

# LARIMER COUNTY INTERNAL CLIMATE ACTION, RESILIENCE, AND EDUCATION (ICARE) REPORT

Larimer County 2023



*ABIDING BY LARIMER COUNTY'S GUIDING PRINCIPLES WHILE PROVIDING A CLIMATE AND SUSTAINABILITY LENS TO OUR DAILY WORK.*

## SUMMARY

Larimer County initiated the Internal Climate Action, Resilience, and Education (ICARE) plan in 2022. Twelve County departments have been active over the past year in gathering data, setting baselines, and making progress toward the goals established in the initial plan. This report captures progress and continued opportunities since adoption in 2022. In addition to making progress toward the specific goals in this plan, the ICARE team explored integration of Social Equity and established the first evaluation tool for project funding priorities. With the solid baseline now created, the ICARE team will continue to work toward goals, provide opportunities for County leadership to further inform goals and initiatives, and will link ICARE plan projects to the efforts outlined in the Climate Smart and Future Ready community plan as appropriate.

## OVERVIEW

### 1. Plan Background and Description

Larimer County is committed to demonstrating leadership on environmental sustainability that is reflective of the community's strong commitment to the environment while optimizing decisions that are inclusive of the economy and social equity. Larimer County, as a governmental body, has a unique role in building climate mitigation, adaptation, and overall sustainability capacity in our community through demonstrating how our internal operations and programs conserve our unique way of life as we confront our changing climate that is a significant contributing factor to extreme weather conditions such as drought, heat and wind.

This Internal Climate and Sustainability Action Plan reflects the [Climate Impacts to Larimer County](#) and the guiding principles of the County to be good stewards of public resources, promote innovation, adaptability, and committing to continuous improvement, and cultivating inclusive and collaborative partnerships, while we empower people to take responsibility.

The actions identified herein demonstrate the County's commitment regarding the community-wide priorities as identified in the Climate Smart and Future Ready initiative and benefit County staff and operations which in turn benefits our community. This plan was developed through the dedicated work of an ICARE Team comprising numerous County departments (see Appendix A). Short-term actions are expected to be complete by 2024, while long-term actions are expected to be complete by 2030.

## 2. Plan Focus and Implementation

This ICARE Plan focuses on short- and long-term goals that improve:

- **Built Environment, Waste, and the Economy** - Reducing our impact on the environment while improving comfort and efficiency, while demonstrating the highest and best use of taxpayer dollars and improving the County's economic sustainability.
- **Mobility of Goods, Services, and People** - Finding sustainable ways to improve how we move people and goods including considerations for the costs, accessibility, impact, and quality of our transportation options.
- **Natural Environment, Water, and Agriculture** - Improving how we care for and use nature and the land to positively impact our water quality, water availability and our natural resources.
- **Wellbeing and Resilience** - Increasing equitable and local access to food, improved air quality, and natural disaster avoidance, preparation, and response.

through concentration on the following desired conditions (terminology is defined in Appendix B):



**Environmental Quality** = A set of properties and characteristics of the environment, either generalized or local, as fundamental to a healthy community environment. It is a measure of the condition of an environment (e.g., varied characteristics such as air and water purity or pollution, noise, access to open space, built environment, etc.) relative to the requirements of one or more species physical and mental health.



**Social Equity** = Social equity, a concept also known as environmental justice, is the fair treatment and involvement of all people and communities—regardless of race, gender, national origin, or income level—in the development, implementation, and enforcement of environmental laws, regulations, and policies.



**Community Resiliency** = The ability of a community to use its assets to strengthen systems and improve the community's ability to withstand, adapt to, and recover from adversity.






































































**Economic Sustainability** = The practices that support long-term and diverse economic growth while enhancing social, environmental, and cultural aspects of the community.





The first year of implementing this plan emphasized development of baseline conditions if no measures yet exist. Goals and measures were adjusted as necessary when baseline conditions were established. **Unless otherwise noted, all goals will be tracked against a 2022 baseline.**

This plan will be reviewed annually to allow for adjustment and alignment with the “Climate Smart and Future Ready” Larimer County initiative as it unfolds and grows, as goals are realized, or actions require adjustments. The Board of County Commissioners will receive mid-year and annual reports on outcomes toward the goals identified and will have the opportunity to continually approve plan adjustments as required.

## Larimer County Internal Climate and Sustainability Goals

Progress		
<b>Built Environment, Waste, and Economy</b>		
  	Reduce County energy use 30% by enhancing energy efficiency and reduce GHG emissions with renewable energy sources by 2030.	  
  	Build the infrastructure required to recycle, reuse and divert waste to achieve 40% waste diversion from the landfill by 2025 and 80% diversion by 2030.	 
  	Establish guidance for the procurement of goods and services which are consistent with the strategies and goals outlined in this plan.	 
  	Increase share of industry mix to include more renewable energy, energy efficiency and greenhouse gas reduction firms in the region.	 
<b>Mobility of Goods, Services, and People</b>		
  	Increase regional paved trails 50% by 2043. Increase EV Infrastructure in unincorporated Larimer County.	  
  	Increase average miles per gallon of the County light-duty fleet by 20% through transition to alternative fuel vehicles, adoption of an idling policy and more fuel-efficient vehicles by 2030.	  
  	Reduce County employee vehicle miles traveled 20% by 2030 and increase the number of services that reduce resident vehicle miles traveled.	 
<b>Natural Environment, Water and Agriculture</b>		
  	Reduce average annual irrigation water used 20% by 2027.	
  	Conserve 74,108 acres of open space properties within Larimer County to protect habitats and preserve biodiversity by 2043.	
<b>Wellbeing and Resilience</b>		
  	Work with local food producers and distributors to increase access to sustainable and locally produced food sources.	  
  	Increase employee and resident resilience by informing and incentivizing actions that promote improved air quality.	  
  	Streamline incentives and lead proactive hazard mitigation and disaster avoidance by implementing 3 mitigation or resilience projects with at least 3 community partners annually.	  
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## Built Environment, Waste and Economy Goals Update

<div> <div></div> <div></div> <div></div> </div> <b>Reduce energy use by 30% through enhancing energy efficiency and use of renewable energy sources by 2030.</b>				
Progress	Action Description	Timeframe	Climate & Sustainability Connection	Costs
<div></div>	Continue to improve County facility Energy Star performance by increasing system efficiencies within component replacement plan.	Short		\$\$\$
	<ul style="list-style-type: none"> <li>Benchmarking of County facilities complete.</li> <li>Developing asset plan with Trane.</li> </ul>			
<div></div>	Develop a building retrofit checklist for applicability to County facilities and review for applicability to businesses and residents.	Short		\$
<div></div>	Update County Facility Design Criteria to include alternative energy source evaluation for all new facilities.	Short		\$
<div></div>	On-site Renewable Energy Production added to County resources and facilities to reduce greenhouse gas emissions.	Long		\$\$\$\$

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<div> <div></div> <div></div> <div></div> </div> <b>Build the infrastructure required to recycle, reuse, and divert waste to achieve 40% waste diversion from the landfill by 2025 and 80% diversion by 2030.</b>				
Progress	Action Description	Timeframe	Climate & Sustainability Connection	Cost
<div></div>	Implement infrastructure and diversion projects in the Solid Waste Master Plan with the Regional Wasteshed Partners, by 2027.	Long		\$\$\$\$
	<ul style="list-style-type: none"> <li>Evaluating technologies capable of processing and converting waste materials into useful forms of energy, renewable natural gas or liquid fuels.</li> <li>78% of municipal waste deposited into the landfill; 12% of waste was recycled.</li> </ul>			
<div></div>	Study Biochar technology as a waste management tool to divert forest waste and dimensional lumber from the landfill.	Short		\$
	<ul style="list-style-type: none"> <li>Co HB23-1069 develops advisory group</li> </ul>			
<div></div>	Continue to move County offices to digitize old and new records to eliminate storage requirements, such as OnBase on a county-wide level, and encourage more paperless workflow between departments.	Long		\$\$\$

<div> <div></div> <div></div> <div></div> </div> <b>Establish guidance for the procurement of goods and services which are consistent with the strategies and goals outlined in this plan.</b>				
Progress	Action Descriptions	Timeframe	Climate & Sustainability Connection	Costs
<div></div>	Explore options, actions, and costs of developing a sustainability purchasing program, consider product life cycle analysis, and buying products with sustainability certifications	Short		\$
	<ul style="list-style-type: none"> <li>Surveyed employees, gathered purchasing agent feedback, and now assessing green house gas inventory results to refine focus</li> </ul>			
<div></div>	Develop a sustainability purchasing guide or policy that supports the County's climate and sustainability goals, while also meeting economic realities and service needs of the community.	Long		\$\$
	<ul style="list-style-type: none"> <li>Section XVI of Purchasing Policy includes initial sustainable guidance</li> </ul>			

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<div> <div></div> <div></div> <div></div> </div> <b>Increase share of industry mix* to include more renewable energy, energy efficiency and greenhouse gas reduction firms in the region.</b>				
Progress	Action Description	Timeframe	Climate & Sustainability Connection	Costs
<div></div>	Participate in the “Reimagining Climate Wise” sustainable business effort and evaluate for Countywide support	Short		\$
	<ul style="list-style-type: none"> <li>Developed Business Resource page and exploring continued partnership with municipalities for the development of a countywide program</li> </ul>			
<div></div>	Update Business Incentive Policy to include more specific language around environmental stewardship and sustainability and workforce development.	Short		\$




\* [https://www.bls.gov/green/industry\\_by\\_naics.pdf](https://www.bls.gov/green/industry_by_naics.pdf)

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## Mobility, Delivery of Goods and Digital Services

<div> <div></div> <div></div> <div></div> </div> <b>Increase regional paved trails 50% by 2043. EV infrastructure in unincorporated Larimer County.</b>				
Progress	Action Description	Timeframe	Climate & Sustainability Connection	Costs
<div></div>	Identify needs in terms of Electric Vehicle (EV) charging infrastructure for County operations - number of stations, types of stations, locations of stations and costs.	Short		\$
	<ul style="list-style-type: none"> <li>County facilities ideal for installation of charging stations are identified and funding being sought.</li> <li>One charging station currently installed at Loveland campus.</li> </ul>			
<div></div>	Identify and explore opportunities at County facilities that support alternative modes of transportation, such as bicycling, walking, and transit. Consider dedicating more indoor space for secure bicycle storage and e-bike charging.	Short		\$
<div></div>	Increase regional paved trails in Larimer County by 50% by 2043.	Long		\$\$\$\$
	<ul style="list-style-type: none"> <li>Since 2015, 53 miles of widened shoulders along county roads have been constructed.</li> <li>Larimer County has 79 miles of regional paved trails.</li> </ul>			

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<div> <div></div> <div></div> <div></div> </div> <b>Increase average miles per gallon of the County light-duty fleet by 20% through transition to alternative fuel vehicles, adoption of an idling policy, and fuel-efficient vehicles by 2030.</b>				
Progress	Action Description	Timeframe	Climate & Sustainability Connection	Cost
<div></div>	Create awareness campaigns regarding emission reduction benefits from increased fuel economy and transition to alternative fuels for County fleet	Short		\$
	<ul style="list-style-type: none"> <li>Anti-idling campaign developed and implemented to all county departments</li> </ul>			
<div></div>	Establish a Sustainable Fleet workgroup of the Customer Advocacy Board that will create a roadmap for County fleet transition to alternative fuel sources and fuel-efficient vehicles.	Short		\$
<div></div>	Transition light-duty fleet vehicles to alternative fuel use 1.5% each year	Long		\$\$\$
	<ul style="list-style-type: none"> <li>6% of light-duty fleet are considered alternative fuel vehicles.</li> <li>328,000 gallons of fuel consumed by light-duty fleet in 2022.</li> </ul>			

<div> <div></div> <div></div> <div></div> </div> <b>Reduce County employee vehicle miles traveled 20% by 2030 and increase the number of services that reduce resident vehicle miles traveled.</b>				
Progress	Action Description	Timeframe	Climate & Sustainability Connection	Cost
<div></div>	Reduce vehicle miles traveled by employees 20%	Short		\$
	<ul style="list-style-type: none"> <li>Established baseline of 12,416,300 annual miles commuted by employees.</li> <li>Developing voluntary remote workers data analysis</li> <li>Developing guaranteed ride home program</li> </ul>			
<div></div>	Explore options to decrease County staff miles traveled and resident vehicles miles traveled by providing virtual and community level access to services	Long		\$




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## Natural Environment, Water and Agriculture

<div> <div></div> <div></div> <div></div> </div> <b>Reduce average annual irrigation water 20% by 2027.</b>				
Progress	Action Description	Timeframe	Climate & Sustainability Connection	Cost
<div></div>	Adopt County ordinance allowing greywater reuse for residential and commercial buildings and provide a model for implementation in other jurisdictions.	Long		\$
<div></div>	Reduce use of potable water through conservation practices at County facilities.	Long		\$\$
<div></div>	Integrate Water Master Plan, if adopted, into Land Use Code	Long		\$\$\$





<div> <div></div> <div></div> <div></div> </div> <b>Conserve 74,108 acres of open space properties within Larimer County to protect habitats and preserve biodiversity by 2043.</b>				
Progress	Action Description	Timeframe	Climate & Sustainability Connection	Cost
<div></div>	Assess and establish native intact vegetation conversion maximum / limit plan and goals for County property to protect habitats and preserve the biodiversity of our native plants and animals, ensuring that no more than 5% of county open space lands are developed.	Short		\$
	<ul style="list-style-type: none"> <li>Developing restoration plans for degraded habitats that lack native vegetation.</li> <li>Currently only 3.5% of open spaces are developed (trailheads, roads, structures)</li> </ul>			
<div></div>	Update the Larimer County Open Space Master Plan to include climate change and resilient ecosystem service considerations (by 2026)	Short		\$\$

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## Wellbeing and Resilience

<div> <div></div> <div></div> <div></div> </div> <b>Work with local food producers and distributors to increase access to sustainable and locally produced food sources.</b>				
Progress	Action Description	Timeframe	Climate & Sustainability Connection	Cost
<div></div>	Continue to partner with local producers and land trusts to conserve farms and ranches with easements in Larimer County.	Short		\$\$\$
<div></div>	Expand access to nutritious food and develop an information campaign.	Short		\$\$
	<ul style="list-style-type: none"> <li>Increasing participation in nutrition/healthy cooking classes and the number of produce bags delivered to seniors</li> </ul>			
<div></div>	Increase sale of local foods at Larimer County Farmer's Market	Short		\$
	<ul style="list-style-type: none"> <li>2021 baseline of \$1,045,424 of sales established</li> </ul>			
<div></div>	Explore a rebate program for vertical farming / greenhouses per HB22-1301	Long		\$

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<div> <div></div> <div></div> <div></div> </div> <b>Increase employee and resident resilience by informing and incentivizing actions that promote improved air quality.</b>				
Progress	Action Description	Timeframe	Climate & Sustainability Connection	Cost
<div></div>	Enhanced air quality monitoring for GHG, air toxics and ozone precursors, particulates, etc.	Short		\$\$
	<ul style="list-style-type: none"> <li>3 new monitor installations planned and partnerships acquired</li> <li>Preplanning on air toxics study completed for 2023 monitoring</li> </ul>			
<div></div>	Provide accurate and timely public health data about the health impacts associated with poor air quality.	Short		\$M
	<ul style="list-style-type: none"> <li>Community dashboard of heat impacts and air quality impacts published</li> </ul>			
<div></div>	Partner with CO RAQC Mow Down Pollution low-emission engine buy-back program and use low-emission engines in County landscaping activities	Short		\$
	<ul style="list-style-type: none"> <li>Fall 2022 program a success with 150 community members accepting vouchers for electric equipment to replace gas powered equipment</li> <li>Larimer County landscaping contractor opted in for program and transitioned 90% of landscaping equipment to electric</li> <li>Commercial incentive program under development</li> </ul>			
<div></div>	Maintain a county operations and county-wide GHG inventory and associated mitigation and adaptation strategy program.	Short		\$\$
	<ul style="list-style-type: none"> <li>2022 inventory completed, updating the 2010 inventory</li> <li>County-wide community inventory to be complete in summer 2023</li> </ul>			



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<div> <div> <div></div> <div></div> <div></div> </div> <div> <b>Streamline incentives and lead proactive hazard mitigation and disaster avoidance by implementing 3 mitigation or resilience projects with at least 3 community partners annually.</b> </div> </div>				
Progress			Climate & Connection	Cost
<div></div>	Greater than 95% of the “proper mitigated” certified homes receive insurance. Over 80% of the Certified Wildland Partners Plans to be up to date within the last five years.	Short		\$
	<ul style="list-style-type: none"> <li>Wildfire Partners manager hired to develop program for Wildland Urban Interface (WUI) residents.</li> <li>Baseline data to be established in 2023.</li> </ul>			
<div></div>	Extend the reach of current emergency management programs to incorporate equity and inclusion of formal and informal community leaders and members	Short		\$
	<ul style="list-style-type: none"> <li>Office of Emergency Management Equity Inclusion Plan has been updated.</li> <li>Resilience survey of the community has been presented to the Equity, Diversion, and Inclusion Advisory Board</li> </ul>			
<div></div>	Remove all County structures from the 500-year floodplain by 2030	Long		\$\$\$
	<ul style="list-style-type: none"> <li>2 County facilities remain in the 500-year floodplain</li> </ul>			
<div></div>	Examine potential policies that would go above and beyond the current County codes and set an example for climate resilient infrastructure.	Long		\$\$
	<ul style="list-style-type: none"> <li>Benchmarked Larimer County against other local governments and CDOT initiatives to address structures in the floodplain.</li> <li>Identification of projects necessary to address infrastructure for risk and disaster response underway</li> </ul>			
<div></div>	Establish Larimer Connects Hub locations in every rural community. Identify key citizens to lead the effort and physical locations for community information sharing in a disaster.	Short		\$
	<ul style="list-style-type: none"> <li>75% of rural communities have an established Larimer Connects Hub</li> </ul>			

## APPENDIX A: LARIMER COUNTY INTERNAL CLIMATE ACTION, RESILIENCE AND EDUCATION TEAM (ICARE) DURING THE 2022-2023 FIRST YEAR CYCLE

Department / Division	Representative
Community Development	Eric Fried, Alyssa Martin, Samantha Lasher
Economic and Workforce Development	Jacob Castillo, Adam Crowe
Office of Emergency Management	Stephen Decatur, Josh Roberts
Engineering	Shelly Bayard de Volo, Devin Traff
Health and Environment	Chris Manley, Nina Wickens-Bhowmik
Natural Resources	Casey Cisneros
Support Services	Matt Townsend, Chris Norrdin, Kaley Clift
Solid Waste Services	Linda Hammet
Finance	Carol Block
Human Services	Lori Metz
Extension	Karen Crumbaker, Cary Weiner
Human Resources	Bridget Paris
Fleet	Heidi Vilhauer, Tony Garcia
CivicSpark Fellow	Abbey Stapleton

## Appendix B: ICARE Terminology

- ❖ Sustainability - Meeting the needs of the present without compromising the ability of future generations to meet theirs, through the three main pillars: environmental, social, and economic.
- ❖ Resilience - The capacity to prepare for disruptions, to recover from shocks and stresses, and to adapt and grow from a disruptive experience.
- ❖ Mitigation -Efforts that people, communities and governments take to reduce or prevent the emission of greenhouse gasses.
- ❖ Climate Change - Any significant change in the metrics of climate lasting for an extended period. In other words, climate change includes major changes in temperature, precipitation, or wind patterns, among others, that occur over several decades or longer.
- ❖ Adaptation - Altering our behavior, systems, and—in some cases—ways of life to protect our families, our economies, and the environment in which we live from the impacts of climate change.