



INFORMATIONAL GUIDE TO LANDSCAPE-SCALE FOREST RESTORATION IN THE ST. VRAIN BASIN

ST. VRAIN FOREST HEALTH
PARTNERSHIP

UPDATED JULY 2022



LEFT HAND
watershed center

We're here to keep you connected and to support your goals toward a more resilient watershed and community

Restoration projects are already happening on city, county, and private lands, and planning is underway for work on federal lands.

The St. Vrain Forest Health Partnership is here to:



Keep you informed about work in your neighborhood and across the landscape



Answer your questions and connect you with the right people



Work with you to ensure that the forest health restoration projects benefit your rivers, forests, and communities



Provide technical support for forest restoration and fire mitigation on private lands in strategic locations, and apply for grant funding to help make it happen

This information will help you learn more about the St. Vrain Forest Health Partnership, why our forests and water resources are at risk, and what we can all do to help.

You can help shape the future of our forests by getting involved today!

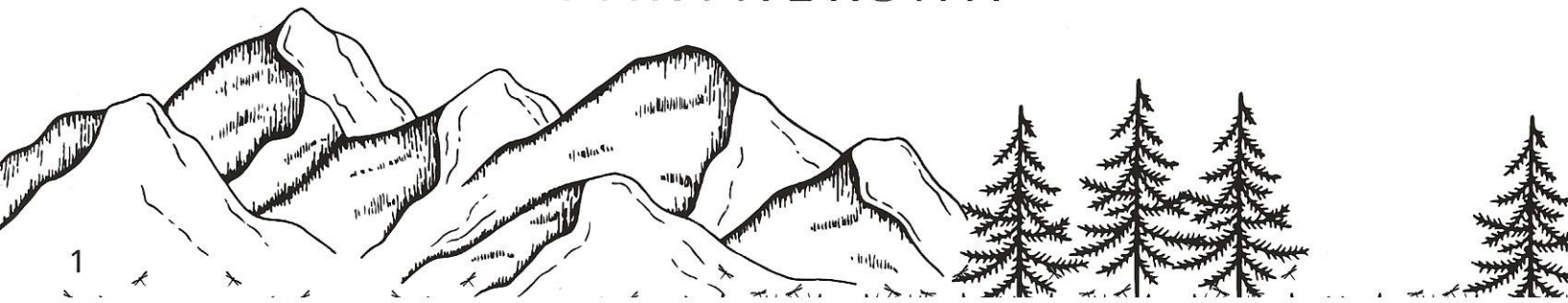


watershed.center/restore-forests

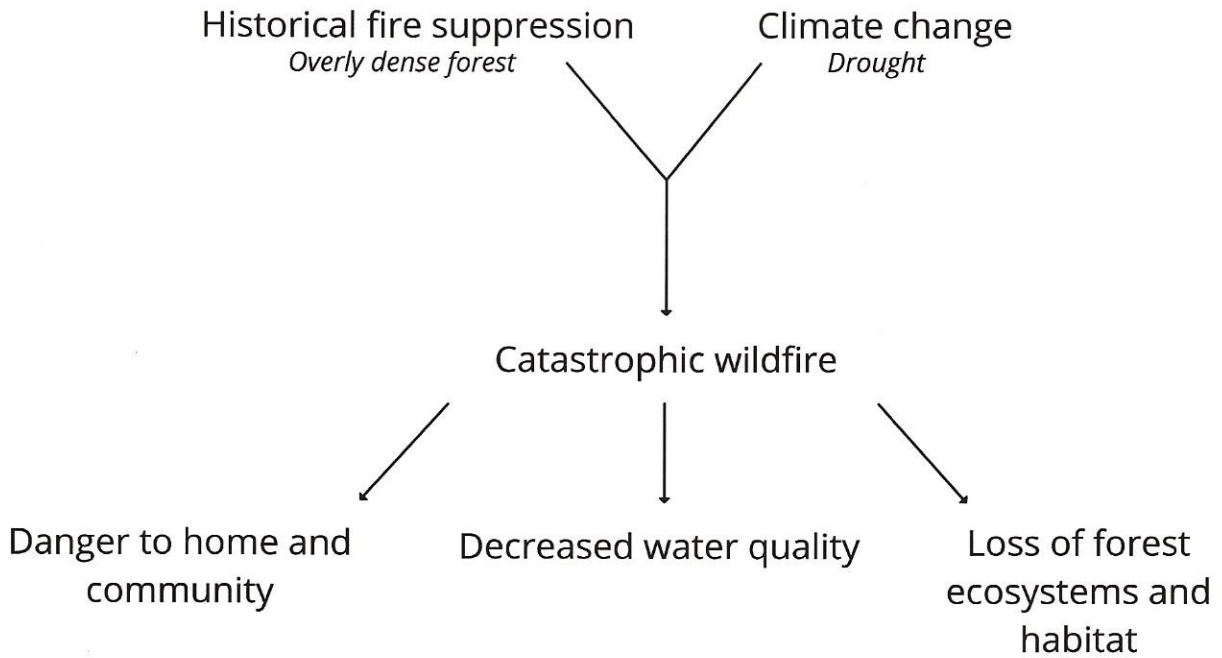


watershedcenterforests@gmail.com

ST. VRAIN FOREST HEALTH PARTNERSHIP



What is the challenge and why does it matter?



Who is the St. Vrain Forest Health Partnership and what are they doing about this challenge?

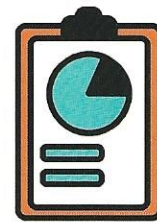
St. Vrain Forest Health Partnership is bringing together diverse communities to address this problem.



Collaborative planning that prioritizes science and community



On-the-ground restoration (e.g., thinning, prescribed fire, planting)



Long-term monitoring to adaptively manage projects

What's happening in your neighborhood and how will it help protect what we care about?

On-the-ground projects that will restore fire-resilient forests

Safer homes and communities, and recreational enjoyment

Clean and reliable water resources

Forests that grow and persist, providing habitat, and sustaining wildlife

Resilient forests that sustain ecosystem services in the face of uncertainty due to climate change

Our forested landscape

What is the challenge and why does it matter?

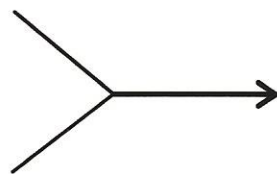
Our community experienced the largest fire in the County's recent history in 2020, highlighting the increased risk of catastrophic wildfire in the region. Fire is a natural component of forest ecosystems across the northern Front Range of Colorado, and for millennia, periodic fire sustained fire dependent plant species, a diversity of wildlife habitat, and functioning watersheds. However, factors such as active and historical fire suppression and climate change have increased the threat of high severity wildfires in overly dense forests.

Historical fire suppression

overly dense forests, changes in species composition

Climate change

more frequent and intense drought



High-severity, catastrophic wildfire

- **Danger to homes and community**

Mountain communities and communities at the edge of wildlands are more at risk.

→ *Causes damage to life, property, and economy*

→ *Increased threat to public safety and infrastructure from landslides and debris flows*

- **Decreased water quality**

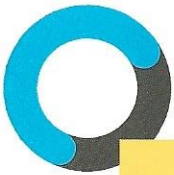
Bare soil and fewer roots to hold soil in place leads to erosion, debris flows, and severe floods.

→ *Limits providers' ability to deliver water to more than 120,000 water users*

- **Loss of forest ecosystems**

High severity fire caused by climate change and overly dense forests kills most trees, making it difficult for forests adapted to low severity fire to grow and persist.

→ *Results in conversion from forests to grassland and shrublands and loss of forest habitat*



For example... if a fire occurs in both the South St. Vrain and North St. Vrain watersheds, two-thirds of Longmont's water sources would be compromised.

Let's interrupt this!

We can manage forests so they are less susceptible to catastrophic fire.

Page 4-5



Desired Future Conditions

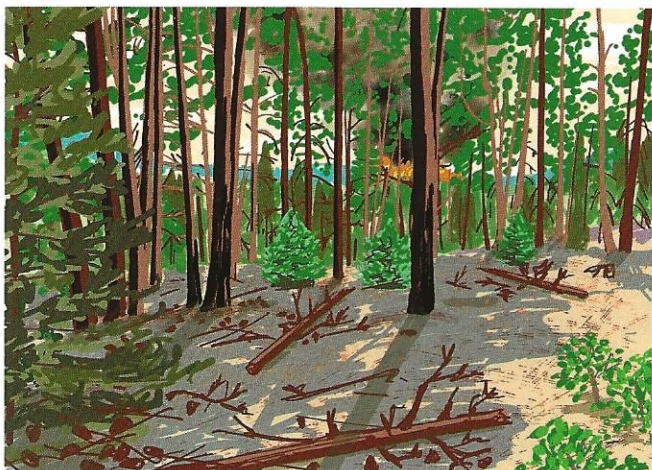
Working with federal, state, and local agencies, as well as individual landowners, researchers, and fire districts, the St. Vrain Forest Health Partnership identified the following desired future conditions for our forests. These conditions highlight a hopeful future that we can achieve through proactive management.

Forest health and resilience	Forested landscapes are adapted to climate change, less susceptible to high-intensity wildfire, and are resilient to wildfire and other disturbances.
Wildfire risk	Negative consequences of wildfire are mitigated near communities.
Water resources	Risk to water utility infrastructure is mitigated so that the watershed can continue to provide high quality water for municipal and agricultural water users.
Wildlife	Forest ecosystems provide quality wildlife habitat.
Aesthetics	Aesthetic value of the forest is maintained.
Recreation	Forests support recreation activities.
Community	Forest restoration adheres to an inclusive collaborative process.

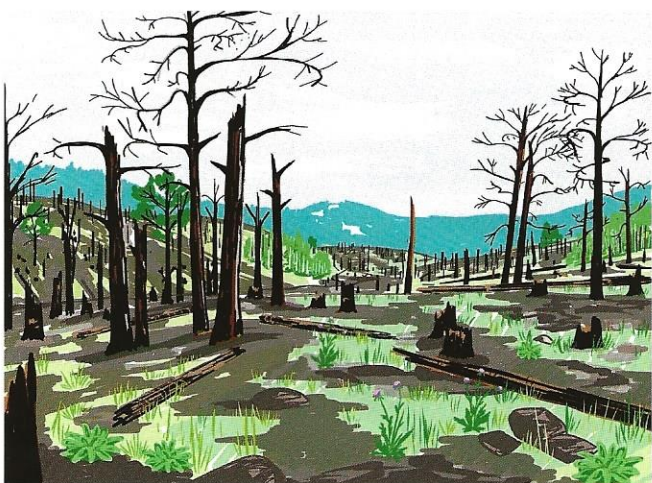



Desired Future Conditions
 by the St. Vrain Forest Health Partnership
www.watershedcenter.com

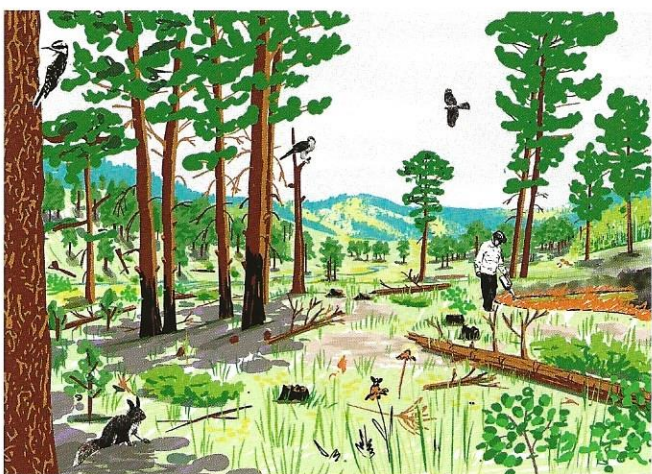
We live in a fire-adapted and prone ecosystem. Managing forests now can lead to a more desirable future.



Look familiar? A history of fire suppression below ~9000 feet in elevation has caused fuels to build up on the forest floor and forests to become overly dense. These forests were adapted to receive fire more frequently, but those fires were less severe. Now, when fire arrives, it is more likely to hop into the forest canopy because of the "ladder fuels" such as smaller, less fire-resistant trees. Combined with longer fire seasons, more frequent warm periods, and extended drought, the likelihood of high-severity wildfire is increased, which puts our communities, water, and forests at risk.



When high-severity wildfires occur, tree survival and regrowth are limited, and soils repel water, increasing the flow of sediment and debris into streams. Non-native invasive plants emerge, such as the mullein and thistle depicted here.



Below ~9,000 feet, restoring historical tree spacing, species diversity, and a range of habitat types helps make the entire watershed more resilient to wildfire. At higher elevations where forests are naturally more dense because they receive fire less often, fire mitigation includes creating fire breaks around communities, homes, water resources, and infrastructure, as well as promoting aspen growth. The use of prescribed fire on the landscape helps restore natural disturbance patterns while creating a diverse mosaic of habitat types that support abundant wildlife and clean water. It is the only treatment type that effectively removes surface fuels, which is critical in moderating overall fire spread, intensity, and severity.

Who is the St. Vrain Forest Health Partnership?

The St. Vrain Forest Health Partnership is a diverse collaborative with more than 200 community and stakeholder representatives working to restore landscape-scale forest health and resilience throughout the St. Vrain Watershed.

The Partnership was formed because federal, state, and local agencies and organizations have long recognized the St. Vrain Watershed as a vital landscape that is at risk for catastrophic wildfire. Partners agreed that the scale of this risk requires a collaborative and cross-boundary approach. Today, the St. Vrain Forest Health Partnership includes participation from diverse groups including:

- federal, state, and local agencies
- universities and schools
- conservation, fire, and water districts
- environmental groups
- private landowners

Partnership coordination is led by the Left Hand Watershed Center, a nonprofit organization that works to protect and restore watersheds for people and the environment using a collaborative and science based approach.

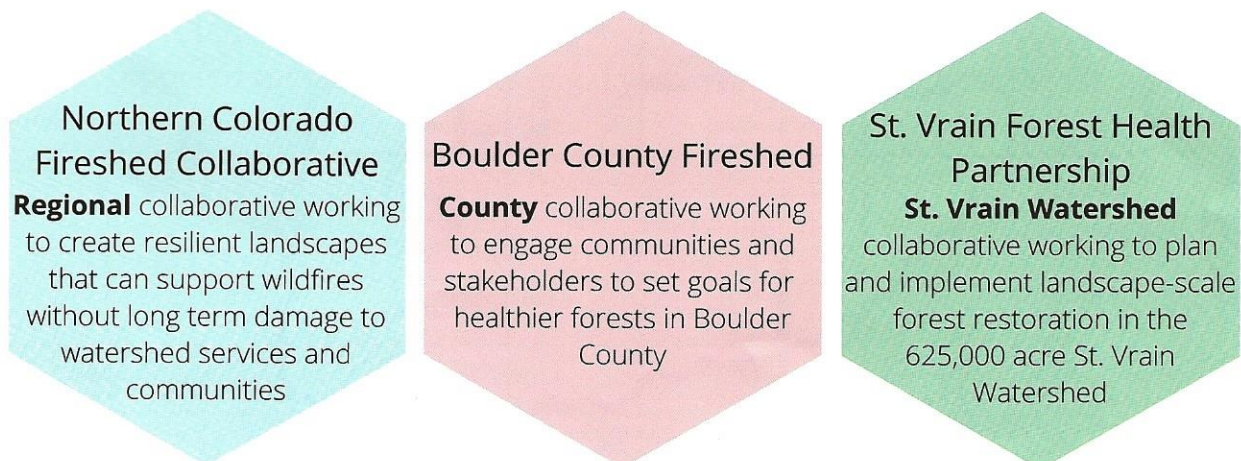
Vision

To achieve a healthy and resilient watershed that can sustain wildfire and other natural disturbances while protecting communities, keeping water supplies clean and reliable, and supporting diverse native flora and fauna for current and future generations.




Mission

To bring together diverse partners and community members to collaboratively plan and implement cross-jurisdictional, landscape-scale forest restoration in the St. Vrain Watershed that will prepare the landscape and community to receive wildland fire as a natural part of the ecosystem.

The partnership is part of county and regional collaboratives that exchange resources and work together to increase the pace and scale of forest restoration across Northern Colorado:

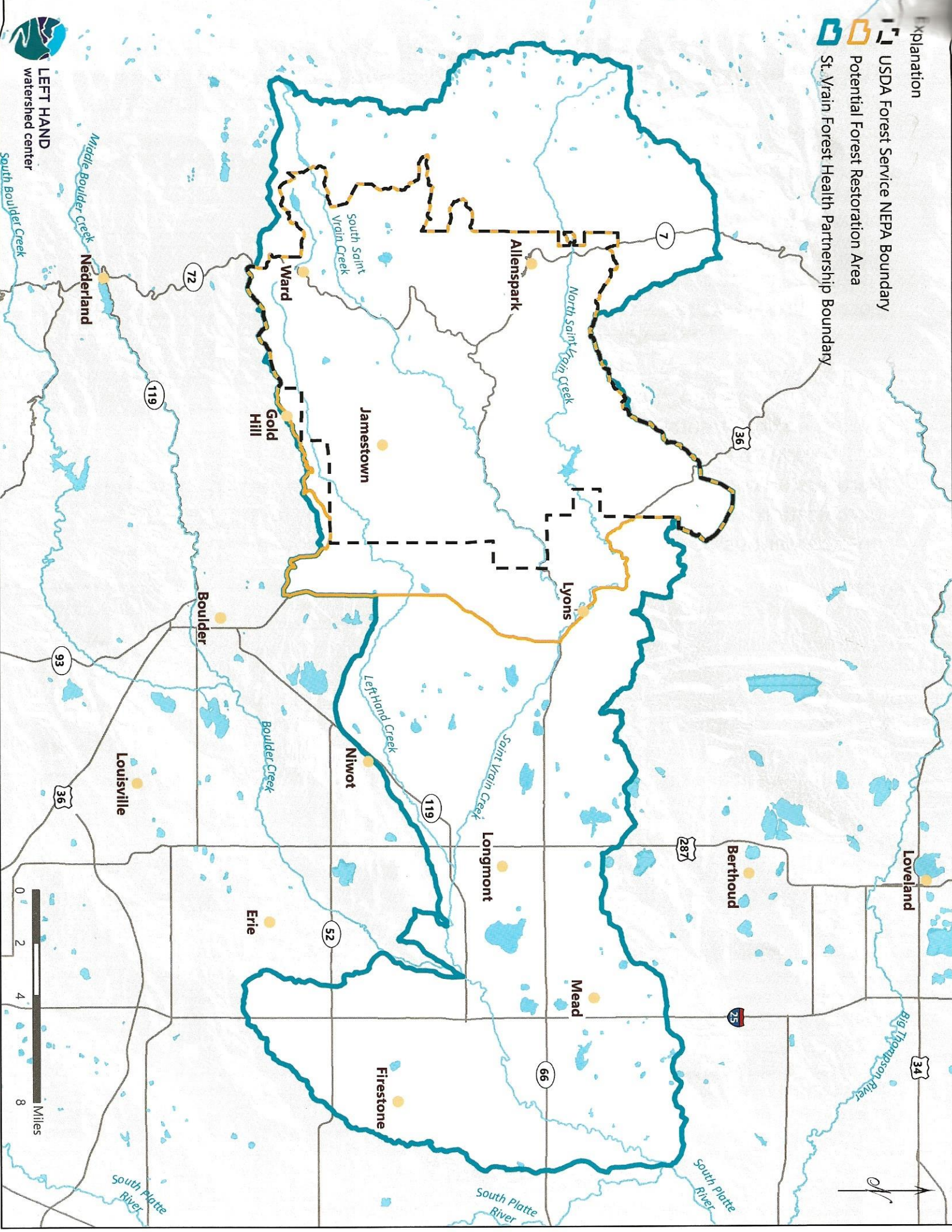


Explanation

-  USDA Forest Service NEPA Boundary
-  Potential Forest Restoration Area
-  St. Vrain Forest Health Partnership Boundary



LEFT HAND watershed center



What is the St. Vrain Forest Health Partnership doing to help our forests and communities?

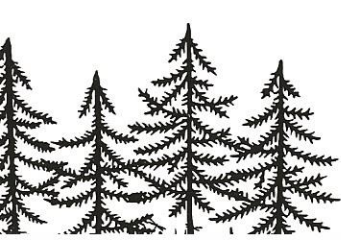
- Building a collaborative of diverse stakeholders and communities that are unified around shared desired future conditions for St. Vrain Watershed forests.
- Increasing broad community support and understanding related to proactive and landscape-scale wildfire management.
- Prioritizing project areas where forest management activities may achieve the greatest benefits at the landscape scale.
- Coordinating implementation of mechanical, manual, and prescribed fire treatments in priority areas.
- Collecting long-term scientific data to monitor project outcomes over time.

Forest management at the landscape scale: How do we solve a problem this big?

Under the right conditions, wildfires may sweep across the landscape crossing land and water, and, as we learned in 2020, the continental divide. We cannot treat every acre of forest, but we can make our forests resilient by treating strategic locations that are important for the forest ecosystem, for communities, and for water supplies.

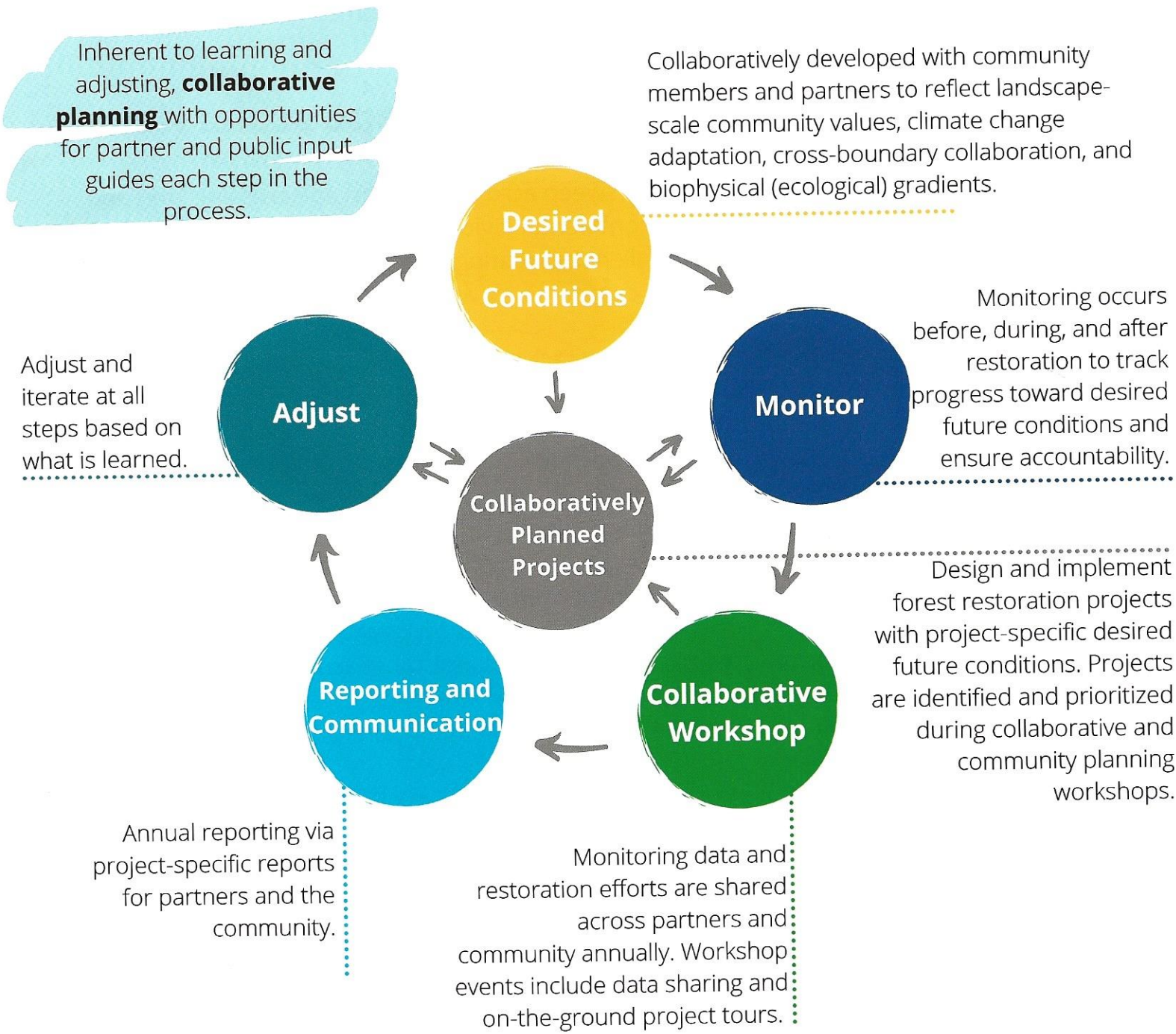
A key aspect of the Partnership's strategy for tackling our landscape-scale problem is cross-boundary restoration. Working across land ownership boundaries is critical for successful forest management. As such, Partners are coordinating forest restoration efforts to ensure a unified and strategic approach. Current efforts underway include:

- City of Longmont – Button Rock Preserve
- Boulder County – Parks and Open Space Lands
- Private property owners doing independent projects and defensible space mitigation
- Colorado State Forest Service, Left Hand Watershed Center, and Boulder Valley and Longmont Conservation Districts facilitating projects on private lands
- Wildfire Partners providing technical and financial assistance to homeowners to create defensible space and harden homes on private lands
- Local fire districts working in communities to implement Community Wildfire Protection Plans
- Community-led mitigation efforts (e.g. Lyons Wildfire Task Force, Big Elk Meadows Firewise)



What is the Partnership's Adaptive Management Approach?

An adaptive management process is foundational to the Partnership's forest projects. Utilizing a data-driven adaptive management process provides the ability to respond to changing conditions, collaboratively develop projects with practitioners and community members, track our progress toward desired future conditions, and to adjust our approach as needed based on what is learned. See the six key steps of our adaptive management process below.



Fuel reduction

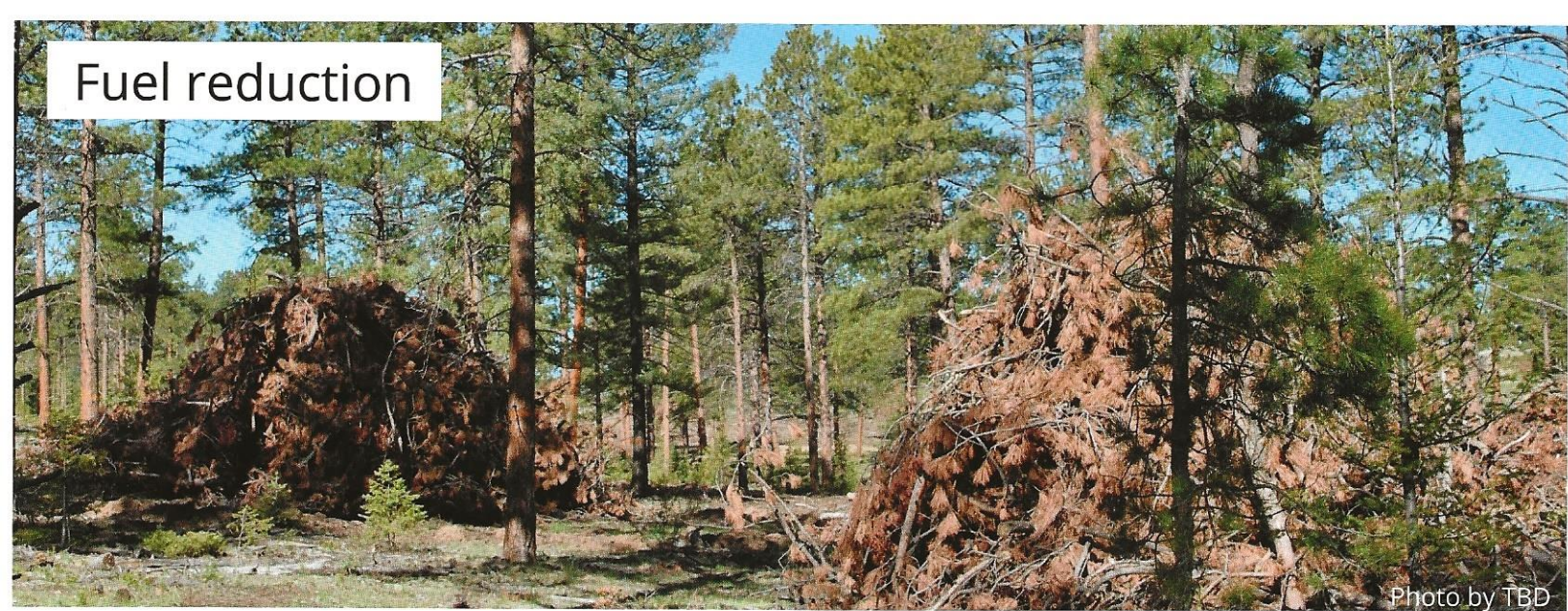


Photo by TBD

Prescribed burns



Photo by Warnick

Restored forest

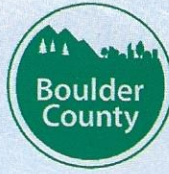


Photo by Andrew Slack

St. Vrain Forest Health Partnership Members



LEFT HAND
watershed center



Boulder
County



**ST. VRAIN &
LEFT HAND**
WATER CONSERVANCY DISTRICT



IMA
InterMountain Alliance
Cooperative Helping Community



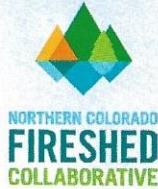
**Longmont and
Boulder Valley**
Conservation Districts



COLORADO STATE
FOREST SERVICE
COLORADO STATE UNIVERSITY



Left Hand Water District



NORTHERN COLORADO
FIRESHED
COLLABORATIVE



COLORADO FOREST
RESTORATION INSTITUTE
COLORADO STATE UNIVERSITY



WILDFIRE PARTNERS



LEFTHAND
FIRE PROTECTION DISTRICT



NATIONAL
PARK
SERVICE



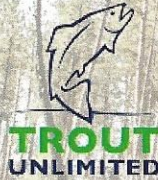
CITY OF
LONGMONT
COLORADO



Lyons
Fire Protection
District



CAL WOOD



TROUT
UNLIMITED



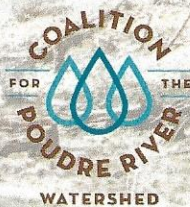
The Nature
Conservancy



COLORADO
PARKS • WILDLIFE



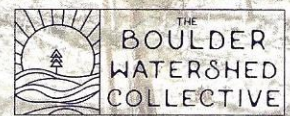
Colorado
Native Plant Society



COALITION
FOR THE
POUDE RIVER
WATERSHED



Northern Water



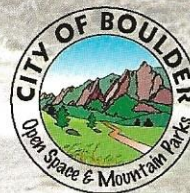
THE
BOULDER
WATERSHED
COLLECTIVE



BALARAT
OUTDOOR EDUCATION



American
Forest
Foundation



CITY OF BOULDER
Open Space & Mountain Parks



ARGOSY
FOUNDATION



FIRE
RESCUE
4900



FIRE
RESCUE

Community members and towns
across the St. Vrain Watershed