



**2023**

BOULDER COUNTY COLORADO

**sustainability,  
climate action  
& resilience  
plan**

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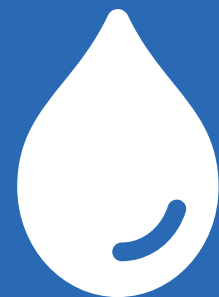
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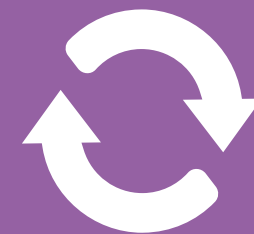
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### Vision Statement

A sustainable, just, and resilient community where all people and natural systems thrive.

### Mission Statement

To advance policies and programs that conserve resources, protect the environment, and safeguard our climate in order to build a sustainable, just, and resilient community.

INTRODUCTION & PURPOSE

# A Plan for All

The Sustainability, Climate Action & Resilience Plan is intended to articulate Boulder County’s vision to create a more environmentally sustainable and just community, and to provide a blueprint for achieving our collective climate action and resilience goals.



**“The latest scientific findings, including the most recent United Nations reports from experts across the world, make clear that reducing greenhouse gases and removing carbon dioxide from the atmosphere need to happen now, and not in future decades, if we want to protect our planet and our quality of life. Boulder County is leading efforts to create regional alliances to extend the reach of the innovative programs we have pioneered. The climate and sustainability work we are doing here in Boulder County is critical. It underscores the power, possibility, and necessity of action in local government.”**

—Commissioner Claire Levy

Since its original adoption in 2013, this plan has illustrated how Boulder County will collectively carry out the vision of environmental sustainability. Revised in 2018 and now in 2023, this plan brings a thorough and comprehensive approach to carrying out our mission.

In addition, this plan addresses county internal operations, as well as the environmental, climate, and resilience services provided for county employees, residents, and businesses.

**PLAN APPROACH**

Boulder County’s leaders and employees have long held a commitment to stewardship of our land, environment, and community. The Sustainability, Climate Action and Resilience Plan provides guidance for how Boulder County can become a healthier and more sustainable place to live, work, and play, and is meant to provide direction for Boulder County’s sustainability and climate priorities. The goals and strategies outlined in the plan are not meant to be prescriptive, but rather to lay out a series of priorities and directions that will help Boulder County, as a community and as a government agency, become more environmentally

sustainable, equitable, and climate forward.

This plan uses a “systems-wide” approach, taking careful account of the numerous and diverse components that provide the foundations for the quality of our environmental, economic, and social condition. The vast list of topics discussed throughout include climate risk, climate accountability, agricultural viability, human health, forest health, energy production and use, resource consumption and preservation, transportation, air and water quality, and meaningful public participation. While this plan attempts to highlight the linkages between social, economic, and environmental sustainability, it does not presume to cover all of these factors. Instead, it focuses on environmental sustainability and climate change impacts as a starting place to build these larger connections. The distinct foci on sustainability, climate



**“In Boulder County, climate action is personal. We’ve been hit by climate-related disaster upon disaster, and we all have loved ones, friends, or neighbors whose lives have been shattered by fires and floods fueled by conditions created by our changing climate. As the Marshall Fire showed me and countless others, the climate emergency isn’t theoretical and far away. It is happening here and now. I am proud of Boulder County’s leadership in supporting policies, developing programs, and fostering innovation to both fight the climate crisis and adapt to its impacts.”**

—Commissioner Ashley Stolzmann



**“As a global leader in climate action with a strong commitment to addressing inequity within the sustainability movement, Boulder County is centering its work on those at increased risk and thereby most impacted by climate change, including children, people who are living in poverty or who are unhoused, Indigenous and Native communities, and other communities of color. With the recent hiring of a Climate Equity Specialist, the county, through the Office of Sustainability Climate Action Resiliency, will continue to build on the critical work of reaching equitable outcomes in climate action policies, programs, and practices.”**

*—Commissioner Marta Loachamin*

action, and resilience are important, as this outlines a blueprint for Boulder County’s vision for a healthier planet and community in the face of today’s environmental and climatic challenges.

This plan has progressed over time through a series of strategic planning

efforts, incorporating elements from numerous Boulder County plans, as well as state and federal legislative agendas. The intent for this current iteration is not to reinvent the wheel but to extract, integrate, and activate the sustainability-, climate-, and equity-focused elements of Boulder

County’s existing plans and processes. This plan leverages the following other countywide plans that have undergone rigorous public engagement and input: the Comprehensive Plan, the Climate Change Preparedness Plan, the Open Space Strategic Plan, the Public Health Improvement Plan, the Transportation Master Plan, the Coordinated Human Service Transportation Plan, and the Zero Waste Action Plan.

This document will continue to evolve, as new strategies and technologies are developed and as unforeseen events challenge us to modify our responses. The plan, therefore, is a tool for the continuing inclusion of new focus areas, policies, and action plans relating to sustainability as they are identified, agreed to, and developed through the planning process.

We hope this plan will continue to help set community-wide sustainability, climate, and resilience priorities and guide the development of shared resources to achieve environmental sustainability, climate, and equity goals on a regional scale.





**A NOTE FROM THE DIRECTOR OF BOULDER COUNTY'S OFFICE OF SUSTAINABILITY, CLIMATE ACTION & RESILIENCE (OSCAR)**

Climate change is not about statistics and numbers being crunched in some faraway place. It's about us. It's about you, me, and the people and places we love. It's personal.

In Boulder County, we know the next few years are critical. The world's top scientists—many of whom live and work right here—have issued a clear warning: we must limit warming to 1.5°C (2.7°F) to avoid the most catastrophic impacts of a changing climate. This will require us to cut the production of global greenhouse gas emissions while also removing legacy emissions from the atmosphere. We are at a crossroads: not only do we need to fight the climate crisis, but we also need to adapt to its impacts. The decisions we make now can secure a livable future.

Boulder County and OSCAR are committed to the radical transformations needed to meet this challenge. Our efforts include supporting programs and policies that foster sustainability innovation,

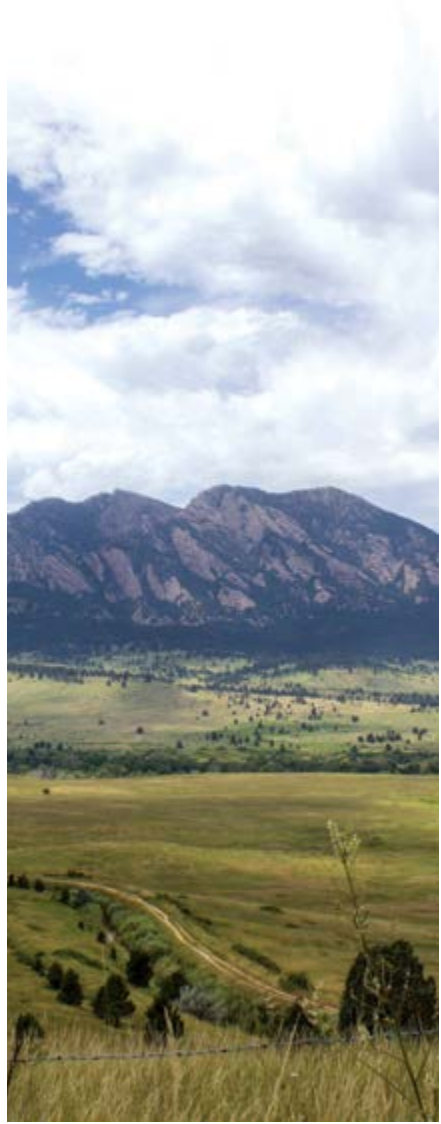
coalition building, and equitable outcomes; reducing emissions and removing carbon dioxide from the atmosphere; supporting systemic change to fight the climate crisis; implementing sustainable grazing practices on local ranches and energy efficient appliance upgrades in mercados; employing policies that reduce air pollution; rebuilding after horrific climate disasters; educating students about our waters; and filing a precedent-setting lawsuit against oil companies that bear significant responsibility for the climate crisis. Each one of these adds up to a vision on the horizon.

In this plan, you will see a blueprint of the work Boulder County has set out to meet our new climate future. We have a brilliant team, dedicated leaders, and an activated community,

all of whom are committed to working together for a better future.



**SUSIE STRIFE, PhD**  
Director of OSCAR



THE PLAN STRUCTURE

# How to Use This Plan

The plan is broken into eight chapters, each containing a brief introduction and an overarching goal. (See goals and lists of strategies identified to reach them on page 9.) Together the chapters represent Boulder County’s sustainability, climate action, and resilience vision.

*County operation strategies* refers to approaches to advance internal county operations and to lead by example. *Community strategies* refer to the actions that both the public and private sectors will need to take for the community’s collective achievement of the goals.

The strategies include policies, codes, and services that the county provides to the public, as the speed and scale of change necessary to address our goals will take ALL of us. Several chapters also share success stories and short case studies to showcase beneficial

community partnerships, programs, and county leadership. Key policies adopted through Boulder County’s legislative agenda are also included. Each chapter concludes with a call to action for individuals and businesses in our community, as well as resources for more information.

We—each of us and collectively—can be environmental stewards and ensure a healthy quality of life now and for future generations. Our health and the health of the planet depend upon it.

 <p><b>air quality</b> Ensure clean, clear, and healthy air for current and future generations.</p>	 <p><b>climate</b> Achieve rapid and deep emission reductions and increase resilience to the impacts of climate change.</p>	 <p><b>ecological health</b> Ensure healthy and vibrant ecosystems that sustain diverse species, support thriving natural systems, and provide valuable services for our human population.</p>	 <p><b>energy &amp; buildings</b> Reduce energy consumption, promote energy efficiency, increase the use of clean energy, and transition away from fossil fuels.</p>
 <p><b>local food &amp; agriculture</b> Ensure a sustainable, local, safe, and healthy food supply that is accessible to all and supported by our community.</p>	 <p><b>transportation</b> Provide environmentally sustainable transportation choices and support diverse opportunities for mobility for all Boulder County residents.</p>	 <p><b>water</b> Continue to implement water efficiency and water quality efforts that ensure sufficient clean water for healthy ecosystems and human use.</p>	 <p><b>circular economy</b> Reduce the amount of materials consumed and discarded in landfills, manage resources responsibly and effectively, promote reusability, and support a circular economy.</p>

**CORE VALUES**

As trusted stewards of Boulder County’s future, we provide the best in public service. We believe the path to a healthy environment is integrally tied to overcoming social, economic, and racial injustice. We care deeply about the people and places that make our community unique, and are committed to Boulder County’s organizational values:

**INCLUSION**

We value, respect, and support all individuals by being an inclusive, culturally responsive county government.

**STEWARDSHIP**

We honor our county’s past and work in partnership with our community to ensure a thriving, healthy quality of life for present and future generations.

**SERVICE**

We work with passion and integrity in a supportive, positive environment to ensure accountability, responsiveness, efficiency, and justice.

**ENGAGEMENT**

We listen to all community members and provide them with opportunities to actively collaborate and engage with us in order to continually improve our services.

**SUSTAINABILITY**

We are committed to environmental, social, and economic sustainability, and we build partnerships to help make the broader community more sustainable.

**INNOVATION**

We are motivated, progressive, and visionary. We continually challenge ourselves to lead with innovation, collaboration, and creativity.

**RESILIENCE**

We plan for the future and forge strong partnerships that allow us to adapt quickly to challenges and manage community impacts.

**TOP STRATEGIC PRIORITIES FOR FOCUSING OSCAR’S WORK**

Below are the three most important areas for us to focus on in our strategic planning, as well as what we should prioritize in our programming in the coming years.

1

**Focus on innovative solutions that drive large-scale, systems-level change.**

We understand that the urgency of our time demands solutions that address the intersectional crises of environmental destruction, climate chaos, and inequality. By focusing on large-scale transformation of our social, economic, and energy systems, we are forced to explore new, innovative initiatives that will set us on a path toward a sustainable, just, and resilient future.

2

**Center our work on equity and racial justice.**

At their core, climate change and environmental degradation are justice issues. Black, Indigenous, and other community members of color are most impacted by economic insecurity, toxic exposure, and climate-driven natural disasters. These disproportionate impacts are compounded by centuries of systemic racism that make it difficult for historically and currently marginalized communities to have the influence they deserve in shaping our shared future. By centering our work on equity and racial justice, we will share power with those who are most impacted, and make decisions only after asking who benefits, who is harmed, and how our actions affect those who have the most at stake.

3

**Engage the community.**

In order to create a world that supports healthy ecosystems, addresses systemic inequality, and is resilient in the face of climate change, we must engage partners at all levels within the Boulder County community and beyond. We will collaborate with county departments to achieve collective impact; we will engage citizens and businesses to take climate action and support our work; and we will partner with funders, technical experts, marginalized community members, environmental groups, and other stakeholders to discover and deploy game-changing solutions to meet our goals.



**DEFINITION OF SUSTAINABILITY**

Within this plan, *sustainability* refers to the use, development, and protection of resources for Boulder County residents.

In this context, “resources” include land, air, and water, along with the inherent value of the natural resources, biodiversity, and life-supporting functions associated with them; energy and materials for development and habitation; the essentially rural, low-density character of the unincorporated county; the uniquely historic, cultural, and geographic composition of distinct rural communities within the county; the diversity of economic activities and opportunities available to individuals;

and the people who continue to shape our developed and natural landscapes.

In addition, it is important to call attention to the linkages between environmental, social, and economic sustainability. For example, the county’s sustainability practices seek to support and enhance the diversity of economic activities, such as viable local agriculture, green jobs creation, and multimodal transportation, as well as to support the well-being of our residents.

The strategies set out to achieve the plan’s targets are actions that support, maintain, conserve, and enhance the environmental, economic, and social systems on which we depend. Achieving sustainability may demand substantial departures from past and present actions, as well as a fundamental commitment to conserving finite resources. Therefore, sustainability requires a coordinated approach to planning and public policy that involves public participation.

Success depends on the widespread understanding of the critical relationship between people and the environment, an appreciation of the interrelationships among the systems that sustain human existence, and the will to make necessary changes. We not only have a relationship with and depend on nature’s systems, but we are also a part of them.

Similarly, we seek to ensure affordable access to clean energy, efficiency improvements, transit, and housing for all members of our community.

**Importance of Land Use**

Boulder County’s land-use policies and regulations foster sustainability by encouraging a compact land-use pattern. A compact land-use pattern focuses growth in urban areas, which helps to avoid sprawl and ensures efficient use of land and natural resources, while also preserving farmland, open space, and wildlife habitat. When development remains within defined urban areas, people can live and work within their communities, live close to public transit, and depend less on their cars. Avoiding sprawl also conserves our natural resources by reducing inefficiencies associated with extending energy and water services out to nonurban areas.

**RESOURCES**

**More Information**

This plan incorporates elements from state and federal legislative agendas, as well as numerous Boulder County plans. The intent is to extract, integrate, and activate the environmentally focused pieces of Boulder County’s existing plans and processes, such as those listed below:

**Boulder County Comprehensive Plan**

[bouldercounty.org/property-and-land/land-use/planning/boulder-county-comprehensive-plan](https://bouldercounty.org/property-and-land/land-use/planning/boulder-county-comprehensive-plan)

**Climate Change Preparedness Plan**

[bouldercounty.org/environment/sustainability/climate-change-2/preparedness-plan](https://bouldercounty.org/environment/sustainability/climate-change-2/preparedness-plan)

**Zero Waste Action Plan**

[bouldercounty.org/wp-content/uploads/2017/02/zwap2011.pdf](https://bouldercounty.org/wp-content/uploads/2017/02/zwap2011.pdf)

**Sustainable Energy Plan**

[assets.bouldercounty.org/wp-content/uploads/2017/03/sustainable-energy-plan.pdf](https://assets.bouldercounty.org/wp-content/uploads/2017/03/sustainable-energy-plan.pdf)

**Transportation Master Plan**

[bouldercounty.gov/transportation/plans-and-projects/transportation-master-plan/](https://bouldercounty.gov/transportation/plans-and-projects/transportation-master-plan/)

**Human Services Strategic Priorities**

[bouldercounty.gov/departments/housing-and-human-services/](https://bouldercounty.gov/departments/housing-and-human-services/)

**Parks & Open Space Cropland Policy**

[bouldercounty.org/open-space/management/cropland-policy](https://bouldercounty.org/open-space/management/cropland-policy)

**Parks & Open Space Water Policy**

[assets.bouldercounty.org/wp-content/uploads/2017/03/water-policy.pdf](https://assets.bouldercounty.org/wp-content/uploads/2017/03/water-policy.pdf)



**1**

**air quality**





INTRODUCTION

Good air quality is fundamental to our well-being, and the presence of air pollution can adversely affect our health. Outdoor air quality is a serious concern in Boulder County due to historically high ozone levels in the summer months and, more recently, persistent wildfire smoke.

Boulder County is a part of the Denver Metro/North Front Range nonattainment area, which has violated the eight-hour-ozone National Ambient Air Quality Standards since 2012. High levels of ozone and the pollutants that form ozone cause poor air quality, which can lead to decreased lung function, exacerbate asthma, and cause breathing difficulty, particularly for sensitive populations. Pollutants and high ozone levels may even lead to cardiovascular disease and premature death. In addition,

smog—which contains ozone, among other pollutants—impairs visibility, damages crops, and causes acid rain, which especially impacts our protected areas like Rocky Mountain National Park.

These wide-reaching impacts of poor air quality underscore the importance of regulating the oil and gas industry and reducing our vehicle emissions, since these pollution sources degrade our air quality and contribute to climate change.

With increasing drought and heat come longer fire seasons and more severe disasters. Particulate matter in wildfire smoke is hazardous, especially to children, seniors, and people with underlying health conditions. Smoke plumes can travel across the entire country, affecting the well-being of all who work and play outside.

Boulder County Public Health supports air quality monitoring studies to better understand the impacts of local sources of air pollution. Using this data, Boulder County participates in the development of stringent local, state, and national air pollution control regulations. Finally, the county works with local government partners to improve indoor air environments by reducing pollutants such as lead, radon, asbestos, and mold.

**The two largest sources of ozone-forming pollutants in the nonattainment area are oil and gas production and vehicle emissions.**



**air quality goal**  
Ensure clean, clear, and healthy air for current and future generations.



## glossary

### OZONE

Ozone is an invisible, odorless gas that can either protect us or harm us, depending on where it is found. Unlike the protective stratospheric ozone layer, ground-level ozone forms from air pollution just above the earth's surface and damages living tissue. Ozone is created by chemical reactions between nitrogen oxides and volatile organic compounds in the presence of sunlight.

### SMOG

Smog is a mixture of harmful air pollutants dominated by ground-level ozone.

### COMMUNITY STRATEGIES

## Push for action to meet federal outdoor air quality standards in Boulder County

- Urge the adoption of state and federal regulations and policies that reduce the impacts of oil and gas resource extraction while continuing to strengthen and enforce county oil and gas regulations.
- Support the adoption of regulations, policies, and legislation that reduce emissions from the transportation sector and benefit disproportionately impacted communities.
- Promote the adoption of electric vehicles (EVs) and the installation of EV charging stations.
- Diagnose and investigate emission sources, such as oil and gas.
- Monitor air quality conditions and public health impacts.
- Inspect sources of pollution for compliance and support enforcement of air pollution requirements.
- Conduct voluntary programs to educate, empower, and mobilize action to reduce ozone-forming and greenhouse gas (GHG) emissions.
- Support the adoption of continuously increasing renewable energy standards.
- Actively participate in the development of protective state and federal air quality policies and plans.

SEE THE CLIMATE (PAGE 30), ENERGY & BUILDINGS (PAGE 102), AND TRANSPORTATION (PAGE 134) CHAPTERS FOR ADDITIONAL OUTDOOR AIR QUALITY IMPROVEMENT STRATEGIES RELATED TO GHG EMISSIONS.



### COMMUNITY STRATEGIES

## Empower residents to identify and maintain healthy indoor environments

- Promote radon testing, mitigation, and the use of proper methods to install radon reduction systems.
- Encourage adoption of radon reduction systems in new single- and multifamily homes through building codes.
- Encourage residents to work with state and local government partners to address indoor air quality issues associated with mold, moisture, radon, and asbestos.
- Conduct education and outreach to real estate professionals, builders, decision-makers, and residents (particularly low-income) to increase radon awareness in Boulder County.
- Promote and incentivize electrification of heating, water heating, and cooking in homes and businesses to reduce indoor exposure to combustion pollutants.
- Promote real-time and forecast information about outdoor air hazards such as wildfire smoke, along with guidance on keeping indoor air clean.



**Colorado has emerged as a leader in climate and air quality action, and Colorado's local governments are stepping up to study impacts on our air and climate, so that Colorado can continue to lead. We are concerned about the climate and health ramifications of ozone and air toxics in our community, especially for community members who are disproportionately affected by climate change and air pollution, including children, people who are living in poverty or who are unhoused, and communities of color. Boulder County looks forward to continued work with the Air Quality Control Commission to find ways to address this.**

—Cindy Copeland, Boulder County Air & Climate Policy Advisor





**TAKING ACTION**

## Oil and Gas Production

Oil and gas production statewide has quadrupled since 2012. The increasing intensity of oil and gas development has consequences for air quality, even for counties that do not host many active wells. Nearly 90% of the state’s oil and gas production originates in proximate Weld County, and emissions from Weld County travel into Boulder County on prevailing winds.

In Colorado, oil and gas production emissions represent one of the two largest sources of ozone-forming air pollution and a large source of toxic air pollution. Air monitoring studies funded by Boulder County and neighboring local governments show that these emissions are adding to the high ozone levels in Boulder County.

The county has adopted stringent air quality measures applicable to oil and gas operations and continues to advocate for stronger state regulations. In the course of its voluntary inspection program, Boulder County

Public Health found leaks at 65% of inspected oil and gas sites. These findings informed the Air Quality Control Commission’s rulemaking process, yielding a new state regulation that requires more frequent leak inspections and covers additional pieces of equipment. The county also participated in a rulemaking by the Colorado Oil and Gas Conservation Commission that generated stronger leak detection and repair requirements for oil and gas pipelines.

Research to understand the air quality impacts of oil and gas production continues to develop, and Boulder County supports those efforts with both funding and staff expertise.



**TAKE A RIDE**

To help reduce the impact of vehicles on air quality, Boulder County subsidizes new businesses and neighborhoods that sign up for the Regional Transportation District (RTD)’s EcoPass (unlimited bus pass) program, an annual transit pass that provides unlimited rides on all local and regional bus and rail services operated by RTD. Surveys have shown that someone with an EcoPass is much more likely to take public transit.

In 2018, Boulder County offered a 70% reimbursement for RTD EcoPasses or MyRide cards for businesses in Lafayette that participate in the

Lafayette Green Business program, a partnership between Boulder County’s Partners for a Clean Environment and the City of Lafayette. This program was inspired by a winning submission from Boulder County’s “No Fare Lafayette” transit promotion contest.

Boulder County supported legislation for fare-free transit for high-ozone periods of the summer. Our transportation program promotes this option to introduce people to public transit when it is most important for air quality.



→ Air quality monitors at the Boulder Reservoir continuously collect samples to test for nitrogen oxides, methane, and a suite of volatile organic compounds associated with oil and gas production. Sample results are posted publicly in real time to [bouldair.com](http://bouldair.com). This data is analyzed to support policies for more stringent emission controls.



**CLEAN AIR CHALLENGE**

Vehicle emissions are one of the two largest sources of ozone-forming air pollution in Boulder County. From 2004 to 2017, 1,700 people participated in the Boulder County Clean Air Challenge (BCCAC), reducing driving by nearly one million vehicle miles and saving 50,000 gallons of gasoline.

In the coming years, Boulder County Public Health will update goals to focus on supporting fuel economy standards, EV adoption, and renewable energy adoption.

**What is the Clean Air Challenge?**

The BCCAC, which encouraged participants to take personal action to have a positive impact on the environment, was created in 2004 in partnership with local businesses and nonprofits. With vehicle emissions being the second largest contributor to ozone-generating emissions on the Front Range, the challenge was to use alternative modes of transportation during the highest ozone months of the year. The main target was reducing single-occupancy vehicle travel. From 2004 to 2017, the BCCAC reduced vehicle miles traveled by more than 1 million miles, equaling a reduction of 543 tons of CO<sub>2</sub> and 5,000 pounds of ozone formation. The challenge ended in 2017 with the inception of several new programs along the Front Range that encourage alternative travel. These programs include the Regional Air Quality Council’s Simple Steps for Better Air (modeled on the Clean Air Challenge), the regional Love to Ride Program, Bike to Work Day, and Winter Bike to Work Day. New services offering alternative modes of transportation were also established.

**POLICY PRIORITIES**

The following are environmental sustainability policy priorities within Boulder County’s legislative agenda:

POLICY	WHAT YOU NEED TO KNOW	
<p><b>Protect air quality</b></p>	<p>Boulder County, as part of the Denver Metro/Northern Front Range Ozone Nonattainment Area, currently exceeds national air quality standards for ozone. Poor air quality has significant public health and environmental impacts, from increasing doctor visits and hospital admissions to</p>	<p>compromising the unique value of our Parks and Open Space lands through loss of visibility and impacts to wildlife. Boulder County supports state legislative, regulatory, and other efforts to ensure public and environmental health by reducing the emissions of harmful pollutants.</p>
<p><b>Support implementation of the Clean Air Act</b></p>	<p>The Clean Air Act is the law that defines the Environmental Protection Agency’s (EPA) responsibilities for protecting and improving the nation’s air quality and the stratospheric ozone layer, including important regulatory powers over GHG emissions and air pollution and associated GHG emissions. Boulder County supports effectively implementing and</p>	<p>enforcing the Clean Air Act and other regulations with the highest level of environmental protection to improve and maintain high standards of our air quality. Boulder County opposes any efforts to reduce the authority of the Clean Air Act or the EPA to protect residents from air pollution or climate change.</p>

**POLICY**

**WHAT YOU NEED TO KNOW**

<p><b>Require residential radon mitigation systems</b></p>	<p>Including radon mitigation requirements in home sales and building codes would help decrease potential health risks associated with</p>	<p>residential exposure to radon, which is the second leading cause of lung cancer in the United States.</p>
<p><b>Address the air quality impacts associated with oil and gas operations</b></p>	<p>Oil and gas operations and transportation are the two largest contributors to poor air quality in Boulder County. The county supports</p>	<p>legislative and regulatory efforts to reduce the air quality impacts from these sources and others.</p>





## Radon Reduction Roadmap

Radon is the second leading cause of lung cancer—second only to smoking. Each year, more than 20,000 people in the United States die from lung cancer caused by exposure to radon. Although most lung cancer deaths are attributable to tobacco usage, secondary causes of lung cancer are important because of the magnitude of lung cancer incidence and its poor survival rate.

More people die from lung cancer than colorectal, breast, and pancreatic cancers combined. From 2012–2014, nearly 7,000 people in Colorado were diagnosed with lung and bronchus cancers; almost 5,000 people (70%) died from them. Boulder County Public Health has created the statewide Public Health Radon Reduction Roadmap, which identified 37 strategies to reduce radon exposure, including education, policy recommendations for elected officials, programs, and practices. The program deploys social mobilization practices with real estate professionals, home builders, building officials, home inspectors, elected officials, and others to create incentives and policies to reduce radon.

As a result,

- Since adopting radon reduction building codes in 2017, unincorporated Jefferson County has issued 1,239 single-family, duplex, and townhome building permits requiring construction with radon-resistant construction techniques.
- Since adopting radon reduction building codes in 2019, the cities of Erie, Louisville, and Sheridan have issued 450 single-family, duplex, and townhome building permits requiring construction with radon-resistant construction techniques.
- The City of Wheat Ridge adopted radon reduction building codes in 2020. From January–November 2020, Wheat Ridge issued 110 single-family, duplex, and townhome building permits requiring construction with radon-resistant construction techniques.

In all, an estimated 4,345 Colorado residents have been impacted and protected from indoor radon exposure in their homes since these building codes have been adopted.



TAKE ACTION

## Improving Air Quality

Our cars, lawn and garden equipment, and other products (e.g., paints and cleaners) produce pollution. The fewer ozone-causing emissions produced on hot, still summer days, the better. Residents can help take care of our air by:

- ❑ Keeping cars tuned—routine maintenance helps cars run efficiently.
- ❑ Choosing low-polluting travel options to driving, including walking, biking, telecommuting, or riding the bus.
- ❑ Fueling vehicles in the evening so fume vapors can't "cook" into ozone.
- ❑ Keeping tires appropriately inflated—it reduces pollution and saves you money.
- ❑ Avoiding idling—restarting your engine uses as much fuel as about six seconds of idling.
- ❑ Using a manual or electric-powered lawn mower or mowing in the evening if you must use a gas-powered mower.
- ❑ Purchasing or leasing a new or used EV, if you must purchase a vehicle. Even better if you power your home with solar.
- ❑ Buying electric appliances, since natural gas appliances contribute to both indoor and outdoor air pollution and have significant health impacts.



RESOURCES

## More Information

**Mobility for All**

[bouldercounty.gov/transportation/multimodal/mobilityforall/](https://bouldercounty.gov/transportation/multimodal/mobilityforall/)

**Radon Aware Initiative**

[bouldercounty.org/environment/healthy-home/PHR3](https://bouldercounty.org/environment/healthy-home/PHR3)

**Oil And Gas Air Quality Information**

[bouldercounty.gov/environment/air/oil-gas-development-air-quality/](https://bouldercounty.gov/environment/air/oil-gas-development-air-quality/)

**Legislative Information**

[bouldercounty.gov/departments/commissioners/legislative-affairs/](https://bouldercounty.gov/departments/commissioners/legislative-affairs/)





2

climate



INTRODUCTION

This is a crucial moment. The latest report from the Intergovernmental Panel on Climate Change (IPCC) warns that the window of opportunity to avert climate catastrophe is rapidly shrinking, and limiting average warming to 1.5°C over the next 10 years is critical to prevent the worst effects of climate change.<sup>1</sup> We have already reached 1.1°C of temperature increases globally,<sup>2</sup> and without immediate reductions in pollution, it is likely Earth will exceed 1.5°C of warming at least once this decade.<sup>3</sup>



**Nothing less than our future and the fate of humankind depends on how we rise to the climate challenge.**

—Antonio Guterres, UN General Secretary



For every fraction of a degree of warming, the threats to our natural and human systems compound and become more complex. An analysis of today's climate commitments and

emissions trajectories puts the world on track to exceed 3.2°C of warming this century, more than double the critical threshold.<sup>4</sup> This level of warming would have catastrophic

**glossary**

**BENEFICIAL ELECTRIFICATION**

Beneficial electrification refers to the systematic replacement of fossil fuel equipment with electrically powered alternatives in a way that reduces overall emissions and energy costs. Examples include switching an internal combustion engine vehicle to an electric vehicle (EV) or switching a natural gas furnace to an electric heat pump.

**CARBON NEUTRALITY**

Achieving carbon neutrality means that any emissions produced are balanced by the emissions absorbed from the atmosphere in carbon sinks. We are aiming to achieve net zero greenhouse gas (GHG) emissions by 2035 through a variety of climate actions.



effects across all human and natural ecosystems, with disproportionate suffering occurring in historically marginalized communities

Human activity, specifically the combustion of fossil fuels, has driven climate change and increased global temperatures. The good news is that we have the technology, policies, and plans to stave off the worst impacts of

climate change.<sup>5</sup> However, this will not be easy. All models limiting warming to 1.5°C require immediate and deep GHG pollution reductions across all sectors of the economy. The longer we delay action, the more drastic these cuts—and their associated costs—will be.<sup>6</sup> Alongside efforts to cut carbon pollution, the implementation of adaptation and resilience measures is crucial in order to protect our

communities, particularly communities that are disproportionately impacted by the dangers of a warmer planet.

Such global problems demand civilization-level transformation of the energy and economic structures we've relied upon since the Industrial Revolution. However, great change can and must begin at a more local level. As a leader in climate action, Boulder County is committed to the radical transformation needed to meet this challenge. Through internationally recognized programs and policies that foster innovation, coalition building, and equitable outcomes, Boulder County is focused on cutting emissions (also known as mitigation), removing carbon dioxide from the atmosphere, and supporting systemic change to fight the climate crisis. While the role of individual communities is essential, Boulder recognizes the need to look beyond its borders. To bring about the change needed to combat a crisis at this scale, we are advocating for aggressive policy and systemic change at the state, federal, and global level.



## climate goal

Achieve rapid and deep emission reductions and increase resilience to the impacts of climate change.

## emissions goal

Reduce countywide GHG emissions by 80% over 2021 levels by 2030 and achieve carbon neutrality by 2035.



### MEETING OUR GOALS

## Carbon Neutrality Strategies

To align with science-based targets and the IPCC's call for limiting warming to 1.5°C, Boulder County has updated its emissions reduction goal. Boulder County is now committed to reducing countywide emissions 80% over 2021 levels by 2030 and achieving carbon neutrality by 2035.

In setting this goal, Boulder County recognizes that it does not exist in a vacuum, and that entire economic systems and structures will need to shift in order to deliver on this promise to our community. Reaching this target will require an “all hands on deck” approach, with every community member, business, and political leader contributing to this work.

Guided by data from the community GHG inventory, Boulder County developed climate mitigation strategies by sector that will support the county and community at-large in meeting these GHG reduction and carbon neutrality goals. The GHG inventory includes an analysis of emissions from residential and commercial building energy, transportation, industrial processes, oil wells, and waste sectors. Through the analysis of sectors and sources that are the greatest emitters, Boulder County can prioritize strategies with the greatest emissions reduction potential.

In addition to our traditional community GHG inventory, Boulder

County also conducted a consumption-based emissions inventory [SEE PAGE 53 FOR MORE]. The information from these analyses combined offers a full scope of the community's carbon pollution and where resources can be directed to reduce that pollution.

Additionally, and crucial to meeting the community carbon neutrality goals, Boulder County is also leading innovative work to reduce carbon in the atmosphere through carbon dioxide removal (CDR) and nature-based solutions.

“

**We have two urgent challenges ahead of us. Adaptation and mitigation. Financing, visionary political initiatives, and concrete actions are needed for the sake of the welfare of current and future generations and our planet.**

—Professor Petteri Taalas, World Meteorological Organization General Secretary

”



### Recent Climate Successes



**44 PIECES**  
of climate-related state  
legislation engaged with  
during the 2021 session



**40 RESTAURANTS  
AND FOOD BUSINESSES**  
funding Restore Colorado grants to improve  
soil health and sequester carbon on local farms



**41% OF HOUSEHOLDS IMPACTED BY THE MARSHALL FIRE**  
are rebuilding according to standards that earn incentives for  
high-performance homes using less energy and little to no  
fossil fuel energy (as of September 2022)



**3,063 BUSINESSES**  
received energy efficiency upgrades through  
Partners for a Clean Environment, saving a  
cumulative \$2,800,000 in annual utility bills



**1,329 ACRES**  
of agricultural land implementing by  
regenerative farming and ranching  
practices supported by county grants



GOING DEEPER

## Impacts in Boulder County

Scientists agree that the climate crisis is happening here and now. Colorado’s average temperatures increased by 2°F between 1977 and 2007 alone.<sup>7</sup> Boulder County residents are experiencing impacts of the climate crisis in the form of high heat days, extreme weather, drought, poor air quality, unpredictable precipitation, and catastrophic wildfires. As temperatures rise, the number of extreme weather events and wildfires will increase. At the same time, Colorado’s wildfire season is getting

longer. Scientists say that “climate change is playing a significant role” in the frequency and intensity of these events.<sup>8</sup> Climate-related disasters are personally impacting residents of Boulder County while also becoming more pervasive regionally.

Climate impacts also carry an enormous price tag for local governments. Boulder County has been in a continuous state of disaster recovery since the 2010 Four Mile Canyon Fire. Due to the increased

frequency of climate-fueled disasters, the county created a permanent Recovery and Resilience Division. In the next 30 years, it is estimated that Boulder County will spend more than \$100 million in additional costs just to adapt transportation and drainage systems for future climate risks.<sup>9</sup>

The impacts of the climate crisis on quality of life in Colorado are deeply concerning. According to researchers at the University of Colorado, local effects of the climate crisis include:

### CHANGES TO AVERAGE SEASONAL TEMPERATURES

- **Hotter summers**—By 2050, more than half of summer days will reach temperatures over 95°F. From June 1–July 31, 2022, the Boulder area experienced more than 30 days of temperatures above 90°F.<sup>10</sup>
- **Warmer winters**—Snowpack will be thinner and spring runoff will be earlier. 2020 was one of Colorado’s hottest and driest years.<sup>11</sup>

### CHANGES TO THE WATER CYCLE AND WATER QUALITY AND AVAILABILITY

- **Changing precipitation**—We will see more rain than snow.
- **Water shortages**—Colorado’s water supplies are drying up, with precipitation decreasing by 20% in the last century. Mountain snowpack serves as a natural reservoir, but less snow and earlier melting will reduce summer water availability and lead to drier soils and vegetation, exacerbating the risk of forest fires and forest pest infestations.

Reduced water availability also lowers agricultural yields, further compounding economic risks to farming communities and our growing population.

- **Increased frequency and intensity of flooding events**—Extreme precipitation events are becoming more common, and persistent drought impacts the ability of soils to absorb excess moisture. When combined, these two factors increase the risk of severe flood events. Culverts, roadways, and bridges damaged during flooding in 2013 are still being repaired, representing almost a decade of financial impacts from a single extreme precipitation event.



- **Longer periods of drought**—The length and frequency of droughts are driven by reduced precipitation and hotter temperatures. The Western U.S. is in the midst of a 20-year-long drought with no end in sight; this is the worst drought in 1,200 years.<sup>12</sup>

### CHANGES IMPACTING OUR FOREST ECOSYSTEMS:

- **More fire danger**—Twice as many acres will burn annually in Colorado, compared to pre-1980 averages. Boulder County’s mid-winter Marshall Fire was the most destructive fire in state history.
- **Widespread beetle infestations**—Rising winter

temperatures have supercharged population growth in some beetle species. Mountain pine beetles have wiped out millions of acres of forest in Colorado and borer beetles are killing aspen stands, increasing dry fuel for wildfires and destroying forests that are relied on as habitat and carbon sinks.

**CHANGES IMPACTING OUR COMMUNITIES:**

- **Health problems**—Hotter temperatures increase the prevalence of wildfire smoke and the formation of ozone. Both affect human health by reducing lung function, aggravating asthma, and causing permanent lung damage. Even short-term exposure to ozone may cause shortness of breath and chest pain.<sup>13</sup>
- **Economic impacts**—The projected cost of adapting to just some of the climate impacts facing Boulder County, such as retrofitting buildings and infrastructure due to high heat only, is anticipated to exceed \$100

million by 2050.<sup>14</sup> These costs are borne by government, private landowners, and homeowners. The Marshall Fire resulted in \$1 billion worth of damages and left many homeowners unable to afford to rebuild the same homes they lost.

- **Global environmental justice impacts**—Climate change is one of the most widespread manifestations of environmental injustice facing humankind. Climate change disproportionately impacts and threatens communities of color and low-income communities.<sup>15, 16</sup> Not only are these communities more severely exposed to the effects of climate change like extreme heat, poor air quality, and unpredictable precipitation, but they also have a harder time recovering from climate-related disasters. In fact, many people in the global south have been or will be displaced from their homes due in large part to climate-related disasters and slow onset events (such as drought, sea level rise, and desertification).<sup>17</sup>

Many predict that permanent displacement due to climate impacts will result in the greatest wave of global migration the world has ever seen.<sup>18</sup> Moreover, communities with fewer resources contribute the least amount to the climate crisis. It's essential that communities vulnerable to climate risk have access to support and resources to adapt to and recover from climate impacts and disasters. Ultimately, we recognize that climate change and environmental justice are inextricably linked and we are prioritizing solutions that focus on our communities most vulnerable to climate risks.

It is important to understand that these trends will become more severe as climate change accelerates. While the last six months of 2021 represented the hottest half-year on record for Colorado,<sup>19</sup> it may very well be the coolest year for generations to come if we do not take bold and immediate action to mitigate climate change.



**GOING DEEPER**

## Equity Impacts

- Low-income communities and communities of color are more likely to be exposed to climate change threats due to inadequate housing and infrastructure.
- Low-income households spend three times as much of their income on energy than middle- and high-income households, despite consuming less energy. As temperatures rise, so too will the amount these families spend on household cooling.
- Affordable housing developments on the edges of urbanized areas are at higher wildfire risk. These households often have fewer resources to recover from such disasters.
- Low-income communities suffer disproportionately from health problems such as heart disease and asthma, as well as mental health issues. These challenges would be exacerbated by climate-related impacts like poor air quality, high heat, and wildfires.



GOING DEEPER

## The Marshall Fire

On December 30, 2021, the Marshall Fire swept through the City of Louisville, Town of Superior, and unincorporated Boulder County. This unprecedented winter firestorm was fueled by a 20-year-long drought, dry grasses, a three-foot snow deficit, and Chinook winds.<sup>20</sup> Damages totaled more than \$1 billion, making the Marshall Fire one of the most expensive wildfires in national history.<sup>21</sup>

Beyond the fire’s initial physical impact, smoke and debris will

continue to pose a lingering health threat to the community for years to come.

Local governments, scientists, environmental engineers, first responders, and policy experts are working together to determine how to reduce wildfire risk and create communities that are more resilient to future wildfires in a warming world.<sup>22</sup>

“  
**It’s the first time in my career I have felt comfortable saying this [Marshall Fire] is a climate fire. Climate change will continue to have a hand in the future of wildfire, increasing the length and intensity of fire seasons, as well as changing how, when, and where water is distributed.**

—*Natasha Stavros,*  
*Director of the Earth Lab Analytics Hub at the Cooperative Institute for Research, University of Colorado Boulder*



GOING DEEPER

## Health Impacts

- Poor air quality can intensify cardiovascular, respiratory, and allergy-related illness.
- Wildfires carry carcinogens, induce asthma symptoms due to high smoke levels, and pose a number of other health-related air quality issues.
- Higher temperatures are increasing the length and severity of allergy seasons and the likelihood of heat emergencies.
- Higher temperatures could also lead to more vector-borne and waterborne diseases.
- Extreme heat increases the risk of dehydration, heat stroke, and heat exhaustion, and aggravates cardiovascular and respiratory illness. Adults age 65 and older and children are particularly vulnerable.



**SUSTAINABLE FOOD & AGRICULTURE FUND**

The Sustainable Food & Agriculture Fund supports the Project Protect Promotora Network, an organization that serves Colorado’s frontline farm workers. The county’s funding helps protect workers from the escalating impacts of climate change by providing the clothing and supplies they need to remain safe while working outdoors in extreme heat conditions.

“

**I am an elderly agricultural worker, and I want to thank you for the help that you have given me. The shirts, the hats, and everything I have been given help me a lot. I never thought of having such good-quality clothes. Thanks to the lady from the program who is always looking after us, we have asked her for help with pain medicine and something to help us with allergies. Sunscreen and gloves help us a lot; we are under the sun all day, and clothes and bottles of water help us a lot.**

—Salvador Lopez, Farm worker supported by Project Protect Promotora Network

”

**TAKING ACTION**

## Resilience

Future warming and climate disaster risks are directly tied to emissions trajectories. However, reducing emissions is not enough. We must also take preemptive steps to protect our community from the climate impacts we are already seeing.

Boulder County has implemented adaptation policies and neighborhood resilience programs as key components of its climate action strategy. Recent successes include:

- Boulder County’s Wildfire Partners program helps homeowners prepare for and mitigate risks associated with wildfires. Residents receive a customized report identifying their home’s wildfire vulnerabilities, as well as a list of actions they can take in order to reduce wildfire susceptibility. After passing inspection, homeowners receive a certificate, which is recognized

by Allstate, State Farm, and USAA insurance companies as proof of mitigation. These companies will not deny coverage to a Wildfire Partner, and the certificate can be uploaded to the multiple listing service to help sell the home.

- Boulder County has built a detailed map visualizing risks [SEE PAGE 46] related to climate impacts alongside demographic information that includes household income, language, race, age, and reliance on public transportation. The map will help local government agencies prioritize resources to protect historically and currently marginalized communities from climate-related impacts.
- Boulder County launched Restore Colorado, a public-private collaboration with Zero Foodprint to improve resilience and fight climate change through

the promotion of healthy soil on local farms and ranches. Participating restaurants add a 1% surcharge to their customers’ bills. These funds are collected and distributed to local farmers via grants that support regenerative agriculture practices that improve soil health, conserve water, and sequester carbon.

- Boulder County Public Health has initiated outreach and assessments to address air quality and extreme heat concerns in lower-income and senior housing. Public health officials share resources that outline clear steps community members can take to protect themselves from ozone, wildfire smoke, and heat emergencies.

Both resilience measures and emission reductions are necessary to prevent climate catastrophe. Boulder County is continuing to develop programs that build resilience.



GOING DEEPER

## Risks and Equity Mapping

Boulder County has created a county map visualizing the risks related to climate impacts at the neighborhood level. This map provides details on areas of the county that are vulnerable to impacts such as high heat, poor air quality, wildfire, flooding, and drought. It has also integrated demographic information, including household income and size, language, race, age, and reliance on public transportation. By mapping where climate risk is greatest alongside demographic information, climate equity considerations can be placed at the forefront of decision making, helping local governments prioritize resources to protect the most historically and currently marginalized communities.

The county has collaborated with its incorporated jurisdictions to complete this mapping effort. This effort illustrates the unique challenges facing different parts of Boulder County, including increasing temperatures and poor air quality in the east and

extreme precipitation and flooding in the west, as well as the expansion of wildfire-prone areas from the west to the east.

This detailed map also highlights neighborhood characteristics, from tree canopy coverage to access to public transportation, and help assess needs and opportunities for climate adaptation, including landscaping considerations and building materials choices. As a result of this work, county and municipal staff are collaborating on appropriate communication and outreach efforts to ensure all residents are aware of climate impacts. The map also shows neighborhoods where language, age, disabilities, or access to resources require focused attention to enhance adaptation efforts, allowing county and city staff to invest resources and time where they will have the greatest impact.



GOING DEEPER

## Tree Cover

Forests and urban trees play a critical role in local hydrologic cycles as they take up water from soil and release it into the atmosphere, cooling the surrounding air. Returning trees to deforested land has the potential to improve soil structure, reduce desertification and erosion, and help soils retain more water—ultimately restoring the local hydrology and ecosystem. A number of scientific reports have illustrated that trees,

once well established, can reduce the urban heat island effect and create safer and more livable communities through the shade and evaporative cooling they provide. Furthermore, when paired with other perennials and herbaceous cover, trees generally reduce the overall amount of metered outdoor water required in a landscape, compared with turfgrass alone.

The climate crisis is impacting local communities by causing an unprecedented loss of biodiversity, including the loss of crucial native pollinators. Planting and protecting trees and creating more diverse habitats for local species, including perennial pollinators, can help address the impacts of both climate change and biodiversity loss.



MEETING OUR GOALS

## Greenhouse Gas Emission Trends

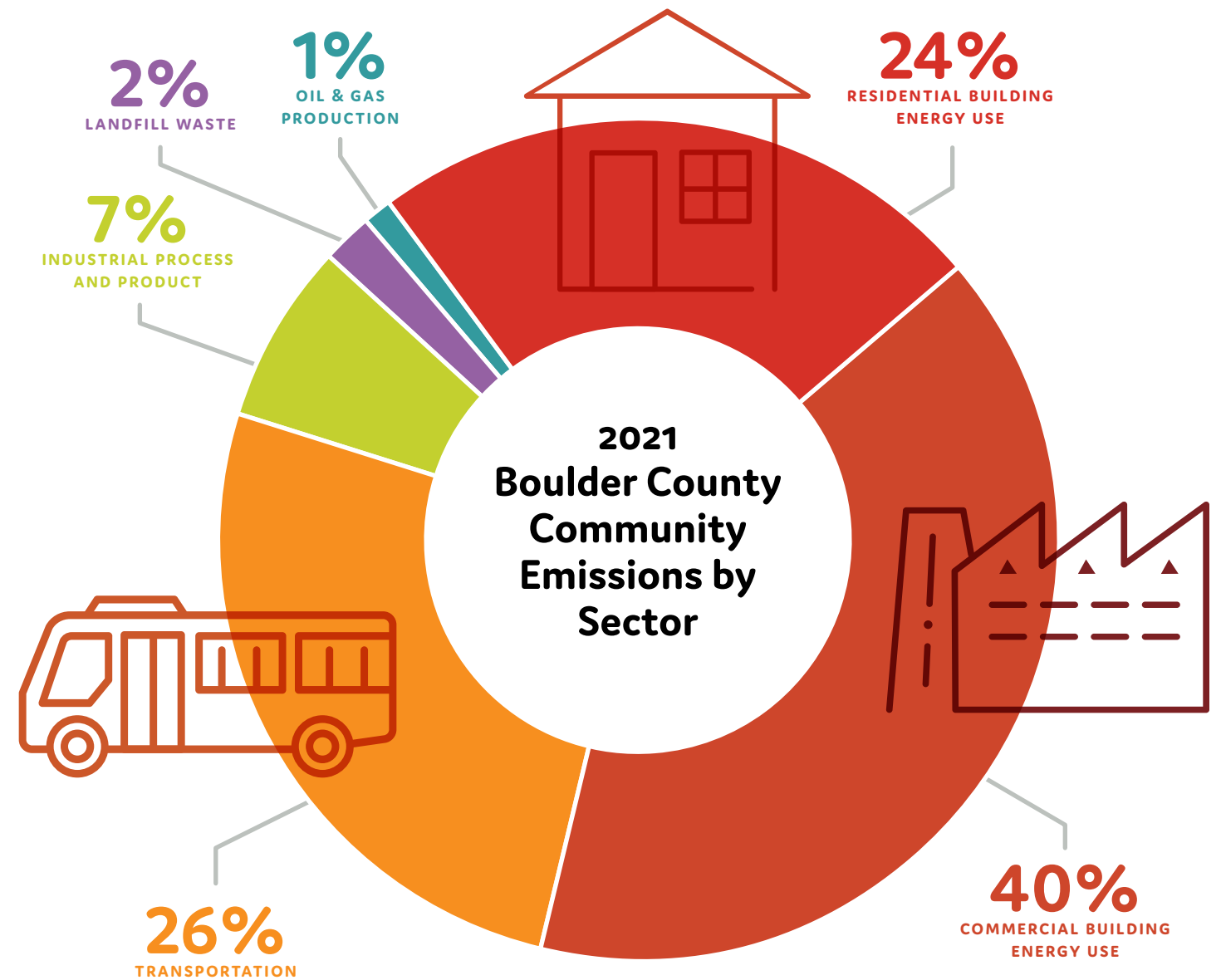
Boulder County has calculated and reported countywide GHG emissions since 2005. These inventories provide insight into the largest emitting activities in the community and show how community emissions have changed over time. The inventory scope includes emissions generated through activities happening in the county's geographic boundary. The county recently completed an updated

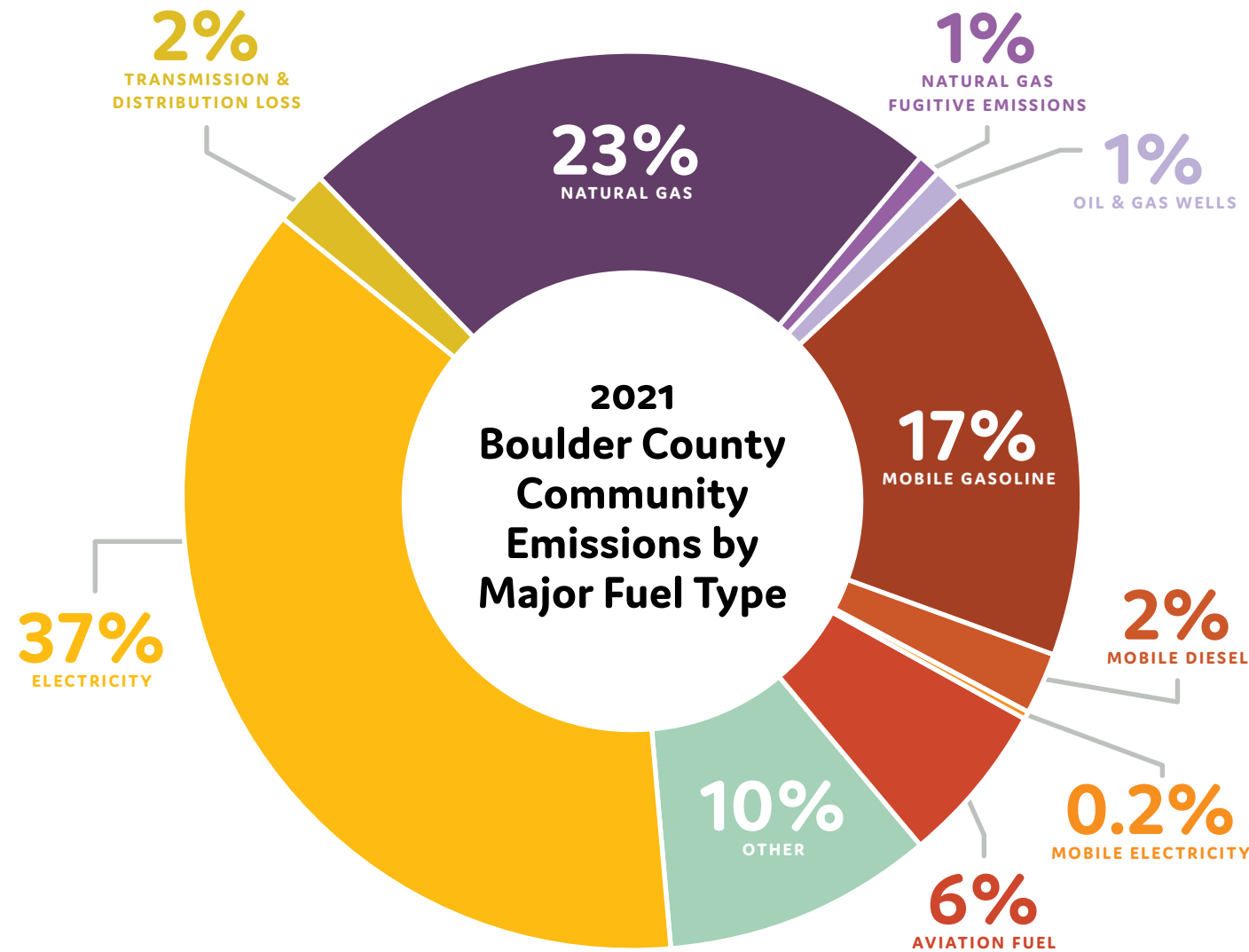
countywide GHG emissions inventory for the year 2021. Data from these analyses has guided the identification of the countywide emissions reduction strategies. [SEE OUR CLIMATE STRATEGIES ON PAGE 62 FOR MORE.]

Activities across Boulder County accounted for 4,097,288 mtCO<sub>2</sub>e in 2021. This represents a 16% reduction since the last countywide inventory

was completed in 2016. To meet our 2030 goal, we have the challenge of reducing our emissions per person per year from 12 mtCO<sub>2</sub>e currently to a countywide average of 2.6 mtCO<sub>2</sub>e.

Energy use by buildings was the greatest emitting sector, making up 64% of total countywide emissions. Transportation was the second-greatest emitting sector, making up





Percentages may not add up due to rounding; the Other wedge includes emissions from agriculture, forestry, and other land use; waste; wastewater; other stationary fuels (propane, stationary diesel, wood); and industrial processes and product use (cement production, refrigerants).

26% of total countywide emissions. Gasoline and transboundary aviation were the greatest transportation-related emissions sources.

Electricity and natural gas use comprised the largest sources of emissions across the county in 2021, making up 37% and 23% of total countywide emissions respectively.

Based on these results, programs and policies aimed at reducing emissions related to building energy use and transportation activities have the greatest potential to reduce countywide emissions.

Waste emissions made up roughly 2% of countywide emissions. The majority of emissions within this sector came from landfilled waste.

**TRENDS OVER TIME**

Boulder County has made strides in reducing GHG emissions over the

years. Since 2016, Boulder County's countywide emissions declined by 16% despite a 5% increase in population.

In the building energy sector, emissions decreased 10% from 2016 to 2021. This is largely attributed to a cleaner electricity grid. Since 2016, natural gas use emissions increased 11%, which can be attributed to the increase in the county's population, a colder winter, and a 6% increase in the global warming potential of methane. Also, since 2016, electricity emissions countywide have decreased 20%, largely due to the growing proportion of electricity derived from clean and renewable energy sources. Renewable energy and efficiency programs, including the EnergySmart program for commercial and residential building, the BuildSmart program, and Housing Authority services, contribute to emissions reductions in the energy sector. This being said, there are still significant

opportunities to reduce energy-related GHG emissions, including through widespread electrification and more aggressive renewable energy and efficiency policies.

Since 2016, transportation sector emissions countywide have decreased 31%. Mobile gasoline, the greatest source of transportation-related emissions, was reduced 18% between 2016 and 2021. Since 2016, emissions associated with air travel decreased 52%. This is due in part to travel restrictions and an increase in the population working from home during the Covid-19 pandemic. However, community programs aimed at increasing multimodal transportation options like walking, biking, public transit, and carpooling, are contributing to the reduction in transportation sector. Boulder County is committed to growing sustainable transportation efforts in the coming decades to reach the countywide 2030 goal.

SEE THE AIR QUALITY CHAPTER (PAGE 14) FOR ADDITIONAL EMISSIONS REDUCTIONS STRATEGIES.



Waste only makes up a small portion of Boulder County’s overall community emissions. However, the emissions captured in this sector don’t account for the emissions generated through the life cycle of a product. For example, production, transportation, delivery, and the use of a product all emit carbon. Reducing the consumption of goods and encouraging reusable and recycled materials lead to emissions reduction at every stage of a product’s life cycle. These emissions reductions are not captured in a standard GHG inventory, which measures GHG emissions created solely within the

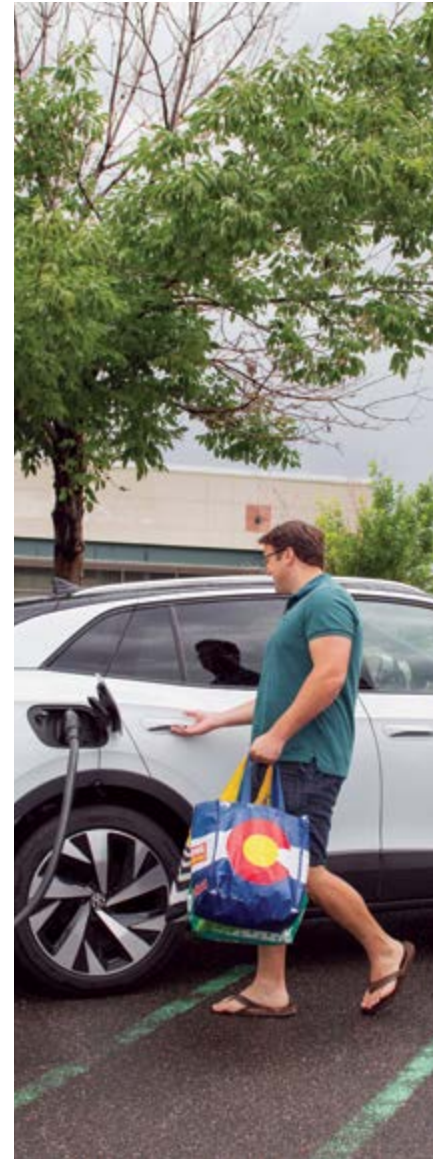
county’s geographic boundary. For this reason, Boulder County will be conducting a consumption-based emissions inventory (CBEI). [SEE PAGE 53 FOR MORE.]

**WHAT COMES NEXT**

In 2021, emissions per capita in Boulder County was 12 mtCO<sub>2</sub>e annually. To meet our 2030 goal, we must reduce our emissions per person per year to a countywide average of 2.6 mtCO<sub>2</sub>e. This is not an easy feat. Boulder County, municipalities, and all community members need to commit to more aggressive climate action and

emissions reduction policies to meet this goal.

Yet, the scale of this challenge extends beyond the borders of Boulder County and is much larger than our local, countywide goal. To reduce global warming to a level of 1.5°C, immediate and deep emissions reductions are required at the international level. Boulder County is committed to reducing global emissions by actively engaging in and advocating for emissions reduction policies at the state, federal, and international levels.



**GOING DEEPER**

## Consumption-Based Emissions Inventory

A CBEI is a calculation of all the GHG emissions associated with producing, transporting, using, and disposing of products and services consumed by a community or entity in a given time period, typically a year. This differs from a traditional territorial inventory, which tracks emissions only created inside the county.

Boulder County has conducted a CBEI that will provide the county with a holistic picture of the life cycle impacts of consumption within the county. CBEIs have several categories, including, but not limited to, water, clothing, healthcare, food and beverage, vehicles, and parks.

Boulder County is pursuing a CBEI to understand and subsequently address consumption as a major driver of carbon pollution. The county hopes to weave CBEI data together with traditional inventory data to identify strategies that reduce emissions in all activities across the community. The CBEI will be one of the first completed in Colorado, and it will be a crucial data set to inform future climate action in Boulder County. In a high-consumption culture such as the U.S., understanding consumption-based emissions will illuminate opportunities to reduce carbon pollution related to the products and services used in everyday life.



RESTORE COLORADO

Using one of the U.S. Department of Agriculture’s first-ever urban agriculture grants, Boulder County teamed up with Mad Agriculture and Zero Foodprint, winner of the prestigious James Beard Award, to launch Restore Colorado, a revolutionary public, private, and nonprofit partnership that connects consumers, restaurants, and food businesses to local farms and ranches. More than 32 Colorado restaurants and businesses are collecting a few cents per meal for Restore Colorado grants, which fund local regenerative and carbon sequestration farming projects that improve soil health.



“  
**As chefs for many years in New York City, we felt so far away from where our food came from. Moving to Colorado was our way to create a company that is sustainable, and by choosing to source locally, supports the community around us. [This program] made it easy for us to support the farms we know and love right here in our neighborhood. We pride ourselves on providing our clients with the delicious produce grown by Speedwell Farm & Gardens, and to know that our 1% donation goes directly to help them continue to do what they do makes our hearts ache with joy.**

— David Pitula and Debbie Seaford-Pitula,  
owners of Whistling Boar Private Chef & Catered Events

MEETING OUR GOALS

# Strategic Priorities

Boulder County recognizes that preventing the most devastating impacts of climate change will require everyone’s participation. The Office of Sustainability, Climate Action & Resilience (OSCAR) has established the following strategic priorities to guide this work:

- Focus on innovative solutions that drive large-scale, systems-level change.
- Center work on equity and racial justice.
- Engage the community.

All of the strategies, programs, and projects that OSCAR implements are guided by their alignment with these three priorities. The priorities guide a dedicated and knowledgeable staff working in the areas of energy,

including efficiency, electrification, and renewables; resilience and adaptation; waste and consumption; transportation and EVs; and climate change communications and community engagement.

Boulder County’s efforts to meaningfully integrate climate action into financial decisions—including choosing insurance providers, pension investments, and banking services—send a message that transitioning away from fossil fuels is our top priority. We will also continue to act on these values by advocating for economic systems that foster an equitable, livable future.

With the passage of the largest and most consequential climate bill in U.S. history, the team at OSCAR is

working to meet the moment. The recently enacted Inflation Reduction Act will accelerate national climate action and local governments are key to successful implementation. Regional collaboration and thoughtful coalition building are fundamental strategies to meet the scale and speed necessary to reach our objective of a just transition to a livable planet. That’s why large-scale systems change, done in an equitable way that engages the community, is vital.



TAKING ACTION

## Clean Energy Transition

In Colorado, the Public Utilities Commission (PUC) is responsible for regulating public utilities in the public’s interest, including electric and gas. Both the state legislature and the PUC can play a significant role in demanding that utilities decarbonize and adapt to a changing climate. Because the power to define what the public’s interest is lies with both the PUC and the legislature, either entity can develop mandates to shift PUC policy and regulatory

decision-making to align with the state’s priorities around renewable energy and grid decarbonization. Together, they develop rules, conduct oversight, and make decisions about critical aspects of energy that could greatly impact the state’s clean energy transition, including new investments, utility rates, and incentives. As such, there is great potential to leverage the PUC’s powers and mission to align with the state’s and Boulder County’s energy goals.

Utilities still have the responsibility to clean up their own operations on a more aggressive timeline independent of the PUC or the state legislature. For example, Xcel Energy, one of Colorado’s main energy providers and one of the electricity providers in Boulder County, has committed to reducing carbon emissions from electricity at least 80% by 2030 and reaching 100% carbon-free electricity by 2050.



MEETING OUR GOALS

## Municipal Collaboration

Boulder County values its municipal partnerships and recognizes that collaboration is important to meet shared climate action goals. A few recent collaboration highlights include the following:

- OSCAR team members are leading a cohort of municipalities to adopt the 2021 International Energy Conservation Code for residential new construction and remodels to accelerate electrification and energy efficiency. The cohort is also developing a road map to achieve net zero for all new construction.
- The county is collaborating with county municipalities, regional and state stakeholders, and Xcel Energy’s Partners in Energy in the design and implementation of a regional transportation electrification plan for Boulder County communities.
- Boulder County’s Environmental Sustainability Matching Grant program provides an opportunity for municipalities in the county to undertake environmental sustainability priorities within their communities. In addition to supporting local efforts, the program will help the county leverage community resources for a coordinated, countywide approach to environmental sustainability.



SMALL BUSINESS EQUITY PROGRAM

Boulder County Partners for a Clean Environment’s (PACE) Small Business Equity Program helps small businesses save energy and money by replacing outdated restaurant or grocery equipment and lighting. After receiving a PACE Small Business Equity Program grant, Asian Food Market saved 60% on their utility bill and reduced their contribution to climate change by 50 metric tons of carbon dioxide per year by replacing outdated equipment.



“  
**Without this grant, there is no way we could have made this happen.**  
 — Maria Nguyen,  
 owner of Asian Food Market.  
 ”

MEETING OUR GOALS

## Climate Finance

The Inflation Reduction Act (IRA) is America’s largest-ever investment to fight climate change, with \$369 billion committed to climate action, resilience, and innovation. The new law is expected to reduce emissions 40% by 2030. Combined with continued federal climate action and ongoing leadership from state and local governments, the IRA will move the U.S. closer to meeting President Biden’s target of a 50% reduction in climate pollution by 2030. The IRA will significantly affect the markets and potentially transform the U.S. economy. An analysis commissioned by the BlueGreen Alliance from the Political Economy Research Institute at the University of Massachusetts Amherst found that the bill would grow the workforce by 9 million jobs over the coming decade.

We know that many climate action and resilience initiatives will need to be regional in scale and managed through a coalition-based process. This

new law provides a potent catalyst for meaningful regional collaboration and stakeholder engagement. The OSCAR team plans to do the organizing work for structures that drive the scaling of our climate action at the speed necessary to meet our climate goals, and we need everyone’s involvement.

As we approach federal funding for nature-based solutions, building and transportation electrification, resilience, and other transition infrastructure, we will consider stakeholders and governance structures to ensure that equity is a defining feature of our work.

## The IRA is expected to reduce emissions 40% by 2030.



TAKING ACTION

# Carbon Dioxide Removal

Taking excess carbon out of the air is now a critical part of confronting the climate crisis. There's already too much carbon dioxide in the air, and more on the way. To maintain a livable climate, the most ambitious plans to fully transition our world away from fossil fuels will require significant removal of excess atmospheric emissions over the course of this century. CDR strategies can be achieved through technological innovation or nature-based solutions. Experts agree that pursuing carbon removal strategies in addition to deep emissions reductions is imperative

to mitigate the worst impacts of the climate crisis." IPCC says we need to remove up to 1,000 billion tons of CO<sub>2</sub> from the atmosphere by 2100 to avoid catastrophic climate change. Thus, all pathways to keep warming within 1.5°C require massive amounts of CO<sub>2</sub> removal, in addition to deep and rapid emissions reductions.

**SUPPORT FOR CARBON DIOXIDE REMOVAL**

In 2022, Boulder County and the City of Flagstaff, Arizona, launched a first-of-its-kind, local government coalition to advance CDR called the 4 Corners

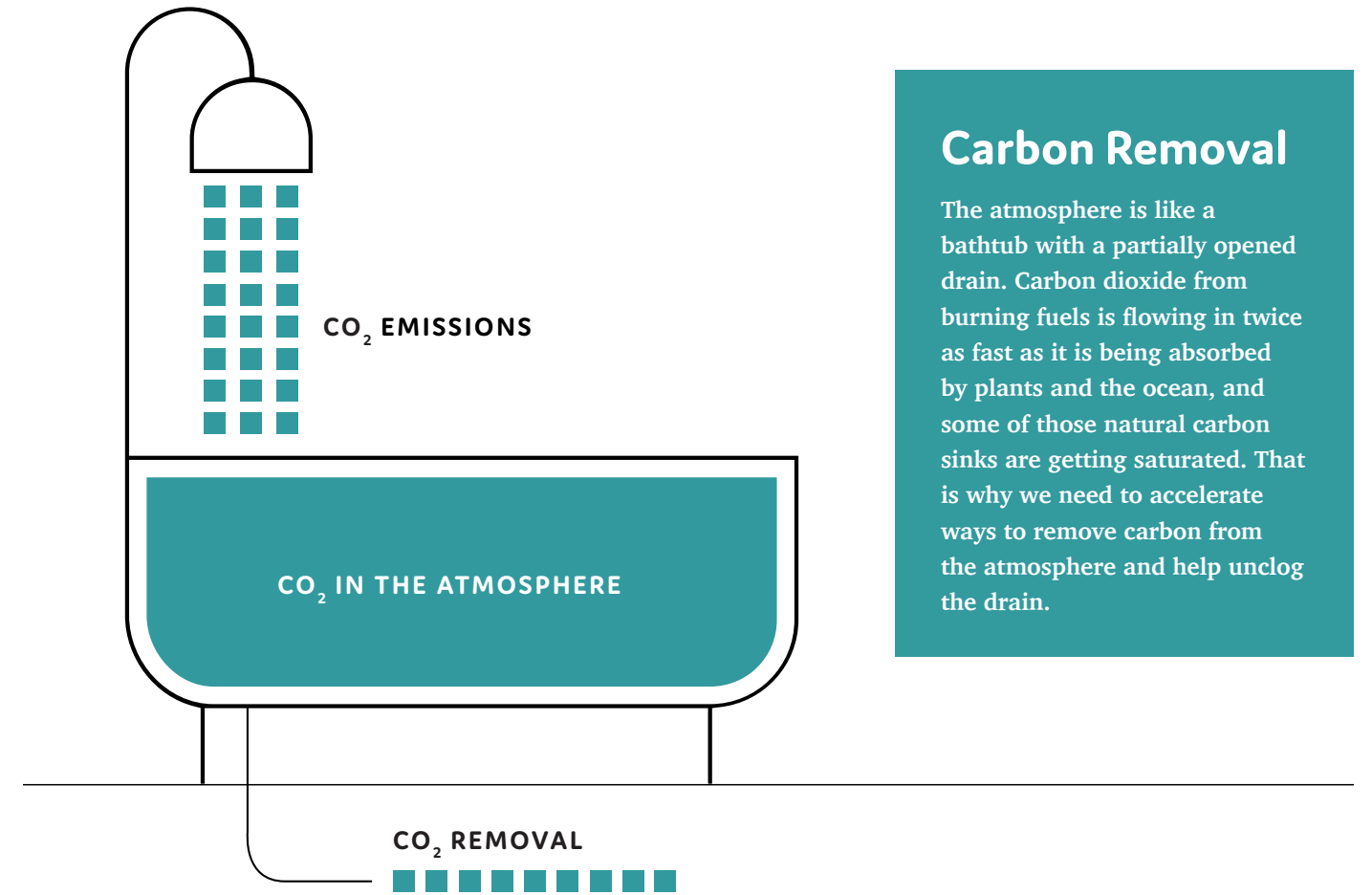
Carbon Coalition. In partnership with the Open Air Collective, this coalition will nurture a market for high-impact CDR that is sustainable, equitable, and locally determined.

Alone, local governments have limited resources and capacity to initiate complex and costly carbon removal projects. But by working in a coalition, local governments can pool resources and share best practices. Together the members of this coalition can invest in common projects similar to community solar, grow demand for new technology like low-carbon concrete, and even adopt regional procurement standards that place explicit value on products and services that draw down carbon. Collectively, the members can also support progressive local and state policies that create even wider adoption of CDR. The county is also exploring opportunities to support carbon removal through its Climate Innovation Fund [SEE MORE ON PAGE 68].



## Carbon Removal

The atmosphere is like a bathtub with a partially opened drain. Carbon dioxide from burning fuels is flowing in twice as fast as it is being absorbed by plants and the ocean, and some of those natural carbon sinks are getting saturated. That is why we need to accelerate ways to remove carbon from the atmosphere and help unclog the drain.



REMOVING CARBON DIOXIDE AND OTHER EMISSIONS FROM THE ATMOSPHERE IS VERY DIFFERENT THAN CARBON CAPTURE AND STORAGE.<sup>23</sup>



COUNTY OPERATION STRATEGIES

## Ensure climate change mitigation and adaptation are top priorities within Boulder County operations

**BENEFICIAL ELECTRIFICATION**

→ Transition buildings owned by Boulder County from fossil gas to clean electric power.

**ENERGY EFFICIENCY**

→ Reduce Boulder County's internal energy consumption and encourage energy conservation behavior at work.

**TRANSPORTATION**

→ Promote low-carbon transportation options, multimodal work commuting, and EV adoption within the countywide vehicle fleet and among county employees.

**RENEWABLE ENERGY**

→ Support land-use policies and the development of codes that reduce barriers to solar without compromising the county's open space policies, and support using appropriate, county-owned land for renewable energy.

→ Continue to meet all of Boulder County's operational electricity with renewable energy.

**CROSS-CUTTING STRATEGIES**

→ Be active members in shaping statewide policy both through our Boulder County policy team and through organizations like Colorado Communities for Climate Action.

→ Adopt internal resolutions and policies that establish climate action as a top priority for the organization and guiding principle for decision-making.

→ Prioritize budget decisions around climate mitigation and climate resilience initiatives.

→ Create an internal county climate change strategic task force that helps implement Boulder County's internal climate mitigation and climate adaptation strategies.

→ Assign a point person to coordinate climate adaptation and climate resilience efforts, track progress, and leverage countywide resources.

COMMUNITY STRATEGIES

## Prioritize climate change mitigation and adaptation communitywide

**BENEFICIAL ELECTRIFICATION**

→ Explore public-private partnerships and third-party financing models to support a large-scale transition to highly efficient electrical space and water heating equipment.

→ Support fuel switching that helps residents and businesses adopt renewable heating and cooling technologies to reduce their reliance on fossil fuels, such as replacing fossil fuel gas appliances and inefficient electric appliances

**ENERGY EFFICIENCY**

→ Continue to offer EnergySmart and Partners for a Clean Environment services to Boulder County residents and businesses, and explore new opportunities to address GHG emission reductions through these programs.

→ Enhance and improve commercial and residential building codes to achieve net zero energy on all new construction in unincorporated Boulder County by 2026.

→ Encourage Boulder County municipalities to adopt the most recent residential and commercial energy efficiency building codes and consider going beyond code.

→ Impose a fee on energy intensive industries, including, but not limited to, marijuana and oil and gas.

→ Promote low-interest financing mechanisms through the Colorado Energy Office's Residential Energy Upgrade loans, Commercial Property Assessed Clean Energy, and other financing instruments, to enable residents and businesses to complete energy efficiency upgrades and install renewable energy.

→ Support electric and gas utility policy that increases energy savings requirements and encourages demand-side management programs to meet those requirements.

**BOULDER COUNTY HAS IDENTIFIED SEVERAL STRATEGIES TO DRIVE EMISSIONS REDUCTION AND CARBON NEUTRALITY GOALS. SOME OF THESE STRATEGIES ARE COMMON IN CLIMATE ACTION WORK AND OTHERS ARE WHAT BOULDER COUNTY CONSIDERS BIG MOVES—INNOVATIVE OR CUTTING-EDGE WORK ESSENTIAL TO MEETING COUNTY GOALS. BIG MOVES ARE SHOWN IN BLUE.**

COMMUNITY STRATEGIES

Prioritize climate change mitigation and adaptation communitywide (continued)

TRANSPORTATION

- Encourage Boulder County municipalities to add a mix of housing types and price ranges to allow commuters the ability to live in the communities where they work.
- Support the implementation of the Boulder County Mobility and Access for All Ages and Abilities Plan to meet the needs of historically underserved community members.
- Support public DC fast charging and Level 2 charging at strategic locations in Boulder County.
- Support adoption of the most advanced vehicle emissions standards available.
- Transition 30% of all vehicles registered in Boulder County to zero emissions by 2030 through programs, incentives, partnerships, and policies.
- Update transportation policies, plans, and standards to incorporate new travel systems and technologies into the design of transportation infrastructure, to ensure low-carbon travel.
- Continue to develop Boulder County's multimodal transportation infrastructure, which includes supporting transit service, expanding shared-use vehicle opportunities, developing biking infrastructure and incentives, and increasing mobility access for all.
- Continue to offer transportation advising to the business community to increase sustainable transportation choices and decrease single-occupancy vehicle use through Partners for a Clean Environment services.
- Support statewide vehicle and fleet electrification proposals, electric school buses, and public transit for pollution reduction and rider health.
- Evaluate the impacts of events caused by climate change on transportation infrastructure, then plan adaptations of transportation infrastructure to help prepare for, respond to, and recover from such events.

BIG MOVES ARE SHOWN IN BLUE

CARBON DIOXIDE REMOVAL

- Explore the adoption of policy that would require large emitters to pursue CDR at the rate of one ton of sequestration or removal for every ton of emissions, with a focus on local sequestration and removal projects.
- Launch and utilize the new Climate Innovation Fund to support local projects focused on CDR and landscape resilience and restoration.
- Incorporate land access and reconciliation with Indigenous peoples into nature-based CDR strategies.
- Work with Boulder County food producers, tenants, and ranchers to increase the carbon sequestration potential of farmland using carbon farming methods, compost application, reduced tillage, tree planting, slow-release fertilizer usage, and cover crop implementation.

WASTE ENERGY

- Explore the use of food waste bans to reduce the quantity of organics, including food, yard, and landscaping waste, that are disposed of in the landfill.
- Adopt deconstruction ordinances that require some amount of deconstruction and waste diversion for all construction and demolition projects.
- Encourage resource conservation by local government, residents, and businesses to reduce the carbon footprint associated with the life cycle of resources and goods, including extraction or harvest, production, transport, provision of services, reuse of materials, recycling, compost, and disposal. Adopt an extended producer responsibility policy to shift responsibility for management of post-consumer waste to producers.

RENEWABLE ENERGY

- Support increased access to rooftop and community solar throughout Boulder County by continuing to offer Boulder County's suite of renewable energy services, such as EnergySmart, Partners for a Clean Environment, solar bulk purchase programs, and rebates and incentives.
- Advocate and support utility policies that increase the amount of renewable energy on the local power grid.
- Prioritize 100% renewable electricity by 2030 countywide and 50% of buildings off fossil gas heating by 2030.

COMMUNITY STRATEGIES

Prioritize climate change mitigation and adaptation communitywide (continued)

WATER

- Update the County Comprehensive Plan to establish and revise water-related goals and utilize updates in regulatory documents such as the Land Use Code to support implementation of these goals.
- Work with water rights holders, including farmers on Boulder County agricultural properties, to employ practices that increase soil capacity for water retention and reduce water use.
- Improve ditches to reduce impact of fires and reduce water waste.
- Develop post-wildfire revegetation plans to protect watersheds from mudslides and increased runoff and to reduce the risk of flooding to downstream assets.
- Provide education and outreach to residents on chemical applications for landscaping and snow removal that have adverse impacts on water quality.
- Support turf replacement programs and promote transition to more water-efficient landscaping in partnership with water districts and other entities.
- Protect, improve, and ensure watershed health to secure an enduring supply of high-quality source water, while protecting the wildlife habitat, stream system functions, and aesthetics of the natural environment.
- Ensure that all on-site wastewater treatment systems are permitted and approved.
- Expand water conservation education efforts with Boulder County residents and businesses.



CROSS-CUTTING

- Support national and statewide efforts to establish a regulated price on carbon or any other market mechanisms that effectively reduce and remove GHG pollutants.
- Practice shareholder advocacy by encouraging all companies the county invests in to incorporate climate action into their core business principles. Furthermore, divest all county assets and financial resources from any institution associated with financing the climate crisis and provide tools and resources for community members and businesses across Boulder County to do the same.
- Continue to pursue legal action against major polluters that have played a significant role in causing the climate crisis damaging the community.
- Participate at state agency proceedings to advocate for regulations that reduce emissions from oil and gas, industrial facilities, and transportation.
- Collaborate with state lawmakers and other local governments to enact legislation that reduces climate impacts of carbon pollution from sources such as oil and gas, industrial operations, and transportation.
- Utilize land-use policies to encourage a compact development pattern in unincorporated Boulder County, effectively locating new development close to existing development, locating housing close to services and transit, and protecting rural preservation and open space lands from fragmentation and other associated impacts.
- Continue to strengthen and enforce county oil and gas regulations.
- Encourage the adoption of federal regulations and policies that reduce the impacts of oil and gas resource extraction.
- Work to engage disproportionately impacted residents through trusted leaders and channels within the community.
- Serve as a convener of strategic and collaborative discussions about climate change mitigation and adaptation across the municipalities within the county, with a particular emphasis on public health, water supply, and hazard management.
- Encourage the Office of Emergency Management to incorporate climate change preparedness strategies into Boulder County and municipal multihazards plans.
- Support future climate change preparedness policies and collaborative efforts at the local, regional, and state levels.

BIG MOVES ARE SHOWN IN BLUE



## Climate Innovation Fund

The Climate Innovation Fund supports projects that use nascent and cutting-edge technologies to remove carbon dioxide from the atmosphere and restore landscape resilience locally. A panel of national and local experts in climate research, carbon sequestration, CDR technology, nature-based climate solutions, and landscape resilience selects projects through a competitive screening process, weighing factors like projected amounts of carbon removed from the atmosphere, carbon removal quality, and community co-benefits.

The inaugural round of grant funding is supporting research, as well as the implementation of the following:

- Decentralized biochar production on local farms.
- Dryland agroforestry practices that enhance fire resilience, biodiversity, water retention, and soil health.
- Carbon farming and regenerative conservation experimentation and analysis.
- Mobile biochar technology that reduces fire risk by facilitating on-location waste wood removal across the county's wildland-urban interface.
- Mycelium inoculation to sequester carbon on degraded agricultural land.

**OSCAR seeks to support innovative climate solutions that promote CDR and landscape resilience.**

“

**We need to kickstart fresh ideas and creative solutions to tackle the climate crisis, and these grant recipients will do that locally. Grounding innovation and technology development through a place-based approach can advance equity and amplify outcomes that respond best to our community's needs. This is why the county selects projects that have positive local impacts and community co-benefits. We look forward to seeing this work make a difference right here in Boulder County, and we also look forward to sharing what we learn with our community and with innovators and scientists around the world.**

*—Board of County Commissioners Chair Marta Loachamin*

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TAKING ACTION

## Nature-Based Solutions

Nature has been cycling and storing carbon for more than three billion years. Through the scaling and harnessing of natural processes like photosynthesis, we could remove 11 gigatons of CO<sub>2</sub> from the atmosphere each year. For context, this is about one third of the annual emissions reductions required to limit warming to 1.5°C over the next decade.<sup>24</sup>

Some of the most effective nature-based solutions include regenerative agriculture, forest regrowth, and

grassland restoration. The OSCAR team is working on increasing urban tree canopies with a focus on equity for those communities that are at the most risk of extreme heat and other climate change impacts. In urban areas, there have been temperature differentials of as much as 30°F between areas where tree canopy provides shade and areas without trees. With nature-based solutions, we strive to preserve biodiversity while also adapting to the risks of climate change such as high heat.



### WOMEN, INFANTS, AND CHILDREN GAP PROGRAM

The Women, Infants, and Children (WIC) Gap program provides county residents and families in need access to healthy, local food. The program's incentive dollars can be spent at Boulder County farmers' markets, both at their locations or for home delivery, supporting local agriculture and a more circular economy.

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**This recent focus on technological innovation is great, but it’s important to recognize that innovation occurs in the nonhuman world as well. Long before humans existed, the planet came up with an incredibly innovative solution to the same problem we face now: too much greenhouse gas in the atmosphere. That solution, “invented” by evolution over 3 billion years ago, is called photosynthesis.**

—Peter Ellis,  
Global Director of Climate Science,  
The Nature Conservancy

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“  
**My family is enjoying fresher, more nutritious food I wouldn’t be able to afford otherwise. The pleasant experiences I’ve had connecting with the community and enjoying the atmosphere at the farmers market have improved my mental health.**

— Silvia Navarette, WIC Gap Program participant

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## Sky Pilot Farm

Longmont’s Sky Pilot Farm used a grant from the county’s Sustainable Food & Agriculture Fund to expand their mobile grazing operation and regenerative agriculture footprint.

The grant paid for infrastructure to move animals on pasture, including mobile shade, mobile water, mobile fencing, and mobile housing for chickens, pigs, and sheep. This equipment is necessary for moving animals across large swathes of land, in order to mimic the natural movement patterns of herd ungulates. Mobile grazing spreads fertilization across the land, but the frequent movement ensures that the animals don’t remain in a location long enough to damage the soil. This practice keeps animals healthy, mitigates grass fire risk, encourages native grasslands and wildlife, and promotes healthy soil, which removes carbon from the atmosphere.

The expansion of Sky Pilot’s grazing operation allowed the farm to increase the range of their animals from 200 to 800 acres while doubling their revenue.

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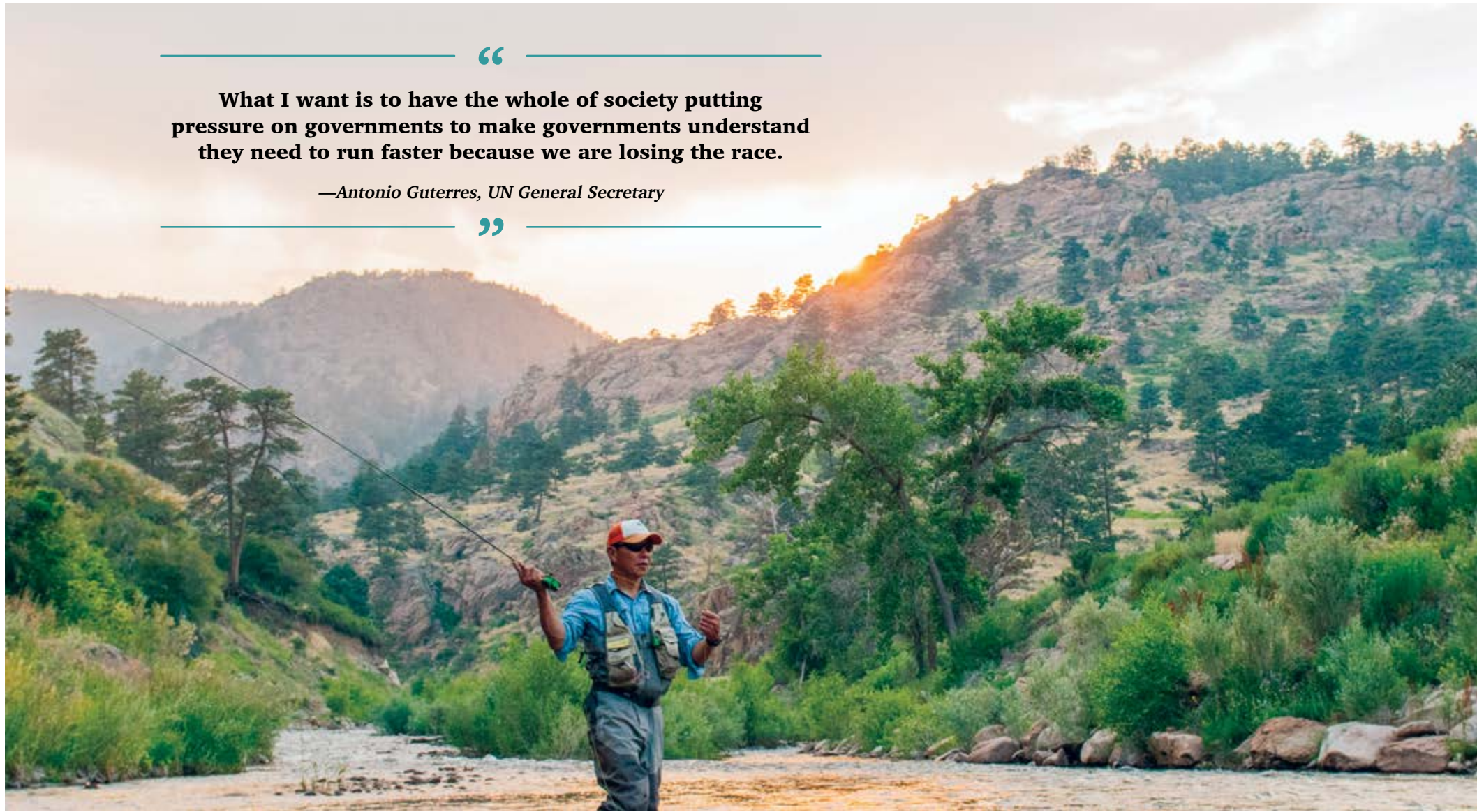
**When someone makes a purchase at the farmers market, whether it’s from us or somebody else, they’re furthering that closed loop of keeping dollars, nutrients, and nutrition in the community. It’s long hours, it’s difficult, but there are people everywhere that want to be doing this. It’s really beneficial to have programs like this that have the intention to open pathways for more regenerative agriculture everywhere.**

—Chloe Johnson, Sky Pilot Farm

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<b>LOCAL FOOD PRODUCED</b>	<b>22,000 lbs. of lamb</b>
<b>CARBON SEQUESTERED</b>	<b>10 MTCO<sub>2</sub></b>
<b>DOLLARS AWARDED/ CASH MATCH + IN-KIND</b>	<b>\$40,000</b>
<b>REVENUE GENERATED</b>	<b>\$100,000</b>
<b>ACREAGE IMPACTED</b>	<b>800 acres</b>





“

**What I want is to have the whole of society putting pressure on governments to make governments understand they need to run faster because we are losing the race.**

—Antonio Guterres, UN General Secretary

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MEETING OUR GOALS

# Policy

Boulder County has made great progress over the past several years by supporting and adopting policies and programs that reduce emissions and ensure equitable access to the benefits of climate action across the community. And yet, there is still much more to be done. Policy is a crucial lever in driving the actions that will ultimately reduce GHG emissions. The county continues to advocate for appropriate climate action policy at the local, regional, state, and federal levels. Whenever possible, the county works in conjunction with other local governments and with Colorado Communities for Climate Action to maximize consistency and impact.

The county helps keep residents informed and engaged in discussions around climate action policy, and encourages them to participate directly in the public process on their own behalf. Crucially, this work specifically involves engaging disproportionately impacted residents through outreach

by trusted leaders, as well as other channels in the community.

The county pursues legislation and then follows up on implementation of passed bills through regulations at various state agencies. This work to combat both the climate crisis and unhealthy air pollution adheres to the Boulder County Policy Team’s priorities, adopted each year by the county commissioners. Recent successes from the Policy Team include the initiatives on the following pages. Further details can be found in this document.

**POLICY PRIORITIES**

The following are environmental sustainability policy priorities within Boulder County’s legislative agenda:

POLICY	WHAT YOU NEED TO KNOW	
<p><b>Advocate for sufficient funding and capacity for state agencies to implement necessary air and climate regulation</b></p>	<p>Boulder County has supported legislation for fees and funding the Colorado Department of Public Health and Environment (CDPHE) to effectively regulate air and climate pollution.</p>	<p>The county will continue to support mechanisms that draw funding from pollution sources to fund the effective regulation of pollution reductions from those sources.</p>
<p><b>Promote proactive efforts for climate change resilience and adaptability</b></p>	<p>In 2022, in the wake of the Marshall Fire, Boulder County supported several wildfire resilience and recovery bills, including Senate Bill (SB) 22-206, Disaster Preparedness and Recovery Resources, which provides sustainable support for residents impacted by disasters. Boulder County will continue to support necessary legislation and policy, including laws</p>	<p>that redefine the wildland-urban interface to account for vulnerability in nonmountain regions. The county will also continue to support funding and capacity for ongoing preparedness and recovery from fires, floods, and other climate-fueled disasters that are becoming all too familiar to Boulder County residents.</p>

**POLICY**

**WHAT YOU NEED TO KNOW**

**Support and promote actions to achieve or exceed the state’s codified climate pollution reduction goals**

With regard to legislation, Boulder County supported and shaped many bills, including House Bill (HB) 19-1261, the Climate Action Plan to Reduce Pollution, which set Colorado’s economywide GHG targets. The county followed up with input on the resulting GHG Road Map. The county then supported HB21-11266, the Environmental Justice Act for sector-specific GHG goals. The county also supported SB21-260 for, transportation pollution reduction and funding, and SB21-181, to provide for stronger regulation of pollution from oil and gas operations.

The county subsequently participated in the resulting statewide climate rulemakings, including the Transportation GHG Rule, the Building Energy Efficiency Rule, the oil and gas GHG and ozone rulemakings, and the Colorado Air Quality Control Commission’s (AQCC) regulation for GHG emissions and Energy Management for Manufacturers in Colorado, or GEMM.



POLICY

WHAT YOU NEED TO KNOW

**Incorporate equity, accessibility, and just transition into climate policies and actions**

Boulder County supported both the 2019 “Climate Action Plan to Reduce Pollution” and the 2021 “Environmental Justice Act,” the latter of which defined and required mapping of communities disproportionately impacted by climate change. These include low-income and housing cost-burdened communities, communities of color, and those historically subjected to exclusionary practices. The county worked on the Climate Equity Advisory Committee at CDPHE and shaped the Climate Equity Framework<sup>25</sup> to guide rulemakings. With regional health departments, the

county provided input on the Colorado EnviroScreen equity map and the Environmental Justice Action Task Force Recommendations.<sup>26</sup>

The county continues to use these frameworks to guide the prioritization of equity in all rulemakings, and advocates for a clear expectation that community engagement will be reflected in finalized policy. The county is cultivating community engagement on policy at all levels, and specifically directing public participation toward state proceedings.



POLICY

WHAT YOU NEED TO KNOW

**Promote equitable energy efficiency and electrification in the building, transportation, and industrial sectors**

Boulder County supported HB19-1286 for commercial building benchmarking and GHG performance standards, and helped to shape and support HB22-1362 for statewide low-carbon building codes. The county has supported expanded weatherization for lower-income Coloradans and incentives for heat pumps and vehicle electrification.

The county supported HB21-1238 for gas utility savings targets and supporting programs, as well as HB21-264 for cleaner gas utility operations. The county continues to support and promote expanded electrification and “demand-side” savings incentive measures to transition the building and appliance industries away from fossil fuels and toward an ever-cleaner electric grid.

**Support clean and renewable utility energy generation through retirement of fossil fuels and support of distributed renewable and resilient energy**

Boulder County encouraged the governor and other state officials to continue their commitment to meeting the standards laid out by the Environmental Protection Agency’s Clean Power Plan, regardless of judicial or executive branch inaction. The county has opposed negotiations by utilities to reduce their commitments to clean energy and supported legislation such as HB19-1261, which required public utilities to reduce emissions 80% from 2005 levels by 2030. The county has

supported expanded utility incentives and provisions for energy efficiency and renewable energy.

The county has also supported, and will follow the progress of, proposals from Xcel Energy and Tri-State Generation that meet state goals for clean power generation. The county continues to support authority for local governments to implement community choice aggregation and clean energy delivery.

POLICY

WHAT YOU NEED TO KNOW

**Expand the consideration of environmental and health costs associated with the use of fossil fuels in making and implementing climate policy**

Boulder County supports the use of the social cost of carbon in environmental impact and cost-effectiveness analyses.

The county continues to advocate for these and other measures of the health and equity impacts of potential rules or inaction.

**Support state regulation and other policy means to protect air and water quality, which are intimately connected to climate change**

Boulder County supported HB22-1244, Regulation of Air Toxics, to expand monitoring of industrial air pollutants and the formulation of health standards to protect surrounding communities. Control measures for these pollutants could also reduce GHG pollution.

The county worked long before the AQCC to protect air quality from ozone precursors and their pollutants, including methane leaked from oil and gas wells. The county

has shaped many advances in the AQCC Regulation 7 rules for ozone precursors from oil and gas.

Due to the high levels of summer ozone across the front range, the county regularly pressed the Regional Air Quality Council to improve its modeling of ozone-forming compounds and strengthen the pollution control measures in its proposed State Implementation Plans.



POLICY

**Support adoption of a comprehensive, market-based approach to reduce Colorado’s GHG emissions while protecting the most vulnerable**

The cost of climate change, if left unmitigated, will be astronomic. However, the current market does not account for the costs of climate change in the price of goods and services. This is a market failure that contributes to a false narrative that aggressive climate action is more costly than the status quo. Boulder County supported a 2019 petition to the AQCC for a market-based emissions reduction system.

Per Governor Polis’ Executive Order B 2021 01, Colorado will not pursue an economywide cap-and-trade program. The county will continue to support efforts to internalize the cost of pollution to polluters, which puts a price on heat-trapping emissions and allows that price to help drive emission reductions.

The county continues to support the option of progressive and equitable carbon taxes and other price signals to disincentivize the use of fossil fuels.

**Meet solid waste reduction goals**

Boulder County supported HB20-1163, “Management of Single-Use Products,” to prohibit stores and restaurants from providing most single-use plastics and polystyrene. The county also supported HB22-1355, Producer Responsibility Program for Recycling, which fosters infrastructure for recycling, and HB22-1159, which supports waste diversion.

WHAT YOU NEED TO KNOW

TAKE ACTION

**Addressing Climate Change Will Take Effort From Each of Us**

Climate change is a global challenge, but there is a lot we can do locally to have an impact on the global system. Addressing the systems that cause climate change, like our economy’s reliance on fossil fuels, for example, requires a new, systems-change approach. This page offers ideas for actions that, if done collectively, can lead to positive change, in addition to actions that reduce your individual impact on the environment. Ways you can help:

- National, state, and local policy have a big impact on climate. Participate in the political system through voting, lobbying, and coalition-building to support policies that can reduce our impact on the planet and make our community more resilient.
- Studies show that people tend to trust information from their friends and family most. You can help others act on climate through your personal conversations. And, while you’re bringing others along on a journey to solve climate change, you just might be building a group to help with political or systems change.
- Sometimes systems change can feel daunting, but there are always opportunities to make changes to your own life to help the climate. Things like making your home more energy efficient, eating less meat, or choosing to walk or bike are better for the planet and can also have health benefits.

Find more ways to take action on our Resources page.<sup>27</sup>

THANKS TO OUR PARTNERS AT THE CITY OF BOULDER FOR CRAFTING THIS LANGUAGE, AS WE ARE IN THIS TOGETHER.<sup>28</sup>



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**3**

**ecological  
health**



**INTRODUCTION**

Boulder County works to preserve and restore our natural resources for their intrinsic value and their benefits to wildlife, the environment, and our community. Our understanding of ecological health has evolved to include its connection to climate change and mitigation, in a new field often referred to as *nature-based solutions*.

There is now a clear understanding that healthy ecosystems create a more resilient planet that soaks up greenhouse gas emissions, slows climate change while stabilizing its effects, protects people from hazardous events, and improves our daily quality of life.

Continued efforts to enhance our streams and riparian habitats with natural stream design benefit wildlife that use these corridors and protect water quality. Our forests provide clean water, flood protection, and habitat for wildlife, but they have also been impacted by historic

fire suppression, invasive insects, disease, overgrazing, and climate change. Boulder County works with numerous partners to improve forest health and reduce wildfire risk across land ownership boundaries. A key part of this work is reintroducing disturbances, like prescribed burning and forest thinning, to imitate historical conditions. The county also manages wildfire risk and improves ecological health in our nonforested lands, while restoring grasslands on unproductive agricultural lands.

More than 100,000 acres of open space have been protected by Boulder County to preserve natural, cultural, and agricultural resources, and to provide public uses that reflect sound resource management and community values. Other government and private entities manage an additional 109,600 acres of federal land and 53,600 acres of open space and public land within Boulder County municipalities. The county preserves land through acquisition or with conservation easements, ensuring the land will remain an ecologically viable habitat for wildlife and plants. It also involves private property owners in preserving ecological health through its land-use regulatory process. Land-use and zoning regulations consider the environmental impacts of development and provide opportunities for property owners to permanently remove development rights or limit the size of future development that can occur on their land.



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**ecological goal**  
Ensure healthy and vibrant ecosystems that sustain diverse species, support thriving natural systems, and provide valuable services for our human population.

**COUNTY OPERATION STRATEGIES**

**Actively preserve and restore the ecological systems in the county**

- Install pollinator plots and improve pollinator habitat connectivity.
- Maintain and increase current extent of mapped grasslands in Boulder County, especially in priority areas for habitat connectivity and protecting key species and species diversity.
- Identify and prioritize opportunities for wetland restoration to enhance ecosystem function and resilience, including supporting a variety of Species of Special Concern identified in other county plans and policies.
- Preserve suitable prairie dog habitat on county open space and continue reintroduction of black-footed ferrets onto county open space.
- Identify opportunities to preserve additional open space and associated water rights that help improve ecological health and connectivity.
- Continue restoration of converted grasslands and pursue restoration of additional degraded agricultural areas to support carbon sequestration, species and habitat preservation, and other land management goals.

**Become a leader in carbon sequestration through land management**

- Investigate the efficacy and feasibility of biochar and green manure application on open space in Boulder County.
- Implement pilot projects in compost addition and biochar application, increase riparian vegetation, and quantify carbon sequestration.
- Support regenerative agricultural practices and other approaches to carbon sequestration.

**COUNTY OPERATION STRATEGIES**

**Restore riparian habitat in Boulder County**

- Improve native fish habitat by collaboratively installing fish passage on diversion structures along St. Vrain Creek and other areas where improved fish passage is needed. Implement projects with multiple benefits for water users, stream function, and climate adaptation.
- Continue restoration of riparian habitat on degraded stream reaches throughout Boulder County.
- Where possible, establish or maintain healthy in-stream flows as part of riparian restoration efforts to support ecological health and connectivity.

**Identify opportunities to enhance policies related to ecological health, water conservation, climate resilience, and climate mitigation in the Boulder County Comprehensive Plan (BCCP) and align the Land Use Code with these policies**

- Provide education opportunities for planners and practitioners in other county departments, decision makers, and the public about the ecological health-related policies (i.e., Environmental Resources Element, Sustainability Element, Natural Hazards Element) that currently exist in the BCCP, so that they can be more fully utilized.
- Pursue implementation measures that enhance ecosystem services; restore the health of soil, grasslands, wetlands, and forests; and advance climate equity.
- Bolster policies related to forest health that currently exist in both the Sustainability Element and the Natural Hazards Element of the BCCP.

COMMUNITY STRATEGIES

Provide sustainable end uses for woody biomass and promote forest health activities

- Develop and expand the means to dispose of biomass in an environmentally sustainable manner and pursue opportunities to expand sustainable end uses.
- Provide private landowners a means to dispose of their wood in an environmentally sustainable manner at the Community Forestry Sort Yards, through chipping and other tools.
- Improve and expand rural slash and debris-removal programs for forest health, wildfire mitigation, and emerald ash borer management by establishing the St. Vrain Sort Yard in the plains.

Ensure urban development is directed to existing urban areas to limit sprawl, promote more sustainable development patterns, preserve agricultural activities, and allow for functional ecological systems

- Renew, extend, and maintain intergovernmental agreements with municipalities to cooperatively plan for areas of development and areas for preservation.
- Protect lands and resources in Boulder County from unnecessary degradation, fragmentation, and other negative environmental impacts related to development while considering long-term needs of Boulder County residents and downstream impacts.
- Implement education programs for decision makers, the public, and staff about policies encouraging compact development patterns.

COMMUNITY STRATEGIES

Increase and expand forest management and wildfire mitigation efforts throughout Boulder County

- Plan and implement landscape-scale forest treatments in high-priority locations within Boulder County in collaboration with key partners.
- Actively participate in Boulder County Fireshed group to increase fire mitigation and forest treatments across jurisdictional boundaries throughout Boulder County.
- Update the Boulder County Community Wildfire Protection Plan, working to align with goals developed in collaboration with key partners in the watershed.
- Continue to provide comprehensive, on-site wildfire mitigation assessments to homeowners through Wildfire Partners, and work to ensure that mitigation is completed and maintained.
- Restore additional acres of forest land with forest thinning or prescribed fire.
- Expand the Wildfire Partner program to residents in the plains of Boulder County.
- Advocate for more funding for wildfire mitigation programs and incentives.
- Work collaboratively with public and private sector partners to enhance forest and watershed health through increased participation rates in forest management and wildfire mitigation practices on public and private lands.







➔ By utilizing National Community Planning month, Boulder County highlights the benefits and issues surrounding planning for preservation and development in the county. Potential tools to help spread the message include a speaker series, bike tours, and website information. In the past, the county has collaborated on these efforts by offering educational bike tours in conjunction with the town of Superior and the cities of Boulder, Lafayette, and Louisville, and by offering a presentation to the public on the history of planning in the county, as well as cross-departmental presentations on current planning efforts.



**QUALITY OF LIFE**

Open space protects habitat for naturally occurring ecosystems and their native wildlife populations. Open space also contributes to our community values by conserving natural, cultural, and agricultural resources, and by supporting a strong economy. Open space can help our economy by increasing property values nearby, improving regional economic performance by attracting quality workers for area businesses, increasing space for bike paths and other active transportation options

between cities, and infusing local and tourist dollars into outdoor recreation activities—a more than \$28 billion annual impact to Colorado’s economy. A significant part of the economic engine of Boulder County can be attributed to the value of working, living, and playing in the same area. Boulder County Open Space contributes to this high quality of life and creates a community that values preserving and utilizing open space.



**WILDFIRE PARTNERS**

Wildfire Partners is Boulder County's nationally recognized program to help homeowners prepare for wildfires and create resilient communities. Western wildfires have increased in number and size over the last three decades. With increased warming due to climate change, we are projected to experience substantially higher risk of climate-driven fires in the future. Launched in 2014, the Wildfire Partners program has worked with more than

2,500 homeowners to protect their properties from increasing wildfire risk by providing assessments and financial assistance for fire mitigation. Due to the success of this program and increasing wildfire and fire risk within the plains, most clearly seen in the 2021 Marshall Fire, Wildfire Partners is exploring expanding its services beyond the mountains and foothills to residents throughout the county.

**POLICY PRIORITIES**

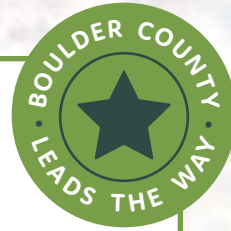
The following are environmental sustainability policy priorities within Boulder County's legislative agenda:

**POLICY**

**WHAT YOU NEED TO KNOW**

**To promote land conservation, land preservation, and outdoor opportunities for Coloradans**

- Support the research, development, and implementation of carbon sequestration practices to improve soil health and productivity while sequestering carbon from the atmosphere.
- Support the preservation and development of tools that the state, local governments, and others use to conserve and protect Colorado's land and natural resources.
- Oppose legislation and other efforts to transfer Colorado's federal public lands to state ownership.
- Support legislation that promotes the efficient utilization and conservation of water.
- Support resolution to conflicts between the federal Endangered Species Act and state water laws.
- Increase state capacity and resources to respond to invasive species.
- Foster a strong stewardship and conservation ethic among Colorado's diverse populations.
- Support state efforts to establish and complete regional trail systems that link communities and connect visitors to important landmarks and amenities.
- Revise state statute to provide permissive authority for Colorado local governments to limit the use of electric scooters to only paved surfaces.



## Planning Boulder County's Growth

The original BCCP, adopted in 1978, set the stage for shaping our landscape today by directing growth to certain areas and launching an open space protection program. The county has followed this plan by creating agreements with municipalities to outline community boundaries, purchasing open space, and directing land uses to appropriate areas. Looking forward, updates to the BCCP will promote more sustainable development, incorporate water quality and quantity into planning, and support functional ecological systems and nature-based solutions for climate mitigation and adaptation.

Today in Boulder County, you can see preserved range lands and working farms; protected forest, riparian, and grassland ecosystems that host myriad wildlife; multiple-use trails; and urban buffers. Urban development is generally sited adjacent to urbanized areas rather than rural areas. Rare or endangered animals, like the burrowing owl, have places to nest. Soaring eagles are more plentiful in our skies. Forests protect our water sources, and lands that were once degraded are now home to native plants and animals.

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**In total, the county has preserved more than 100,000 acres of land.**



TAKE ACTION

## Open Space

Boulder County has a variety of volunteer opportunities for anyone interested in caring for open space. During the past five years, community members have doubled their volunteer hours, and Boulder County Parks and Open Space has expanded opportunities for you to have a hand in preserving the open space. Join us and help define the future for the next generation!

- Collect native seeds.
- Adopt a trail to clean up regularly.
- Help restore forests.
- Monitor wildlife or weeds.
- Volunteer your organization as a partner and help on various projects.



RESOURCES

## More Information

**Boulder County Comprehensive Plan**

[bouldercounty.org/property-and-land/land-use/planning/boulder-county-comprehensive-plan](https://bouldercounty.org/property-and-land/land-use/planning/boulder-county-comprehensive-plan)

**Wildfire Mitigation for Mountain Homes**

[Wildfirepartners.org](https://wildfirepartners.org)

**Get Outside! Volunteer!**

[BoulderCountyOpenSpace.org](https://BoulderCountyOpenSpace.org)

**Colorado's Outdoor Recreation Economy**

[choosecolorado.com/key-industries/outdoor-recreation](https://choosecolorado.com/key-industries/outdoor-recreation)



**4**

**energy  
& buildings**



**INTRODUCTION**

Boulder County strives to foster building practices that improve occupant health, comfort, and safety, as well as environmental, economic, and social sustainability, through the Comprehensive Plan and Land-Use Codes, complemented by the BuildSmart, EnergySmart, Partners for a Clean Environment (PACE), and Housing & Human Services programs.

The Boulder County Comprehensive Plan sets a policy vision for a compact development pattern that locates development in urban areas and preserves distinct buffers between communities. The goals of this policy vision are to avoid sprawl and conserve natural resources. In 2008, the county adopted BuildSmart, a green building program for residential construction and major remodels that sets mandatory requirements to improve energy efficiency, conserve water and resources, and reduce landfill waste generated by new construction projects.

In 2011, EnergySmart and PACE, our residential and commercial energy programs respectively, began helping building occupants take advantage of energy efficiency and renewable energy opportunities. Each program offers free, one-on-one energy advising, financial incentives, and unique programming to meet the needs of each participant. Both programs are currently centering their work on climate justice to reach historically marginalized populations that face the most climate risk.



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**energy and buildings goal**  
Reduce energy consumption, promote energy efficiency, increase the use of clean energy, and transition away from fossil fuels.

**COUNTY OPERATION STRATEGIES**

**Reduce Boulder County's internal energy consumption**

- All newly constructed, county-owned buildings shall be constructed to a minimum Gold level certification as defined by the U.S. Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED) for New Construction, or the equivalent, while striving to attain all the available points under the Energy and Atmosphere category. Construction is underway for a Southeast Community Hub, expected to achieve LEED certification status and modeled after the St. Vrain Community Hub platinum LEED level building in Longmont, which opened in 2016. This \$22.4 million investment brings service closer to community members and will be the fourth county-owned facility deemed energy efficient by the USGBC.
- Annually track building energy intensity, perform energy assessments and retro commissioning, upgrade mechanical equipment and lighting, and reduce plug loads in county-owned buildings. Completed American Society of Heating, Refrigerating and Air-Conditioning Engineers Phase II Audits on all county buildings outlining potential energy efficiency measures that may aid county climate savings and impacts.

**Increase Boulder County's adoption of renewable energy**

- Meet all of Boulder County's electrical needs with 100% renewable energy by 2025.
- Expand capacity of on-site solar electric and solar thermal generation.

**COMMUNITY STRATEGIES**

**Increase energy efficiency, renewable energy, and electrification in residential and commercial properties across Boulder County**

- Continue to offer EnergySmart and Partners for a Clean Environment services to Boulder County residents and businesses, and to explore new opportunities to address greenhouse gas (GHG) emission reductions through these programs in a way that centers on historically marginalized populations.
- Support fuel-switching pilots that helps residents and businesses adopt renewable heating and cooling technologies as replacements for fossil fuel gas appliances and inefficient electric appliances.
- Increase outreach and education efforts to local solar installers, energy efficiency contractors, residents, and business owners.
- Work toward equity in our services for underrepresented community members and business groups.
- Provide low-interest financing through the statewide Residential Energy Upgrade loan of the Colorado Commercial Property Assessed Clean Energy Program, and provide other financing instruments to enable residents and businesses to complete energy efficiency upgrades and install renewable energy.
- Support additional community solar garden capacity to increase the availability of renewable electricity to the residents and businesses of Boulder County.
- Continue to offer free and subsidized weatherization services and solar incentives to qualifying low- and moderate-income residents.
- Utilize the Energy Impact Offset Fund to offset the high electricity usage of the cannabis cultivation industry.
- Continue to explore opportunities to address energy sustainability through the Land-Use Code and the Comprehensive Plan, particularly as it relates to siting solar and other renewable energy facilities.
- Continue to strengthen BuildSmart to move toward net zero energy use in new residential and commercial construction.
- Use the experience and insights we have gained locally to work with the International Code Council to strengthen energy codes for commercial and residential structures.
- Promote and support the adoption of energy storage technologies that increase system resilience and to moderate electrical grid peak demand.



**CLEAN CLOTHES, CLEAN ENERGY**

With the help of Boulder County’s Partners for a Clean Environment (PACE) service, John’s Cleaners paired energy efficiency with renewable energy for a clean energy makeover.

Working with a PACE advisor, this family-owned cleaner in Lafayette installed new LED lighting, which improved light quality and lowered the amount of energy used. They then installed a ground-mounted, 46 kilowatt solar array.

John’s Cleaners used Commercial Property Assessed Clean Energy Program financing for the upgrades and thus had no up-front, out-of-pocket costs. They repay the loan along with their property taxes, and the loan stays with the property if they sell it.

**SOLAR PHOTOVOLTAIC (PV) PAYBACK & SAVINGS**

Costs Covered by Incentives	<b>46%</b>
Project Cost	<b>\$128,686</b>
Federal Tax Incentive	<b>\$38,606</b>
PACE Rebates	<b>\$20,000</b>
Cost after Rebates	<b>\$70,080</b>
Payback	<b>4.3 years</b>
Energy Saving Cost/Year	<b>\$19,066</b>
Lbs of CO <sub>2</sub> Savings/Year	<b>98,454</b>

“  
**Generating our own power instead of relying on fossil fuels helps save money but also makes our business more competitive in the environmentally conscious Boulder community.**  
 ”

—Wendy Ellwood, Co-owner







**CLEAN ENERGY FOR ALL**

Throughout Boulder County, homeowners are investing in clean and energy efficient technologies such as solar PV and high-performance electric heating systems. However, for some residents, the up-front costs of these measures can be a barrier. Ensuring access to money-saving, climate-friendly upgrades for all is a priority.

Beginning in 2013, Boulder County's then-weatherization agency, Longs Peak Energy Conservation, teamed with the county's EnergySmart service to address a gap in energy-related county services for low- to moderate-income families. This collaboration, called EnergySmart IQ (for Income Qualified) resulted in 63 completed EnergySmart IQ projects and 26 projects through the federal Weatherization Assistance Program.

Fast forward to 2021, when the work of providing energy efficiency improvements to low- to moderate-income residents transitioned into a collaborative effort between EnergySmart and Energy Outreach Colorado (EOC). Through EOC's Colorado's Affordable Residential Energy program, more than 40 families have received whole-home energy efficiency and weatherization improvements at no cost.

In 2021, another partnership launched among Boulder County, EOC, Xcel Energy, and the City of Boulder to subscribe more than 450 Boulder County low- to moderate-income Xcel customers to the low-income-dedicated community solar garden on the former Valmont coal fired power plant site. Along with providing these residents with access to renewable energy at charge, these subscriptions reduce resident electric bills by 30 to 40% on average each month.

**Committed to ensuring access to money-saving, climate-friendly upgrades for all.**



POLICY PRIORITIES

The following are environmental sustainability policy priorities within Boulder County’s legislative agenda:

POLICY	WHAT YOU NEED TO KNOW	
<b>Energy and Climate</b>	<ul style="list-style-type: none"> <li>Reduce statewide carbon emissions consistent with or greater than the state of Colorado’s 2019 codified goals.</li> <li>Adopt a comprehensive, market-based approach to reduce Colorado’s GHG emissions while protecting the most historically and currently marginalized communities.</li> <li>Expand the consideration of the environmental and health costs associated with the use of fossil</li> </ul>	<ul style="list-style-type: none"> <li>fuels in making and implementing climate-based policy.</li> <li>Support sufficient funding for staffing and other necessary resources at the Colorado Department of Public Health and Environment and the Colorado Oil and Gas Conservation Commission to effectively develop and implement the oil and gas regulations authorized by Senate Bill 19-181 and the climate change goals established in House Bill 19-1261.</li> </ul>
<b>Energy Efficiency</b>	<ul style="list-style-type: none"> <li>Expand demand-side savings from efficiency and conservation for all energy types.</li> <li>Support ongoing and sustainable funding for weatherization and</li> </ul>	<ul style="list-style-type: none"> <li>renewable energy assistance to low-income households, so that all Coloradans have access to comfortable and affordable homes.</li> </ul>

POLICY

WHAT YOU NEED TO KNOW

**Energy Generation**

- Accelerate the retirement of existing fossil fuel generation facilities and their replacement with cost-effective and reliable clean energy supplies through means that protect both utilities and consumers.
- Modernize energy infrastructure to enhance community-based resilience and integrate distributed energy resources.

**Local Climate Strategies**

- Remove barriers and promote opportunities that allow counties and municipalities to maximize the deployment of local clean energy and climate-related strategies, including resilience-oriented strategies, while promoting affordable, accessible, and equitable delivery of reliable clean energy.
- Support policies that promote energy-efficient buildings.
- Provide for equitable strategies to enable and accelerate beneficial electrification.





## Leadership in Energy

Energy reduction and the use of renewable energy are top priorities in Boulder County-owned buildings. The county started performing energy audits, lighting efficiency projects, building controls upgrades, and heating, ventilation, and air conditioning improvements in the 1980s, and these efforts continue today.

In 1998, the county began benchmarking energy use with the Environmental Protection Agency's ENERGY STAR program. Several county buildings have achieved ENERGY STAR labels, designating them as top energy performers. In addition, three county buildings have achieved high USGBC LEED ratings—two Gold and one Platinum. Additionally, the new Southeast Community Hub, located in Lafayette, is expected to achieve LEED Gold certification when construction is completed in 2023.

Some of the exciting measures the county has taken include the use of biomass boilers

at the Boulder County Jail and the Open Space and Transportation Complex. The boilers provide all the heating required for these buildings in the winter, using wood chips harvested from county-owned open space properties during forest fire mitigation work. Another energy efficient building is Josephine Commons, a new affordable housing development for older adults and low-income families in Lafayette. This housing development features both geothermal and solar energy sources.

The county is also offsetting energy use at our facilities with solar and wind energy. In 2005, the county began purchasing a significant amount of its electrical power from wind generation. In 2008, the county began installing solar PV systems and subscribing to solar gardens. As of 2020, all electricity supplied to facilities operated by Boulder County Public Works is from 100% renewable sources.





## One of the Greenest Jails in the Country

In 2009, Boulder County engaged the engineering firm M. E. Group to complete a baseline energy model assessment of the county jail. Through that process, it was determined that the majority of the jail's energy usage was attributed to space heating.

With the county's integration of alternative energy, upgrades to existing systems, and other changes, the jail is on track to reduce energy use. To optimize heating and energy performance, Boulder County Jail made the following energy upgrades:

- 2006**  
Installed laundry unit to reduce hot water use.
- 2009**  
Added roof insulation and white, heat-reflecting roof.
- 2010**  
Installed new roof over office and cell block and installed 99.75 kW solar PV system.
- 2011**  
Upgraded building HVAC controls, the chiller system, and began new biomass-burning heating system.
- 2012**  
Upgraded exterior lights to LEDs and added solar hot water system.
- 2016**  
Replaced two air handlers with new units containing heat recovery wheels to improve efficiency and provide ventilation for the increased number of beds.
- 2020**  
Installed new air handler containing heat recovery wheel.
- 2022**  
Completed remodel of the old administrative offices, including replacement of existing air handler with new energy-efficient unit containing heat recovery wheel.



3200 AIRPORT ROAD  
**Boulder County Jail**



**Loading Dock  
Deliveries  
Work Release  
Communications  
Center/EOC**



**Public Entrance  
Jail/Court  
Intake/Release**



TAKE ACTION

## Call to Action

To reach these goals, we need collective community action to reduce countywide reliance on fossil fuels, not waste energy, and shift to a clean-energy economy. Here are great ways you can make a difference:

- ❑ Make your home tight, efficient, quiet, and comfortable. Participate in the EnergySmart<sup>29</sup> program to optimize and receive incentives for your energy efficiency and electrification projects.
- ❑ Wondering how your business can contribute to climate change mitigation? Join Partners for a Clean Environment’s Climate Action Challenge to receive free support to measure your GHG pollution, set a reduction target, and make a plan.
- ❑ Share all the changes you are making in your life, home, and workplace with your friends, family, and colleagues.
- ❑ Make your home<sup>29</sup> or business<sup>30</sup> fossil fuel-free by adding solar and switching to electric heat pump heating, heat pump hot water heating, and electric resistance or induction cooking. You’ll also improve the indoor air quality of your home by cutting out the potential for gas leaks and pollutants from gas combustion.



RESOURCES

## More Information

**29 Resources for Homes**

[EnergySmartYES.com](https://energysmartyes.com)

**30 Resources for Businesses**

[Pacepartners.com](https://pacepartners.com)



**5**

**local food  
& agriculture**



**INTRODUCTION**

Climate change and agricultural lands are directly linked. Agricultural lands contribute and are sensitive to a worsening climate, but they can also be a key part of the solution.

The agricultural lands of Boulder County are under increased pressures from climate change, including rising average temperatures, erratic weather patterns, and impacts to the hydrological cycle. These changes in environmental patterns can lead to grassland fires, loss of productivity,

soil degradation, and desertification. Supporting sustainable farming practices and local agriculture is a critical step in reducing our greenhouse gas emissions, which ultimately makes for a healthier place to live.

Boulder County promotes a locally based food and agricultural system that advances economic, environmental, and social well-being through the conservation of lands that would otherwise get developed. We also encourage and support food markets and practices that improve the availability and accessibility of local, healthy, and safe foods by participating in regional and state agricultural efforts.



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**local food & agriculture goal**  
Ensure a sustainable, local, safe, and healthy food supply that is accessible to all and supported by our community.

**COUNTY OPERATION STRATEGIES**

**Maintain and enhance viability and sustainability on Boulder County Parks & Open Space agricultural properties through management planning, infrastructure improvements, and stewardship practices**

- Work with tenants to identify outcomes that address the long-term management and resilience of the property, including infrastructure needs (e.g., storage facilities, water improvements, etc.) that support sustainable farming and ranching operations.
- Identify potential infrastructure projects and create an operating plan for each agricultural property.
- Promote long-term agricultural stewardship and sustainability practices that enhance soil health and regeneration, reduce erosion, and conserve water. For example:
  - Incentivize water-efficient production systems.
  - Work with local universities, tenants, and other organizations to pilot carbon sequestration practices.
- Continue to promote dialog between farm operators and local beekeepers to evaluate bee health and identify opportunities for dedicated pollinator habitat on county agricultural properties.
- Continue implementing a strategic, integrated pest management program.

**Support Boulder County’s farm and ranch economy**

- Streamline and clarify local policies and regulations to reduce misconceptions by farmers and the public, and improve constraints on business growth.
- Maximize the amount of food, fiber, and forage that is available locally by investing in farm and ranch infrastructure, food processing facilities, and food distribution channels.
- Work to nurture relationships among local producers, distributors, and potential buyers for the purpose of supporting business relationships and initiatives.

**Boulder County is committed to working with tenants, private landowners, educators, researchers, and other organizations to find the best strategies for local agricultural land stewardship.**





**COMMUNITY STRATEGIES**

**Develop a suite of resources for producers that supports the social, environmental, and economic viability of the agricultural community**

- Determine where the Boulder County Land-Use Code can better serve the needs of the agricultural community to help producers optimize economic opportunities and support diverse business models.
- Foster practical education opportunities for beginning farmers, and encourage mentorship and training among multigenerational farmers and ranchers.
- Coordinate farmer trainings through Colorado State University (CSU) Extension and other educational outreach and technical support providers.
- Provide succession planning assistance for local farm and ranch business owners.
- Collaborate with private tenants, subject matter experts, and applicable organizations to explore best strategies for adaptive land stewardship practices that conserve agricultural lands while promoting a local, sustainable agricultural economy.

**Support access to safe and healthy agricultural products produced on lands in Boulder County**

- Prevent foodborne illnesses by continuing to partner with retail food establishments, to encourage them to implement Active Managerial Control Practices and to become Partners for Food Safety.
- Educate at least 200 food safety workers on five key foodborne illness risk factors per year.
- Explore opportunities to assist local producers in complying with the FSMA and develop partnerships with CSU to provide education for compliance assistance.
- Continue to implement the Food and Drug Administration’s voluntary national retail food program standards and the Food Safety Modernization Act (FSMA) for produce growers and processors.

**COMMUNITY STRATEGIES**

**Prioritize opportunities for organic operations and support expansion of soil health and regenerative agriculture principles on county agriculture lands**

- Provide incentives to county agricultural tenants pursuing organic certification through rent reductions during the three-year transition period to organic production, as well as pay certification fees for the initial year following the transition.
- Share local and regional in-person and self-guided education opportunities on organic production and regenerative agriculture strategies through local information distribution channels.
- Provide incentives, such as the Boulder County Food and Agriculture Fund, to help producers adopt more soil health and regenerative agriculture principles, and build a more sustainable food system.
- Leverage nature-based solutions and foster collaboration among local municipalities to accelerate land restoration, biodiversity, carbon sequestration, and water retention on agricultural lands.
- Participate in regional agriculture efforts to help implement appropriate recommendations at the local level. One such effort is Restore Colorado, a U.S. Department of Agriculture (USDA)-funded public-private collaboration to improve resilience and tackle climate change by growing good food in healthy soil on local farms and ranches.

**Increase accessibility of local food for historically and currently marginalized communities**

- Support donations of locally grown food when feasible.
- Explore local markets with producers and buyers.
- Support charitable groups that are producing and creating access to food for historically and currently marginalized communities.
- Invest in programs such as Double Up Food Bucks (DUFb) that make low-cost, locally grown fruits and vegetables available to historically and currently marginalized communities.



**SUCCESSES IN IMPROVING NUTRITION SECURITY**

Established in 2017, the Women, Infants, and Children (WIC) Farmers' Market Nutrition Program (FMNP) provides access to fresh produce to low-income pregnant and postpartum mothers, families, and children. Boulder County WIC families can receive coupons at the Boulder or Longmont farmers' markets or receive a home delivery of fresh produce.

Participants have said, "This is by far the most helpful of all the government programs from which we receive support," and "I don't know if we'd have the opportunity to be involved in a local food system without this program."

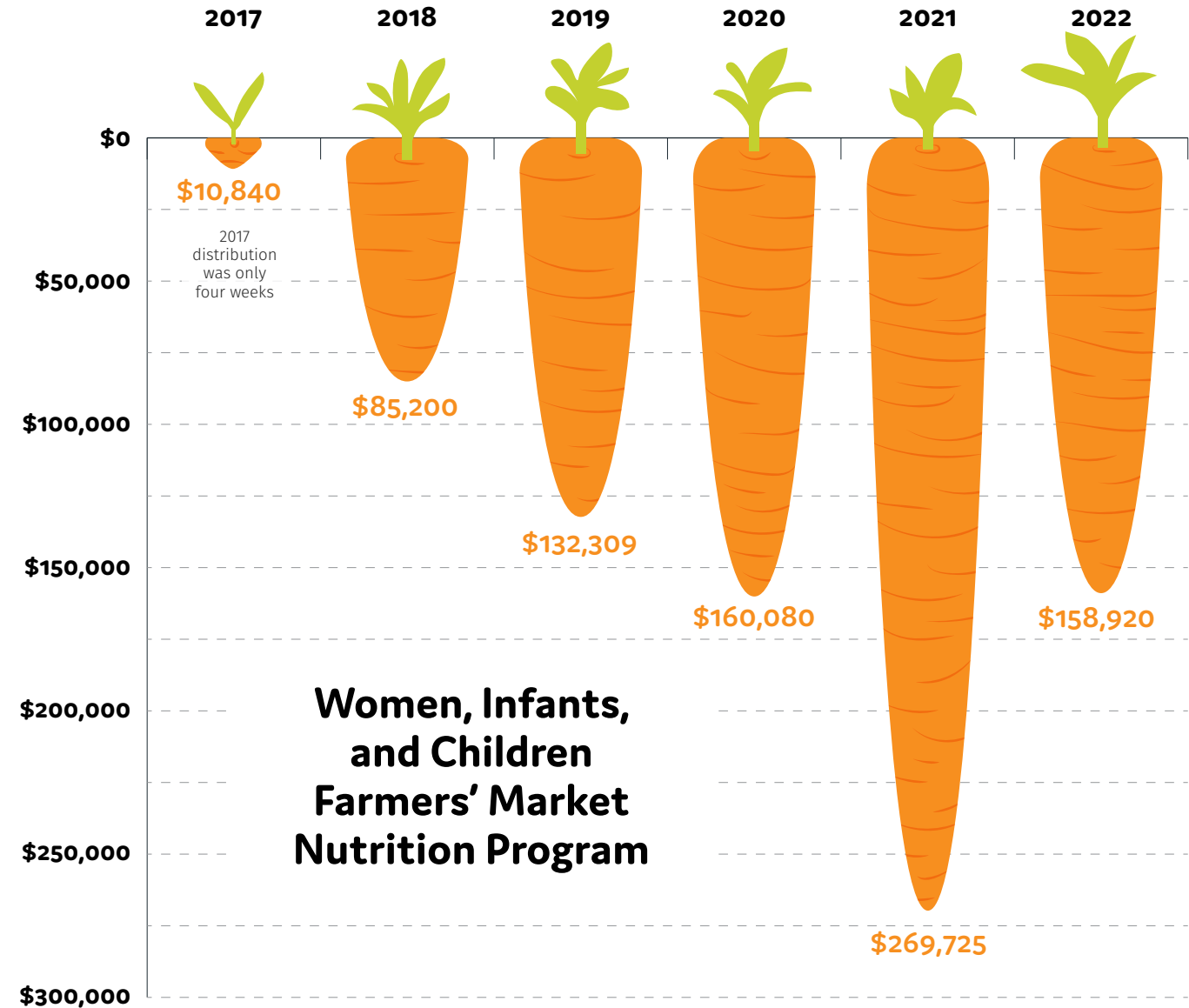
The DUFB program provides people who have Supplemental Nutrition Assistance Program (SNAP) benefits with matching dollars to purchase locally grown, fresh produce from farmers' markets in Boulder, Longmont, and Lafayette. The DUFB program

is a triple win, increasing the purchasing power of SNAP shoppers to purchase fresh and local produce, funneling dollars to local farmers, and stimulating the local economy.

Participants have said, "This program has changed my life for the better, since I no longer have to worry about food or stress when at the store or market," and "My children now want fresh produce over 'junk food.' They see that they feel better."

The FMNP serves families who are unable to qualify for SNAP or WIC, yet are experiencing nutrition insecurity.

**In summer 2022, the WIC program served 769 families (2,994 total people).**



MEETING OUR GOALS

## Sustainable Food & Agriculture Fund

In 2020, Boulder County launched the Sustainable Food and Agriculture Fund. This grant program provides funding opportunities for projects that fall in the following categories: (1) regenerative agriculture and soil health, (2) regenerative agriculture education and outreach, (3) farm equipment and infrastructure, (4) local food production, and (5) support for frontline farm workers. The goal of the program is to support a local, sustainable food system in Boulder County.

From 2020 to 2022, Boulder County allocated \$1,015,000 of sales tax revenue to 32 farmers, agriculture

producers, nonprofits and private sector entities. To date, the program has impacted more than 2,300 acres of land, sequestered carbon, increased crop resilience, and advanced regenerative agriculture knowledge in the community. A few winning projects are described below.

- The Project Protect Promotora Network serves frontline agricultural workers across six different agricultural regions in Colorado, helping to provide resources, clothing, and supplies needed to remain safe.
- SkyPilot Farm executed rotational grazing across 800 acres of land.

Funding supported the purchase of mobile shade, water, and fencing to aid in moving pigs, sheep, and cattle around the pasture. This process helps fertilize the land, keeps animals healthy, and yields more nutritious crops.

- Masa Seed Foundation is advancing Colorado's ancient and heritage grain movement by bringing a wider diversity of grains into production. The foundation uses regenerative methods and works with regional partners to share best practices through a series of educational events.



GOING DEEPER

## Restore Colorado

In 2020, through a public-private partnership, the Office of Sustainability, Climate Action & Resilience; Zero Foodprint; and Mad Agriculture were awarded funding from the USDA Composting and Food Waste Reduction Agreement to launch Restore Colorado.

Restore Colorado connects restaurants with farms to fund climate-beneficial agricultural practices. Specifically, participating restaurants add a 1% charge on customers' checks, or donate 1% of sales toward the effort, with the revenue going to regenerative agriculture in the community. More than 32 Colorado restaurants and businesses, like Annette, Dry Storage, River and Woods, Somebody People, and all Boulder Subway locations are collecting a few cents per meal for Restore Colorado grants. As of 2022, these grants have funded projects at 10 Colorado farms and ranches, such as Grama Grass and Livestock, which are applying

compost to 40 acres of degraded pasture to improve soil health and sequester carbon. The program has been so successful that the Colorado Department of Agriculture is engaging in a partnership to expand reach across the state. Furthermore, Restore Colorado received \$7 million in funding from the Federal Climate Smart Commodities Grant, \$3 million of which will go toward expanding Restore Colorado statewide. This is an excellent example of a small pilot program in Boulder County that's scaling past our borders and having a profound impact.





TAKE ACTION

## Be a Boulder County Locavore

The concept of eating local is an old idea that is having a resurgence. To assist you, we offer our guide<sup>31</sup> on how to eat locally in Boulder County:

### PARTAKE IN THE LOCAL FOOD ECONOMY

- Join a Community-Supported Agriculture program and shop at your local farmers' market for produce and meat. Ask for and buy local food products at your grocery store. Learn about the food loops happening in Boulder County.

### LEARN MORE ABOUT FARMERS AND RANCHERS IN BOULDER COUNTY

- Say hello to farmers at your local farmers' market, farmstands, or the Boulder County Fair or other community events. In the summer, Boulder County has farm tours where you can meet the many farmers and ranchers who lease county properties, and hear from them firsthand what it is like to be a Boulder County producer.

- Learn about the farming activities happening around you. From small, quarter-acre vegetable farms to medium-sized cattle operations to large-scale wheat producers, Boulder County farmers produce a variety of foods for you to enjoy year-round.

### GROW AND PRESERVE YOUR OWN FOOD

- Small ideas to get you started producing some of your own food include planting herbs in a window box, turning over a patch of grass for starting a small garden, or having a few chickens that lay eggs. Reach out of Boulder County's CSU Extension Office to learn about upcoming classes on becoming more self-reliant.

## RESOURCES

# More Information

### 31 Double Up Food Bucks

[bouldercounty.gov/families/food/double-up-food-bucks/#:~:text=Program%20Details,be%20used%20at%20Whole%20Foods](https://bouldercounty.gov/families/food/double-up-food-bucks/#:~:text=Program%20Details,be%20used%20at%20Whole%20Foods)

### Educational Services and Tours

[bouldercounty.org/open-space/education](https://bouldercounty.org/open-space/education)

### Food Assistance

[bouldercounty.gov/families/pregnancy/women-infants-and-children/](https://bouldercounty.gov/families/pregnancy/women-infants-and-children/)

### Boulder County Sustainable Food and Agriculture Fund

[bouldercounty.gov/environment/sustainability/ag-grant-program/](https://bouldercounty.gov/environment/sustainability/ag-grant-program/)



6

**transportation**



**INTRODUCTION**

Boulder County places high priority on sustainable transportation systems and infrastructures, from its trails and bike lanes to mobility solutions around zero emission vehicles (ZEV) and alternative modes of transportation. The fundamental goals and policies in the Boulder County Comprehensive Plan call for a compact development pattern that supports the use of low-carbon transit, maximizes the use of existing infrastructure, and reduces the negative environmental impacts of the transportation system.

In July of 2020, the Board of County Commissioners adopted an update to the Transportation Element for the Comprehensive Plan to provide direction for transportation projects, programs, and spending. The Transportation Element moves the county towards its vision of high-quality, safe, sustainable, and environmentally responsible

transportation to meet the mobility and access needs of all users.

In 2020, the Boulder County Transportation Department updated and adopted a Transportation Master Plan (TMP), which provides a blueprint for Boulder County’s transportation system for the next 25 years and identifies strategies for improving mobility options throughout

the community. We will continue to focus on projects that reduce greenhouse gas (GHG) emissions, while maintaining or expanding affordable and convenient mobility for county residents, employees, and visitors.

In November 2022, voters in Boulder County approved the extension of the countywide transportation sales tax. This funding will be used for transit service and programs, regional trails and commuter bikeways, community mobility programs, roadway safety and resilience, and regional corridors. Projects within this funding are estimated to reduce GHG emissions by 186,020 cumulative metric tons of CO<sub>2</sub>e from 2024 through 2040. The extension of the tax has no expiration date.

In 2022, the Boulder County Office of Sustainability, Climate Action & Resilience (OSCAR) was a leading participant in the development of the Regional Transportation Electrification Plan for Boulder County Communities. The plan is intended to guide Boulder County



communities toward solutions that support the large-scale and equitable transition to ZEV. The collaborative stakeholder group developed a common vision and identified how surrounding communities can work together as a region. Boulder County plans to electrify its own vehicle fleet and encourage electric vehicle (EV) adoption by its own employees, residents, businesses, and transit agencies. Vehicle electrification offers one of the best opportunities

to significantly reduce the GHG emissions from transportation and plays an important role in reducing local air pollution. Analysis by the National Center for Atmospheric Research has found that vehicles and oil and gas development are the two major sources of emissions of ozone precursors. Outdoor air quality is a serious concern in Boulder County due to historically high ozone levels in the summer months.

All in all, Boulder County’s policies and programs support the use of multimodal transportation and EVs in order to decrease countywide GHG emissions. The results are cleaner air, equitable mobility access, reduced traffic congestion, decreased reliance on fossil fuels, improved public health, and overall positive change in addressing the climate crisis.



**transportation goal**  
Provide environmentally sustainable transportation choices and support diverse opportunities for mobility for all Boulder County residents.



#### COUNTY OPERATION STRATEGIES

### Reduce the GHG emissions from the county fleet

- Evaluate the demand and usage of county fleet vehicles to determine their necessity, and find opportunities to use multimodal modes and carpool for workplace and departmental travel needs.
- Evaluate the usage of county vehicles in order to make informed decisions about which vehicles to electrify first and the necessary infrastructure to support those vehicles.
- Actively promote the adoption of battery electric vehicles (BEV) and plug-in hybrid electric vehicles (PHEV) for Boulder County's fleet as appropriate technology develops.
- Install EV charging stations for fleet EVs in appropriate county locations.
- As the technology matures, transition to EVs for medium- and heavy-duty fleet vehicles.
- Assess the use of renewable diesel for eligible county vehicles and other equipment, if and when renewable diesel becomes available in the region.
- Continue to purchase BEVs or PHEVs for any new, light-duty replacement vehicles in the general fleet, as well as for the sheriff's office administration and detective vehicles. Electrification of the fleet will expand as technology develops.

### Encourage employee adoption of eBikes and EVs, and support employees who want to commute using ZEVs

- Provide EV charging stations at key work locations across the county based on public use, and plan for infrastructure to support more EV charging stations in the future.
- Partner with car-share and vanpool organizations to support electrification of their fleet vehicles as appropriate technology develops.
- Incorporate EV infrastructure in new construction and/or major remodels of county-owned buildings to ensure employee EV charging stations are integrated into county planning and buildings.
- Offer employees ways to participate in eBike and EV purchase discounts or other incentive opportunities, and connect employees to resources related to eBikes, EVs, and EV charging at home.

**COUNTY OPERATION STRATEGIES**

**Ensure all Boulder County employees have access to multimodal means of travel to help reduce single-occupancy vehicle (SOV) commute trips, and explore creative ways to incentivize employees to reduce the carbon footprint of their commutes**

- Continue to offer transportation incentives to all employees, including hourly staff, such as Regional Transportation District (RTD) EcoPasses (unlimited bus pass), vanpool subsidies, bike share membership, Bike to Work Day, secured bike parking, and employee showers within county buildings.
- Create new programs to mitigate vehicle miles traveled (VMT), such as parking cash-out programs, car-share opportunities, commute challenges, restricted employee parking, paid parking, and increased access to pool vehicles.
- Pilot infrastructure at county-owned sites for secure and convenient eBike parking and charging, such as secured indoor and outdoor eBike parking, and offer resources from other organizations about their eBike infrastructure.
- Develop multimodal means of transportation for employees traveling while at work to reduce the use of fleet vehicles.

**COMMUNITY STRATEGIES**

**Highlight and communicate the links between land-use patterns, transportation, and sustainability, and incorporate this analysis into decision- and policy-making processes**

- Encourage Boulder County municipalities to locate and design new development in a manner that helps achieve regional sustainability goals. A key element is encouraging municipalities to add a mix of housing types and price ranges to allow in-commuters the ability to live in the communities where they work.
- Create land-use codes that elevate the intersection between development and transportation in the land-use decision-making process, to ensure that new development provides—or is near to—multimodal transportation options (e.g., secured bike parking, eBike and EV car-sharing, and charging stations).
- Continue to work with Denver Regional Council of Governments (DRCOG) to ensure the continuation of growth management strategies in the growing Denver Metro Region, such as urban growth boundaries and areas, to minimize sprawl.
- Promote thoughtful land-use planning; site selection; urban design; and equitable, transit-oriented development to encourage coordinated transportation and walkability to existing infrastructures and populations.
- Locate county buildings and Boulder County Housing Authority (BCHA) housing facilities in areas that have convenient access to services and the multimodal transportation system, including regional transit. Design future facilities with access to the multimodal transportation system and EV charging stations.



**COMMUNITY STRATEGIES**

**Support the public adoption of eBikes and EVs, and assist in the installation of public charging stations**

- Continue to collaborate with partners and cities across the county to transition 30% of all vehicles registered in Boulder County to zero emissions by 2030.
- Promote the local public health benefits of eBikes and EVs.
- Leverage statewide EV awareness by promoting programs and incentives included in the federal climate bill (Inflation Reduction Act of 2022).
- Continue public outreach efforts around EVs and charging to the commercial sector and residents through Partners for a Clean Environment and EnergySmart.
- Encourage alternatives to personal EV ownership and electrification goals among shared-use transportation options, such as car-share organizations, Transportation Network Company vehicles (such as Uber and Lyft), taxis, and autonomous vehicles operating in Boulder County.
- Use EV registration data, maps of travel corridors, multifamily housing properties, equitable charging locations, and other criteria to inform decisions about additional infrastructure and charging equipment locations.
- Partner with utilities, municipalities, and the private sector to develop appropriate charging hubs. Ensure electrification efforts are accessible to all community members.
- Leverage existing EV and eBike incentives, while looking for other benefits to further encourage their use.
- Partner with the chambers of commerce to encourage businesses to install charging stations at workplaces.
- Encourage businesses, multifamily housing properties, nonprofits, and other organizations to apply for Charge Ahead Colorado grant funds for EV charging stations.
- Support the installation of regional public DC fast-charging stations, as well as mobility hubs.
- Urge RTD, Via, and other transit service providers to electrify transit routes in the county and region. Pursue partnerships with RTD, Via, the University of Colorado, utilities, municipalities, and the private sector to achieve complete transit electrification over a 12-year bus replacement cycle.
- Explore the option to use feebates or other ideas to incentivize the purchase of high-efficiency vehicles and disincentivize high-polluting vehicles.
- Support and promote workforce development created by other relevant organizations for training of EV technicians and EV charging station installation and maintenance.



**COMMUNITY STRATEGIES**

## Increase modal choice and decrease the SOV share of local and regional trips

- Continue active partnerships with Colorado Department of Transportation (CDOT), DRCOG, RTD, U.S. 36 Mayors and Commissioners Coalition, Commuting Solutions, Boulder Transportation Connections, and other local partners to implement Bus Rapid Transit (BRT) and other multimodal improvements on State Highways (CO 119 and 7, US 287) and other key corridors to complete high-performance, efficient, low-carbon, and convenient transportation options to all major destination communities.
- Continue developing Boulder County's multimodal transportation system, including developing additional transit infrastructures, service frequencies, geographic coverage, and increasing vehicle-sharing opportunities and programs.
- Develop Boulder County's on- and off-street bike and pedestrian infrastructure and facilities with a focus on user safety and comfort.
- Offer transportation advising to local businesses to provide alternative modal choice and decrease SOV use through Boulder County's Partners for a Clean Environment program.
- Support the integration of eBikes, electric scooters, electrified car-share, and EVs within broader multimodal planning by offering electric travel modes and charging infrastructure at mobility hubs anchored by high-frequency transit service. With transit and Transportation Management Organizations partners, explore improvements to the customer experience and help residents get accustomed to the shared-mobility services model, such as with transit incentive cards that allow residents to use other electric-powered, first- and last-mile mobility options.
- Work with Boulder County communities to establish multimodal connections to regional transit.
- Examine road usage fees and consider increases in parking fees or other mechanisms to fund pedestrian and bicycle infrastructures and transit systems.
- Establish partnerships to develop joint projects with Boulder County Public Health and other agencies to promote active transportation and improve public health outcomes through transportation improvements and services.
- Improve the convenience and security of eBike parking infrastructures in park-n-rides, public facilities, businesses, and multifamily housing locations.
- Update transportation policies, plans, and standards to incorporate new travel systems and technologies into future transit infrastructures to ensure low-carbon travel.

**COMMUNITY STRATEGIES**

## Reduce barriers to using the transportation system and expand transportation programs and services that serve the needs of all members of our community, including low-income individuals and families, youth, older adults, and people with disabilities

- Support the implementation of the Boulder County Mobility and Access for All Ages and Abilities Plan.
- Continue to establish partnerships among Community Services; Boulder County Public Health, Housing, and Human Services; Mobility and Access Coalition; and other agencies and community-based organizations to coordinate programs to address transportation needs.
- Continue to assist multimodal transportation programming and education opportunities for BCHA residents, including transit passes, car-share memberships, bike parking, and maintenance, that will reduce vehicle parking minimums.
- Continue to work collaboratively with multimodal transportation providers to overcome gaps in service and barriers for underserved communities.
- increase access to transit through free transit passes and other pilot programs for people with lower incomes
- Expand ways to fund and implement transit options for those who live, work, and recreate in Boulder County, including first- and final-mile solutions in areas underserved by fixed-route transit.
- Continue multimodal transportation education and programming to meet the needs of historically underserved community members, including but not limited to people with disabilities, older adults, people with low incomes, youth, and Spanish-speaking communities.
- Offer travel training to historically underserved populations, such as individuals with disabilities, older adults, people with low incomes, youth, families, caregivers, and people who speak languages other than English.
- Partner with community-based organizations, such as libraries, food pantries, and family resource centers, to provide education and transportation to support the people they serve.
- Expand transit EcoPass, vanpool, and biking options to employment sites for wage earners and essential workers.
- Provide more covered and secure bike parking facilities, capable of storing and charging eBikes, especially at multifamily developments.

**COMMUNITY STRATEGIES**

**Support EV and eBike adoption and charging station access for low-income and multifamily residences**

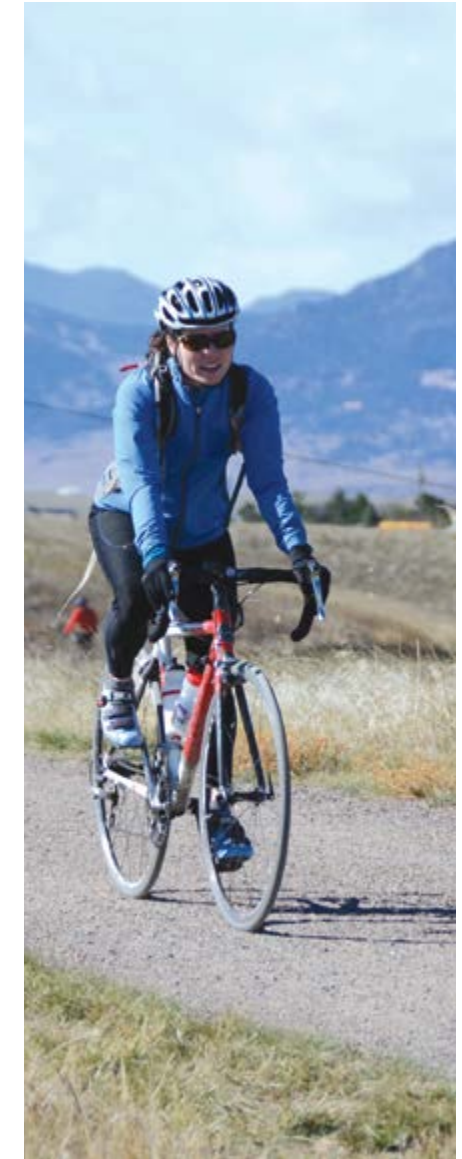
- Develop an understanding of the current availability of EV charging in the multifamily and low-income housing sectors, barriers to adoption of EV charging stations, and resources needed.
- Increase awareness of the Charge Ahead Colorado charging station grant funding for income-qualified and disproportionately impacted communities.
- Promote local utilities programs for utility owned and operated chargers, as well as incentives for chargers owned by property owners at multifamily housing.
- Support Level 2 and public DC fast charging at strategic locations in Boulder County.
- Support installation of charging stations at new or remodeled multifamily buildings in alignment with local governments' adoption of EV-ready codes.
- Support secured bike parking facilities capable of storing and charging eBikes.
- Collaborate with housing authorities, car-share organizations, and local utilities to offer electric car-sharing in low-income neighborhoods or at low-income housing.
- Promote rebates from state agencies and local utilities, as well as tax credits, and identify further opportunities to provide rebates, preferably at the point of sale, toward the purchase of new and used EVs and eBikes by low-income residents.
- Develop a pilot program that pairs access to charging at low-income and multifamily properties with a program that encourages purchase of new and used EVs.
- Provide targeted education and outreach to enhance community understanding of EVs and eBikes, and partner with community-based organizations early to ensure barriers are understood before designing programs and policies.

**SEE THE AIR QUALITY (PAGE 14) AND CLIMATE (PAGE 30) CHAPTERS FOR ADDITIONAL EMISSIONS REDUCTIONS STRATEGIES.**

**COMMUNITY STRATEGIES**

**Increase multimodal transportation options and incentives with schools and households with youth to reduce GHG emissions**

- Continue to create, develop, and support policies, projects, and programs that reduce single-family vehicle trips to and from schools and other key destinations.
- Design and build county transportation infrastructure that supports walking, biking, and busing to schools and other key destinations.
- Encourage school districts to construct new schools in areas already served by the multimodal transportation network.
- Encourage school districts and local municipal partners to renovate school properties to support walking, biking, carpooling, and busing to schools.
- Encourage schools unable to provide school bus service to offer bus pass programs to ensure equitable access to school and after-school activities.
- Advocate for school districts to replace fossil-fuel-powered school buses with electric buses.





TAKING ACTION

## Holistic Transportation Solutions for Affordable Housing Communities

Boulder County is a leader in finding solutions for increased access to both affordable housing and sustainable transportation, as we work to address rising housing and transportation costs in our community. Boulder County fosters the creation of connected communities by coordinating

among different departments that play a role in housing and transportation. BCHA, Boulder County’s Transportation Planning Division, and OSCAR collaborate to review new, affordable housing developments, look for opportunities to support multimodal transportation access, and coordinate affordable and

sustainable mobility programming for housing communities.

Mobility for All (M4A) provides transportation programming focused on innovative approaches, to ensure economical and sustainable transportation for all community members. Many BCHA residents have



enjoyed a renewed sense of freedom that they could not have experienced without the support of M4A. Below are some examples of programming provided by M4A:

- Free EcoPass for all BCHA residents
- Educational materials for site-specific mobility options

- Car-share expansion, including EV and fuel-efficient vehicles
- Bike parking and maintenance facilities
- Bicycles programming, including Earn-a-Bike workshops and basic bike maintenance



Gary and Carol Cox, BCHA Josephine Commons residents, gave their car to their grandson due to the increasing costs of owning and maintaining a personal vehicle on a fixed income. They have taken advantage of the many transportation programs offered by M4A at their housing authority site, such as a GoGoGrandparent pilot, Ride Free Lafayette, RTD EcoPass, and Colorado Car-Share. Many of these options included a learning curve, but Mr. and Ms. Cox are always willing to try new transportation options that allow them to remain active in their community.



**TAKING ACTION**

## Ride Free Lafayette

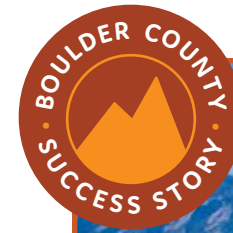
Boulder County operates a fare-free, on-demand, door-to-door transit service called Ride Free Lafayette. This service provides Lafayette residents, employees, and visitors with point-to-point transportation from 7 a.m. to 8 p.m. seven days a week. The Ride Free Lafayette service was launched in

August 2020 and provides an average of 37 trips per day for residents of all ages and abilities who would not have any other form of personal mobility.

Dawn Russell, pictured above, is an avid user of RTD Access-a-Ride service but is unable to take advantage of

on-demand, app-based transportation services, such as Uber and Lyft, due to the lack of wheelchair accessibility. After hearing about Ride Free Lafayette, she was very skeptical that the service would be truly wheelchair accessible and on-demand, but she decided to give it a try for local trips. Dawn was extremely happy with the service and expressed a sense of pride and being valued.

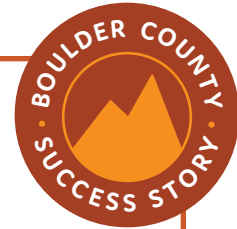
Lafayette resident Patricia Rice had hip replacement surgery and was unable to ride her bike, which is her primary mode of transportation. From August 2021 to February 2022, Patricia took Ride Free Lafayette at least three times a week to shop, exercise, go to medical appointments, and even get the COVID vaccine. Patricia shared, “If it weren’t for Ride Free Lafayette, I would have been unable to go anywhere on my own—food shopping, getting to appointments at Kaiser, and, very important to me, getting to the rec center so I could exercise my hip and help it heal. Taking Uber and Lyft would have rapidly emptied my bank account!”



**LOCAL PUBLIC TRANSIT**

Boulder County supports transit ridership in a variety of ways, including directly operating transit service, partnering with other jurisdictions to provide transit service, and supporting EcoPass and fare-free programs. Some examples include:

- Ride Free Longmont
  - This program was originally funded by Boulder County and is currently funded by the City of Longmont.
- Ride Free Lafayette on-demand service
- U.S. 36 BRT and bikeway
- FLEX Route connecting Ft. Collins to Longmont and Boulder
- Lyons community EcoPass program, Lyons Flyer commuter bus service, and Lyons taxi voucher program
- Nederland Community EcoPass program
- CLIMB bus connection to Gold Hill
- Mountain Mobility Demand-Responsive and Volunteer Driver programs
- Hessie Trailhead and Eldorado Canyon State Park shuttles
- Bike-n-Ride system



**MOBILITY FOR ALL**

M4A has helped hundreds of low-income people maintain access to employment, education, and medical services through multimodal transportation assistance. Boulder County also helped form a local coordinating council called the Mobility and Access Coalition, with participation from more than a dozen local, nonprofit human service agencies, several transportation providers, and community advocates. M4A is a county initiative designed to help meet the needs of historically underserved populations, including:

- Low-income individuals and families
- Older adults
- People who do not drive or have access to a personal motor vehicle
- People with disabilities
- Spanish-speaking families

M4A provides:

- Subsidized transit for low-income persons in select county case-managed programs
- Mobility programming and EcoPasses to all BCHA sites
- Improved transportation service coordination with human service agencies and transportation providers
- Improved ability to serve more people with existing resources
- Support for regional efforts to increase access to transportation services for low-income households, people with disabilities, older adults, Spanish-speaking households
- Bike programming, such as Earn-a-Bike and Basic Bike Maintenance Workshops for BCHA sites
- Shared-use mobility support for car-sharing and ride hailing, and education to overcome technology barriers to accessing transportation options



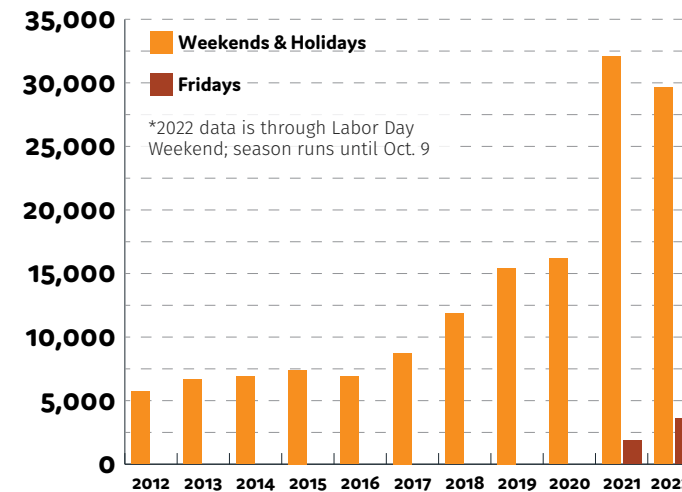
**TAKING ACTION**

**Hessie Shuttle**

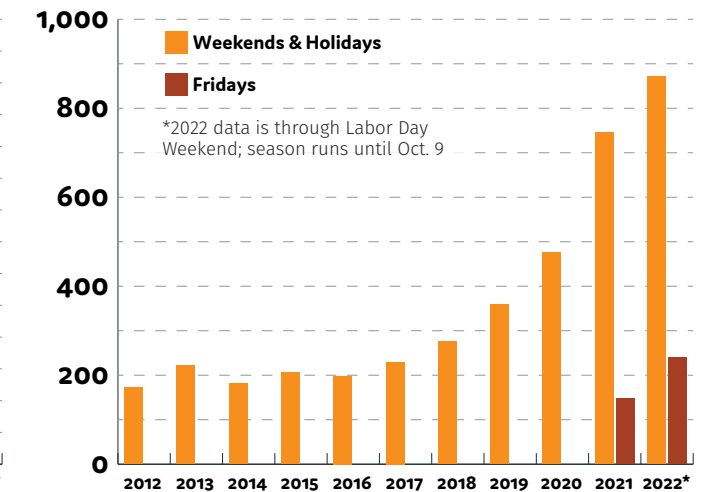
Boulder County operates the Hessie Shuttle, which provides recreational access to the Indian Peaks Wilderness. This service provides Boulder County residents and visitors with free transportation from Nederland High School to the Hessie Trailhead on Fridays, Saturdays, Sundays, and holidays during

the summer months. The Hessie Shuttle operates every 15 minutes. As of 2022, the service boarded on average 870 residents and visitors per summer weekend day, reducing traffic congestion and parking hassle along mountain roads.

**Annual Shuttle Boardings**



**Daily Shuttle Boardings**





MEETING OUR GOALS

## Electric Vehicle Leadership in Colorado

Colorado has a unique opportunity to take the lead on reducing transportation emissions, making significant air quality impacts, and helping pave the way for other states to set more ambitious climate and electrification goals.

In 2018, Colorado released the “Colorado Electric Vehicle Plan”,

which described strategies to reach the statewide goal of nearly one million EVs on the road by 2030.

Colorado was the first state in nearly a decade to negotiate with automakers to develop a standard to promote electric ZEVs. This standard was approved by the state’s Air Quality Control Commission and included

input from a diverse range of stakeholders. The new ZEV standard requires automakers to sell a growing share of ZEVs each year, thus providing more EV options to Coloradoans.

Colorado has a \$2,500 state EV tax credit (decreases to \$2,000 in 2023) for purchase of a new EV and a \$1,500 tax credit for leasing a new EV. When

paired with federal tax credits and a growing network of EV charging stations, Colorado is one of the best places in the nation to buy an EV.

Colorado is part of the Regional Electric Vehicle Plan for the West, an agreement signed in 2017 with seven other Western states to build fast-charging stations along 7,000 miles of highway corridors to support seamless region-wide travel. Colorado also received \$68.7 million in funds from the Volkswagen emissions settlement to reduce air pollution in Colorado, and this included funding for charging infrastructure and support for electric buses and trucks. With part of this funding, the state has supported the installation of high-speed charging stations along travel corridors across Colorado, with 31 stations installed at the end of 2022. Starting in 2023, Colorado will build on this progress toward the creation of a comprehensive, highway corridor fast-charging network through the investment of approximately \$56.5 million in federal National Electric Vehicle Infrastructure funding. In 2023 and thereafter,

the state, local governments, and other stakeholders will also have the opportunity to compete for \$2.5 billion in discretionary funding for ZEV charging stations and alternative fuels. This funding was possible through the passage of the Infrastructure Investment and Jobs Act.

The state also offers funding support for community EV charging through Charge Ahead Colorado grants, which include incentives for income-qualified and disproportionately impacted communities. Through 2022, the program had awarded funding for more than 2,000 charging stations statewide.

In 2021, Governor Polis signed Senate Bill 21-260 to accelerate clean transportation by creating new sources of dedicated transportation funding and new state enterprises. The law creates three new transportation electrification enterprises: the Community Access Enterprise, the Clean Transit Enterprise, and the Clean Fleet Enterprise. It is forecasted that these three enterprises will generate and invest more than

\$700 million in their first decade of operations. The state completed an EV equity study to ensure that the benefits of EVs are available to all, and to identify opportunities for an equity-centered approach to transportation electrification.

The State of Colorado launched its first statewide EV education and awareness campaign in the fall of 2022 to raise the public’s awareness about the environmental, convenience, and financial benefits of EVs.

Yet, it takes local leadership to ensure that this awareness, infrastructure, and technology are successfully expanded throughout the state. This is the moment for local governments to step out front and secure the benefits of transportation electrification for their communities and the state.





## Regional Collaboration to Support Electric Vehicles



Colorado counties and cities are leading the way by setting bold targets and policies for adoption of EVs. Expanding transportation electrification in local communities will increase the benefits of this clean technology, including reducing GHG emissions and improving air quality. It will also save residents money and help promote greater EV adoption nationwide.

In 2021, representatives from local governments in Boulder County came together for nearly a year with key stakeholders, including business associations, state agencies, nonprofit organizations, and Xcel Energy to develop a strategic plan to reduce GHG emissions in Boulder County through equitable

transportation solutions. They built a plan based on existing sustainability initiatives to show that close collaboration can accelerate a successful transition to an all-electric future. In August 2022, Boulder County, along with these regional partners, completed the first-ever regional transportation electrification plan to support EV adoption. Today the stakeholders are working in subgroups to implement the transportation electrification strategies.





**POLICY PRIORITIES**

The following are environmental sustainability policy priorities within Boulder County’s legislative agenda:

POLICY	WHAT YOU NEED TO KNOW	
<p><b>Support the development of sustainable, multimodal transportation systems that focus on moving people, goods, and services using all modes of travel</b></p>	<p>Boulder County supports transportation planning that prioritizes funding for multimodal projects, programs, and services and investments in a regional transportation system that reduces reliance on single-occupant vehicles and fossil fuels. Examples include timely completion of a transit system that connects people throughout Boulder County and with the entire Denver metropolitan area and the North Front Range region. Transit system improvements are documented in Boulder County’s 2020 TMP, RTD’s FasTracks transit system approved by voters in 2004,</p>	<p>and RTD’s 2013 Northwest Area Mobility Study. In addition, Boulder County’s TMP includes additional multimodal infrastructure, including safe bikeways, regional trails and walkways, managed HOV/transit lanes, transportation demand management, and other transit services and programs that provide people with safe, affordable and sustainable travel choices. Also included are programs identified in Boulder County’s Coordinated Human Services Transportation Plan: Access and Mobility for All Ages and Abilities (2022).</p>

**POLICY**

**WHAT YOU NEED TO KNOW**

<p><b>Link land use, housing, and transportation planning and investment</b></p>	<p>Cooperation between land-use planning and multimodal transportation investment will result in decreased GHG emissions and air pollution, decreased fossil fuel consumption and transportation infrastructure costs, and increased</p>	<p>access to transportation options. This will lead to improved air quality for people of all ages, abilities, income levels, and stages of life, while maximizing previous investments in existing infrastructure and amenities.</p>
<p><b>Support adoption of the most advanced vehicle emissions standards available</b></p>	<p>The federal Clean Air Act provides authority for California to adopt its own emission standards for new motor vehicles, if they are at least as stringent as federal standards, and for other states to adopt the California</p>	<p>standards. Boulder County supports Colorado adopting California’s revised vehicle emissions standards (Advanced Clean Car Standards II) and the Advanced Clean Trucks and Low Nitrogen Oxides Trucks rules.</p>

POLICY

WHAT YOU NEED TO KNOW

**Support increased funding for transit, bike, and pedestrian infrastructure**

Boulder County supports increased new and innovative funding of multimodal transportation improvements in Colorado, including funds committed to multimodal and sustainable transportation solutions. Priorities for new funding include Vision Zero safety improvements; completion of the U.S. 36 BRT project; completion of FasTracks improvements and build-out of regional BRT system improvements in the Northwest metro region; expansion of local, regional, and interregional transit services; regional trails; and other multimodal infrastructure, including first- and final-mile connections for people to safely access transit.

Boulder County believes that any new road-capacity funding should be invested in managed lanes and transit system improvements that prioritize on maximizing the travel of people (not just vehicles). The county also believes that managed lane projects must provide equitable and affordable travel choices to ensure that lower-income travelers benefit from the

public investment in a toll road. Boulder County supports funding sources that incentivize sustainable land-use and transportation planning principles and practices. Ideally, transportation funding sources are tied to transportation system use, including VMT-based approaches and user fees.

The county also supports distribution of federal and state transportation funds through regional planning organizations such as the DRCOG Transportation Improvement Program, as well as directly from CDOT to local jurisdictions (ex. Safer Main Streets, Revitalizing Main Streets, and Highway Safety Improvement Programs). Boulder County endorses the expansion of fare-free transit year-round, especially during the entire ozone season, to provide more affordable mobility options for people, increase transit ridership, improve Front Range air quality, and to reduce GHG emissions.

POLICY

WHAT YOU NEED TO KNOW

**Promote the purchase and use of ZEV, including investment in related technology and infrastructure**

Expanding the use of EVs and the necessary charging infrastructure to support them will play an important role in achieving GHG emissions reductions from the transportation sector, advancing Colorado’s statewide carbon reduction goals, greatly improving air quality, and reducing dependence on foreign oil. Policy approaches that support the use of electric and other ZEV include supporting the integration of eBikes, electric scooters, electrified car-share, and EVs with broader multimodal

planning efforts; investment in eBikes and associated safe-bike infrastructure and secure parking; investment in EV charging infrastructure; feebate and other incentives for the purchase of EVs; investment in electric transit vehicles and associated charging infrastructure; and vehicle-to-grid technology, which enables EVs to “plug” into the electric grid and provide power during the many hours that those vehicles sit idle.





## TAKE ACTION

## Get Off Fossil Fuels

We need collective action to reduce community-wide reliance on fossil fuels and to improve our air quality.

- ❑ Next time you move homes, consider a location that allows you to walk or bike to work and for errands. You can walk to work with fresh air and no congestion!
- ❑ Consider biking and/or taking the bus to get to work, run errands, or visit family and friends. The RTD has a helpful trip planner.
- ❑ Consider purchasing a bike or eBike, based on your travel distance needs, mobility needs, and budget. Electric cargo bikes can eliminate car trips for many community members and even businesses by adding the capacity to carry kids, groceries, goods, and more, and an eBike offers a more affordable option than car ownership.
- ❑ Invite friends and colleagues to split commute costs and reduce your carbon footprint by vanpooling and carpooling. WayToGo, VanGo, and Commuting Solutions help commuters identify sustainable commute options.
- ❑ Move from a two-car household to a one-car household and save between \$4,800 and \$8,300 annually. Joining a car-share, such as Colorado Car-share, or using on-demand transportation, such as Lyft or Uber, can help with this transition.
- ❑ If you have to purchase a vehicle, purchase or lease a new or used EV. Go fossil fuel free at home and power your vehicle with rooftop solar photovoltaic, or purchase a subscription to a community solar garden.
- ❑ Consider using a remote conferencing service for a work-related trip to reduce your contribution to carbon emissions associated with air travel.

## RESOURCES

## More Information

### RELATED INFORMATION AND PLANS

#### Boulder County

##### Comprehensive Plan

[bouldercounty.org/property-and-land/land-use/planning/boulder-county-comprehensive-plan](https://bouldercounty.org/property-and-land/land-use/planning/boulder-county-comprehensive-plan)

##### Transportation Master Plan

[bouldercounty.gov/transportation/plans-and-projects/transportation-master-plan/](https://bouldercounty.gov/transportation/plans-and-projects/transportation-master-plan/)

##### Mobility and Access for All Ages and Abilities Plan

[boco.org/MAAAA](https://boco.org/MAAAA)

##### Colorado Electric Vehicle Plan

[energyoffice.colorado.gov/zero-emission-vehicles/colorado-ev-plan-2020](https://energyoffice.colorado.gov/zero-emission-vehicles/colorado-ev-plan-2020)

##### Regional Transportation Electrification Plan for Boulder County Communities

[bit.ly/BoulderCountyRegional-TEplan](https://bit.ly/BoulderCountyRegional-TEplan)

### TRANSPORTATION SERVICES

#### RTD (bus)

[Rtd-denver.com](https://rtd-denver.com)

#### WayToGo (helps residents find sustainable and more affordable transportation options)

[waytogo.org/getting-around/vanpool](https://waytogo.org/getting-around/vanpool)

#### VanGo (vanpool)

[vangovanpools.org](https://vangovanpools.org)

#### Commuting Solutions (serves anyone commuting to/from Southeast Boulder County, Longmont, or Gunbarrel)

[Commutingsolutions.org](https://Commutingsolutions.org)

#### Boulder Transportation Connections (serves anyone commuting to/from Boulder or Gunbarrel)

[bouldertc.org](https://bouldertc.org)

#### Smart Commute Metro North (serves anyone commuting to/from CO-287 to/from the I-25 corridor)

[smartcommute.org](https://smartcommute.org)



**Mobility for All** (supports residents with accessible, affordable, and equitable transportation options)  
[boco.org/M4A](https://boco.org/M4A)

**Trip Tracker** (supports sustainable transportation to/from school)  
[bouldercounty.gov/transportation/multimodal/trip-tracker/](https://bouldercounty.gov/transportation/multimodal/trip-tracker/)

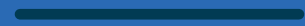
**Resource for Businesses**  
[PACEPartners.com](https://PACEPartners.com)

**Colorado Statewide EV Website** (educational information as well as incentives resource)  
[evco.colorado.gov/](https://evco.colorado.gov/)

**Electric Vehicle Coaches** (coaches can speak one-on-one with residents and businesses to answer all EV-related questions)  
[driveelectriccolorado.org/](https://driveelectriccolorado.org/)

**Drive Electric Boulder County** (local resources and incentives for residents and businesses of Boulder County)  
[energysmartyes.com/drive-electric](https://energysmartyes.com/drive-electric)

**7**



**water**



**INTRODUCTION**

Water is the lifeblood of Boulder County. Our rivers, streams, and reservoirs provide clean drinking water for nearby cities and towns and are an essential habitat to our fish and wildlife populations. Our water is critical to supporting the economy, from farming to recreational tourism.

Boulder County supports sustainable water resource management practices and regulations to achieve water conservation. In Boulder County, we believe that healthy water quality and a sustainable water supply depend on the entire community, from the Board of County Commissioners, who develop and approve policy, to the

businesses and residents who conserve water resources.

As a headwaters county, Boulder County enjoys relatively pristine water quality from mountain sources, and we are responsible for improving water quality downstream. Over the past decade, Boulder County

has committed to partnerships with communities working together to protect our water quality and coordinate watershed management.

In addition, we know that conserving water resources is a top priority among Boulder County residents. To this end, we are continuing to expand our sustainability services to offer water efficiency and conservation tools for our residents and business owners.

Water is a precious natural resource, particularly in the semi-arid climate of Colorado, and Boulder County is committed to ensuring that the county's future generations have clean and abundant water.



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**water goal**

Continue to implement water efficiency and water quality efforts that ensure sufficient clean water for healthy ecosystems and human use.

**COUNTY OPERATION STRATEGIES**

## Continue improving water efficiency and maintain the water supply on Parks & Open Space agricultural properties

- Leverage policies and programs in existing Parks and Open Space Water and Cropland Policies and Management Plans.
- Advocate for local and state policies that help maintain agricultural viability, and preserve open-space values by retaining stream and ditch water supplies on irrigated lands throughout Boulder County.
- Continue support of irrigation system improvements on county property that supply water to communities and agricultural producers.
- Work with water rights holders and farmers on Boulder County agricultural properties to employ practices that increase soil capacity for water retention and reduce water use.
- Identify and prioritize ecosystem and in-stream-flow protection needs to aid species recovery and provide areas for aquatic wildlife habitat and recreational activities, with limited reliance on west slope diversions.

## Reduce Boulder County facilities' indoor water usage

- Ensure that new county buildings meet all of the U.S. Green Building Council's (USGBC) Leadership in Energy and Environmental Design rating system points within the water efficiency section of the USGBC new construction certification process.
- Require the use of low-flow "WaterSense" rate fixtures for all new and retrofit applications in county facilities.
- Develop a targeted plan to reduce indoor water use.

**COUNTY OPERATION STRATEGIES**

## Reduce outdoor water use at Boulder County facilities

- Repair, upgrade, and adjust all irrigation systems with the most efficient available technologies, incorporating weather and soil conditions to minimize demand.
- Finalize square-foot data collection and service charges for all water-related utilities (drinking water, sewage, storm water) on irrigated landscapes.
- Create and implement a plan to replace 25% of irrigated turf with more water-efficient landscaping around county buildings by 2030.

## Assess current and future drought and related vulnerabilities caused by increased climate and weather variability, population growth, and development

- Develop common data repositories for all water sources, for unincorporated Boulder County residents and for water rights held by Boulder County.
- Update the County Comprehensive Plan to establish and update water related goals, and utilize updates in regulatory documents, such as the Land Use Code, to support implementation of these goals.
- Map groundwater within Boulder County to assess for drought vulnerabilities, carrying capacity, threats to water quality, and locations where private water supplies may be at risk.
- Compile information on soil moisture and other drought-related data from county agencies and incorporated areas.
- Enhance water-conservation-related components of the Land Use Code and participate in regional planning efforts to ensure that planning for new development within Boulder County and the Denver metro region adequately addresses water supply constraints and vulnerabilities.
- Support coordinated climate change response strategies for use by Boulder County water providers through a collaborative forum.

**COMMUNITY STRATEGIES**

**Protect and improve watershed health to secure an enduring supply of high-quality source water, while protecting the wildlife habitat, stream system functions, and aesthetics of our natural environment**

- Participate in the Keep It Clean Partnership and other intergovernmental agreements to minimize pollution impacts on surface waters.
- Collaborate with external multistakeholder watershed groups to promote healthy watersheds through water quality monitoring, stream stewardship and restoration projects, fire mitigation, public education, and other related activities while integrating efforts with the Boulder County Community Wildfire Protection Plan.
- Identify stream segments on Colorado’s list of impaired waters within or downstream of county properties, and prioritize management actions where progress can be made toward attainment of water quality standards.
- Develop post-wildfire restoration plans to protect watersheds from mudslides and increased runoff, and reduce the risk of flooding to downstream assets.
- Assess and minimize negative impacts on water quality from oil and gas exploration and development.
- Expand efforts to reduce stormwater runoff in the upper watersheds and nonurbanized areas of Boulder County.
- Improve forest health and maintenance in order to reduce wildland fire impacts to source waters.
- Ensure that natural resource extraction is conducted in ways that protect riparian areas and water quality.
- Coordinate with local water providers and engage in local source-water protection planning efforts.
- Complete remediation of ranked abandoned mine sites.
- Develop infrastructure and support policies for off-stream watering of livestock that protects riparian vegetation and water quality.
- Support local water quality monitoring efforts and facilitate data sharing to inform decision-making and provide a thorough understanding of watershed health.

**COMMUNITY STRATEGIES**

**Ensure that all on-site wastewater treatment systems are permitted and approved**

- Ensure all wastewater treatment applications will be reviewed and evaluated by Boulder County Public Health to ensure that they meet Boulder County wastewater treatment regulations that are a part of all property sales transactions.
- Conduct outreach to high-risk geographic areas likely to be impacted by aging and unapproved wastewater treatment.
- Maintain regulations to employ the best practices and technologies to protect groundwater.
- Maintain an active outreach and permitting process for unpermitted and unapproved wastewater treatment in Boulder County.
- Identify areas where on-site wastewater treatment systems may pose a risk to groundwater.

**Support water education and conservation efforts for Boulder County residents and businesses**

- Engage with statewide education campaigns and any new collaborative water conservation education initiatives to promote efficient residential water use.
- Facilitate consistent messaging throughout Boulder County on water conservation strategies.
- Expand existing youth water education programs to include water conservation and source water protection.
- Ensure proper water efficiency measures for all new, remodel, and addition projects by updating to the 2021 Building Codes, as well as utilizing WaterSense requirements for larger homes, and include water efficiency retrofits in the BuildSmart code.
- Educate residents and businesses on chemical applications for landscaping and snow removal that have adverse impacts on water quality.
- Support turf replacement programs and promote transition to more water-efficient landscaping in both unincorporated Boulder County and incorporated areas in partnership with water districts and other entities.
- Provide installation of water-efficient valves and faucets and messaging on irrigation efficiency to businesses through the Partners for a Clean Environment program.



**BUSINESS SAVES WATER**

For more than a decade, Boulder County’s Partners for a Clean Environment (PACE) program has worked with local businesses and municipal operations to reduce their stormwater pollution and systematically standardize water efficiency. In past years, dozens of businesses have become certified in PACE’s water conservation area of excellence.

Studio Z Dental in Louisville is now using 77% less water than the average dental office. After installing a waterless suction system and auto shut-off pumps at each hand-washing sink, more than 200,000 gallons per year will be saved. This business has since voluntarily implemented environmentally responsible purchasing practices, as well as composting and recycling programs for their office staff and clients.



**POLICY PRIORITIES**

The following are environmental sustainability policy priorities within Boulder County’s legislative agenda:

**POLICY**

**WHAT YOU NEED TO KNOW**

**Reduce greenhouse gas emissions and increase resilience associated with water management through water conservation, efficiency, reuse, adaptation, and low-impact development strategies**

- Support state regulation and other policy means to protect water quality.
- Support legislation that promotes the efficient utilization and conservation of water.
- Maintain adequate funding for the enforcement of safe and high-quality drinking water standards.
- Support resolution to conflicts between the federal Endangered Species Act and state water law.







## Water Conservation

Boulder County continues to explore innovative ways to encourage water conservation among its residents. For years, public policy polling and community surveys have reported water conservation as a top priority.

In partnership with a local environmental nonprofit, ReSource Central, Boulder County has installed nearly 2,000 high-efficiency toilets. Over the lifetime of the program, it is estimated that 539 million gallons of water will be conserved. That is enough to supply every household in the county with water for almost eight days.



TAKE ACTION

### Saving Water

There are numerous ways to take action to save water. Here are just a few:

- ❑ Install water-efficient toilets, showerheads, and faucet aerators.
- ❑ Check all faucets, toilets, and showerheads for leaks.
- ❑ Only run the dishwasher when it is completely full.
- ❑ Have your irrigation system audited for leaks, broken equipment, overspray, or inefficient watering schedules.
- ❑ Share information with coworkers about how to conserve water indoors and outdoors.
- ❑ Learn and share about where your community's water supply comes from and how it is treated through a community tour.



RESOURCES

### More Information

**Parks & Open Space Water Policy**

[assets.bouldercounty.org/wp-content/uploads/2017/03/water-policy.pdf](https://assets.bouldercounty.org/wp-content/uploads/2017/03/water-policy.pdf)

**Parks & Open Space Cropland Policy**

[bouldercounty.org/open-space/management/cropland-policy](https://bouldercounty.org/open-space/management/cropland-policy)

**Ways to Save Water**

[ResourceCentral.org](https://ResourceCentral.org)

[LoveColoradoWater.org](https://LoveColoradoWater.org)

[ColoradoWaterWise.org](https://ColoradoWaterWise.org)

[PACEPartners.com](https://PACEPartners.com)

**Help Prevent Water Pollution**

[keepitcleanpartnership.org](https://keepitcleanpartnership.org)



**8**

**circular  
economy**



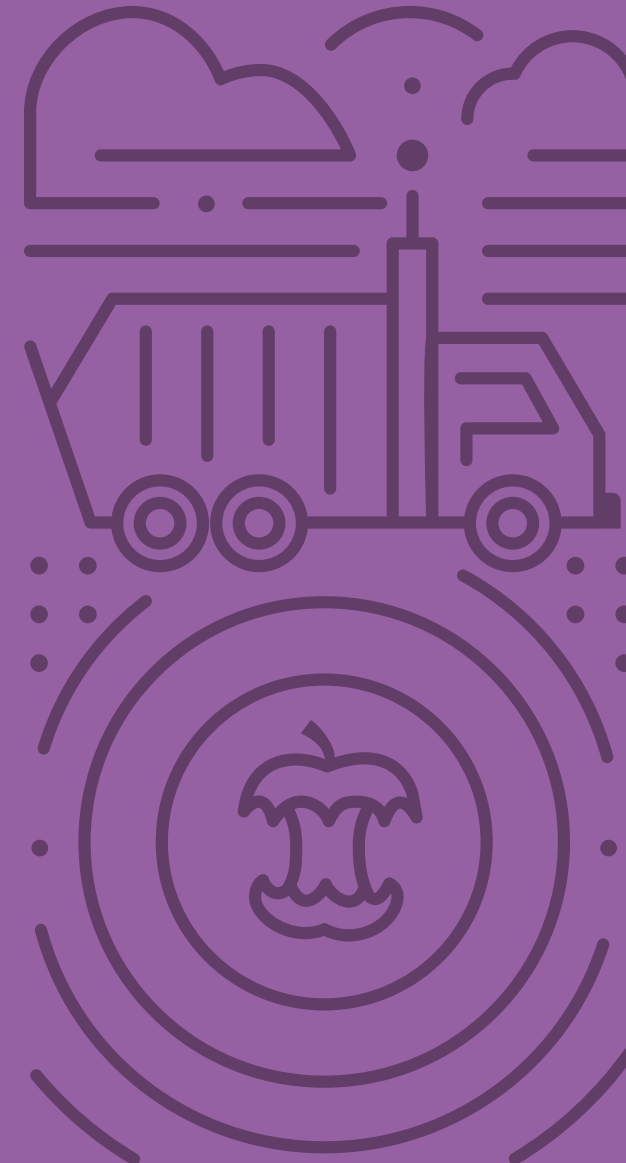
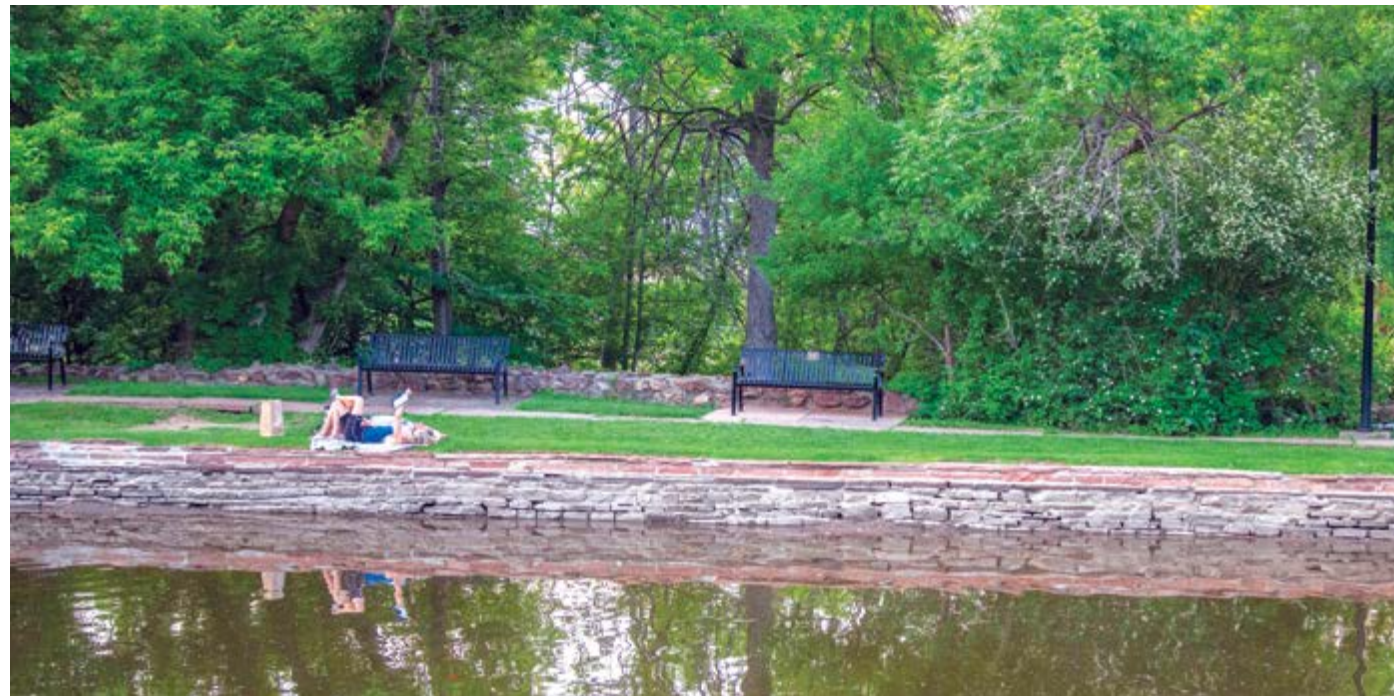
**INTRODUCTION**

Boulder County’s goal of “Zero Waste or Darn Near” reflects a commitment to responsible and sustainable management of its waste streams.

We are working to achieve this goal through its policies, programs, and infrastructure to help our community reduce, reuse, recycle (traditional and hard-to-recycle materials), compost,

and safely manage hazardous materials. The county is committed to ensuring accessible and affordable waste diversion opportunities to all residents countywide, as well as

supporting municipalities in Boulder County to advance circular economy policies, programs, and infrastructure. We are also investing resources to better understand the link between county supply chains and greenhouse gas (GHG) emissions, which will drive future work toward a more circular economy. Recycling creates nine times more jobs than landfills.<sup>32</sup>



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**circular  
economy goal**  
Reduce the amount of materials consumed and discarded in landfills, manage resources responsibly and effectively, promote reusability, and support a circular economy.

**COUNTY OPERATION STRATEGIES**

**Increase internal county diversion to 90% by 2025**

- Require Boulder County employees and contractors to divert construction materials from internal county building and road projects, including new construction, deconstruction projects, large capital improvement projects, and remodels.
- Increase composting by county employees through continued education.
- Increase county employee participation in zero waste efforts through incentives and educational programs.
- Reduce contamination in compost and recycling streams.

**Decrease the amount of total waste going to the landfill and reduce overall consumption**

- Educate county employees through waste audits, campaigns, and other programs.
- Encourage staff to participate in hard-to-recycle collection events, green purchasing practices, and reuse initiatives.
- Measure and reduce the waste per capita for Boulder County employees.
- Provide convenient drop-off locations in county buildings for hard-to-recycle materials.
- Work with county staff to follow the Environmental Protection Agency's Food Waste Hierarchy, which promotes redistribution of food before disposal.

**COUNTY OPERATION STRATEGIES**

**Comply with Boulder County's internal zero waste purchasing policies and create new policies to further waste reduction**

- Ensure that county employees purchase supplies, equipment, and parts that are reusable, locally recyclable, BPI-certified compostable, and/or made of 100% post-consumer recycled content where available, in accordance with the Boulder County Environmentally Preferable Purchasing Policy.
- Establish a list of environmentally preferable products and explore enforcement strategies to ensure adherence to green purchasing policies.
- Create policy to prohibit single-use or disposable products wherever possible.
- Purchase compost from permitted Colorado processors that show the U.S. Composting Council Seal of Testing Assurance. Purchase locally generated compost whenever feasible.
- Support state and local development of end-use markets for recyclable/ recycled products and compost through county purchasing policies.
- Work with county employees to reduce office supply and furniture purchases by following reuse protocols.

COMMUNITY STRATEGIES

### Increase construction materials diversion

- Boulder County municipalities will require residential and commercial deconstruction, and incentivize construction and demolition materials recycling and reuse.
- Support capacity for construction and demolition materials transfer, sorting, processing, and reuse.
- Create recycling opportunities for clean, damaged, and dimensional lumber.
- Require construction and demolition materials recycling and reuse in additional sectors.
- Enforce construction and demolition requirements and work with municipalities to develop a tracking and reporting system.

### Increase food and yard waste diversion through composting

- Support local infrastructure for additional composting.
- Encourage curbside and drop-off center compost collection throughout the county, including mountain regions.
- Promote at-home composting programs through education and incentives.
- Support multifamily and business compost collection systems and education.
- Expand composting in rural and mountain communities.
- Enforce current and future composting requirements.
- Promote opportunities for yard waste diversion.

COMMUNITY STRATEGIES

### Reduce countywide supply chain GHG emissions

- Offer programs to help educate the public and support carbon insetting for local business manufacturers.
- Support and advocate for Scope 3 GHG emission analysis at the state and local levels.
- Implement strategies from the consumption-based GHG emissions inventory



**COMMUNITY STRATEGIES**

**Increase commercial diversion**

- Provide free waste audits for businesses and support for zero waste implementation through Boulder County Public Health’s Partners for a Clean Environment Program.
- Update land-use codes to improve commercial and multifamily recycling and composting requirements.
- Support requirements for commercial construction and demolition materials diversion.
- Support requirements for commercial and multifamily recycling programs and composting programs countywide.
- Provide zero waste building planning assistance.
- Provide incentives for businesses to adopt zero waste collection programs.

**Reduce the amount of toxic materials purchased and increase safe disposal**

- Increase diversion of hazardous materials through increased drop-off opportunities at the Hazardous Materials Management Facility (HMMF).
- Educate students about hazardous materials through in-school presentations and projects.
- Explore hazardous materials home pick-up programs for older adults, homebound persons, and underserved communities.
- Reduce the use and purchases of toxic and hazardous products by educating consumers and businesses.
- Increase collection of residential and commercial hazardous materials at the HMMF.
- Promote opportunities for electronics recycling.

**COMMUNITY STRATEGIES**

**Support diversion through additional strategies**

- Cultivate municipal contacts and advocates, and support municipal goal setting, policy work, and data tracking.
- Support requirements for volume-based residential collection with embedded recycling and composting countywide where feasible.
- Support bans on sending recyclables, yard waste, and food waste to the landfill.
- Require zero waste planning for large events on public property countywide. Provide education and support for event planners.
- Support opportunities for waste diversion and reuse at spring cleanup events.
- Promote local markets for county-generated recyclables and compost.
- Develop zero waste branding and initiate a comprehensive education program.
- Provide zero waste education and collection systems in schools.
- Offer metal and hard-to-recycle material recycling at additional locations.
- Provide food waste reduction and redistribution efforts countywide.
- Share waste reduction efforts and how they correlate with climate change in the community.
- Provide waste transfer stations to mountain communities.
- Implement the Plastic Pollution Reduction Act through education, outreach, and enforcement.
- Make waste diversion opportunities accessible to all Boulder County residents.

**Increase waste prevention through product stewardship programs**

- Promote voluntary product stewardship opportunities offered by retailers and manufacturers.
- Support and advocate for product stewardship initiatives at the state and local levels.
- Have the Resource Conservation Advisory Board (RCAB) and other community partners identify a list of priority items to divert from the landfill.

**POLICY PRIORITIES**

The following are environmental sustainability policy priorities within Boulder County’s legislative agenda:

POLICY	WHAT YOU NEED TO KNOW	
<p><b>Grant Colorado Department of Public Health and Environment (CDPHE) authority to implement a plan for meeting Colorado’s statewide and regional solid waste diversion goals</b></p>	<p>Recycling and composting are proven to reduce carbon dioxide and methane emissions and are key strategies in the fight against climate change. However, Colorado’s waste diversion rate (the combination of recycling and organics diversion as a proportion of the solid waste stream) of 15% lags behind</p>	<p>the national average of 32%. Boulder County supports legislation that grants CDPHE the authority to administer diversion programs, including, but not limited to, economic and technical assistance for local and regional waste diversion programs and facilities.</p>
<p><b>Reduce the use of disposable and single-use products and promote the reuse of materials</b></p>	<p>Single-use products cause contamination in Boulder County’s recycling and organics waste stream. Boulder County supports statewide legislation that limits single-use products and creates a standard</p>	<p>across businesses. The plastic bag and styrofoam bans were an excellent start, but legislation must continue to expand and support reusable alternatives where feasible.</p>

**POLICY**

**WHAT YOU NEED TO KNOW**

**Foster infrastructure, policies, incentives, and programs for recycling and composting**

The successful intersection of statewide policy, programs, and infrastructure is critical to achieving waste diversion goals. Without a uniform approach, it becomes a patchwork of local government

decisions to achieve zero waste. This makes it much more difficult to site infrastructure, hone educational messaging, and bring economies of scale to all aspects of the waste diversion economy.







**ZERO WASTE GRANTS**

Established in 1997, Boulder County’s Zero Waste Funding program has awarded more than \$1.1 million to 240 unique projects throughout the county for education and infrastructure initiatives that promote waste reduction and diversion. Municipalities, nonprofit organizations, and businesses have the opportunity to apply for this funding each year.

Zero Waste Funding has helped support a number of innovative zero waste projects like these throughout the county:

- For its Reusable Plate Program, Planet Bluegrass purchased a mobile dishwasher trailer to move from disposable plates and utensils to reusable ones at all their music festival events.
- ReSource Central expanded the tools in their tool library.
- The Boulder County HMMF increased the waste diversion of controlled substances and needle sharps.
- The City of Louisville built zero waste stations for their weekly summer Downtown Louisville Street Faire event.
- Eco-Cycle’s Green Star Schools Program expanded zero waste education services at Boulder County schools.



**Boulder County Diversion Rate**

**2017  
35% Diversion**

**By 2025  
90% Diversion**





## Resource Conservation Advisory Board

Boulder County's RCAB is a 21-member board consisting of elected officials, municipal staff, representatives from nonprofit organizations, waste haulers, and citizens. RCAB's purpose is to advise the Board of County Commissioners on policies, programs, and infrastructure related to waste reduction, reuse, recycling, and composting. RCAB helps Boulder County, its communities, and its partners conserve natural resources and reduce environmental pollution.

TAKE ACTION

## How to achieve zero waste and support a more circular economy

Residents and businesses in Boulder County can do more than recycle and compost to help the county achieve zero waste. Try these steps:

- Ditch the disposables! Take a reusable mug, water bottle, and shopping bag when you go out.
- Look into joining a local zero waste advocacy organization or advisory board.
- Shop smart. Whether it's clothing, electronics, or household goods, look for items that are high quality, repairable, and long-lasting.
- Volunteer at a food rescue, food bank, or at a zero waste event.
- Reduce your food waste. It saves not only food but also money, water, and other resources.
- Visit the HMMF to find free reusable products such as cleaners, paints, automotive products, and more.
- Visit Eco-Cycle's Center for Hard to Recycle Materials (CHaRM) to recycle materials such as electronics, block Styrofoam, mattresses, and more.
- Check out ReSource Central's ReSource Yard to donate or purchase used building materials or to become a member of their tool library.
- Take advantage of zero waste education opportunities around Boulder County such as composting workshops and U-fix-it clinics.
- Know before you throw. Understand what goes into each waste stream within Boulder County to reduce contamination.

RESOURCES

## More Information

32 [tellus.org/pub/More%20Jobs,%20Less%20Pollution%20-%20Growing%20the%20Recycling%20Economy%20in%20the%20US.pdf](https://tellus.org/pub/More%20Jobs,%20Less%20Pollution%20-%20Growing%20the%20Recycling%20Economy%20in%20the%20US.pdf)

**Resolution for Zero Waste**  
[assets.bouldercounty.org/wp-content/uploads/2017/02/zw-resolution-2005-138.pdf](https://assets.bouldercounty.org/wp-content/uploads/2017/02/zw-resolution-2005-138.pdf)

**Resource Conservation Advisory Board**

[bouldercounty.org/government/boards-and-commissions/resource-conservation-advisory-board](https://bouldercounty.org/government/boards-and-commissions/resource-conservation-advisory-board)

**BuildSmart**

[bouldercounty.org/property-and-land/land-use/building/buildsmart](https://bouldercounty.org/property-and-land/land-use/building/buildsmart)

**Resources for Homes and Businesses**

[bouldercounty.org/environment/hazardous-waste](https://bouldercounty.org/environment/hazardous-waste)

[bouldercounty.org/environment/recycle/drop-off-centers](https://bouldercounty.org/environment/recycle/drop-off-centers)

[bouldercounty.gov/environment/sustainability/food-waste/](https://bouldercounty.gov/environment/sustainability/food-waste/)

[bouldercounty.org/environment/recycle](https://bouldercounty.org/environment/recycle)

[PACEPartners.com](https://PACEPartners.com)



THANK YOU!

Boulder County’s vision statement reads as follows:

“  
**As trusted stewards of Boulder County’s future, we provide the best in public service.**  
 ”

This Sustainability, Climate Action and Resilience Plan is our community’s vision for a vibrant and healthy future. Join us in making great strides in meeting our aspirational goals. Thanks to everyone who’s had a hand in crafting this plan!

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