

Resilience Action Plan

Town Council Study Session

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Presentation Overview

- 1.MENV Program
- 2.Project Purpose and Background
- 3.Vulnerability Assessment and Hazards
- 4.Community Engagement
- 5.Resilience Action Plan
- 6.Next Steps



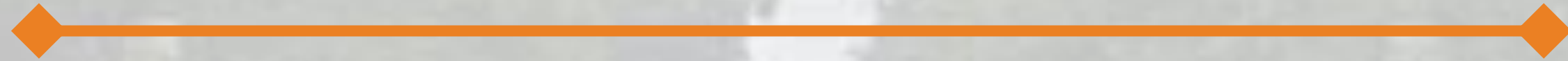
Masters of the Environment (MENV) Graduate Program

- Interdisciplinary, application-focused professional master's degree that provides practical skills, knowledge, and experience to professionals who can **solve environmental and sustainability problems in the public, private, and nonprofit sectors.**
- MENV has **five degree tracks** focused on sustainable policy, energy, the outdoor industry, food systems, and urban resilience.
- **Capstone Project:** Our team is working with the Town of Erie to gain impact-oriented experience over 12 months.



Masters of the Environment
UNIVERSITY OF COLORADO BOULDER

Project Purpose





Project Purpose

Create Erie's first Resilience Action Plan

"Community resilience is defined as the ability of a community to recover from a disaster or persist sustainably in the face of a new, ongoing hardship." -**Town of Erie, Sustainability Division**

Resilience is a "city's ability to adapt, survive, and grow in the face of challenges." - **100 Resilient Cities program**

Methodology



**Review of
TOE Plans**



**Review of
Other City
Plans**



**Vulnerability
Assessment**



**Community
Partner
Interviews**



**Community
Engagement
at TOE
Events**

Vulnerability Assessment and Hazards





Vulnerability Assessment

Air Quality

Drought

Extreme Heat

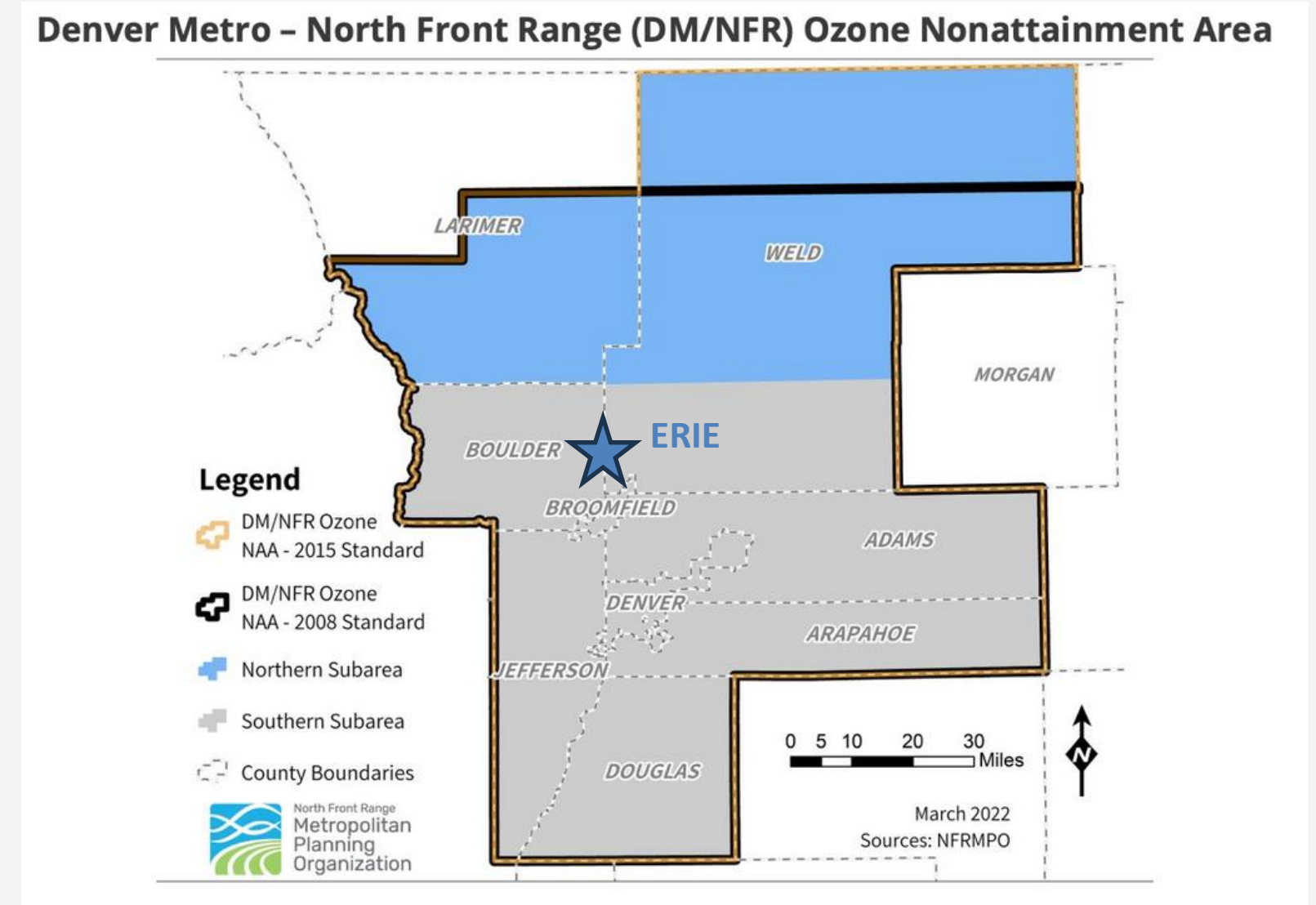
Flooding

Wildfires

**Social
Vulnerability**

Air Quality

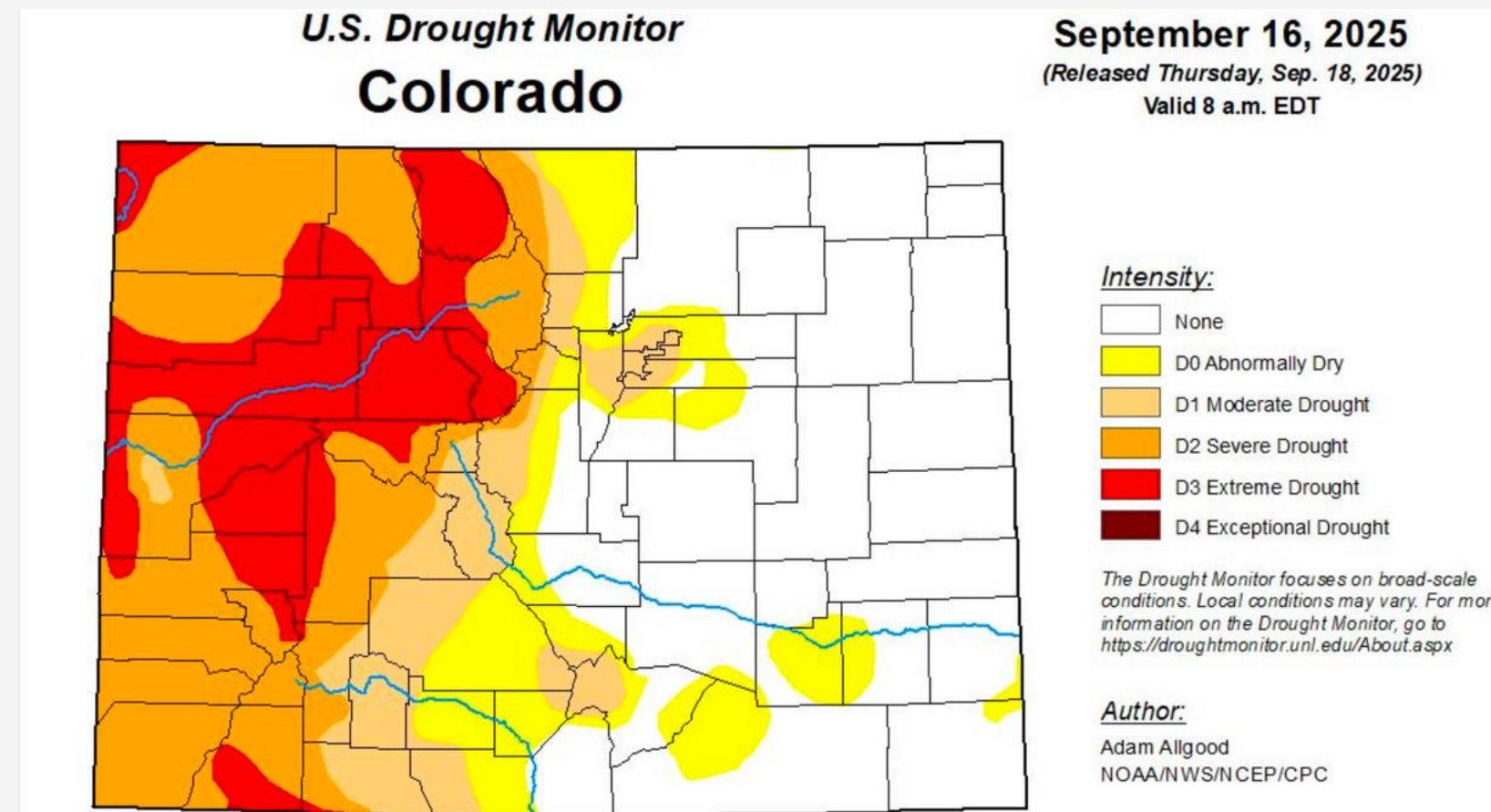
- Erie's air quality regularly exceeds federal ozone limits.
- Particulate matter impacts local air quality.
- **Radon** is a common indoor pollutant.



Map of the North Front Range Ozone Nonattainment Area (North Front Range Metropolitan Planning Organization)

Drought

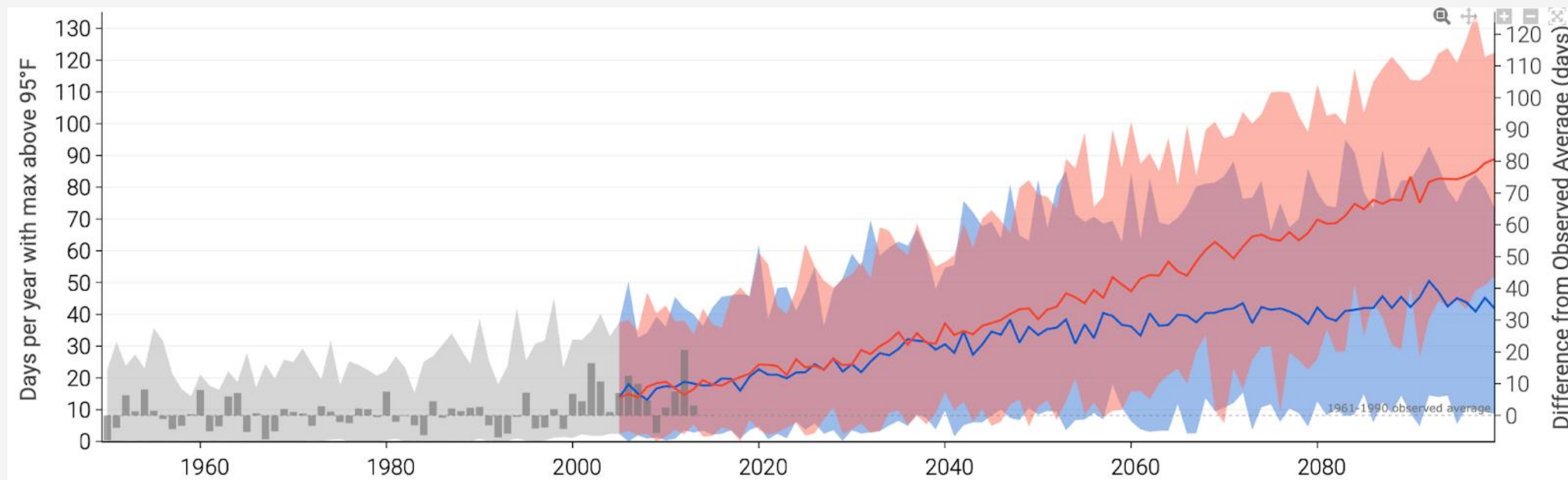
- In the last five years, moisture conditions are drier than average across the contiguous 48 states of the United States.
- Boulder and Weld counties are currently experiencing **less severe drought conditions compared to the rest of the state.**



Map of drought conditions in Colorado (U.S. Drought Monitor)

Extreme Heat

- **Average annual temperatures increased** 1.4°F from the 1971-2000 baseline. Temperatures are projected to increase an additional 1.1-4.1°F by 2050.
- **Heat waves are projected to increase** to 10 per year by the 2060s.



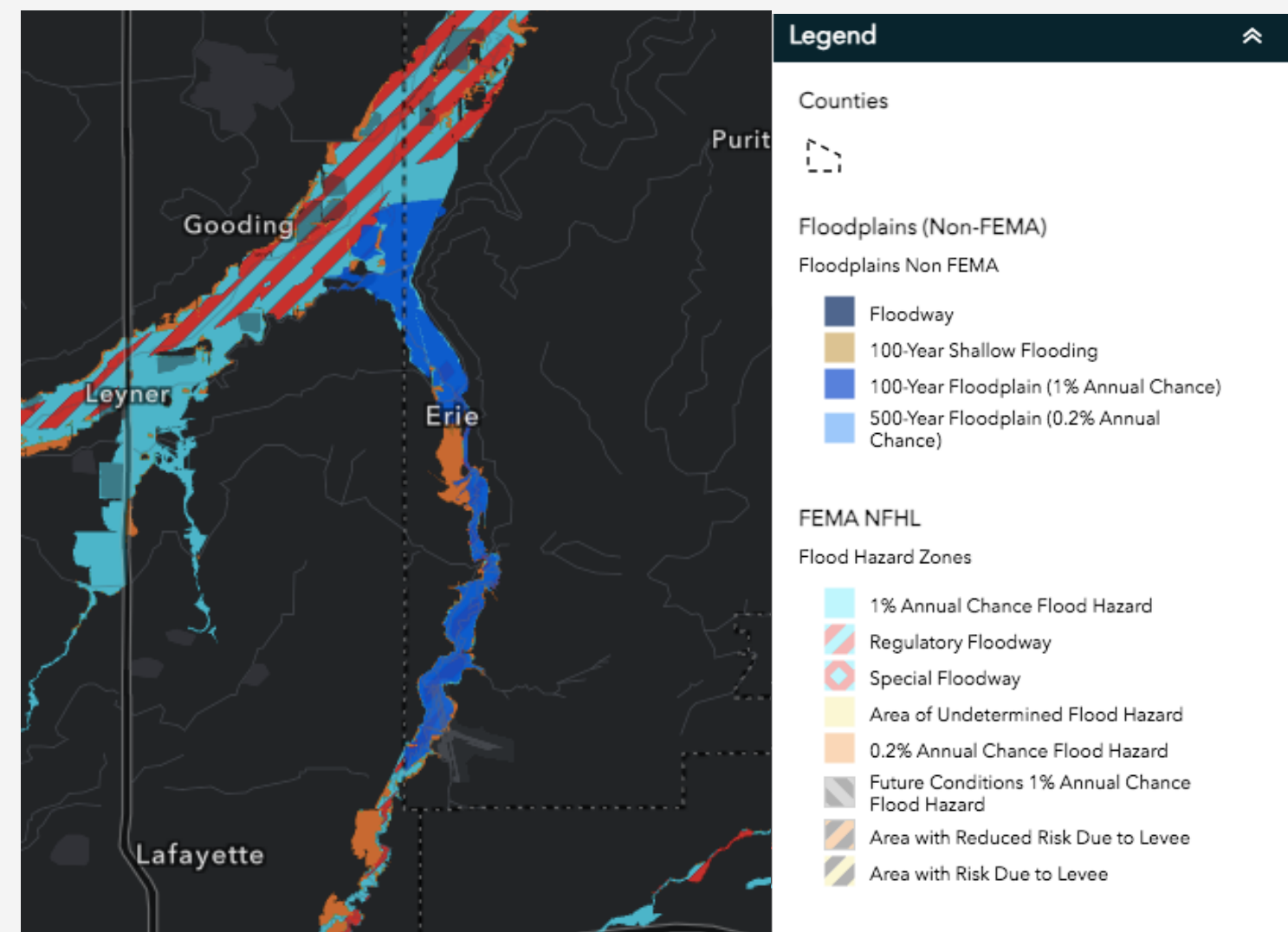
Graph showing projected Erie days above 95°F (Climate Explorer)

Flooding

- **25% of land area** in the census block south of Old Town in Weld County is **in the 100-year floodplain**.



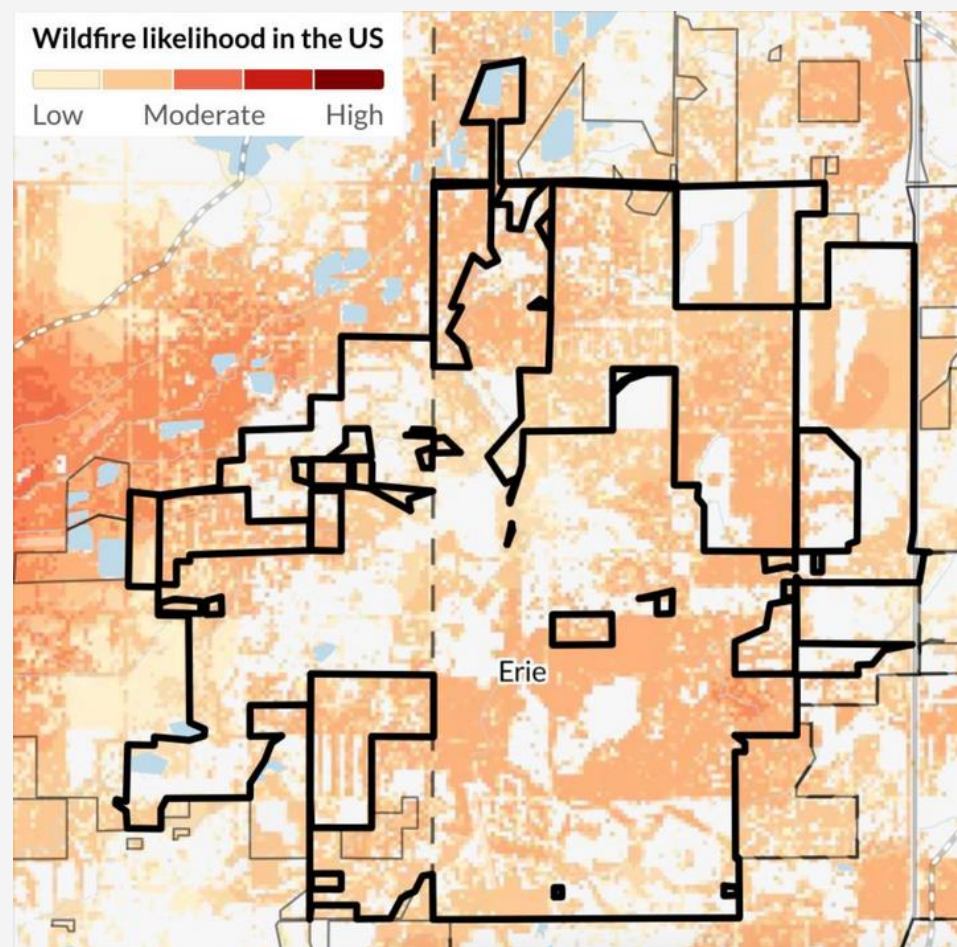
Census block group 081230020073
(Colorado Enviroscreen 2.0)



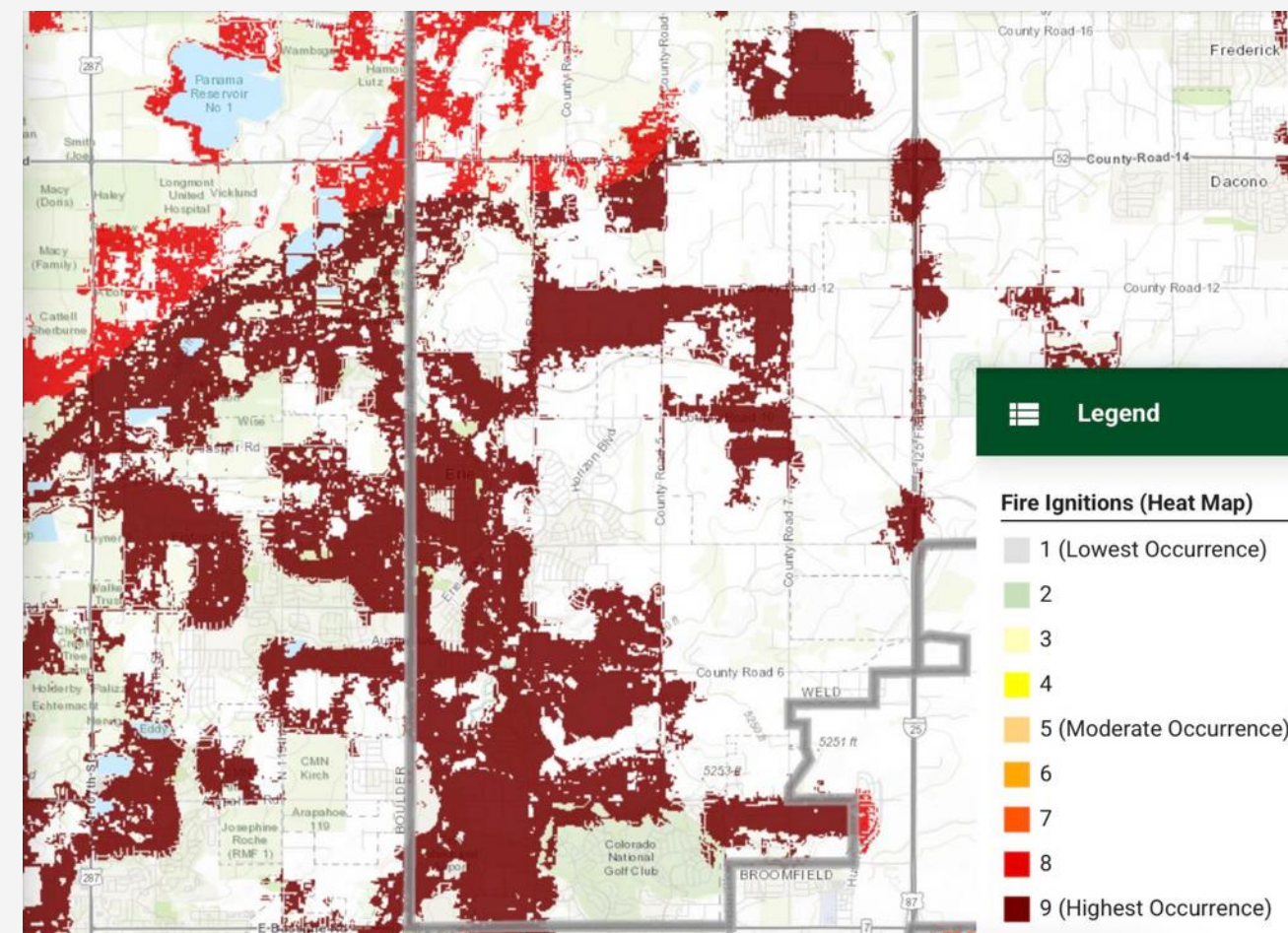
Mile High Flood District Floodplain Map
(Mile High Flood District)

Wildfires

- Erie has a moderate likelihood of wildfires, which is a **"greater wildfire likelihood than 58% of communities in the United States."**
- **Central Erie** has the most likelihood for a fire ignition.



Wildfire likelihood in the Town of Erie
(Wildfire Risk to Communities)



Likelihood for fire ignition in the Town of Erie
(Colorado State Forest Service)



Social Vulnerability

- The central corridor of Erie contains the **highest percentage of low-income residents (15%)**, households that are **housing cost-burdened (34%)**, and **people of color (33%)**.
- 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.

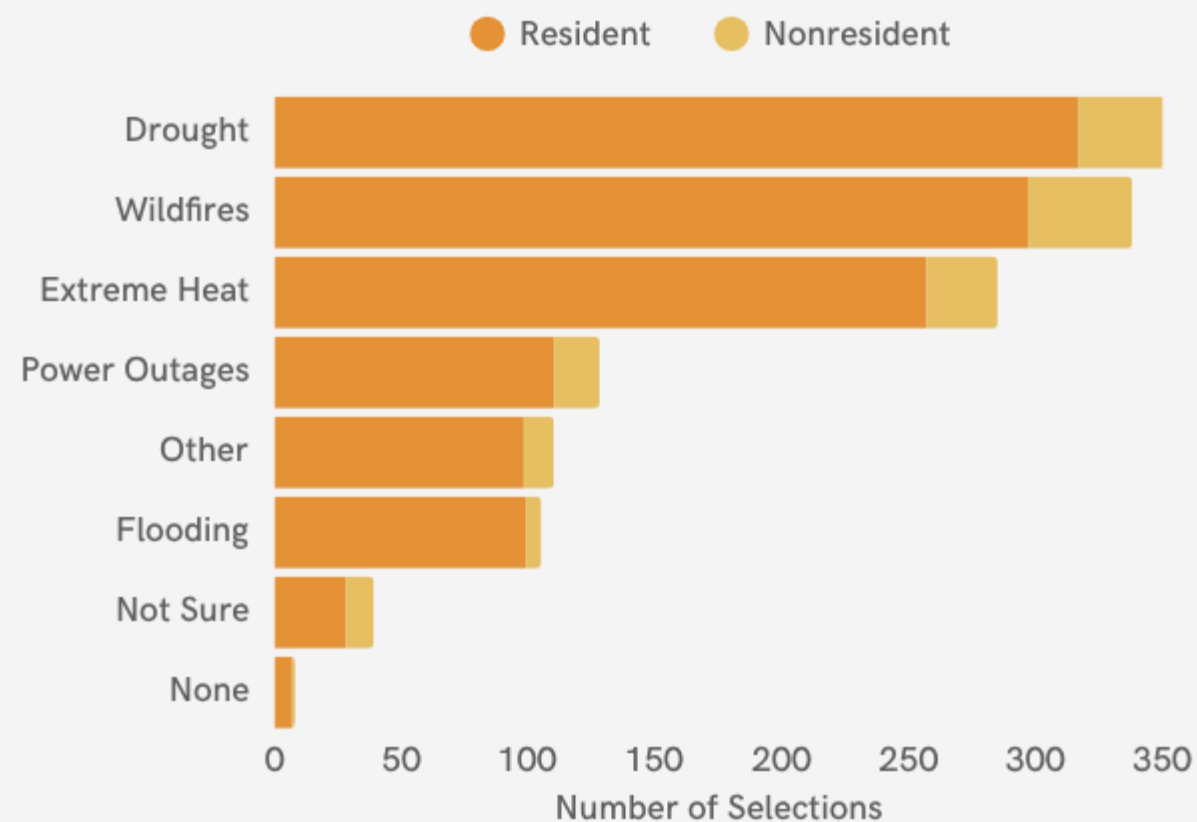
Community Engagement and Interviews



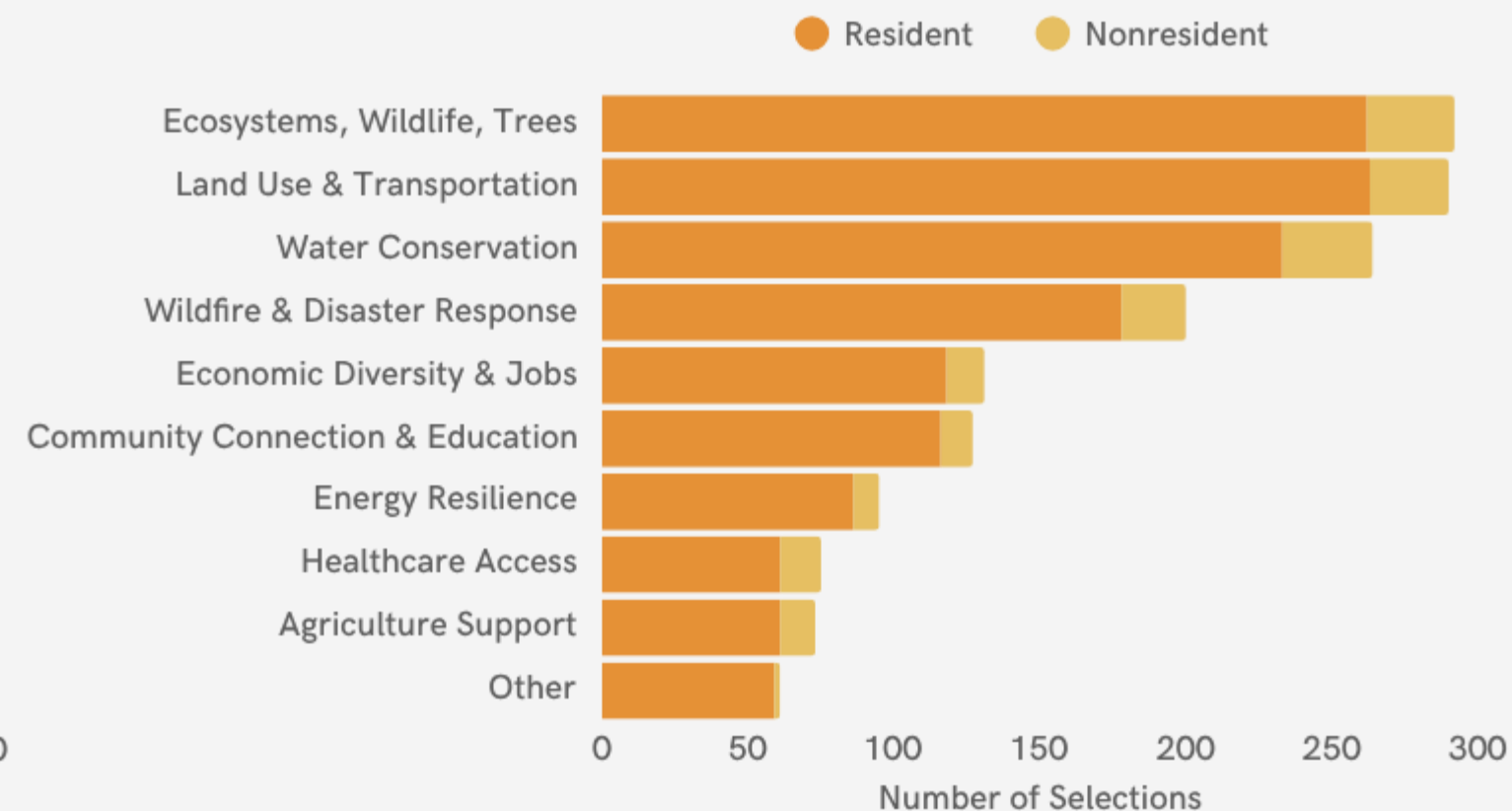
Community Engagement: Summary

- The team acquired community feedback at **8 events** with **over 900 interactions**.
- **Top hazards** residents identified included drought, wildfires, extreme heat.
- **Top priorities** included ecosystems, wildlife, trees; land use & transportation; water conservation.

Top Identified Hazards



Top Identified Priorities



Community Engagement

Arbor Earth Day
194 interactions



Town Fair
250 interactions



Farmers Markets
378 interactions



Erie Fest
104 interactions

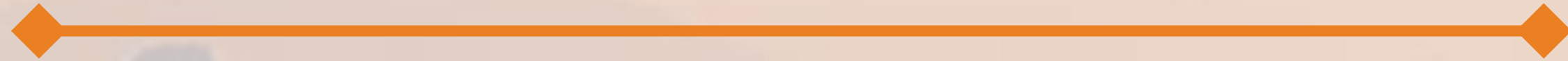


Interviews Recap

- Conducted **16 interviews** across Town staff from various departments and divisions, local partners, regional partners, emergency responders, and Town Council members.
- There were many personal stories on how interviewees were affected by the the **2013 Flood, Marshall Fire, and hailstorms.**
- Feedback and review on the RAP draft from community collaborators, in addition to their personal interviews.
- RAP draft strategies were shared with Town of Erie directors and involved staff for their feedback.



Resilience Action Plan





Resilience Action Plan Chapters



Resilient Infrastructure

Build infrastructure able to withstand and operate during natural hazards and decrease the need for post-disaster rebuilding.



Land Management

Maintain public and private lands to protect local biodiversity, stormwater management, and recreation opportunities.

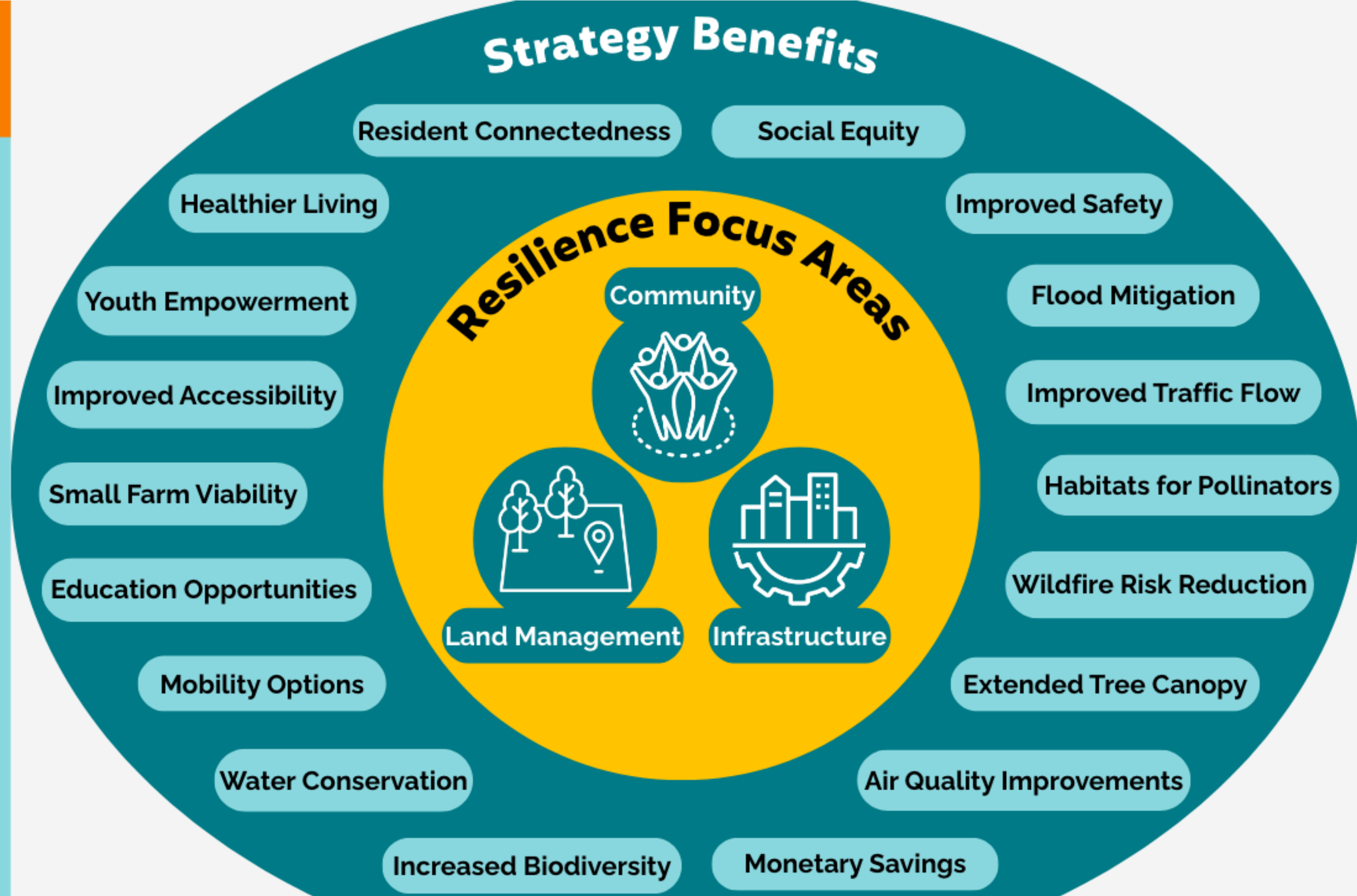


Community

Provide accessible resources to give Town residents the opportunity to succeed through safety, connectedness, and health.

RAP Chapters and Sections

- Resilient Infrastructure
 - Air Quality
 - Extreme Temperatures
 - Transportation
 - Water Conservation
 - Wildfires
- Land Management
 - Agriculture
 - Landscaping, Parks, and Open Space
- Community
 - Accessibility
 - Economic Development
 - Healthy Living
 - Resilience Hubs
 - Youth Engagement and Empowerment
- Partnership Opportunities





Funding and Payback

- Specific costs associated with each strategy were not within the scope of the team's work.
- The team generated a list of potential funding sources related to proposed strategies.
- The United States Chamber of Commerce estimates that **for every \$1 spent** on resilience work, **\$13 is realized** through avoided future impacts in economic loss and infrastructure rebuilding.

Next Steps

1. Finalize RAP and its design.
- 2. October 31:** MENV Symposium
- 3. November 4:** Council considers final adoption of RAP
4. Prepare for community engagement to begin RAP implementation.





Acknowledgements

We would like to thank our:

- Partner, Town of Erie Sustainability Division
 - Partner Contacts, Emma Marino, and Eryka Thorley
- Advisor, Leslie Blood
- Capstone Lead, Alice Reznickova

Questions?



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