

# **SAN JUAN COUNTY, COLORADO BOARD OF COMMISSIONERS**

## **MEETING AGENDA**

June 26, 2024

### **WORK SESSION 5:00 PM**

San Juan National Forest  
Nicholas Glidden-District Ranger  
Dave Neely-Forest Supervisor

### **CALL TO ORDER: 6:30 P.M.**

BOCC Meeting Minutes for June 12, 2024

### **APPOINTMENTS**

6:35 P.M. Silverton Mountain Application for Variance to Section 5-102.1 Mobile Units

7:00 P.M. Terry Morris

7:20 P.M. EcoAction Partners – Adoption of Regional Climate Action Plan

### **CORRESPONDENCE:**

Silverton-San Juan Fire and Rescue Authority  
Katie Shapiro – Dust Control

### **NEW BUSINESS:**

Resolution 2024-03 Adopting The Silverton And San Juan County Climate Action Plan  
San Juan County Technology Accessibility Plan

Public Comment

Commissioner and Staff Reports

Other

Adjourn

**Times listed above are approximate.**

**Discussion of an agenda item may occur before or after the assigned time.**

**Next Regular Meeting – Wednesday July 10, 2024 8:30 A.M.**

Join Zoom Meeting

<https://zoom.us/j/92136473203>

By Telephone: Dial 1 669-900-6833 and enter the Webinar ID 92136473203 when prompted.

Meeting ID: 921 3647 3203

You Tube (live and recorded for later viewing, does not support public comment):

<https://www.youtube.com/@sanjuancountycoloradostreams>

RESOLUTION 2024-04

A RESOLUTION OF THE SAN JUAN COUNTY BOARD OF COMMISSIONERS  
ADOPTING THE SILVERTON AND SAN JUAN COUNTY ACTION PLAN

WHEREAS, increased greenhouse gas (GHG) emissions and rapidly rising temperatures resulting from human activity are changing the climate in ways that threaten Colorado's economy, the health of its residents and its natural landscape; and

WHEREAS, the impact of climate change affect everyone regardless of age, gender, or socioeconomic background, which will require increased resiliency measures to provide for and mitigate adverse effects on public health and the environment; and; and

WHEREAS, local governments are at the forefront of responding to these challenges and managing local land use authority and policy decisions that can be effective in addressing them; and

WHEREAS, the Ouray and San Miguel County Regional Climate Action Plan was completed in 2021 by EcoAction Partners and a Silverton and San Juan County Climate Action Plan Appendix was created as a standalone document to complement the regional Climate Action Plan; and

WHEREAS, San Juan County Commissioners desires to adopt the Silverton and San Juan County Climate Action Plan to demonstrate the County's commitment to change through climate actions and collaboration

NOW THEREFORE, BE IT RESOLVED by the Board of Commissioners of San Juan County, that the Commissioners adopt the Silverton and San Juan County Climate Action Plan.

READ, PASSED AND ADOPTED this 26th day of June 2024 by the Board of Commissioners of San Juan County, Colorado.

Attest:

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Austin Lashley, Chairman

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Scott Fetchenhier

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Pete Maisel

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Ladonna L. Jaramillo  
Clerk and Recorder

# ECOACTION PARTNERS



To: San Juan County Board of County Commissioners

From: EcoAction Partners

Date: June 19, 2024

Subject: Adoption of Regional Climate Action Plan

EcoAction Partners invites government members of the Sneffels Energy Board to formally adopt the regional Climate Action Plan. By doing so, governments will affirm their commitment to implementing environmentally sustainable actions applicable to their jurisdiction with the support of the Sneffels Energy Board and EcoAction Partners.

The Ouray and San Miguel County Regional Climate Action Plan was completed in 2021 by EcoAction Partners and the Sneffels Energy Board. A Silverton and San Juan County Climate Action Plan Appendix was created as a standalone document to complement the regional CAP and focus on the needs and goals specific to San Juan County. A separate GHG inventory has been created for SJC. The actions highlighted in the SJC CAP Appendix were informed by the Regional CAP, Silverton Compass Master Plan and feedback from key stakeholders. Adoption of the CAP will supplement the work Silverton and San Juan County are already doing and will strengthen connections with regional partners working toward collective regional goals.

The plan sets the stage for the next decade of climate action across our region. Successful implementation of the 21 objectives and supporting actions across eight sectors will help our community continue to reduce our greenhouse gas emissions from our 2010 GHG emissions baseline, while we continue to see economic and population growth. We are looking ahead to goals of a 50% reduction in our GHG emissions by 2030 and a 90% reduction by 2050. This plan will act as a roadmap for continued collaborative regional actions across the eight sectors of: Community Engagement & Policy, Energy Supply, Buildings, Transportation, Waste, Food, Water, and Land.

The plan is a regional community working document. Though specific entities, governments, organizations and individuals might take the lead on certain actions, success will take deliberate partnership across our entire region. No one organization, department, or government is solely responsible for the execution of the actions listed in this CAP. This document will help guide intentional actions over the next 3-, 5-, and 10- years as we move towards a more sustainable future.

EcoAction Partners encourages San Juan County to formally adopt the regional Climate Action Plan as an initial step toward creating a more resilient community for present and future generations.

Sincerely,

Emma Gerona: Executive Director, EcoAction Partners

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355 W Colorado Ave, Telluride, CO 81435



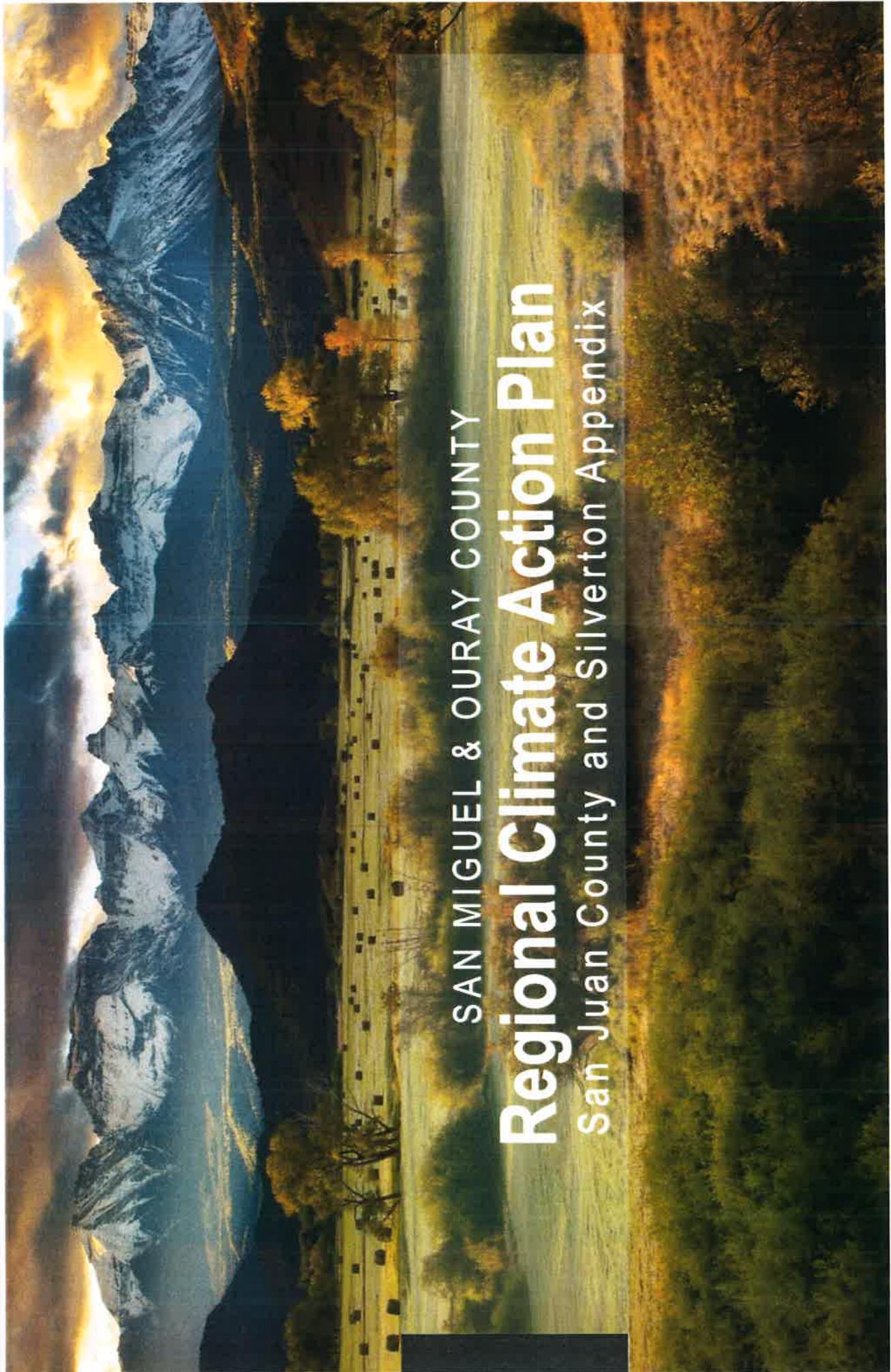
[www.ecoactionpartners.org](http://www.ecoactionpartners.org)



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SAN MIGUEL & OURAY COUNTY  
**Regional Climate Action Plan**  
San Juan County and Silverton Appendix



Presented by Sneffels Energy Board  
Prepared by EcoAction Partners

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# Key Acronyms and Partners



## Partners

BHE: Black Hills Energy  
D&SNGR: Durango & Silverton Narrow Gauge Railroad  
EAP: Eco-Action Partners  
GFC: Good Food Collective  
ICLEI Local Governments for Sustainability

MTJ: Montrose Regional Airport

OC: Ouray County

PCI: Pinhead Climate Institute

ROCC: Ridgway Ouray Community Council

SEB: Snettish Energy Board

SJC: San Juan County

SMC: San Miguel County

SMA: Sheep Mountain Alliance

SMART: San Miguel Authority for Regional Transportation

SMPA: San Miguel Power Association  
TEX: Telluride Regional Airport

TI: Telluride Institute

TMV: Town of Mountain Village

Tri-State: Tri-State Generation & Transmission

WCU: Western Colorado University

WPL: Wilkinson Public Library

Commissions, Committees & Boards:

ACCO: Association of Climate Change Officers  
AQCC: Air Quality Control Commission  
CAST: Colorado Association of Ski Town  
CC4CA: Colorado Communities for Climate Action

OSRC: Ourir Self Reliance Committee

OWC: Ourir Water Commission

RMCO: Rocky Mountain Climate Organization

## Introduction

## Programs

CARE: Colorado Affordable Residential Energy Program

PES: Payment for Ecosystem Services

REMP: Renewable Energy Mitigation Program

TEMP: Telluride Energy Mitigation Program

## Other

BLM: Bureau of Land Management

CAP: Climate Action Plan

CSA: Community Supported Agriculture

CSG: Community Solar Generation

DSM: Demand Side Management

EVs: Electric Vehicles

GHG: Greenhouse Gas

GPC: Global Protocol for Community-Scale Greenhouse Gas Emission Inventories, 12-8-2014

IQ: Income Qualified

kWh: Kilowatt-Hour

LED: Light Emitting Diode

mtCO<sub>2</sub>e: Metric Tons of Carbon Dioxide Equivalent

NFS: National Forest Service

OHV: Off Highway Vehicle

PUC: Public Utilities Commission

PV: Photovoltaic Solar

RECs: Renewable Energy Credits

RV: Recreational Vehicle

SAF: Sustainable Aviation Fuel

WWTP: Wastewater Treatment Plant

# Call to Action



## San Juan County and Silverton Residents and Visitors:

We are excited to present our regional collaborative Climate Action Plan and the Silverton and San Juan County Appendix in an effort to continue our regions' shared climate leadership. This document is meant to be a working roadmap to advance projects and programming that allow our communities to pursue economic, environmental, and socially beneficial solutions to reducing our greenhouse gas emissions.

Now more than ever we are experiencing the adverse effects of climate change on our community. Rising temperatures, a reduced snowpack, and an increased number of wildfires have all demonstrated the unprecedented risk that we are facing. This document is meant to be owned by the community. Success will come from the work of each of you. We all need to step up and demonstrate leadership by protecting the natural environment that makes our home so special.

In adopting this document, our region is re-establishing our commitment to igniting change through climate action and collaboration. We will champion local, state and federal policies that prioritize the health of our environment. We will create more inclusive planning and programming through increased community empowerment and engagement. We will work with SMPA as they move towards their goal of 80% renewable energy by 2030. We will demonstrate the power that local action can have on a broad scale by setting an example of collaborative and proactive climate action. We recognize that local action can spark change and have a global impact.

This plan lays out our commitment to taking action across all greenhouse gas emissions sectors applicable to our region: community engagement and policy, energy supply, building energy use, transportation and aviation, waste, food, water, and land use. We are calling on you to take action with us.



Facilitated by EcoAction Partners



# Executive Summary

The Ouray and San Miguel County Regional Climate Action Plan was completed in 2021 and sets the stage for the next decade of climate action across our region. EcoAction Partners completed the San Juan and Silverton appendix to the plan in 2024 informed by the regional planning process with input from key community stakeholders. This document is meant to build from the full Regional Plan to identify objectives and actions that are a priority for the San Juan County community. Though specific actions and objectives are called out here, this document is an appendix to the larger regional plan.

Successful implementation of the Regional Climate Action Plan's 21 objectives and supporting actions will help our community continue to reduce our greenhouse gas emissions from our 2010 GHG emissions baseline, while we continue to see economic and population growth. We are looking ahead to goals of a 50% reduction in our GHG emissions by 2030 and a 90% reduction by 2050.

The plan and this appendix will act as a roadmap for continued collaborative regional actions across the eight sectors of:  
**Community Engagement & Policy, Energy Supply, Buildings, Transportation, Waste, Food, Water, and Land**

This plan is a regional community working document. Though specific entities, governments, organizations and individuals might take the lead on certain actions, success will take deliberate partnership across our entire region. No one organization, department, or government is solely responsible for the execution of the actions listed in this CAP. This document will help guide intentional actions over the next 3-, 5-, and 10- years as we move towards a more sustainable future.



# Executive Summary



## Sneffels Energy Board

Recognizing the power of collaboration and leveraging grant funding, EcoAction Partners formed the Sneffels Energy Board in 2009 to address sustainability at a regional level. The SEB (formerly named the Western San Juan Community Energy Board), aims to reduce GHG emissions and consumption of valuable natural resources in the region through coordinated community engagement, project implementation, and policy change at both the local and state level.

The Sneffels Energy Board brings together local leaders to collaborate on setting and accomplishing regional sustainability goals. Partners of the Board meet to share information and experiences, design successful regional programs, identify new opportunities, and analyze progress.

The Board is made up of government and staff representatives from San Miguel, San Juan, and Ouray counties, the towns of Telluride, Mountain Village, Ophir, Nonwood, Silverton, Ridgway, and the City of Ouray as well as utility partners, San Miguel Power Association, Black Hills Energy, and a number of citizen group and local organization representatives.

The Board established regional sustainability goals and published the predecessor to this document, a collaborative Sustainability Action Plan, in 2010. They collect, analyze, and report on regional greenhouse gas emissions data and coordinate the implementation of regional action items to more efficiently reach regional goals. The group gathers and shares information from the Colorado statewide sustainability network and identifies key local priorities, partnerships, and climate solutions. The creation of this Climate Action Plan by the Board represents the ongoing regional commitment to collaborative climate action in support of a more sustainable future for our region.

## Welcome to the Silverton and San Juan County Regional Climate Action Plan Appendix

San Juan County is located in the San Juan mountain range in southwest Colorado. It is home to 736 residents, making it the least populated county in Colorado with the highest mean elevation of any U.S. county at 11,240 feet. The Town of Silverton has a population of 650 residents and an elevation of 9,318 feet. Silverton is the county seat of San Juan County.

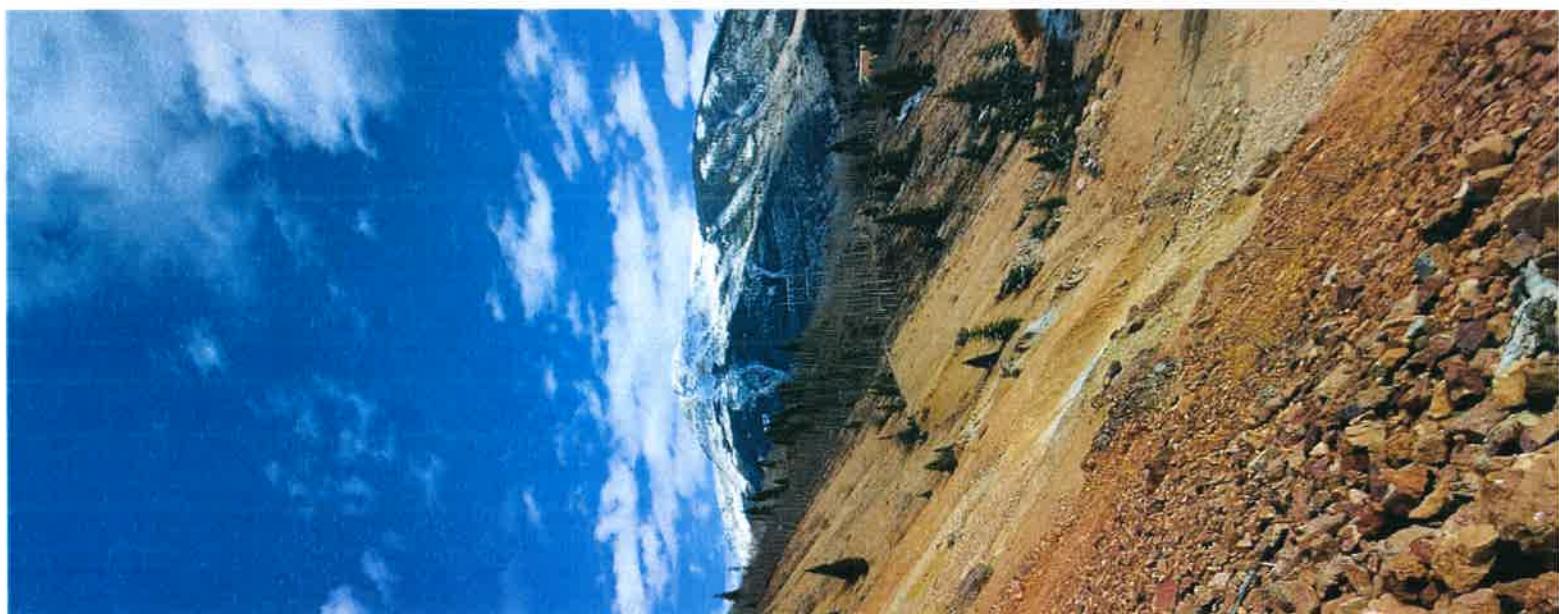
In 2023 partners from San Juan County, the Town of Silverton, San Miguel Power Association and EcoAction Partners applied for and received an award from the Office of Clean Energy Development (OCED) for the Silverton GOLD (Goal of Less Dependence) Project. The project aims to achieve four key goals.

1. Develop a community resilience plan
2. Adopt the regional Climate Action Plan and develop a San Juan County specific appendix
3. Create a Beneficial Electrification Plan
4. Explore electrical resiliency opportunities and plan for local renewable generation pathways

Each of these goals is reflected in this appendix and aim to bring your community economic and environmental resiliency and sustainability.

Though many of the actions, environments, and challenges addressed in this plan were originally identified as priorities for neighboring San Miguel and Ouray Counties, the geographic similarities, remote and rural nature, tourism economies and similar climate challenges set the stage for the base use of this plan in San Juan County. This appendix addresses key community differences as related to key goals, unique environments and projects occurring in San Juan County.

In creating this appendix, EcoAction Partners developed and utilized a community survey to understand key CAP priorities and challenges, hosted worksessions with elected officials, staff, and community members, and held education and outreach opportunities to ensure that this plan meets the unique needs and goals seen in Silverton and San Juan County.



## A Roadmap to our Sustainable Future:

This CAP is a roadmap for reducing GHG emissions and creating a sustainable, thriving future. The plan is intended to guide policy makers, organizations, businesses, and individuals in community planning across the next decade. The plan creates a timeline for high priority, ongoing, mid- and long- term actions.

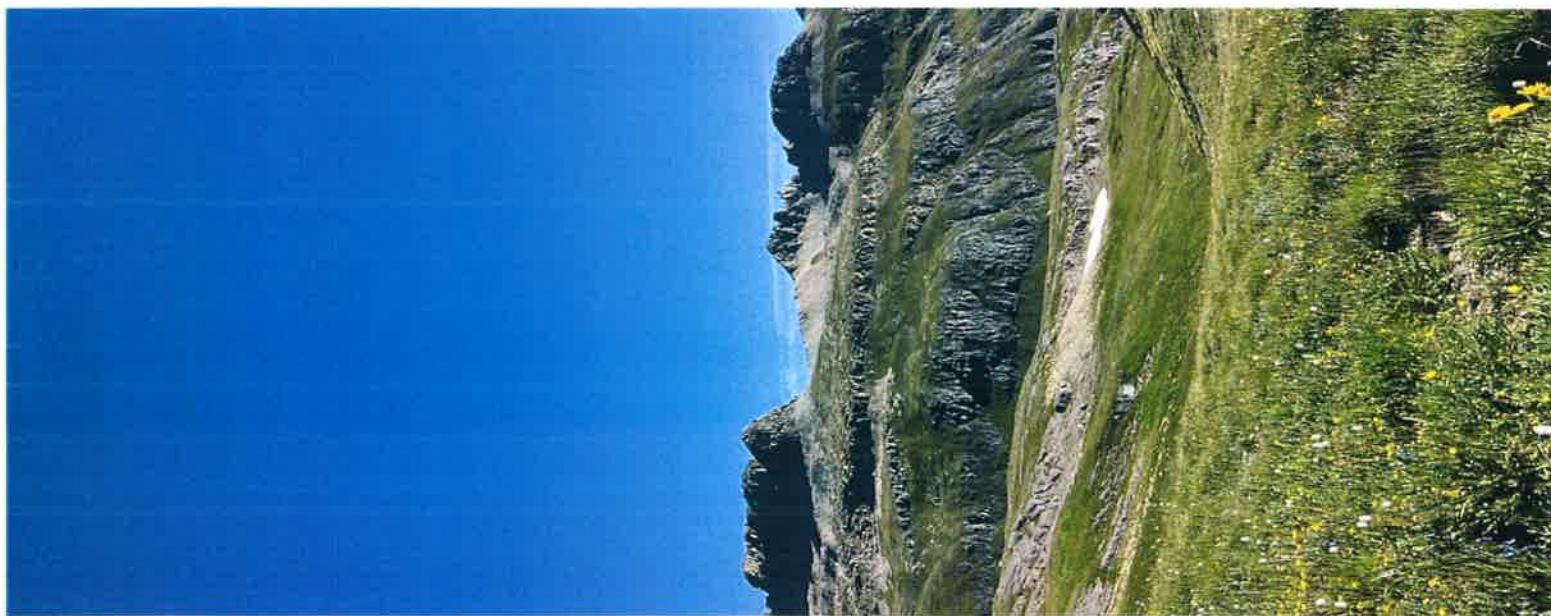
As our communities continue to experience rapid growth many of our sustainability goals are becoming more difficult to reach. The plan aims to balance the actions and programs that are reducing our emissions and the inevitable growth driving them up. As our tourism economy, population, part-time visitor and construction numbers are increasing, we need to look at collaborative, creative, and progressive strategies to reach our goals. The incremental timeframe will help to integrate short-term, high priority action items with a sustainable long-term plan for our community.

## Measurable & Target-Oriented:

This plan is meant to support our community in reaching our goals & targets, aligned with Colorado's GHG emissions reduction goals, adopted in 2019 through Colorado's Climate Action Plan to Reduce Pollution (Colorado's House Bill 19-1261), which sets Colorado statewide goals to reduce:

- = 2025 greenhouse gas emissions by at least 26%
- = 2030 greenhouse gas emissions by at least 50%
- = 2050 greenhouse gas emissions by at least 90%

Colorado State goals use 2005 as a baseline year. Our region started tracking GHG emissions in 2010 and in this plan will use 2010 as our baseline year to measure progress towards these goals.



## Continued...

### **Climate Action Mitigates Risk and Creates Opportunities:**

It's no secret our climate is changing. Already we see less yearly snowfall, increased wildfire frequency and severity, and temperatures which continue to rise. Because much of our livelihood relies on our interactions with our shared landscape, these changes endanger us all. Our collective response to climate change not only mitigates risk, but creates new opportunity for residents, businesses, and visitors. Opportunities vary across sector, yet no sector is exempt. In other words, no matter how you engage with and participate in our community, this CAP provides an avenue to reduce GHG emissions, save money and improve our social environment!

### **Co-Benefits:**

Each of the actions defined later in this plan have been evaluated to determine if they provide additional co-benefits beyond GHG emissions reductions. These co-benefits include promoting equity, fostering economic sustainability, improving local environmental quality, enhancing public health and safety, and building resilience. Actions promoting equity are a targeted response to existing inequalities in our region and ensure that resources and opportunities are dispersed equitably. Fostering economic sustainability refers to promoting sustained economic growth and reinvestment in the region. Actions improving local environmental quality have a tangible positive impact on the local environment. Enhancing public health and safety refers to supporting local health through elements such as air, water and food quality that have significant impacts on public health and create a safer community. Resilience means equipping our community with the ability to cope with change. Building resilience strengthens our ability to adapt to a changing climate and be flexible in a changing world with more natural disasters and weather anomalies.



### **Adaptation and Mitigation:**

Responding to a climate that is already changing requires adaptation of infrastructure, policies and societal norms in addition to mitigation strategies. Many actions listed in this plan focus on mitigating GHG emissions and simultaneously increase our resilience so we can adapt to the changes that are already happening. Both strategies of adaptation and mitigation aim to preserve the wellbeing of present and future generations in a changing world.

## Continued...

### **Climate Action Plan and Compass Master Plan Comparison**



In 2022 the Town of Silverton completed its Compass Master Plan, a document that will serve as a guiding force for the community over the next 10 years. The Compass Master Plan and the regional Climate Action Plan have many overlapping initiatives, including local renewable energy generation, investments in local workforce housing, safer streets, upgrading the wastewater treatment facility, improved energy efficiency and more. Overall, both plans recognize the benefit of increased resilience, investments that improve quality of life for all residents and overarching intentions changes that preserve the integrity of the community.

The 2022 Compass Master Plan recognizes that the Silverton community values connection to nature, and their agency, safety and a healthy environment, and the ability to make a difference and see the impact of their actions in a tightknit community. These foundational values align with those of many rural and remote mountain communities across the Sheffels Energy Board region.

The Climate Action Plan identifies dozens of strategic actions that can be taken locally to do our part to reduce emissions. These actions recognize our connection to a global community and the intent to preserve our ability to live locally in the context of a changing climate. These actions support triple bottom line solutions to climate change, supporting environmental, economic, and social sustainability for our region.

Like many mountain communities, increasing affordable housing opportunities is a high priority. This reduces transportation emissions and allows residents to live where they work. The master plan acknowledges the need for prudence around big investments, as should be the case for any capital investment. Considering the greenhouse gas emissions impact during the building process for new development and using the most appropriate and sustainable materials and technologies in this process is important. This is specifically referenced in the Master Plan action EB3, "Factor in future air and water quality measures into the building design for new and redevelopment projects."

## Accomplishments

We want to recognize the climate action that has been occurring in Silverton and San Juan County long before we started the process of developing this plan and GHG analysis. Key accomplishments from recent years include:

### 2022:

- The Town of Silverton received an EPA Brownfields Grant for the environmental cleanup of the Lackawanna Mill Site, River Corridor, and future affordable housing townsite.
- Town of Silverton partnered with CDOT and a local landowner to restore a wetland area and allocated \$63,371 to the project.
- The Department of Local Affairs (DOLA) awarded the Town of Silverton \$612,849 through the 'Main Street, Open for Business' Grant to help preserve eight buildings through façade improvements, while looking toward the future of this National Historic District with a number of energy efficiency upgrades including windows and solar panels. Four businesses installed solar arrays on their rooftops as a result of this grant.
- The Town Board of Trustees committed to becoming a Dark Sky Community and pursue a formal designation.
- The Town of Silverton completed the Compass Master Plan.

### 2023:

- The Town of Silverton committed \$27,000 to conduct a wetland inventory in town.
- Rural Energy Prize Awarded to Team GOLD to join the regional climate plan, promote beneficial electrification, create a resiliency plan and begin exploring renewable grid resiliency.
- Grow Dome Grant awarded through Area for Aging installed a 42' Grow Dome and funding a Master Gardener position for three years at the Senior Center supported by the Town of Silverton. This project will provide seniors with fresh food year-round.
- San Juan County and The Town of Silverton are included in the Regional EV Readiness Plan.

### 2024:

- D&SNGR converts the last of its coal fired engines to diesel and recycled motor oil, a process that began in 2020 in the wake of 2018 wildfires caused by coal fire sparks



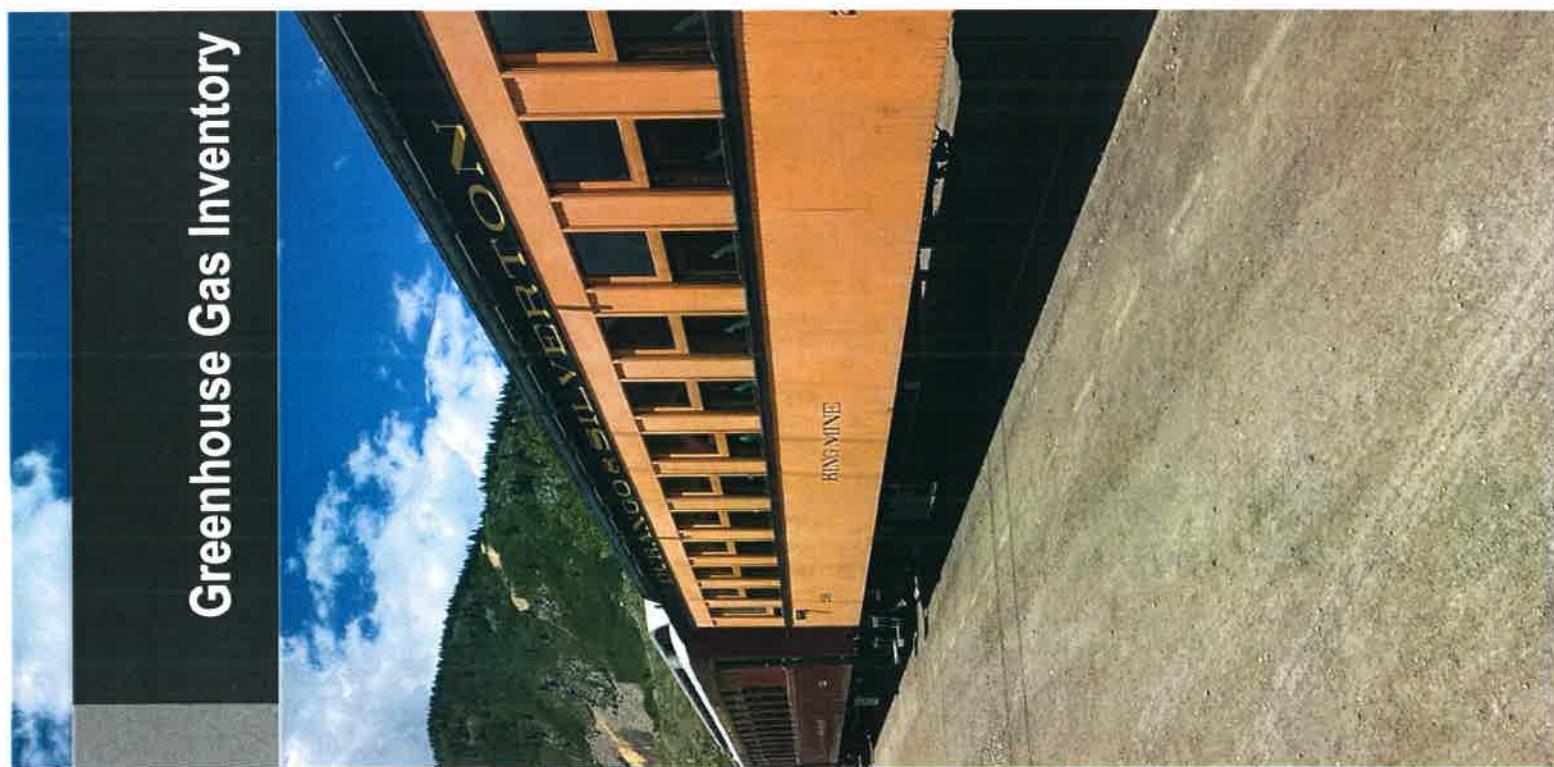
## Greenhouse Gas Inventory

### Overview:

The Sneffels Energy Board established a baseline GHG Inventory based on 2010 for San Miguel and Ouray County data from which to track progress towards emission reduction goals. Before this time, community-wide utility use and emissions were unknown, and some governments were not yet tracking their own utility use. This 2010 process established a baseline GHG Inventory and a process for tracking resource consumption and associated emissions.

In 2020 we switched our inventory methodology to ICLEI's ClearPath tool. This online tracking and analysis tool is the leading platform for completing GHG inventories, forecasts, climate action plans, and monitoring at the community-wide or government operation scale. Through ClearPath our inventory is directly comparable to other communities across the U.S. and around the world, including a number of similar rural mountain towns.

The Durango-Silverton Train is a unique factor in that no other community in the region has a train. The D&SNGR train serves as a tourist attraction and historical infrastructure. While the train historically operated on coal, in recent years it has switched its fuel to recycled motor oil and diesel. Emissions calculations were based on fuel use estimates from articles featuring D&SNGR and comparable case studies.



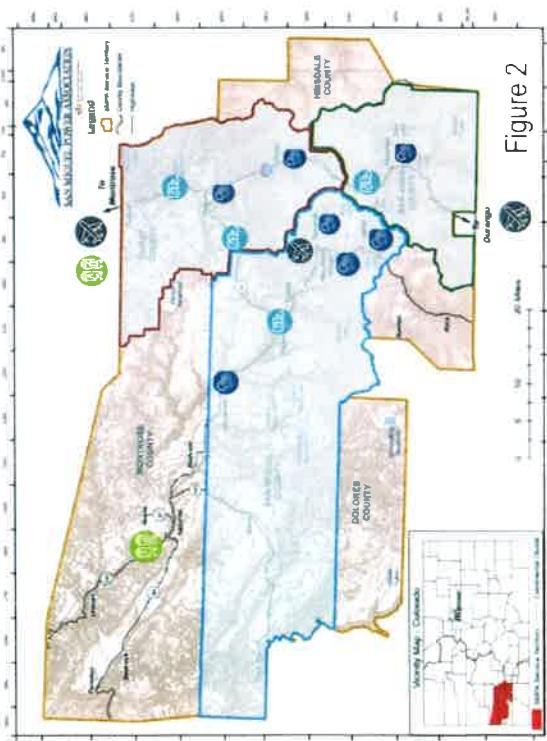
# Our Regional GHG Inventory

## Geographic Boundary & Scopes:

We calculate emissions associated with San Miguel, San Juan, and Ouray Counties, including electricity production, building energy and other uses of utilities, vehicle and airline transportation, food consumption, waste, and material use. Scope 1 and 2 emissions sourced from directly within our boundaries are included in our inventory in accordance with the GPC. We also include some Scope 3 emissions for services located outside of our county boundary recognizing that these are still key to the operations of our remote region. For example, waste transported to landfills and recycling facilities in other counties, the Montrose Regional Airport of which 75% of emissions are associated with travelers to SMC and OC, and food consumption, all fall within the scope 3 category. Not including these emissions can greatly skew the reality of emissions associated with our communities. It is important to recognize that successfully reducing GHG emissions will also require action at the state and federal policy-making levels. For this the SEB continues to prioritize highly collaborative planning and programming to better address the scope 3, and other complex, region wide emissions sources.

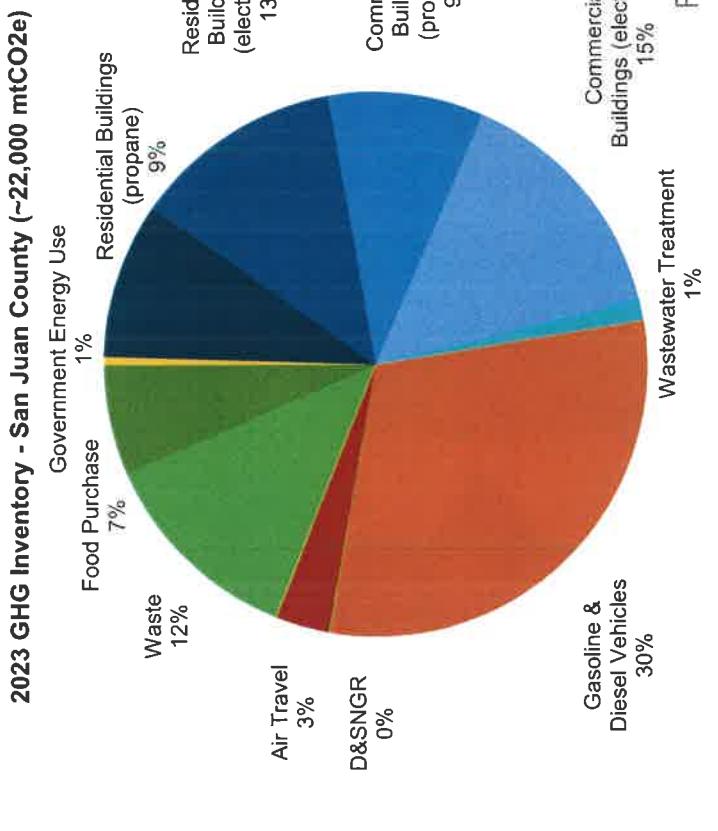
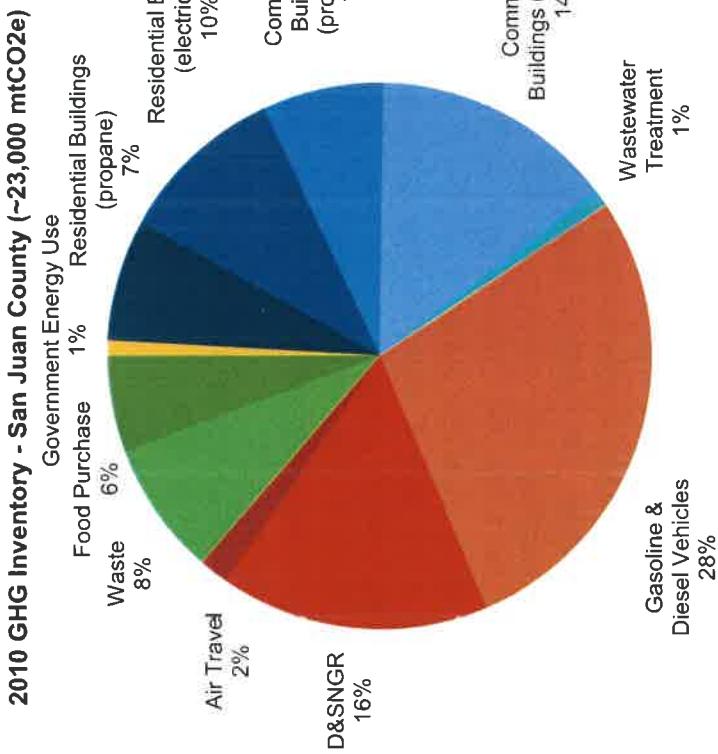


Figure 1 <https://www.epa.gov/greenhousegas/greenhouse-gases-eq>



# Our Regional GHG Inventory

## Sources of GHG Emissions:



Buildings produce the majority of our GHG emissions at 46% (22% residential, 24% commercial in 2023). Reducing GHG emissions associated with buildings remains our highest priority.

Transportation related GHG emissions from vehicles and air travel account for 33% of SJC emissions. A full 30% of emissions come from vehicle use. Air travel includes a small percentage from the Durango Airport (DRO). The D&SNGR trains used coal for many years. In 2010 this made up 16% of SJC emissions. Switching fuel sources to diesel and recycled motor oil in recent years has greatly decreased the emissions impact from the trains. Only 50% of calculated D&SNGR emissions have been allocated to SJC.

We account for major material production aspects of our GHG emissions as well, including food, fuel production and waste, which account for the remaining 19% of our emissions. As a remote, rural region with a tourist-based economy, tracking these emissions is important to us, as we recognize our responsibility to reduce our overall contribution to global emissions.

# Our Regional GHG Inventory

GHG Inventory

## Forecasting: Business As Usual

### Business As Usual - San Juan County

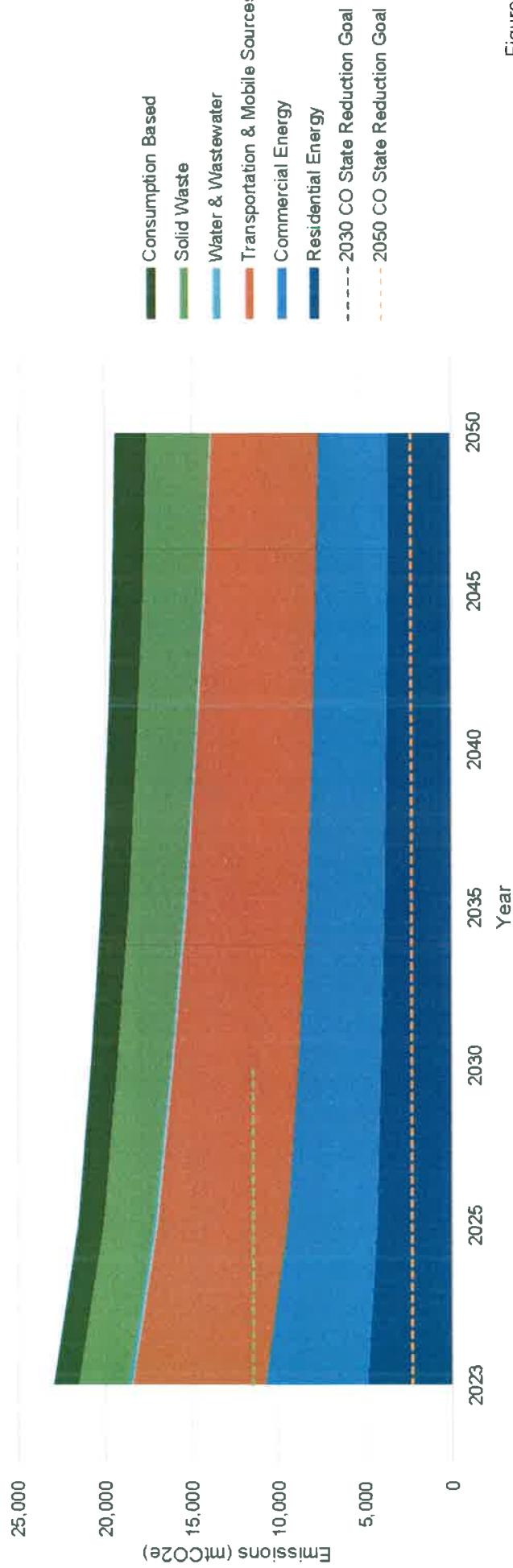


Figure 5

This "business as usual" forecast includes TriState's emission reduction promises detailed in their Responsible Energy Plan – 50% renewable supply by 2024, and 100% renewable supply by 2040. Though this trajectory will noticeably reduce our emissions associated with grid supplied electricity, it will not bring our region in line with either 2030 or 2050 GHG reduction goals without implementing additional strategies. The increasing trend of GHG emissions is due to a growing population. While the rate of this growth is predicted to decrease it continues to impact all sectors.

Fortunately, because we have the support of both SMPA and TriState in the renewable energy transition, we can focus on reduction strategies outside of grid supplied electricity, namely local renewable energy production, beneficial electrification, waste reduction, transportation, and consumption-based emissions (which includes waste, food, and cement).

Contact [kendra@ecoactionpartners.org](mailto:kendra@ecoactionpartners.org) for details on the calculations and assumptions made in these forecasts.

# Our Regional GHG Inventory

## Forecasting: Moderate Reduction Pathways

### Reduction Scenario - San Juan County

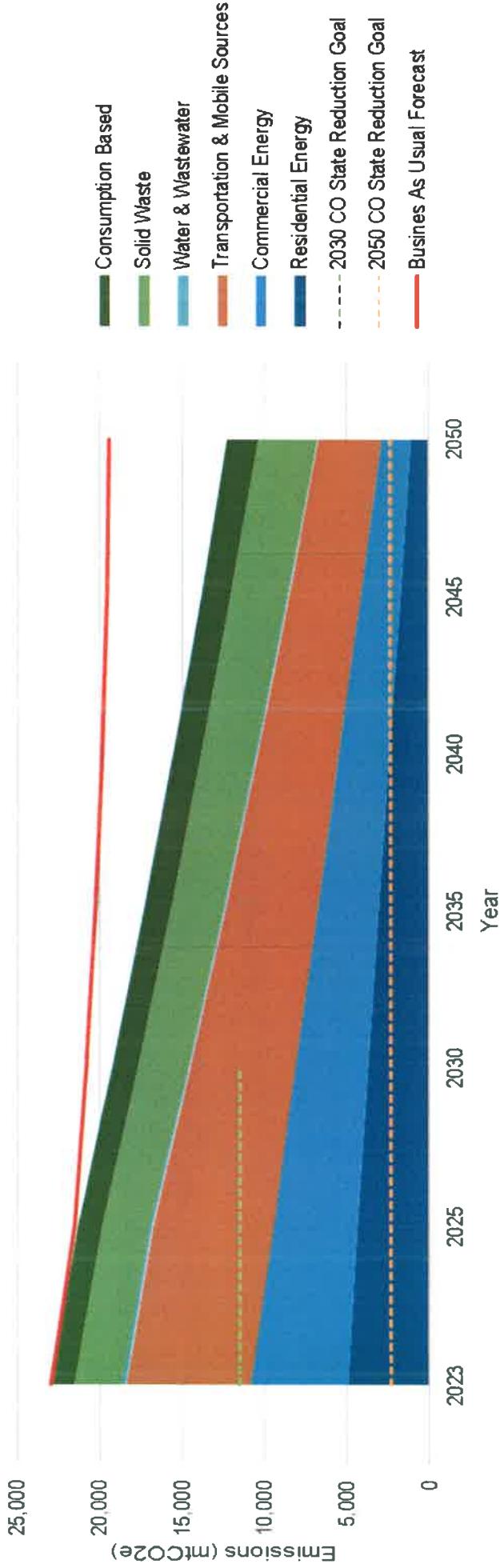


Figure 6

This chart displays the combined effects of moderate high-level and localized reduction strategies, including increased residential and commercial solar production, EV adoption, conversion of residential and commercial spaces from propane to electric heat pumps or boilers, improved building energy codes, and other actions outlined in this plan. This pathway shows that we can significantly reduce our GHG emissions associated with both residential and commercial energy use. However, if our population and tourism economy continues to grow at the current pace, we will need to implement creative comprehensive policies and actions in order to reduce our emissions associated with commercial buildings, transportation, and material consumption to reach our goals.

Contact [info@ecoactionpartners.org](mailto:info@ecoactionpartners.org) for details on the calculations and assumptions made in these forecasts.

# Introduction to the Climate Action Plan

## Objective:

Broad scale or big picture goals and changes that must occur to reach our regions' GHG emissions reduction goals.

### Action:

Smaller scale projects, programs and policies that contribute to achieving an objective.

### GHG Reduction Potential:

A measure of the GHG reduction potential for each objective and action. These values were derived from ICLEI's ClearPath model and simplified to a value of 1-4, with 4 having the highest potential for GHG reduction.

GHG Reduction Potential	MT CO2 Reduced If Action is Fully Implemented
1 = ☀	4-1900 Mt by 2050 – Marginal
2 = ☀☀	1900 -3200 Mt by 2050 – Small
3 = ☀☀☀	3200-9600 mt by 2050 – Medium
4 = ☀☀☀☀	9600-46000 Mt by 2050 - Large

ACTION	GHG REDUCTION POTENTIAL			CO-BENEFITS			TIMELINE	PARTNERS
	1	2	3	=	\$	+		
Action Listed Here	☀	☀☀	☀☀☀	=	\$	+	Years Expected	●

### Co-Benefits:

Additional positive impacts associated with achieving our goals. Nearly all objectives and actions within this plan have co-benefits. These benefits were determined through reviews of academic research, case studies from similar regions, and will be further informed by community engagement through 2022. These co-benefits are further defined on page 10. The CAP supporting documents webpage includes a list of supporting literature for co-benefits of various objectives and actions.

#### Promotes Equity

#### Fosters Economic Sustainability

#### Improves Local Environmental Quality

#### Enhances Public Health & Safety

#### Builds Resilience

### Timeline:

Amount of time in years expected to complete an objective or action:  
Current, 1, 3, 5, 10, Ongoing

### Partners:

Community stakeholders who can and are likely to contribute to achieving an objective or action

### Silverton And SJC Notes :

We have included high level notes for each action with existing programs, identified opportunities, and a comparison to the Silverton Compass Master plan.

# High Impact Sectors

## Introduction

**Disclaimer:** As a reminder, this document is an appendix, and we have highlighted actions here that are of the highest priority to Silverton and SJC. However, please refer to the original document for additional action items, context and details. Additionally, actions that reference partners outside of SJC are being addressed on a regional level, whereas actions that strictly mention SJC and its local partners are specific to that jurisdiction.

The CAP addresses emissions, accomplishments, objectives and goals across 8 sectors that are closely tied to our regional emission reduction and sustainability goals.



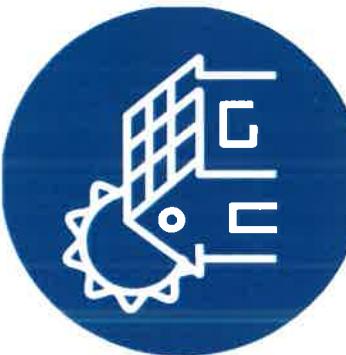
## Community Engagement & Policy

Stakeholder partnerships and ownership of policy and decision-making



## Energy Supply

Generation of our community's electricity



## Building Energy Use

Energy used by commercial and residential buildings



## Transportation

Emissions associated with on-road movements and aviation operations



## Waste

Trash, recycling, and compostable materials; landfill reduction and diversion



## Food

Emissions from food production, transportation, and storage



## Water

Water supply, use pumping, and treatment and watershed health



## Land

Land use and health, sequestration opportunities, and agricultural use

# Community Engagement & Policy

Since joining the Sneffels Energy Board in the fall of 2023, Silverton and San Juan County have increased access to regional partnerships. These partnerships are vital to rural and remote communities and each community has its unique strengths and challenges. Silverton and San Juan County will be able to learn from best practices adopted by neighboring communities and share their own strategies for reducing GHG emissions.

**Objective 1:** Increase community engagement and continue to prioritize collaborative and intersectional decision making and action implementation.

ACTION	GHG REDUCTION POTENTIAL	CO-ENGAGEMENT	TIMELINE	PARTNERS	SJ. VERTON & SJJC NOTES
Continue to participate in regional collaboration of local governments, stakeholders, and utilities to drive regional clean energy transition & GHG emissions reduction.			Ongoing	SEB	Silverton & SJJC representatives joined the SEB for the first time in the fall and winter of 2023.
Increase community-level outreach and engagement with implementation of the regional Climate Action Plan.			Ongoing	EAP, SEB, community organizations, business organizations	EAP will collaborate with government staff and community leaders to determine the most effective outreach strategies.

KEY



GHG Potential 1-4  
 Promotes Equity



Environmental Quality  
 Public Health & Safety

Builds Resilience

# Energy Supply

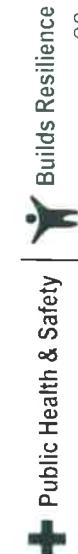
## Energy Supply

Silverton has a mixed energy supply between electricity, propane, and coal. Like many communities across the San Juan Mountains, it has a history of frequent power outages due to avalanches, winter storms, wind events, and the generally extreme natural environment. Identifying and creating pathways to produce energy locally would not only lower Silverton's GHG impact but also create opportunities to invest in resiliency. This has been identified as a high priority for the Silverton community.

### Objective 1: Increase the percentage of electricity provided by renewable energy sources.

ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS	SILVERTON & SJC NOTES
Establish a local renewable energy generation target and plan to achieve it.		 	3-10	SMPA	ENAD1: Conduct an energy assessment to better understand the availability of renewable energy sources (geothermal, micro and pumped hydro, solar). Update the existing 2010 EPA Wasterock SolarAssessment. (Public Works).
Identify and eliminate barriers to local renewable energy production.		 	3	SMPA, WCU	ENAD2: Create redundancy in power by creating more than one connection to San Miguel Power supply and by harvesting Silverton's own renewable energy within the Caldera.
Advance regional grid flexibility to enable a modernized renewable electricity supply.		 	5-10	SMPA	CA3: Expand electrification of the existing grid. CA4: Implement Broadband improvements to include improved speed, reliability, and redundancy.

KEY



Builds Resilience

20

Environmental Quality

Public Health & Safety

Economic Sustainability

Promotes Equity

# Energy Supply

ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS	SILVERTON & SJC NOTES
Install renewable energy capacity on government buildings		 	1-5	SMPA	CC1: Develop Capital Improvements Plan
Incentivize and promote net-metered solar systems on residential and commercial rooftop or pole mount locations	 	 	Ongoing	SMPA, Solar Installers, HOAs	EB4: Create incentives for local businesses and residents for moving to renewable energy ENADD3: Create incentives for local businesses and residents for moving to renewable energy EAP notes: Expand existing commercial grant programs and encourage use for renewable and efficiency projects
Encourage community participation in SMPA Totally Green program for electricity not covered by local renewable energy production	 	 	1	SMPA, WPL, ROCC, Rotary Club Telluride, HOAs	Support town and county government buildings in going Totally Green. Support businesses and residences with buildings unfit for solar installation to do the same.

KEY



GHG Potential 1-4    Promotes Equity



Environmental Quality



Public Health & Safety



Builds Resilience

# Building Energy Use

One notable difference between Silverton and other communities across SMC & OC is that Silverton does not have natural gas. Instead, propane is used to fuel generators and coal is still used by some government buildings and residences. As such, Building Energy Use Objective 3 has been changed to reference propane rather than natural gas. Implementing beneficial electrification to reduce the emissions of building energy use will have to go hand in hand with an increased renewable energy supply.

At the publication of this document in May 2024, EcoAction Partners is in the process of creating a Beneficial Electrification Plan for Silverton and San Juan County. This plan will include more specific action items for how to implement beneficial electrification equitably and strategically in San Juan County. This model will be used for other member SEB communities once the plan is complete.

## Objective 1: Beneficial electrification of buildings

ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	CO-BENEFITS	PARTNERS	SILVERTON & SJJC NOTES
Transition building mechanical equipment and appliances from fossil fuels to electricity through incentives, outreach and building codes. Include: space and water heating, appliances, and other equipment.					EB3: Factor in future air and water quality measures into building design new and redevelopment projects.

## KEY



Economic Sustainability  
= Promotes Equity

Environmental Quality

Public Health & Safety  
+ Builds Resilience

# Building Energy Use

## Objective 2: Continue to improve building energy codes for new construction, remodels and additions

ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS	SILVERTON & SJC NOTES
Continue to coordinate regional alignment of energy codes and 'beyond code' preferences.			Ongoing	EAP, all regional governments	EAP: 2024, applying for a Building Code Cohort Grant to support the region.
Facilitate education for contractors, architects and property managers.			Ongoing	EAP, SMPA, BHE	EAP hosting workshops with regional stakeholders to understand specific challenges and propose solutions.

## Objective 3: Propane efficiency

ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS	SILVERTON & SJC NOTES
Provide technical assistance for propane heating alternatives.			Ongoing	EAP, Mechanical Contractors	Low-income financial support identified as a key need.

KEY



# Building Energy Use

## Objective 4: Reduce energy consumption in rentals, apartments and multifamily buildings

ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS	SILVERTON & SJC NOTES
Encourage electrification of existing and new affordable housing and other multifamily developments.			1-5	All regional governments, SMPA, EAP	ENAD4: Better market and utilize existing energy efficiency programs and expand education on the ease of upgrading, including home heating and energy retrofits. Create educational opportunities around existing new or retrofitted Silvertown homes that are fully electric.

## Objective 5: Improve the energy efficiency performance of existing buildings

ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS	SILVERTON & SJC NOTES
Continue to provide and educate community members on energy efficiency and renewable energy incentives available from SMPA, BHE, and municipalities.			Ongoing	SMPA, EAP	ENAD4: Better market and utilize existing energy efficiency programs and expand education on the ease of upgrading, including home heating and energy retrofits. Create educational opportunities around existing new or retrofitted Silverton homes that are fully electric.

## Objective 7: Others...

ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS	SILVERTON & SJC NOTES
Continue to host and expand EcoAction Partners' Green Business Program awarding and highlighting business that achieve energy efficiency and sustainability thresholds.			Ongoing	EAP, local businesses	2024, EAP presented at first annual Silvertown Business Summit to share cost-saving benefits of the program.

KEY



GHG Potential 1-4  
= Promotes Equity



Environmental Quality  
+ Public Health & Safety



Builds Resilience

# Transportation

Increased housing, specifically affordable housing, allows more people to live where they work and cut down on commute time and emissions. The housing section of the compass master plan states that “Housing affordability and choices plays an essential role in sustaining the social and economic fabric of Silverton,” and lists five key strategies to address affordable housing needs. The Compass Master plan also notes that place-based investments such as improved pedestrian and bike infrastructure for better connectivity across town is a way to create and strengthen local assets.

## Objective 1: Decrease vehicle travel

ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS	SILVERTON & SJC NOTES
Increase affordable and available housing for local workers.			Ongoing	All regional governments	See full housing section of 2022 Compass Master Plan.
Reduce in-community vehicle use by residents and visitors.			5	All regional governments - SMART, Southwest Regional Transit Coordinating Council	CB3: Improve town pedestrian and bicycle infrastructure to create uninterrupted connectivity throughout town including: a. Improved sidewalks throughout town b. Implement 2020 Blair Street Sidewalk Improvements c. Bicycle connections d. Wayfinding signage e. Pedestrian scale lighting

## Objective 2: Increase use of electric vehicles

Silverton and San Juan County are included in the [Regional Electric Vehicle Readiness Plan](#) published in 2024. An inventory of existing and potential EV charging locations as well as an evaluation of community and government needs for each jurisdiction is included in the appendices of that document, along with more detailed actions around the electric vehicle transition.

### KEY

	GHG Potential 1-4		Economic Sustainability
	Promotes Equity		Environmental Quality
			Public Health & Safety
			Builds Resilience

# Transportation

## Objective 4: Other ...

ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS	SILVERTON & SJC NOTES
Address growth in recreational helicopter use. Consider legislation to guide helicopter use and improve data collection process to better understand emissions impact of increased flights.			1-5	SJC	Growth is expected in helicopter use in the next decade as the recreation environment changes, note impacts and opportunities to direct growth in a sustainable fashion.
Engage with D&SNGR to understand and address emissions and economic impacts.			3-5	SJC	Collaborate with D&SNGR as a stakeholder for addressing visitor impacts and other applicable CAP actions.

KEY



# Waste & Material Use

As a tourism-based community, Silverton collects waste for both residents and visitors passing through. Deploying strategies that reduce the burden of waste (both the volume and its associated costs) from the residents of Silverton is a priority for the community. Additionally, as regional partners develop and expand composting programs, Silverton will benefit from adopting strategies that increase compost collection and reduce landfill waste.

**Objective 1: Reduce the overall volume of waste transported to landfills with strategies including reduce, reuse, recycle, repurpose and composting.**

ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS	SILVERTON & SJC NOTES
Support restaurants and businesses with waste reduction.			Ongoing	EAP, all regional governments	EAP's Green Business Program has strategies and resources to support businesses with waste reduction. Bruin plans to have their compost pickup program available in Silverton in 1-3 years.
Create resources to manage visitor waste habits. Utilize educational campaigns, best practices and streamlined information and protocols to impact waste culture.			1-3	Bruin Waste, Visitor Center, Silverton, SJC, EAP	As a tourism community, Silverton collects more waste than that produced by residents. Strategies might include lifecycle education and behavioral change campaigns.

**Objective 2: Increase composting use and capacity in the region**

ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS	SILVERTON & SJC NOTES
Increase community compost programs, individual residential composters and encourage participation in composting programs.			1-5	Waste Management, Bruin, 3XM, EAP	Silverton supported Bruin Waste Compost Grant. Bruin plans to have their compost pickup program available in Silverton in 1-3 years.

KEY



GHG Potential 1-4  
= Promotes Equity

Environmental Quality

Public Health & Safety

Builds Resilience

# Food

While agricultural production is not a key asset of San Juan County, finding ways to grow food locally in gardens and grow domes and to support small local producers through farmers markets is a way to reduce the emissions from transporting food over long distance. This also supports local resiliency by promoting food security through a local food source for the remote region.

## Objective 1: Increase local organic & natural food production and consumption.

ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS	SILVERTON & SJC NOTES
Continue to increase local food supply and consumption		  	Ongoing	Regional farmers markets, food co-ops and agricultural producers, GFC	Silverton farmers market held Tuesday mornings from June-August Good Food Collective an ally eager to collaborate.
Incentivize and explore innovative methods to expand the growing season, increase production, and implement alternative growing strategies (greenhouses, hydroponics, permaculture, etc.)		  	3-5	San Miguel Basin Extension Office	2023 Grow Dome Grant awarded to support Silverton seniors for 3 years Opportunity to replicate this project

## KEY



Promotes Equity  
 GHG Potential 1-4



Economic Sustainability  
 Environmental Quality



Public Health & Safety  
 Builds Resilience

# Water

Investing in necessary sewer system and water supply infrastructure upgrades is a clear priority for Silverton based on the 2022 Compass Master Plan. Co-benefits of these investments include improved local environmental quality, enhanced public health and safety, and building resilience. These master plan goals integrate well with CAP goals of reducing water consumption and improving watershed health and security. Upgrades in efficient infrastructure and water tracking data will allow SJC and Silverton residents to make informed decisions as stewards of this important resource.

## Objective 1: Reduce water consumption from municipal and industrial uses

ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS	SILVERTON & SJC NOTES
Track water and wastewater use data, associated energy use, and impacts of conservation/drought mitigation measures.			Ongoing	Municipal water departments	Water supply has been an ongoing concern in recent years with existing vulnerable surface water sources and drought. Implement Wastewater System Rehabilitation Project (new treatment plant and collection).
Evaluate and implement system methodologies to reduce water-associated energy use.			1-3	Municipal water departments	CA1: Implement Wastewater System Rehabilitation Project (new treatment plant and collection). Ongoing deferred water system maintenance and accommodation of growth are also high on the list of water system priorities. CA2: Improve/maintain the town's water supply infrastructure and assess longevity of accessing water table via town operated wells to address long term water security.

KEY



# Water

Water

## Objective 2: Improve watershed health and security

ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS	SILVERTON & SJC NOTES
Continue to develop, adopt, implement and enforce municipal drought mitigation plans.			Ongoing	All regional governments	Utilize and maintain drought mitigation plan.
Support efforts of organizations (local, regional, and statewide) that focus on water security and watershed ecological health.			Ongoing	SMWIC, UWP, MSI	Animas River Watershed stakeholders are those downstream including San Juan County, La Plata County, and San Juan County, NM.

## KEY



## Land Use

Much of the land in San Juan, San Miguel and Ouray Counties is managed by the NFS or BLM and is an asset in its beauty, recreational access and carbon sequestration capacity. Protecting this resource that provides so many benefits is a priority across the region. Working with land stewardship partners to achieve common goals would benefit both Silverton locals and the whole region. At the time of this publication, the updated Silverton Land Use and Development Code (LUDC) has not yet been published. Please refer to those documents (to be published in Dec 2024) for additional guidance on land use. Community partners with expertise on and governance over land use decisions in San Juan County include: Mountain Studies Institute, San Juan Mountain Association, Great Outdoors Colorado, Bureau of Land Management, National Forest Service, Environmental Protection Agency, Colorado Parks and Wildlife, and US Forest Service. The Silverton Compass Master Plan identifies three goals related to land use: to build sustainability outdoor recreation management, assess and map current conditions, and create the capacity & foundation for collaborative conservation and long-term management.

**Objective 1: Increase the GHG sequestration and water retention capacity of land in the region.**

**Objective 3: Increase GHG sequestration capacity of trees and plant life in the region.**

Action	GHG Reduction Potential	Co-Benefits	Timeline	Partners
Increase measures to promote and protect healthy forests.			Ongoing	SMA, all regional governments, MSI, SJMA, GOCO, CPW, EPA, CHRF, USFS
Implement programs, develop incentives and encourage the planting of trees appropriate for specific ecological zones.			Ongoing	All regional governments, Seas for Trees, MSI, SJMA, GOCO, CPW, EPA, CHRF, USFS
Encourage landscaping according to best practices for local ecological zone.			Ongoing	All regional governments, building departments, MSI
Improve wetland protection.				All regional governments, SMA, TI, SMWC, MSI, SJMA, GOCO, CPW, EPA, CHRF, USFS

KEY



# Conclusion

We want to thank all the key community partners in Silverton and San Juan County who helped to develop this plan and understand the importance of pursuing collaborative climate action as we strive for a more sustainable future for our region.

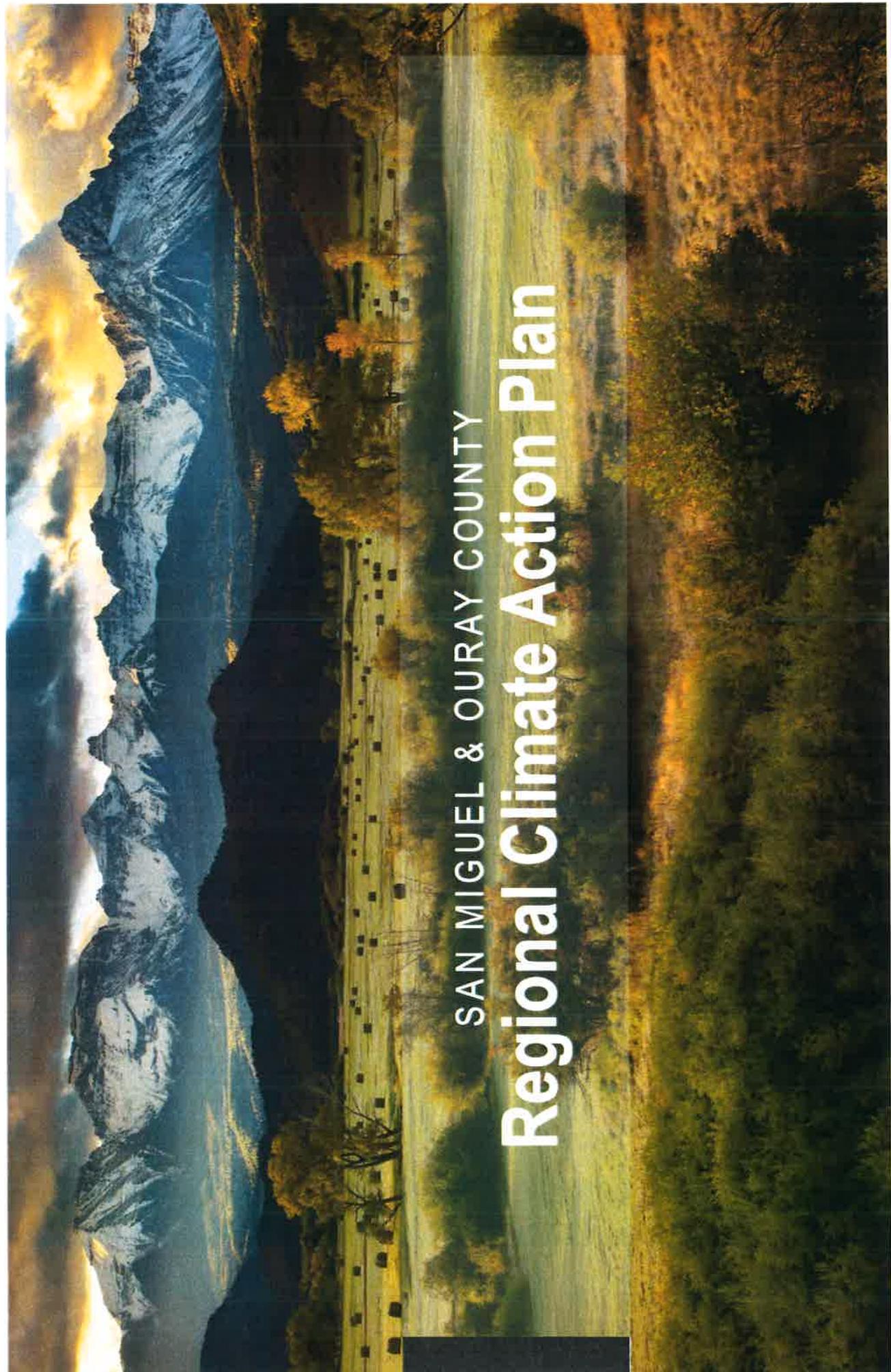
This plan is meant to respond to climate change in a way that not only mitigates risk, but creates new opportunities for residents, businesses, and visitors. We are excited to approach the next decade of implementation, and support Silverton and San Juan County in maintaining an equitable, resilient, sustainable community.

If you have questions about the development of this plan, or want to get involved please reach out at:

 @ecoaction\_partners

 info@ecoactionpartners.org

 (970)-728-1340



SAN MIGUEL & OURAY COUNTY  
**Regional Climate Action Plan**



Presented by Sneffels Energy Board  
Prepared by EcoAction Partners

# Call to Action



## San Miguel and Ouray County Residents and Visitors:

We are excited to present our regional collaborative Climate Action Plan in an effort to continue our regions' shared climate leadership. This document is meant to be a working roadmap to advance projects and programming that allow our communities to pursue economic, environmental, and socially beneficial solutions to reducing our greenhouse gas emissions.

Now more than ever we are experiencing the adverse effects of climate change on our community. Rising temperatures, a reduced snowpack, and an increased number of wildfires have all demonstrated the unprecedented risk that we are facing. This document is meant to be owned by the community. Success will come from the work of each of you. We all need to step up and demonstrate leadership by protecting the natural environment that makes our home so special.

In adopting this document, our region is re-establishing our commitment to igniting change through climate action and collaboration. We will champion local, state and federal policies that prioritize the health of our environment. We will create more inclusive planning and programming through increased community empowerment and engagement. We will work with SMPA as they move towards their goal of 80% renewable energy by 2030. We will demonstrate the power that local action can have on a broad scale by setting an example of collaborative and proactive climate actions. We recognize that local action can spark change and have a global impact.

This plan lays out our commitment to taking action across all greenhouse gas emissions sectors applicable to our region: community engagement and policy, energy supply, building energy use, transportation and aviation, waste, food, water, and land use. We are calling on you to take action with us.

Sneffels Energy Board,  
Facilitated by EcoAction Partners



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# Key Acronyms and Partners



## Partners

Programs:	
BHE	Black Hills Energy
EAP	EcoAction Partners
ICLEI	Local Governments for Sustainability
MTJ	Monrose Regional Airport
OC	Oury County
PCI	Pinehead Climate Institute
ROCC	Ridgway Ouray Community Council
SEB	Sneffels Energy Board
SMC	San Miguel County
SMA	Sheep Mountain Alliance
SMART	San Miguel Authority for Regional
Transportation	
SMPA	San Miguel Power Association
TEX	Telluride Regional Airport
TL	Telluride Institute
TMV	Town of Mountain Village
Tri-State	Tri-State Generation & Transmission
WCU	Western Colorado University
WPL	Wilkinson Public Library
Commissions, Committees & Boards:	
ACCO	Association of Climate Change Officers
AQCC	Air Quality Control Commission
CAST	Celeste Association of Ski Town
CC4CA	Colorado Communities for Climate Action
OSRC	Ophir Self Reliance Committee
OWC	Ophir Water Commission
RMCO	Rocky Mountain Climate Organization
CARE	Colorado Affordable Residential Energy Program
PES	Payment for Ecosystem Services
REMP	Renewable Energy Mitigation Program
TEMP	Telluride Energy Mitigation Program
Other	
CAP	Climate Action Plan
CSA	Community Supported Agriculture
CSG	Community Solar Generation
DSM	Demand Side Management
EVs	Electric Vehicles
GHG	Greenhouse Gas
GPC	Global Protocol for Community-Scale Greenhouse Gas Emission Inventories, 12-8-2014
IQ	Income Qualified
kWh	Kilowatt-Hour
LED	Light Emitting Diode
mtCO <sub>2</sub> e	Metric Tons of Carbon Dioxide Equivalent
OHV	Off Highway Vehicle
PUC	Public Utilities Commission
PV	Photovoltaic Solar
RECs	Renewable Energy Credits
RV	Recreational Vehicle
SAF	Sustainable Aviation Fuel
WWTP	Wastewater Treatment Plant

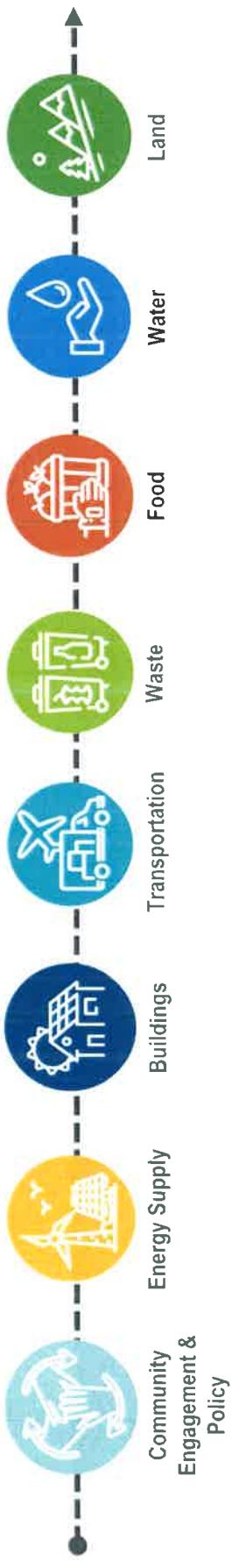
# Executive Summary

The Ouray and San Miguel County Regional Climate Action Plan was completed in 2021 and sets the stage for the next decade of climate action across our region. Successful implementation of the following 21 objectives and supporting actions will help our community continue to reduce our greenhouse gas emissions from our 2010 GHG emissions baseline, while we continue to see economic and population growth. We are looking ahead to goals of a 50% reduction in our GHG emissions by 2030 and a 90% reduction by 2050.

This plan will act as a roadmap for continued collaborative regional actions across the eight sectors of:

## Community Engagement & Policy, Energy Supply, Buildings, Transportation, Waste, Food, Water, and Land

This plan is a regional community working document. Though specific entities, governments, organizations and individuals might take the lead on certain actions, success will take deliberate partnership across our entire region. No one organization, department, or government is solely responsible for the execution of the actions listed in this CAP. This document will help guide intentional actions over the next 3-, 5-, and 10- years as we move towards a more sustainable future.



# Executive Summary



## Sneffels Energy Board

Recognizing the power of collaboration and leveraging grant funding, EcoAction Partners formed the Sneffels Energy Board in 2009 to address sustainability at a regional level. The SEB (formerly named the Western San Juan Community Energy Board), aims to reduce GHG emissions and consumption of valuable natural resources in the region through coordinated community engagement, project implementation, and policy change at both the local and state level.

The Sneffels Energy Board brings together local leaders to collaborate on setting and accomplishing regional sustainability goals. Partners of the Board meet quarterly to share information and experiences, design successful regional programs, identify new opportunities, and analyze progress.

The Board is made up of government and staff representatives from San Miguel and Ouray counties, the towns of Telluride, Mountain Village, Ophir, Norwood, Ridgway, and the City of Ouray as well as utility partners, San Miguel Power Association, Black Hills Energy, and a number of citizen group representatives.

The Board established regional sustainability goals and published the predecessor to this document, a collaborative Sustainability Action Plan, in 2010. They collect, analyze, and report on regional greenhouse gas emissions data and coordinate the implementation of regional action items to more efficiently reach regional goals. The group gathers and shares information from the Colorado statewide sustainability network and identifies key local priorities, partnerships, and climate solutions. The creation of this Climate Action Plan by the Board represents the ongoing regional commitment to collaborative climate action in support of a more sustainable future for our region.

# Welcome to the Ouray & San Miguel County Regional Climate Action Plan

## A Roadmap to our Sustainable Future:

This CAP is our regional roadmap for reducing GHG emissions and creating a sustainable thriving future. The plan is intended to guide policy makers, organizations, businesses, and individuals in community planning across the next decade. The plan creates a timeline for high priority, ongoing, mid- and long-term actions. We focused on high-level action items that will support the whole region in achieving our GHG emissions reduction goals while improving our social and economic conditions.

## A 10-Year Plan with Short- and Long-Term Goals and Recommendations... 1-, 3-, 5- and 10!

While looking ahead to 2030 and 2050 goals, our CAP presents 1-, 3-, 5-, and 10- year actions and goals to balance long-term planning with ongoing high priority actionable items. We have integrated opportunities that are newly advantageous to our region including beneficial electrification, additional energy production capacity within Tri-State, the decreasing cost of solar PV systems, and a growing local food supply and distribution infrastructure.

As our communities continue to experience rapid growth many of our sustainability goals are becoming more difficult to reach. The plan aims to balance the actions and programs that are reducing our emissions and the inevitable growth driving them up. As our tourism economy, population, part-time visitor and construction numbers are increasing, we need to look at collaborative, creative, and progressive strategies to reach our goals. The incremental timeframe will help to integrate short-term, high priority action items with a sustainable long-term plan for our community.

# Executive Summary

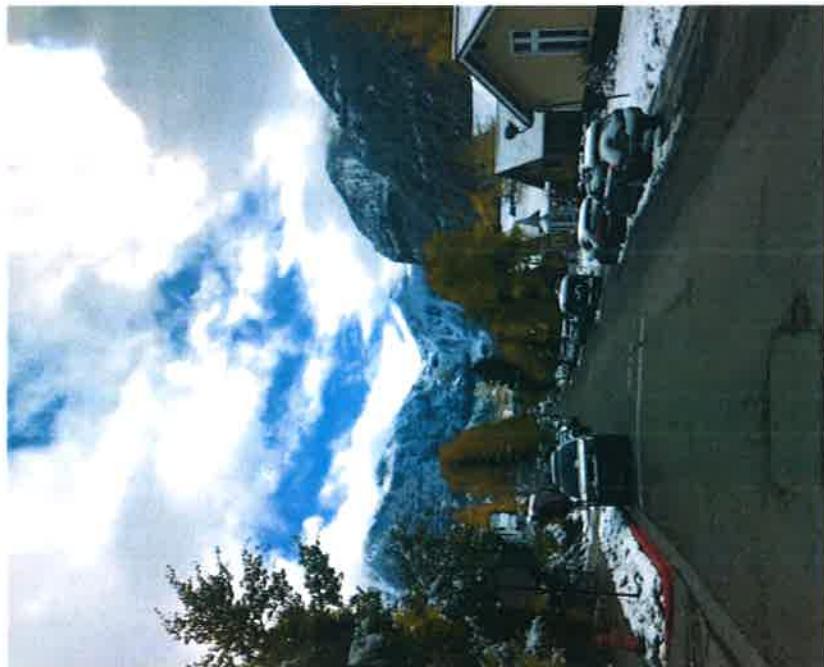
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## Measurable & Target-Oriented:

This plan is meant to support our community in reaching our long-term goal of a 90% emissions reduction by 2050. The goals outlined in this document are supported by state and federal goals and the international community's commitments that uphold the [Paris Climate Agreement](#) to "limit global warming to well below 2° preferable to 1.5 degrees Celsius, compared to pre-industrial levels." We have shifted away from previous targets tied to per capita data. The complex nature of accounting for a variable seasonal visitor and part-time resident population makes it difficult to accurately evaluate per person values within each GHG emissions sector. For this reason, we are focusing goals on the tonnage of GHG emissions released per sector and overall consumption of resources.

Our goals & targets are aligned with Colorado's new GHG emissions reduction goals, adopted in 2019 through Colorado's Climate Action Plan to Reduce Pollution (Colorado's House Bill 19-1261), which:

- Sets Colorado statewide goals to reduce 2025 greenhouse gas emissions by at least 26%, 2030 greenhouse gas emissions by at least 50%, and 2050 greenhouse gas emissions by at least 90% of the levels of greenhouse gas emissions that existed in 2005.
- Specifies that Air Quality Control Commission (AQCC) will consider in implementing policies and promulgating rules to reduce greenhouse gas pollution, including the benefits of compliance and the equitable distribution of those benefits, the costs of compliance, opportunities to incentivize clean energy in transitioning communities, and the potential to enhance the resilience of Colorado's communities and natural resources to climate impacts.
- Directs AQCC to consult with the PUC regarding rules that affect the providers of retail electricity in Colorado.



# Executive Summary

Continued...



## Intended Use:

We envision several intended uses for this document. It is meant to act as a guide for planning and implementing sustainability initiatives over the next decade across the region. We designed this plan to represent the needs and priorities of the diverse stakeholder groups across the region, and hope this document is able to balance these interests and support the effective implementation of action items. The actions within this document represent more than GHG emissions reduction potential. The CAP looks at social, economic, and environmental benefits to our community and will support non-profits, community organizations, entrepreneurs, governments, individuals, and other groups in contributing to sustainable development in the region. We hope volunteers, educators, and citizens alike will use this document to find and contribute to ongoing and upcoming projects and programs. Some readers may want or need more technical information than others (e.g., Jurisdictional-specific actions identified, GHG emissions factors used in calculations, reduction estimate methodology, further resources, etc.), all of which is included in the Appendices and on the supporting [CAP webpage](#). Lastly, the plan documents and celebrates past accomplishments and the ongoing work of our regional partners in moving our community to a more sustainable future.

## A Comprehensive, Collaborative Approach: Stakeholder Engagement, Community Outreach, Analysis & Modeling:

From beginning to end, the creation of our Climate Action Plan has been a collaborative process. The SEB met monthly to review progress and provide feedback. Our contributors represent a wide group of stakeholders within our region, citizens and local politicians of varying backgrounds, ages, professions, passions, and expertise, and feel this document reflects the collective intention of our community. We have gathered community input through an extensive outreach process and with the support of the SEB have integrated the priorities of our community members into the document. Moreover, as a new ICLEI member, we enter a new era of climate modeling and action assessment. Though ICLEI's ClearPath tool we join a global network of communities sharing strategies and utilizing a set of scientifically recognized GHG assessment and planning tools. We look forward to continuing our growth and learning in partnership with local and global stakeholders to best serve our community's sustainability needs.

# Executive Summary

Continued...

## **Climate Action Mitigates Risk and Creates Opportunities:**

It's no secret our climate is changing. Already we see less yearly snowfall, increased wildfire frequency and severity, and temperatures which continue to rise. Because much of our livelihood relies on our interactions with our shared landscape, these changes endanger us all. Our collective response to climate change not only mitigates risk, but creates new opportunity for residents, businesses, and visitors. Opportunities vary across sector, yet no sector is exempt. In other words, no matter how you engage with and participate in our community, this CAP provides an avenue to reduce GHG emissions, save money and improve our social environment!

## **Co-Benefits:**

Each of the actions defined later in this plan have been evaluated to determine if they provide additional co-benefits beyond GHG emissions reductions. These co-benefits include promoting equity, fostering economic sustainability, improving local environmental quality, enhancing public health and safety, and building resilience. Actions promoting equity are a targeted response to existing inequalities in our region and ensure that resources and opportunities are dispersed equitably. Fostering economic sustainability refers to promoting sustained economic growth and reinvestment in the region. Actions improving local environmental quality have a tangible positive impact on the local environment. Enhancing public health and safety refers to supporting local health through elements such as air, water and food quality that have significant impacts on public health and create a safer community. Resilience means equipping our community with the ability to cope with change. Building resilience strengthens our ability to adapt to a changing climate and be flexible in a changing world with more natural disasters and weather anomalies.



## **Adaptation and Mitigation:**

Responding to a climate that is already changing requires adaptation of infrastructure, policies and societal norms in addition to mitigation strategies. Many actions listed in this plan focus on mitigating GHG emissions and simultaneously increase our resilience so we can adapt to the changes that are already happening. Both strategies of adaptation and mitigation aim to preserve the wellbeing of present and future generations in a changing world.

# Executive Summary

Continued...

## Climate Action & Environmental Stewardship are Regional Community

### Values:

San Miguel and Ouray County are committed to environmental stewardship and taking action to preserve and protect our climate and natural resources. Collaborative climate efforts have been the common narrative in our community since long before the creation of the SEB. Our Community has a long history of stepping up to care for our natural resources. From long-time logging prevention on our forest lands to pursuing renewable energy sources and transitioning to year-round mountain recreation economies, we have worked to preserve what makes this place so special. This strong sense of community activism presides across the San Juan's and makes it possible for the SEB to pursue our established goals.

### Shared Regional Resources:

Many resources in our counties are shared across jurisdictions making clean delineation of GHG responsibilities between each jurisdiction challenging. A prime example is the Telluride Wastewater Treatment Plant (WWTP), which is used by the communities of Telluride, Mountain Village, and nearby communities in San Miguel County. While Telluride is responsible for maintenance and operations of the plant, Mountain Village contributes 15% of funding, and the plant is located outside of both town limits, so associated electricity and natural gas used for operations are categorized in SMC's usage. The gondola serving Mountain Village and Telluride is another excellent example of a collaborative and shared critical resource for these closely-tied communities. Thus, while community-specific inventory values and plans are important in directing specific actions, situations like the WWTP make it clear that the region must closely collaborate toward accomplishing GHG reduction goals.

Our region also shares common challenges associated with increases in tourism, an increasing cost of living, and a shortage of affordable housing for locals. This common scenario in tourism-based economies has escalated in recent years creating an imminent need for us to collaboratively address housing needs. Much of our workforce and material goods come from surrounding communities, closely tying us to the broader Western Slope region. Providing local, affordable housing, decreases transit-associated emissions while maintaining cultural and economic viability. GHG reduction goals are absolute, not based on census population or our visitor economy, so we must include consideration of increasing stress on our resources due to visitor and tourism growth while planning reduction strategies.



# Executive Summary

Continued...

## Jurisdiction-Specific CAPs, GHG Inventories, and Goals:



Several individual jurisdictions within the region have developed GHG Inventories, Energy Action Plans or Climate Action Plans, and goals specific to their community to direct GHG reduction actions and track local accomplishments. These community-specific plans complement the regional CAP by providing actions that are more specific to be accomplished per jurisdiction. Community-specific and municipal-specific GHG inventories help track program and project results on a more granular level. All community-level and regionally collaborative accomplishments contribute toward reaching our greater GHG reduction goals.

**Town of Telluride:** Municipal and community-level GHG tracking in place; [Telluride-specific CAP](#) developed 2015, updated in 2021; target of carbon neutrality.

**Town of Mountain Village:** Municipal & community-level GHG tracking in place; [TMV-specific CAP](#) developed 2020; target of carbon neutrality by 2050.

**San Miguel County:** Municipal & community-level GHG tracking in place; target of carbon neutrality  
**City of Ouray:** Through 2012, the City adopted an [Energy Action Plan](#), guiding them toward implementing many actions that reduce government energy use into the future.

**Ouray County:** Adopted [CC4CA](#) goals and strategies.

**Town of Ridgway:** Ridgway encourages the use of carbon-free and renewable energy systems within the town and supports the goal of carbon neutrality for Colorado.

**Town of Norwood:** Adopted Colorado's previous state goals of reducing GHG emissions 20% by 2020 along with the rest of the Sneffels Energy Board.

**Town of Ophir:** Established the Ophir Self Reliance Committee that is working towards the goal of carbon neutrality and the Ophir Water Commission that is implementing water efficiency actions.

*Appendix 1 displays jurisdiction-specific actions prioritized for accomplishment by 2030. Because our region varies drastically in topography, energy requirements, financial resources, and economies, some municipalities and jurisdictions have prioritized specific actions that have already been accomplished elsewhere in the region. These actions, while important, were not included in the regional plan as they are only applicable for one or a few individual jurisdictions.*

## Our Regional GHG Inventory

### Overview:

The Sneffels Energy Board established a baseline GHG Inventory based on 2010 data from which to track progress toward 2020 goals and beyond. Before this time, community-wide utility use and emissions were unknown, and some governments were not yet tracking their own utility use. This 2010 process established a baseline GHG Inventory and a process for tracking resource consumption and associated emissions.

EcoAction Partners updates the GHG inventory annually with available data, analyzes the results, and annually reports on progress to our communities. Our overall regional GHG emissions have decreased (See Figure 1 pg. 14) since 2010, despite an overall increase in fossil fuel consumption due to an increased economy, visitor numbers, and full-time resident population. We have successfully reduced our energy use emissions by 20% through 2020, according to our 2020 GHG Inventory analysis as seen in Figure 2 (pg. 14), as a result of decreased electricity consumption from efficiency improvements and a significant increase in renewable energy production in our electricity mix.



# Our Regional GHG Inventory

Figure 1  
**Ouray & San Miguel Counties**  
Regional Total GHG Emissions (mtCO<sub>2</sub>e)

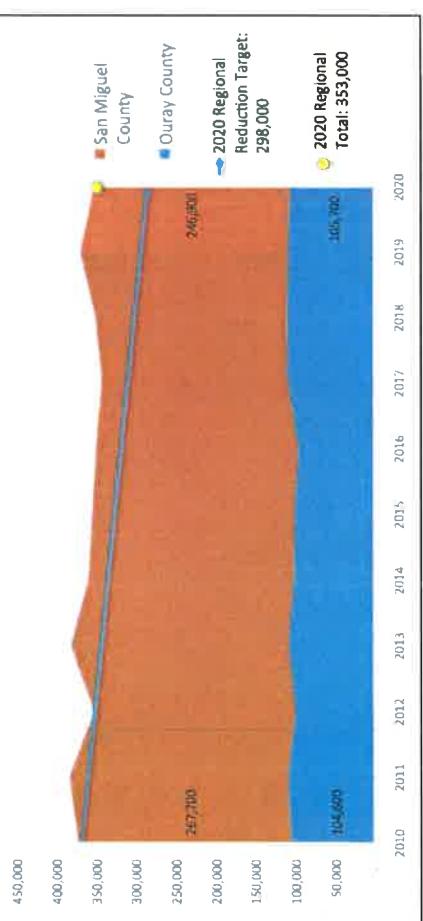
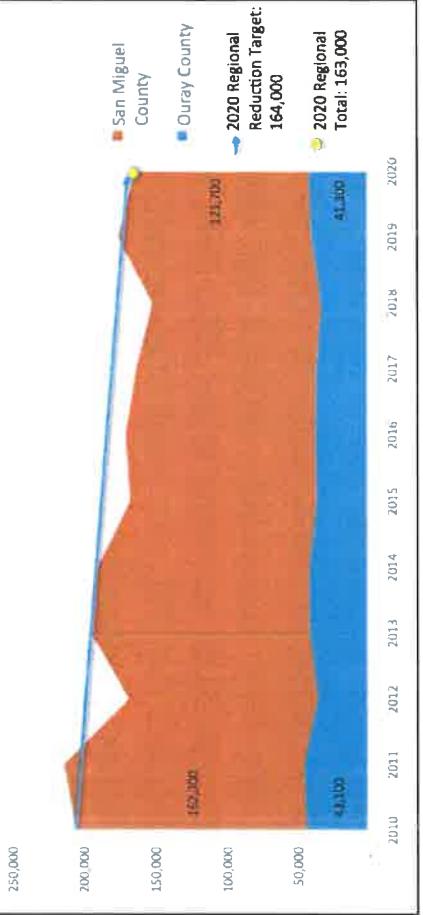


Figure 2  
**Ouray & San Miguel Counties**  
Regional Energy Use GHG Emissions (mtCO<sub>2</sub>e)



These charts show the trend of our total GHG emissions from 2010-2020 and emissions associated with building energy use which accounts for 50% of our overall emissions and is supported by the most accurate consumption data. By tracking our emissions annually, we can analyze the influence of annual fluctuations from weather, economic shifts, COVID, and other impacting anomalies, while also tracking our progress toward goals. Accurate data has not been available on an annual basis for a few categories of our emissions, so it is helpful to review building energy emissions separately to more accurately understand the trends in this key sector.

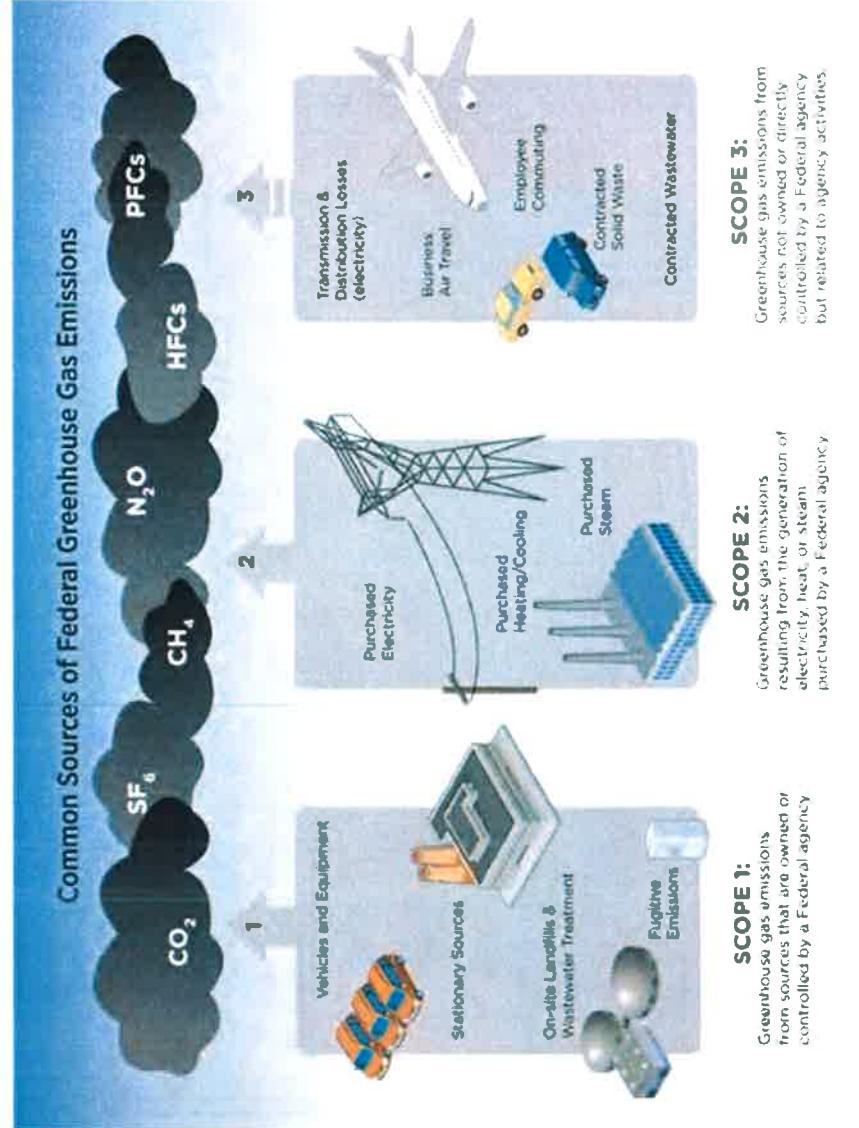
EcoAction Partners is in the process of converting our regional GHG Inventory calculation methodology to ICLEI's ClearPath online GHG tracking and analysis tool, the leading online platform for complete GHG inventories, forecasts, climate action plans, and monitoring at the community-wide or government operation scale. Through the use of ClearPath, our Inventory will be directly comparable to other cities and communities across the U.S., and around the world, including a number of similar rural mountain communities. Additionally, ClearPath provides GHG forecasting and tracking tools to help guide us toward our GHG reduction goals.

Our baseline 2010 regional GHG Inventory was established in the early years of community-wide GHG emissions calculations using the state-of-the-art calculation methodology of the time. Since then, ICLEI has been at the forefront of leading and influencing methodology changes that are defined in the GPC Protocol. Once the conversion to ClearPath is complete, our GHG Inventory from 2020 forward will no longer reflect a reduction in electricity emissions associated with RECs (see pg. 20) or other carbon reduction offsets. Progress with these activities will continue to be calculated separately as “information-only” data, in order to track and understand the success of our policies, programs and actions. The charts above reflect our historic GHG tracking methodology for purposes of consistency across 2010 to 2020.

# Our Regional GHG Inventory

## Geographic Boundary & Scopes:

We calculate emissions associated with San Miguel and Ouray Counties, including electricity production, building energy and other uses of utilities, vehicle and airline transportation, food consumption, waste, and material use. Scope 1 and 2 emissions sourced from directly within our boundaries are officially included in our updated 2020 GHG Inventory, in accordance with the GPC. Traditionally since 2010, we have also included some Scope 3 emissions for services located outside of our county boundary but that we have a direct influence over. For example, waste transported to landfills and recycling facilities in other counties, the Montrose Regional Airport of which 75% of emissions are associated with travelers to our counties, and food consumption, all fall within the scope 3 category, but are interrelated with our region's emission reduction goals. We continue to track data associated with these scope 3 factors in order to track progress towards reaching sustainability goals. It is important to recognize that successfully reducing GHG emissions will also require action at the state and federal policy-making levels. For this, the SEB continues to prioritize highly collaborative planning and programming to better address the scope 3, and other complex, region wide emissions sources.



# Our Regional GHG Inventory

## Geographic Boundary & Scope Continued ....

EcoAction Partners conducts an annual regional and jurisdiction specific greenhouse gas inventory to analyze our regional emissions breakdown and update programming to reflect our emissions profile. The geographic boundary of our inventory includes San Miguel and Ouray County. We have several key scope three emissions (outside of the inventory's geographic scope) which we account for in our program creation and regional policy decisions. These include the Montrose Regional Airport, the 3XM and Bruin Waste Management waste collection facilities, and material consumption such as food.

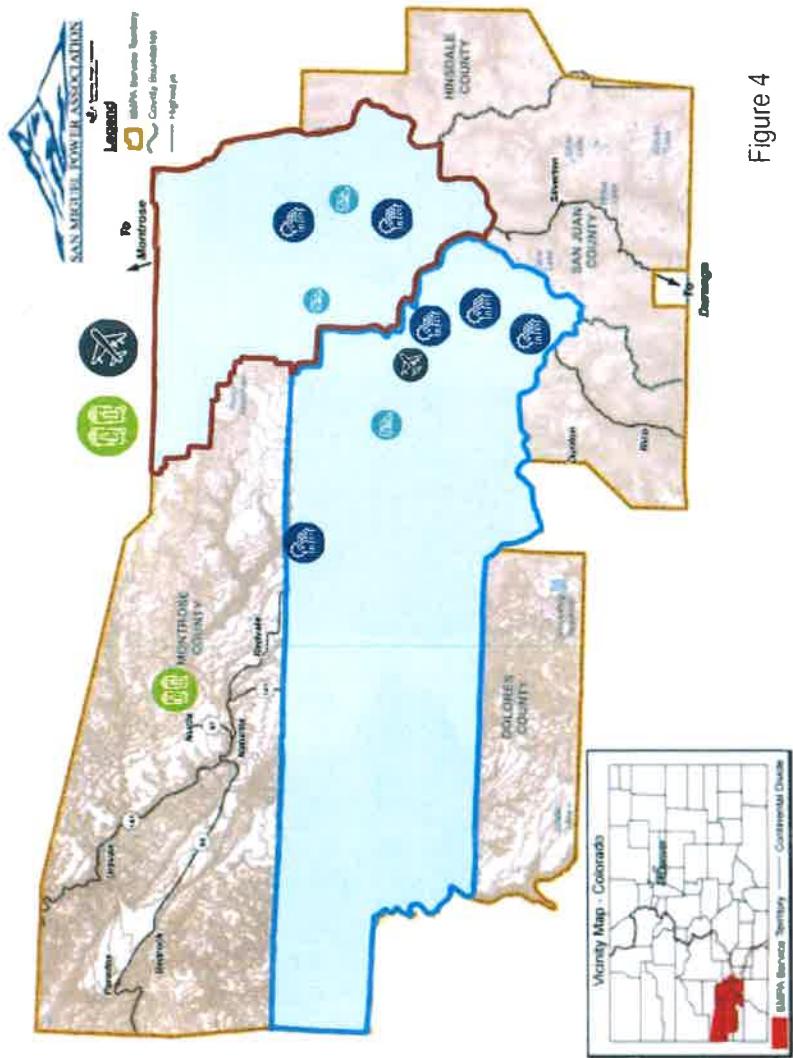
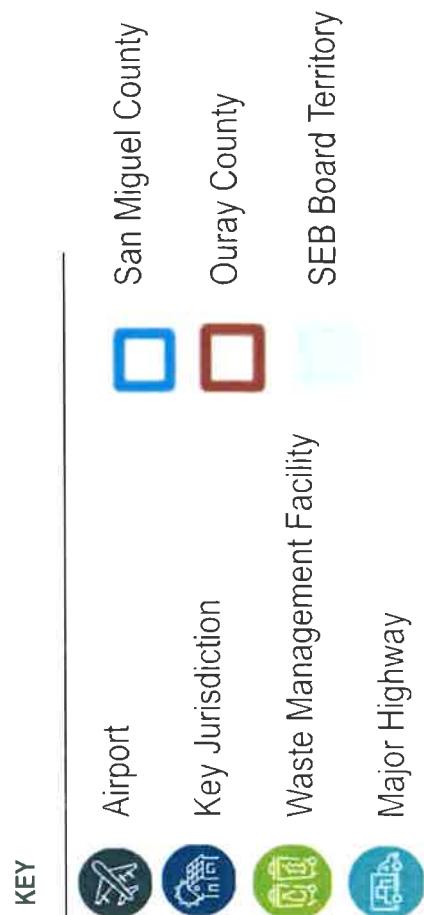
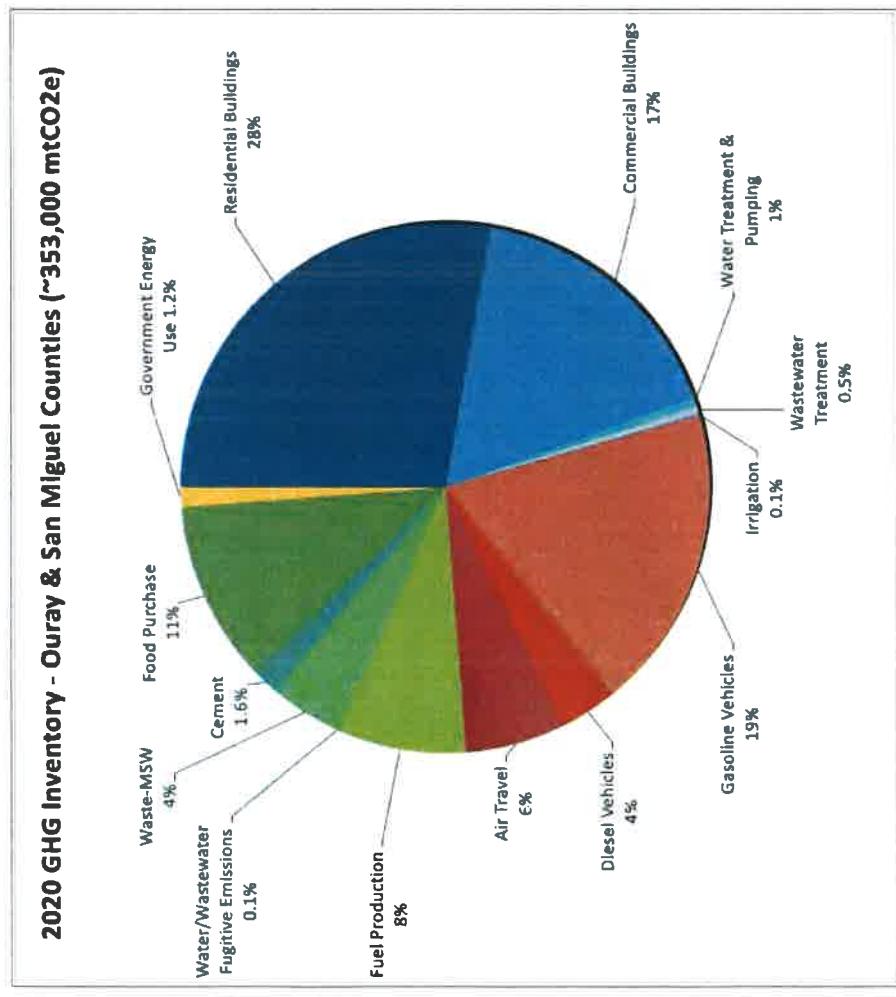


Figure 4



# Our Regional GHG Inventory

## Sources of GHG Emissions:



Buildings produce the majority of our GHG emissions (28% residential, 17% commercial in 2020). This 45% includes a reduction association with electricity offset by the purchase of REC's, without which building emissions would produce well over 50% of our region's emissions. Thus, reducing GHG emissions associated with buildings remains our highest priority.

Transportation related GHG emissions from vehicles and air travel account for 29% of our emissions. Air travel includes the Telluride Airport (TEX) and a percentage of travel through the Montrose Regional Airport (MTJ), as almost 75% of passengers through MTJ are visiting our region.

We account for major material production aspects of our GHG emissions as well, including food, fuel production and waste, which account for the remaining 26% of our emissions. As a remote, rural region with a tourist-based economy, tracking these emissions is important to us, as we recognize our responsibility to reduce our overall contribution to global emissions.

Figure 5

Note: This GHG emissions pie chart currently reflects our historical GHG Inventory calculation methodology which accounts for RECs as offsets, for consistency purposes of this document.

# Our Regional GHG Inventory

## Forecasting: Business As Usual

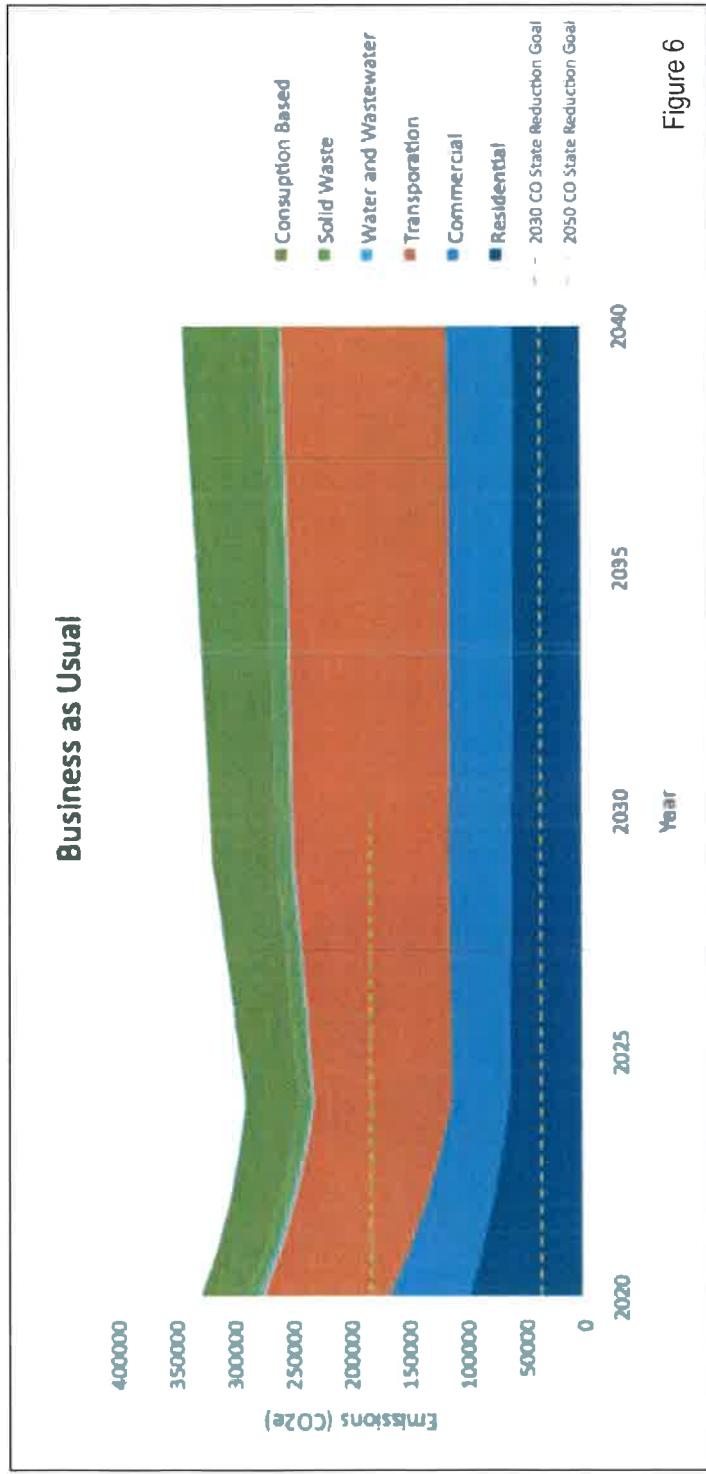


Figure 6

This "business as usual" forecast includes TriState's emission reduction promises detailed in their Responsible Energy Plan – 50% renewable supply by 2024, and 100% renewable supply by 2040. Though this trajectory will noticeably reduce our emissions associated with grid supplied electricity, it will not bring our region in line with either 2030 or 2050 GHG reduction goals without implementing additional strategies. The increasing trend of GHG emissions is due to a growing tourism economy. While the rate of this growth is predicted to decrease it continues to impact all sectors except residential energy use.

Fortunately, because we have the support of both SMPA and TriState in the renewable energy transition, we can focus on reduction strategies outside of grid supplied electricity, namely local renewable energy production, beneficial electrification, waste reduction, transportation, and consumption-based emissions (which includes waste, food, and cement). These actions are incorporated into the reduction pathway on page 19.

See the [CAP supporting documents webpage](#) for details on the calculations and assumptions made in these forecasts.

# Our Regional GHG Inventory

GHG Inventory

## Forecasting: Reduction Pathways

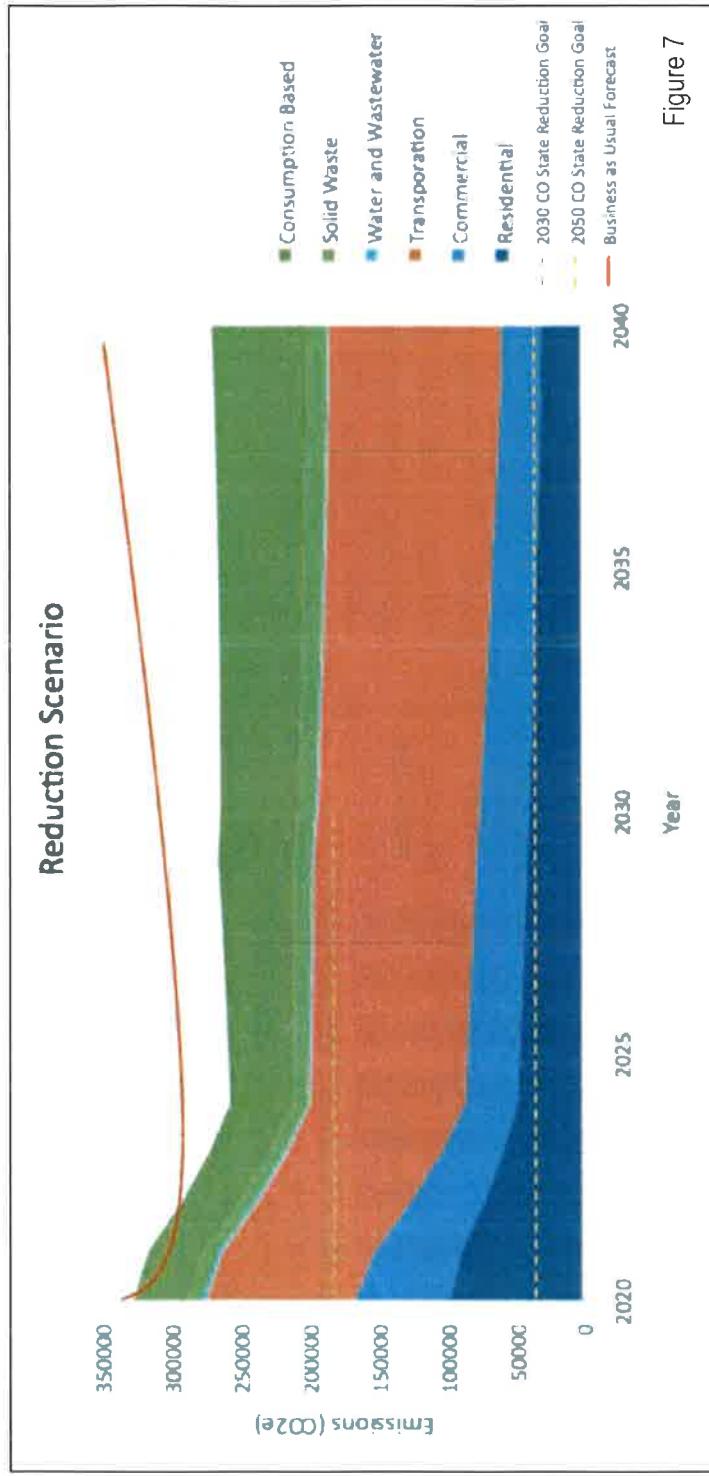


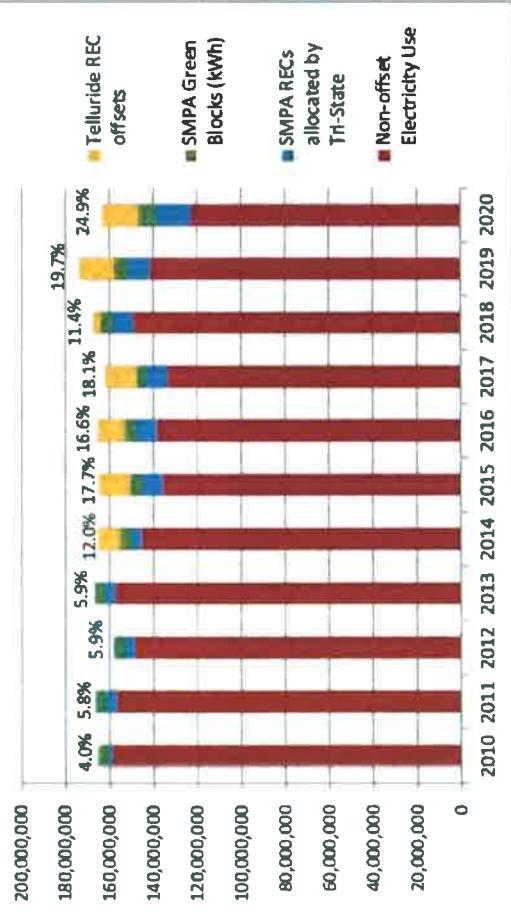
Figure 7

This chart displays the combined effects of both high-level and localized reduction strategies, including EV adoption, conversion of residential and commercial spaces from natural gas heating to electric heat pumps or boilers, improved building energy codes, and other actions outlined in this plan. This pathway shows that we can significantly reduce our GHG emissions associated with both residential and commercial energy use. However, if our tourism economy continues to grow at the current pace, we will need to implement creative comprehensive policies and actions in order to reduce our emissions associated with commercial buildings, transportation and material consumption to reach our goals.

See the [CAP supporting documents webpage](#) for details on the calculations and assumptions made in these forecasts.

# GHG Offsets: Renewable Energy Credits and Carbon Offsets

**Figure 8**  
**Regional Electricity Use (kWh)**  
**with Renewable Energy Credit Offsets**



**RECs:** tradable, non-tangible energy commodities in the U.S. that represent proof that 1 MWh of electricity was generated from an eligible renewable energy resource (renewable electricity) and was fed into the shared system of power lines, which transport energy. Telluride's REC offsets are associated with power produced by the Ridgway Hydro Dam, and are thus subject to fluctuations in annual precipitation, such as the drought conditions in 2018.

**Carbon offset:** a greenhouse gas (GHG) emissions reduction or carbon sequestration enhancement made in order to compensate for, or offset, an emissions made elsewhere such as air travel. Each offset represents one metric ton of carbon dioxide or its GHG equivalent. Carbon offsetting has gained appeal among consumers of services in emission sectors that do not have immediate opportunities to implement low emission or zero emission strategies. Our local partner [Pinhead Climate Institute](#) offers Colorado-based carbon offsets.

Renewable energy credits (RECs) have been part of our regional strategy for supporting renewable energy. While RECs are not a guarantee that additional renewable energy is produced that would not have been produced otherwise, and RECs do not actually reduce the region's GHG emissions, purchasing RECs is a first step to demonstrate public demand and commitment to renewable energy while we work to install local renewable energy sources. REC purchases are also not restricted by SMPAs contract with Tri-State, while non-net metered local renewable energy production is currently limited. Thus, RECs have been and will continue to be part of our strategy moving forward.

Locally, SMPA provides REC purchase opportunities to its members through their Totally Green Program, which is an easy opt-in program for members to choose to offset electricity use by 100%. In addition to the RECs, the funds collected through the Totally Green Program support local renewable energy and energy efficiency projects and incentives.

Locally, we have a few options to increase the percentage of renewable power that is electrifying homes and businesses: build onsite solar, add community solar gardens, build a large, utility-scale solar array owned by Tri-State, and develop local hydropower. Because these projects will take time to develop, in the meantime we support the purchase of RECs to demonstrate to our electricity provider that we support a transition to renewable energy.

To this end, we have tracked our purchases of RECs since 2010, and currently offset 25% of our electricity use. We also track local renewable energy installation capacity, to assist us in measuring progress toward local renewable energy generation.

## Introduction to the Regional CAP

### **Objective:**

Broad scale or big picture goals and changes that must occur to reach our regions' GHG emissions reduction goals.

## Action:

Smaller scale projects, programs and policies that contribute to achieving an objective.

## GHG Reduction Potential:

A measure of the GHG reduction potential for each objective and action. These values were derived from ICI EI's ClearPath model and simplified to a value of 1-4, with 4 having the highest potential for GHG reduction.

GHG Reduction Potential	MIT CO <sub>2</sub> Reduced If Action is Fully Implemented
1 =	4-1900 Mt by 2050 – Marginal
2 =	1900 -3200 Mt by 2050 – Small
3 =	3200-9600 mt by 2050 – Medium
4 =	9600-46000 Mt by 2050 - Large

ACTION

Action Listed Here

GHG REDUCTION POTENTIAL



## CO-BENEFITS



PARTNERS



## Co-Benefits:

Additional positive impacts associated with achieving our goals. Nearly all objectives and actions within this plan have co-benefits. These benefits were determined through reviews of academic research, case studies from similar regions, and will be further informed by community engagement through 2022. These co-benefits are further defined on page 10. The [CAP supporting documents webpage](#) includes a list of supporting literature for co-benefits of various objectives and actions.

Tinelli

**Timeline.** Amount of time in years expected to complete an objective or action.  
Current, 1, 3, 5, 10  
Ongoing

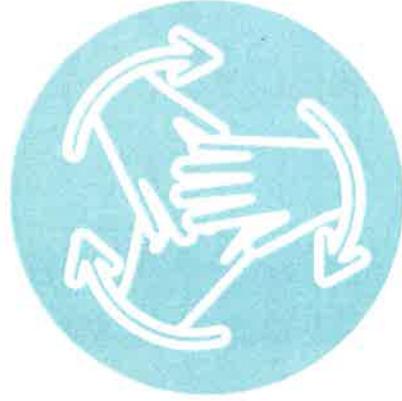
Dantone

**Article 3:** Community stakeholders who can and are likely to contribute to achieving an objective or action



## High Impact Sectors

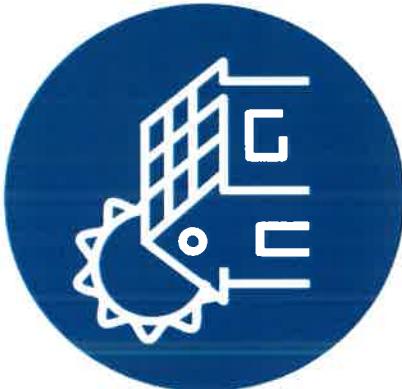
The CAP addresses emissions, accomplishments, objectives and goals across 8 sectors that are closely tied to our regional emission reduction and sustainability goals.



**Community Engagement & Policy**  
Stakeholder partnerships and ownership of policy and decision-making



**Energy Supply**  
Generation of our community's electricity



**Building Energy Use**  
Energy used by commercial and residential buildings



**Transportation**  
Emissions associated with on-road movements and aviation operations



**Waste**  
Trash, recycling, and compostable materials, landfill reduction and diversion



**Land**  
Land use and health, sequestration opportunities, and agricultural use



**Water**  
Water supply, use, pumping and treatment and watershed health



**Food**  
Emissions from food production, transportation, and storage

# Community Engagement & Policy

We felt it was important to highlight actions around community engagement and policy. Reaching our regional emissions reduction goals will not happen if we solely rely on external forces to reduce our carbon footprint. Individual actions make a difference, and we need to step up as a community to prioritize policies and partnerships that move us toward our goals. Everyone has a role to play and only through working together will we reach our goals.

We hope to see community ownership of these actions and have prioritized collaboration throughout this document. We aim to address any conflicting priorities across the region and align with regional GHG reduction goals and a commitment to a more sustainable future. Ideally, emissions analysis will be integrated into all decision making, centering scientifically informed policy. The nature of climate action is intersectional. We recognize that this interconnection requires actions across the board to achieve the change we hope to see in our community.



# Community Engagement & Policy

## Community Engagement & Policy Accomplishments

- Development of and continued collaboration of regional Sneffels Energy Board.
- Participation in state and nationwide organizations such as CC4CA, CAST, ACCO, Climate Mayors, Mountain Pact, RMCO, and others.
- Telluride Institute is developing a growing relationship with Western State University's Masters in Environmental Management program, bringing student-based projects to the region, increasing our capacity for environmental work.

## Community Engagement & Policy Recommendations

OBJECTIVE 1: Increase community engagement and continue to prioritize collaborative and intersectional decision making and action implementation.

ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS
Continue to participate in regional collaboration of local governments, stakeholders, and utilities to drive regional clean energy transition & GHG emissions reduction.		 	Ongoing	SEB
Participate in State-level organizations to drive regional clean energy transition & GHG emissions reduction.		 	Ongoing	CC4CA, SMPA, EAP, SEB
Consider GHG emissions as part of all decision-making processes. Utilize a GHG impact assessment tool, if available, to quantify GHG emissions or sequestration impacts.	 	 	Ongoing	All governments, partner organizations, stakeholders, businesses & residents
Increase community-level outreach and engagement with implementation of the regional Climate Action Plan.		 	1-3	EAP, SEB, community organizations, business organizations
Collaborate between municipalities & organizations on actions when beneficial.		 	Ongoing	All governments, local organizations

KEY



# Energy Supply

Greenhouse gas emissions associated with our energy supply primarily stem from the use of electricity and natural gas in residential and commercial buildings. Energy supply is embedded within and accounted for in the building energy use GHG inventory sectors and analysis. Energy supply is separated into its own sector with prioritized actions, as changes in electricity production and sources of energy can significantly impact the reduction potential of actions in other GHG sectors. Thus, focusing on supply-side planning will bring about drastic reductions independent of recommended actions for businesses and residents.

Electricity and natural gas use accounts for over 50% of San Miguel and Ouray County's total GHG emissions. The carbon intensity of this sector directly relates to the fuel associated with the supply of these utilities from SMPA and BHE. Natural gas has its own emissions factor associated with its use as a direct energy source for heating, hot water, cooking, and more. Because we are unable to influence the production or emissions factor associated with natural gas, recommendations in this section focus on transitioning electricity supply to renewable sources. The mix of these sources of electricity directly impact the emissions associated with electricity use, with fossil fuel resources having a significantly greater carbon intensity than renewable energy sources.



## Energy Supply



Fortunately, Tri-State has set a goal to provide 70% clean energy supplied to members system-wide by 2030. Figure 9 (pg. 27) shows the trend toward increasing renewable energy sources and a decrease of fossil fuel sources within the electricity supplied through SMPA from Tri-State. These changes, along with efficiency improvements and the viability of community energy production, make achieving drastic GHG emissions reductions in the coming decade a realistic possibility. The state of Colorado plans for an 80% reduction of greenhouse gas emissions associated with electricity production and a 37% reduction for emissions associated with natural gas. Our region is well positioned to achieve these goals by contributing to statewide GHG reduction while providing savings for our residents and businesses through a mix of rooftop and community solar, and larger regional renewable generation.

SMPA's contract with Tri-State includes a 5% allowance on local energy generation and distribution within SMPA territory, which allows SMPA to incorporate locally-generated, renewable sources such as small hydro projects and community solar arrays. Due to system growth, the 5% is a moving target instead of a fixed amount. According to SMPA's contract with Tri-State:

- The Total SMPA system-owned or controlled generation shall not exceed 5% of SMPA's annual energy requirements in any calendar year, and the total installed generation nameplate capacity shall not exceed 15% of that SMPA's annual peak demand in any calendar year. Generation projects that are eligible under this Policy include renewable or distributed generation under the ownership or control of SMPA.

It is important to note, that net-metered renewable energy systems below 10 kW, such as a typical residential roof-mounted PV solar array are not limited by this cap on larger scale power production within SMPA's region. Therefore, increasing the installation of smaller net-metered systems has the potential to significantly reduce our electricity-associated GHGs without counting towards the local generation limits.

## Energy Supply Trends & Accomplishments

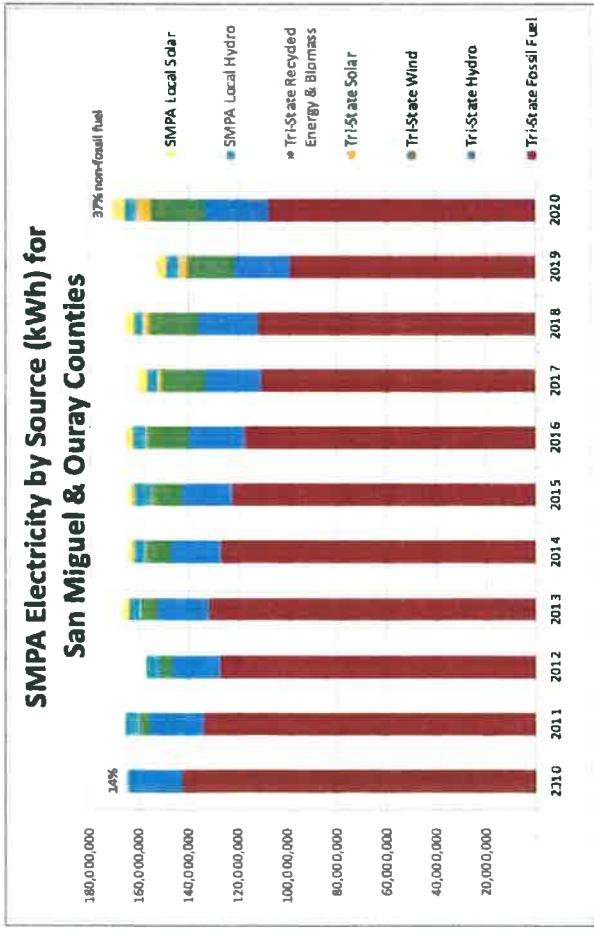


Figure 9

The chart above shows our electricity fuel mix based on production and transmission data provided by Tri-State and local renewable energy production within SMPA territory. Tri-State's fuel mixture was calculated based on annual member reports for 2010, 2016, and 2020. The trend for Tri-State's fuel mix between 2016 and 2020 was calculated linearly.

SMPA provides electricity to homes and businesses in our region. SMPA's power supplier, Tri-State, provides SMPA with 37% of its energy from renewable resources including wind, solar, and hydropower. The remaining 63% of Tri-State's energy currently comes from fossil fuels. This mixture defines our electricity emissions factor ( $\text{mtCO}_2/\text{kWh}$ ).

- Increase in non-fossil fuel electricity production from 13% to 37% as shown in Figure 9 at left, as a result of local public pressure.
- SMPA territory has successfully achieved 5% local renewable energy power production, as a result of SMPA, government, and private projects built and operating across the area.
- SMPA's first community solar array in Paradox Valley was the 2nd largest of its kind when constructed and was completely subscribed within three years.
- SMPA's 2nd array is an income-qualified solar array located outside of Norwood has recently become 100% subscribed.
- SMPA and Tri-State have both adopted a progressive renewable energy production goal of 80% renewable production by 2030.
- SMPA's Green Blocks program has changed to Totally Green, as a result of community-level input. The program is now easy to join to offset 100% of a members' monthly electricity use.
- Net metered renewable electricity production has increased by over five times since 2010.
- Mountain Village provides additional financial incentives for net metered solar PV systems.

# Energy Supply Recommendations

OBJECTIVE 1: Increase percentage of electricity provided by renewable energy sources.

ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS
Establish a local renewable energy generation target and plan to achieve it.	==	\$ 🌱	3-10	SMPA
Identify and eliminate barriers to local renewable energy production.	==	\$ 🌱	3	SMPA, WCU
Advance regional grid flexibility to enable a modernized renewable electricity supply.	==	\$ 🌱	5-10	SMPA
Install renewable energy capacity on government buildings.	-	\$ 🌱	1-5	SMPA
Incentivize and promote net-metered solar systems on residential and commercial rooftop or pole mount locations.	==	\$ 🌱	Ongoing	SMPA, solar installers, HOAs
Encourage community participation in SMPA Totally Green program for electricity not covered by local renewable energy production.	==	\$ 🌱	Ongoing	SMPA, WPL, ROCC, Rotary Club, Telluride Inst., HOAs
Support SMPA in increasing community solar arrays in the region.	==	\$ 🌱	1-5	SMPA, WCU, Americorps VISTA
Expand free and low-cost solar programs for low-income households.	==	\$ 🌱	1-5	SMPA, WCU, Americorps VISTA,
Work with renewable energy installation businesses to promote residential energy incentives and financing opportunities.	==	\$ 🌱	1-5	SMPA, solar installers

KEY



# Building Energy Use

Buildings are currently the primary consumer of energy in our region and therefore are the largest emitting sector with 45% of our total GHG emissions. Emissions in this sector come from electricity and natural gas use, and a small amount of propane consumption. Thus, reductions in the building sector will come from supply side transition to renewable energy, beneficial electrification, and increased efficiency of our buildings.

Many of our commercial buildings are mixed use and include residential space, and many of our residences are larger than many commercial spaces across the region. There is significant cross-over between the recommended actions for buildings in both the residential and commercial sectors, so our objectives and prioritized actions apply to all buildings. With a complex mix of historical buildings and new construction, unimproved, and newly renovated buildings, recommendations to reduce energy in the building sector are diverse and aim to address building energy use from several angles to benefit all community members.



# Building Energy Use

Residential energy accounts for 28% of our region's total GHG emissions. San Miguel and Ouray County's residential community is primarily comprised of free market and workforce housing rentals, which vary in age, quality, size, and occupancy. These residences may be single family homes, multifamily properties, mobile homes, and residences in mixed-use buildings.

Commercial energy consumption accounts for 17% of our region's GHG emissions, and similarly to residential energy, nearly all these emissions come from electricity and natural gas use. Free market and subsidized properties comprise San Miguel and Ouray Counties' commercial building stock and vary in age, quality, size, and occupancy. These buildings may be owner-occupied and/or tenant-occupied, condominium style and mixed-use buildings.

As our tourism economy, population, and part-time visitor numbers cause an ongoing increase in construction, the number of utility accounts have increased as well, causing a challenging situation to address with the aim of reducing our total GHG emissions. Our collaborative and focused actions must include creative and progressive strategies if we are to reach our goals.



# Building Energy Use Trends - Electricity

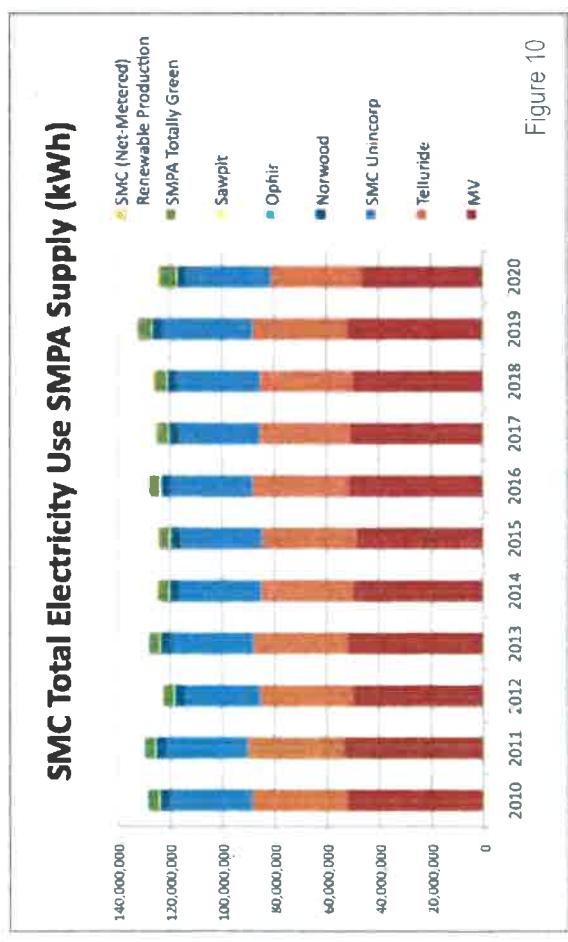


Figure 10

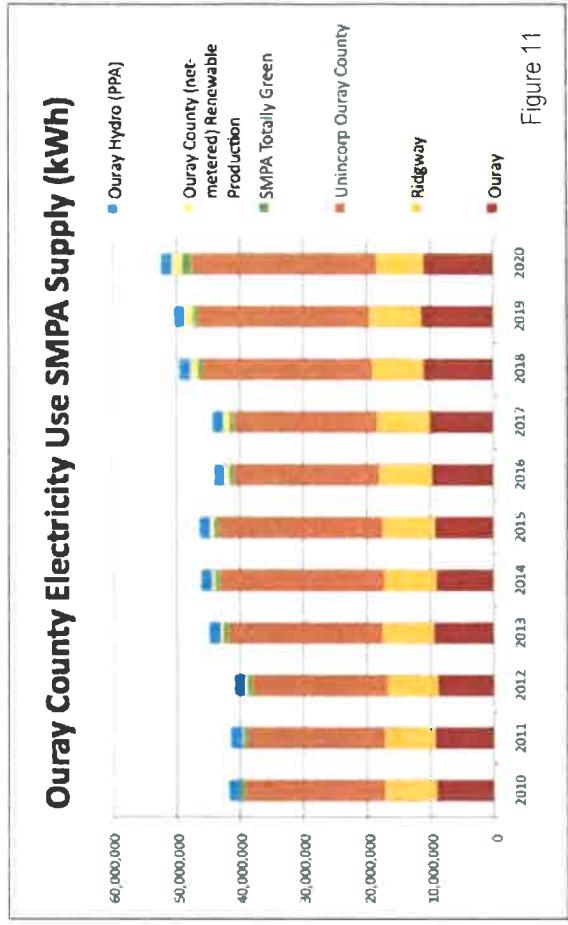


Figure 11

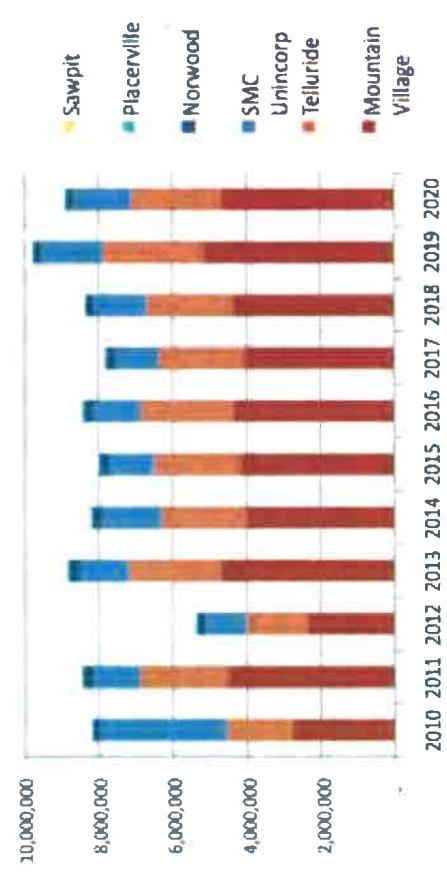
EcoAction Partners tracks annual electricity use and local renewable energy production for analysis by the SEB. Electricity consumption in San Miguel and Ouray Counties is graphed by jurisdiction in the charts above. The top of each bar indicates the total electricity use in each county per year. Electricity use that is offset by SMC Green Blocks or produced through local renewable energy is separated from general usage in order to show progress on each of these strategies.

Electricity use across SMC has held relatively steady aside from a noticeable increase in 2019 and a COVID-19 associated decrease in 2020, indicating success with our efficiency programs. The Town of Ridgway and City of Ouray show a similar trends. The 2019 increase is likely a combination of a noticeable increase in tourism as well as the beginnings of transition to electricity from fossil fuel use. It could also be accounted for due to an increase in installation and use of air conditioning systems during summer months as temperatures continue to rise. The decrease in 2020 is attributed to the impacts of COVID-19. Ouray County experienced an increase in commercial activity that increased electricity consumption from 2018 through 2020.

In 2019 SMPA revamped their Green Blocks program to Totally Green which is designed to make it easier for members to offset their electricity use 100%, significantly increasing participation in the program. Net-metered renewable energy system installations have also noticeably increased in recent years as the costs for solar PV has decreased worldwide.

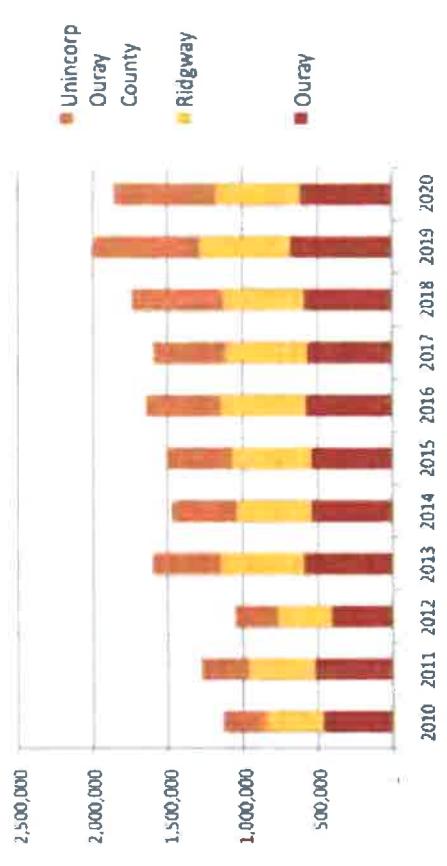
# Building Energy Use Trends – Natural Gas

Figure 12  
SMC Total Natural Gas Use - Actual (Therms)



\*2012: gap in data provided. & a TNV snowmelt system was under remodel during the winter.

Figure 13  
Ouray County Natural Gas Use - Actual (Therms)



EcoAction Partners tracks annual natural gas use along with weather data for analysis by the SEB. Natural gas use is significantly impacted by outdoor winter temperatures and annual snowfall as it is used to heat buildings and for snowmelt systems. The SEB analyzes actual and normalized natural gas consumption along with weather charts, in order to fully understand the trends. Actual natural gas consumption in San Miguel and Ouray Counties is graphed by jurisdiction in the charts above. The top of each bar indicates the total natural gas use in each county per year.

Actual natural gas use across both counties has been noticeably increasing as our regional economy expands. A dramatic increase in new construction is far out-weighting efficiency program impacts, even with improved building energy codes. We've also seen an increase in natural gas use due to conversions from propane to natural gas, although this impact is difficult to track due to lack of data from propane and natural gas companies. The decrease in 2020 is attributed to the impacts of COVID-19.

Natural gas use can only be offset through carbon offsets (not RECs) since it cannot be produced through renewable energy methods. A transition away from natural gas to electricity is required in order to reach GHG emission reduction goals associated with natural gas.

# Building Energy Use Accomplishments

- All governments have taken actions to improve energy efficiency of their buildings and utility uses. A few key examples:
  - Telluride built renewable energy projects and purchases RECs from power produced at the Ridgway Hydro Dam to offset 100% of government electricity use and a significant portion of the community's electricity use.
  - SMC received a \$750,000 DOLA grant for energy efficiency, solar PV systems, and solar battery storage for properties in Illicum and Norwood. This project is reducing county carbon emissions by 50%, and SMC is offsetting the rest with SMPA's Totally Green program, resulting in 100% renewable electricity use for SMC.
  - Ouray County is investigating a net zero carbon initiative similar to what SMC is undertaking and is a Totally Green member.
  - The Town of Ridgway has reached 100% renewable energy offset through SMPA's Totally Green program.
  - Ridgway Town Hall, Ouray hot springs/gym and Library, street lighting, and most other government facilities across the region have been converted to 100% LED lighting.
  - The Town of Norwood upgraded all municipal lighting and streetlights to LED bulbs.
  - Ridgway and Ouray collaborated to examine use of performance contracting to improve the efficiency of municipal facilities.
  - Enhanced electricity metering & monitoring was made available through SMPA's online SmartHub tool: SMPA improved our ability to track electricity use in real time. Although metering does not reduce emissions directly, it allows residents and business owners alike the opportunity to review hourly electricity use and use data analysis to identify opportunities to improve efficiency and save money.
  - 2018 International Energy Code adopted for new construction with local amendments adopted by Telluride, TMV, Ridgway and Ouray County and SMC. Ophir will likely follow suit soon after.
  - Adoption and implementation of Renewable Energy Mitigation Programs (REMP & TEMP) to address mitigation of exterior energy systems (such as snowmelt systems, heated garages, and outdoor spas and pools). Funds collected through these programs have been used on a wide variety of projects to reduce emissions.
  - Ridgway secondary school EV charger is now online and fully operational.
  - Sunnyside is a new net zero affordable housing community under construction by Telluride and SMC to be completed in 2022.
  - EAP's SMPA IQ Weatherization Program (CARE) has successfully weatherized 164 homes between 2017-2021, reducing annual GHG emissions by 280 mtCO<sub>2</sub>e, significantly saving homeowners and renters on annual utility bills, and improving the comfort and safety of these homes. Participating homes have historically received further utility support through a 50% offset from the SMPA IQ community solar array. The array is currently at full capacity and several key stakeholders are exploring additional solar opportunities earmarked for income qualified residents.
  - The Towns of Norwood and Ridgway have gained International Dark Sky designation.
  - Telluride Ski & Golf participated in the National Ski Areas Association Climate Challenge from 2012-2019, continuing to make strides toward reducing direct energy use and waste associated with ski area operations as well as influencing indirect GHG emissions of employees and guests.

# Building Energy Use Recommendations

## OBJECTIVE 1: Beneficial electrification of buildings

ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	PARTNERS
Transition building mechanical equipment and appliances from fossil fuels to electricity through incentives, outreach and building codes. Includes space and water heating, appliances, and other equipment.			
Encourage transition to/use of geothermal, air source heat pumps, or other available heat exchange technology.			
Support building electrical service upgrades when necessary for building electrification			

**Beneficial Electrification** includes the application of electricity to end-uses that would otherwise consume fossil fuels (e.g., natural gas, propane, oil, gasoline) where doing so satisfies at least one of following conditions, without adversely affecting the others: save consumers money over time; benefit the environment and reduce [GHG] emissions; improve product quality or consumer quality of life; or foster a more robust and resilient grid. (from SMPA, per The Beneficial Electrification League)

This method of reducing GHG emissions has just recently become viable in our region as our overall electricity fuel supply mixture has changed. Previously highly carbon-intensive, Tri-State's electricity emissions factor was too high for electrification to decrease GHG emissions. As our electricity supply shifts to be increasingly sourced from renewable sources, converting traditional uses of fossil fuels to electricity now contributes toward reducing our regional carbon footprint. It will be important for us to work closely with SMPA during this transition in order to track the associated increase in electricity use with fossil fuel use conversion versus electricity use increase for other more traditional reasons, such as visitor population, economy, and new construction.

## KEY

GHG Potential 1-4	Promotes Equity	Economic Sustainability	Environmental Quality	Public Health & Safety	Builds Resilience
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# Building Energy Use Recommendations

**OBJECTIVE 2:** Continue to improve building energy codes for new construction, remodels and additions

ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS
Adopt the 2018 International codes with specific local requirements as appropriate and to exceed minimum standards.			1	SMC, City of Ouray, Town of Ophir
Strengthen existing building efficiency standards and codes to require 10% better than basic code construction, update building energy codes at least every 6 years, and move towards net zero energy buildings. Incentivize 'beyond code' construction practices.			Ongoing	EAP, all regional governments
Continue to coordinate regional alignment of energy codes and 'beyond code' preferences.			Ongoing	EAP, all regional governments
Facilitate education for contractors, architects and property managers.			Ongoing	EAP, SMPA, BHE
Promote/incentivize optimal control systems and thermostat settings to couple comfort with efficiency.			1-3	Telluride, MV, Ridgway, City of Ouray, SMPA, BHE
Promote/incentivize building automation systems (such as key card entry activation of electricity in lodging rooms).			1-3	Telluride, MV, Ridgway, City of Ouray, SMPA, BHE, lodging

KEY

	GHG Potential 1-4		Promotes Equity		Economic Sustainability		Environmental Quality		Public Health & Safety		Builds Resilience
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# Building Energy Use Recommendations

## OBJECTIVE 3: Increase natural gas efficiency

ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS
Continue rebate and incentive programs to replace old or inefficient systems/appliances.		  		Ongoing EAP, BHE
Encourage water tank insulation and pipe wrap on hot water systems.		  		Ongoing BHE
Provide technical assistance for natural gas heating alternatives.		 		Ongoing EAP, BHE

## OBJECTIVE 4: Reduce energy consumption in rentals, apartments and multifamily buildings

ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS
Encourage electrification of existing and new affordable housing and other multifamily developments.		 		Ongoing All regional governments, EAP, SMPA
Support building automation and building performance standard tracking to optimize efficiency and effectiveness.		 		1-5 SMPA, Tri-State, EAP, all regional governments
Incentivize energy efficiency upgrades in rental properties.		 		1-5 Telluride, MV, Ridgway, Ouray
Develop renter-specific outreach and education campaigns.		 		Ongoing Telluride, MV, Ridgway, Ouray

KEY

GHG Potential 1-4	Economic Sustainability	Public Health & Safety	Environmental Quality	Promotes Equity

Builds Resilience

# Building Energy Use Recommendations

## OBJECTIVE 5: Improve the energy efficiency performance of existing buildings

ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS
Continue to provide and educate community members on energy efficiency and renewable energy incentives available from SMPA, BHE, and municipalities.		=	Ongoing	SMPA, BHE, EAP
Incentivize refrigeration upgrades.			Ongoing	SMPA, Tri-State
Incentivize, mandate & educate on "away" mode technology for second homes when unoccupied.			Ongoing	SMPA, Tri-State
Expand outreach on financing opportunities. Existing examples: Property Assessed Clean Energy, CO RENEW, Alpine Bank and other specialized financing mechanisms.		=	1-3	Property Assessed Clean Energy, CO RENEW, Alpine Bank
Encourage utilities to implement energy use comparison mechanisms in monthly billing.			3	SMPA, Tri-State

KEY

	GHG Potential 1-4		Economic Sustainability		Environmental Quality		Public Health & Safety		Builds Resilience
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# Building Energy Use Recommendations

**OBJECTIVE 6:** Anticipate and mitigate likely expansion of air conditioning use in new & existing buildings

ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS
Avoid or prolong the need for air conditioning via building design and management. Utilize education & outreach to building trades, owners, and facility and property managers.			Ongoing	Architect firms, property managers, EAP, all regional governments
Encourage air source heat pumps for cooling purposes as air conditioning use becomes more prevalent.			5-10	SMPA, Tri-State
Coordinate cooling needs with efforts to adopt high efficiency electric heating systems (i.e. air-source heat pumps).			Ongoing	SMPA, Tri-State, all regional governments

**OBJECTIVE 7:** Other actions

ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS
Encourage continued regular "cost of service studies" by SMPA to incentivize and balance current and future priorities (i.e., EVs, fuel switching, time of use, peak shaving, energy efficiency, DSM).			Ongoing	SMPA, all regional governments, SMPA members, EAP
Continue to host and expand EcoAction Partners' Green Business Program awarding and highlighting business that achieve energy efficiency and sustainability thresholds.			Ongoing	EAP, local businesses
Facilitate the electrification of outdoor yard tools through incentives, programs and policies.			Ongoing	SMPA, EAP, all regional governments

KEY

	GHG Potential 1-4		Economic Sustainability		Public Health & Safety
	Promotes Equity		Environmental Quality		Builds Resilience

# Transportation & Aviation

## Transportation

The transportation sector encompasses ground transportation of people and goods travelling within, to, from, and passing through San Miguel and Ouray County. GHGs in the transportation sector stem from the combustion of liquid fuels (gasoline and diesel) by a wide range of vehicles and fuel impact from a variety of factors (consumer choice, business demand, urban design, housing/business density, transit corridors, commuter and visitor choices, fuel type, etc.). Types of vehicles within this sector include personal vehicles, light trucks, commercial transport vehicles, heavy duty vehicles, and motorcycles. Due to our region's dependence on tourism comprehensively accounting for all GHGs associated with transportation is challenging. In addition, our GHG inventory was not initially set up to account for transit busses/vans, OHVs, RVs, or other vehicles that are increasingly used across the region. Efforts to improve our transportation emissions accounting are underway and will be incorporated starting with the 2020 GHG Inventory. This plan does not intend to decrease tourism in our region, but instead encourages "cleaner" vehicles and recreation opportunities which may reach a wider audience of visitors, without sacrificing our communities' emission reduction goals.

Opportunities and interventions to reduce emissions in the transportation sector span a range of scales and domains. Opportunities include shifting away from single occupancy vehicle use, transitioning to low-emission vehicle options for personal and commercial vehicles, and increasing viability of public transport options. Potential benefits of these changes include reduced congestion, and improved air quality.



## Vehicle Transportation Trends

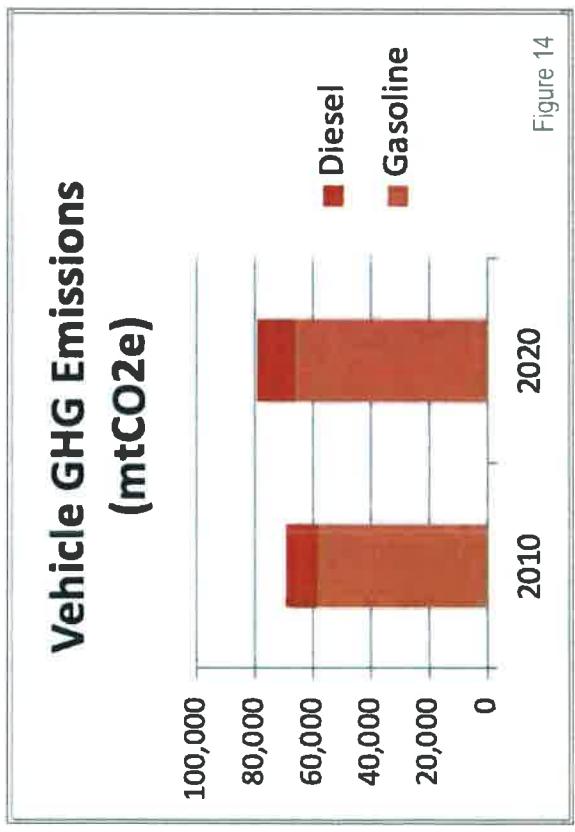


Figure 14

Vehicle emissions have increased significantly since our 2010 baseline, by approximately 24%. This is mainly associated with an increase in our economy. Commuting workers, services of trades people, and a decrease in local affordable housing have increased the amount of workforce related vehicle transportation. The region has also experienced an increase in tourism, with noticeable visitor and service-related traffic increases throughout the year. During the 2020 and 2021 summer season, as people flocked away from cities, camper, motorhome, and similar vehicles became more prevalent. Jeep and OHV traffic has also been increasing, which is difficult to quantitatively capture in our emissions calculations due to the remote nature of the roads they travel. As demand for parking grows, creating the need for the development of additional infrastructure, we see the opportunity to support infrastructure that prioritizes EV and public transit options.

## Vehicle Transportation Accomplishments

- Creation of the San Miguel Authority for Regional Transportation (SMART) to manage and improve public transportation serving San Miguel County.
- Development of Region 10's Four County Transit Study Update report in 2013 identifying needs and opportunities for greater regional public transit.
- Government and commercial business – supplied increases in public transportation opportunities for commuters and visitors.
- Ongoing operation of the free gondola service between TMV and Telluride. Gondola electricity emissions are 100% offset through SMPA's Totally Green Program.



# Vehicle Transportation Recommendations

## OBJECTIVE 1: Decrease vehicle travel

ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS
Subsidize bus passes for commuting workers.			1-3	TSG, SMART, private employers
Increase affordable and available housing for local workers.			Ongoing	All regional governments
Reduce in-community vehicle use by residents and visitors, i.e. encouraging use of electric bikes			5	All regional governments, SMART
Continue outreach and education efforts around public transit.			Ongoing	SMART, Region 10

## OBJECTIVE 2: Increase use of electric vehicles

ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS
Improve tracking and analysis of EV station use.			1-3	SMPA
Increase number and location of EV charging stations.			1-3	Municipal building departments
Electrify fleet vehicles when viable.			5	SMART, SMPA
Require new construction to be EV ready.			Ongoing	Municipal building departments
Develop EV readiness plan for region including alternative fuel and transport options.			1-3	SMPA, all regional governments

KEY

GHG Potential 1-4	Promotes Equity	Environmental Quality	Economic Sustainability	Public Health & Safety	Builds Resilience
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# Transportation & Aviation

continued...

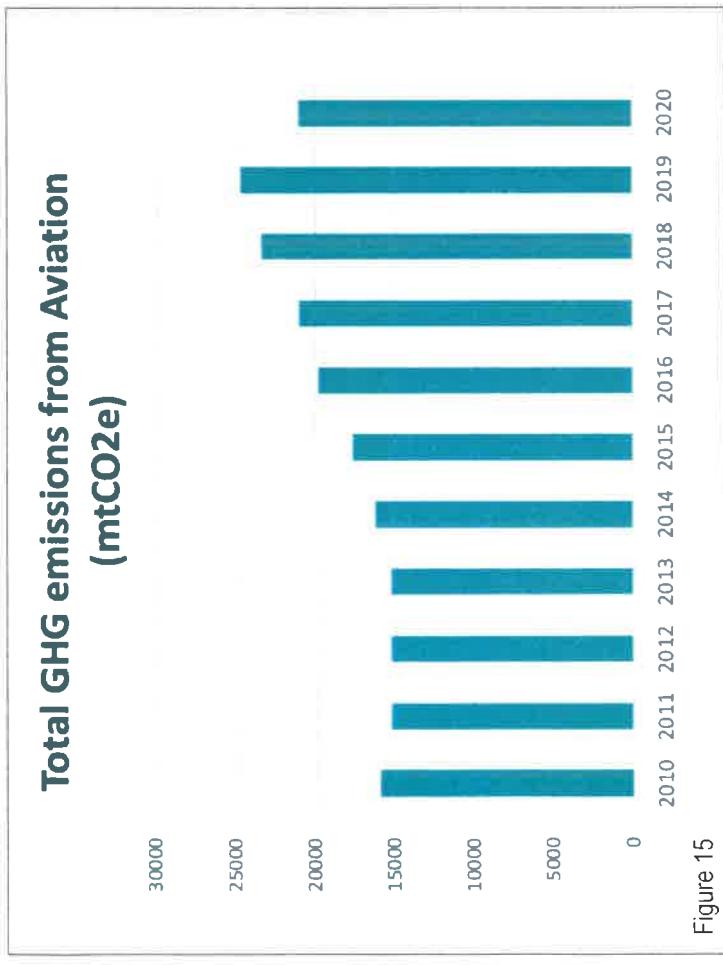
## Aviation

GHG emissions with aviation stem from aircraft fuels exclusively. Operational GHG emissions from buildings and vehicles are accounted for in prior sectors. Opportunities to reduce emissions in this sector include increased aircraft efficiency, electrifying ground support equipment, and maximizing capacity on airplanes to reduce fuel consumption per traveler. As aviation primarily serves to bring visitors and part time residents into San Miguel and Ouray County, we expect continued and possibly increased flight volumes. Moreover, as tourism is the primary industry for our region, maintaining its prevalence while optimizing efficiency is our main concern. The Telluride airport is within scope 1+2 of our GHG emissions, as it is within our regional boundaries. The Montrose regional airport is outside of our regional boundaries, but approximately 75% of travelers through the airport are coming to our counties, so we have traditionally included these associated Scope 3 emissions in our GHG assessment.

Although many airlines intend to reduce GHGs by setting voluntary targets, mandatory fuel efficiency requirements do not exist. Furthermore, because the airline industry operates outside of SEB's direct control, the recommended actions aim to encourage and influence TEX and our regional airports instead of recommending concrete changes. Fortunately, a substantial difference in emissions can be achieved with intentional action when compared to the business as usual scenario.



## Aviation Trends



- After relatively steady aviation travel numbers for a few years, the region has experienced a steady increase in airline travel and associated GHG emissions since 2014.
- Visitor numbers increased from 2013 to 2019 due to a combination of several factors including a national demand for outdoor activities, worldwide improved economy, and effective marketing locally, regionally, and state-wide.
  - The Montrose Regional Airport (MTJ) reported a noticeable decrease in aviation fuel use and enplanements in 2020.
  - The Telluride Airport (TEX) reported a decrease in enplanements, but an increase in aviation fuel use from the airport.

## Aviation Accomplishments

- TEX began using sustainable aviation fuel (SAF), a biofuel mix, in January of 2020, one of the first airports in Colorado to provide SAF, with a goal of providing it for 25% of fuel sales. Use of SAF will reduce operational emissions of sulfur oxides, particulate matter (both count and mass) and carbon monoxide.
- TEX is preparing a marketing and communications plan for its passengers on the use of SAF with the help of AVFUEL, the fuel supplier, as a means of educating the public & increasing public support.
- Since 2017, TEX has promoted PCI's Carbon offset program to passengers.
- TEX was the first large entity to subscribe to the Last Dollar community solar array to offset emissions.
- While many visitors fly in/out of MTJ, an increase in private shuttle companies has decreased the number of private vehicle rentals.

## Aviation Recommendations



**OBJECTIVE 3:** Decrease GHG emissions per passenger associated with airline flights serving our region

ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS
Educate, conduct outreach, and encourage travelers to support utilization of local carbon offset programs.		 	Ongoing	Regional airports, Pinhead Institute
Encourage increased use of bio-jet fuel at all regional airports.		 	Ongoing	Regional airports
Support airlines in encouraging travelers to be environmentally responsible through purchasing carbon offsets, selecting sustainable ground transportation options, and other strategies.	 	 	Ongoing	Regional airports

KEY



GHG Potential 1-4  
 Promotes Equity



Environmental Quality  
 Economic Sustainability



Public Health & Safety  
 Builds Resilience

## Waste + Material Use

Our regional waste and recycling volumes are estimated to be approximately 13,300 and 1,830 tons respectively based on the Sneffels Waste Diversion Planning Project completed based on 2015 data. Waste, specifically municipal solid waste, accounts for 4% of San Miguel County and Ouray County's emissions. On average each person generates 8.7 pounds of waste a day (2019 GHG1 benchmark), slightly below the Colorado average (9 pounds/day) yet nearly double the national average (4.5 pound/day). San Miguel County and Ouray County's dependence on tourism likely contributes to our high waste rate along with the rest of Colorado. GHGs associated with waste primarily come from organic matter (food scraps, leaf litter, wood, etc.) as it decomposes into methane.

All materials sent to landfills and recycling facilities are transported outside of our regional boundaries to Montrose or Grand Junction and are thus considered Scope 3 emissions. Despite waste being outside our inventory scope, we still track waste volumes and implement programs to decrease material sent to the landfill. Reducing waste is a high priority value within our communities due to our direct ability to reduce waste through the 4 R's: refuse, reduce, reuse, and recycle.



## Waste & Material Use

Opportunities to reduce emissions in this sector include diverting and/or salvaging organic materials and increasing the efficiency of hauling and processing. Interestingly a range of benefits come into play from diverting/salvaging organic waste including fertilizer and biogas production, which may be used for local food and energy production. At approximately 45% of our waste stream (according to the Sneffels Waste Diversion Planning Project completed in 2015), and a high contributor to GHGs due to the production of methane, increasing composting is a high priority for our region.

Estimates of Food Waste Weights and Volumes					
	Amount	Pounds/Week	Cubic Yards/Week	Tons/Week	Tons/Year
<b>San Miguel County</b>					
Households	3234	13	28	21	1093
Restaurants	100	300	20	15	780
<b>Total</b>			48	36	1873
<b>Oury County</b>					
Households	1943	13	17	13	657
Restaurants	25	300	5	4	195
<b>Total</b>			22	16	852
<b>Two County Food Waste Total</b>					
			70	52	2725
<b>Add Two Parts of Wood Chips</b>					
			140	45	2325
<b>Total Wet Compost Materials</b>					
			210	97	5050

Figure 16

We continue to work toward increasing the rate of composting as a method of reducing GHG emissions in our region. Large festival events have had the greatest success with composting food-related waste (with Planet Bluegrass accomplishing a 75% diversion rate!). This is due to the highly controlled festival environment where food vendors can be required to utilize compostable materials which are then collected and transported to a regional compost facility. Small scale composting programs are on the rise, with a successful community composting program in Ophir, a free commercial and residential composting drop-off location in Telluride, and a residential compost pickup program developed by a local entrepreneur. Other composting opportunities continue to be explored with varying levels of progress toward development. Expansion/improvement in these facilities along with the formation of partnerships to increase the regional composting network will allow for major reductions in both emissions and tonnage of waste.

# Waste Trends + Accomplishments

## General Waste:

- A composition study of condo waste stream is being conducted and coordinated with the EPA. Updated information will be provided when available.
- Continuing to work on gathering improved information on our regional waste and better understand its composition.
- Compost, recycling, and trash management for waste diversion at most large-scale area events and concerts.

## Composting:

- With local encouragement and financial support, regional green waste and food-related waste are now compostable at 3XM, a private composting company located in Olathe, CO. Efforts are in place to increase our region's use of this service.
- Dirty Sturdy's, a private composting business, collects food waste from residents and businesses throughout the region which is then composted and utilized locally. They recently received a local grant to expand their collection capacity.
- The Town of Ophir has successfully operated a community composting program since April 2019, diverting approximately 24,000 pounds of food waste by September 2021.



## Single Use Plastic:

- Telluride and Mountain Village passed regulations in 2010 to ban single use plastic bags at grocery stores and implemented a 5-cent fee for paper bags.
- Ridgway students initiated the "Carry On Ridgway Reuses" campaign in 2018 that led the way toward Ridgway Council acting against single use plastic bags and straws.
- TMV enacted the Planet Over Plastics Initiative in 2019 to reduce single use plastics in Mountain Village.
- In response to Green Business Program participant requests, EcoAction Partners began collecting plastic film in 2019 for upcycling into Trex decking. Over 5100 pounds have been collected since program inception and it continues to expand.
- Many restaurants have converted takeout materials from plastics to compostables, and the region continues to work toward a collection program for these commercial compostable materials.

# Waste Recommendations

**OBJECTIVE 1:** Reduce the overall volume of waste transported to landfills through efforts to reduce, reuse, recycle, repurpose and compost

ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS
Require waste haulers to improve waste stream monitoring and data availability.		  	  	1-3 Waste Management, Bruin, 3XM
Encourage waste haulers to use clean energy vehicles.		  	  	3-5 Waste Management, Bruin, 3XM
Expand plastic film up-cycling program and other community level recycling programs.		  	  	1-3 EAP, TREX
Continue and expand hazardous waste collection services.		  	  	Ongoing SMC, EAP, Waste Management, Bruin, 3XM
Decrease festival and event waste, requiring local management contracts where appropriate.		  	  	Ongoing Festival owners and managers,
Support restaurants and businesses with waste reduction.		  	  	Ongoing EAP, all regional governments

KEY

- GHG Potential 1-4
- Economic Sustainability
- Promotes Equity
- Environmental Quality
- Public Health & Safety
- Builds Resilience

# Waste Recommendations

## OBJECTIVE 2: Increase composting use and capacity in the region

ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS
Increase community compost programs and individual residential composters. Encourage participation in existing composting programs.				1-5 Waste Management, Bruin, 3XM, EAP
Make finished compost available for local use.				1-5 All regional governments
Implement large-scale green waste collection programs.				1-3 Waste Management, Bruin, 3XM

## OBJECTIVE 3: Decrease construction & demolition waste

ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS
Reduce construction & demolition waste through education, encouragement, incentives, and ordinances.				3-5 Municipal building departments

KEY



Economic Sustainability | Promotes Equity |

Environmental Quality |

Public Health & Safety |

Builds Resilience |

# Food

Food accounts for 11% of our region's GHG emissions. Though it is considered a Scope 3 emission it is also a high priority to address in meeting our goals. Emissions within our food system come from the production, transportation, and storage of goods. With a tourist economy located in a remote high-alpine mountain region, most of our food is grown, produced, processed, and transported from lower elevation regions. Producing and consuming local food allows for a significant reduction in these GHG emissions, as well as the opportunity to support local environmentally-friendly agricultural producers and small businesses. Food is included in this CAP because of its intimate connection to both human and environmental health.

Actions within this sector represent significant research and community resilience opportunities.



# Food Accomplishments

- Number and size of farmers markets across the region have increased.
- Local agricultural production across SMC, OC, and the Western Slope has increased.
- Distribution of locally produced food has increased through the development of CSAs, food cooperatives, delivery businesses, and other options.

# Food Recommendations

OBJECTIVE 1: Increase local organic/natural food production and consumption

ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS
Continue to increase local food supply, distribution, and consumption. Including local programming such as community gardens, CSA's, farmers markets.		 		Ongoing Regional farmers markets, food co-ops and agricultural producers
Incentivize and explore innovative methods to expand the growing season, increase production, and implement alternative growing strategies (greenhouses, hydroponics, permaculture, etc.).	 		 	3-5 San Miguel Basin Extension Office
Develop local food production monitoring program associated with GHG reductions.		 	 	1-3 PES Program

KEY

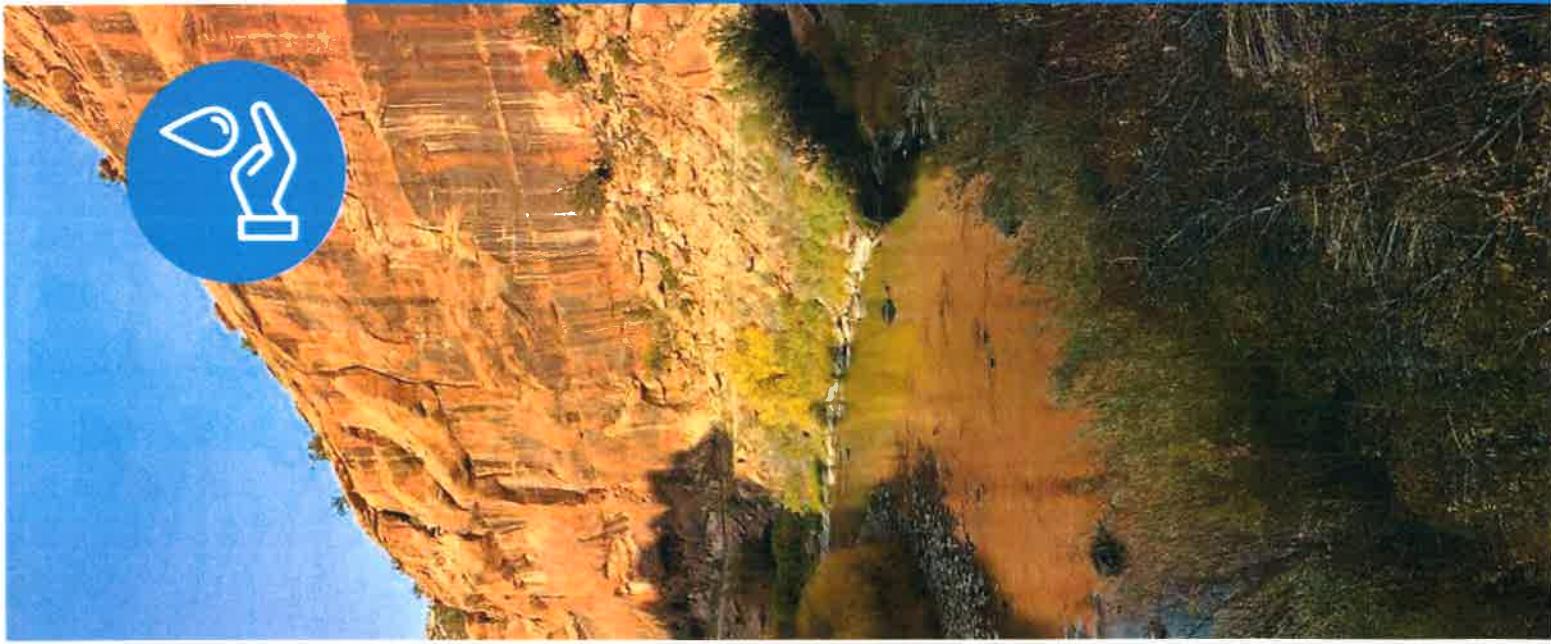
GHG Potential 1-4	Promotes Equity	Economic Sustainability	Environmental Quality	Public Health & Safety	Builds Resilience
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# Water

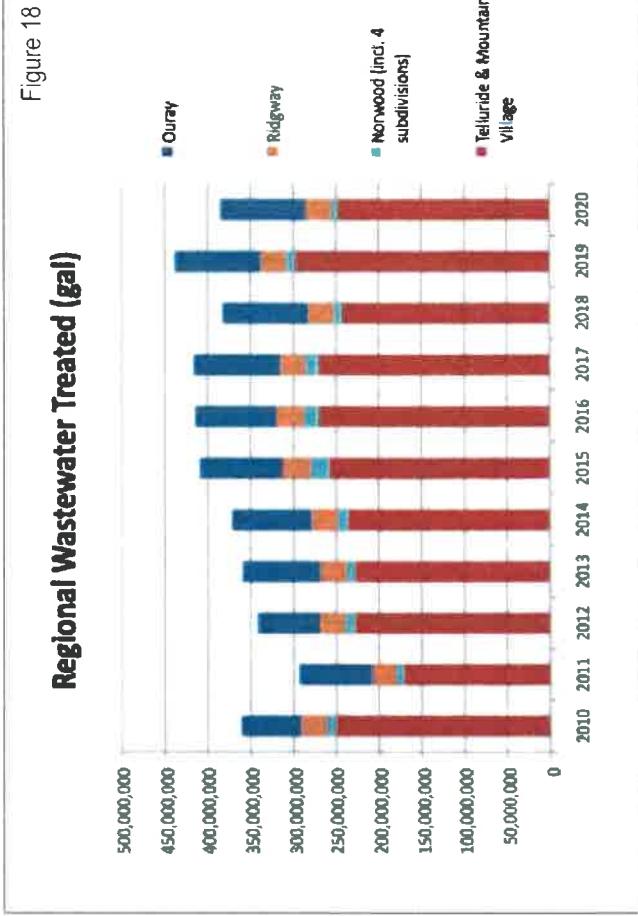
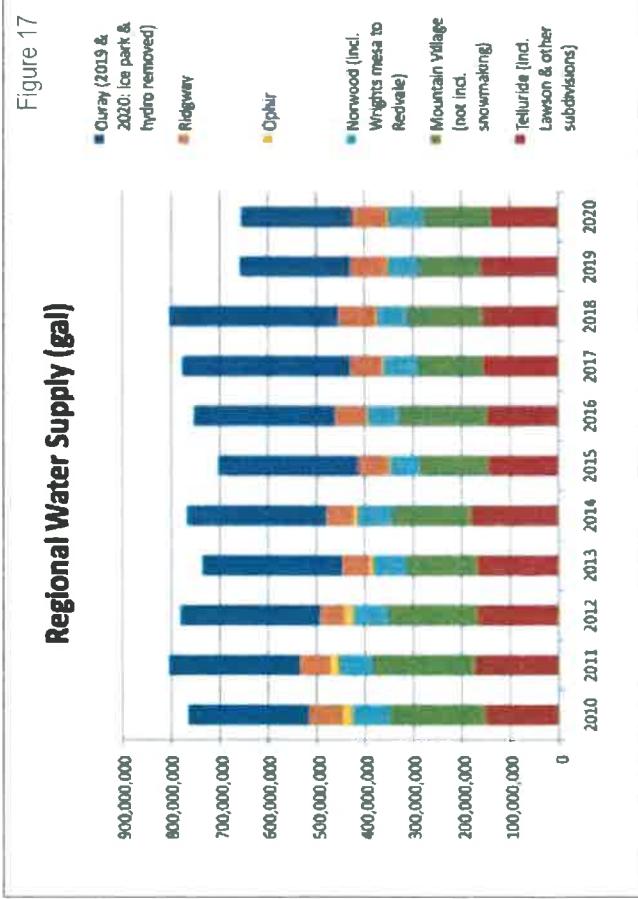
GHG emissions associated with water use in our region come from water pumping and treatment. Nearly all GHG emissions associated with water treatment are tied to energy supply for those systems, while additional energy used for heating water is included in the building energy use sector. While GHG emissions associated with municipal water comprise less than 2% of our region's total emissions, we have included it in this CAP as it is intimately tied to environmental and economic health of our region.

Due to the relationship between water and energy use, our recommendations in this section primarily focus on reducing the use of energy associated with water consumption, pumping, and treatment. We recognize the importance of water conservation planning, metering and monitoring, and implementation of water conservation policies and efficiency technologies. Creative solutions to reduce water consumption, such as eliminating use of potable water for irrigation, will need to be considered as part of creating a sustainable future.

Water scarcity is nothing new in Western Colorado and we applaud the efforts and actions made by Southwestern and Tri-County Water Conservancy Districts, San Miguel Watershed Coalition, Uncompahgre Watershed Partnership, as well as public and private landowners working to improve water quantity and quality now and for years to come. We hope to contribute to the goals outlined in our region's plans for water security, while recognizing drought mitigation stands beyond the scope of this CAP.



# Water Trends

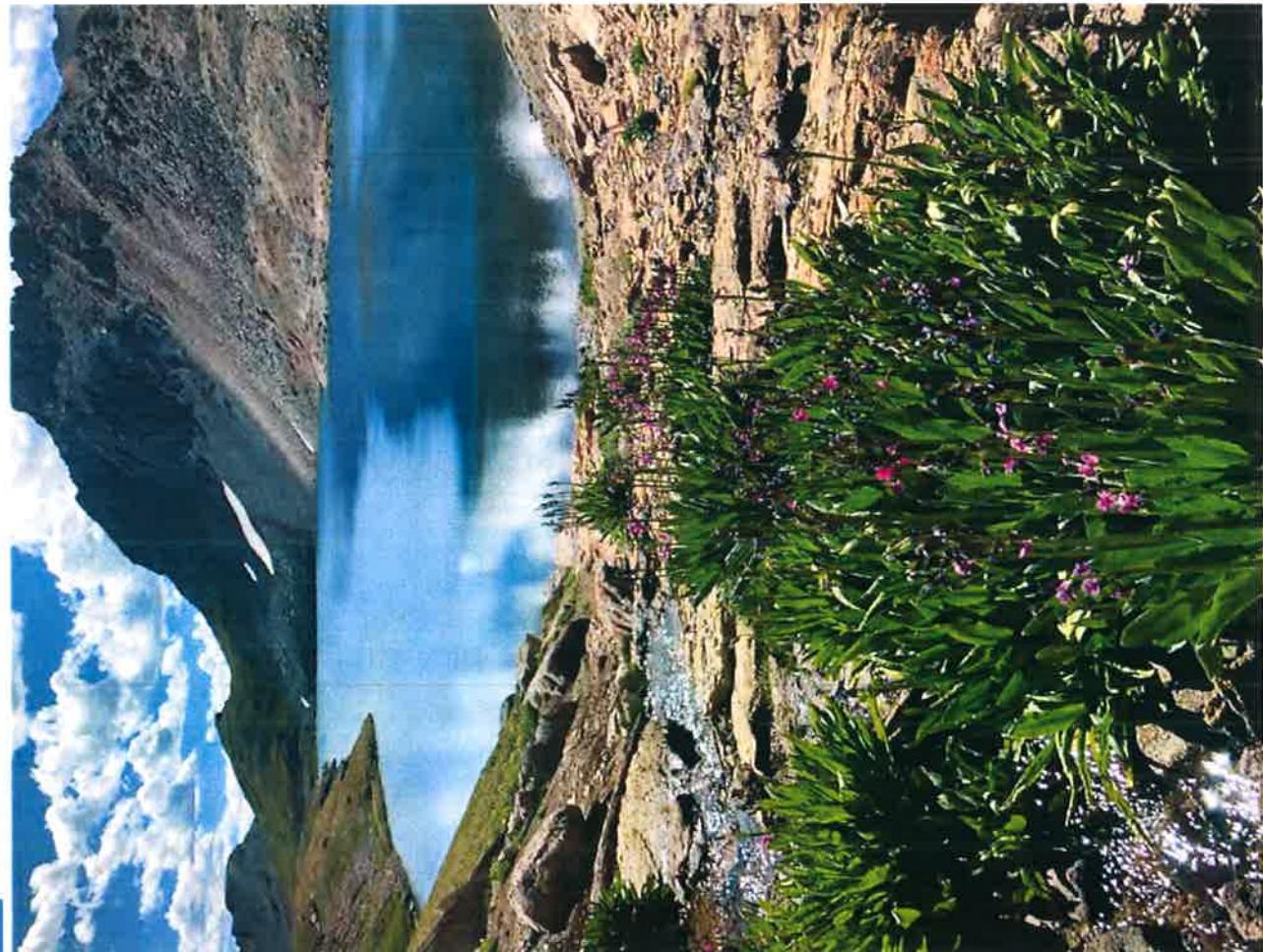


EcoAction Partners tracks annual water use by communities across the region for the SEB to analyze usage, consumption, and energy associated with water supply and wastewater treatment. Significant changes in domestic water use have been noticed to be associated with water leaks and their repair and an increase of water use for irrigation during drought years. As our visitor economy increases, population expands, and new homes and commercial buildings are constructed, we must continue to closely track changes in our water usage associated with this increased demand.

Of note for the above charts:

- The City of Ouray continues to work on improving their means and methods toward tracking accurate water consumption and treatment data. Since the city's water is supplied via gravity, water leaks in the supply system have been treated with less concern than for communities that must pump their water supply, which leads to a relatively high volume for the size of the community.
- Enforced irrigation restrictions in drought years create a noticeable reduction in water use.
- Many consumers of municipally-supplied water are on septic systems, and thus not served by wastewater treatment plants.

## Water Accomplishments



- Water conservation plans have been adopted by the Towns of Telluride and Ridgway.
- Drought mitigation plans were adopted and are enforced by Towns of Telluride, Mountain Village, Ridgway, Norwood, and Ophir.
- Norwood installed a raw water irrigation collection system.
- The Town of Ophir identified and fixed a significant water supply leak in 2013, reducing its water supply volume in half.
- Increase in percentage of households with low flow fixtures across the region.
- Hazard mitigation plans for addressing drought conditions:
  - [San Miguel County](#)
  - [Ouray County](#)
- The San Miguel Watershed Coalition and Uncompahgre Watershed Partnership each produce watershed health reports.
- [SMWC State of the Watershed](#)
- [UWP Watershed Reports](#)
- Increase in local, regional, and statewide organizational efforts to address water consumption across Colorado.
- The San Miguel Watershed Coalition (SMWC) produced a proposal for an Integrated Hydrologic Modeling of the San Miguel Watershed Using MIKE SHE in 2021.
- In 2022 the Dolores River Canyon National Conservation Area and Special Management Area Act was introduced to help protect the Dolores River.

# Water Recommendations

## OBJECTIVE 1: Reduce water consumption from municipal and industrial uses

ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS
Track water and wastewater use data, associated energy use, and impacts of conservation/drought mitigation measures.			Ongoing	Municipal water departments
Evaluate and implement system methodologies to reduce water-associated energy use.			1-3	Municipal water departments
Encourage and incentivize low flow water fixtures.			1-3	CO state govt, Municipal water departments
Encourage use of alternative water systems i.e. rainwater, greywater.			Ongoing	SMWC, all regional governments, municipal water departments
Support efficient agricultural water practices and incentivize savings.			Ongoing	PES program, municipal water departments

## OBJECTIVE 2: Improve watershed health and security

ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS
Continue to develop, adopt, implement, and enforce municipal drought mitigation plans.			Ongoing	All regional governments
Support efforts of organizations (local, regional, and statewide) that focus on water security and watershed ecological health.			Ongoing	SMWC, Uncompahgre Watershed Partnership

KEY

GHG Potential 1-4	Promotes Equity	Economic Sustainability	Environmental Quality	Public Health & Safety	Builds Resilience
-------------------	-----------------	-------------------------	-----------------------	------------------------	-------------------

# Land

Land use contributes to both emissions and sequestration of our region's GHG emissions. Carbon exists in different forms across our landscape. Soil, plants, water, and other aspects of our region's ecosystem exchange carbon for different uses creating a dynamic state of equilibrium. Land use such as tilling, planting and fertilizing cropland, and grazing livestock releases ecosystem carbon and nitrogen as greenhouse gases into the atmosphere in the form of carbon dioxide and other GHG trace gases such as nitrous oxide and methane. Simultaneously, other forests, vegetation, wetlands, designated open space, and many agricultural practices sequester carbon and increase moisture retention of the land. Functional, flourishing ecosystems increase regional capacity to be resilient and cope with a changing climate. Utilizing nature-based solutions to sequester carbon and improve ecosystem health is an extremely valuable endeavor that supplements mitigation and adaptation strategies.

In 2019, San Miguel County hired Marc Easter Consulting LLC in tandem with DBA Farm Table & Sky to conduct a land use GHG inventory for the county. Their study provided insights into what changes could improve soil health (water retention and infiltration, nutrient cycling, and crop capacity) and increase GHG emissions and sequestration potential of SMC land. These recommendations helped guide the development of SMC's Payment for Ecosystem Services Program. The PES plan highlights those exciting opportunities for ranchers, agriculturalists, and other land managers to receive monetary compensation for the environmental actions they practice.



## Land Use - Forestry

### San Miguel County Non-Federal Land Cover

Settlement:	Other:
1.6%	0.3%
Cropland:	

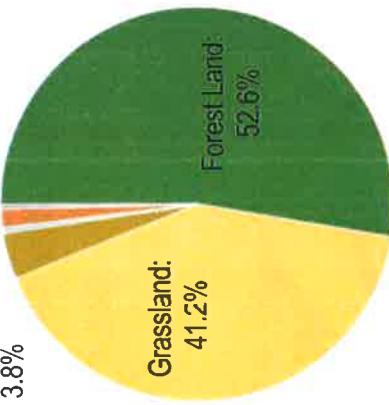


Figure 19

### Ouray County Non-Federal Land Cover

Settlement:	Other:
1.9%	1.2%
Cropland:	

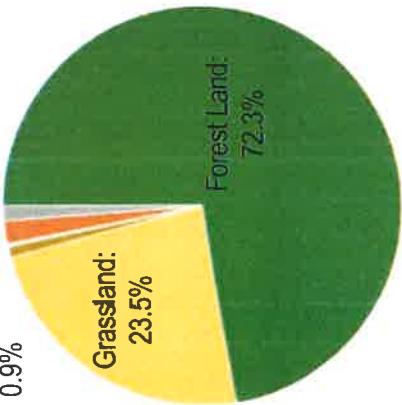
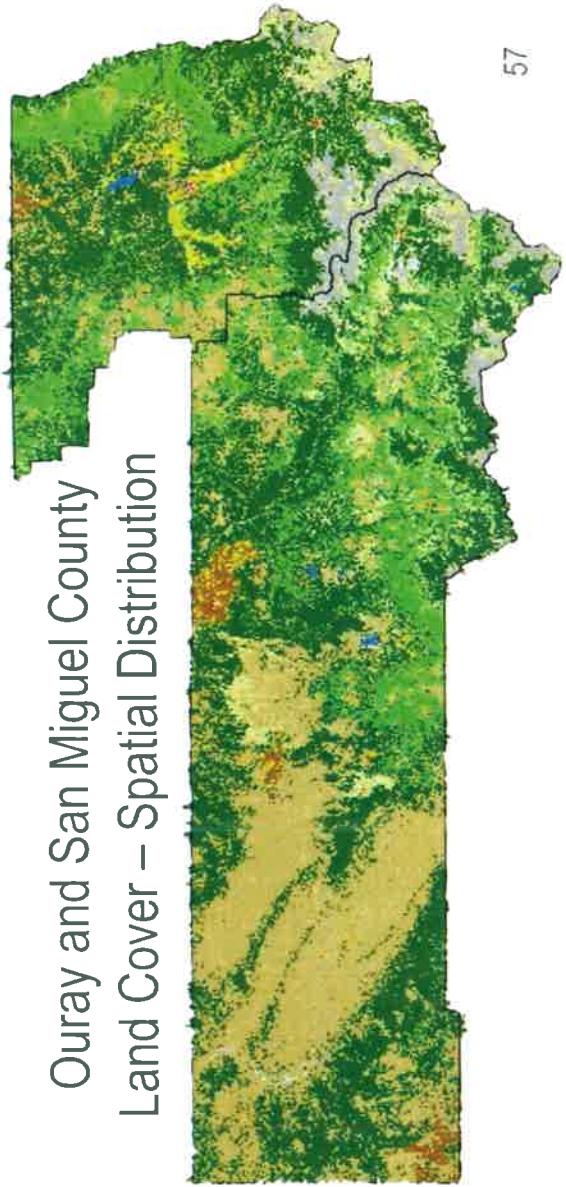


Figure 20

### Ouray and San Miguel County Land Cover – Spatial Distribution

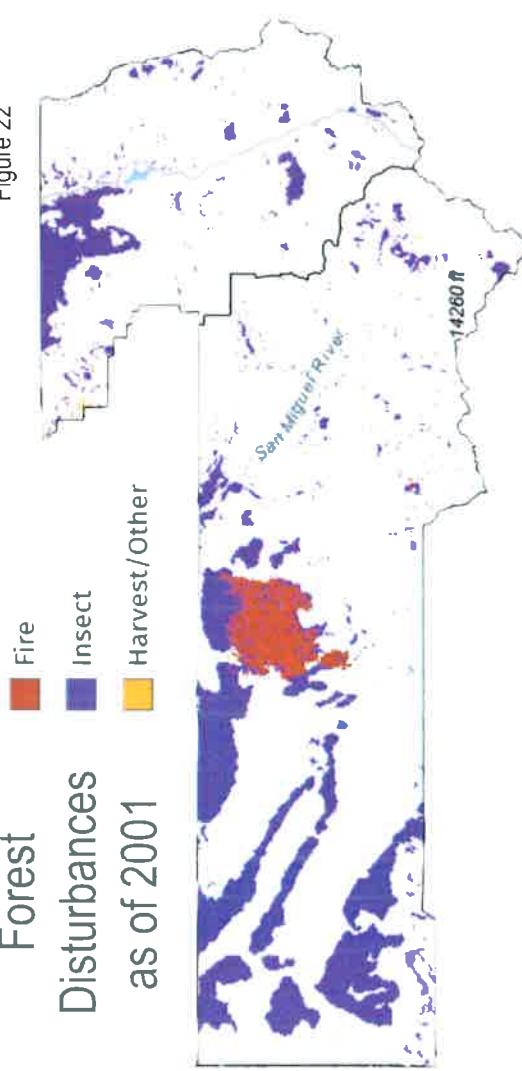


The health, function, and structure of our diverse ecosystems intimately relate to both our economic sustainability and resilience to the stressors of climate change. Changes in vegetation cover due to disturbances or natural succession impact our landscape's ability to sequester carbon. The following section describes changes in our beloved landscape and the impacts it has on GHG emissions and reductions. Because our municipal and county governments hold little control over federal land practices, we have chosen to exclude federally owned and operated land from our emissions calculations but feel it is important to understand and account for these changes in our goal setting and program creation decisions.

Forests make up the vast majority of our region's ecosystems (72.3% in Ouray County, 52.6% in San Miguel County) with grasslands constituting most of the remainder (23.5% in OC, 41.2% in SMC). In total, our ecosystems remove around 181,000 mtCO<sub>2</sub>e annually from the atmosphere, roughly half of our annual regional emissions. There's potential through PES and other local land initiatives to increase this sequestering capacity and promote long-term forest health.

## Land Use – Forest Disturbances

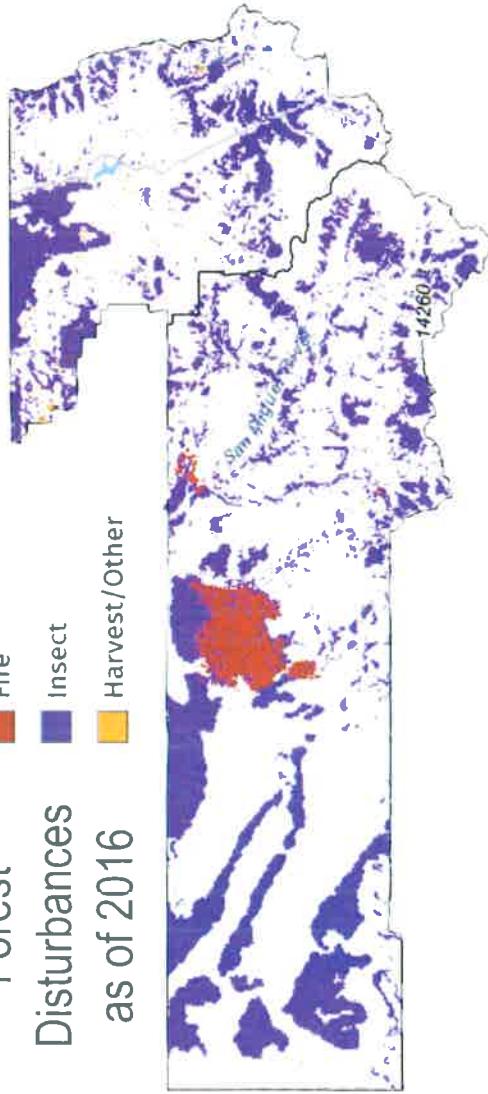
Figure 22  
Forest Disturbances as of 2001



Though most of our region's forests remain healthy year to year, there has been a drastic increase in forest disturbances, specifically insect damage.

From 2001-2010, insect damage impacted roughly 68,000 acres of our region's non-federal lands. The extent of this damage is depicted left on both federal and non-federal land. The GHG inventory accounting covers the emissions and reduction changes from 2011 onward to correlate with our 2010 baseline year.

Figure 23  
Forest Disturbances as of 2016



The primary impacts of insect damage takes three forms.

1. From a GHG perspective; prevents our forests from removing carbon from the atmosphere and produces its own emissions.
2. From a risk perspective; greatly increases the risk of severe forest fires and mudslides.
3. From an ecological perspective; disrupts several ecosystem processes including soil stability, flood control, wildlife habitat, and nutrient exchange.

These may produce serious compounding affects, not fully accountable in a GHG inventory.

## Land Use Accomplishments

- Areas throughout the region that have been set aside as open space sequester carbon, including [Telluride's Valley Floor](#).
- Land Trusts throughout the region have grown, preserving land and preventing development through conservation easements.
- SMC established and has maintained a Baseline Soil Health Study since 2016, with a plot program study based on 25'x50' plots of land.
- SMC planted the Pollinator Garden at the County's Down Valley park in 2017 and continues with plantings and management of this 7500' garden each year.
- A Rare Plant Study was completed by SMC in 2010.



## Payment for Ecosystem Services

San Miguel County is piloting a soil health [Payment-for-Ecosystem-Services \(PES\) Program](#) to develop a protocol to help farmers and ranchers improve their soil and increase the water holding capacity. Soil scientists across the world are studying the effects of increasing soil organic matter and encouraging healthy soil microbes in order to produce healthier and better yields of grass and/or crops for years to come. Increasing the soil's water holding capacity may help ease the effects of droughts as the soil acts more like a sponge, holding onto more of the water that falls. Balanced and healthy microbial activity can increase plant growth and maintain a soil environment which may decrease the opportunity for invasive plants to get established. The pilot program will also explore the levels of carbon that can be sequestered within our local soils. Ideally, this will develop into a way for farmers and ranchers to get paid for ecosystem services centered on soil health. Funding for the program falls under the County's Open Space Commission and includes funding for forest health initiatives, a fen wetland study, and community education.

# Land Use Recommendations

**OBJECTIVE 1:** Increase the GHG sequestration and water retention capacity of land in the region

**OBJECTIVE 2:** Increase yield and health of crops and livestock through use of regenerative agricultural and ranching practices

**OBJECTIVE 3:** Increase GHG sequestration capacity of trees and plant life in the region

\*Objectives apply to all actions

Action	GHG Reduction Potential	Co-Benefits	Timeline	Partners
Support San Miguel County in implementing their Payment for EcoSystem Services (PES) Program.			1-3	SMC, agricultural producers, ranchers, landowners
Quantify GHG impacts of carbon sequestration actions and relate them to our GHG emissions inventory.			3-5	EAP
Increase measures to promote and protect healthy forests.			Ongoing	SMA, all regional governments
Implement programs, develop incentives and encourage the planting of trees appropriate for specific ecological zones.			Ongoing	All regional governments, Seas for Trees
Encourage landscaping according to best practices for local ecological zone.			Ongoing	All regional governments, building departments
Improve wetland protection.			Ongoing	All regional governments, SMA, TI, SMWC
Review policies and tax mechanisms to ensure wide use land practices and encourage sequestration.			1-3	All regional governments, SMA

KEY



GHG Potential 1-4  
Promotes Equity

Economic Sustainability  
Environmental Quality

Public Health & Safety  
Builds Resilience

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# Acknowledgments

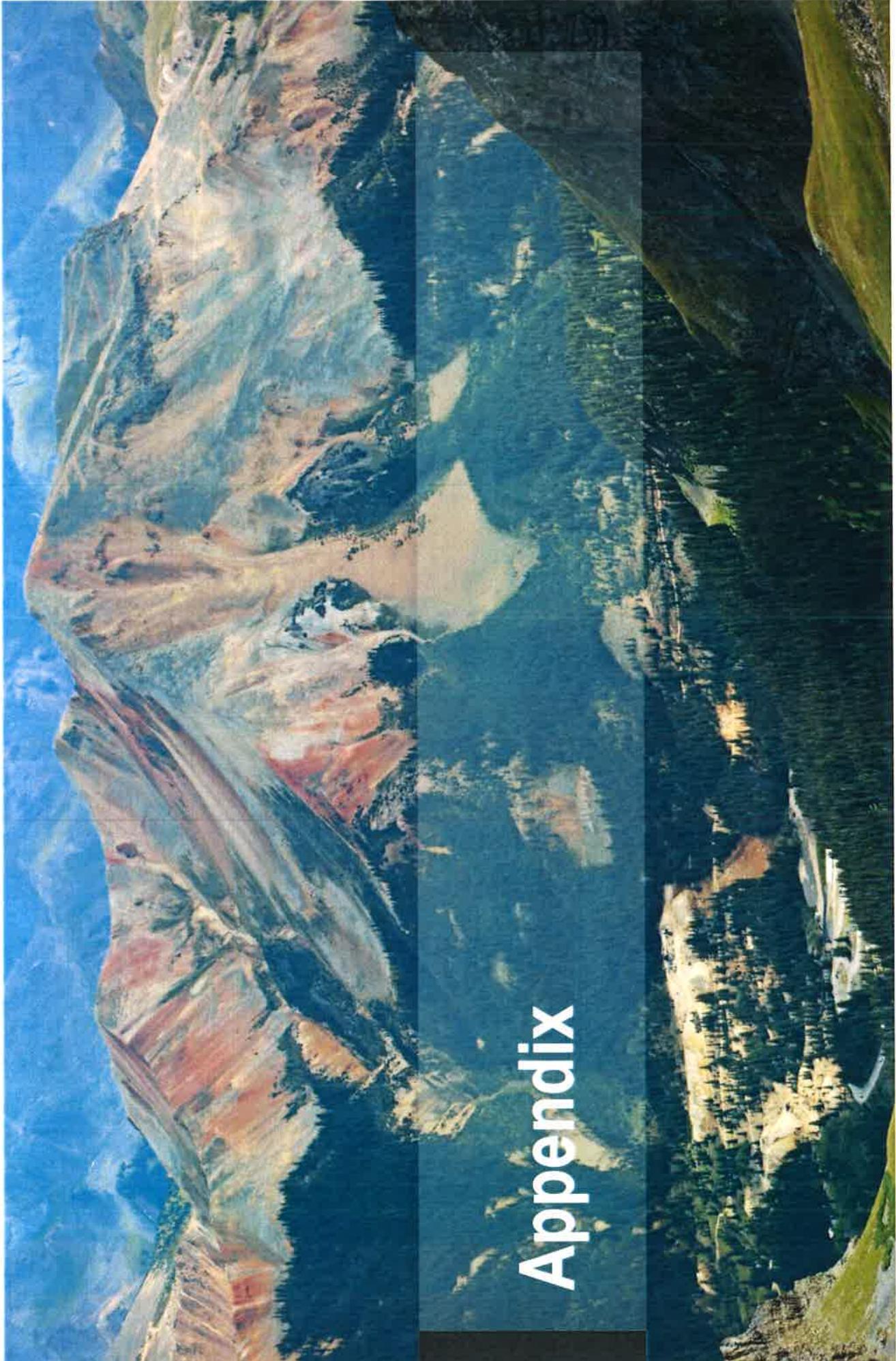
## Sneffels Energy Board:

The San Miguel and Ouray County Regional Climate Action Plan was prepared by EcoAction Partners with extensive input from the Sneffels Energy Board. It would not be possible without the expertise, time, and dedication of this Advisory Committee. Many other stakeholders representing all sectors provided expertise and data to support the development of this CAP and GHG Inventory analysis. We would like to express our thanks to each of them.

Organization	Person	Title
City of Ouray	Ethan Funk	City Council member
Ouray County	Ben Tisdell	County Commissioner
Ouray County	Jake Niece	County Commissioner
San Miguel County	Lance Waring	County Commissioner, EAP Board
San Miguel County	Starr Jamison	Natural Resources & Special Projects Director
Town of Mountain Village	Patrick Berry	Town Council member, EAP Board
Town of Mountain Village	Zoe Dohnal	Business Development & Sustainability Director
Town of Ophir	Ken Haynes	Ophir Town Manager
Town of Ridgway	John Clark	Ridgway Town Mayor
Town of Ridgway	Preston Neil	Ridgway Town Manager
Town of Telluride	Karen Gugjelmone	Environmental & Engineering Division Manager
Town of Telluride	Todd Brown	Town Council member, EAP Board
Town of Telluride	Alex Shelley	Communications Executive
San Miguel Power Association	Kevin Cooney	SMPA Board member, EAP Board
San Miguel Power Association	Phil Zimmer	Energy Services Executive
San Miguel Power Association	Terry Schuyler	Key Account Executive
San Miguel Power Association	Wiley Freeman	Manager of Member Services & Marketing
EcoAction Partners	Audrey Morton	Previous EAP Board Director
Pinehead Climate Institute	Adam Chambers	Climate Scientist
Ridgway Ouray Community Council	Dave Jones	ROCC Clean Energy Committee
Rotary International of Telluride	Madeleine Allen	SMC community representative
San Miguel Authority for Regional Transportation	David Averill	Executive Director
Seas of Trees	Joanna Kanow	SMC community representative
Telluride Institute	Tucker Szymkowicz	Executive Director

## Other Contributing Stakeholders:

Organization	Person	Title
Black Hills Energy	Ed Holland	Black Hills Energy Small Business Direct Install Program Manager
Bruin Waste Management	Chris Troper	Climate & Sustainability Programs Administrator
City of Aspen	Chris Menges	Managing Director of Communications and Engagement
Lotus Engineering & Sustainability	Julia Ferguson	Research Associate
Lotus Engineering & Sustainability	Rachel Meier	Property & Contracts Director
Montrose Regional Airport (MTO)	Venda Stockdale	Airport/FBO Manager
Telluride Regional Airport (TEX)	Kenneth Maepa	Mountain Operations Administrator
Telluride Ski & Golf	Erin Kress	Adult Programs Specialist
Wilkinson Public Library	Joanna Spindler	
Telluride Ecology Commission		
Mountain Village Green Team		
Ridgway Ouray Community Council		



# Appendix



Additional supporting materials can be found on  
the CAP supporting documents webpage

# Appendix 1: Jurisdiction Specific Action List

The actions included in this appendix offer additional municipal/jurisdiction specific actions selected to support accomplishment of our regional objectives. We offer this information to illuminate potential actions for each municipality within our region, as actions for some may be achievements for others (i.e., water and/or energy metering).



## San Miguel County

San Miguel County is home to 5,086 residents. San Miguel County has municipal and community-level GHG tracking in place and has a target of reaching carbon neutrality.

ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS
Develop and adopt a jurisdiction specific climate action plan to guide the county government in prioritizing climate actions.		=   +	1	SMC and others

KEY



Economic Sustainability  
= Promotes Equity

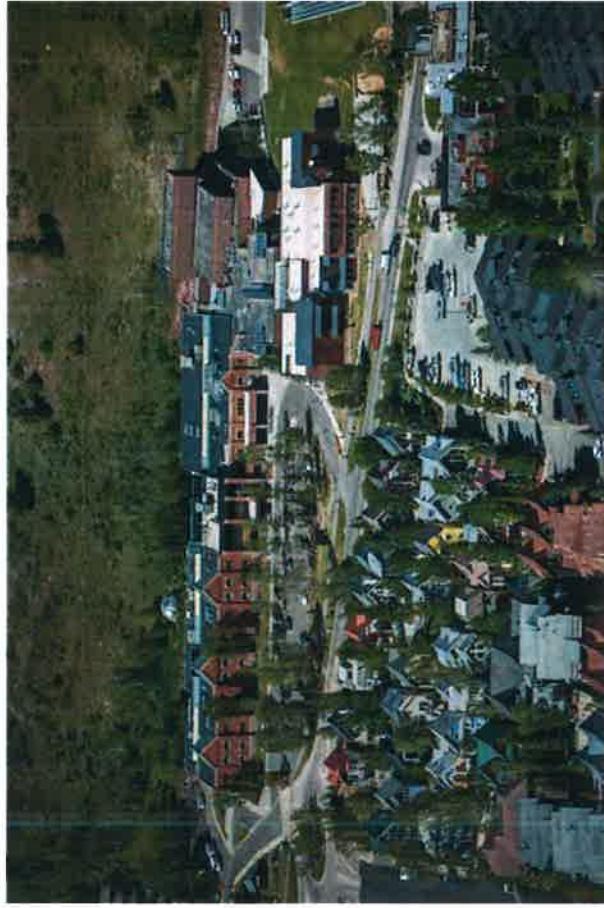


+ Public Health & Safety  
 Person icon representing Builds Resilience.

Builds Resilience

## Town of Telluride

### Appendix 1



The town of Telluride has a population of 2,608 residents and is making progress toward its [Telluride-specific Climate Action Plan](#) which was originally published in 2015 and updated in 2021. Telluride is located in San Miguel County and is working to be resilient, healthy, and more equitable as a community. Through collective and committed climate action, the goal is to create a thriving, safe, and sustainable environment that prioritizes conservation of natural resources, supports local economies, and affords all members of the community a high quality of life. Climate action is essential to the environmental sustainability work Telluride is doing. It includes continued expansion of affordable housing options within the town and the region; expansion of the regional wastewater treatment plant to ensure good water quality in the San Miguel River; and exploration of electrification.

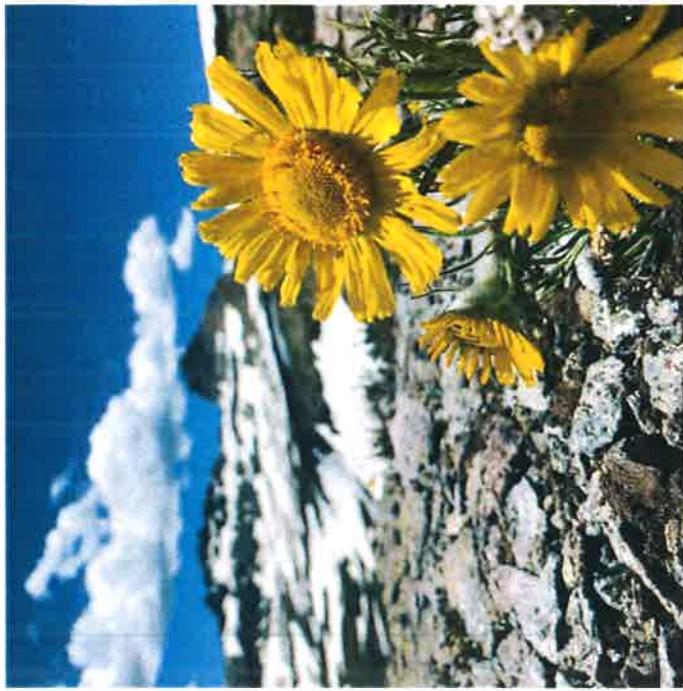
ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS
Promote/incentivize optimal control systems and thermostat settings to couple comfort with efficiency.				1-3 Telluride
Promote/incentivize building automation systems (such as key card entry activation of electricity in lodging rooms).				1-3 Telluride
Incentivize energy efficiency upgrades in rental properties.				Ongoing Telluride
Develop renter-specific outreach and education campaigns.				1-3 Telluride

KEY



## Town of Ridgway

The town of Ridgeway has a population of 1,183 residents and is located in Ouray County. Town representatives participate in the Ridgeway Ouray Community Council (ROCC) to work towards maintaining quality of life and sustainability for present and future generations. Ridgway encourages the use of carbon-free and renewable energy systems within the town and supports the goal of carbon neutrality for Colorado.



ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS
Adopt an energy code that achieves equivalent or better energy performance than the 2021 international energy conservation code and the model electric and solar ready code developed by the energy code board.		 		Ongoing Ridgway
Encourage the use of innovative building practices and materials, as allowed by the Town's building regulations, including the international energy conservation code, when such practices or materials would increase energy efficiency, curb greenhouse gas emissions, and reduce home costs.		 		Ongoing Ridgway

KEY

GHG Potential 1/4	Promotes Equity	Environmental Quality	Public Health & Safety	Builds Resilience
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## Town of Ridgway (continued)

ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS
Work with SMPA and the Ridgway Space to Create owner to move forward on installing a solar/storage system, commonly referred to as a Microgrid, at Ridgway Space to Create.		  		1-3 Ridgway
Promote/incentivize optimal control systems and thermostat settings to couple comfort with efficiency.		  		1-3 Ridgway
Promote/incentivize building automation systems (such as key card entry activation of electricity in lodging rooms).		  		1-3 Ridgway
Incentivize energy efficiency upgrades in rental properties.		  	Ongoing 	Ridgway
Develop renter-specific outreach and education campaigns.		  		1-3 Ridgway

KEY

GHG Potential 1-4	Promotes Equity	Environmental Quality	Public Health & Safety	Builds Resilience
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## Town of Mountain Village

The town of Mountain Village has 1260 residents and is located in San Miguel County. The [Town of Mountain Village-specific Climate Action Plan](#) was developed 2020 with a target of carbon neutrality by 2050. The Town of Mountain Village will be alternating years of the Solar Co-op with the new Building Energy Incentive Program – a 2023 pilot program targeting energy inefficiencies and energy loss in existing residential and commercial buildings. The Town of Mountain Village has a Composting Pilot Program at Village Court Apartment (VCA). The Town is working with local waste haulers to bring widespread commercial and residential composting to Mountain Village and the region. In 2022, irrigation assessments were added as a pre-requisite to the Smart Irrigation Controls Program. The Town implements its Water Conservation Program each summer.

ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS
Smart Building Program: Promote energy efficiency, energy reduction, and renewable energy use by waiving up to 100% of building permit fees for those renovating, expanding, or building.			Ongoing	Mountain Village
Solar Co-Op: Promote solar through assistance/rebates for homes/businesses that offset energy use with a renewable energy source.			Ongoing	Mountain Village, Solar United Neighbors, TMVOA
Farm to Community Incentive: Promote local food sourcing by offering a 14-week food share of locally farmed produce and food items and encouraging non-qualifying residents to become CSA members.			Ongoing	Mountain Village
Compost Incentive: Incentivize diversion of organic matter by providing 20 households with composting units, scales, and training.			Ongoing	Mountain Village
Cedar Shake Incentive: Incentivize re-roofing with fire-rated roofing material by waiving building permit fees.			Ongoing	Mountain Village
Wildfire Mitigation/Defensible Space: Promote creation of defensible space by reimbursing costs up to 50% or \$10,000.			Ongoing	Mountain Village

KEY

GHG Potential 1-4	Promotes Equity	Environmental Quality	Public Health & Safety	Builds Resilience
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## Town of Mountain Village (continued)



ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS
Smart Irrigation Controls: Incentivize water conservation by providing a rebate for the purchase and installation of EPA WaterSense smart irrigation controls.	leaf leaf leaf leaf	=\$ \$ + +	Ongoing	Mountain Village
Promote/incentivize optimal control systems and thermostat settings to couple comfort with efficiency.	leaf leaf leaf leaf	=\$ \$ + +	1-3	Mountain Village
Develop local hydropower capacity (through existing dam retrofits, micro-hydro, pico-hydro, and run of the river, etc.)	leaf leaf leaf leaf	=\$ \$ + +	7-10	Mountain Village
Promote/incentivize building automation systems (such as key card entry activation of electricity in lodging rooms).	leaf leaf leaf leaf	=\$ \$ + +	1-3	Mountain Village
Incentivize energy efficiency upgrades in rental properties.	leaf leaf leaf leaf	=\$ \$ + +	Ongoing	Mountain Village
Incentivize large employers that provide seasonal housing to deploy large-scale energy efficiency upgrades.	leaf leaf leaf leaf	=\$ \$ + +	Ongoing	Mountain Village
Develop renter-specific outreach and education campaigns.	leaf leaf leaf leaf	=\$ \$ + +	1-3	Mountain Village

KEY



GHG Potential 1-4 | Promotes Equity | Environmental Quality | Public Health & Safety



Builds Resilience

## City of Ouray

### Appendix 1

The city of Ouray is home to 903 residents and is located in Ouray County. Through 2012, the City adopted an [Energy Action Plan](#), guiding them toward implementing many actions that reduce government energy use into the future. Additionally, the Ridgeway Ouray Community Council (ROCC) works toward maintaining quality of life and sustainability for present and future generations. Much of the City's attention is now directed toward dealing with diminishing Geothermal hot water resources from our aquifer, likely due to the long-term regional drought. The City relies on these resources for both the Hot Springs Pool, and for some additional building heat. City leaders are looking at how to optimize and possibly expand use of these resources. They plan to continue to purchase "green power" from our electrical provider for all city owned electrical accounts.



ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS
Develop local hydropower capacity (ideally through existing dam retrofits, micro-hydro, pico-hydro, and run of the river.)		 		Ongoing City of Ouray
Install methane digesters, both small and large (adequate feedstock provided).		 		5-10 City of Ouray
Adopt 2018 International codes with specific local requirements to exceed minimum standards.		 	 	1 City of Ouray, building trades

KEY

	GHG Potential 1-4		Economic Sustainability		Public Health & Safety		Builds Resilience
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## City of Ouray (continued)

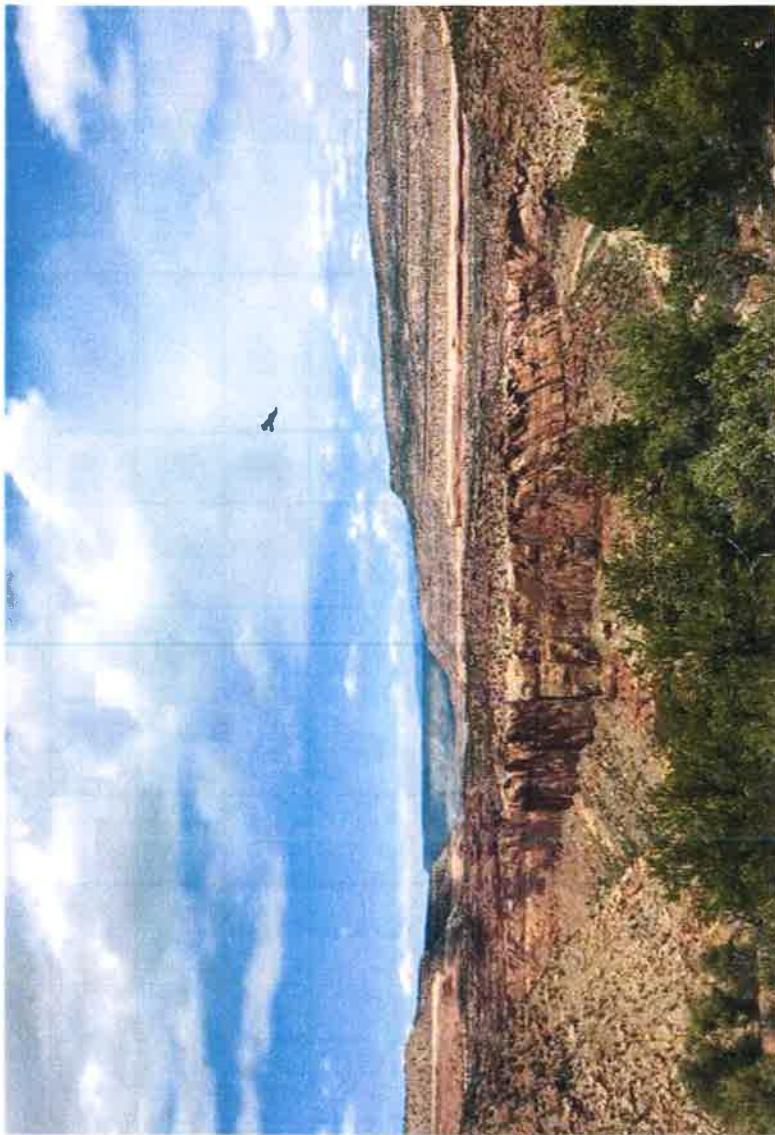
ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS
Promote/incentivize optimal control systems and thermostat settings to couple comfort with efficiency.		 		1-3 City of Ouray
Promote/incentivize building automation systems (such as key card entry activation of electricity in lodging rooms).		 		1-3 City of Ouray
Incentivize energy efficiency upgrades in rental properties.		 		Ongoing City of Ouray
Develop renter-specific outreach and education campaigns.		 		1-3 City of Ouray
Install water meters.		 		3-5 City of Ouray
Improve water usage data.		 		Ongoing City of Ouray

KEY

GHG Potential 1-4	Promotes Equity	Environmental Quality	Economic Sustainability	Public Health & Safety	Builds Resilience
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## Town of Norwood

The town of Norwood has a population of 536 residents and is located in San Miguel County. Norwood adopted Colorado's previous state goals of reducing GHG emissions 20% by 2020 along with the rest of the Sneffels Energy Board.



ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNER(S)
Install solar PV on municipal buildings and facilities	+	\$ +	1-5	Norwood
Develop and implement energy saving and environmentally sound domestic water conservation plans	+	\$ +	1-3	Norwood

KEY



GHG Potential 1-4  
= Promotes Equity



Environmental Quality  
\$ Economic Sustainability



Public Health & Safety  
+ Builds Resilience

## Town of Ophir

### Appendix 1



The town of Ophir is located in San Miguel County and has 198 residents. The town of Ophir has several groups working towards environmental and sustainable initiatives for the community. The Water Commission has been working in partnership with the team of engineers at SGM to create a comprehensive plan for the municipal water usage and to develop a conservation plan. The Ophir Environmental Commission works towards conservation of the lands, including high carbon sequestration areas like wetlands and old growth forest in and around Ophir. The Ophir Self Reliance Commission had its fifth year managing the community compost program that diverts around 17,500 lbs. of waste from landfill annually. In addition, the town government has maintained 100% offset by renewable energy.

ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS
Adopt 2018 International codes with specific local requirements to exceed minimum standards.			1	Ophir, building trades
Explore community solar project and microgrid resiliency.			3-5	Ophir, SMPA
Implement water metering.			3-5	Ophir, Ophir Water Commission
Develop and implement energy saving and environmentally sound domestic water conservation plans.			1-3	Ophir, Ophir Water Commission
Create a new educational campaign around compost programming. Make finished compost available for local use.			1-3	Ophir, EAP
Explore micro hydro capacity.			7-10	Ophir
Install community EV charging system.			1-3	Ophir
Improve wetland protection specifically local fens			3-5	Ophir, Ophir Water Commission, SMWC

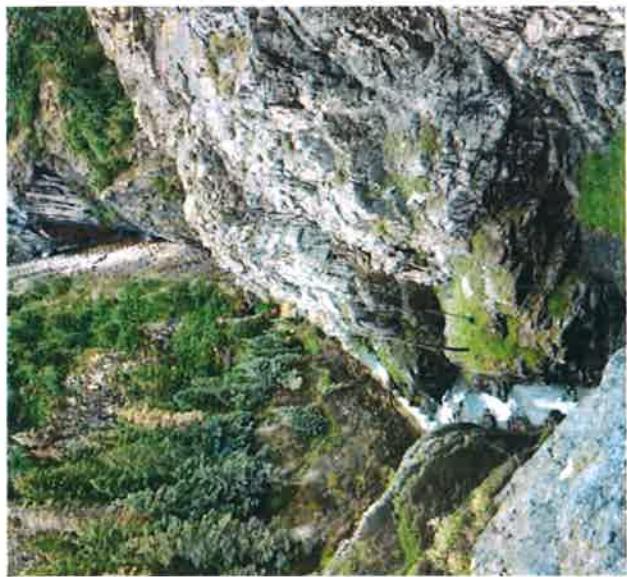
KEY

GHG Potential 1-4 | Economic Sustainability | Promotes Equity | Environmental Quality

Environmental Quality | Economic Sustainability | Public Health & Safety | Builds Resilience

## Ouray County

### Appendix 1



Ouray County has a population of 5,046 people. Through the facility update plan the county is improving energy efficiency of all county buildings, switching to electric heat pumps and eliminating natural gas to the maximum extent possible. Additionally, they are pursuing behind-the-meter solar generation for county facilities to reduce utility costs. The county is working with SMPA to identify local solar generation locations and supporting government and community transition to EVs by supporting EV charging infrastructure. Ouray County plans to pursue electrification of its vehicle fleet to the maximum extent practical.

ACTION	GHG REDUCTION POTENTIAL	CO-BENEFITS	TIMELINE	PARTNERS
Transition government vehicles to electric where functionally equivalent EVs are available.				Ouray County, Enterprise
Utilize Land Use GHG Inventory and PES Program to develop and implement land use recommendations.				Ouray County, agricultural landowners, forest land trusts
Integrate energy efficiency and electrification into county facility upgrade plan and install behind the meter solar to cover 100% of Ouray County's electricity use.				Ouray County
Enhance local transit options				Ouray County, transit providers

KEY



