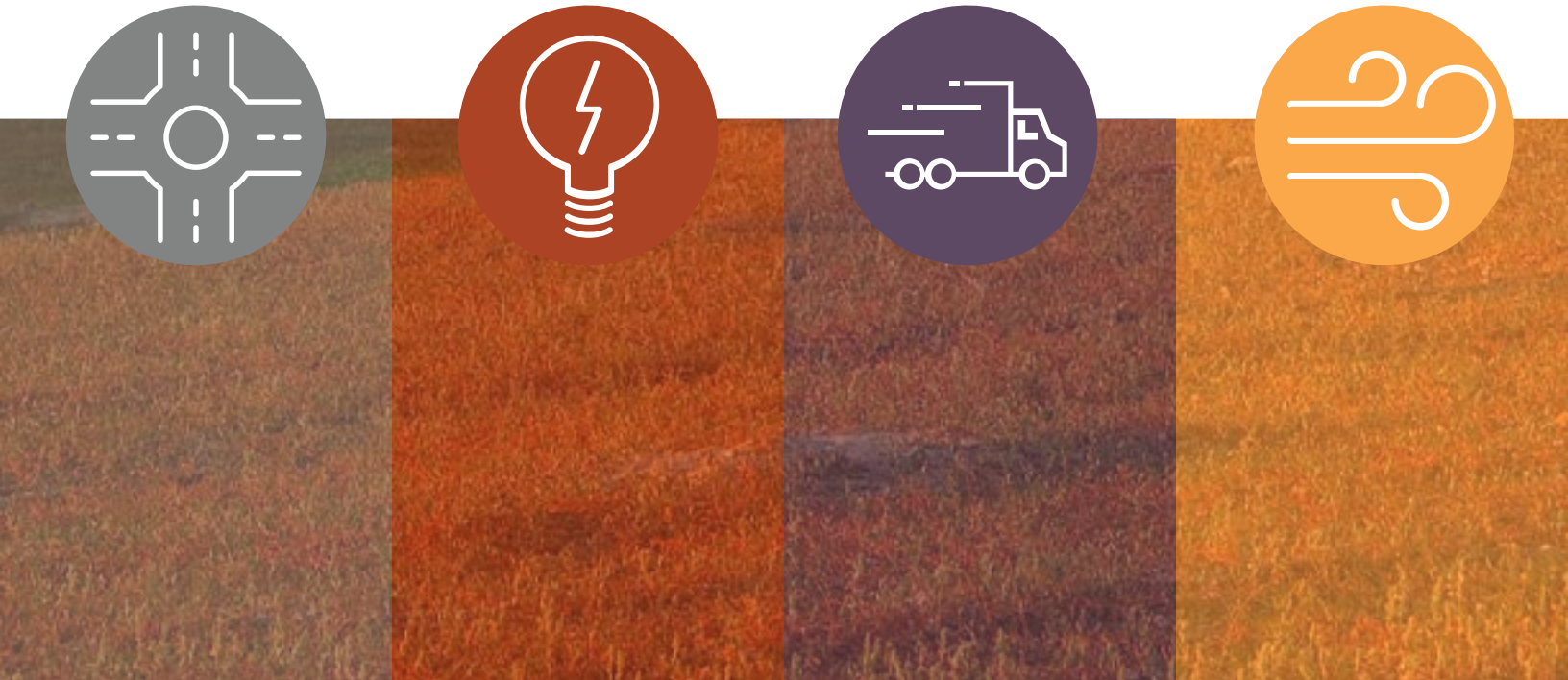
# SUSTAINABLE ADAMS COUNTY 2030 PLAN

UPDATED MAY 2025



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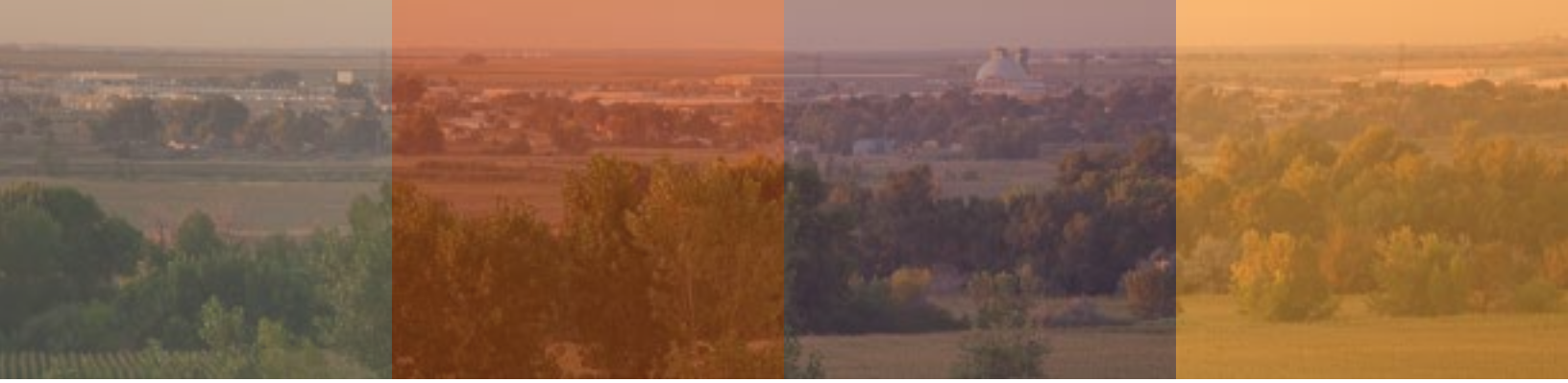

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# EXECUTIVE SUMMARY

Adams County developed the first countywide sustainability plan in 2015. This plan, Sustainable Adams County 2030, established Adams County's commitment to its vision of being ***the most innovative and inclusive county in America for all families and businesses***. It set the stage for the county to tackle issues such as energy efficiency and renewable energy, waste reduction, water quality and quantity, transportation options, food access, and sustainable neighborhoods while ensuring county operations were leading the way for the community. The 2030 plan called for a reevaluation in 2020 to determine any need for revision, to ensure the long-term sustainability and success of Adams County. The update process began in late 2020 and coincided with Advancing Adams, a coordinated effort to develop the Comprehensive Plan, the Transportation Master Plan, and update the Parks, Open Space, and Trails (POST) plan.

Since the original plan's publication in 2015, there have been significant advances in the sustainability industry, from renewable energy, to electric vehicles (EVs), to policy changes at the local and state level. This Sustainability Plan update is an essential component to Adams County achieving its vision, mission, and goals and focuses on making the Sustainability Plan more measurable and actionable while aligning with industry best practices, market trends, and State of Colorado climate action goals. Implementation success was also a key consideration in the plan update, and all goals and strategies include clearly defined metrics, clearly defined roles and action steps, and a framework for implementation success is included in the plan.

## SUSTAINABILITY FRAMEWORK

The plan is organized to align with eight sustainability topics. These topics were chosen based on the original 2030 plan, existing efforts related to sustainability within Adams County's internal purview, and topics important and impactful to the Adams County community. Many topic areas are also broken, by geographic scale, into focus areas representing county operations or the community, with separate considerations for each. At the community scale, unincorporated Adams County is the primary focus, as many of the cities in Adams County have their own sustainability plans and goals. All Sustainability Plan topics incorporated cross-cutting themes of equity, environmental justice, and resilience.

# SUSTAINABILITY PLAN GOALS AND TARGETS

## ENERGY

### Goal 1: Incorporate energy efficiency and new energy technologies and building practices in new facilities and retrofit eligible existing facilities.

- Achieve 15% reduction in electricity and natural gas use intensity
- Track the number of existing facility energy efficiency retrofits

### Goal 2: Increase use and procurement of renewable energy for county facilities.

- Achieve 100% renewable electricity supply
- Increase number of facilities with on-site solar to 5

### Goal 3: Expand, create, and advocate for equitable clean energy opportunities for all community members to reduce our carbon footprint.

- Create 1 solar co-op annually
- Increase number of CPACE projects in the county to 20
- Issue 2,600 total solar permits

## WASTE

### Goal 4: Reduce waste in county operations through source reduction, sustainable diversion practices, and fostering a waste reduction culture.

### Goal 5: Ensure all Adams County residents in unincorporated areas have access to recycling.

- 100% of private haulers in unincorporated Adams County provide recycling
- Achieve 35% community waste diversion rate

### Goal 6: Establish and sustain recycling at county-led events.

### Goal 7: Expand waste diversion and reduction practices in all new developments during construction.

## WATER

### Goal 8: Improve water use efficiency in county facilities and parks and promote the use of non-potable water supplies where available and feasible.

- Meet efficiency benchmarks for all buildings for indoor water use, outdoor water use, and outdoor irrigation use
- Meet outdoor water efficiency benchmarks for parks and open space and keep plant life healthy in a sustainable way

### Goal 9: Promote water use efficiency for new and redeveloped residential and commercial properties in unincorporated Adams County.

## LAND

### Goal 10: Acquire and conserve land sustaining the level of service of parks and open space for economic, social, and environmental benefits.

- Maintain or increase number of acres of county-owned conservation easements
- Maintain or increase number of acres of county-owned land

## SUSTAINABLE INFRASTRUCTURE

### Goal 11: Use sustainable infrastructure in Public Works projects to maximize economic, environmental, and social durability and minimize economic impacts from natural hazards.

- Achieve a FEMA community rating score of 7
- Increase number of local water quality facilities owned and maintained by Adams County to 17
- Achieve a tree replacement rate of 100%
- Incorporate 4 ENVISION credits on 80% of projects
- Increase number of ENVISION certified staff to 30% of inspection and engineering staff
- Conduct 2 annual coordination meetings between Public Works and Utility/District partners
- Inspect 100% of dry outfalls for illicit discharges every 5 years in urbanized areas
- Conduct 10 educational activities above MS4 permit minimum requirements annually

## TRANSPORTATION

### Goal 12: Decrease county fleet emissions through vehicle and operational efficiency and fuel switching.

- Track total vehicle miles traveled and gallons of fuel consumed for county fleet
- Decrease hours of idling by 50%
- Purchase or lease electric for 50% of all new, eligible vehicles
- Replace 80% of diesel fuel with B-20 blends

### Goal 13: Support EV mobility and infrastructure across all of Adams County.

- Electrify 5% of all registered vehicles in Adams County

### Goal 14: Support alternative modes of transportation and enhance mobility for all Adams County residents.

- Align with Transportation Master Plan performance measures once adopted (to be updated)

## HEALTHY AND RESILIENT NEIGHBORHOODS

### Goal 15: Increase access to resources, opportunities, and services supporting financial, mental, and physical well-being for all community members in Adams County.

## AIR QUALITY

### Goal 16: Reduce indoor and outdoor air quality impacts on disproportionately impacted communities through advocacy and mitigation practices.

- Track the number of environmental compliance and oil and gas inspections
- Maintain or increase the number of participants in Weatherization and Minor Home Repair programs
- Increase the number and type of air quality monitors to 4
- Provide 1 air quality education and awareness communication per quarter (excluding air quality alerts)

# IMPLEMENTATION HIGHLIGHTS

Implementation is at the forefront of the Sustainability Plan update. All strategies have associated work plans that include action steps, lead and partner departments identified, and resources to support implementation. In addition, organization actions are outlined that will support long-term success, including formalizing the Sustainability Committee and holding routine implementation check-ins, annual reporting and communications about Sustainability Plan progress, and leveraging the Green Team to infuse a culture of sustainability throughout Adams County staff. The plan was developed to be dynamic in nature and conducting routine check-ins and reporting will allow any necessary changes or updates to strategies, tactics, or performance management to occur.


EV
ONLY


ADAMS COUNTY
GOVERNMENT CENTER

# INTRODUCTION

Adams County developed the first countywide sustainability plan in 2015. This plan, Sustainable Adams County 2030, established Adams County's commitment to its vision of being the most innovative and inclusive county in America for all families and businesses. It set the stage for the county to tackle issues such as energy efficiency and renewable energy, waste reduction, water quality and quantity, transportation options, food access, and sustainable neighborhoods while also ensuring county operations were leading the way for the community. The 2030 plan called for a reevaluation in 2020 to determine any need for revision, to ensure the long-term sustainability and success of Adams County.

This plan update focuses on making the Sustainability Plan more measurable and actionable while aligning with industry best practices, market trends, and State of Colorado climate action goals. Since the original plan's publication in 2015, there have been significant advances in the sustainability industry, from renewable energy, to electric vehicles (EVs), to policy changes at the local and state level. This Sustainability Plan update (hereafter referred to as the 2030 Plan Update) is an essential component to Adams County achieving its vision, mission, and goals.

## ADAMS COUNTY AT A GLANCE

Adams County, Colorado, is located north of the Denver metropolitan area — with a 2020 population of 519,572, a 17.7% growth rate since 2010. The county is expected to be one of the fastest-growing counties in Colorado, reaching an estimated population of 745,218 by 2040 (see Figure 1) (Colorado State Demographer, 2021). Most of this population growth is expected to occur in the western portion of the county, in the Denver Metro area. This growth will lead to increased demand for resources and added stress on existing systems, highlighting the need to integrate sustainability across the county as it continues to grow. Sustainability priorities in these more urbanized areas of the county focus on resource conservation and alternatives, connections to natural resources, and adopting new technologies to support growth, especially in unincorporated areas. Eastern Adams County is primarily agricultural land important to the cultural heritage of Adams County and has different sustainability priorities than western Adams County as climate change impacts worsen. Priorities in eastern Adams County focus on land management, including opportunities for renewable energy production, sustaining agriculture and food production, and resource conservation.

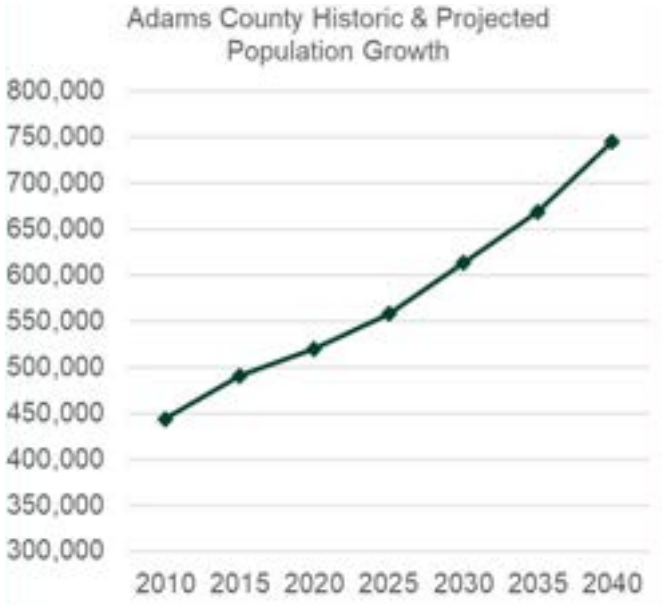



*Figure 1: Projected Adams County population growth through 2040*

The median household income in Adams County is $70,282, slightly lower than the state of Colorado, though income growth is outpacing the state's average. A significant portion of households in Adams County are considered low-to-moderate income, with 32.8% of households making less than $50,000. This fact translates to less income available for personal and household changes related to sustainability and improved quality of life, such as energy efficiency upgrades that reduce energy bills and improve indoor air quality, that may require additional support from the county and partnerships with other agencies.

Adams County is already seeing the impacts of climate change, including drought, increased heat, and poor air quality from increased wildfires, emphasizing the need for sustainability practices and programs to both mitigate and adapt to worsening climate impacts. By 2050, Adams County could see an increase in average temperature of 2.5° to 5° F, more extreme heat days, more extreme weather, and increased and more severe drought conditions (Adams County, 2021). Further, these impacts are often exacerbated in communities of color and in low-income areas, disproportionately impacting their quality of life by contributing to poor health outcomes (e.g. asthma, heat stress, poor water quality). These communities often do not have well-maintained or well-built infrastructure to withstand major hazard events, making it difficult for them to recover from such events. Adams County is also home to landfill sites, industrial operations, and oil and gas development that may disproportionately impact these communities due to their proximity to harmful pollutants and noise emitted by these operations.

**CLIMATE & EQUITY RESOURCE**

To understand the interaction between climate and equity in your neighborhood, visit the Colorado Department of Public Health & Environment's Climate Equity Data Viewer. This tool considers both environmental burden (e.g. air quality, proximity to traffic) and population characteristics (e.g. income, race/ethnicity).

This sustainability plan update aims to achieve the Sustainable Adams County 2030 vision through innovation while also bolstering inclusivity by acknowledging and helping lessen the severity of climate impacts on the environment, people, and economy of Adams County.

## GREENHOUSE GAS EMISSIONS SUMMARY

As part of the 2030 Plan Update, a new greenhouse gas (GHG) emissions inventory was completed to determine the scope, scale, and impact of emissions in Adams County. This inventory was completed for all of Adams County, including both unincorporated and incorporated areas. In 2019, Adams County emitted 7,181,627 metric tons of CO2 equivalent ($MTCO_2e$); this is 13.8 $MTCO_2e$ per capita. For the GHG emissions inventory, 2019 is used as the baseline year due to significant changes in operations and lifestyles caused by the COVID-19 pandemic in 2020. This addition to the 2030 Sustainability Plan is important to support the State of Colorado's greenhouse gas reduction goals, set in House Bill 19-1261, which aim to reduce emissions – by at least 50% by 2030 and 90% by 2050 – over 2005 levels.

Figure 2 shows a breakdown by sector. The largest sectors are energy, including natural gas and electricity, and transportation. These sectors account for 49% and 34%, respectively. In Adams County, energy industry and industrial processes and product use (IPPU) emissions are created by petroleum refining processes and combustion of non-natural gas fuels (e.g. fuel oil). These sectors combined account for 12% of community-wide emissions. Adams County's total GHG emissions account for approximately 6% of the State of Colorado's GHG emissions (Taylor, 2021). For comparison, Denver County's 2019 emissions following the same methodology and sectors result in 12.5 $MTCO_2e$, slightly lower than Adams County's per capita emissions (City and County of Denver, 2020).

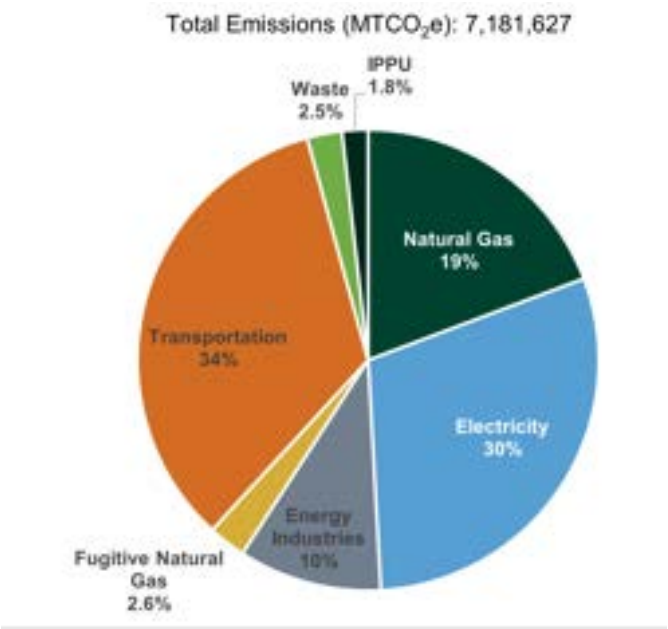



*Figure 2: 2019 Adams County GHG Emissions by Sector*

The greenhouse gas inventory was developed to comply with the Global Protocol for Community-Scale Greenhouse Gas Emissions Inventories (GPC Protocol) BASIC reporting level within the boundary of Adams County. The GPC Protocol sets a clear, standard framework for reporting community GHG emissions, allowing for consistent reporting year to year and comparisons across communities. The GPC Protocol captures production and consumption activities taking place within the community.

An estimate was completed for county buildings and departmental operations based on available data. While this is not considered a protocol-compliant inventory, it helps inform the areas of impactful actions that can be taken to lower emissions. The county emissions estimate is shown in Figure 3. Energy use is the largest sector, accounting for 52% of county operations emissions. The transportation sector, including fleet operations, personal vehicles used for work purposes, and commuting, make up the second largest sector, with 44% of emissions.

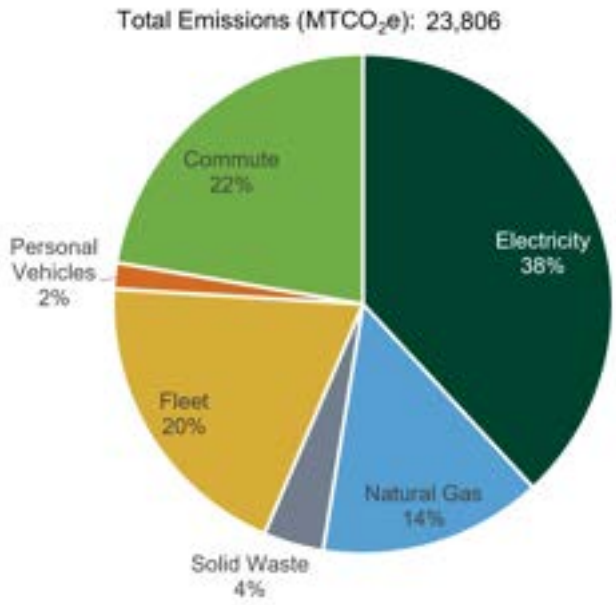



*Figure 3: County Buildings and Departmental Operations GHG Emissions Estimate*

# PLANNING PROCESS

In 2020, the plan review and update process, spearheaded by the staff-led Sustainability Committee, began. The plan update focuses on making the Sustainability Plan more measurable, with clear implementation actions to ensure progress can be made toward the county's sustainability goals. The 2030 Plan Update Sustainability Plan update considers sustainability both within county operations and in the broader community, defined as unincorporated Adams County. The planning process occurred in three phases, each building on the previous phase, shown in Figure 4.

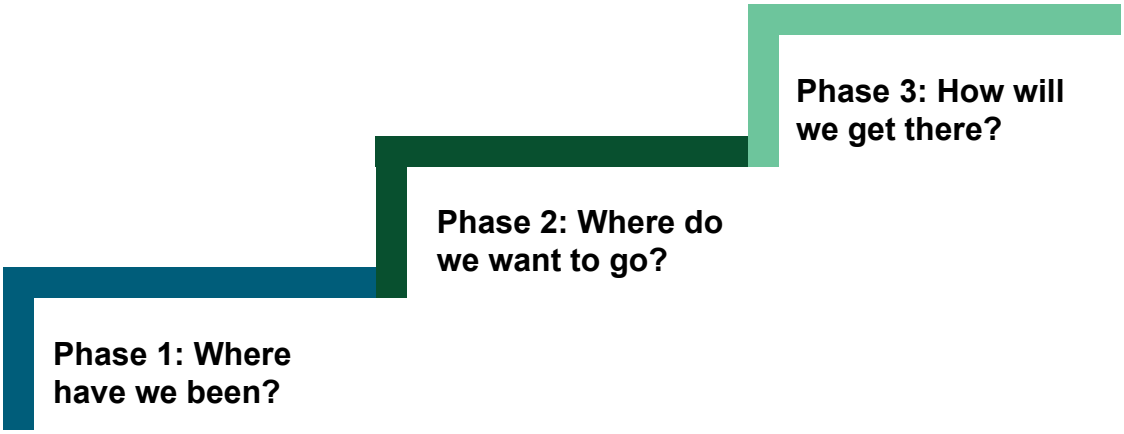



*Figure 4: Sustainability Plan update process*

## ADVANCING ADAMS

The 2030 Plan Update occurred in conjunction with the Advancing Adams long-range planning effort to update the county Comprehensive Plan, Transportation Master Plan, and Parks, Open Space, and Trails (POST) Plan. These plans establish a community-wide vision, goals, and policies as Adams County continues to grow, and they define where and how growth will occur. The Sustainability Plan supports these efforts, by providing a tactical approach to addressing sustainability in Adams County. Many of the topics and issues identified in the Advancing Adams planning effort have direct ties to the Sustainability Plan, and vice versa, with mutual reinforcement of elevating sustainability in Adams County.

The planning teams coordinated throughout the planning processes to ensure these efforts were aligned and the correct goals and strategies are in the correct plan. For example, there may be sustainability opportunities such as development code changes or broader goals and strategies identified in this plan coinciding with the Comprehensive Plan.

## COUNTY AND COMMUNITY ENGAGEMENT

The Sustainability Committee primarily led the development of the Sustainability Plan, with additional input from other subject matter experts within county staff, meeting four times during the course of this project to inform the plan update. Subject teams specific to the plan topics and operational lens (e.g. county or community focus) met three times to provide input on existing efforts, goals, metrics, targets, and strategies.

The Sustainability Plan leveraged Advancing Adams community outreach and engagement efforts and online surveys to provide an understanding of community needs and desires related to sustainability. Because of Advancing Adams' sustainability plan theme, many sustainability issues were raised during those engagement efforts. The online survey asked residents to provide feedback on where they would like to see sustainability in Adams County in the future and to provide ideas for ensuring equitable implementation of sustainability across the county. Survey results can be found in Appendix A.

# ADAMS COUNTY SUSTAINABILTY FRAMEWORK

## VISION

***Be the most innovative and inclusive county in America for all families and businesses.***

## PLAN TOPICS & TERMINOLOGY

The plan is organized to align with eight sustainability topics (see Figure 5). These topics were chosen based on the original 2030 plan, existing efforts related to sustainability within Adams County's internal purview, and topics that are important and impactful to the Adams County community. Many topic areas are also broken, by geographic scale, into focus areas representing county operations or the community, with separate considerations for each. At the community scale, unincorporated Adams County is the primary focus, as many of the cities in Adams County have their own sustainability plans and goals.

Each topic and focus area addressed in this plan includes a brief overview of the importance; cross-cutting themes, goals, metrics, and targets; and strategies. These items are described in more detail below. Also included is an overview of the topic area's role in climate mitigation and adaptation. Mitigation is considered the process of avoiding and reducing greenhouse gas emissions, while adaptation focuses on how to protect communities and ecosystems from the effects of climate change.


*Figure 5: Sustainable Adams County 2030 Plan Topics*

## CROSS-CUTTING THEMES

Three cross-cutting themes were identified as important to the 2030 Plan Update: equity, environmental justice, and resilience. These themes permeate across all topic areas and helped guide strategy development and prioritization. Each topic and focus area includes connections to these three themes within the context of sustainability.

**Equity:** Recognizing each Adams County community member has different circumstances and correspondingly allocating opportunities and resources needed to equally thrive and succeed.

**Environmental Justice:** Addressing the needs or impacts of sustainability and climate change issues on disproportionately impacted communities. In this context, these communities are those that experience “first and worst” consequences and are typically communities of color and are also defined as low-income areas. In Adams County, disproportionately impacted areas are generally located in the southwest portion of the county, based on the Colorado Department of Public Health & Environment’s Climate Equity Data Viewer.

**Resiliency:** Anticipating, accommodating, and adapting to climate-related hazards to ensure quality of life and continued operations.

These contextualized themes complement and reinforce the Advancing Adams plan values of equity, sustainability, and livability, providing an aligned, strategic approach to shaping the future of Adams County.

## GOALS

Goals are value-based statements that help define the desired end result for each topic. In short, goals help answer the question what do we want to achieve through a certain set of actions?

## METRICS AND TARGETS

Metrics are a standard of measure used to determine the impact of actions, while targets help show progress toward goals. Metrics and targets are the data points used to evaluate progress toward the established goals. While each goal can have multiple metrics that work together to show progress, each metric has one established target.

Metrics are quantifiable and data driven, having the ability to track a metric is critical. The metrics enumerated in this plan were selected based on relevance to the goal they measure and the ability of Adams County staff to collect, update, and report the necessary data on a regular basis. Baseline values were established for each metric to serve as the starting point progress will be measured against. For this plan update, 2019 is used as the baseline year (with some exceptions) due to significant changes in operations and lifestyles caused by the COVID-19 pandemic in 2020.

The targets were determined by evaluating historic trends, benchmark values, and staff input.

For more information on progress reporting and data tracking, see the Implementation chapter.

## STRATEGIES

Strategies guide the actions that drive progress toward targets and goals. They are major initiatives the County and community can pursue to support sustainability. Strategies were vetted with Adams county staff, based on feasibility and sustainability impact, and prioritized into ongoing, near-, mid-, and long-term timelines defined as:

**Ongoing** – currently underway and will continue through 2030

**Near-term** – 2022 to 2024

**Mid-term** – 2024 to 2026

**Long-term** – 2026 to 2030

In addition to the strategy summaries contained in the sections below, Appendix C includes full strategy details, including implementation action steps, roles and responsibilities, and resources.

# ENERGY

## GOAL 1
Incorporate energy efficiency and new energy technologies and building practices in new facilities and retrofit eligible existing facilities.

## GOAL 2
Increase use and procurement of renewable energy for county facilities.

## GOAL 3
Expand, create, and advocate for equitable clean energy opportunities for all community members to reduce our carbon footprint.

### GREENHOUSE GAS (GHG) FACTS

**59% of GHG emissions** come from the energy sector, including electricity, natural gas, and energy industries

**42% of energy emissions** come from the residential sector

**58% of energy emissions** come from commercial, industrial, and public sectors

### ENERGY AT A GLANCE (2019)

**4,072 Gigawatt hours** of electricity used across Adams County residential and commercial sectors – enough to power about **381,000 homes** for a year

**258 million therms** of natural gas used across Adams County – enough to power about **359,000 homes** for a year

**3 energy generating stations** operate in Adams County

**774 oil and gas wells**

**24% of energy** supplied to county facilities is from renewable sources

**ENERGY** is essential to quality of life in any community, providing electricity and natural gas to homes, businesses, and streetlights. It also provides jobs in Adams County and presents opportunities for future economic development. Energy also accounts for 59% of greenhouse gas emissions in Adams County, amplifying the need to transition to clean energy sources, such as wind and solar, and to reduce energy consumption.


As the county continues to grow, there will be an increased demand for energy across the community. Carefully planning new development, engaging existing homeowners and businesses in energy efficiency measures, and working with utility providers will ensure Adams County residents and businesses receive reliable power and help reduce greenhouse gas emissions – ensuring quality of life for the community.

The majority of natural gas (90%) in Adams County is provided by Xcel Energy, with the remaining 10% provided by Colorado Natural Gas. Adams County is serviced by four electricity providers: Xcel Energy, United Power, CORE electric cooperative (formerly IREA), and Morgan County Rural Electric Association (MCREA). Tri-State Generation and Transmission sells wholesale electricity to United Power and MCREA. Each utility has different sources of electricity generation, energy efficiency and renewable energy programs, and different goals for carbon-free electricity – all impacting Adams County goals and strategies. Xcel Energy has set a goal for 85% carbon-free electricity by 2030 (Xcel Energy, 2021), and Tri-State's goal is to achieve 80% reduction in carbon dioxide emissions in wholesale electricity sales by 2030 (Tri-State, 2021). These goals will help reduce emissions in Adams County and across the state.

Adams County is also home to several large industrial facilities and hundreds of oil and gas wells that produce emissions and pollution, adversely impacting adjacent communities and neighborhoods. These impacts are also addressed in the Air Quality topic area.

The strategies in this plan focus on reducing consumption through energy efficiency practices and transitioning to renewable sources that can save residents, businesses, and county operations money, reduce greenhouse gas emissions, and provide support to disproportionately impacted communities.

# ROLE IN CLIMATE MITIGATION & ADAPTATION

As the largest source of greenhouse gas (GHG) emissions both community-wide and for county facilities, energy plays a significant role in climate mitigation. Reducing energy consumption and transitioning to cleaner energy sources will reduce GHG emissions associated with energy, lessening the impacts of climate change. As electric utilities transition to cleaner electricity sources, such as wind and solar, natural gas will become a bigger source of GHG emissions. Natural gas also has adverse impacts on air quality by contributing to ozone issues in the Front Range. Because natural gas is primarily made up of methane, it is also a more potent greenhouse gas, having a global warming potential 28 times that of carbon dioxide (U.S. EPA, 2020). Natural gas can also have negative impacts on indoor air quality, leading to increased respiratory and health issues. This emphasizes the need to both reduce consumption of natural gas and transition to different fuel sources when possible.

# CONNECTION TO ADVANCING ADAMS

Energy is a critical component of future growth and will be considered in updates to building and development codes – to encourage efficient and sustainable building practices as well as additional renewable energy installations throughout the community.

## Community *Action*

*Here are just a few ways you can make an impact...*

- Participate in your energy utility's home or business assessment to get recommendations for savings and rebate programs related to replacing old and inefficient equipment:
  - » United Power Rebates
  - » Xcel Energy Residential Services
  - » Xcel Energy Business Services
  - » CORE Energy Efficiency Resources
  - » MCREA Energy Center & Rebates
- Low-income residents may qualify for energy conservation measures and appliance upgrades through the county Weatherization program.
- Explore ways to subscribe to renewable energy through your utility or add it to your home. Or contact GRID Alternatives to find out if you quality for a free rooftop solar system.
- Upgrade to LED lighting, which can use 75% less energy and last 25 times longer than incandescent lighting (U.S. DOE, 2021).

# COUNTY FACILITIES

County facilities' energy efforts focus on energy use, energy conservation, and energy sources in county operated facilities. Facilities Management is responsible for the construction, operation, and maintenance of county facilities and balances the need to maintain comfort in buildings with the need for conserving resources. Currently, the county operates 44 facilities – 29 are provided electricity by United Power, 13 by Xcel Energy, one by CORE Electric Cooperative, and one by MCREA. Xcel Energy provides natural gas to all buildings. This variation in utility providers impacts the energy source fuel mix provided to county facilities, as each utility has a varying amount of renewable energy supply on their electricity grid. In 2019, renewable energy was estimated to account for 24% of total county facilities' energy use.

Over the past several years, Adams County has invested in energy efficiency upgrades, demonstrating significant energy use reductions across county facilities. Some of the greatest successes have included upgrades to Heating, Ventilation, and Air Conditioning (HVAC) systems such as an investment in evaporative cooling at the Adams County Government Center. This remains an opportunity for the county to lead by example, while reducing operational costs, through continued energy efficiency upgrades to existing facilities.

## SUCCESSES

Adams County has had many sustainability succesess related to this topic since the 2015 Sustainable Adams County plan. These include:

- County facilities have **reduced energy consumption by 49% per square foot since 2012**, achieving the initial 2030 Plan goal.
- Facilities & Fleet Management Department uses **EnergyCAP to track building energy use** for 23 buildings.
- The county has made significant upgrades to energy systems and implemented energy recovery systems that have made **significant impacts on energy conservation**.
- The Human Services Center and Government Center have **solar assist domestic water heating systems**.
- The Justice Center was recently retrofited for energy recovery, resulting in a **40% energy reduction**.
- **2018 International Energy Conservation Code** is used for all new facilities, though the county strives to go beyond this by incorporating Leadership in Energy and Environmental Design (LEED) criteria.

## CROSS-CUTTING THEMES

### Equity

- Energy conservation reduces utility bill costs that are paid for by county revenue streams, keeping service costs down for taxpayers as well.

### Environmental Justice

- Fossil fuel energy resources disproportionately impact communities of color and residents with low incomes. Transitioning away from these fuel sources is crucial for addressing environmental justice issues.

### Resiliency

- Energy conservation and transitioning to renewable energy sources help mitigate the impacts of climate change.
- As climate change impacts increase, resilient buildings will be important to reducing resource demands and in considering the health and well-being of building occupants.

# GOAL 1

Incorporate energy efficiency and new energy technologies and building practices in new facilities and retrofit eligible existing facilities.

## METRICS & TARGETS

| Metric | 2019 Baseline | 2030 Targets |
|---|---|---|
| Energy Use Intensity (EUI) | 7.95 kWh/ft2<br>0.31 therms/ft2 | 15% reduction |
| Number of existing facility energy efficiency retrofits | N/A | Tracking Only |

## STRATEGIES

| | | Lead Division | Timing |
|---|---|---|---|
| 1.1 | **Continue upgrading county facility energy systems** | ***Facilities*** | **Ongoing** |
| 1.2 | **Establish internal technology education and research working group** | ***Facilities*** | **Near-term** |
| 1.3 | **Train employees on energy efficiency practices** | ***Facilities*** | **Near-term** |
| 1.4 | **Develop sustainable, resilient, and health-focused design and operations guidelines** | ***Facilities*** | **Near-term** |
| 1.5 | **Pilot building electrification in new or existing building(s)** | ***Facilities*** | **Long-term** |

# GOAL 2

Increase use and procurement of renewable energy for county facilities.

## METRICS & TARGETS

| Metric | 2019 Baseline | 2030 Targets |
|---|---|---|
| Percent renewable electricity supply | 24% | 100% |
| Number of facilities with on-site solar | 0 | 5 |

## STRATEGIES

| | | Lead Division | Timing |
|---|---|---|---|
| 2.1 | **Identify potential locations for solar installations on county property** | ***Facilities*** | **Near-term** |
| 2.2 | **Advocate for and pursue renewable energy procurement options with utilities** | ***Facilities*** | **Near-term** |
| 2.3 | **Incorporate renewable energy into new county facilities** | ***Facilities*** | **Mid-term** |

# COMMUNITY

This focus area covers energy use in unincorporated Adams County, focusing on residential and commercial sectors. Xcel Energy provides electricity to 71% of residents and 88% of commercial and industrial customers in Adams County; United Power provides electricity to 26% of residents and 11% of commercial and industrial customers; CORE and MCREA cover the remaining 2% and 1% respectively.

In addition to promoting sustainable and efficient development as the county grows, addressing energy efficiency in existing homes is also critical to maintaining quality of life and reducing GHG emissions. More than 70% of homes in Adams County are over 20 years old (U.S. Census Bureau, 2020), likely resulting in lower efficiency homes and equipment and leading to higher energy bills. Among low-income residents, energy bills constitute a larger portion of monthly income (known as energy burden, Figure 6) (U.S. DOE, 2021). Strategies in this topic area emphasize connecting residents and businesses to low-cost resources to help them improve efficiency, reduce their energy burden, and utilize cleaner sources of energy.

## Energy Burden in Adams County

Energy burden is the percent of monthly income a household spends on energy bills. The chart below shows the energy burden by state median income (SMI) bracket in Adams County. Colorado SMI is $35,887 for individuals and $72,331 for households. Lower-income residents spend more on their monthly utility bills.

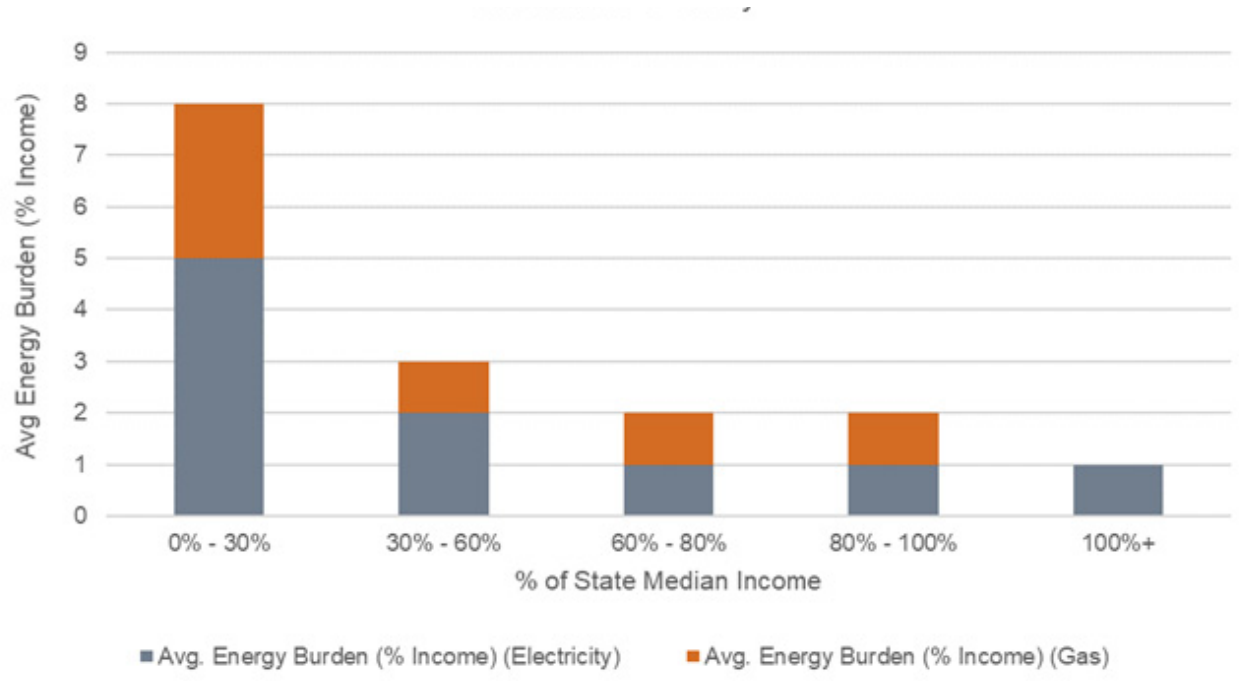



*Figure 6: Energy burden of Adams County residents, as percent of state median income (SMI)*

## SUCCESSES

Adams County has had many succesess related to this topic area since the 2015 Sustainable Adams County plan. These successes include:

- Adams County adopted the **2018 International Energy Conservation Code (IECC)**
- **Weatherization services** for income-qualified customers are available through the Arapahoe County Weatherization Division, which serves both Adams and Arapahoe counties, helping residents improve the energy efficiency of their homes.
- The Minor Home Repair program helps residents make **health, safety, and energy efficiency repairs to their homes**. The program is available to residents in unincorporated Adams County, the City of Brighton, the City of Federal Heights, and the City of Northglenn.
- Commercial Property Assessed Clean Energy (C-PACE) financing is available in Adams County, allowing commercial property owners to **pay for energy efficiency and renewable energy upgrades** via their property tax assessments.
- Development standards include:
  - » **Passive solar requirements** for mixed-use and non-residential blocks
  - » **Encouragement of sustainable development**, including integration of renewable energy, use of energy efficient materials, LEED, green roofs
  - » **Solar design standards**
- **SolSmart Gold designation** achieved by streamlining the solar installation process, including: establishing an e-permit system, providing a list of resources for residents and businesses interested in going solar, and reducing administrative fees.

## CROSS-CUTTING THEMES

### Equity

- The 0-30% area median income bracket in Adams County pays approximately 8% of their monthly income on energy bills, versus 3% or less for higher income brackets (U.S. Dept. of Energy, 2021), creating a higher energy burden. High energy bills impact communities with lower incomes more significantly than other communities.
- Residents with lower incomes, particularly those residents who do not meet the requirements for income-qualified programs, often cannot afford energy efficiency or renewable energy upgrades and may have limited options for assistance.
- Different electric utilities offer different programs and rebates to customers, possibly leading to inequitable distribution of resources.

### Environmental Justice

- Emissions and other hazardous events from energy industry activities in Adams County are impacting communities of color and those with lower incomes disproportionately, resulting in increased health impacts.
- Older homes have less efficient systems, leading to worse indoor environmental quality and health outcomes.
- Reducing or eliminating natural gas use in buildings can improve indoor air quality and create safer environments. It can also reduce emissions associated with the gas production process, and pipeline leakage, which are significant contributors to emissions in Adams County.

### Resiliency

- Reducing energy consumption through energy efficiency can lead to more stable grid operations in the event of disruptions, particularly as climate hazards worsen.
- Sustainable and resilient buildings can promote economic development and improve building occupant health, and they are better suited to withstand hazard events.
- Distributed renewable energy resources, like solar, can enhance the resilience of power systems.

# GOAL 3

Expand, create, and advocate for equitable clean energy opportunities for all community members to reduce our carbon footprint.

## METRICS & TARGETS

| Metric | 2019 Baseline | 2030 Targets |
|---|---|---|
| Number of solar co-ops created | 0 | 1 annually |
| Number of C-PACE projects | 2 | 20 |
| Number of solar permits issued | 849 total (since 2011) | 2,600 total (200 permits annually) |

| STRATEGIES | | Lead Division | Timing |
|---|---|---|---|
| 3.1 | **Develop Energy Action Plan** | ***Facilities*** | **Near-term** |
| 3.2 | **Establish sustainability points system for development code** | ***Development Services*** | **Near-term** |
| 3.3 | **Support solar cooperatives in Adams County** | ***Environmental Programs*** | **Ongoing** |
| 3.4 | **Support residential energy efficiency outreach and upgrades** | ***Environmental Programs*** | **Long-term** |
| 3.5 | **Support business energy efficiency outreach and upgrades** | ***Economic Development*** | **Near-term** |
| 3.6 | **Develop and fund energy services program** | ***Environmental Programs, Community Development, Legislative Affairs*** | **Long-term** |
| 3.7 | **Incentivize renewable energy project development** | ***Economic Development, Development Services*** | **Mid-term** |

# WASTE

**GOAL 4** Reduce waste in county operations through source reduction, sustainable diversion practices, and fostering a waste reduction culture.

**GOAL 5** Ensure all Adams County residents in unincorporated areas have access to recycling.

**GOAL 6** Establish and sustain recycling at county-led events

**GOAL 7** Expand waste diversion and reduction practices in all new developments during construction.

## GREENHOUSE GAS (GHG) FACTS

**3% of GHG emissions** are from waste, including solid waste and wastewater treatment, attributable to Adams County residents.

Methane, the most common GHG associated with waste disposal, is **28 times more potent than carbon dioxide** (U.S. EPA, 2020).

**Organic waste** (food and yard/landscaping waste) is a significant contributor to methane emissions in landfills.

## WASTE AT A GLANCE (2019)

**205 historic landfill sites**

**2 operating landfills**

**16.2% of waste diverted** from landfills via recycling or composting in the Front Range (CDPHE)

Generated **520 pounds of compost** from 900 pounds of food waste in 2019 at the Adams County Government Center in compost machine pilot program

**WASTE** considers the consumption and disposal of municipal solid waste (e.g. paper, plastics, food), as well as hazardous, electronics, construction and demolition, metal, and other miscellaneous items (e.g. tires). Population growth directly contributes to increased consumption of goods that must be disposed of, either in landfills or via recycling or composting. In Colorado, only 15.9% of waste was recycled in 2019, down from 17.2% in 2018 and well below the national average of 35% (Setzke, Bailey, & Katz, 2020).

Unincorporated Adams County is currently served by many private haulers, which in the past has made it difficult to have set standards and consistent service offerings; and, many of them do not offer waste diversion options such as recycling or composting. Recycling requirements vary depending on hauler, further complicating the issue of waste diversion. In addition, it is challenging to obtain data from waste haulers to calculate local diversion rates for both community and county facilities. Two major landfills currently operate in Adams County: the East Regional Landfill and the Tower Landfill. Both of these landfills also serve other communities along the Front Range, impacting land use, traffic, and emissions in Adams County.

Reducing waste at the source by reducing consumption is important to preventing new materials from entering the waste stream. Reduced material use has added benefits of conserving resources in upstream supply chains. Integrated Solid Waste Management principles, which consider reduction, collection, composting, recycling, and disposal, can help address many of the challenges Adams County faces related to waste.

# ROLE IN CLIMATE MITIGATION & ADAPTATION

The portion of GHG emissions attributable to solid waste in Adams County considers only the landfill emissions of waste; it does not include the supply chain impacts of production which can be significant. The emissions from processing waste are included in other sectors, such as energy. Therefore, reducing consumption and increasing diversion can have significant impacts on climate by reducing emissions in multiple sectors.

Climate change causes more severe weather events in Adams County, which may result in surges of waste due to damage to homes and businesses. Managing and reducing waste to ensure availability of landfill space in the future, particularly considering landfills in Adams County receive waste from many other areas, will need to be considered. Careful selection of building materials and resilient design standards with improved durability will also lead to less waste generation.

# CONNECTION TO ADVANCING ADAMS

Waste is a significant component associated with new development as the county grows. Development code updates, following the adoption of the Advancing Adams plans, will encourage waste diversion during the development process.

## Community *Action*

*Here are just a few ways you can make an impact...*

- Look for products with less packaging and are more durable long-term.
- Use refillable, rechargeable, and reuseable products when possible.
- Reduce food waste by buying only what you need, sharing with neighbors and community organizations, and composting.
- Don't put hazardous materials in the trash – take to appropriate facilities or county-sponsored drop-off events.
- Shop at thrift stores instead of buying new clothes or items.

# COUNTY FACILITIES

This focus area covers waste reduction and diversion in county facilities. County transactions that can be done electronically through Information Technology & Innovation and procurement policies are strategies that can reduce waste generation. A contracted private hauler is responsible for transporting and disposing waste generated through county operations. Strategies in this topic consider ways to measure waste to understand current operations, increase diversion, and address procurement (to reduce consumption and buy more sustainably).

## SUCCESSES

Adams County has had many sustainability successes related to this topic since the 2015 Sustainable Adams County plan. These include:

- **Increased use of recyclable materials** in county building materials and supplies
- Waste diversion efforts at Adams County Fair **increased the amount of waste diverted** from the landfill
- **Donations** of used office supplies and furniture to local nonprofit organizations and schools (Supply Donation Program)
- Green Team installed a **compost machine** in the Government Center Public Works break room to pilot composting on site. Compost was provided to employees, the Master Gardening program, and revegetation efforts at the Dahlia Yard
- Individual offices **do not have trash cans**
- Fleet **recycles oils, sheet metal, and tires**
- **Online transactions** opportunities have been expanded:
  - » Many offices take transactions online
  - » ePermit system has allowed many building permits to be filed online
  - » Department of Motor Vehicles (DMV) services can be completed online
  - » Property taxes can be paid online
  - » Stormwater permitting is being transitioned to online

## CROSS-CUTTING THEMES

### Equity

- Transitioning to online transaction systems may adversely impact those in the community without access to technology or with concerns about security of online transactions.

### Environmental Justice

- Pollutants from landfills impact communities of color and low-income communities disproportionately, as these populations typically live closer to landfills (e.g., Tower Landfill). Pollutants include methane emissions, blowing trash, and noise pollution.

### Resiliency

- Reducing waste will increase the longevity of existing landfills and prevent the need for finding new sites that disrupt neighborhoods.
- Increased climate-related hazard events such as severe storms, tornadoes, fires, etc., increase debris waste. Purchasing more durable, more resilient materials can help reduce debris from hazardous events.
- Multiple methods for conducting county business transactions increase resilience in case of hazardous events or situations in which business cannot be conducted in person, and it caters to residents by letting them choose the method(s) they prefer.

# GOAL 4

Reduce waste in county operations through source reduction, sustainable diversion practices, and fostering a waste reduction culture.

## METRICS & TARGETS

| Metric | 2019 Baseline | 2030 Targets |
|---|---|---|
| Diversion rate | None | Establish diversion rate through waste hauler tracking |

| STRATEGIES | | Lead Division | Timing |
|---|---|---|---|
| 4.1 | **Train employees on waste diversion and ways to reduce consumption** | ***Facilities*** | **Ongoing** |
| 4.2 | **Develop countywide sustainable procurement policies and provide employee training** | ***Finance, Facilities*** | **Near-term** |
| 4.3 | **Explore commercial scale options and implement potential end-uses for organic waste (e.g. food, landscaping)** | ***Facilities*** | **Ongoing** |
| 4.4 | **Develop low-waste event and meeting guidelines** | ***Facilities*** | **Near-term** |
| 4.5 | **Collect waste data for county facilities and operations** | ***Facilities*** | **Ongoing** |
| 4.6 | **Continue shifting transactions online with considerations toward equity and accessibility** | ***Information Technology & Innovation*** | **Ongoing** |
| 4.7 | **Establish construction and demolition waste management policies for county facilities and projects** | ***Facilities*** | **Near-term** |

# COMMUNITY

This focus area addresses solid waste generated in unincorporated Adams County and at county-wide events such as the county fair. The community produces waste across residential and business functions. As the community continues to grow, increased waste generation is likely to occur. Waste will also be generated in new developments that support the expected growth of the county. Residents in the Front Range produce an estimated 5.8 pounds of waste per day per person that is sent to landfills (CDPHE, 2020).

Strategies to address community waste include code changes, education and awareness, recycling events, procurement policies, legislative advocacy, economic development, and attracting recycling and zero-waste end markets.

## SUCCESSES

Adams County has had several sustainability succesess related to this topic since the 2015 Sustainable Adams County plan. These include:

- **County hosts recycling events** throughout the year, in conjunction with member communities, to collect electronics, household hazardous waste, and other hard-to-recycle materials
- Tri-County Health Department provides an A-to-Z-Recycle-Guide that includes the **drop-off options** for the various products

## Equity

- Reusable or environmentally friendly goods and materials are often more expensive and are therefore inaccessible for some community members.
- Different waste haulers result in differing services offered across the county, meaning some residents and businesses do not have recycling or composting options.

## Environmental Justice

- Pollutants from landfills impact communities of color and low-income communities disproportionately, as they typically live in closer proximity to landfills (e.g. Tower Landfill). Pollutants include methane emissions, blowing trash, and noise and traffic pollution.
- There are 205 historic landfills in Adams County, highly concentrated along the Platte River. There are many adjacent neighborhoods and businesses adversely impacted by these landfills that still emit methane and other pollutants despite not being actively used (Vasarhelyi, 2021).

## Resiliency

- Reducing waste will increase longevity of landfills and prevent the need for finding new sites and disrupting neighborhoods.
- Increased climate-related hazardous events such as severe storms, tornadoes, fires, etc., lead to increased debris waste.

# GOAL 5

Ensure all Adams County residents in unincorporated areas have access to recycling.

## METRICS & TARGETS

| Metric | 2019 Baseline | 2030 Targets |
|---|---|---|
| Number of private haulers providing recycling | 0% | 100% of private haulers in unincorporated Adams County provide recycling |
| Diversion rate | 16.2% | 35% |

| STRATEGIES | | Lead Division | Timing |
|---|---|---|---|
| 5.1 | **Continue supporting hard-to-recycle waste events** | ***Environmental Programs*** | **Ongoing** |
| 5.2 | **Adopt waste hauler licensing ordinance and regulations** | ***Environmental Programs*** | **Near-term** |
| 5.3 | **Provide yard waste drop-off voucher program for unincorporated Adams County residents and businesses** | ***Community & Economic Development*** | **Mid-term** |
| 5.4 | **Hire Integrated Waste Management Specialist** | ***Environmental Programs*** | **Near-term** |
| 5.5 | **Conduct waste diversion education and outreach campaign** | ***Environmental Programs, Economic Development*** | **Mid-term** |
| 5.6 | **Provide neighborhood waste diversion opportunities** | ***Strategic Partnerships & Resilient Communities*** | **Mid-term** |
| 5.7 | **Administer reporting system to track waste hauler annual recycling, composting, and landfilling metrics** | ***Environmental Programs*** | **Mid-term** |

# GOAL 6

Establish and sustain recycling at county-led events.

## METRICS & TARGETS

| Metric | 2019 Baseline | 2030 Targets |
|---|---|---|
| None | | |

## STRATEGIES

| | | Lead Division | Timing |
|---|---|---|---|
| 6.1 | **Ensure county-led events have blue cans and blue bags** | ***Fair and Special Events*** | **Long-term** |
| 6.2 | **Have recycling dumpsters available at county-led events** | ***Fair and Special Events*** | **Long-term** |

# GOAL 7

Expand waste diversion and reduction practices in all new developments during construction.

## METRICS & TARGETS

| Metric | 2019 Baseline | 2030 Targets |
|---|---|---|
| None | | |

| STRATEGIES | | Lead Division | Timing |
|---|---|---|---|
| 7.1 | **Advocate at state level for integrated waste management policies** | ***Legislative Affairs*** | **Ongoing** |
| 7.2 | **Update development standards to encourage all development projects to include construction and demolition debris recycling, composting, and data tracking** | ***Development Services*** | **Near-term** |
| 7.3 | **Incentivize circular economy, recycling, and other zero-waste markets** | ***Economic Development*** | **Mid-term** |

# WATER

## GOAL 8

Improve water use efficiency in county facilities and parks and promote the use of non-potable water supplies where available and feasible.

## GOAL 9

Promote water use efficiency for new and redeveloped residential and commercial properties in unincorporated Adams County.

### WATER AT A GLANCE (2019)

**Over 50 public water systems**

Only **80% of current agricultural demand** is met on a statewide basis

Municipal and industrial water supplies are expected to have a **gap between supply and need between 250,000 and 750,000 acre feet (AF) by 2050**

More than **12% of the South Platte River Basin's** irrigated area **is expected to urbanize**, compared to 5% statewide

**WATER** is one of the most critical resources needed in our daily lives and is a cornerstone of Adams County's heritage. Water supports community health and wellness by connecting community members with clean drinking water, water for cooking and cleaning, and water for recreation. Water supports the county's economic prosperity across all business sectors, particularly agriculture and residential development. Water also supports county operations, including roadway maintenance and construction and parks maintenance. Finally, water is an iconic part of Adams County's landscape. The South Platte River, one of eight major river systems paramount to Colorado's identity as a headwater state, flows through the western portion of Adams County.

However, Colorado suffers from a gap between water supply and demand. The agricultural sector already experiences a 20% gap between available supply and demand. By 2050, this gap is expected to grow – between 18-43% beyond the current gap – despite an anticipated decline in irrigated area due to urbanization, aquifer sustainability, and agriculture to water transfers (CWCB, 2015). Though municipal and industrial (M&I) demands don't currently experience a gap, the Colorado Water Plan estimates a gap ranging between 250,000 Acre Feet (AF) to 750,000 AF annually by 2050, depending on realized climate impacts, population growth, economic growth, and conservation efforts (CWCB, 2015).

Despite these projected gaps, the Colorado Water Plan models show aggressive conservation efforts can significantly reduce projected gaps. For instance, assuming predicted temperature increases and significant population growth, municipal conservation efforts can reduce projected gaps by 325,000 AF (CWCB, 2015). Given these projected gaps between supply and demand, and the importance of a healthy community, economy, and environment to Adams County, it is crucial the county and community make best use of available water resources.

## ROLE IN CLIMATE MITIGATION & ADAPTATION

Colorado's climate is becoming hotter and drier. Additionally, climate change has increased the frequency and severity of droughts, wildfires, and flooding. All of these factors increase stress on the availability and quality of water supply.

Water contributes to GHG emissions indirectly through the energy used to pump, treat, and heat water. Thus, improving water efficiency decreases emissions through the "energy-water nexus."

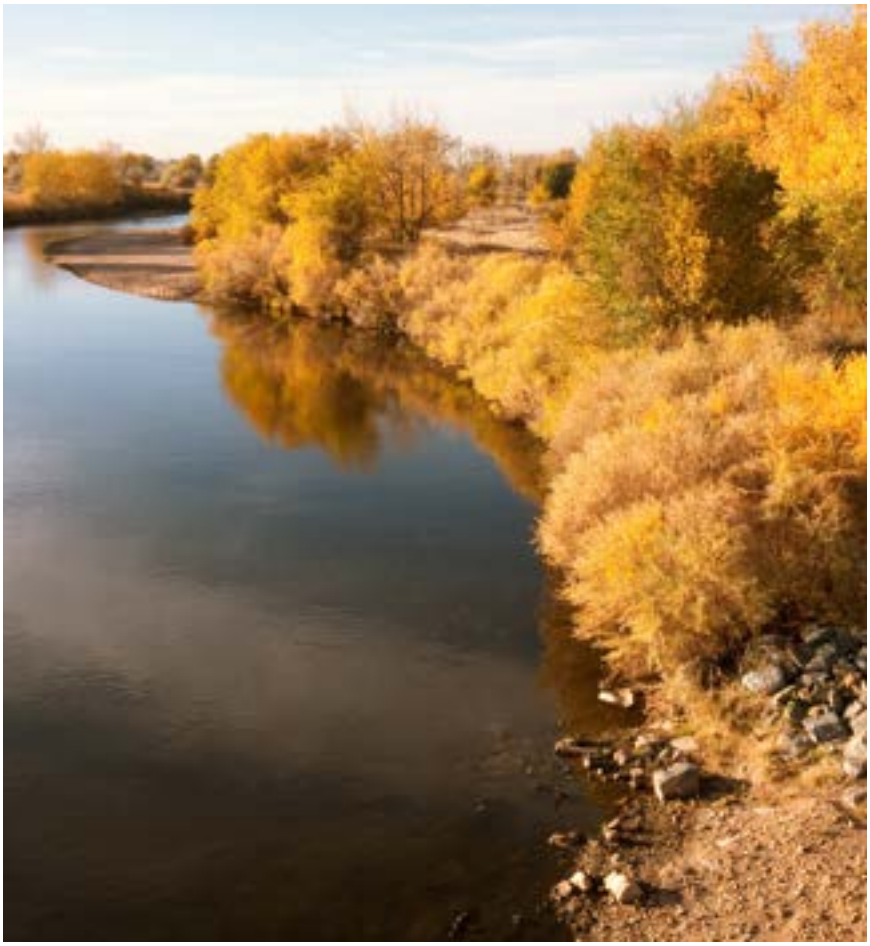
### ESTIMATING THE ECONOMIC IMPACTS OF CLIMATE CHANGE

The Colorado Water Conservation Board developed the Future Avoided Cost Explorer: Colorado Hazards tool to estimate a range of annualized economic impacts associated with population growth and climate change. The tool allows users to select a population growth scenario (current, low growth, medium growth, high growth) and a climate scenario (current, moderate climate change, more severe climate change). Users can then explore economic impacts, by county, associated with drought, flood, and wildfire. Economic impacts are calculated for agriculture, infrastructure, recreation, and fire suppression costs. Depending on future population and climate conditions, the model predicts Adams County could see between $3.6 million and $11 million in annual damages due to drought.

# CONNECTION TO ADVANCING ADAMS

Comprehensive plans can play a foundational role in water conservation by setting water-related goals and objectives, and integrating water-related policies and actions throughout the plan. Importantly, future land use and population growth will drive future water demands. For instance, encouraging smaller lots with less irrigable area may drive down water demand compared to larger lots with large, irrigated areas. The strategies in this sustainability plan complement water-saving efforts by promoting better data tracking and management for county facilities and water-saving strategies for both county facilities and the community.

The strategies in this sustainability plan also support the POST Plan by promoting the efficient use of water in parks and open spaces. See the Land section for connections to water quality.



## Community *Action*

*Here are just a few ways you can make an impact...*

- Take a look at your water utility bill and compare your use in summer versus winter months. This change is largely due to outdoor irrigation. Consider installing a more efficient irrigation system or even replacing a portion of your turf with low-water plants to see savings on your summer bill.
- Check out your water provider's website to see what programs, rebates, and educational opportunities they offer.
- Pay attention to your water bill – if you see big spikes that don't make sense based on how much water you've been using, you may have a leak that needs to be addressed.

# COUNTY FACILITIES

Water is critical to county operations, including facility use, irrigation of parks and open spaces, public works operations (e.g. sweeping, fugitive dust control, gravel surfacing, gravel reclamation, and routing grading), and contractor use. The county owns facilities along with multiple parks and open spaces, all of which use a combination of potable and non-potable water supplies for domestic indoor use, cooling, irrigation, and other uses. The county receives potable water from multiple municipal water systems as well as non-potable water from ditch companies and groundwater wells. Riverdale Regional Park has its own water system that pumps and treats groundwater from the Lower Arapahoe Aquifer.

Water use data were analyzed for the period 2011-2020. Potable water use associated with county buildings has declined compared to 2011-2012, when the county implemented some indoor efficiency measures, and the statewide drought led to outdoor watering restrictions. Potable water associated with county buildings use has remained relatively flat since, for the period 2013-2020. In most cases, water use metering is combined, measuring both indoor and outdoor uses, and making it challenging to characterize water use and water savings opportunities. However, seasonal analysis and knowledge of on-site end uses can aid in the estimation of water use by end use type. A preliminary analysis of water-saving opportunities identified the following facilities to prioritize for action over the next several years.

## BY THE NUMBERS

County facilities use **60 million gallons/year** of potable water, equivalent to usage in almost **500 single family homes** for one year.

The county uses **264 million gallons** of water (mostly non-potable) per year to irrigate the regional park, golf courses, and satellite parks.

Public Works uses about **5 million gallons** of water (approximately 99% non-potable) per year for operations.

| FACILITY | POTENTIAL OPPORTUNITY |
|---|---|
| District Attorney office | High outdoor use |
| Justice Center | High outdoor use |
| Strasburg Public Works | High indoor and outdoor use |
| Sheriff & Coroner's offices | High indoor use |
| Jail | High indoor use |
| Public Works | High use |

## SUCCESSES

Adams County has had several sustainability successes related to this topic since the 2015 Sustainable Adams County plan. These include:

- **Total potable water dropped significantly** between 2012 and 2013 and Adams County continues to pursue water efficiency projects on county properties.
- The county consistently **coordinates capital improvement road projects with water districts** to allow them to upgrade their older water systems and avoid water breaks on new pavement.
- Most of the county's water use is supplied by **raw water rather than potable water**.
- Adams County continues to improve water use tracking in **EnergyCAP** to distinguish between raw and potable water use, etc.

## CROSS-CUTTING THEMES

### Equity

- Colorado experiences a drought somewhere across the state in nine out of every 10 years. Improving the efficient use of water will help ensure Adams County can maintain levels of service in parks, open spaces, and public works, even in drought years.

### Environmental Justice

- Public Works operations use water to conduct gravel maintenance, which reduces particulate matter air pollutants and improves air quality in rural areas.

### Resiliency

- Colorado is projected to have a gap in water supply and demand in the future. Reducing reliance on potable water sources for facilities, parks, and county operations may increase Adams County's ability to cope with future water shortages.

# GOAL 8

Improve water use efficiency in county facilities and parks and promote the use of non-potable water supplies where available and feasible.

## METRICS & TARGETS

| Metric | 2019 Baseline | 2030 Targets |
|---|---|---|
| | ***Facilities*** | |
| Indoor water use (total per sq. ft.) | 80% of facilities met indoor efficiency benchmark | Meet all efficiency benchmarks for indoor domestic |
| Outdoor water use (total per sq. ft.) | 36% of facilities met outdoor efficiency benchmark | Meet all efficiency benchmarks for outdoor irrigation use |
| | ***Parks and Open Space*** | |
| Outdoor water use (total per sq. ft.) | 100% of parks met outdoor efficiency benchmark | Meet all efficiency benchmarks for outdoor irrigation use |

| STRATEGIES | | Lead Division | Timing |
|---|---|---|---|
| 8.1 | Analyze water use annually | *Facilities, Parks, Public Works Operations* | Ongoing |
| 8.2 | Implement new water conservation measures | *Facilities, Parks, Public Works Operations* | Ongoing |
| 8.3 | Monitor local and state regulations and policies | *Facilities, Parks, Public Works Operations* | Ongoing |
| 8.4 | Train employees on water-efficient practices | *Facilities, Parks, Public Works Operations* | Mid-term |
| 8.5 | Centralize water use data management | *Facilities, Parks, Public Works Operations* | Near-term |
| 8.6 | Install water sub-metering and/or smart meters | *Facilities, Parks, Public Works Operations* | Mid-term |
| 8.7 | Conduct on-site water assessments | *Facilities, Parks, Public Works Operations* | Near-term |
| 8.8 | Explore options to self-supply non-potable water | *Facilities, Parks, Public Works Operations* | Mid-term |
| 8.9 | Monitor water provider surplus water programs | *Facilities, Parks, Public Works Operations* | Mid-term |

# COMMUNITY

Increasing development density is correlated with decreasing water use, primarily attributable to reduced lot size and outdoor irrigation demand. Adams County is supportive of growth and development but also strives to encourage efficient use of the water supply. Each year, approximately 50-60% of total water use is for supplemental irrigation, representing a significant opportunity for water savings through a combination of low-water-using plants and efficient irrigation systems and practices. The strategies in this section focus on reducing outdoor water use for existing development by promoting the adoption of water-saving technologies and landscaping; and, for new development by promoting the use of C-PACE to incorporate water efficiency projects into new and redevelopment.

Water service in the county is fragmented, with almost 50 public water systems, including many municipal and special district water providers. Residents living in rural areas of unincorporated Adams County rely on private domestic water wells (also known as self-supplied use) rather than being served by a centralized water system. Self-supplied use presents a challenge in terms of ensuring equitable water quality, service, and reliability.

## SUCCESSES

Adams County has had several educational successes related to this topic since the 2015 Sustainable Adams County plan. These include:

- **County educates the public through programs such as:**
  - » Rain barrel education for homeowners
  - » Watershed models that are loaned out

## CROSS-CUTTING THEMES

### Equity

- There are over 50 water providers in Adams County, and many self-supplied users, making it difficult to ensure equity of service (e.g. water quantity, quality, reliability, access to conservation programs).

### Resiliency

- Conservation can be considered a “new water supply” and can help stretch how far the current supply can go. For instance, a decline in water use per capita can increase the total population Adams County could support at full build out. However, the county must consider other potential uses (e.g. economic development, environmental protection) to determine the best use for the conserved water.
- Using native, low-water landscaping can add co-benefits such as boosting community aesthetic and providing habitat for pollinators.

# GOAL 9

Promote water use efficiency for new and redeveloped residential and commercial properties in unincorporated Adams County.

## METRICS & TARGETS

| Metric | 2019 Baseline | 2030 Targets |
|---|---|---|
| None | | |

## STRATEGIES

| | | Lead Division | Timing |
|---|---|---|---|
| 9.1 | **Conduct a water conservation and awareness campaign** | ***Communications, Development Services*** | **Ongoing** |
| 9.2 | **Promote C-PACE and Performance Contract programs to incorporate water efficiency for development and redevelopment projects** | ***Communications, Economic Development*** | **Ongoing** |
| 9.3 | **Develop a comprehensive Countywide Water Master Plan** | ***Development Services*** | **Near-term** |
| 9.4 | **Develop a webpage to connect residents and businesses with water-saving resources** | ***Facilities*** | **Near-term** |
| 9.5 | **Develop and adopt water-wise appliance, fixture, landscaping, and irrigation standards into building, landscape, and development codes** | ***Development Services, Building Safety*** | **Near-term** |
| 9.6 | **Promote water efficiency for residents and businesses** | ***Facilities*** | **Mid-term** |

# LAND

## GOAL 10

Acquire and conserve land that sustains the level of service of parks and open space for economic, social, and environmental benefits.

### LAND AT A GLANCE (2019)

**54 acres per 1,000 residents** of publicly accessible parks, open space, and trails (POST Plan Existing Conditions)

**5 developed parks**

**5 open space areas**

**40.75 miles of trails managed**

Over the past 15 years, developed area land cover has **increased by 28%**, agricultural lands have **increased by about 2%**, and vegetative land cover has **decreased by nearly 9%**

**LAND** is central to Adams County's heritage – whether it's access to thousands of acres of conserved open space or the important role agriculture plays in supporting a thriving economy. Well-protected lands can provide innumerable benefits, including improved water quality and air quality, enhanced biodiversity, and even community health and well-being. However, development trends have put significant pressure on Adams County's land, threatening the quantity and quality of protected open space. For instance, as a result of development and industrial and agricultural activity, water quality in the South Platte River has long been impaired in this area, even though some tributary waterways in the county are protected through the Natural Resource Conservation Overlay zone (Adams County, 2021).

While there exist opportunities to reduce the environmental impacts of Adams County's agricultural land, the land remains an important opportunity for maintaining ecosystem services and economic production within the county. Statewide trends of transferring water from the agricultural sector to the local government sector are contributing to the loss of agricultural land.

The strategies in this section focus on continuing the county's great work of preserving new open space and supporting the adoption of the POST plan. Note that while the strategies in this sustainability plan do not directly address agriculture, agriculture remains an important component of Adams County's heritage and is addressed through the Advancing Adams plans.

# ROLE IN CLIMATE MITIGATION & ADAPTATION

Though not accounted for in the county's GHG emissions inventory, land management plays a critical role in both climate mitigation and adaptation. Land conserved as a natural resource can provide significant carbon sequestration opportunities. Healthy ecosystems pull carbon dioxide from the air and store the carbon in vegetation and in the soil. Additionally, every acre of conserved land is land not used for carbon-intensive development.

Conserved land also plays an important role in protecting communities against the impacts of climate change, such as flooding and wildfire. For instance, many ecosystems provide flood control by allowing water to soak into the vegetation and soil rather than running off and flooding urban areas.

## SUCCESSES

Adams County has had many sustainability successes related to this topic since the 2015 Sustainable Adams County plan. These include:

- Adams County voters approved a **permanent extension to the County Open Space Sales Tax** in 2020 that continues to fund the acquisition of open space.
- **Water quality monitoring programs** leverage community volunteers and a partnership with the Colorado School of Mines to monitor quality along Clear Creek.
- The county works closely with the Mile High Flood District to **enhance the regional drainage system** by purchasing land within floodplain areas, which also serves to preserve open space.

# CONNECTION TO ADVANCING ADAMS

The strategies in this sustainability plan seek to support the POST plan by providing additional resources to operational activities in support of the POST plan goals. The targets and strategies tie directly to the POST plan.

## Community *Action*

*Here are just a few ways you can make an impact...*

- Create a native oasis around your home by planting native trees, shrubs, grasses, and flowers.
- Find the nearest park or natural area and plan a trip to visit it. See if you can get there by carpooling, using public transit, or biking.

## CROSS-CUTTING THEMES

### Equity

- Adams County residents should have equitable access to land and water resources for recreation purposes.

### Environmental Justice

- Disproportionately impacted communities may have less access to parks and open space compared to other communities in the county, which further exacerbates discrepancies related to environmental and public health.

### Resiliency

- Resource conservation helps mitigate damage from climate change, such as reduced water availability during times of drought.

# GOAL 10

Acquire and conserve land that sustains the level of service of parks and open space for economic, social, and environmental benefits.

## METRICS & TARGETS

| Metric | 2019 Baseline | 2030 Targets |
|---|---|---|
| Acres of county-owned conservation easements | 6,000 acres in conservation easements | Maintain or increase from 2019 |
| Acres of county-owned land | 3,000 acres in fee simple | Maintain or increase from 2019 |

## STRATEGIES

| | | Lead Department | Timing |
|---|---|---|---|
| 10.1 | **Continue using County Open Space Sales Tax dollars to acquire and conserve land** | ***Parks, Open Space & Cultural Arts*** | **Ongoing** |
| 10.2 | **Support implementation of the Adams County Parks, Open Space, and Trails Master Plan and the Riverdale Regional Park Master Plan** | ***Parks, Open Space & Cultural Arts*** | **Near-term** |


EMERGENCY

# SUSTAINABLE INFRASTRUCTURE

## GOAL 11

Use sustainable infrastructure in Public Works projects to maximize economic, environmental, and social durability and minimize economic impacts from natural hazards.

### SUSTAINABLE INFRASTRUCTURE AT A GLANCE (2019)

Adams County is an **Institute for Sustainable Infrastructure ENVISION Supported Agency**

**3 ENV SP on staff**

**FEMA Community Score of 9**
allows residents to receive discounts on
**flood insurance premiums**

**25 green public and private infrastructure projects**
implemented through 2019

# SAFE, RELIABLE INFRASTRUCTURE

is one of Adams County's core operational goals to support quality of life for residents and employees, meet the needs of businesses, and support economic development. In the context of this sustainability plan, infrastructure is primarily related to the county's Public Works Department Capital Improvement Program (CIP), which addresses projects in stormwater management, roadways, and more.

As development occurs in Adams County, so too does the need for roads and stormwater management. Without careful consideration and planning, development can fragment wildlife corridors, increase impervious areas and urban stormwater runoff, reduce groundwater infiltration, and reduce the amount of agricultural and rural land (that may have other, more beneficial, uses). Water quality can also be adversely impacted by construction and urban runoff.

Sustainable infrastructure focuses on incorporating sustainability and resiliency concepts into the design and construction of infrastructure projects.

# ROLE IN CLIMATE MITIGATION & ADAPTATION

Climate change results in less frequent but more intense rainfall events, leading to larger volumes of stormwater that must be managed to minimize flooding damage. Green stormwater management practices aid in managing additional stormwater runoff and protecting water quality.

Climate change also causes added heat stress, as temperatures are expected to rise 2.5°F to 5°F by 2050 (Adams County, 2021). Sustainable infrastructure practices, such as maintaining tree canopies, reduce urban heat island effects through expanding the quality and quantity of green space. Green space also improves air quality, which is a significant issue impacting the Adams County community.

## SUCCESSES

Adams County has had many sustainability successes related to this topic since the 2015 Sustainable Adams County plan. These include:

- **County educates the public through programs** like storm drain marking, rain barrel education for homeowners, watershed models that are loaned out, and free stormwater audits for businesses.
- **Promote water quality** through free stormwater audits for businesses, stormwater illicit discharge education, "Adopt a Spot" programs, and Creek Day Cleanup events.
- Adams County was the first county in Colorado to become an **Institute for Sustainable Infrastructure ENVISION Supported Agency,** leveraging the ENVISION sustainable infrastructure framework on public works CIP projects. Three staff members are certified as ISI Envision sustainability professionals as of 2021. ENVISION for public infrastructure is similar to LEED certification for buildings.
- **Consistently coordinate CIP road projects with water districts** to allow them to upgrade their older water systems and avoid water breaks under new pavement.
- Public Works Stormwater Division assists the Community & Economic Development (CED) Department in **reviewing low-impact development (LID) techniques for new developments and redevelopments** larger than one acre in urbanized areas.

# CONNECTION TO ADVANCING ADAMS

As the development code is updated following the adoption of the Advancing Adams plans, barriers to low-impact development and green infrastructure (GI) should be eliminated.

## Community *Action*

*Here are just a few ways you can make an impact...*

- Build a rain garden at your home or business
- Keep fertilizers, yard waste, food waste, auto fluids, and animal waste out of stormwater drains
- Participate in public meetings about infrastructure projects to understand impacts and provide feedback to ensure projects are meeting the needs of the community

## CROSS-CUTTING THEMES

### Equity

- During community engagement phases of capital improvement projects, ensure all community member voices are heard by providing a range of opportunities to provide feedback and share project updates.
- Understand the social impacts of CIP projects on communities and incorporate ways to address or mitigate impacts. Social impacts might include impacts to public health, safe pedestrian access to services, or the exclusion of impacted communities from the process.

### Environmental Justice

- Disproportionately impacted communities are exposed to flooding, water pollution, urban heat island effects, poor air quality, and other environmental hazards, and often lack the resources needed to relocate during emergency events and recover afterward. Incorporating sustainable infrastructure practices into county projects can make green space more accessible to these communities.

### Resiliency

- Sustainable infrastructure solutions help mitigate the damages from climate and natural hazards, increase resilience to flood events, reduce urban heat island effects, and help prepare for drought by relieving stress on local water supplies.

# GOAL 11

Use sustainable infrastructure in Public Works projects to maximize economic, environmental, and social durability and minimize economic impacts from natural hazards.

## METRICS & TARGETS

| Metric | 2019 Baseline | 2030 Targets |
|---|---|---|
| ***Green Stormwater Management Approaches*** | | |
| FEMA Community Rating Score | 9[1] | 7 |
| Number of local water quality facilities owned and maintained by Adams County[2] | 12 (local, public water quality-only ponds) | Increase by 5 constructed |
| Tree replacement rate (based on number of trees)[3] | 0% (replacement program started in 2020) | 100% replacement rate |
| ***Sustainable Infrastructure*** | | |
| Number of ENVISION credits incorporated on each project | 0 | 4 credits on 80% of projects |
| Number of ENVISION certified staff | 1[5] | 30% of inspection and engineering staff |
| Number of coordination meetings between Public Works and Utility/District partners | 1 | 2 annually |
| ***Community Education Programs*** | | |
| Percent of dry outfalls inspected for illicit discharges every five years in urbanized areas | 50% | 100% |
| Number of stormwater educational activities above MS4 Permit minimum requirements. | 4 | 10 |

1 FEMA Score 8 in 2021
2 Starting definition: Water-quality only ponds and rain gardens; trends are using regional facilities for detention/flood control and local facilities for water quality.
3 Conditional to the terms and conditions approved by County Attorney
4 Three staff members ENVISION certified as of 2021

| STRATEGIES | | Lead Department | Timing |
|---|---|---|---|
| 11.1 | Incorporate Green Infrastructure and Low-Impact Development concepts into public works projects | *Public Works* | Ongoing |
| 11.2 | Implement master drainage studies | *Public Works* | Ongoing |
| 11.3 | Coordinate with utility and service provider partners to minimize future maintenance and infrastructure needs | *Public Works* | Ongoing |
| 11.4 | Plan community education events | *Public Works* | Ongoing |
| 11.5 | Expand the Tree Amenity Program | *Public Works* | Near-term |
| 11.6 | Develop and adopt resilient design performance standards for infrastructure, considering future impacts of climate change and adaptation ability | *Public Works* | Near-term |
| 11.7 | Execute a Public Works executive order that CIP projects be evaluated for ENVISION criteria, as appropriate, based on project function | *Public Works* | Mid-term |
| 11.8 | Include sustainability and resiliency considerations as part of procurement processes for infrastructure projects | *Public Works* | Mid-term |

# TRANSPORTATION

## GOAL 12
Decrease county fleet emissions through vehicle and operational efficiency and fuel switching.

## GOAL 13
Support EV mobility and infrastructure across all of Adams County.

## GOAL 14
Support alternative modes of transportation and enhance mobility for all Adams County residents.

### GREENHOUSE GAS (GHG) FACTS

**34% of community GHG emissions** are from the transportation sector

An estimated **44% of county operations emissions are related to transportation**

### TRANSPORTATION AT A GLANCE (2019)

**78% of workers** living in Adams County drive alone to work (U.S. Census Bureau, 2019)

Approximately **1% of total vehicles** registered in Adams County are **electric or hybrid vehicles**

**40.75 miles of trails** maintained by Adams County

**500+ fleet units** used for county operations

Over **300,000 gallons of gasoline** and over **240,000 gallons of diesel** consumed by county fleet vehicles

**TRANSPORTATION** is one of the leading contributors to GHG emissions (GHG) and air pollutants in Adams County. Specifically, transportation contributes to ozone, carbon monoxide (CO), and particulate matter (PM 2.5, PM 10), which have significant and detrimental public health and environmental impacts (EPA, 2020). Several major interstates and highways run through the western portion of Adams County, disproportionately impacting nearby community members with noise and air pollution. Adams County is part of an EPA-designated eight-hour ozone nonattainment zone, highlighting the severity of the issue.

Reducing the number of total miles traveled by community members, supporting the adoption of alternative modes of transportation (e.g. carpooling, public transit, biking, and walking) and supporting the adoption of EVs can all reduce transportation-related emissions and air pollution. 71% of Adams County residents commute outside the county for work (U.S. Census Bureau, 2018) and 78% of workers living in Adams County drive alone to work (U.S. Census Bureau, 2019). This dominance of solo travel represents a significant opportunity to improve the sustainability of transportation.

However, Adams County faces several additional transportation challenges. For instance, the county does not own or operate a transit service, relying on the Regional Transportation District (RTD) to provide transit for a portion of the county. Though RTD's N-Line provides access to public transit for a portion of the county, residents in the central and eastern portions do not have access to public transit. Large portions of the county do not have high enough density to support alternative modes of transportation like public transit or bike infrastructure. Improving the sustainability of transportation in Adams County will require a coordinated and comprehensive effort with member jurisdictions and regional partners and organizations.

# ROLE IN CLIMATE MITIGATION & ADAPTATION

Transportation is the second highest contributor to Adams County's GHG emissions. As electricity continues to transition to renewable energy sources, transportation is likely to become a larger portion of total emissions.

The majority of transportation emissions are associated with the total number of miles traveled by vehicles and the fuel efficiency of the vehicles. Though internal combustion engines have generally become more fuel efficient, they still contribute significantly to GHG emissions and also produce pollutants that exacerbate ozone and air quality issues in Adams County. These pollutants disproportionately impact communities along or near major transportation corridors.

Mitigating the impacts of the transportation sector, both for the purpose of lowering GHG emissions and improving the health of Adams County community members, can be accomplished by reducing the total amount of community travel, shifting travel to less impactful modes of transportation (e.g. walking, biking, public transit, carpooling), and increasing fuel efficiency. EVs are likely to play an important role in GHG and air pollution reduction, as they produce virtually no tail pipe emissions or pollutants.

# CONNECTION TO ADVANCING ADAMS

Given the importance of development in determining the viability of transportation options, Adams County's Comprehensive Plan will be an important factor in the county's transportation future. Specifically, a more intentional approach to guiding density and developing multimodal hubs is required to support alternative modes of transportation in eastern Adams County. This sustainability plan supports Comprehensive Plan policies related to density and multimodal hubs.

The strategies outlined in this sustainability plan support Transportation Master Plan policies and infrastructure recommendations by calling for additional implementation capacity. The sustainability plan also supports the implementation of the POST plan through education and outreach to promote the use of trails.

## Community *Action*

*Here are just a few ways you can make an impact...*

- Taking a short trip? Walk, run, bike, scoot, or skate to nearby places.
- Consider mixing transportation modes, such as biking to an N-Line stop to go to downtown Denver.
- Challenge yourself to combine trips into one outing to cut down on total miles traveled.
- Do you travel more than 15 miles each way to work? Enroll in Way to Go vanpooling.
- Use online tools to see if an EV is right for you. Make sure to leverage tax incentives and rebates to lower the upfront costs.
- Check out Smart Commute Metro North to learn more about alternative commuting options, rewards for smart commuters, and even fun events.

# COUNTY FLEET AND TRANSPORTATION

The county owns and operates over 500 fleet units, including passenger vehicles, off-road vehicles, heavy-duty trucks, buses, sweepers, and heavy equipment. As county operations continue to grow, so will the size of the fleet. Reducing total vehicle miles traveled (VMT) may be impractical given both the size of county operations and its growing fleet. Other options, like medium- and heavy-duty vehicle electrification, are still in the early stages of market offerings. Still, given that fleet operation contributes significantly to county operations emissions, identifying and adopting more sustainable transportation practices – such as maximizing route efficiency, reducing idling, and transitioning to alternative fuels – presents a significant opportunity for the county to decrease emissions and show leadership in transportation decarbonization.

## SUCCESSES

Adams County has had several sustainability successes related to this topic since the 2015 Sustainable Adams County plan. These include:

- Fleet includes **13 hybrid vehicles and 1 EV.**
- **Installed 6 new charging stations,** including 4 publicly available stations
- Public Works **reduced VMT for gravel operations by 24%** by hiring more efficient contractors for gravel maintenance.
- Began using **20% biodiesel blends** in medium-/heavy-duty vehicles in 2021

## CROSS-CUTTING THEMES

### Environmental Justice

- Transportation emissions and noise pollution from transportation have significant adverse impacts on communities located nearest highways and major roads. Reducing fleet noise and emissions can help alleviate these impacts.

### Resiliency

- Transitioning to electric transportation options has the additional benefit of reducing gasoline and diesel transport, reducing the risk of spills and pollution.
- EVs can also act as energy storage when charged. They can be connected to building infrastructure (vehicle to building systems) to provide bi-directional power.

# GOAL 12

Decrease county fleet emissions through vehicle and operational efficiency and fuel switching.

## METRICS & TARGETS

| Metric | 2019 Baseline | 2030 Targets |
|---|---|---|
| Total VMT for county operations | 5,691,515 | No target (tracking only) |
| Gallons of fuel consumed | 302,927 gal. gasoline<br>242,418 gal. diesel | No target (tracking only) |
| Hours of idling during county operations | N/A | Decrease hours of idling by 50% |
| Percent of eligible light-duty vehicles converted to electric | 1 EV (% TBD) | Electrify 75% of eligible light-duty vehicles |
| Percent of eligible medium- and heavy-duty vehicles replaced with EVs or using B-20 blends. | 0 | Convert 25% of medium- to heavy-duty vehicles to alternative fuels |

| STRATEGIES | | Lead Department | Timing |
|---|---|---|---|
| 12.1 | **Encourage virtual meetings when feasible** | ***County Manager's Office*** | **Ongoing** |
| 12.2 | **Develop and implement EV procurement plan** | ***Fleet*** | **Ongoing & Near-term** |
| 12.3 | **Increase opportunities to fuel heavy-duty fleet vehicles with bio-diesel** | ***Fleet*** | **Ongoing & Near-term** |
| 12.4 | **Develop and implement anti-idling policy** | ***Fleet*** | **Near-term** |

# COMMUNITY

Supporting safer, more efficient, and cleaner transportation options in Adams County will require a coordinated approach across departments and via partnerships with member jurisdictions and regional organizations. There are a wide range of options available to Adams County community members, including RTD's N-Line, MyWaytoGo vanpooling program, and A-Lift paratransit service. Additionally, while EVs currently represent a small portion of total vehicle registrations in Adams County, EV infrastructure is expected to grow across the region, allowing community members to recharge in more places. Still, the vast majority of these alternative transportation opportunities are unavailable or inadequate for community members living in the eastern portion of Adams County. The goals and strategies below aim to improve mobility for all Adams County community members, while reducing the GHG emissions and air pollutants associated with transportation.

## SUCCESSES

Adams County has had many sustainability successes related to this topic since the 2015 Sustainable Adams County plan. These include:

- Community Development Block Grants (CDBG) funded **multimodal transportation projects** in unincorporated county and member communities.
- Adams County encourages community members to use **MyWaytoGo** (a vanpooling program) in partnership with Denver Regional Council of Governments (DRCOG).
- **A-Lift provides free paratransit service** for Adams County residents ages 55 years or older.
- **RTD N-line opened in 2020**, providing service from north Adams County to Denver's Union Station.
- **Transit-oriented development (TOD) guidelines** lay the foundation for future multimodal hubs.

## CROSS-CUTTING THEMES

### Equity

- Access to alternative transportation networks is limited, especially in rural parts of the county. The first-mile and last-mile connections (i.e. from home to transit stops or from transit stops to final destination) are also limited and can be a barrier to alternative transportation options for community members.
- Access to high-quality, ADA-accessible sidewalks and protected bike lanes should be equitable across neighborhoods and member communities.
- Compact development can increase access to transportation options.
- Equity needs to be considered when transitioning to EVs, as there can be significant associated upfront costs.

### Environmental Justice

- Disproportionately impacted communities often have inadequate transportation infrastructure, putting these communities at greater risk for transportation safety concerns (e.g. ADA non-compliant sidewalks).

### Resiliency

- During hazard events, a range of transportation options for community members can increase community resilience. For instance, robust transit opportunities can allow community members to safely get to work even during heat waves or snow storms, when it may be unsafe to bike or walk.
- Natural hazards – such as floods and winter storms – can cut off transportation corridors needed by emergency services and residents.
- Natural hazards can limit alternative modes of transportation such as transit, biking, and walking. This restriction can have a disproportionate impact on communities reliant on those modes of transportation (e.g. community members without access to a vehicle).

# GOAL 13

Support EV mobility and infrastructure across all of Adams County.

## METRICS & TARGETS

| Metric | 2019 Baseline | 2030 Targets |
|---|---|---|
| Reduce vehicle miles traveled per capita | 9,500 miles | Tracking only |
| Reduce single occupancy vehicle mode split | 80% | Tracking only |

| STRATEGIES | | Lead Department | Timing |
|---|---|---|---|
| 13.1 | **Prioritize locations for EV charging stations** | ***Economic Development*** | **Near-term** |
| 13.2 | **Leverage grant funding to implement prioritized investments in EV charging** | ***Facilities*** | **Ongoing** |
| 13.3 | **Develop and implement communitywide EV readiness plan** | ***Facilities*** | **Near-term** |
| 13.4 | **Support EV-ready codes across Adams County** | ***Development Services*** | **Near-term** |
| 13.5 | **Implement EV education events for the community** | ***Facilities & Fleet*** | **Ongoing** |
| 13.6 | **Partner with member communities to fund key fast-charging infrastructure** | ***Facilities*** | **Mid-term** |

# GOAL 14

Support alternative modes of transportation and enhance mobility for all Adams County residents.

## METRICS & TARGETS

| Metric | 2019 Baseline | 2030 Targets |
|---|---|---|
| Align with Transportation Master Plan performance measures | TBD | TBD |

| STRATEGIES | | Lead Department | Timing |
|---|---|---|---|
| 14.1 | **Support quality of transportation infrastructure with a focus on safety and environmental health** | ***Public Works*** | **Near-term** |
| 14.2 | **Leverage community partnerships to promote commuting programs** | ***Economic Development*** | **Near-term** |
| 14.3 | **Raise awareness of sustainable transportation options** | ***Economic Development*** | **Mid-term** |
| 14.4 | **Explore options to expand community transit programs and micro-mobility options to service first- and last-mile connections** | ***Public Works*** | **Mid-term** |
| 14.5 | **Support policies in long-range plans that guide density necessary to enhance multimodal and first-mile/last-mile connections** | ***Development Services*** | **Mid-term** |
| 14.6 | **Develop and share map of bike infrastructure** | ***Information Technology & Innovation*** | **Mid-term** |

# HEALTHY AND RESILIENT NEIGHBORHOODS

## GOAL 15

Increase access to resources, opportunities, and services supporting financial, mental, and physical well-being for all community members in Adams County.

### HEALTHY AND RESILIENT NEIGHBORHOODS AT A GLANCE (2019)

More than **9%** of Adams County residents **experience food insecurity**

The **Adams County Social Vulnerability Index**, which measures vulnerabilities of communities to hazardous events, is 0.63 on a scale of 0-1.0, indicating a **moderate-to-high level of vulnerability**

**19.4% of Hispanic/Latino** Coloradans report fair or poor health; by comparison **13% of white** (non-Hispanic/Latino) reported fair or poor health

# HEALTHY & RESILIENT NEIGHBORHOODS

that promote quality of life for all community members, including physical and mental health and community connectedness, is an important value in Adams County. These components of health and wellness are important factors in building community resilience, a community's ability to respond to or bounce back from shocks and stressors like heat waves and flood events. For instance, community members with lower rates of respiratory illness may be more able to cope with heat waves, since extreme temperatures can worsen air quality and exacerbate respiratory illness.

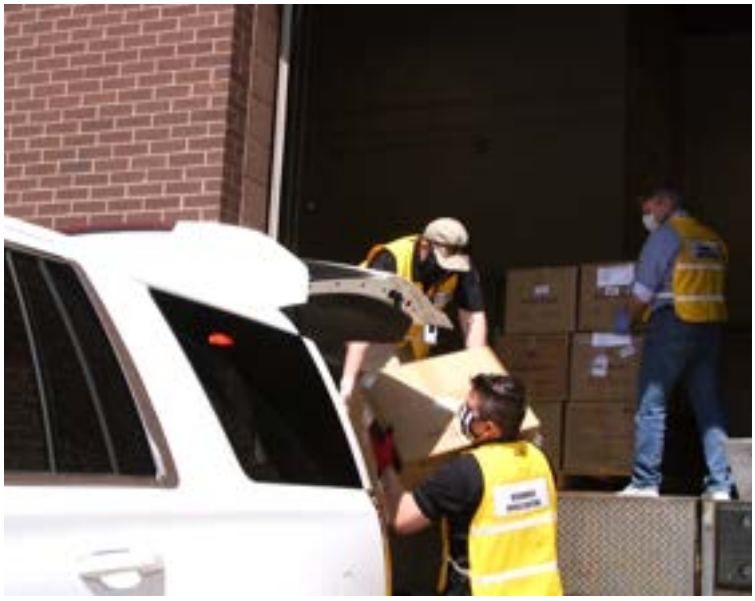
The built environment can also contribute to community resilience. For instance, living in an energy efficient home, living outside the boundaries of a floodplain, or close proximity to key services like grocery stores and community centers can all build community resilience.

Economic health and prosperity are important determinants of community health and adaptive capacity. A statewide survey conducted by the Colorado Health Institute found that individuals with incomes below the federal poverty line are twice as likely as other Coloradans to report fair or poor health (Colorado Health Institute, 2021). Healthcare costs impact the ability of Adams County community members to access the care they need. A survey of Adams County residents found 13.4% of residents had problems paying medical bills and 49.4% did not receive mental health care (Tri-County Health Department, 2019).

The strategies in this plan focus on bolstering existing initiatives, programs, and partnerships to continue connecting community members with the resources they need to thrive.

# ROLE IN CLIMATE MITIGATION & ADAPTATION

Building resilient neighborhoods can help Adams County community members better adapt to the impacts of climate change, including flooding, extreme heat, and wildfires. Addressing and alleviating health challenges can reduce an individual's vulnerability to the impacts of hot days or wildfires. Cultivating preparedness can ensure all community members have access to the information and supplies they might need to cope with a flood event or other hazard. Importantly, enhancing community cohesion can ensure neighbors help uplift one another in time of need and can even lead to the sharing of resources to improve communitywide access to goods and services.



## SUCCESSES

Adams County has had many sustainability successes related to this topic since the 2015 Sustainable Adams County plan. These include:

- **Community Development Block Grants** are available to support minor home repairs.
- Adams County recently approved several positions to bolster staff capacity to build health, resiliency, and equity programming, including a **resiliency coordinator, community race equity coordinator, neighborhood services analyst, and public health policy & program specialist**.
- The Adams County neighborhood program successfully piloted the development of a **neighborhood policy guide** – a model that can be used to collect neighborhood-specific information and connect neighborhoods with appropriate programs and resources.
- Eye on Adams encourages civic participation in code enforcement.
- Tri-County Health Department offers several health and wellness programs, including **Healthy Living and radon testing kits**.
- **OneAdams** facilitates a socially distant neighborhood connection during COVID-19 restrictions.
- Community Enrichment Grants support neighborhood beautification and social cohesion efforts.
- Western Service Center continues to focus on **improving food access and providing food hubs.**

# CONNECTION TO ADVANCING ADAMS

Many health and wellness issues are the result of pollution from industrial operations and transportation in the county. While sustainability can play a role in supporting education and programming to improve health outcomes for community members, the Comprehensive Plan plays an important role in guiding land use decisions related to extent and location of industrial uses and transportation corridors as well as proximity of residential developments and schools to these sources of pollution.

Community *Action*

*Here are just a few ways you can make an impact...*

- Get to know your neighbors and organize a block party or join OneAdams to connect virtually.
- Check out the Adams County Tool Shed and organize a neighborhood cleanup event.
- Have a neighborhood improvement project in mind? Apply for a mini-grant to receive funding from the county to accomplish your project.
- Get involved in your local neighborhood group. Don't have a neighborhood group? Rally some of your neighbors and get one started.

## CROSS-CUTTING THEMES

### Equity

- Adams County's population is growing but access to health and wellness services and healthy foods is not equitably available across the county.
- Nutrition education and knowledge can be inequitably distributed.
- Opportunities for beautification that provide neighborhood connection are often targeted toward wealthier and/or newer neighborhoods.

### Environmental Justice

- Rates of health risks (e.g. asthma, obesity) are often higher in communities impacted by environmental injustices (NIH, 2021), putting these communities at higher risk during natural hazards caused by climate change.
- Similarly, low-income communities and communities of color are most likely to live near environmental hazards such as industrial facilities that produce GHG emissions and other pollution that contribute to and exacerbate health conditions (CDPHE, 2021).
- While these disproportionately impacted communities experience the greatest rates of health issues and are most at risk to environmental hazards, they often have the least access to healthy food options, health services, and health education.
- Events like the COVID-19 pandemic exemplify the importance of environmental justice – as many members of low-income communities and communities of color were disproportionately impacted by the virus.

### Resiliency

- Developing social and neighborhood connections is an opportunity to enhance community resilience.
- Resilient infrastructure can also support community health and wellness:
  - » Safety shelters, cooling centers, and other similar centralized structures can ensure all residents have access to basic needs in the event of an emergency.
  - » Neighborhood centers, recreation centers, and senior centers can provide opportunities to connect residents to programing to support health and wellness.
- Improving physical health and wellness can improve personal resilience and lower the risk for illness.

# GOAL 15

Increase access to resources, opportunities, and services supporting financial, mental, and physical well-being for all community members in Adams County.

## METRICS & TARGETS

| Metric | 2019 Baseline | 2030 Targets |
|---|---|---|
| Number of resource events | N/A | No target (tracking only) |

| STRATEGIES | | Lead Department | Timing |
|---|---|---|---|
| 15.1 | **Expand and promote existing programs for community-led neighborhood improvements** | ***Strategic Partnerships & Resilient Communities*** | **Mid-term** |
| 15.2 | **Grow community partner networks to address resiliency gaps** | ***Strategic Partnerships & Resilient Communities*** | **Mid-term** |
| 15.3 | **Participate in Sustainable Neighborhoods Network** | ***Strategic Partnerships & Resilient Communities*** | **Long-term** |
| 15.4 | **Design and launch neighborhood capacity-building educational series** | ***Strategic Partnerships & Resilient Communities*** | **Long-term** |
| 15.5 | **Cultivate culture of personal resilience and preparedness** | ***Strategic Partnerships & Resilient Communities*** | **Long-term** |
| 15.6 | **Cultivate community leaders** | ***Strategic Partnerships & Resilient Communities*** | **Long-term** |

# AIR QUALITY

## GOAL 16

Reduce indoor and outdoor air quality impacts on disproportionately impacted communities through advocacy and mitigation practices.

### AIR QUALITY AT A GLANCE (2019)

**4.9 billion**
**annual vehicle miles traveled**

**205 historic landfill sites**

**11 Love My Air**
**air quality monitors**

**774 oil and gas wells**

**Over 440,000 feet**
**of natural gas pipelines**

**AIR QUALITY** is a significant priority for Adams County due to its impact on public health, particularly for those who live in close proximity to transportation corridors, industrial activities, and oil and gas operations. Adams County is in an EPA eight-hour ozone non-attainment area because the state has not met the standards set to reduce air pollution. In addition to ground-level ozone, methane, nitrous oxide (NOx), volatile organic compounds (VOCs), and particulate matter (PM) are significant contributors to air quality issues in Adams County. All these pollutants can cause or exacerbate respiratory issues (U.S. EPA, 2021), which have been worsened by the COVID-19 pandemic.

The transportation sector has significant negative impacts on air quality in the region, as several major transportation corridors route through southwest Adams County. Gasoline- and diesel-powered vehicles and equipment are a primary contributor to ozone. Pollutants from these vehicles, including NOx, VOCs, and PM, are precursors to ozone formation (U.S. EPA, 2021). Small off-road, gas-powered equipment, such as lawn and garden equipment, snow and leaf blowers, pressure washers, and generators contribute to poor air quality through uncontrolled emissions. Despite their smaller size, these sources emit far more than automobile engines because they have fewer controls and are often two-stroke engines (Washington University in St. Louis, 2018) which are less efficient. Transportation emissions also impact indoor air quality, especially in homes located close to transportation corridors.

Methane pollution, another precursor to ozone formation, is primarily due to oil and gas wells, natural gas transmission operations, and landfill emissions; it is also a significant contributor to GHG emissions, with a global warming potential 28 times higher than carbon dioxide (U.S. EPA, 2020). The county has taken many steps to address emissions from these operations. Methane in natural gas in homes can have negative impacts on indoor air quality, leading to health problems – especially in older, less efficient homes with poor ventilation. Building more efficient homes, and all-electric homes, can help address indoor air quality in new homes. Providing energy efficiency solutions, ventilation, and indoor air purification systems can help address indoor air quality in existing and older homes.

Strategies in this topic area aim to increase monitoring and reporting of air quality to help the community understand the impacts and actions they can take, address indoor air quality issues, advocate for regulatory requirements, and transition away from small off-road, gas-powered equipment. The Transportation topic area addresses fuel switching and multimodal options, and the Energy topic area considers energy efficiency.

# ROLE IN CLIMATE MITIGATION & ADAPTATION

Reducing transportation and natural gas GHG emissions through mitigation tactics will have direct impacts on air quality as well, as these sectors are the leading causes for ozone formation, particulate matter, and other air pollutants in Adams County. These topics are addressed throughout this plan and are also considered as air quality strategies.

As climate change worsens and wildfires become more prevalent, air quality is negatively impacted by wildfires across the Mountain West and in Colorado. Rising temperatures due to climate change lead to more ozone formation from transportation and small engines. The ability to adapt to these changes will be important for Adams County, particularly for communities that are disproportionately impacted.

Improving the urban tree canopy throughout the county is one adaptation technique considered in various sections of this plan. Trees provide carbon sequestration benefits and cooling effects (and therefore energy savings); reduce impacts from ozone, nitrous oxide, and particulate matter; provide improved community experience; and promote physical/mental well-being. Disproprotionately impacted communities often have fewer trees in their neighborhoods, so they are unable to realize these benefits.

## SUCCESSES

Adams County has had many sustainability successes related to this topic since the 2015 Sustainable Adams County plan. These include:

- Adams County is an active member in the **Regional Air Quality Council (RAQC), Colorado Department of Public Health and Environment (CDPHE)** air quality programs, and works with **Tri-County Health Department (TCHD)** to address air quality within the region.
- Active participant in the Love My Air program, working to increase air monitoring within the county
- The Minor Home Repair program helps qualified residents with health, safety, and energy efficiency upgrades that can improve indoor air quality.
- Oil and Gas (O&G) traffic impact study highlights the **challenges of increased oil and gas activity** on traffic and transportation systems.
- **Oil and gas development regulations** that include a 2,000-ft. setback from residences, schools, water resources, and buildings, provide for increased scrutiny for proposed locations within 2,000-ft setback buffer, require full suite of air quality Best Management Practices (BMPs), incentivize use of electric drill rigs, pipelines, and low-odor muds to mitigate emissions to the fullest extent feasible.
- Adams County regularly submits public comments on rulemakings and permitting actions pertaining to air quality, GHG emissions, and oil and gas development at both the state and local level aimed at **addressing impacts to public health, safety, welfare, and the environment from the built environment.**

# CONNECTION TO ADVANCING ADAMS

Each of the Advancing Adams plans can have significant impacts on air quality in the future development of Adams County and will take these impacts into consideration as the plans are developed. Considering air quality impacts in land use planning, such as the proximity of neighborhoods to major transportation corridors, industrial operations, landfills, and oil and gas operations, can help mitigate future impacts of air quality on residents. Land use planning, codes, and policies can also reduce urban heat island impacts. Transportation planning can inform considerations for multimodal options that can reduce air quality by providing options other than single occupancy vehicles. Parks and open space planning can provide additional urban tree canopy and carbon sequestration opportunities that will mitigate air quality and climate impacts.

## Community *Action*

*Here are just a few ways you can make an impact...*

- Take public transit or ride your bike to reduce transportation pollution.
- Switch to electric- or battery-powered lawn and garden equipment.
- Plant trees in your yard or find out how you can help plant trees in your neighborhood.
- Join a citizen science air quality monitoring network, such as Purple Air.

## CROSS-CUTTING THEMES

### Equity

- Poor air quality can have impacts communitywide, even if the causes may be different.

### Environmental Justice

- Poor air quality impacts low-income, elderly, disabled, and communities of color disproportionately, and they are often least able to relocate to areas with cleaner air. They also have less access to health services to manage health impacts from poor air quality and are often uninsured or underinsured.
- Areas of southwest Adams County, near large industrial facilities and major highways, are considered most at risk to climate issues, according to CDPHE.
- Neighborhoods most impacted by air quality issues also tend to have fewer parks and trees – land cover types that help clean the air.

### Resiliency

- Air quality issues are exacerbated by climate change (e.g. drier, hotter days lead to increased ozone production, wildfires increasing PM pollution).
- Strategies included for other topics have co-benefits for improved air quality – for example, improved energy efficiency in buildings also improves indoor air quality.
- An improved urban tree canopy can reduce exposure to air pollution, improve carbon sequestration, and reduce urban heat island effects.

# GOAL 16

Reduce indoor and outdoor air quality impacts on disproportionately impacted communities through advocacy and mitigation practices.

## METRICS & TARGETS

| Metric | 2019 Baseline | 2030 Targets |
|---|---|---|
| Number of environmental compliance and oil and gas inspections | 67 environmental compliance inspections<br>494 oil and gas inspections | No target (tracking only) |
| Number and type of air quality monitors | 0 | 4 |
| Number of air quality education and awareness communications, excluding alerts | N/A | 1 per quarter |

## STRATEGIES

| | | Lead Department | Timing |
|---|---|---|---|
| 16.1 | **Continue advocacy for improved air pollution mitigation and monitoring at regional and state levels** | ***Environmental Programs*** | **Ongoing** |
| 16.2 | **Explore options to expand tree plantings in areas with significant air quality impacts** | ***Public Works*** | **Near-term** |
| 16.3 | **Increase measurement and reporting of air quality in Adams County** | ***Environmental Programs*** | **Near-term** |
| 16.4 | **Develop program to provide indoor air quality education, outreach, assessment, and resources to disproportionately impacted communities** | ***Environmental Programs*** | **Near-term** |
| 16.5 | **Support transition to electric- and/or battery-powered small engines through education, awareness, funding, and advocacy** | ***Facilities*** | **Ongoing** |


THE SHOW
HUSKY

# IMPLEMENTATION

## ORGANIZATIONAL SUSTAINABILITY

Implementing sustainability across the Adams County organization will ensure the goals and targets of this plan are met and will set Adams County on a path of regional leadership in sustainability and maintaining a culture of sustainability over time. Strategies identified in this plan will help build and infuse a culture of sustainability across the organization, considering the social, environmental, and economic impacts of decisions. The opportunity to make impactful and meaningful decisions and processes an integral part of county governance is significant and Adams County is fully invested in doing so. As the county embarks on the initiatives and actions identified in this Sustainable Adams County 2030 Plan, engaging residents, organizations, businesses, and member communities across the county and region will provide great opportunity for every individual and group to contribute to positive change.

### SUSTAINABILITY COMMITTEE

The county has made great strides in establishing sustainability across the organization, including the formation of the Sustainability Committee. Formalizing the role of committee members through job descriptions, regularly scheduled meetings, and updates to county management and the Board of County Commissioners will be crucial to ensuring sustainability stays at the forefront of operations and continues through staffing transitions and other changes.

The Sustainability Committee is primarily responsible for the implementation, progress, and monitoring of plan strategies, targets, and goals. Lead departments have been identified for each strategy, and each department has a lead champion involved in the Sustainability Committee. These departments will identify staff person(s) who will lead the implementation of the strategies through their daily work activities. Department champions will be responsible for reporting progress regularly to the committee via regularly scheduled meetings. Because strategies coordinate across departments and are often related, this cross-pollination is crucial to the success of the plan and to infusing sustainability throughout the organization. They will also be responsible for annual reporting updates to ensure transparency and accountability.

Table 1 provides a summary of number of strategies by lead department or division and relevant topic and focus areas. Partnering departments are not included in this count. Additional departments, such as Budget & Finance and Communications, will also be involved in partnering roles.

*Table 1: Sustainability Strategies by Lead Department/Division*

| **Division or Department** (Dept. indicated in parthenses where applicable) | **Number of Strategies Leading** | **Relevant Topic & Focus Areas** |
|---|---|---|
| Facilities Operations Division (Facilities & Fleet Management) | 28 |  |
| Fleet Division (Facilities & Fleet Management) | 5 |  |
| Public Works | 11 |  |
| Parks, Open Space & Cultural Arts | 2 |  |
| Fair and Special Events Division (Parks, Open Space & Cultural Arts) | 2 |  |
| Economic Development Division (Community & Economic Development) | 7 |  |
| Environmental Program Division (Community & Economic Development) | 10 |  |
| Development Services Division (Community & Economic Development) | 8 |  |
| Community Safety & Well-Being, Information Technology & Innovation | 2 |  |
| County Manager's Office (including Strategic Partnerships & Resilient Communities) | 9 |  |
| Finance | 1 |  |

## GREEN TEAM

The Green Team, an internal, staff-led volunteer group, is also a key aspect of organizational sustainability. The Green Team is responsible for championing sustainability activities across county facilities and promoting educational opportunities. Team duties include volunteering at and hosting events, providing information and educational opportunities, and highlighting successes. They will help spread the word about educational opportunities and county successes, continue volunteering at events, and be a key channel for communicating about the sustainability plan. Maintaining an active Green Team ensures sustainability is infused throughout the culture of Adams County operations.

# A LIVING PLAN

The Sustainable Adams County 2030 Plan is intended to be a living document that county staff, elected officials, and community partners use to drive the county toward its vision of being the most innovative and inclusive county in America for all families and businesses. This sustainability plan can be applied by staff to guide annual work plans, by elected officials to prioritize policy action, and by community partners to identify opportunities to collaborate and contribute.

This plan identifies a broad range of actionable strategies that will increase sustainability across the community and within county operations. Some strategies can be implemented by staff or elected officials alone and some require partnerships across local, regional, and state government or between the public and private sector. These strategies are scheduled to be implemented over the next eight years. However, as a living plan, strategies should be revisited regularly to address new information, technologies, and resource development.

**FUTURE PLAN UPDATES**

Looking to the future, an update to the plan is recommended in 2026, about halfway to the 2030 goals, or as identified strategies are completed and new strategy ideas emerge. Similar to this 2021 update, existing targets and strategies should be reviewed to understand progress toward goals. Targets and strategies may need to be updated and new targets and strategies may be needed to continue making progress toward a sustainable Adams County as progress is made and technology advances.

Because the Sustainability Plan is being updated in parallel with the Advancing Adams plan updates, the plan will be reviewed following the completion of the other Advancing Adams plans to ensure alignment. This update may include items such as minor updates to metrics, targets, and strategy details to ensure alignment and consistency with the other plans.

# PERFORMANCE MANAGEMENT

Regular monitoring of progress will keep implementation on track and on schedule. It can also help identify when corrective action should be taken, when timelines may need to be updated, when to start on subsequent or new strategies, or when plan needs or priorities have shifted and updates may be needed.

Tracking tools will be developed with the Sustainability Committee and Performance Measurement staff to ensure tracking is easy to maintain and can be completed annually. This process will not only help illustrate what sustainability milestones have been achieved but is essential in determining projects, programs, and policies that effectively achieve sustainability goals. A robust monitoring and evaluation process creates greater transparency and accountability, more effectively utilizes resources, and identifies areas for continued focus and/or improvement. Appendix B summarizes topic area targets, baseline values, and data sources. In the future, dashboards may be created to easily track, monitor, and share progress.

# REPORTING AND COMMUNICATIONS

Performance should also be reported to ensure transparency and accountability. This process will be coordinated with the Sustainability Committee and Communications Department. This will include developing an annual sustainability report and keeping the Adams County sustainability website up to date with sustainability successes, stories, and ways for the community to get involved. Additional reporting and communications tools, such as an internal or external dashboard, may also be developed at a later date.

In addition, leveraging the county's existing communications channels will be important for providing information about plan progress and building connections to ensure an equitable approach to implementation, participation, and benefits.

## WEBSITE

Maintaining a sustainability landing page for all county efforts, both at the community and county facilities scale, will be a key tactic to informing the community about plan updates and progress. This resource can also be used to connect community members to sustainability resources such as energy and water utility rebates, waste reduction resources, transportation resources, and other information to help residents and businesses in their sustainability journeys.

## ANNUAL SUSTAINABILITY REPORT

To communicate the results of the annual sustainability plan review and achievements, an annual sustainability report will be prepared to address:

- Implementation status (completed, in-progress, upcoming, and delayed/removed)
- Performance reporting (progress to targets, progress to goals)
- Emerging opportunities and priorities in the community and in county operations

The annual sustainability report will be developed by the Sustainability Committee, shared with the county Executive Leadership Team and Board of County Commissioners, and publicly via the county's communication channels.

## COMMUNITY CONNECTIONS

The sustainability communications strategy may leverage the communications networks of established neighborhood groups and community-based organizations, to help distribute information to the community and to learn about their sustainability needs, interests, and priorities. This two-way communication will help spread the word about sustainability opportunities and achievements, will help guide strategy implementation to achieve maximum benefits for the intended audience, and will inform future plan updates. This will be managed in partnership with the Community Safety & Well-Being Department neighborhoods outreach. There are also many community-based organizations working to provide connections between residents, neighborhoods, employers, services, county staff, and other resources.

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Workforce and Business Center
Children and Family Services
Financial Assistance Programs
Child Support Services


ADAMS COUNTY
PETE MIRELEZ
HUMAN SERVICES CENTER

# APPENDIX A: COMMUNITY ENGAGEMENT

The Sustainability Plan leveraged the Advancing Adams community engagement process to ensure alignment across plans to address the county's vision, mission, and goals and prevent public fatigue by providing coordinated opportunities for input.

Engagement results from Advancing Adams public outreach was shared with the Sustainability Plan team to incorporate relevant results and feedback into the planning process. This included online survey results and in-person activities at summer events that addressed priority areas for Adams County's future.

Community engagement included an online survey, conducted in both English and Spanish, specific to Sustainability Plan priorities and strategies. The survey was advertised through the county's communication channels and at the Adams County Fair, gathering a total of 43 responses. Responses were used to inform strategies in the Sustainability Plan. Figure 7 shows the percent of respondents who selected various sustainability topics as their top priorities (multiple answers were allowed). All survey results are also included.

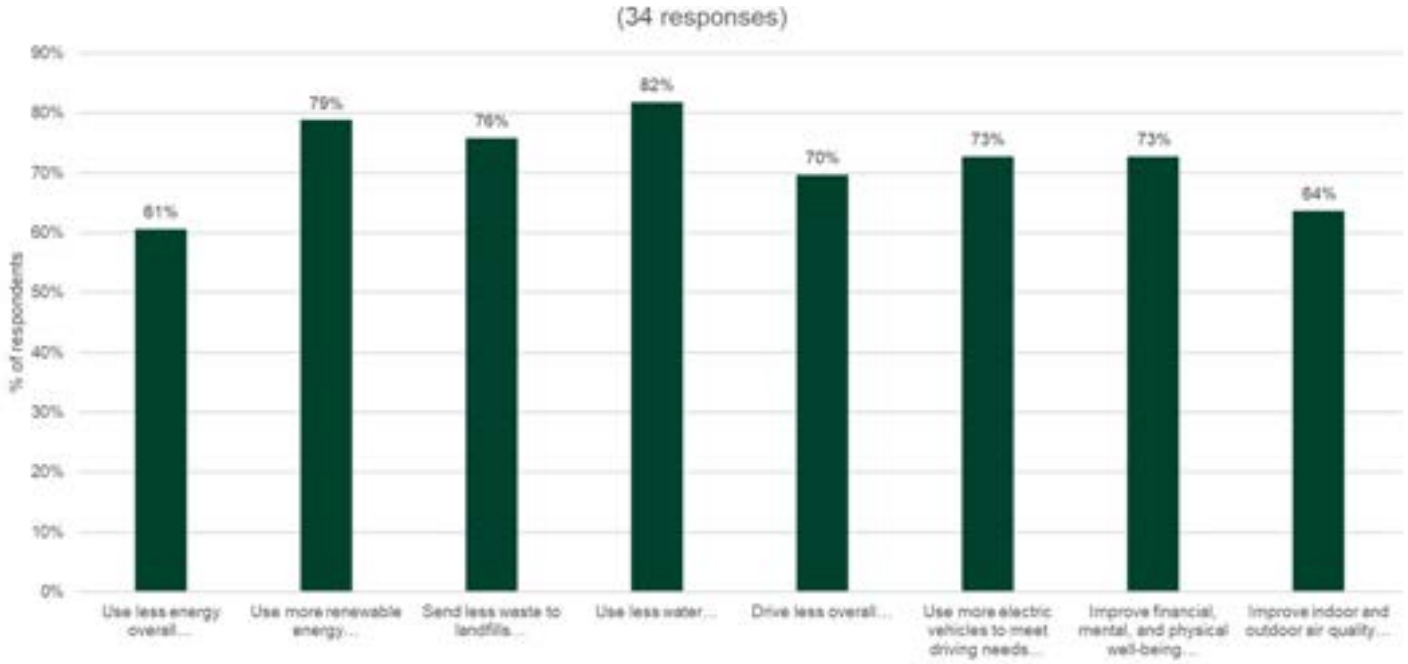



*Figure 7: Adams County Sustainability Survey Results - Priority Topics*

**Q1 Do you value living in a County that prioritizes sustainability?**

| | English | Spanish | Percent |
|---|---|---|---|
| 5 - Very much | 29 | 3 | 73% |
| 4 - Somewhat | 5 | 0 | 11% |
| 3 - Neutral | 5 | 0 | 11% |
| 2 - No | 1 | 0 | 2% |
| 1 - Not at all | 1 | 0 | 2% |
| Total Responses | 41 | 3 | 100% |
| Skipped | 0 | 0 | |

**Q2 Which statement do you agree with most:**

| | English | Spanish | Percent |
|---|---|---|---|
| Adams County should be a national example of sustainability | 16 | 1 | 40% |
| Adams County should a state-wide example of sustainability | 10 | 2 | 28% |
| Adams County should be a regional example of sustainability | 5 | 0 | 12% |
| Adams County should focus on other priorities. | 9 | 0 | 21% |
| Total Responses | 40 | 3 | |
| Skipped | 1 | 0 | |

**Q3 What can Adams County do to help you or the community... (select all)**

| | English | Spanish | Percent |
|---|---|---|---|
| Use less energy overall... | 20 | 1 | 62% |
| Use more renewable energy (ex. solar, wind) to meet energy needs... | 26 | 1 | 79% |
| Send less waste to landfills... | 25 | 1 | 76% |
| Use less water... | 27 | 1 | 82% |
| Drive less overall... | 23 | 0 | 68% |
| Use more electric vehicles to meet driving needs... | 24 | 0 | 71% |
| Improve financial, mental, and physical well-being... | 24 | 0 | 71% |
| Improve indoor and outdoor air quality... | 21 | 0 | 62% |
| Total Responses | 33 | 1 | |
| Skipped | 8 | 2 | |

**Q4 What idea(s) do you have to make sure all Adams County community members get to experience the benefits of sustainability?**
Answered: 22
Skipped: 19

| |
|---|
| All work should be approached with an equity lens, all communications should be multi-lingual and multi-cultural, environmental justice should be centered in this work. |
| Make knowledge available to all. Public service messages online, radio and TV. |
| Make sure materials are translated into different languages commonly spoken in the county, partner with different community hubs for marginalized parts of the Adams County to ensure programs are well-suited for their needs and well-publicized, work with nursing homes to ensure sustainability measures reach those members of the community |
| Subsidies for residents in EJ communities or economically challenged to pay for indoor air monitoring and controls, vouchers for EV and charging stations and rooftop solar or participation in community solar gardens |
| Adams County should be focusing on things like infrastructure, not this crap. |
| Educate residents on the source of their energy, especially electricity. Promote the use of solar energy at home. |
| Create programs to assist with better land management, cleanup of residential blighted areas. |
| Take care of all community members. Like clean up the drugs and garbage on Federal Blvd. Make Hyland Hills clean out the Berkeley Hills Park pond. The algae is disgusting to see everyday. I pay plenty of taxes and see no benefit what so ever down here in southwest unincorporated adams county. |
| Job and professional skills training and placement in green industries |
| Whatever sustainability options are offered - offer them on at least a sliding cost/fee scale of some sort. Try to offer free (or free in exchange for service?) sustainability options for those who truly cannot pay for them. |
| Educate us on all of these things. We keep hearing about climate change and planet pollution. What are all of the things I can do as a resident in Adams County to help with all of these things? Small to big. I've reduced single use plastic, I recycle everything I believe I can through Waste Managements recycling program, I compost food waste, I combine my driving trips. I'm sure I can do more, I'm just not sure what all of my options and choices are. Maybe partner with the Brighton Chamber (disclaimer: I'm on the Board) so we can educate businesses about all of these things. Ch |
| Energy efficient light bulb give away |
| Ensure that sustainability actions are delivered equitably throughout the county. |
| Improve the tap water freshness/cleanliness/taste so we don't have to purchase it in plastic bottles. |
| EV kiosks; EV stations in low-income neighborhods. Stop oil and gas permitting. Be the example. Convert gas-powered vehicles to electrical. Require electrical. Provide cooling stations. |
| Make sure apartment buildings are included, make grants so low-income people can put solar on their roofs |
| have a better community engagement program to see what the people are looking for and try to leverage state and federal programs to make those wishes happen |
| Until more charging stations exist, and more infrastructure is included in residential and commercial buildings for EV's, there isn't much that can be done. |
| To day my big topic is trees. Where Adams County can plant trees. Put in mediums that have trees and plants in them. Also, making walking the best exercise. Make the streets safer for walkers. Have walking events? Walking is a great form of exercise and a lovely past time. |
| mass transit |
| Provide trash cans and recycle bins at parks and bus stops |
| With no fracking, better transit snd renewable resources all residents can enjoy cleaner air and make sure our water sources are safe. |
| Informar más a las comunidades de lo que el condado está haciendo ya que quizás muchas personas no están siendo informadas o no les está llegando información. (Inform communities more about what the county is doing as perhaps many people are not being informed or not getting information) |
| Reciclar en eventos del condado y ofrecer servicios de compostaje (Recycle at county events and offer composting services) |

**Q5 Additional Comments**
Answered: 12
Skipped: 29

| |
|---|
| If the county actually did anything in this space it would be incredible to see, but past efforts, even when led by local champions, have been ignored at the least, and completely sabatogged at the most, by county leadership. If you really want this to happen you have to actually fund the programs and make the unpopular decision to require or at least incentivize behavior change through codes and policies. |
| Encouraging less meat consumption within the county through cooking classes, gardening courses, and partnerships with local restaurants would also improve sustainability within the county |
| The County government buildings should set an example by committing to become 100% renewablely powered by 2030. The government center should have solar panels/solar array installed immediately and consider a wind turbine to demonstrate its commitment. |
| Be more responsive and quit using COVID-19 as an excuse to do nothing. |
| Thanks for asking |
| Focus (in publicity) on the kind of life our children, grandchildren and future generations can have in Adams County that they will definitely not have if we do not adopt sustainability practices on a wide scale! |
| Get rid of all masks, we have bigger problems of people needing to work, and children being able to experience a normal school year. |
| Make oil & gas companies remove their leavings at their expense. |
| support innovative sustainability and conservation solutions, and help educate our community about them. |
| I think the county should look into a nuclear power plant using the newer technologies like are promoted by Bill Gates. They are safe and can assist in load issues on cloudy days or days with less wind. |
| It is still trees. I have seen many times where something looks good on paper but when it gets out into the world if falls very short of the description on paper. One other thing. Have the youth of our community involved in the effort. There is an art elementary school near me. The county could setup a competition for students to design a sustainability art fixture. Or from the STEM schools there could be a competition on some kind of solution. All built around education of the topic and youthful ideas. |
| Make a difference |
| Que les llegue información a las personas que no están familiarizadas con el internet ya que la mayoría de información es alrabez de internet. (That information reaches people who are not familiar with the internet) |
| Ofrecer incentivos y descuentos en los impuestos de propiedad a residentes que instalan equipos y mejoran sus casas para usar menos energía o agua. (Offer property tax incentives and discounts to residents who install equipment and upgrade their homes to use less energy or water) |

# APPENDIX B: PERFORMANCE MANAGEMENT

## ENERGY

### County Facilities

| Target | Baseline | Data Source | Supporting Strategies |
|---|---|---|---|
| 15% reduction in Energy Use Intensity (EUI) | 7.95 kWh/ft$^2$<br>0.31 therms/ft$^2$ | EnergyCAP | 1.1 Continue upgrading county facility energy systems<br>1.3 Train employees on energy efficient practices<br>1.4 Develop sustainable, resilient, and health-focused design and operations guidelines |
| 100% renewable electricity supply | 24% | Xcel Energy Community Energy Reports and United Power | 2.1 Identify potential locations for solar installations on county property<br>2.2 Advocate for and pursue renewable energy procurement options with utilities<br>2.3 Incorporate renewable energy into new county facilities |
| 5 facilities with on-site solar | 0 | Facilities | 2.1 Identify potential locations for solar installations on county property<br>2.3 Incorporate renewable energy into new county facilities |
| **Metric (Tracking Only)** | **Baseline** | **Data Source** | **Supporting Strategies** |
| Number of existing facility energy efficiency retrofits | N/A | Facilities | 1.1 Continue upgrading county facility energy systems |

### Community

| Target | Baseline | Data Source | Supporting Strategies |
|---|---|---|---|
| 1 new solar co-ops created annually | 0 | Environmental Programs | 3.1 Develop Energy Action Plan |
| 20 C-PACE projects | 2 | Colorado CPACE | 3.1 Develop Energy Action Plan<br>3.6 Support business energy efficiency outreach and upgrades |
| 2,600 solar permits issued (200 annually) | 849 total (since 2011) | Adams County Building Eye | 3.1 Develop Energy Action Plan<br>3.8 Incentivize renewable energy project development |
| **Additional Strategies** | | | |
| 3.2 Establish sustainability points system for development code | | | |

## WASTE

### Community

| Target | Baseline | Data Source | Supporting Strategies |
|---|---|---|---|
| 100% of private haulers in unincorporated Adams County provide recycling | 0% | Waste hauler licensing | 5.2 Adopt waste hauler licensing ordinance and regulations |
| 35% community waste diversion rate | 16.2% (CDPHE, 2020) | Colorado Dept. of Public Health & Environment | 5.5 Conduct waste diversion education and outreach campaign<br>5.6 Provide neighborhood waste diversion opportunities<br>5.7 Administer reporting system to track waste hauler annual recycling, composting, and landfilling metrics<br>7.1 Advocate at state level for integrated waste management policies<br>7.3 Incentivize circular economy, recycling, and other zero-waste markets |

## WATER

### County Facilities

| Target | Baseline | Data Source | Supporting Strategies |
|---|---|---|---|
| Facilities to meet all efficiency benchmarks for indoor domestic water use (total per sq. ft.) | 80% of facilities met indoor efficiency benchmark | Energy CAP | 8.1 Analyze water use annually<br>8.2 Implement new water conservation measures<br>8.3 Monitor local and state regulations and policies<br>8.4 Train employees on water efficient practices<br>8.5 Centralize water use data management<br>8.6 Install water sub-metering and/or smart meters<br>8.7 Conduct on-site water assessments<br>8.8 Explore options to self-supply non-potable water<br>8.9 Monitor water provider surplus water programs |
| Facilities to meet all efficiency benchmarks for outdoor irrigation use (total per sq. ft.) | 33% of facilities met outdoor efficiency benchmark | Energy CAP | |
| Parks to meet all efficiency benchmarks for outdoor water use (total per sq. ft.) | 100% of parks met outdoor efficiency benchmark | Parks, Open Space & Cultural Arts | |

## LAND

### County Facilities

| Target | Baseline | Data Source | Supporting Strategies |
|---|---|---|---|
| Maintain or increase acres of county-owned conservation easements | 6,000 acres in conservation easements | Parks, Open Space & Cultural Arts | 10.1 Continue using county Open Space Sales Tax dollars to acquire and conserve land<br>10.2 Support implementation of the Adams County Parks, Open Space, and Trails Master Plan and the Riverdale Regional Park Master Plan |
| Maintain or increase acres of county-owned land | 3,000 acres in fee simple | Parks, Open Space & Cultural Arts | |

## County Facilities

| Target | Baseline | Data Source | Supporting Strategies |
|---|---|---|---|
| Achieve FEMA Community Rating Score of 7 | 9[6] | FEMA Community Rating System | 11.1 Incorporate Green Infrastructure and Low-Impact Development concepts into public works projects<br>11.6 Develop and adopt resilient design performance standards for infrastructure, considering future impacts of climate change and adaptation ability |
| Increase number of local water quality facilities owned and maintained by Adams County[8] by 5 | 12 (local, public water quality-only ponds) | Public Works | 11.1 Incorporate Green Infrastructure and Low-Impact Development concepts into public works projects<br>11.2 Implement master drainage studies |
| Achieve a 100% tree replacement rate (based on number of trees) | 0% (replacement program started in 2020) | Public Works | 11.5 Expand the Tree Amenity Program |

6 FEMA CRS Score was improved to 8 in 2021. Adams County evaluates the program every five years.

7 Starting definition: Where regional is defined as serving >300 acres upstream stormshed, detention for flood control

8 Starting definition: Water-quality only ponds and rain gardens; trends are using regional facilities for detention/flood control and local facilities for water quality.

## County Facilities

| Target | Baseline | Data Source | Supporting Strategies |
|---|---|---|---|
| Incorporate 4 ENVISION credits on 80% of Public Works projects[9] | 0 | Public Works | 11.6 Develop and adopt resilient design performance standards for infrastructure, considering future impacts of climate change and adaptation ability<br>11.7 Execute a Public Works executive order that CIP projects be evaluated for ENVISION criteria, as appropriate, based on project function<br>11.8 Include sustainability and resiliency considerations as part of procurement processes for infrastructure projects |
| Achieve and maintain a rate of 30% of ENVISION certified staff in inspection and engineering services | 1[10] | Public Works | 11.7 Execute a Public Works executive order that CIP projects be evaluated for ENVISION criteria, as appropriate, based on project function |
| Host 2 coordination meetings between Public Works and Utility/District partners annually | 1 | Public Works | 11.3 Coordinate with utility and service provider partners to minimize future maintenance and infrastructure needs |
| Inspect 100% of dry outfalls in urbanized areas for illicit discharges every five years | 50% | Public Works | 11.4 Plan community education events |
| Complete 10 stormwater educational activities above MS4 Permit minimum requirements | 4 | Public Works | 11.4 Plan community education events |

9 Conditional to the terms and conditions approved by County Attorney

10 Three staff members ENVISION certified as of 2021

# TRANSPORTATION

## County Facilities

| Target | Baseline | Data Source | Supporting Strategies |
|---|---|---|---|
| Decrease hours of idling by 50% | N/A | PRECISE software reports | 12.4: Develop and implement anti-idling policy |
| Electrify 50% of new, eligible vehicles purchased or leased | 1 EV (% TBD) | Fleet vehicle inventory | 12.2 Develop and implement EV procurement plan |
| Convert 80% of diesel fuel to B-20 blends | 0% | Fleet | 12.3 Increase opportunities to fuel heavy-duty fleet vehicles with bio-diesel |
| **Metric (Tracking Only)** | **Baseline** | **Data Source** | **Supporting Strategies** |
| Total VMT for county operations | 5,691,515 | Fleet | 12.1 Encourage virtual meetings when feasible |
| Gallons of fuel consumed | 302,927 gal. gasoline<br>242,418 gal. diesel | Fleet | |

## Community

| Target | Baseline | Data Source | Supporting Strategies |
|---|---|---|---|
| Electrify 5% of total vehicles | 0.45% (1,513) | DMV | 13.1 Prioritize locations for EV charging stations<br>13.2 Leverage grant funding to implement prioritized investments in EV charging<br>13.3 Develop and implement communitywide EV readiness plan<br>13.4 Support EV-ready codes in Adams County development codes and development codes of member communities<br>13.5 Implement EV education events for the community<br>13.6 Partner with member communities to fund key fast-charging infrastructure<br>14.1 Support quality of transportation infrastructure with a focus on safety and environmental health<br>14.2 Leverage community partnerships to promote commuting programs<br>14.3 Raise awareness of sustainable transportation options<br>14.4 Explore options to expand community transit programs and micro-mobility options to service first- and last-mile connections<br>14.5 Support policies in long-range plans that guide density necessary to enhance multimodal and first-mile/last-mile connections<br>14.6 Develop and share map of bike infrastructure |

## HEALTHY AND RESILIENT NEIGHBORHOODS

### Community

No targets tracked for this goal.

| Additional Strategies |
|---|
| 15.1 Expand and promote existing programs for community-led neighborhood improvements |
| 15.2 Grow community partner networks to address resiliency gaps |
| 15.3 Participate in Sustainable Neighborhoods Network |
| 15.4 Design and launch neighborhood capacity-building educational series |
| 15.5 Cultivate culture of personal resilience and preparedness |
| 15.6 Cultivate community leaders |

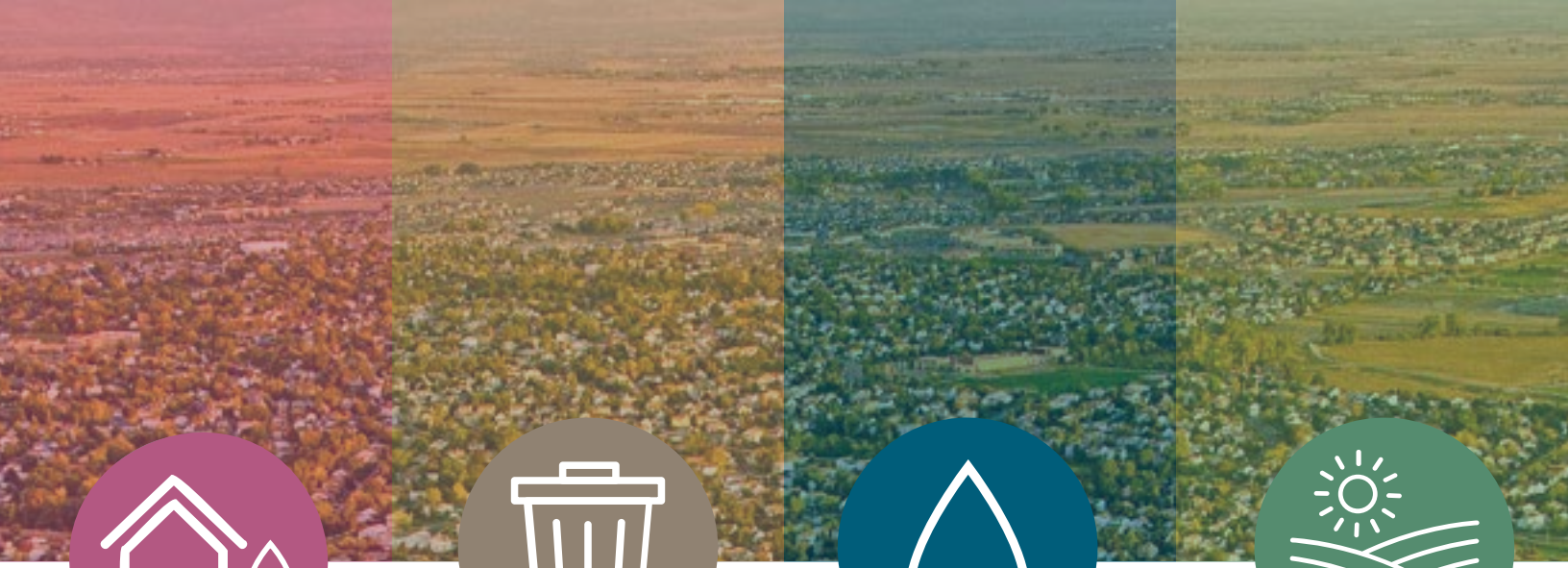
## AIR QUALITY

### County Facilities

| Target | Baseline | Data Source | Supporting Strategies |
|---|---|---|---|
| Install 4 air quality monitors | 0 | Environmental Programs | 16.1 Continue advocacy for improved air pollution mitigation and monitoring at regional and state levels<br>16.3 Increase measurement and reporting of air quality in Adams County |
| Host 1 air quality education and awareness communication event per quarter, excluding alerts | N/A | Environmental Programs | 16.4 Develop program to provide indoor air quality education, outreach, assessment, and resources to disproportionately impacted communities |
| **Metric (Tracking Only)** | **Baseline** | **Data Source** | **Supporting Strategies** |
| Number of environmental compliance and oil and gas inspections | 67 environmental compliance inspections<br>494 oil and gas inspections | Environmental Programs | |

| Additional Strategies |
|---|
| 16.2 Explore options to expand tree plantings in areas with significant air-quality impacts |
| 16.5 Support transition to electric- and/or battery-powered small engines through education, awareness, funding, and advocacy |

# APPENDIX C: STRATEGY IMPLEMENTATION DETAILS



# ADAMS SUSTAINABLE COUNTY