People of Color

Boulder AIR: Boulder Atmosphere Innovation Research

CDOT: Colorado Department of Transportation

CDPHE: Colorado Department of Health and Environment

CSA: Community supported agriculture

DI: Disproportionately impacted

DUG: Denver Urban Gardens

EPA: Environmental Protection Agency

EV: Electric vehicle

FEMA: Federal Emergency Management Administration

GARE: Government Alliance on Race and Equity

HEPA: High efficiency particulate air; a type of air filter

HOA: Homeowners association

IECC: International Energy Conservation Code

LEED: Leadership in Energy and Environmental Design

LID: Low impact development

MENV: Masters of the Environment, a masters program at the University of Colorado Boulder

MHFD: Mile High Flood District

MS4: Municipal separate storm sewer system

MVFPD: Mountain View Fire Protection District

NOAA: National Oceanic and Atmospheric Administration

NOx: nitrogen oxides

PM: Particulate matter

PV: Photovoltaics, a method of solar generation

RAP: Resilience Action Plan

RAQC: Regional Air Quality Council

RTD: Regional Transportation District

SFHA: Special Flood Hazard Area

SPEI: Standardized Precipitation Evapotranspiration Index

TMP: Transportation Mobility Plan

USDA: United States Department of Agriculture

USGBC: United States Green Building Council

VMB: Variable Message Board

VOC: Volatile Organic Compounds

WUI: Wildland-Urban Interface

References

1. *Document 2,048x1,357 pixels.* (n.d.). Retrieved October 22, 2025, from <https://www.erieco.gov/ImageRepository/Document?documentID=10792>
2. *Document 2,200x550 pixels.* (n.d.). Retrieved October 21, 2025 from <https://www.erieco.gov/ImageRepository/Document?documentID=19998>
3. Fang, C., Hensch, J., Daniels, C., and Abrash Walton, A. (2022). *Centering Equity in Climate Resilience Planning and Action: A Practitioner's Guide*. Vol. 3. <https://doi.org/10.25923/765q-zp33>
4. Colorado Water Conservation Board. (n.d.). *FACE: Hazards*. Retrieved June 17, 2025, from <https://cwcb.colorado.gov/FACE>
5. *Understanding Radon.* (n.d.). Colorado Department of Health and Environment. Retrieved June 17, 2025, from <https://cdphe.colorado.gov/hm/understanding-radon>
6. *Air Quality.* (n.d.). Town of Erie. Retrieved June 17, 2025, from <https://www.erieco.gov/869/Air-Quality>
7. *Drought Information.* (n.d.). Town of Erie. Retrieved June 14, 2025, from <https://www.erieco.gov/1991/Drought-Information>
8. *Climate Change Indicators: Drought.* (2024). EPA. Retrieved June 14, 2025, from <https://www.epa.gov/climate-indicators/climate-change-indicators-drought>
9. *Populations Impacted by Drought.* (2024, March 25). Drought and Health | CDC. Retrieved June 14, 2025, from <https://www.cdc.gov/drought-health/toolkit/vulnerable-populations.html>
10. *Colorado Climate Preparedness Roadmap.* (2023, December). Colorado Office of Climate Preparedness and Disaster Recovery. Retrieved June 17, 2025, from https://www.colorado.gov/governor/sites/default/files/2023-12/Colorado%20Climate%20Preparedness%20Roadmap_Low%20Resolution%20%281%29.pdf
11. *The Climate Explorer.* (n.d.). U.S. Climate Resilience Toolkit. Retrieved June 17, 2025, from https://crt-climate-explorer.nemac.org/climate_graphs/?city=Erie%2C+CO&county=Weld%2BCounty&area-id=08123&fips=08123&zoom=7&lat=40.0502623&lon=-105.0499817&id=days_tmax_gt_95f
12. *Who Is At Most Risk to Extreme Heat?.* (n.d.). National Integrated Heat Health Information System. Retrieved June 17, 2025, from <https://www.heat.gov/pages/who-is-at-risk-to-extreme-heat>
13. Bolinger, R.A., J.J. Lukas, R.S. Schumacher, and P.E. Goble. 2024. *Climate Change in Colorado, 3rd edition*. Colorado State University. Retrieved June 17, 2025, from <https://doi.org/10.25675/10217/237323>
14. Historic Erie, Colorado. (2023, Oct. 25). Erie Historic Preservation Advisory Board. Retrieved June 15, 2025 from <https://storymaps.arcgis.com/stories/d8aac9e1d2114430a03061c75540fdb2>
15. *How Flooding Affects Colorado's Communities: A case study of the 2013 Colorado Flood.* (2020, May 9). Colorado Water Conservation Board. Retrieved June 20, 2025 from <https://storymaps.arcgis.com/collections/e557a66237b6429787a19a39b30a1f4e?item=3>
16. *Risk reduction zones in Erie, CO.* (n.d.). Wildfire Risk to Communities | USDA Forest Service. Retrieved June 14, 2025, from <https://wildfirerisk.org/explore/risk-reduction-zones/08/08123%7C08013/0800024950/>

- 17.** Colorado Climate Preparedness Roadmap. (2023, December). Colorado Office of Climate Preparedness and Disaster Recovery. Retrieved June 17, 2025, from https://www.colorado.gov/governor/sites/default/files/2023-12/Colorado%20Climate%20Preparedness%20Roadmap_Low%20Resolution%20%281%29.pdf
- 18.** *Colorado Climate Preparedness Roadmap*. (2023, December). Colorado Office of Climate Preparedness and Disaster Recovery. Retrieved June 17, 2025, from https://www.colorado.gov/governor/sites/default/files/2023-12/Colorado%20Climate%20Preparedness%20Roadmap_Low%20Resolution%20%281%29.pdf
- 19.** *Colorado Climate Preparedness Roadmap*. (2023, December). Colorado Office of Climate Preparedness and Disaster Recovery. Retrieved June 17, 2025, from https://www.colorado.gov/governor/sites/default/files/2023-12/Colorado%20Climate%20Preparedness%20Roadmap_Low%20Resolution%20%281%29.pdf
- 20.** *Vulnerable Populations*. (n.d.). Wildfire Risk to Communities | USDA Forest Service. Retrieved June 22, 2025, from <https://wildfirerisk.org/reduce-risk/vulnerable-populations/>
- 21.** *Town of Erie 2025 Community Profile*. (n.d.). Town of Erie Economic Development Department. Retrieved July 27, 2025 from <https://www.erieco.gov/DocumentCenter/View/22556/Erie-Community-Profile-2025>
- 22.** *Explore the Map*. (n.d.). Climate and Economic Justice Screening Tool. Retrieved July 10, 2025 from <https://edgi-govdata-archiving.github.io/j40-cejst-2/en/#15.31/40.077172/-105.010919>
- 23.** *Disproportionately Impacted Community Map*. (n.d.). Colorado Department of Health and Environment. Retrieved July 17, 2025 from <https://www.cohealthmaps.dphe.state.co.us/DICommunity/>
- 24.** *Colorado Enviroscreen 2.0*. (n.d.). Colorado Department of Health and Environment. Retrieved July 17, 2025 from https://www.cohealthmaps.dphe.state.co.us/COEnviroscreen_2/
- 25.** *Indoor Air Pollution: the Link between Climate and Health*. (2020). Rocky Mountain Institute. Retrieved May 20, 2025 from <https://rmi.org/indoor-air-pollution-the-link-between-climate-and-health/>
- 26.** Town of Erie, Colorado. (2024). *Erie Transportation and Mobility Plan*. Retrieved July 24, 2025 from <https://www.erieco.gov/DocumentCenter/View/21782/2024-Erie-Transportation-Mobility-Plan>
- 27.** Julig, Carina. *Google pays Boulder employees \$5 a day to leave their cars at home*. (2018). The Daily Camera. The Denver Post. Retrieved July 25, 2025 from <https://www.denverpost.com/2018/09/18/google-pays-boulder-workers-drive/>
- 28.** *2013 Colorado Floods: A Decade of Recovery and Building Resilience*. (2023, September). The Federal Emergency Management Agency (FEMA). Retrieved May 31, 2025 from https://www.fema.gov/sites/default/files/documents/fema_r8-2013-colorado-floods-decade-recovery-building-resilience.pdf
- 29.** Sustainable Technologies Evaluation Program. (2025, September 29). *Enhanced swales in LID SWM Planning and Design Guide*. Retrieved October 21, 2025, from https://wiki.sustainabletechnologies.ca/wiki/Enhanced_swales

30. *Low Impact Development (LID) Fact Sheet*. (2013). American Planning Association. Retrieved July 17, 2025, from <https://www.planning.org/knowledgebase/resource/9196077/>
31. National Center for Appropriate Technology. (2022, August 10). Case study: *Jack's Solar Garden*. AgriSolar Clearinghouse. Retrieved October 21, 2025, from <https://www.agrisolarclearinghouse.org/case-study-jacks-solar-garden/>
32. *Pollinators Benefit Agriculture*. (n.d.). U.S. Fish and Wildlife Service. Retrieved July 28, 2025 from <https://www.fws.gov/initiative/pollinators/pollinators-benefit-agriculture>
33. Hirsh, S. (2020, July 29). *Bee population decline puts these U.S. crops at risk, study finds*. GreenMatters. Retrieved October 21, 2025, from <https://www.greenmatters.com/p/bees-population-decline-crops>
34. Town of Erie Parks & Open Space. (n.d.). Horticulture. Town of Erie. Retrieved October 21, 2025, from <https://www.erieco.gov/2367/Horticulture>
35. Gedrose, C. (2025, February 12). *How to grow a resilient Colorado native pollinator garden*. Honeywood Garden Design. Retrieved October 21, 2025, from <https://honeywoodgardendesign.com/blog/how-to-grow-a-resilient-colorado-native-pollinator-garden/>
36. *Document 2,600x1,733 pixels*. (n.d.). Retrieved October 22, 2025 from <https://www.erieco.gov/ImageRepository/Document?documentID=23224>
37. 2024 Climate Resiliency Report. (2024). U.S. Chamber of Commerce, Retrieved September 23, 2025 from <https://www.uschamber.com/security/the-preparedness-payoff-the-economic-benefits-of-investing-in-climate-resilience>
38. Home Slideshow - Website - Schofield Farm, 2200×550 pixels. (n.d.). Retrieved September 22, 2025, from <https://www.erieco.gov/ImageRepository/Document?documentID=23075>
39. *Agrivoltaics: Solar and Agriculture Co-Location*. (n.d.). U.S. Department of Energy. Retrieved September 21, 2025, from <https://www.energy.gov/eere/solar/agrivoltaics-solar-and-agriculture-co-location>
40. *Co-Benefits of Climate Action*. (n.d.). Changing the Conversation. Retrieved September 21, 2025, from <https://www.changingtheconversation.ca/co-benefits>
41. *Cool Roofs*. (n.d.). U.S. Department of Energy. Retrieved September 21, 2025, from <https://www.energy.gov/energysaver/cool-roofs>
42. *Cover Crops and Crop Rotation*. (n.d.). U.S. Department of Agriculture. Retrieved September 21, 2025, from <https://www.usda.gov/about-usda/general-information/initiatives-and-highlighted-programs/peoples-garden/soil-health/cover-crops-and-crop-rotation>
43. *Crop Rotation Practice Standard*. (n.d.). Agricultural Marketing Service. Retrieved September 21, 2025, from <https://www.ams.usda.gov/grades-standards/crop-rotation-practice-standard>
44. *C.R.S. 24-33.5-703 – Definitions*. (n.d.). Colorado Public Law. Retrieved September 21, 2025, from https://colorado.public.law/statutes/crs_24-33.5-703
45. *C.R.S. 24-33.5-703 – Definitions*. (n.d.). Colorado Public Law. Retrieved September 21, 2025, from https://colorado.public.law/statutes/crs_24-33.5-703
46. *Green Roofs: Benefits and Design Considerations*. (2025, March 14). PennState Extension. Retrieved September 21, 2025, from <https://extension.psu.edu/green-roofs-benefits-and-design-considerations>

47. *Learn About Green Streets*. (2015, June 12). U.S. EPA. Retrieved September 21, 2025, from <https://www.epa.gov/G3/learn-about-green-streets>
48. *Low Impact Development (LID) Fact Sheet*. (2013). American Planning Association. Retrieved September 21, 2025, from <https://www.planning.org/knowledgebase/resource/9196077/>
49. *C.R.S. 24-33.5-703 – Definitions*. (n.d.). Colorado Public Law. Retrieved September 21, 2025, from https://colorado.public.law/statutes/crs_24-33.5-703
50. Davidson, D., Mason, L., and Arathi, H. S. (2025, May 28). *Creating Pollinator Habitat*. Colorado State University Extension. Retrieved September 21, 2025, from <https://extension.colostate.edu/resource/creating-pollinator-habitat/>
51. *Emergency Links*. (n.d.). Town of Erie. Retrieved September 21, 2025, from <https://www.erieco.gov/2118/Emergency-Links>
52. *Soak Up the Rain: Rain Gardens*. (2015, August 19). U.S. EPA. <https://www.epa.gov/soakuptherain/soak-rain-rain-gardens>
53. *Emergency Links*. (n.d.). Town of Erie. Retrieved September 21, 2025, from <https://www.erieco.gov/2118/Emergency-Links>
54. *Resilience Hubs*. (n.d.). Urban Sustainability Directors Network. Retrieved September 21, 2025, from <https://www.usdn.org/resilience-hubs.html#/>
55. *Rotational vs. Continuous Grazing | Master Grazer*. (n.d.). University of Kentucky, Martin-Gatton College of Agriculture, Food and Environment. Retrieved September 22, 2025, from <https://grazer.ca.uky.edu/rotational-vs-continuous-grazing>
56. *Definition of sump pump*. (2025, September 11). Merriam-Webster. Retrieved September 21, 2025, from <https://www.merriam-webster.com/dictionary/sump+pump>
57. Un, K. (2010, October 27). *Fact Sheet: Vegetated Swales*. Metropolitan Area Planning Council. Retrieved September 21, 2025, from <https://www.mapc.org/resource-library/fact-sheet-vegetated-swales/>
58. *What are volatile organic compounds (VOCs)?* (2019, February 19). U.S. EPA. Retrieved September 21, 2025, from <https://www.epa.gov/indoor-air-quality-iaq/what-are-volatile-organic-compounds-vocs>
59. *What is the WUI?* (n.d.). U.S. Fire Administration. Retrieved September 21, 2025, from <https://www.usfa.fema.gov/wui/what-is-the-wui/>

Appendix A: Vulnerability Assessment

Purpose and Methodology

The Town of Erie is experiencing an increase in extreme weather events that affect residents, the environment, and economy. This report focuses on five climate hazards: air quality, drought, extreme heat, flooding, and wildfires. The purpose of this assessment is to provide historical and scientific context for each hazard as well as related current trends and potential impacts.

According to the NOAA Climate Program Office, vulnerability describes "the degree to which a person or community is at risk, risk being the likelihood of a threat and impact. Impact is determined by the nature and magnitude of the exposure, sensitivity to the exposure, and the capacity of an individual or community to adapt and respond."¹ By analyzing potential vulnerabilities, this report provides necessary background for the Town of Erie Resiliency Action Plan to enact effective methods of resilience, prepare for changes in climate, and provide community support.

ICLEI USA has created a vulnerability matrix to assist with the prioritization of potential hazards a local community might face. Vulnerability is affected and determined by exposure, sensitivity, and adaptive capacity. Exposure refers to the location of "people, assets, and ecosystems" to certain hazards. Sensitivity describes the degree that people, assets, and ecosystems are, or potentially will be, affected by hazards. Adaptive capacity is the ability of people, assets, and ecosystems to adjust to hazards and change while using new opportunities effectively.²

Vulnerability Matrix

		High	Moderate	High	High
		Moderate	Low	Moderate	High
<i>Sensitivity</i>	Low	Low	Low	Moderate	
			High	Moderate	Low
		<i>Adaptive Capacity</i>			

ICLEI USA vulnerability matrix for hazards.³

A good place for local communities to begin assessing their risk and vulnerability is with the Federal Emergency Management Agency (FEMA) National Risk Index mapping tool. This resource uses the expected annual loss, social vulnerability, and community resilience of a county to determine its risk index.⁴ Both Boulder County and Weld County currently have a relatively moderate risk index. It is also important to note that hazards can often interact with each other, increasing the damage they cause. According to the Future Avoided Cost Explorer (FACE) tool by the Colorado Water Conservation Board, "drought increases the likelihood of wildfire, which increases the likelihood and impacts of flooding."⁵ With the findings of this report, Town officials will have a better understanding of the climate hazards affecting the community and can work to reduce their communities' overall risk.

Town of Erie Background

During the 1860s, the main economic drivers in the area were agriculture and trading goods. After the Civil War, mining became the area's largest and most profitable industry following the discovery of a nearby coal vein. The demand for coal, along with the completion of the Boulder Valley Railroad extension spurred development of Erie's first commercial mine.⁶ As more people moved to the area, the Town of Erie was officially established in 1874.

In the 1950s, following World War II, Erie experienced a wave of suburban and economic growth as a result of the newly built Interstate Highway System. "I-25 was completed from Wyoming to New Mexico in 1969."⁷ Mining became less profitable for mining corporations as the demand for coal dwindled with the rise of the oil economy, leading to the closure of the Erie coal mines in 1978.

The 1990s marked the beginning of rapid housing development in Erie, bringing thousands of new residents. Between 2000 and 2010, the population grew from 6,291 residents to over 18,000 people. In 2025, the population has increased to over 40,000 people with an expected buildout to 80,000 residents by 2050 to 2055.⁸

As the population continues to expand, The Town of Erie works with its partners to manage growth responsibly while preserving natural resources, a high quality of life, and its small town identity. Central to this vision is ensuring that Erie is positioned to adapt and thrive in the face of future challenges.

Climate Vulnerabilities

Air Quality

Poor air quality is a hazard facing much of the Front Range of Colorado. The Environmental Protection Agency (EPA) and the Colorado Department of Public Health and Environment (CDPHE) provide a tool called the Air Quality Index (AQI). The AQI is a color-coded system in which air quality is categorized based on the levels of ground level ozone, particulate matter, carbon monoxide, sulfur dioxide, and nitrogen dioxide.⁹ The EPA and CDPHE use the AQI to communicate human health hazards associated with current measurements to the public.

AQI Basics for Ozone and Particle Pollution

Daily AQI Color	Levels of Concern	Values of Index	Description of Air Quality
Green	Good	0 to 50	Air quality is satisfactory, and air pollution poses little or no risk.
Yellow	Moderate	51 to 100	Air quality is acceptable. However, there may be a risk for some people, particularly those who are unusually sensitive to air pollution.
Orange	Unhealthy for Sensitive Groups	101 to 150	Members of sensitive groups may experience health effects. The general public is less likely to be affected.
Red	Unhealthy	151 to 200	Some members of the general public may experience health effects; members of sensitive groups may experience more serious health effects.
Purple	Very Unhealthy	201 to 300	Health alert: The risk of health effects is increased for everyone.
Maroon	Hazardous	301 and higher	Health warning of emergency conditions: everyone is more likely to be affected.

Air Quality Index Chart.¹⁰

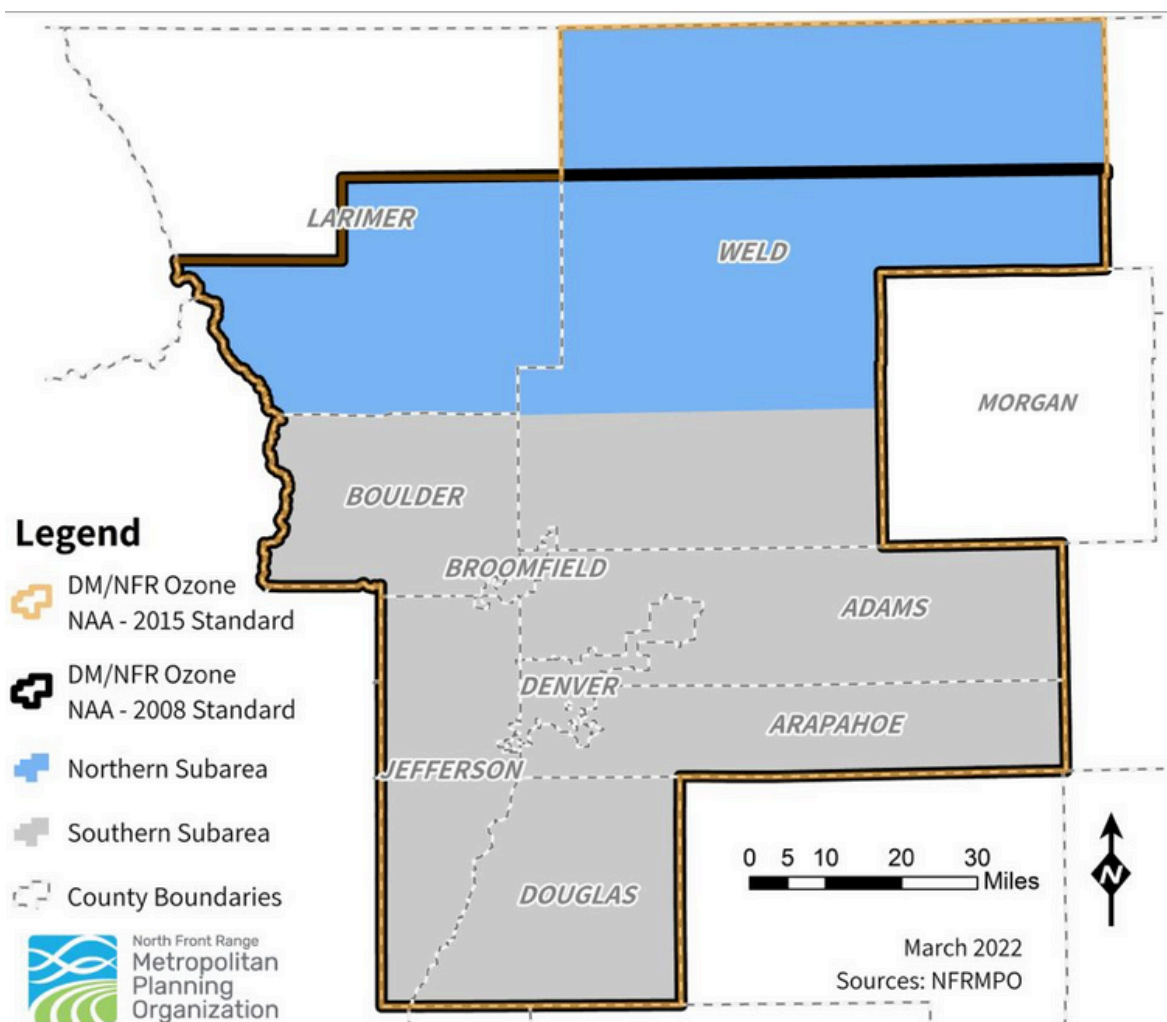
Ground level ozone forms when nitrogen oxides (NO_x) and volatile organic compounds (VOCs) react in the presence of heat and sunlight.¹¹ Internal combustion engine exhaust, power generation, and oil and gas operations are common sources of these ozone precursors.

Particulate matter (PM) refers to fine air pollutants that are small enough to be inhaled. CDPHE monitoring focuses on PM₁₀ and PM_{2.5} particles, which are equal to or smaller than 10 micrometers and 2.5 micrometers in diameter, respectively. For reference, a human hair is 50 to 70 micrometers wide.¹² Common sources for PM include vehicle exhaust, wildfire smoke, and dust from disturbed earth.

In addition to the CDPHE monitoring, Erie has deployed five monitoring stations near oil and gas wells to monitor for volatile organic compounds, particulate matter, and meteorological data. Erie also hosts a Boulder A.I.R. monitoring station at the Erie Community Center. This station, in addition to the pollutants monitored for AQI, monitors for several volatile organic compounds as well as methane, a potent greenhouse gas.¹³

According to CDPHE, short-term exposure to air pollutants can result in difficulty breathing, asthma attacks, and airway irritation. Long-term exposure can result in cardiovascular disease, reduced lung function, and premature death. Populations more susceptible to impacts from poor air quality include children, older adults, outdoor workers, and people with preexisting conditions like asthma.¹⁴ In addition to human health, poor air quality can negatively impact soil chemistry, photosynthesis, and crop growth.¹⁵

According to the Boulder County Hazard Mitigation Plan, counties in the Denver and North Front Range areas continue to be in ground-level ozone nonattainment, meaning that ozone levels are in excess of federal standards. Additionally, poor air quality is highly likely to continue impacting the area while posing a severe threat to public safety.¹⁶



Map of the North Front Range Ozone Nonattainment Area.¹⁸

Radon, a naturally occurring gas produced from the breakdown of uranium-containing granite, also poses an indoor air quality risk to Erie residents. It is a carcinogen that is a leading cause of lung cancer in the United States. Approximately half of all Colorado homes have radon levels in excess of the EPA's recommended level.¹⁷

Drought

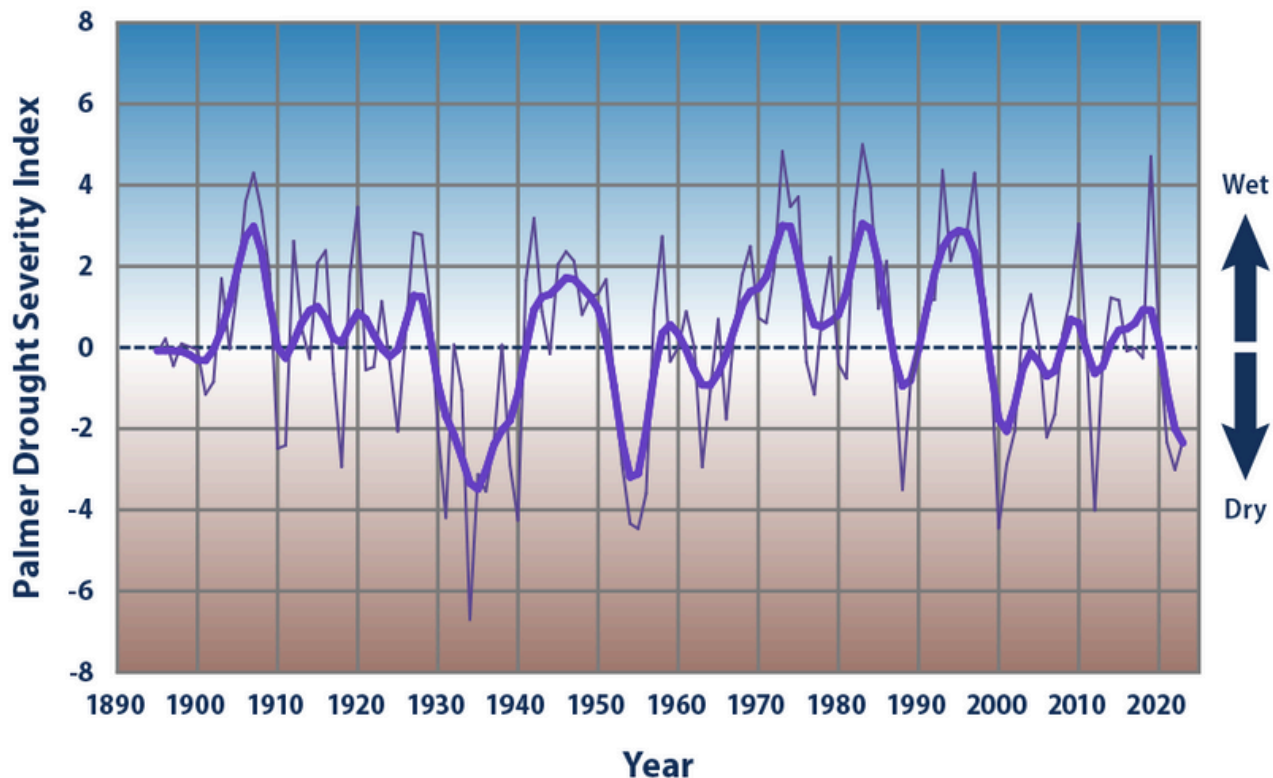
Droughts are another potential point of vulnerability within the Town of Erie. In 2002 and 2012,¹⁹ the Town experienced intense droughts caused by drastically low levels of precipitation, snowpack accumulation, and streamflows compared to average levels across the state.²⁰ This led to the development of a three-tiered water restrictions program in Erie, followed by a Drought Management Plan in 2015 and a Drought and Water Supply Shortage Plan in 2021.²¹ The period of a drought can change, either happening quickly and lasting for a season or having a gradual onset and lasting for decades.²²

Due to the importance of water for daily functions, droughts have the potential to cause lasting negative impacts to agriculture in Colorado, particularly to crop production and livestock feed supplies. The 2011 to 2013 drought caused about \$633 million in damage within the state. If this drought occurred under predicted 2050 climate conditions, costs would have increased to \$639 million. The Colorado recreation industry, particularly any snow- and water-based activities, is also vulnerable to drought.²³ Droughts also have the potential to impact residential water rates as well as the quality of life for the wildlife and natural environment.

Because there are many factors that contribute to drought, there are several indices for drought severity. The Palmer Drought Severity Index is the most commonly used and is derived from temperature and precipitation data at weather stations. A value of zero represents the standard moisture conditions based on data from 1931 through 1990 for a specific region. Negative values represent drier than average conditions, and positive values represent wetter than average conditions.²⁴

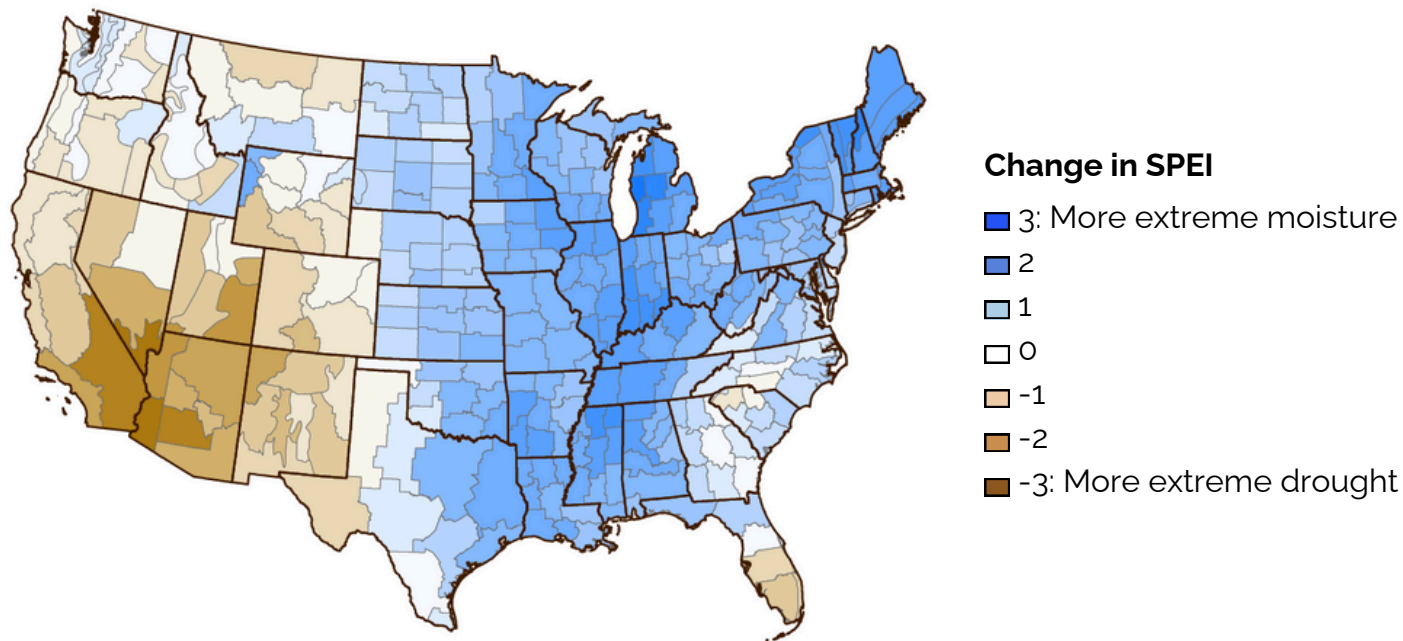
Another method of measuring the impact of droughts is the Standardized Precipitation Evapotranspiration Index (SPEI), which uses precipitation and evapotranspiration data to show if an environment is balanced in its inputs and outputs. Values between -1 and 1 are considered the baseline. Values below -1 indicate drought conditions, and values above one indicate moist conditions.²⁵

From the Palmer Drought Severity Index, moisture conditions within the last five years are drier than average across the contiguous 48 states of the United States.²⁶



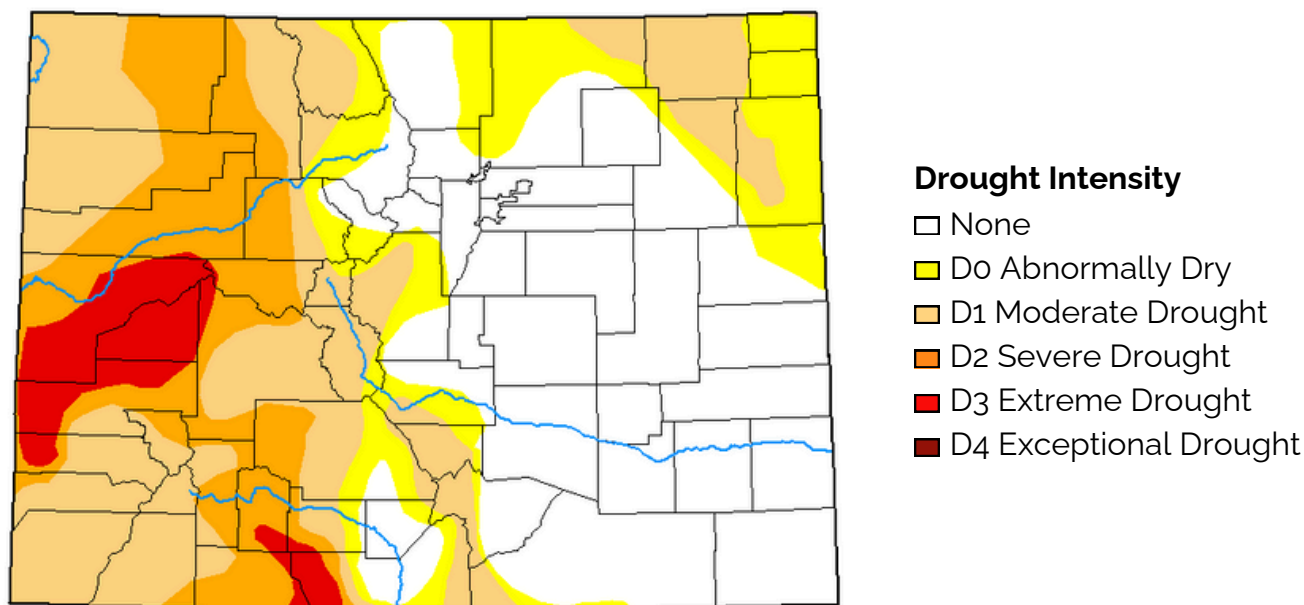
Graph showing average drought conditions from 1895 to 2023 according to the Palmer Drought Severity Index for the contiguous 48 states.²⁷

By focusing on the State of Colorado in the SPEI graph, data from 1900 to 2023 indicates that drought conditions have also steadily increased.²⁸



Map of average change in drought conditions from 1900 to 2023 in the contiguous 48 States, from the SPEI.²⁹

The U.S. Drought Monitor shows this trend has continued into present day, but both Boulder and Weld counties are currently experiencing lower levels of drought conditions.³⁰



Map of drought intensity in Colorado on June 10, 2025.³¹

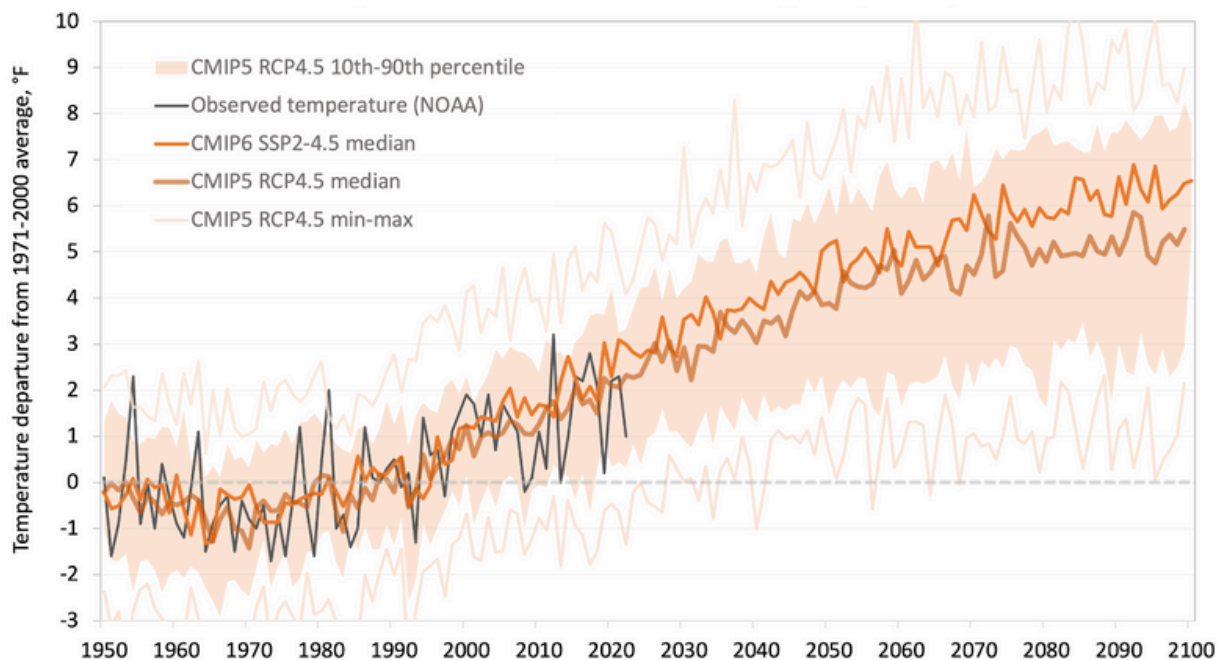
According to the Colorado Climate Preparedness Roadmap, droughts are expected to increase due to stagnant precipitation patterns, increasing temperatures, and earlier runoff seasons, thus limiting water supply from mountain sources.³² With drought, vulnerable populations include older adults, infants and children, people with lower incomes, and people with chronic medical conditions, especially with heat often being a coinciding climate factor when droughts occur.³³ It is essential to continue expanding water management measures to protect against any increase in drought conditions within the western region of the United States.

Extreme Heat

Rising temperatures are occurring globally and within Colorado. These rising temperatures are primarily a result of human activity and greenhouse gas emissions following the Industrial Revolution. Temperatures are measured against a preindustrial baseline to determine the change over time. Colorado has experienced a temperature increase of 2.9°F since 1895.³⁴

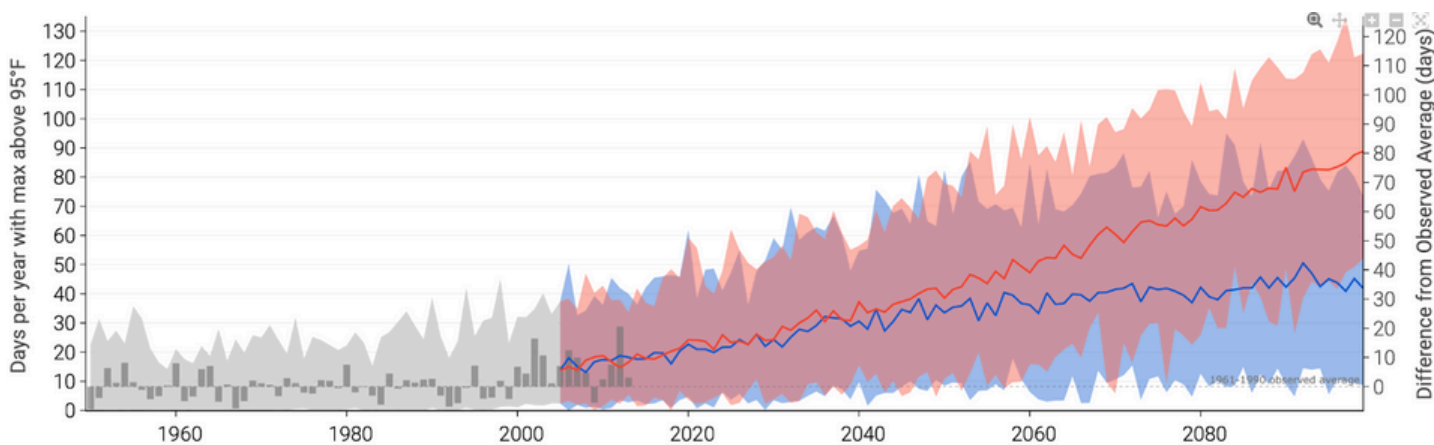
According to the Climate Change in Colorado report, one way to quantify extreme temperatures is by determining the exceedance of an absolute threshold such as the number of days above 95°F. Additionally, heat waves can be calculated by measuring consecutive days that exceed a relative threshold for a specific area. "Heat waves are defined as a four-day period in which the daily mean temperature (the sum of the daily maximum and minimum temperatures divided by two), averaged over the four days, exceeds the four-day average temperature that was exceeded on average once per year during 1971 to 2000."³⁵

The incidence and severity of extreme temperatures in Erie are expected to increase as global temperatures rise. Per the Climate Change in Colorado Report, Colorado's average annual temperature has already increased statewide by 1.4°F from a 1971 to 2000 baseline.³⁶ Modeling suggests the state will warm by 2.5 to 5.5°F by 2050 and 3 to 6.5°F by 2070 compared to this baseline.³⁷ This is based on a medium-low emissions scenario.



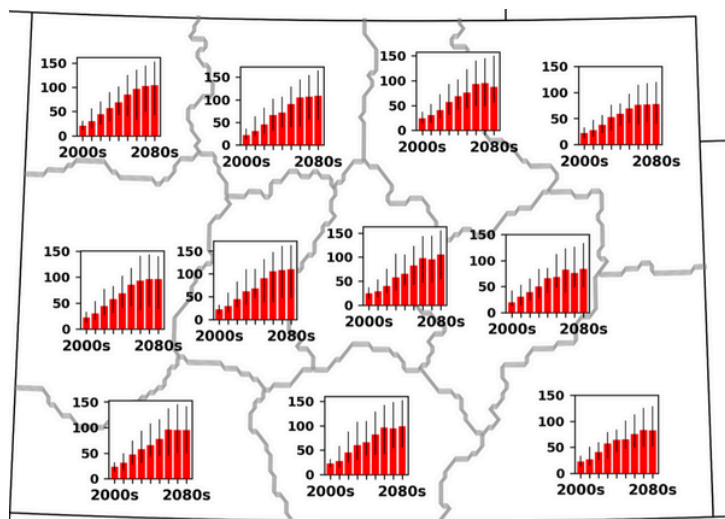
Graph showing historic and projected Colorado annual average temperatures from 1950 to 2100.³⁸

If global average temperatures rise 2°C, modeling shows that Colorado's Eastern Plains will see 20 days per year above 95°F by 2050.³⁹ Depending on emissions reductions, this could reach 44 to 83 days per year by the end of the century. For reference, Erie experienced roughly eight days per year above 95°F between 1961 to 1990.⁴⁰



Graph showing projected Erie days above 95°F.⁴¹

Heat waves, similarly, are projected to increase. "In most regions [of Colorado], the median number of projected heat waves is expected to increase from one per year during 1971 to 2000...to approximately 10 per year by the 2060s."⁴²

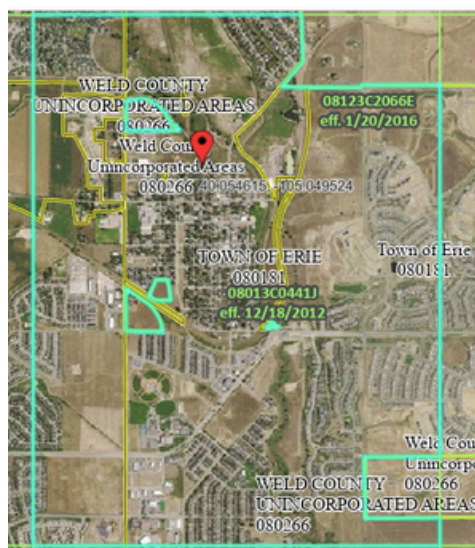


Map of Colorado showing projected heat waves per decade in the 21st century.⁴³

Extreme heat can be deadly when a person's body is unable to sufficiently cool itself. Vulnerable populations include outdoor workers and athletes, people experiencing homelessness, children, older adults, people with chronic health conditions, and pregnant women. Additionally, residents that lack air conditioning or the means to pay for it are at a greater risk of heat illness.⁴⁴ Extreme heat days create an environment where daily heat-related hospitalizations increase, primarily from ailments such as heatstroke, fainting, throbbing headache, rapid heart rate, and advanced dehydration.⁴⁵

Flooding

Events of extreme precipitation cause flooding when a large and rapid influx of water overwhelms the drainage infrastructure. A floodplain is an area of land surrounding or adjacent to a river or wetland that is more prone to flooding when precipitation occurs. Flooding has occurred in and around Coal Creek multiple times throughout the history of Erie. In 1890, the Town experienced a devastating flood that wreaked havoc on the community and infrastructure. In 1921, "Erie experienced the biggest flood in its history."⁴⁶

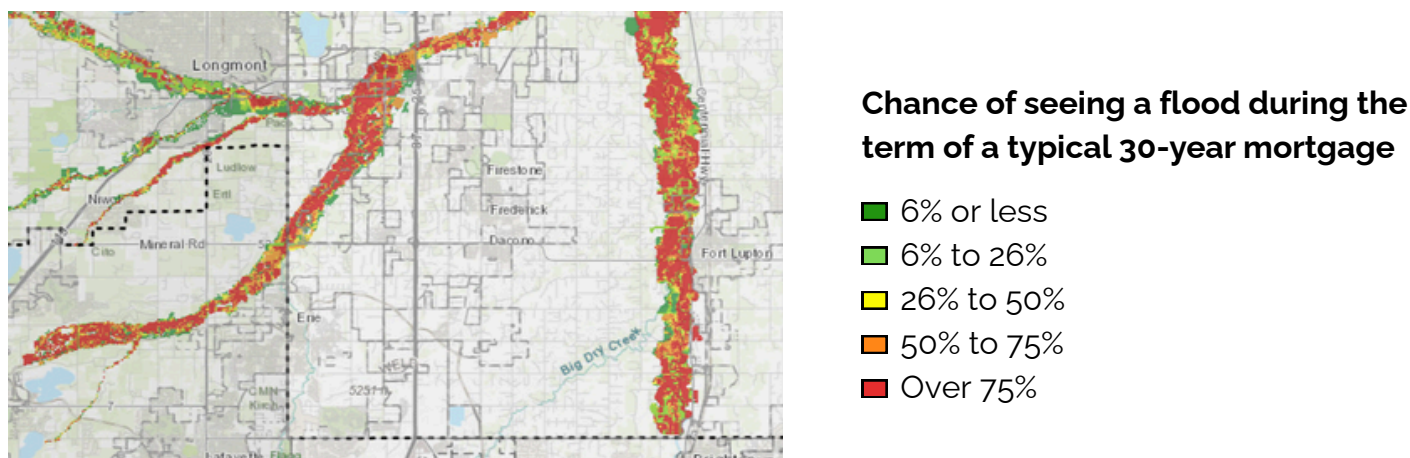


SFHA boundary map for Erie, Colorado highlighted in light blue.⁴⁷

The historical prevalence of flooding and current flood risk in Erie has allowed the Federal Emergency Management Agency (FEMA) to list a portion of Erie as a Special Flood Hazard Area (SFHA). The map above depicts properties within the SFHA boundary that are required by law to obtain flood insurance because their property has a 1% chance or greater to experience flooding annually.⁴⁸ Some cities decide to not allow new development on SFHAs altogether.

In 2013, the Town of Erie experienced a disastrous flood. From September 9th to 13th, roughly, 15 inches of rain fell over Erie. This flooding event was so destructive that it cost an estimated \$4 billion in infrastructure damage across Colorado.⁴⁹

After the 2013 floods, FEMA allocated public assistance funding across Colorado for reconstruction of damaged infrastructure. \$186,044,924.26 was given to Boulder County, while \$20,304,746.35 was given to Weld County to rebuild what was damaged in the flood. \$57,121,301 were allocated to Colorado municipalities to build backup energy generators, create educational material, flood mitigation plans, and for flood infrastructure improvements.⁵⁰



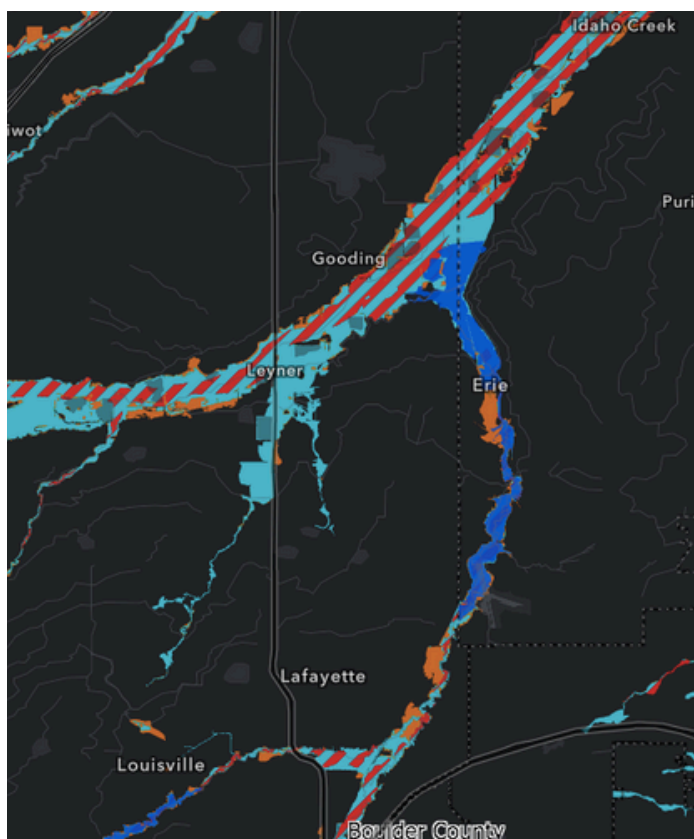
Erie floodplain map for a 30 year flood. The dashed line represents Boulder and Weld County Line.⁵¹

The Town of Erie invested further into flood mitigation infrastructure and preparedness. In this effort, the Town collaborated with the Mile High Flood District and initiated the Coal Creek Expansion Project. This project enhanced flood protection by widening Coal Creek, reinforcing levees, and improving drainage infrastructure with a goal to reduce floodplain impacts and increase community resilience. These infrastructure improvements explain why the Town of Erie shows such a low flood risk within the annual and 30 year projections from the Colorado Hazard Mapping Portal.⁵² However, according to the EnviroScreen tool, the census block south of Old Town, including the Erie Municipal Airport, has the most land area (25%) that has a one percent or greater chance of annual flooding.⁵³

The likelihood of flooding corresponds to the intensity of precipitation and the ability of that water to infiltrate into soil, bodies of water, and drainage systems. Based on the Climate Change Colorado Report for every one degrees Celsius increase in temperature the atmosphere can hold

3.5 to 6% more moisture. This is because higher temperatures cause air and water molecules to separate, thus increasing their holding capacity. This increase in moisture has a strong correlation to increased extreme precipitation events. As projected temperatures continue to rise, the rainfall events may be less frequent without much change in annual precipitation totals. This points to more intense rainfall in less overall precipitation events. As precipitation patterns change and the likelihood of drought in the warmer months increases, the drying out of the soil exacerbates the lack of water infiltration, causing an increased likelihood of flash flooding in the spring and early fall.⁵⁴

While the Town's investment in mitigation infrastructure makes floods far less likely to cause severe damage, citizens of Erie should remain vigilant about flood alerts and warnings. The Mile High Flood District works together with FEMA to update and inform the Floodplain Map for Erie and surrounding areas.



Legend

Dashed lines are county borders.

Floodplains (Non-FEMA)

- Floodway
- 100-Year Shallow Flooding
- 100-Year Floodplain (1% Annual Chance)
- 500-Year Floodplain (0.2% Annual Chance)

FEMA NFHL Flood Hazard Zones

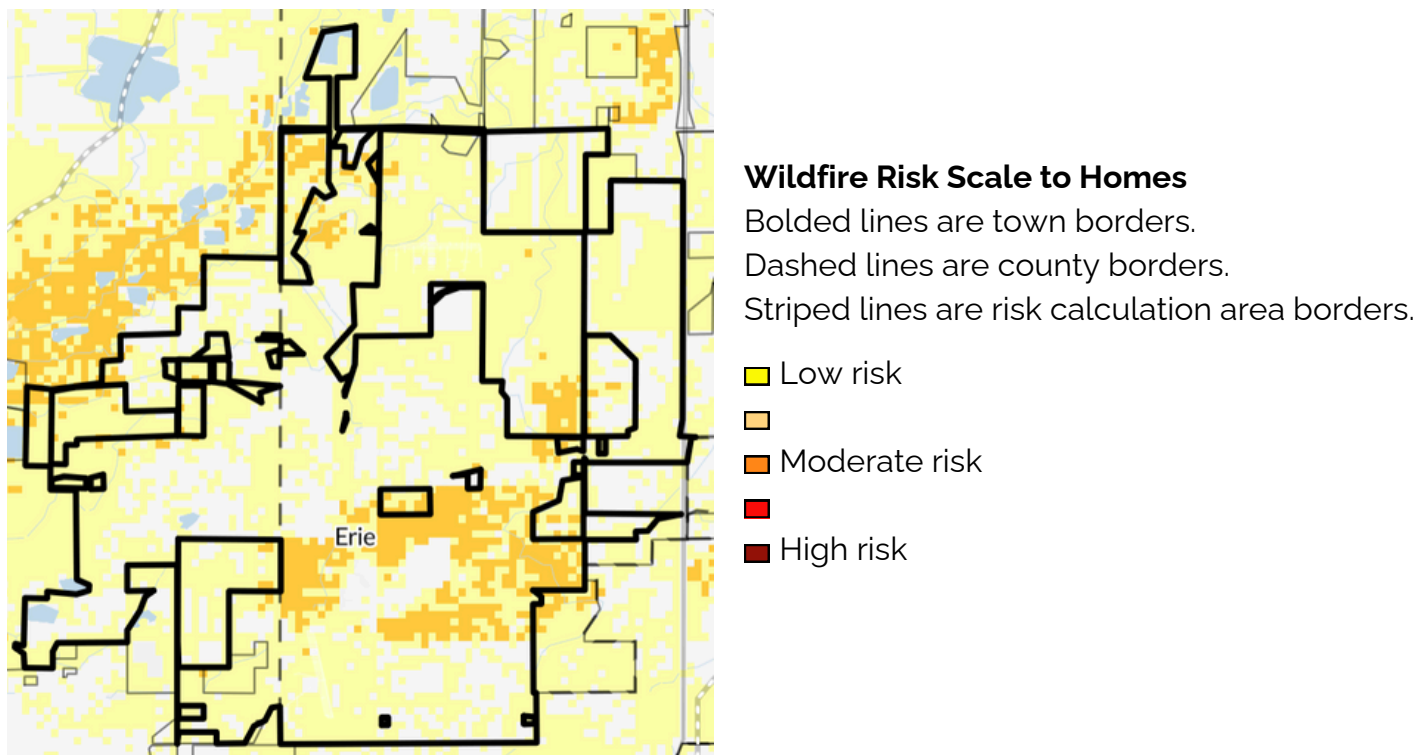
- 1% Annual Chance Flood Hazard
- Regulatory Floodway
- Special Floodway
- Area of Undetermined Flood Hazard
- 0.2% Annual Chance Flood Hazard
- Future Conditions 1% Annual Chance Flood Hazard
- Area with Reduced Risk Due to Levee
- Area with Risk Due to Levee

The Mile High Floodplain Map for Erie as of June 2025.⁵⁵

Wildfires

Wildfires are common within the state of Colorado and have ranged in size and intensity. There were several notable wildfires within Boulder County, such as the Black Tiger Fire in 1989, the Fourmile Canyon Fire in 2010, and the Marshall Fire in 2021. Boulder County has noted that wildfires occur year-round, with the most catastrophic fires arising from human causes and increasing in severity due to unhealthy forests.⁵⁶ With these events, both Boulder and Weld counties have worked to increase fire mitigation strategies such as vegetation management⁵⁷ and burn permits.⁵⁸

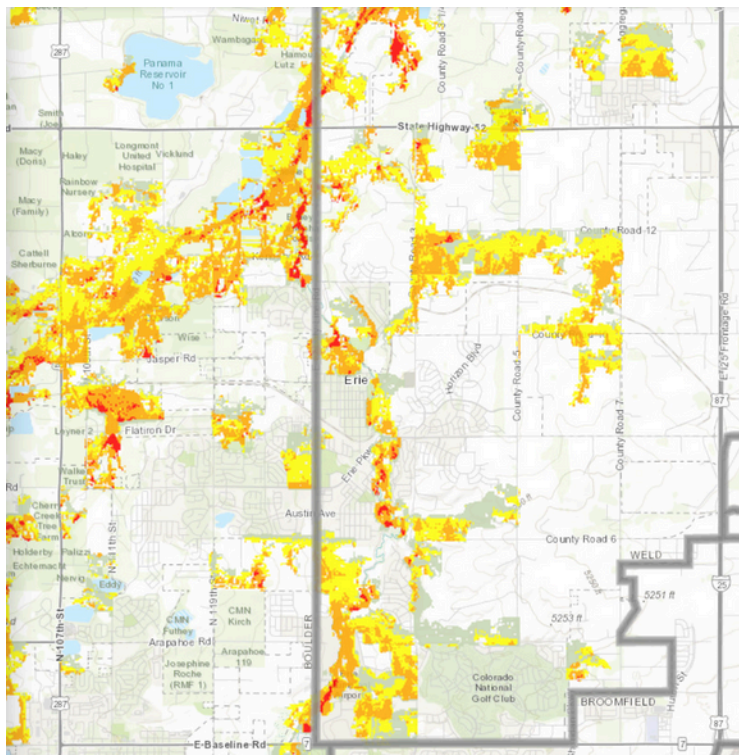
To quantify wildfire risk, the United States Department of Agriculture (USDA) Forest Service determines risk by hazard and vulnerability. Hazard consists of the likelihood and intensity of a wildfire, and vulnerability consists of exposure and susceptibility.⁵⁹ Exposure refers to the proximity of potential hazards such as nearby vegetation. Susceptibility describes how easily a home can be damaged by a wildfire without taking mitigation methods into account.⁶⁰ According to the USDA, houses in Erie have a medium risk for wildfires which is "greater risk than 56% of communities" in the United States.⁶¹



Map of wildfire risk to homes in the Town of Erie.⁶²

In terms of hazard, Erie has a moderate likelihood, which is a "greater wildfire likelihood than 58% of communities" in the United States.⁶³ Erie also has 84% of its buildings located in a minimal exposure zone, which is defined as an area where buildings are unlikely to be subjected to wildfire. 2% of buildings are in an indirect exposure area where ignition by embers or close proximity to another building is likely. 14% of buildings are in a direct exposure zone where ignition may occur due to flying embers or nearby vegetation and buildings.⁶⁴

The Colorado State Forest Service has also analyzed wildfire risk using factors such as canopy cover, building damage potential, and burn probability. Within Boulder and Weld counties, the Erie area falls under no wildland-urban interface (WUI) risk or low WUI risk.⁶⁵ WUI refers to "areas where human habitation and development meet or intermix with wildland fuels."⁶⁶ The Town also has low building damage potential. With regards to potential fire intensity, the Town of Erie mostly has a low to moderate intensity, with some areas that have a probable high fire intensity.⁶⁷



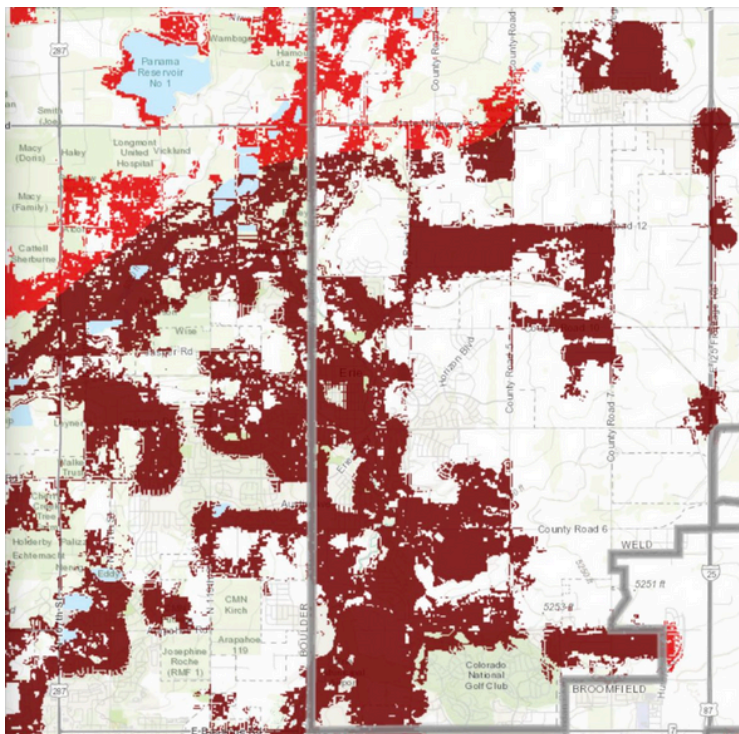
Fire Intensity Scale

Thick dark gray lines are county borders.

- Lowest Intensity
- Low Intensity
- Moderate Intensity
- High Intensity

Map of probable fire intensity in the Town of Erie.⁶⁸

The Colorado State Forest Service also created a heat map that shows the past ignition trends, which can predict the likelihood of a wildfire.⁶⁹



Fire Ignitions Scale

Thick dark gray lines are county borders.

- 1: Lowest Occurrence
- 2
- 3
- 4
- 5: Moderate Occurrence
- 6
- 7
- 8
- 9: Highest Occurrence

Heat map of past fire ignitions in the Town of Erie.⁷⁰

Wildfires also have some common interactions with other climate hazards. According to the Colorado Climate Preparedness Roadmap, the smoke from wildfires increases particulate matter in the air, lowering overall air quality in nearby regions.⁷¹ The resultant loss of vegetation and diminished water absorption capacity of the soil also makes land affected by wildfires more susceptible to flash floods and surface-level floods.⁷² This roadmap also provided statistics on future wildfire risk when compared to the past decades of the 20th century. It is estimated that "the annual amount of land area burned could increase between 100% and 500% by the mid 21st century."⁷³ Due to social and economic conditions, older people, people with mobility challenges, families in poverty, and people living in mobile homes are more vulnerable to wildfire.⁷⁴ Thus, while the fires may not be severe, it is important to enact fire mitigation and prevention measures to improve the overall safety of the community.

Social Vulnerability

While natural hazards may strike a region as a whole, their impacts are not felt equally among all residents. Various factors such as age, income, race and ethnicity, educational attainment, preexisting health conditions, disability, household makeup, and proximity to hazards and pollutants shape how vulnerable different populations are. Understanding these patterns is essential to ensuring that all residents can prepare for, respond to, and recover from hazards equitably.

Erie is, in many ways, a thriving and well-resourced community. The Town's current population of just over 40,000 is projected to reach 75,500 by 2050, and the median household income is \$163,644. Educational attainment is high, with 67% of residents holding at least a bachelor's degree. Nearly all residents live within a mile of a park, and public transportation options are expanding, including youth access to free transit and a new Flex Ride service launching in 2025.⁷⁵ By many indicators, Erie ranks among the highest in the country for life expectancy, wealth, and education access.

When we look closer, patterns of vulnerability emerge beneath these averages. The population is 83.2% white and 16.8% are people of color. 10.4% of residents identify as Hispanic or Latino, and 1.4% have limited English proficiency. This can create barriers to communication and access to critical services, particularly in emergencies. Children under five make up 6.3% of the population, and about 10% of residents are over 65. Notably, 5.8% of older adults live alone, and 7.3% of households are led by single women, some with young children.⁷⁶ Both of these groups may face increased challenges in times of crisis.

Though the majority of households earn over \$75,000 annually, a portion of the population faces economic insecurity. Approximately 3% of residents live in poverty, with 1.4% classified as being in "deep poverty," defined as earning less than half the federal poverty level.⁷⁷ About 6.1% of residents have disabilities, 2.9% lack health insurance, and 2.5% of adults over 25 do not have a high school diploma.⁷⁸ Among working-age adults, 13% are not employed, which can further limit access to healthcare and financial stability.⁷⁹

Geographically, these vulnerabilities are not evenly distributed. Old Town Erie, particularly the area stretching between Reliance Park in the north and Erie Community Park in the south, shows higher levels of social and environmental risk.⁸⁰ This central corridor has the highest concentration of low-income residents at 15%, households that are housing cost-burdened at 34%, and people of color, at 33%.⁸¹ It also shows lower educational attainment, with 7% of adults holding only a high school diploma.⁸²

This same central area stands out for its elevated environmental and climate risks. It ranks in the 95th percentile nationwide for potential economic and life loss from natural disasters, including wildfire and flooding.⁸³ Manufactured home neighborhoods, some of which fall within this central zone, are also recognized by the State of Colorado as disproportionately impacted due to a combination of income, housing, and demographic factors.⁸⁴

By contrast, other parts of Erie appear more prepared for these risks. The eastern portion has some of the highest life expectancy rates in the country, with residents highly likely to live to 90 or older.⁸⁵ In the northwest corner of the town, only 5% of the population is considered low-income, and 13% experience a housing cost burden.⁸⁶

Across all census blocks, however, certain vulnerabilities persist. Exposure to air pollution and proximity to oil and gas sites are common concerns. In some areas, particularly those in Weld County, residents experience higher rates of chronic illnesses like diabetes and heart disease. Disability rates range from 4.6% to 8%.⁸⁷

Conclusion of Social Vulnerability

While Erie is not broadly classified as socially vulnerable, important disparities exist, particularly in and around Old Town. This area faces the intersection of environmental exposure, economic hardship, and social factors that can exacerbate vulnerability during disasters. To build a truly resilient and equitable community, Town planning and operations must acknowledge and address these disparities. Prioritizing investments in central Erie can ensure that no one is left behind as the Town continues to grow.

Takeaways and Next Steps

The hazards included in this assessment are often related and exacerbated by climate change. Warming temperatures enable the atmosphere to hold more moisture, increasing the possibility of flooding from intense precipitation events. Higher temperatures and drought can increase the number and intensity of wildfires, creating more particulate air pollution. Wildfire scars can increase stormwater runoff and magnify the threat of flooding. While not covered within this report, additional hazards that affect Erie include thunderstorms, lightning, hail, tornadoes, wind, winter storms, and pandemics.

All the hazards discussed in this report can impact safety, human health, quality of life, infrastructure, local economy, and the environment. The impacts on Erie residents are not equally felt, as some populations are at greater risk due to age, health, income, and other factors.

Understanding current hazards, how they are likely to change in the coming years, and how they might impact Erie is central to local climate adaptation planning. This understanding will allow Town staff to form strategies that reduce vulnerability and increase preparedness, thereby building a community that is equipped to adapt and thrive in a changing environment. An important next step in this process is the creation of Erie's first Resilience Action Plan, a plan that will include a set of actionable items that will serve to mitigate the harm caused by these shocks and stressors.

Acknowledgements

This report was created by the University of Colorado Boulder Masters of the Environment students Adam Arata, Stephany Correa-Diaz, and Sean Lee with the support of Town of Erie Sustainability Division staff: Eryka Thorley, Sustainability Manager, and Emma Marino, Sustainability and Water Conservation Specialist.

Vulnerability Assessment References

1. Fang, C., Hench, J., Daniels, C., and Abrash Walton, A. (2022). *Centering Equity in Climate Resilience Planning and Action: A Practitioner's Guide*. Vol. 3. Retrieved June 17, 2025, from <https://doi.org/10.25923/765q-zp33>
2. ICLEI USA. (2023). *Adaptation in Climate Planning and Implementation*. ICLEI. Retrieved June 17, 2025, from <https://iclei.org/e-library/adaptation-in-climate-planning-and-implementation/>
3. ICLEI USA. (2023). *Adaptation in Climate Planning and Implementation*. ICLEI. Retrieved June 17, 2025, from <https://iclei.org/e-library/adaptation-in-climate-planning-and-implementation/>
4. FEMA. (n.d.). *Map | National Risk Index*. Retrieved June 17, 2025, from <https://hazards.fema.gov/nri/map>
5. Colorado Water Conservation Board. (n.d.). *FACE: Hazards*. Retrieved June 17, 2025, from <https://cwcb.colorado.gov/FACE>
6. *Historic Erie, Colorado*. (2023, Oct. 25). Erie Historic Preservation Advisory Board. Retrieved June 15, 2025 from <https://storymaps.arcgis.com/stories/d8aac9e1d2114430a03061c75540fdb2>
7. *Historic Preservation Master Plan Erie, Colorado*. (2020, March). Town of Erie Historic Preservation Advisory Board. Retrieved June 22, 2025 from <https://www.erieco.gov/335/Historic-Preservation-Advisory-Board>
8. *Town of Erie Comprehensive Plan*. (2024). Town of Erie. Retrieved June 18, 2025 from <https://erieco.gov/2446/Comprehensive-Plan>
9. *Air Quality Index (AQI) Basics*. (n.d.). AirNow. Retrieved June 17, 2025, from <https://www.airnow.gov/aqi/aqi-basics/>
10. *Air Quality Index (AQI) Basics*. (n.d.). AirNow. Retrieved June 17, 2025, from <https://www.airnow.gov/aqi/aqi-basics/>
11. *Ground-level Ozone Basics*. (n.d.). United States Environmental Protection Agency. Retrieved June 17, 2025, from <https://www.epa.gov/ground-level-ozone-pollution/ground-level-ozone-basics#formation>
12. *Particulate Matter Basics*. (n.d.). United States Environmental Protection Agency. Retrieved June 17, 2025, from <https://www.epa.gov/pm-pollution/particulate-matter-pm-basics#PM>
13. *Air Quality*. (n.d.). Town of Erie. Retrieved June 17, 2025, from <https://www.erieco.gov/869/Air-Quality>

14. *Ozone Pollution and Your Health*. (n.d.). Colorado Department of Public Health and Environment. Retrieved June 17, 2025, from <https://cdphe.colorado.gov/ozone-pollution-and-your-health>
15. *2022-2027 Boulder Hazard Mitigation Plan*. (n.d.). Boulder County Office of Emergency Management. Retrieved June 17, 2025, from <https://boulderodm.gov/wp-content/uploads/2020/12/hazard-mitigation-plan.pdf>
16. *2022-2027 Boulder Hazard Mitigation Plan*. (n.d.). Boulder County Office of Emergency Management. Retrieved June 17, 2025, from <https://boulderodm.gov/wp-content/uploads/2020/12/hazard-mitigation-plan.pdf>
17. *Understanding Radon*. (n.d.). Colorado Department of Health and Environment. Retrieved June 17, 2025, from <https://cdphe.colorado.gov/hm/understanding-radon>
18. *Air Quality*. (n.d.). North Front Range Metropolitan Planning Organization. Retrieved June 17, 2025, from <https://nfrmpo.org/air-quality/>
19. *Emergency Management Procedures*. (n.d.). Town of Erie. Retrieved June 15, 2025 from <https://erieco.gov/1959/Emergency-Management-Procedures>
20. Kuhn, G. (2005, September 29). *Historical perspective of statewide streamflows during the 2002 and 1977 droughts in Colorado*. U.S. Geological Survey. Retrieved June 17, 2025, from <https://www.usgs.gov/publications/historical-perspective-statewide-streamflows-during-2002-and-1977-droughts-colorado>
21. *Drought Information*. (n.d.). Town of Erie. Retrieved June 14, 2025, from <https://www.erieco.gov/1991/Drought-Information>
22. *Colorado*. (n.d.). Drought.Gov. Retrieved June 17, 2025, from <https://www.drought.gov/states/colorado>
23. Colorado Water Conservation Board. (n.d.). *FACE: Hazards*. Retrieved June 17, 2025, from <https://cwcb.colorado.gov/FACE>
24. Climate Change Indicators: Drought. (2024). EPA. <https://www.epa.gov/climate-indicators/climate-change-indicators-drought>
25. Climate Change Indicators: Drought. (2024). EPA. <https://www.epa.gov/climate-indicators/climate-change-indicators-drought>
26. Climate Change Indicators: Drought. (2024). EPA. <https://www.epa.gov/climate-indicators/climate-change-indicators-drought>
27. Climate Change Indicators: Drought. (2024). EPA. <https://www.epa.gov/climate-indicators/climate-change-indicators-drought>
28. Climate Change Indicators: Drought. (2024). EPA. <https://www.epa.gov/climate-indicators/climate-change-indicators-drought>
29. Climate Change Indicators: Drought. (2024). EPA. <https://www.epa.gov/climate-indicators/climate-change-indicators-drought>
30. Rippey, B., and Johnson, L. (n.d.). Colorado. U.S. Drought Monitor. Retrieved June 10, 2025, from <https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?CO>
31. Rippey, B., and Johnson, L. (n.d.). Colorado. U.S. Drought Monitor. Retrieved June 10, 2025, from <https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?CO>
32. Colorado Climate Preparedness Roadmap. (2023, December). Colorado Office of Climate Preparedness and Disaster Recovery. Retrieved June 17, 2025, from https://www.colorado.gov/governor/sites/default/files/2023-12/Colorado%20Climate%20Preparedness%20Roadmap_Low%20Resolution%20%281%29.pdf

- 33.** Populations Impacted by Drought. (2024, March 25). Drought and Health | CDC. <https://www.cdc.gov/drought-health/toolkit/vulnerable-populations.html>
- 34.** *Colorado Climate Preparedness Roadmap*. (2023, December). Colorado Office of Climate Preparedness and Disaster Recovery. Retrieved June 17, 2025, from https://www.colorado.gov/governor/sites/default/files/2023-12/Colorado%20Climate%20Preparedness%20Roadmap_Low%20Resolution%20%281%29.pdf
- 35.** Bolinger, R.A., J.J. Lukas, R.S. Schumacher, and P.E. Goble. 2024: *Climate Change in Colorado, 3rd edition*. Colorado State University. Retrieved June 17, 2025, from <https://doi.org/10.25675/10217/237323>
- 36.** Bolinger, R.A., J.J. Lukas, R.S. Schumacher, and P.E. Goble. 2024: *Climate Change in Colorado, 3rd edition*. Colorado State University. Retrieved June 17, 2025, from <https://doi.org/10.25675/10217/237323>
- 37.** Bolinger, R.A., J.J. Lukas, R.S. Schumacher, and P.E. Goble. 2024: *Climate Change in Colorado, 3rd edition*. Colorado State University. Retrieved June 17, 2025, from <https://doi.org/10.25675/10217/237323>
- 38.** Bolinger, R.A., J.J. Lukas, R.S. Schumacher, and P.E. Goble. 2024: *Climate Change in Colorado, 3rd edition*. Colorado State University. Retrieved June 17, 2025, from <https://doi.org/10.25675/10217/237323>
- 39.** *Colorado Climate Preparedness Roadmap*. (2023, December). Colorado Office of Climate Preparedness and Disaster Recovery. Retrieved June 17, 2025, from https://www.colorado.gov/governor/sites/default/files/2023-12/Colorado%20Climate%20Preparedness%20Roadmap_Low%20Resolution%20%281%29.pdf
- 40.** *The Climate Explorer*. (n.d.). U.S. Climate Resilience Toolkit. Retrieved June 17, 2025, from https://crt-climate-explorer.nemac.org/climate_graphs/?city=Erie%2C+CO&county=Weld%2BCounty&area-id=08123&fips=08123&zoom=7&lat=40.0502623&lon=-105.0499817&id=days_tmax_gt_95f
- 41.** *The Climate Explorer*. (n.d.). U.S. Climate Resilience Toolkit. Retrieved June 17, 2025, from https://crt-climate-explorer.nemac.org/climate_graphs/?city=Erie%2C+CO&county=Weld%2BCounty&area-id=08123&fips=08123&zoom=7&lat=40.0502623&lon=-105.0499817&id=days_tmax_gt_95f
- 42.** Bolinger, R.A., J.J. Lukas, R.S. Schumacher, and P.E. Goble. 2024: *Climate Change in Colorado, 3rd edition*. Colorado State University. Retrieved June 17, 2025, from <https://doi.org/10.25675/10217/237323>
- 43.** Bolinger, R.A., J.J. Lukas, R.S. Schumacher, and P.E. Goble. 2024: *Climate Change in Colorado, 3rd edition*. Colorado State University. Retrieved June 17, 2025, from <https://doi.org/10.25675/10217/237323>
- 44.** *Who Is At Most Risk to Extreme Heat?*. (n.d.). National Integrated Heat Health Information System. Retrieved June 17, 2025, from <https://www.heat.gov/pages/who-is-at-risk-to-extreme-heat>
- 45.** *Heat-Related Illnesses (Heat Cramps, Heat Exhaustion, Heat Stroke)*. (2025). Johns Hopkins Medicine. Retrieved June 17, 2025 from <https://www.hopkinsmedicine.org/health/conditions-and-diseases/heatrelated-illnesses-heat-cramps-heat-exhaustion-heat-stroke>

46. *Historic Erie, Colorado*. (2023, Oct. 25). Erie Historic Preservation Advisory Board. Retrieved June 15, 2025 from <https://storymaps.arcgis.com/stories/d8aac9e1d2114430a03061c75540fdb2>
47. *FEMA Flood Map Service Center: Erie, Colorado*. (2012, December 18). Federal Emergency Management Agency (FEMA). Retrieved June 13, 2025, from <https://msc.fema.gov/portal/search?AddressQuery=erie%20colorado>
48. *FEMA Flood Map Service Center: Erie, Colorado*. (2012, December 18). Federal Emergency Management Agency (FEMA). Retrieved June 13, 2025, from <https://msc.fema.gov/portal/search?AddressQuery=erie%20colorado>
49. *How Flooding Affects Colorado's Communities: A case study of the 2013 Colorado Flood*. (2020, May 9). Colorado Water Conservation Board. Retrieved June 20, 2025 from <https://storymaps.arcgis.com/collections/e557a66237b6429787a19a39b30a1f4e?item=3>
50. *2013 Colorado Floods: A Decade of Recovery and Building Resilience*. (2023, September). The Federal Emergency Management Agency (FEMA). Retrieved June 14, 2025 from https://www.fema.gov/sites/default/files/documents/fema_r8-2013-colorado-floods-decade-recovery-building-resilience.pdf
51. *Colorado Hazard Mapping and Risk MAP Portal*. (2025). Colorado Water Conservation Board. Retrieved June 13, 2025 from <https://coloradohazardmapping.com/story?county=b12d7e0f-3bb0-427a-82bd-3db6e4f2de36#pctAnnual>
52. *Colorado Hazard Mapping and Risk MAP Portal*. (2025). Colorado Water Conservation Board. Retrieved June 13, 2025 from <https://coloradohazardmapping.com/story?county=b12d7e0f-3bb0-427a-82bd-3db6e4f2de36#pctAnnual>
53. *Colorado Enviroscreen 2.0 - About the Methods and Data*. (n.d.). Colorado Department of Public Health and Environment. Retrieved July 17, 2025 from <https://cdphe.colorado.gov/colorado-enviroscreen-20-about-the-methods-and-data>
54. Bolinger, R.A., J.J. Lukas, R.S. Schumacher, and P.E. Goble. 2024. *Climate Change in Colorado, 3rd edition*. Colorado State University. Retrieved June 17, 2025, from <https://doi.org/10.25675/10217/237323>
55. *Open Data Hub: Floodplain Viewer*. (2025). Mile High Flood District. Retrieved June 18, 2025 from <https://www.mhfd.org/flood-safety>
56. *Boulder County Wildfires*. (2025, April 29). ArcGIS StoryMaps. <https://storymaps.arcgis.com/stories/d60edf3c01874a2caf46a3427f718604>
57. *Community Chipping*. (n.d.). Wildfire Partners. Retrieved June 17, 2025, from <https://wildfirepartners.org/chipping-program/>
58. *Outdoor Burning*. (n.d.). Weld County. Retrieved June 17, 2025, from <https://www.weld.gov/Government/Departments/Health-and-Environment/Environmental-Health-Services/Air-Quality/Outdoor-Burning>
59. *Understand Risk*. (n.d.). Wildfire Risk to Communities | USDA Forest Service. Retrieved June 14, 2025, from <https://wildfirerisk.org/understand-risk/>
60. *Mountain View Community Wildfire Protection Plan*. (n.d.). Mountain View Fire Rescue. Retrieved June 14, 2025, from <https://www.mvfpd.org/mountain-view-community-wildfire-protection-plan>
61. *Risk to homes in Erie, CO*. (n.d.). Wildfire Risk to Communities | USDA Forest Service. Retrieved June 14, 2025, from <https://wildfirerisk.org/explore/risk-to-homes/08/08123%7C08013/0800024950/>

- 62.** *Risk to homes in Erie, CO.* (n.d.). Wildfire Risk to Communities | USDA Forest Service. Retrieved June 14, 2025, from <https://wildfirerisk.org/explore/risk-to-homes/08/08123%7Co8013/0800024950/>
- 63.** *Wildfire likelihood in Erie, CO.* (n.d.). Wildfire Risk to Communities | USDA Forest Service. Retrieved June 14, 2025, from <https://wildfirerisk.org/explore/wildfire-likelihood/08/08123%7Co8013/0800024950/>
- 64.** *Risk reduction zones in Erie, CO.* (n.d.). Wildfire Risk to Communities | USDA Forest Service. Retrieved June 14, 2025, from <https://wildfirerisk.org/explore/risk-reduction-zones/08/08123%7Co8013/0800024950/>
- 65.** *Colorado Wildfire Risk Public Viewer.* (n.d.). Colorado Climate Action. Retrieved June 14, 2025, from <https://climate.colorado.gov/colorado-wildfire-risk-public-viewer>
- 66.** *Mountain View Community Wildfire Protection Plan.* (n.d.). Mountain View Fire Rescue. Retrieved June 14, 2025, from <https://www.mvfpd.org/mountain-view-community-wildfire-protection-plan>
- 67.** *Colorado Wildfire Risk Public Viewer.* (n.d.). Colorado Climate Action. Retrieved June 14, 2025, from <https://climate.colorado.gov/colorado-wildfire-risk-public-viewer>
- 68.** *Colorado Wildfire Risk Public Viewer.* (n.d.). Colorado Climate Action. Retrieved June 14, 2025, from <https://climate.colorado.gov/colorado-wildfire-risk-public-viewer>
- 69.** *Colorado Wildfire Risk Public Viewer.* (n.d.). Colorado Climate Action. Retrieved June 14, 2025, from <https://climate.colorado.gov/colorado-wildfire-risk-public-viewer>
- 70.** *Colorado Wildfire Risk Public Viewer.* (n.d.). Colorado Climate Action. Retrieved June 14, 2025, from <https://climate.colorado.gov/colorado-wildfire-risk-public-viewer>
- 71.** *Colorado Climate Preparedness Roadmap.* (2023, December). Colorado Office of Climate Preparedness and Disaster Recovery. Retrieved June 17, 2025, from https://www.colorado.gov/governor/sites/default/files/2023-12/Colorado%20Climate%20Preparedness%20Roadmap_Low%20Resolution%20%281%29.pdf
- 72.** *Colorado Climate Preparedness Roadmap.* (2023, December). Colorado Office of Climate Preparedness and Disaster Recovery. Retrieved June 17, 2025, from https://www.colorado.gov/governor/sites/default/files/2023-12/Colorado%20Climate%20Preparedness%20Roadmap_Low%20Resolution%20%281%29.pdf
- 73.** *Colorado Climate Preparedness Roadmap.* (2023, December). Colorado Office of Climate Preparedness and Disaster Recovery. Retrieved June 17, 2025, from https://www.colorado.gov/governor/sites/default/files/2023-12/Colorado%20Climate%20Preparedness%20Roadmap_Low%20Resolution%20%281%29.pdf
- 74.** *Vulnerable Populations.* (n.d.). Wildfire Risk to Communities | USDA Forest Service. Retrieved June 22, 2025, from <https://wildfirerisk.org/reduce-risk/vulnerable-populations/>
- 75.** *Town of Erie 2025 Community Profile.* (n.d.). Town of Erie Economic Development Department. Retrieved July 27, 2025 from <https://www.erieco.gov/DocumentCenter/View/22556/Erie-Community-Profile-2025>
- 76.** *Neighborhoods at Risk.* (n.d.). Headwater Economics. Retrieved July 13, 2025, from <https://nar.headwaterseconomics.org/800024950/explore/map>
- 77.** *Populations at Risk.* (n.d.). Headwaters Economics. Retrieved July 13, 2025, from <https://headwaterseconomics.org/tools/populations-at-risk/>

- 78.** *Neighborhoods at Risk*. (n.d.). Headwater Economics. Retrieved July 13, 2025, from <https://nar.headwaterseconomics.org/800024950/explore/map>
- 79.** *Populations at Risk*. (n.d.). Headwaters Economics. Retrieved July 13, 2025, from <https://headwaterseconomics.org/tools/populations-at-risk/>
- 80.** *Explore the Map*. (n.d.). Climate and Economic Justice Screening Tool. Retrieved July 10, 2025 from <https://edgi-govdata-archiving.github.io/j40-cejst-2/en/#15.31/40.077172/-105.010919>
- 81.** *Colorado Enviroscreen 2.0*. (n.d.). Colorado Department of Health and Environment. Retrieved July 17, 2025 from https://www.cohealthmaps.dphe.state.co.us/COEnviroscreen_2/
- 82.** *Explore the Map*. (n.d.). Climate and Economic Justice Screening Tool. Retrieved July 10, 2025 from <https://edgi-govdata-archiving.github.io/j40-cejst-2/en/#15.31/40.077172/-105.010919>
- 83.** *Explore the Map*. (n.d.). Climate and Economic Justice Screening Tool. Retrieved July 10, 2025 from <https://edgi-govdata-archiving.github.io/j40-cejst-2/en/#15.31/40.077172/-105.010919>
- 84.** *Disproportionately Impacted Community Map*. (n.d.). Colorado Department of Health and Environment. Retrieved July 17, 2025 from <https://www.cohealthmaps.dphe.state.co.us/DICommunity/>
- 85.** *Explore the Map*. (n.d.). Climate and Economic Justice Screening Tool. Retrieved July 10, 2025 from <https://edgi-govdata-archiving.github.io/j40-cejst-2/en/#15.31/40.077172/-105.010919>
- 86.** *Colorado Enviroscreen 2.0*. (n.d.). Colorado Department of Health and Environment. Retrieved July 17, 2025 from https://www.cohealthmaps.dphe.state.co.us/COEnviroscreen_2/
- 87.** *Colorado Enviroscreen 2.0*. (n.d.). Colorado Department of Health and Environment. Retrieved July 17, 2025 from https://www.cohealthmaps.dphe.state.co.us/COEnviroscreen_2/

Appendix B: Community Engagement Data

Overall Data from Town of Erie Events

Total interactions: 926

Top 3 Erie Hazards	Erie Resident	Nonresident
Drought	317	35
Wildfires	297	41
Extreme Heat	257	28
Power Outages	110	18
Flooding	99	6
Other	98	12
Not Sure	28	11
None	7	1
Total	1213	152

Table 1:
Table of responses on the top three hazards in the Town of Erie from all Town of Erie events the MENV Graduate Student Team attended.

Top 3 Resilience Priorities	Erie Resident	Nonresident
Local Ecosystems, Wildlife, and Trees	262	30
Sustainable Land Use and Transportation Access	263	27
Water Conservation	233	31
Wildfire Mitigation and Disaster Response	178	22
Economic Diversity and Job Access	118	13
Community Connectedness and Education	116	11
Energy Resilience	86	9
Healthcare Access	61	14
Agricultural Support	61	12
Other	59	2
Total	1437	171

Table 2:
Table of responses on the top three resilience priorities the Town of Erie should take from all Town events the MENV team attended.

Top Three Hazards: Responses from Erie Residents

Top 3 Erie Hazards	Arbor/ Earth Day	Town Fair	Farmers Market, May 30	Farmers Market, June 12	Farmers Market, June 26	Farmers Market, July 10	Farmers Market, July 24	Erie Fest
Drought	98	73	23	36	19	12	22	34
Wildfires	74	61	27	43	27	15	20	30
Extreme Heat	72	52	17	36	23	8	26	23
Power Outages	18	26	4	30	10	4	3	15
Flooding	22	20	6	9	14	3	12	13
Other	3	12	0	6	5	4	31	37
Not Sure	5	2	3	10	0	0	2	6
None	1	2	0	3	0	1	0	0
Total	293	248	80	173	98	47	116	158

Table 3: Table of responses from Erie residents on the top three hazards in the Town of Erie from all Town events the MENV Graduate Student Team attended.

Top Three Hazards: Responses from Nonresidents

Top 3 Erie Hazards	Arbor/ Earth Day	Town Fair	Farmers Market, May 30	Farmers Market, June 12	Farmers Market, June 26	Farmers Market, July 10	Farmers Market, July 24	Erie Fest
Drought	8	11	2	5	2	0	0	7
Wildfires	7	10	3	6	4	0	1	10
Extreme Heat	5	8	1	6	2	0	0	6
Power Outages	5	3	1	4	1	0	0	4
Flooding	2	3	0	0	0	0	0	1
Other	0	10	0	1	0	0	0	1
Not Sure	2	4	0	1	1	0	0	3
None	1	0	0	0	0	0	0	0
Total	30	49	7	23	10	0	1	32

Table 4: Table of responses from nonresidents on the top three hazards in the Town of Erie from all Town events the MENV team attended.

Top Three Resilience Priorities: Responses from Erie Residents

Top 3 Resilience Priorities	Arbor/ Earth Day	Town Fair	Farmers Market, May 30	Farmers Market, June 12	Farmers Market, June 26	Farmers Market, July 10	Farmers Market, July 24	Erie Fest
Local Ecosystems, Wildlife, and Trees	68	59	17	34	28	12	20	24
Sustainable Land Use and Transportation Access	73	47	16	44	21	13	22	27
Water Conservation	68	51	17	31	23	8	14	21
Wildfire Mitigation and Disaster Response	55	26	19	26	20	5	9	18
Economic Diversity and Job Access	25	21	12	18	6	6	21	9
Community Connectedness and Education	25	31	9	14	7	6	11	13
Energy Resilience	21	15	2	18	11	5	2	12
Healthcare Access	23	5	5	9	0	3	4	12
Agricultural Support	10	11	10	13	5	4	5	3
Other	5	20	15	8	3	0	2	6
Total	373	286	122	215	124	62	110	145

Table 5: Table of responses from Erie residents on the top three resilience priorities the Town of Erie should take from all Town events the MENV Graduate Student Team attended.

Top Three Resilience Priorities: Responses from Nonresidents

Top 3 Resilience Priorities	Arbor/ Earth Day	Town Fair	Farmers Market, May 30	Farmers Market, June 12	Farmers Market, June 26	Farmers Market, July 10	Farmers Market, July 24	Erie Fest
Local Ecosystems, Wildlife, and Trees	6	9	1	4	3	0	0	7
Sustainable Land Use and Transportation Access	3	8	2	6	1	0	1	6
Water Conservation	9	6	1	5	3	0	0	7
Wildfire Mitigation and Disaster Response	4	7	0	5	2	0	1	3
Economic Diversity and Job Access	1	6	1	1	2	0	0	2
Community Connectedness and Education	1	4	1	3	1	0	0	1
Energy Resilience	1	0	1	3	1	1	0	2
Healthcare Access	1	1	0	3	2	0	0	7
Agricultural Support	2	4	1	0	1	1	0	3
Other	0	2	0	0	0	0	0	0
Total	28	47	8	30	16	2	2	38

Table 6: Table of responses from nonresidents on the top three resilience priorities the Town of Erie should take from all Town events the MENV Graduate Student Team attended.

Number of Interactions from Town of Erie Events

Number of Interactions	Arbor/ Earth Day	Town Fair	Farmers Market, May 30	Farmers Market, June 12	Farmers Market, June 26	Farmers Market, July 10	Farmers Market, July 24	Erie Fest
Interactions from People	194	250	93	120	82	28	55	104

Table 7: Table of number of people that interacted with the MENV team during each event they attended.

Top Three Hazards: Responses for the Other Category*Arbor/Earth Day*

Hail, Coal Creek flooding.

Farmers Market, June 26

Road safety, overdevelopment, infrastructure.

Town Fair

Big oil, too many planes and aircraft, littering, too much growth, individualism.

Farmers Market, July 10

Grasshoppers, cell service for emergencies.

Farmers Market, May 30

There were no responses for "other" for the hazards question recorded during this event.

Farmers Market, July 24

Sprawl, hail.

Farmers Market, June 12

Overdevelopment.

Erie Fest

Traffic, oil and gas, income levels, community building, hazards.

Top Three Resilience Priorities: Responses for the Other Category*Arbor/Earth Day*

Affordable housing.

Farmers Market, June 26

5G Service.

Town Fair

Food markets.

Farmers Market, July 10

Advanced and specialty medical access.

Farmers Market, May 30

Overbuilding, lagging infrastructure, connected trails, safer crossings on major roads, indoor play areas for kids to use during the winter, progress with commercial facilities, more grocery stores.

Farmers Market, July 24

Water resource development and commercial development.

Erie Fest

Senior care.

Farmers Market, June 12

Civil unrest, unchecked growth, cell towers, water prices, and transportation access.

Defining Resilience: Open-Ended Responses

Arbor/Earth Day

Resilience: The ability to overcome hard times and create a more beautiful future from those hard times.
 Able to handle extreme events with minimal negative effects.
 An infrastructure that supports and can withstand changes.
 Recycling and Composting (waste).
 Planting trees.
 Protection from extreme weather.
 Building habitats and gardens.
 Pushing ahead with solutions for problems.
 Support our pollinators.
 Walkability.
 Sustainable business plans and practices.
 Survival in all conditions.

Town Fair

Diverse neighborhoods, interconnectivity, economy and entrepreneurship, walkability.
 Affordable housing for people to have access to lower wage jobs.
 Affordable living (housing transportations, groceries, etc.; more inclusive than housing).
 The goats were brilliant!
 More parks that have diverse equipment.
 Wildfires.
 Less focus on car-based convenience, more bikeability and walkability to all services.
 Slow development.
 Construction: stop blocking residents in (Old Town).
 Long term stability regarding (finances?) and water (among other public services).
 The community could use a cricket ground in the parks and rec center, but we appreciate the transportation improvements.
 Community.
 The town should align growth with water availability and taps.

Town Fair, Part 2

Volunteerism to help open space and do creek cleanups, better creek access near new development, maybe a duck race fundraiser.
 The Town needs more industry with the residential growth; it is basically a bedroom community.
 Crisis resilience for different environmental (floods, etc.) through city institutions.
 Resilience is being prepared in order to respond.
 The ability of a community, regardless of economic status, to make it through hard times.
 Listen to all voices.

Farmers Market, May 30

Always getting back up again!
 Being creative! Finding innovative solutions for tough problems.
 Never giving up no matter what!
 Oil drilling under my house is awful!
 Morgan Hill park: We don't want it built so we can preserve nature.
 I moved from a town that quadrupled in size in 10 years, don't let that happen here.

Farmers Market, June 12

The ability to bounce back.
 Strong.
 Standing up to a challenge.
 Asset management.

Farmers Market, June 26

Strong and diverse ecosystem.
 To overcome hardships and hazards as a connected community.
 Better air quality.
 To recover from adversity.

Defining Resilience: Open-Ended Responses

Farmers Market, July 10

Keep on trying.

Farmers Market, July 24

Planning for 7 generations ahead, without causing harm now, long term sustainability.

Erie Fest

There were no open-ended responses recorded during this event.