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**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.



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.

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

Wildfire Mitigation for Mountain Homes

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

Get Outside! Volunteer!

BoulderCountyOpenSpace.org

Colorado's Outdoor Recreation Economy

choosecolorado.com/key-industries/outdoor-recreation

