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CITY OF Grand Junction COLORADO

GRAND JUNCTION CITY COUNCIL
MONDAY, JUNE 5, 2023
WORKSHOP, 5:30 PM
HOSPITALITY SUITE AND VIRTUAL
1307 NORTH AVENUE

1. Discussion Topics

a. Update of Purdy Mesa Flowline Project

b. EV Readiness Plan Update

c. Greenhouse Gas Emissions Inventory & Resiliency and Sustainability Plan

d. Transportation Engineering Design Standards (TEDS) Update

e. Orchard Mesa Recreation Facility Study

2. City Council Communication

An unstructured time for Councilmembers to discuss current matters, share ideas for possible future consideration by Council, and provide information from board & commission participation.

3. Next Workshop Topics

4. Other Business

What is the purpose of a Workshop?

The purpose of the Workshop is to facilitate City Council discussion through analyzing information, studying issues, and clarifying problems. The less formal setting of the Workshop promotes conversation regarding items and topics that may be considered at a future City Council meeting.

How can I provide my input about a topic on tonight's Workshop agenda?
Individuals wishing to provide input about Workshop topics can:

1. Send an email (addresses found here www.gjcity.org/city-government/) or call one or more members of City Council (970-244-1504);

2. Provide information to the City Manager (citymanager@gjcity.org) for dissemination to the City Council. If your information is submitted prior to 3 p.m. on the date of the Workshop, copies will be provided to Council that evening. Information provided after 3 p.m. will be disseminated the next business day.

3. Attend a Regular Council Meeting (generally held the 1st and 3rd Wednesdays of each month at 6 p.m. at City Hall) and provide comments during "Citizen Comments."

Grand Junction City Council

Workshop Session

Item #1.a.

Meeting Date:	June 5, 2023
Presented By:	Randi Kim, Utilities Director
Department:	City Clerk
Submitted By:	Randi Kim

Information

SUBJECT:

Update of Purdy Mesa Flowline Project

EXECUTIVE SUMMARY:

The Purdy Mesa Flowline project is in the final design stage. Due to the high cost of pipeline materials and limited remaining funding, Staff plans to construct the upper 3.3-mile section of the project with an in-house crew and outsource the lower 2.9-mile section to stay within budget.

BACKGROUND OR DETAILED INFORMATION:

The 2022 Appropriated Budget for the Purdy Mesa Flowline Project was $7.5 million. This project is mostly funded with a $7 million low-interest rate loan through the Colorado Water Conservation Board (CWCB). The project includes replacing two sections of the Purdy Mesa flowline, totaling about 6.2 miles, and installing a new pressure control tank.

After direct purchase of pipe materials in 2022, the remaining $2 million was carried forward to 2023 with Council approval of the Supplemental Appropriation on April 19, 2023. After accounting for 2023 expenditures, the current available budget is $1.93 million. In addition, $740,000 is available for transfer into the project from the Kannah Creek Flowline project which came in under budget, resulting in a total available budget of $2.67 million.

Due to the high cost of pipeline materials and limited remaining funding, Staff plans to construct the upper 3.3-mile section of the project with an in-house crew. This section is relatively easy to construct as it is mostly on flat terrain along Lands End Road. However, the lower 2.9-mile section is in an area with challenging terrain and would be more suitable to be performed by an outsourced contractor.

The Engineer's estimate to construct the entire project is $3.82 million. By using an in-house crew for the upper section, the estimated construction cost would be reduced to $1.9 million, a savings of $1.84 million which would keep the project within budget. The remaining $690,000 would be utilized for the pressure control tank. If the City does contract the upper section of the project, Staff would have to pursue a loan amendment of $1.84 million from CWCB to complete the project and, if approved, incur additional interest costs over the life of the loan.

The project is currently in the final design phase as easements for the realigned flowline are being negotiated with property owners. Staff anticipate completing design and being ready to bid the project in June 2023, and starting construction by July/August.

FISCAL IMPACT:

This item is for discussion purposes.

SUGGESTED ACTION:

This item is for discussion purposes.

Attachments

None

Grand Junction City Council

Workshop Session

Item #1.b.

Meeting Date:	June 5, 2023
Presented By:	Jennifer Nitzky, Sustainability Coordinator
Department:	Community Development
Submitted By:	Jennifer Nitzky

Information

SUBJECT:

EV Readiness Plan Update

EXECUTIVE SUMMARY:

In the Resource Stewardship principle of the 2020 Comprehensive Plan, proposed action items to improve public and environmental health include improving EV charging infrastructure, implementing policies to reduce air pollution, and educating the public about community-wide actions that can be taken to limit environmental impacts. Additionally, in the previous council's strategic plan implementation matrix, one of the actions under the Quality of Life priority stated: "Create an EV Readiness Plan". Due to these components, staff saw the need to work with utility providers in the area to create a comprehensive community-wide EV Readiness Plan. In January 2023 the City began working with Xcel Energy's Partners in Energy to create and implement this EV Readiness Plan over the coming years. City staff and consultants from Partners in Energy will present the background and draft components of the Electric Vehicle (EV) Readiness Plan.

BACKGROUND OR DETAILED INFORMATION:

Located at the crossroads of two major regional travel corridors, Grand Junction is uniquely situated to benefit from the ongoing transition to electric vehicles (EVs). Nearly 10 percent of newly-registered vehicles in Colorado in 2022 were EVs, making the state a top-five national leader in EV adoption, and almost a million Colorado-registered EVs are expected to be on the road by 2030. By implementing infrastructure and policies that attract EV-driving travelers and local and regional commuters, the City sees an opportunity to become a vital regional charging hub. For this reason, and due to the outcomes of the 2020 Comprehensive Plan Principle 8: Resource Stewardship, the City is now preparing an EV Readiness Plan that will ensure the City seizes this opportunity for the benefit of our entire community. Over the past six months, the City has been working with consultants from Partners in Energy, a free Xcel Energy consulting service, to create a plan that is inclusive, robust, and pragmatic for Grand Junction's

unique community. Focus areas of the plan include incentivizing public adoption, increasing public infrastructure, and transitioning institutional fleets. With the guidance of city staff and consultants, a council-appointed steering committee referred to as the EV Action Team has helped develop the goals, vision, and short and long-term strategies of the plan. In addition to the steering committee, community input has been gathered through numerous avenues to provide the plan with more direction. These include an EV and ebike event hosted by Western Colorado Alliance, an EV Ride and Drive event co-hosted by the City and Clean Energy Economy for the Region (CLEER), staff-led targeted focus groups, an EV plan Open House, and engagement activities hosted on the City's EngageGJ.org platform.

Staff and consultants will present the overarching elements of the plan to council. Presenters are seeking feedback on the specific goals and strategies outlined in the plan.

One final EV Action Team workshop is scheduled for June 14. Council recommendations will be incorporated into plan elements prior to this final meeting. The purpose of this workshop is to garner any final suggestions from the EV Action Team before moving forward with a draft plan. A draft plan will be presented to City Council at a workshop in July.

FISCAL IMPACT:

There is no fiscal impact related to this discussion item.

SUGGESTED ACTION:

Staff is seeking feedback on the elements of the plan and general discussion on the plan.

Attachments

1. Grand Junction EV - City Council Summary V2

PARTNERS IN ENERGY GRAND JUNCTION EV READINESS PLAN UPDATE

Work Session Purpose

The purpose of this work session is to provide an update on the Partners in Energy Grand Junction EV Readiness Plan development including a summary of work completed to-date and next steps.

The objectives of this work session are to:

- Review the EV Readiness Plan process.
- Review work done to-date and the plan framework.
- Preview next steps for plan finalization and implementation.
- Allow time for feedback and questions.

Project Context

Located at the crossroads of two major regional travel corridors, Grand Junction is uniquely situated to benefit from the transition to electric vehicles (EVs). This EV Readiness Plan, developed through Xcel Energy's Partners in Energy Program, will provide a roadmap to strategically guide action in Grand Junction and ensure that the community is "Ready for EVs". EV Readiness Plan development kicked off in January 2023, and directly contributes to implementation of the City of Grand Junction 2020 Comprehensive Plan through "anticipat[ing] and plan[ning] for the implications and opportunities associated with… electric vehicles".

In developing this plan, Grand Junction joins more than 35 other Colorado communities that have developed EV and Energy Action Plans through Xcel Energy's Partners in Energy. Partners in Energy will also support 18 months of plan implementation in the form of marketing and communications, data tracking and analysis, program expertise, and project management to move forward strategies identified in the plan.

Plan Development Process

The strategies that will be included in the plan document have been developed collaboratively by a project management team formed of City staff and Xcel Energy representatives, with input from an EV Action Team formed of key local stakeholders. Over the course of two planning meetings in February and April, the EV Action Team worked together to develop a vision and actionable strategies to support fair access and EV opportunities across the community. The plan will also incorporate broader community feedback received during events, online engagement, and a community open house to inform the strategy details and implementation approach.

Next Steps

- During the third and final planning meeting on June 14th, the EV Action Team will confirm key strategy details and begin mobilizing for implementation.
- A draft plan will be available for review by City staff and the EV Action Team in July.
- The final plan will be brought to City Council for approval in August.
- Xcel Energy Partners in Energy will work with City staff to develop an MOU for implementation, outlining roles, responsibilities, and resources to support action in 2023 and 2024.

EV Adoption Forecast and 2023 – 2024 Readiness Strategies

At the end of 2022, there were 588 electric vehicles on the road in Grand Junction and over 72,000 in Colorado (EValuateCO Dashboard). However, based on scenarios developed by the Colorado Energy Office, there may be over 13,500 EVs in Grand Junction, accounting for approximately 13% of the total light-duty vehicles on the road.

The following strategies were developed by the project management team with input from the EV Action Team. The implementation approach and details will be confirmed during the final EV Action Team planning meeting on June 14th and will reflect input received from the broader community.

Note that the EV Readiness Plan is intended to be a living document. Goals and strategies will be assessed during implementation and refined as needed based on new data, emerging opportunities and community and staff capacity.

Community Adoption Strategies	
CA-1:	**Electric Mobility Education Campaign** A foundational strategy focused on outreach and education to residents and businesses to raise awareness of EV benefits and opportunities including existing charging stations, available rebates, and tax credits.
CA-2:	**Dealership Outreach & Engagement** Connect local vehicle dealerships and auto repair shops to EV trainings, customer collateral, and other resources to support increased availability of EVs, access to existing incentives, and maintenance options.
CA-3:	**Encourage E-Bike Adoption** Explore opportunities to support and incentivize community adoption of e-bikes as a mode of transportation.
CA-3:	**Clarify and Streamline Permitting Process for EV Charging** Clarify permitting processes for residential and commercial EV charging, for example through developing a "how to" guide and exploring opportunities to simplify site plan review.
Public Charging Strategies	
PC-1:	**Engage Potential Private Charging Site Hosts** Use mapping and community input to identify high priority areas for public charging and engage potential site hosts.
PC-2:	**Install Public Charging at Public Facilities** Use mapping and community input to prioritize public facilities for charging, apply for available grant funding, and install charging stations.
PC-3:	**EV Parking Enforcement and Best Practices** Develop and implement EV parking enforcement best practices.
PC-4	**Clarify and Streamline Permitting Process for EV Charging** Clarify permitting processes for residential and commercial EV charging, for example through developing a "how to" guide and exploring opportunities to simplify site plan review.
Institutional Fleet Strategies	
IF-1:	**Fleet Assessments** Encourage local fleets with 5+ vehicles to participate in Xcel Energy's Fleet Electrification Assistance Program.
IF-2:	**EV Training for Elected Officials, Board & Commission Members** Develop and implement EV training to support informed budget and decision making.
IF-3:	**EV Training for City Staff** Develop and implement training for fleet mechanics, operators, and planning staff interacting with EV operation or decision making.

Grand Junction City Council

Workshop Session

Item #1.c.

Meeting Date:	June 5, 2023
Presented By:	Jennifer Nitzky, Sustainability Coordinator
Department:	Community Development
Submitted By:	Jennifer Nitzky, Sustainability Coordinator

Information

SUBJECT:

Greenhouse Gas Emissions Inventory & Resiliency and Sustainability Plan

EXECUTIVE SUMMARY:

Staff will provide an overview of the greenhouse gas emissions inventories recently completed for 2018 and 2021 as well as discuss the forthcoming purpose and process for the resiliency and sustainability plan.

BACKGROUND OR DETAILED INFORMATION:

Greenhouse Gas Emissions Inventory – In November 2022, the city contracted with Lotus Engineering & Sustainability to conduct Greenhouse Gas (GHG) inventories to serve as the baseline for the Resiliency and Sustainability Plan. A GHG inventory lists all emission sources within a certain boundary and calculates their associated emissions. The boundary for these inventories is city limits, including emissions that are the result of activities from assets not owned or controlled by the City, but that the City indirectly impacts within its value chain. Inventories were conducted in 2018 and 2021, and over that span the city saw a four percent decrease in emissions. This decrease is mostly due to Xcel Energy adding more renewable energy to the grid, which reduces the carbon footprint of electricity used by residents and commercial businesses. The inventories also indicated that the largest sources of GHG emissions in the City in 2021 were gasoline vehicles, commercial electricity, commercial natural gas, and residential electricity, in that order. Action items from the final report include policies and programs that address these sources of emissions, including encouraging vehicle electrification, increasing investments in multimodal transportation, and implementing higher building efficiency standards and electrification.

Resiliency and Sustainability Plan – In Plan Principle 8: Resource Stewardship of the 2020 Comprehensive Plan, city residents indicated the importance of creating a community-wide Sustainability Plan. In addition, in Plan Principle 10, the community

established a goal to “Promote a safe and more resilient community” to ensure the health, safety, and economic resiliency of the community through increasingly frequent natural disasters and social disturbances. The findings of the GHG emissions inventories will lay the groundwork for a data-driven approach to developing a community-based resiliency and sustainability plan.

In April 2023, the City selected Design Workshop and Spirit Environmental to help facilitate this community-driven plan. The planning process will begin in May 2023, and last approximately 12 months. A council-appointed steering committee will be convened to help provide direction for the plan. This committee will include those with specific experience and expertise in related fields as well as those with an interest in creating a sustainable future for Grand Junction. Members will reflect diversity in the community. Solicitation for people interested in participating in the committee began the week of May 15 and the application deadline is June 2, 2023. Promotional materials and the application will be available in English and Spanish. Staff will prepare a recommended steering committee for council’s consideration. Numerous public events and engagement opportunities will take place throughout the year to determine the plan’s general scope and specific strategies.

FISCAL IMPACT:

There is no fiscal impact related to this discussion item.

SUGGESTED ACTION:

This item is for discussion purposes only.

Attachments

1. FINAL_Grand Junction_GHG_Report (1)

City of Grand Junction Community Greenhouse Gas Inventory Results and Recommendations Report

April 2023

LOTUS
Engineering & Sustainability

TABLE OF CONTENTS

Table of Figures

Table of Tables

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GLOSSARY OF TERMS

Note that the following terms are sourced from the Global Protocol for Community-scale Greenhouse Gas Emission Inventories (GPC).[1]

Biogenic Emissions (CO2(b))
Emissions produced by living organisms or biological processes, but not fossilized or from fossil sources.

Carbon Sequestration
The process by which atmospheric carbon dioxide is taken up by plants through photosynthesis and stored as carbon in biomass and soils.

Consumption-based Emissions Inventory
A consumption-based emissions inventory (CBEI) is a calculation of all the greenhouse gas emissions associated with producing, transporting, using, and disposing of products and services consumed by a particular community or entity in a given period (typically a year). A CBEI is a way to tally up a comprehensive emissions 'footprint' of a community.

Emission Factor
A factor that converts activity data into GHG emissions data (e.g., kg CO_2e emitted per liter of fuel consumed, kg CO_2e emitted per kilometer traveled, etc.).

Fugitive Emissions
A small portion of emissions from the energy sector frequently arises as fugitive emissions, which typically occur during the extraction, transformation, and transportation of primary fossil fuels. Where applicable, cities should account for fugitive emissions from the following subsectors: 1) mining, processing, storage, and transportation of coal; and 2) oil and natural gas systems.

Greenhouse Gas Emissions
Gases that trap heat in the atmosphere. For the purposes of the GPC, GHGs are the seven gases covered by the United Nations Framework Convention on Climate Change (UNFCCC): carbon dioxide (CO_2); methane (CH_4); nitrous oxide (N_2O); hydrofluorocarbons (HFCs); perfluorocarbons (PFCs); sulfur hexafluoride (SF6); and nitrogen trifluoride (NF_3).

Global Warming Potential
A factor describing the radiative forcing impact (degree of harm to the atmosphere) of one unit of a given GHG relative to one unit of CO_2.

[1] For more information see:
https://ghgprotocol.org/sites/default/files/standards/GPC_Full_MASTER_RW_v7.pdf

GPC
The Global Protocol for Community-scale Greenhouse Gas Emission Inventories (GPC) is a greenhouse gas protocol that provides extensive guidance on emissions calculations and reporting for local, subnational, and national governments.

In-boundary Transportation
Includes all transportation of people and freight occurring within the City boundary.

Industrial Processes and Product Use (IPPU)
IPPU emissions occur from industrial activities, such as a power plant, and from the use of industrial products, such as refrigerants and other chemicals.

Metric Tons of Carbon Dioxide Equivalent (mt CO_2e)
A standard unit of measurement for the quantity of greenhouse gas emissions. Carbon dioxide equivalent (CO2e) standardizes emissions from different greenhouse gases (such as nitrous oxide and methane) into equivalent carbon dioxide emissions based on the global warming potentials, or potencies, of the different gases.

Mode Shift
A shift in the way residents travel to and from locations. This often presents itself as a shift away from driving fossil-fuel-powered vehicles to using public transport or other forms of carbon-free transportation like walking or biking.

Transboundary Emissions
Emissions from sources that cross the geographic boundary.

Transboundary Trips
There are typically four types of transboundary trips:

1. Trips that originate in the City and terminate outside the City.
2. Trips that originate outside the City and terminate in the City.
3. Regional transit (typically buses and trains) with an intermediate stop (or multiple stops) within the City.
4. Trips that pass through the City, with both origin and destination outside the City. These trips are not attributed to Grand Junction for the purposes of the inventory.

Transmission and Distribution (T&D Losses)
A small percentage of electricity is lost while it moves through the grid between the power station and the consumer. Emissions are calculated for these losses.

Per Capita Emissions
Average emissions per person/resident, calculated by dividing total emissions by the population.

Waste Characterization/Composition

Is the result of a solid waste composition study, using survey data and a systematic approach to analyze the waste stream and determine the waste source (paper, wood, textiles, garden waste, etc.).

EXECUTIVE SUMMARY

To better understand where the City's emissions are coming from, Grand Junction conducted several greenhouse gas (GHG) emissions inventories, dating back to 2010. These include three comprehensive inventories, one with data from 2021 and the others using data from 2018 and 2010. The inventories from 2018 and 2021 will be compared throughout this report to highlight any trends found. A business-as-usual emissions model was also created to give an idea of what emissions levels would look like if Grand Junction continued to operate without undertaking any further emissions reduction actions. There were two other analyses conducted to help the City get a better understanding of potential sustainability and resilience measures that could be undertaken: an analysis of the carbon removal benefits of the City's urban trees and parks; and a study of common metrics related to water, resilience, and equity that the City should consider tracking as they move forward with expanding their sustainability work. Also woven throughout this report are high-level policy recommendations for the City to consider implementing to help lower its GHG emissions in the future.

2021 GHG Inventory Results

Emissions in Grand Junction decreased by 4% from 2018 due primarily to COVID-19-related impacts. Compared to the original 2010 GHG inventory, community emissions have been reduced by 8%. See Figure 1.

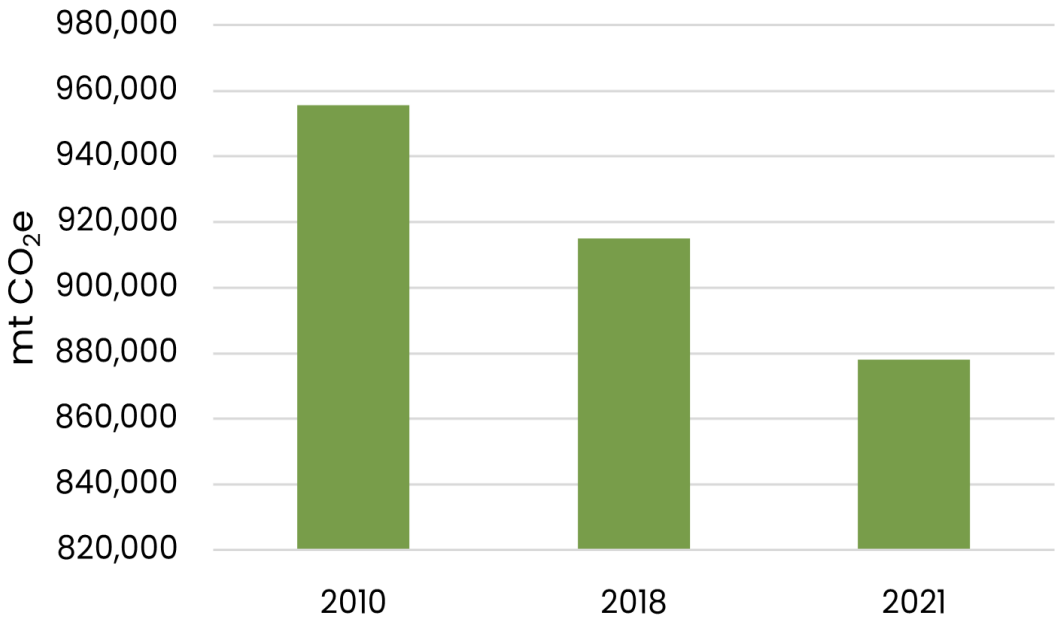

Figure 1. Total community wide GHG emissions in Grand Junction.

Emissions Snapshot

In 2021, the biggest contributors to emissions came from

- Building electricity use (36%).
- On-road fossil fuels (32%).
- Building natural gas use (22%).

Figure 2 provides an overview of the total emissions in 2021 (878,041 mt CO_2e) reported by Grand Junction broken out by sector and source. Additional details can be found in the following sections.

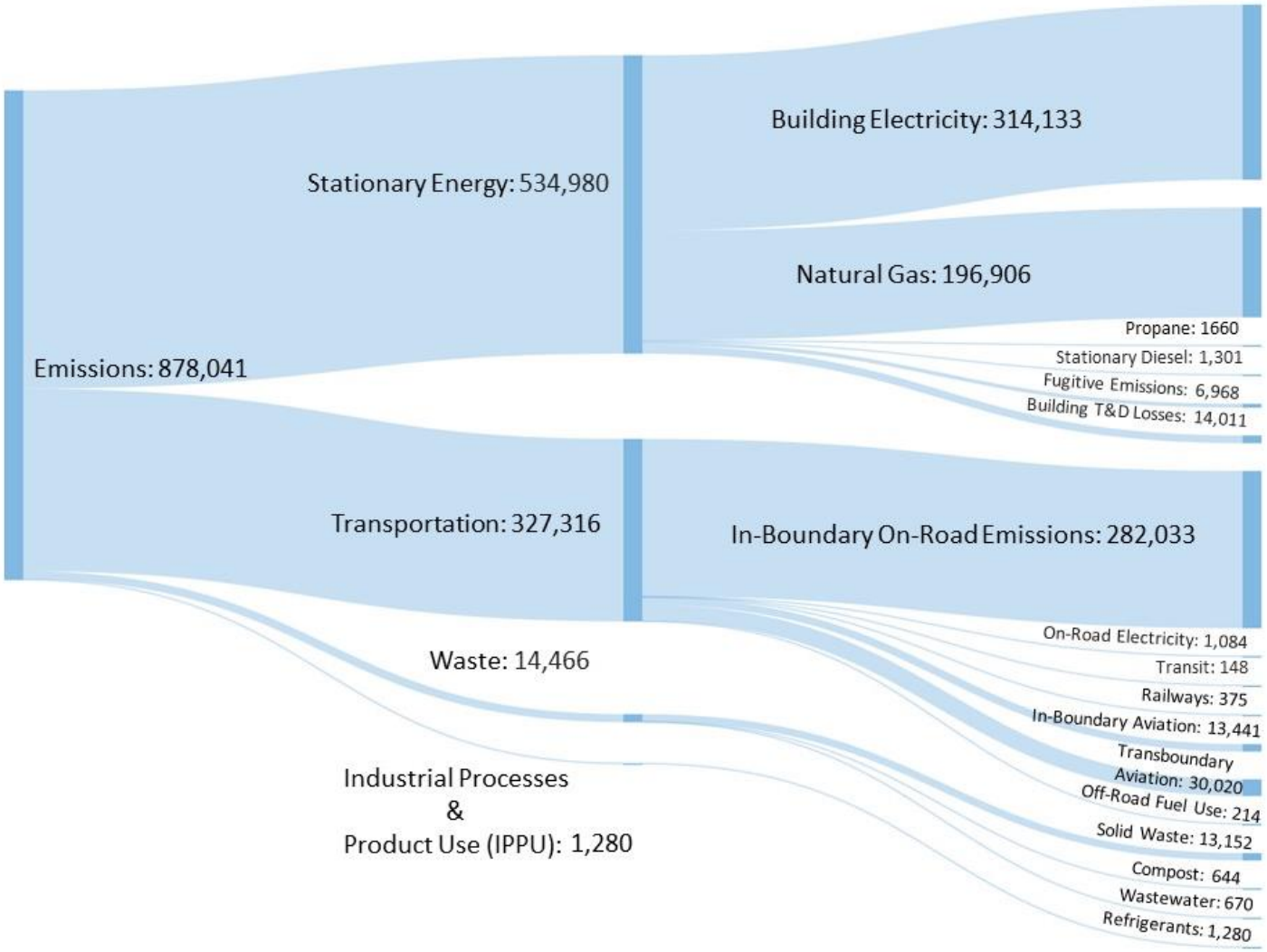

Figure 2. Snapshot of Grand Junction's 2021 GHG emissions by sector and source (mt CO_2e).

Emissions Changes from 2018-2021

The biggest contributor to the overall decrease in emissions came from the building energy sector, but smaller reductions in other sectors contributed as well.

- Solid Waste and Wastewater Treatment (down 13%)
    - Solid waste (down 15%)
    - Compost (up 2%)
    - Wastewater (up 8%)
- Building Energy (down 5%)
    - Propane emissions (down 25%)
    - Building electricity emissions (down 10%)
    - Natural gas emissions (up 5%)
- Transportation (down 2%)
    - In-boundary on-road transportation (down 3%)
    - In-boundary transit (down 45%)
    - In-boundary aviation (up 5%)
    - Transboundary aviation (up 5%)
    - On-road electric vehicle use (up 95%)
- Refrigerant Leakage (down 2%)

Key Takeaways from the 2021 Inventory

Some key takeaways from the 2021 greenhouse gas emissions inventory include:

- Emissions fell slightly from 2018 levels (down 4%).
- Compared to the prior baseline (2010), emissions have decreased by only 8%.
- The largest emissions sources in Grand Junction are building electricity use, on-road fossil fuels, and building natural gas use.

As in previous years, the single biggest source of emissions comes from building electricity use. This highlights the fact that Grand Junction will need Xcel Energy to meet the requirement put in place by Colorado House Bill 19-1261, which set into law an emissions reduction target for the power sector of 80% by 2030 compared to 2005 emissions. The City's other electric utility, Grand Valley Power, purchases electricity from Xcel Energy for its customers, therefore Xcel reaching the state's goals will eliminate emissions from electricity use in the City by 2050.

The Impact of COVID-19 on Emissions

While emissions decreased only slightly from 2018 to 2021, it is important to note the unique circumstances brought about by the COVID-19 pandemic. Between 2018 and 2021, there was a

45% drop in emissions coming from transit, as the population spent more time at home and fewer people utilized public transit services. The small 3% decrease in on-road transportation emissions and a 5% increase in aviation emissions can be attributed most easily to the community's return to pre-pandemic levels of driving and flying.

At this point, it is too soon to say whether some of the norms that formed during the pandemic (i.e., increase in remote work, reduction in leisure travel, etc.) are durable. Similarly, it is unlikely that 2021 is fully representative of a post-pandemic system. The City will continue to track the trends of the pandemic to determine their persistence into the future and how the City will adjust its strategies in response.

INTRODUCTION

The City of Grand Junction completed its first greenhouse gas (GHG) emissions inventory in 2010, in conjunction with the other communities in the Grand Valley. In 2022, the City contracted with Lotus Engineering and Sustainability, LLC to create City-specific GHG emissions inventories for calendar years 2018 and 2021. These inventories will help the City to set emissions reduction goals and will help to understand which sectors and sources to focus strategies and actions on.

The 2018 and 2021 inventories were prepared following the Global Protocol for Community-Scale Greenhouse Emission Inventories (GPC). The GPC protocol provides a robust framework for accounting and reporting City-wide GHG emissions. The inventory results should not be considered an absolute measure of the community's emissions, but rather a tool to track and evaluate year-to-year trends. Inventories should be completed regularly to track emissions over time and to estimate progress toward sustainability and emissions reduction goals.

The results described in this report focus mainly on the year 2021, on the heels of the City's transition away from state-wide shutdowns and towards activity levels seen before the start of the COVID-19 pandemic. The COVID-19 pandemic, which began on March 16, 2020, had widespread impacts on the 2021 results. While some of the effects, both reducing and increasing emissions, may carry forward, it will be years before any conclusion can be drawn as to the sustained impact on global and local emissions. Trends between pre-pandemic times in 2018 and 2021 are explored throughout the report. A business-as-usual model that projects emissions from 2018-2040 assuming no additional action is taken to reduce emissions was created as well to help the City understand what areas to focus future efforts on.

Climate change impacts are now noticeable in everyday life to residents of Grand Junction. The days are warming, the droughts are becoming longer and more intense, and wildfires and the associated poor air quality are now a normal occurrence. GHG emissions are important to measure, however, there are other aspects of sustainability and resilience that need to be considered. This report also details the results of several other analyses; one of which explores the carbon removal benefits of the City's urban trees and open spaces as well as an analysis

of potential resilience, water, and equity-related metrics that the City should consider tracking while they pursue sustainability actions.

METHODOLOGY

Both GHG inventories utilized the same protocol to calculate emissions – the Global Protocol for Community-Scale Greenhouse Emission Inventories (GPC).[2] The GPC protocol provides a robust framework for accounting and reporting City-wide GHG emissions. This protocol is the standard used by cities globally to calculate and track emissions from within their community boundary. By completing a GPC-compliant inventory, Grand Junction can report emissions to the Carbon Disclosure Project (CDP),[3] which demonstrates the City's commitment to reporting its emissions to a larger audience. The following report reviews the 2021 inventory process, 2021 GHG emissions sources, and trends in emissions.

GHG EMISSIONS IN GRAND JUNCTION

In 2021, the results of the inventory show a total of 878,041 metric tons of carbon dioxide equivalent (mt CO_2e), which equates to a 4% reduction when compared to 2018 emissions. The majority of these emissions came from building energy use and on-road transportation.

Emissions Snapshot

Emissions by Sector

Both the transportation and the stationary energy sectors made up the largest share of Grand Junction's emissions, with stationary energy making up 61% of total emissions (534,980 mt CO_2e) and transportation comprising 37% of the total (327,316 mt CO_2e). These sectors are followed by solid waste and wastewater treatment emissions at 2% (14,466 mt CO_2e), with the remaining 0.1% of emissions generated from industrial processes and product use (1,280 mt CO_2e). Of the total stationary energy emissions, commercial and industrial electricity use accounted for 213,537 mt CO_2e in 2021 or 40% of the total emissions associated with the stationary energy sector. Residential electricity use (100,597 mt CO_2e) also accounted for a sizable portion (19%) of the total stationary energy emissions. Of the total transportation emissions, fuel combustion from on-road vehicles accounted for 282,033 mt CO_2e in 2021 or 86% of the total emissions associated with the transportation sector. See Figure 3.

[2] For more information see: https://ghgprotocol.org/greenhouse-gas-protocol-accounting-reporting-standard-cities.

[3] For more information see: https://www.cdp.net/en/info/about-us.

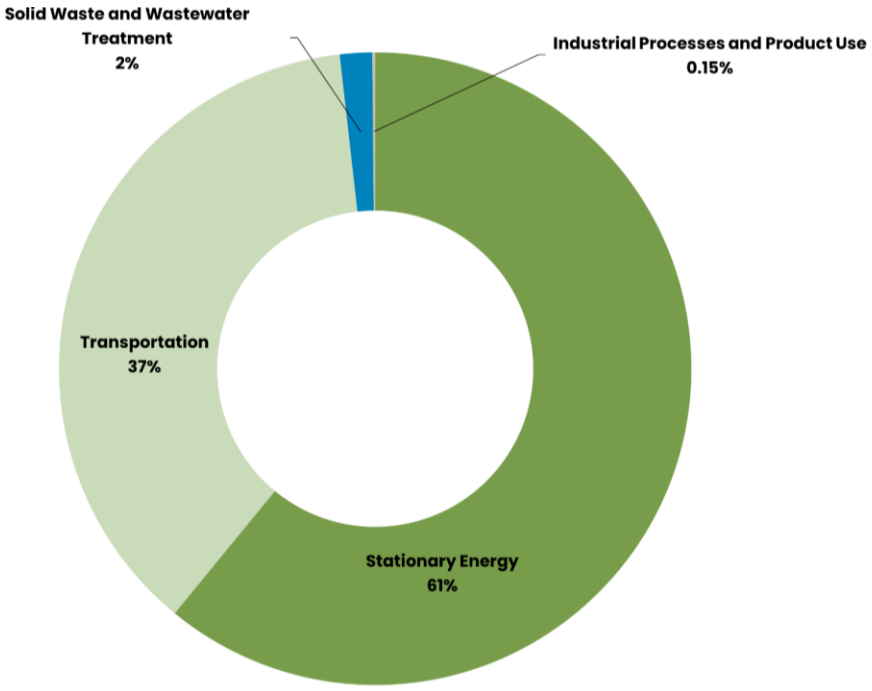

Figure 3. GHG emissions by sector (mt CO_2e).

Emissions by Source

The largest sources of emissions in order are building electricity use (36% or 314,133 mt CO_2e), on-road fuel use (32% or 282,033 mt CO_2e), building natural gas use (22% or 196,906 mt CO_2e), and transboundary aviation (3% or 30,020 mt CO_2e). Other notable sources include building transmission and distribution losses, in-boundary aviation, and solid waste. See Figure 4.

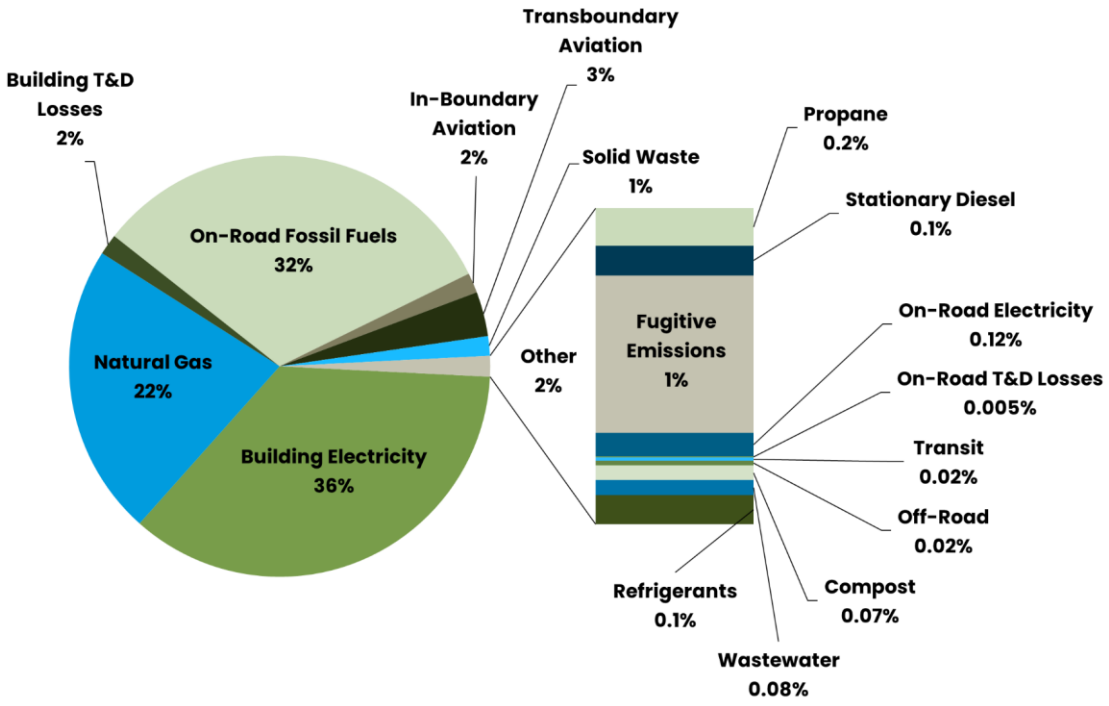

Figure 4. GHG emissions by source (mt CO_2e).

KEY TRENDS DRIVING EMISSIONS BETWEEN 2018 AND 2021

The inventory showed a decrease of 4% (36,867 mt CO_2e) between 2018 and 2021, and a decrease of only 8% (77,658 mt CO_2e) compared to the 2010 inventory.

Changes in Emissions

The small decrease in emissions since 2018 has been driven by two main sources: building electricity and on-road transportation. This trend is consistent with the effects of Xcel's work to green the electric grid by generating electricity from renewable energy sources such as wind and solar, as well as the COVID-19 restrictions on travelers and the workforce.

The COVID-19 Impact

The global response to the COVID-19 pandemic generated unprecedented restrictions on and changes to travel patterns; as these restrictions eased throughout 2021, transboundary air travel rose. However, on-road transportation showed only a slight decrease from 2018. Commercial and industrial building energy use decreased by 5% between 2018-2021, due to both the shift to working from home and Xcel's greening of the grid. Residential building energy use emissions decreased just 2% in that same time almost exclusively due to Xcel's greening of the grid. Residential electricity, natural gas, and propane use all increased between 2018-2021. It is important to note that 2021 was the year of the Great Resignation, where many left their jobs for other companies or remote positions. It is unclear if this trend will continue or what the impact will be on workforce norms and patterns.

Cleaner Electricity

Since 2005, Xcel Energy's electricity emission factor for metric tons of carbon dioxide equivalent (mt CO_2e) per megawatt-hour (MWh) has decreased by 44% due to additional renewable energy resources and the reduction of coal and natural gas on the grid. Since 2018, the electricity emissions factor has decreased by 15%. In the last year (2020 to 2021), the electricity emission factor for mt CO_2e decreased by 1%. Looking forward, Xcel Energy is subject to the requirements of Colorado House Bill 19-1261, which puts into law an emissions reduction target for the power sector of 80% by 2030 compared to 2005 emissions.[4] Should Xcel meet that goal in 2030, the electricity emissions factor would be expected to decrease an additional 36% over the next 9 years.

[4] See: https://leg.colorado.gov/bills/hb19-1261.

Normalized Metrics

Normalized metrics[5] can indicate significant emission reductions, as shown in Table 1 below. After normalizing total emissions for indicating growth factors, notable trends are revealed. One thing to note that had an impact on these trends is the increase in work-from-home policies due to COVID-19 restrictions. Residential electricity use per person increased during the 2018-2021 period likely as a result of the increase in residents working from home while COVID-19 restrictions were still in place. Waste landfilled per person has also decreased since 2018, which is a positive trend. However, per capita emissions and emissions per GDP fell despite the economic rebound from the COVID-19 pandemic restrictions and the growth of the City's population. Similarly, the reduction in vehicle miles traveled (VMT) per capita associated with the COVID shutdowns and stay-at-home orders has largely endured, hovering around 10% lower than 2018 numbers.

When looking at natural gas use, commercial natural gas use per square foot increased between 2018-2021. This could be attributed to several factors, including a colder winter, and a slow return to working in the office. However, residential natural gas use per housing unit decreased between 2018-2021, which could indicate more energy-efficiency projects and more energy-efficient new buildings to accommodate the growing population. Finally, the biggest increase is seen in the percentage of registered vehicles as electric vehicles, which has increased by 95% since 2018. The proportion of registered vehicles as EVs in Grand Junction is still below the state average of 0.88% in 2021, however, this metric is trending in the right direction and will be important to keep track of in the coming years.[6]

Table 1. Normalized metrics.

Emission Metrics	2018	2021	Change Since 2018
Total emissions per capita ($mtCO_2e$/resident)	14.89	13.11	-11.9%
Total emissions per Gross Domestic Product (GDP) (mt CO_2e / $)	.00034	.00028	-16.8%
Residential electricity per person (kWh/Person)	3,123	3,129	0.2%
Residential natural gas use per housing unit (therms/housing unit)	677	603	-10.9%

[5] Normalized metrics are intensity ratios that can be used in GHG emissions accounting to scale the net generated emissions by business metrics or other financial or community indicators, such as emissions per person or emissions per job.

[6] See: https://atlaspolicy.com/evaluateco/.

Commercial and Industrial natural gas per building floor space (dekatherm/sqft)	.0007	.0008	11.6%
In-boundary VMT per capita (VMT/resident)	11,563	10,403	-10.0%
% of Registered Vehicles that are Electric	0.23%	0.46%	95%
Landfill tons per capita (tons/resident)	1.1	0.89	-18.4%

STATIONARY ENERGY

Energy Trends

Building energy use made up 61% of Grand Junction's 2021 emissions inventory and should be a key focus for Grand Junction in achieving its GHG emissions reduction goals.

Overall, commercial and industrial electricity use (40%) comprises the largest percentage of total stationary energy emissions. The next greatest source of emissions is commercial and industrial natural gas (19%) followed by residential electricity use (18.8%) and residential natural gas (17.8%). The proportion of emissions from building electricity and propane has decreased since the 2018 baseline (Figure 5). In both the commercial and residential sectors, emissions are now beginning to shift - emissions from natural gas will soon exceed emissions from electricity, due to Xcel's 100% carbon-free electricity goal. If Xcel reaches this target, there will no longer be emissions from electricity use. If the City takes no action, gas emissions will remain the same or even increase.

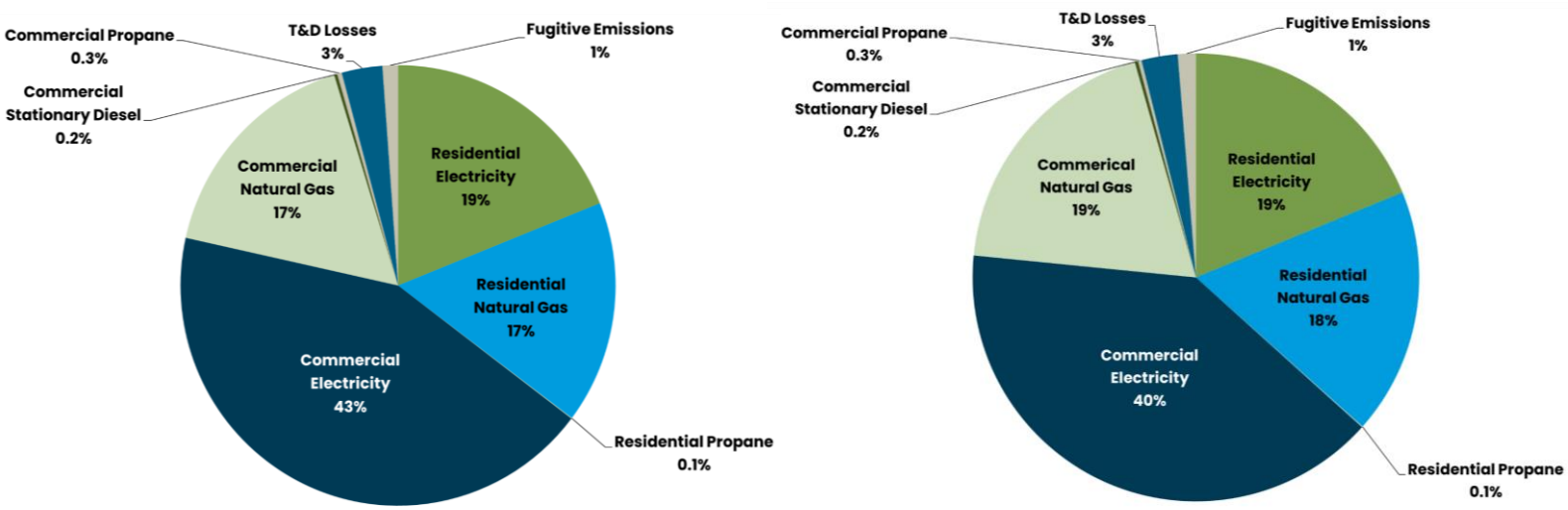

Figure 5. GHG emissions sources in the stationary energy sector in 2018 (left) and 2021 (right).

On the other hand, emissions from natural gas have been higher than in 2018. Stationary diesel and propane use have seen minimal changes over time and contribute less than 1% to stationary energy emissions.

Emissions from natural gas will decrease if more homes and businesses convert from natural gas furnaces, stoves, and boilers to electric heat pumps. Much of the decrease in electricity emissions has been possible due to Xcel's work to add renewable energy to the electric grid.

Energy Source Trends

The consistent reduction in electricity emissions can be attributed to:

- **Reduction in residential electricity emissions:** Total residential electricity usage has increased by 9% since 2018. Although, with cleaner electricity on the grid, higher residential electricity usage still resulted in lower total emissions in 2021. It is expected that electricity use per person will trend upward as more homes become electrified and more households adopt electric vehicles and charge them at home. With continued efforts around energy efficiency and greening the grid, electricity emissions from the residential sector can be expected to continue to reduce over time.
- **Cleaner electricity:** A cleaner electricity grid supplying energy to the community has contributed to emissions reduction since 2005. Colorado's Renewable Energy Standard[7] and the state's Clean Air Clean Jobs Act[8] required Xcel Energy, Grand Junction's primary electricity provider, to increase the efficiency of its operations and procure increasing amounts of energy from low- to zero-carbon sources (i.e., renewable energy, recycled energy, etc.). Grand Valley Power, Grand Junction's other electric utility, purchases electricity from Xcel. Further, House Bill 1261, passed in 2019, requires a reduction in GHG emissions within all sectors of the state's economy, including electricity generation.[9] The state government continues to support renewable energy generation through executive and legislative action. Xcel Energy's Colorado Energy Plan maps the utility's work to reduce emissions to meet its own goal of an 80% reduction in electricity generation emissions by 2030.[10] The mix of energy sources that supply Xcel Energy's electric grid changes every year, and the resulting electricity emission factor decreases every year. Based on data from Xcel

[7] For more information, see: https://leg.colorado.gov/bills/hb19-1261.
[8] For more information, see: https://www.xcelenergy.com/environment/system_improvements/colorado_clean_air_clean_jobs.
[9] For more information see https://leg.colorado.gov/bills/hb19-1261.
[10] For more information see https://www.xcelenergy.com/staticfiles/xe-responsive/Company/Rates%20&%20Regulations/Regulatory%20Filings/CO%20Recent%20Filings/Colorado%20Energy%20Plan%202020.pdf.

Energy, in 2021 the electricity emission factor for mt CO_2e has decreased by 15% since 2018, and by 1% from 2020.[11] See Figure 6.

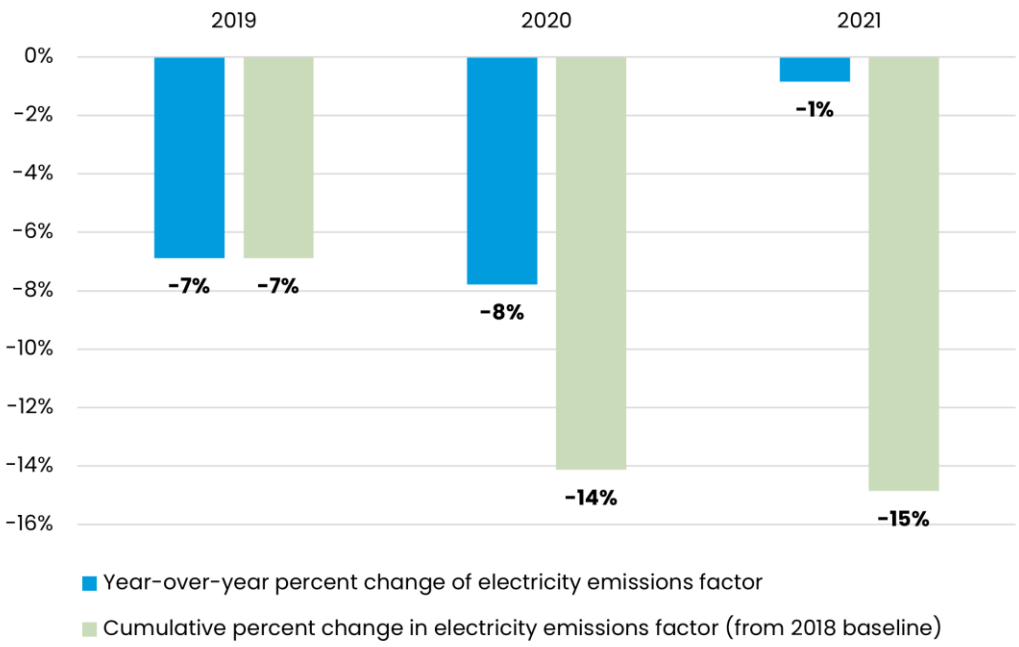

Figure 6. Year-to-year and cumulative decrease in Xcel Energy's electricity emission factor.

Other Stationary Energy Trends

Natural gas consumption has increased by 5% since 2018, driven both by residential consumption (up 3%) and commercial and industrial (C&I) emissions (up 7%). Also, emissions from residential and commercial propane use decreased by 25% since 2018. Natural gas emissions trends can be attributed to:

- **Increased housing:** Residential natural gas usage on a per housing unit basis has decreased by 10.9% between 2018 and 2021. Residential electricity use per capita also decreased, although the population and number of housing units have increased by 9%.
- **C&I square footage:** Commercial & Industrial natural gas consumption per square foot has increased by 12% between 2018 and 2021. However, there was a 2% decrease in the square footage of commercial businesses and institutional units during that same time.

[11] Xcel Energy does not report emission factors for methane and nitrous oxide. These values are sourced from U.S. Environmental Protection Agency's (EPA) eGRID and are not expected to change annually.

Action Plan

The City is already doing work to reduce its municipal stationary energy operations. In the time between 2018 and 2021, the City subscribed to 32% of the energy produced at the 2 MW Cameo site solar garden. This solar energy allows the City to offset two meters, the Police building and the Water Treatment Plant, resulting in an estimated savings of approximately $546,000 over the 20-year subscription period. The energy from the solar garden powers 57% of the Police building's energy usage and 100% of the Water Treatment Plant's remaining energy usage that is not already covered by the on-site system. Grand Junction also subscribes to 23% of the 2 MW community solar garden on School District property near Pear Park, the first of its kind in the City. The City is subscribed to another solar 2 MW solar garden, as well, and purchases 23% of the electricity produced. In addition to off-site solar, the City has five on-site solar arrays located at various City facilities. At a high level, the City should focus on the following high-level strategies in the stationary energy sector:

- **High-performance emissions-free healthy buildings:** developing innovative electrification programs for existing buildings and updating building codes to require all new construction and major renovations to be electric ready as well as to require or incentivize the use of low carbon building materials in construction. Funding for building electrification can be achieved through rebates or incentive programs administered at the local, state, or federal level. Both updating building codes and developing electrification programs will help create more efficient new buildings, leading to decreased electricity and natural gas use as well as eliminating natural gas use with new all—electric buildings. The City should also consider creating its own building code, rather than adopting the County's.

- **Building performance standards:** creating measurable energy and greenhouse gas emissions-based performance targets to ensure the above programs and code requirements are effective and to empower the local government to meet these targets within the buildings sector.

    - Also consider that in 2021, Colorado passed the Energy Performance for Buildings bill (HB-21-1286).[12] The bill requires buildings over 50,000 square feet across the state to report their building energy use annually to the Energy Office. In the coming years, the Energy Office will be developing building performance standards that these reporting buildings will need to meet by given target dates. The standards will be aimed at increasing energy efficiency in commercial buildings, leading to decreases in electricity and natural gas usage in the commercial sector over time.

- **Weatherization and energy audits for residential and commercial buildings:** conducting energy audits for all buildings and investing in weatherization techniques to improve the energy efficiency of buildings. Pursuing funding opportunities to expand these services to the community through rebates and/or incentives. As the building stock in the City ages,

[12] See: https://energyoffice.colorado.gov/climate-energy/energy-policy/building-benchmarking

buildings become more inefficient. Performing an audit helps to identify where these inefficiencies are so that the homeowner or building owner can take steps to make necessary updates to save energy and energy costs. Adding more insulation and ensuring all cracks are sealed, or weatherized, will lead to reductions in electricity and natural gas use in both sectors. The City could also consider partnering with a local energy efficiency non-profit to administer the audits and incentives, similar to those found in neighboring counties such as San Miguel/Ouray, Pitkin, Eagle, Summit, and Routt counties.

TRANSPORTATION

Transportation emissions can be looked at in two ways: in-boundary and transboundary (sometimes called cross-boundary). In-boundary emissions include all emissions that happen from transportation within Grand Junction's City limits. This includes trips that start and end in Grand Junction, as well as the portion of miles that occur within the City boundary for trips that originate in or end inside the boundary. Transboundary emissions include emissions from car trips that cross but do not begin or end in the City boundary or from air travel induced by Grand Junction residents (taking a flight from GJT). Transboundary car trips were not considered in the 2018 and 2021 GHG inventories, only transboundary aviation emissions were calculated. Figure 7 shows the breakdown of transportation emissions.

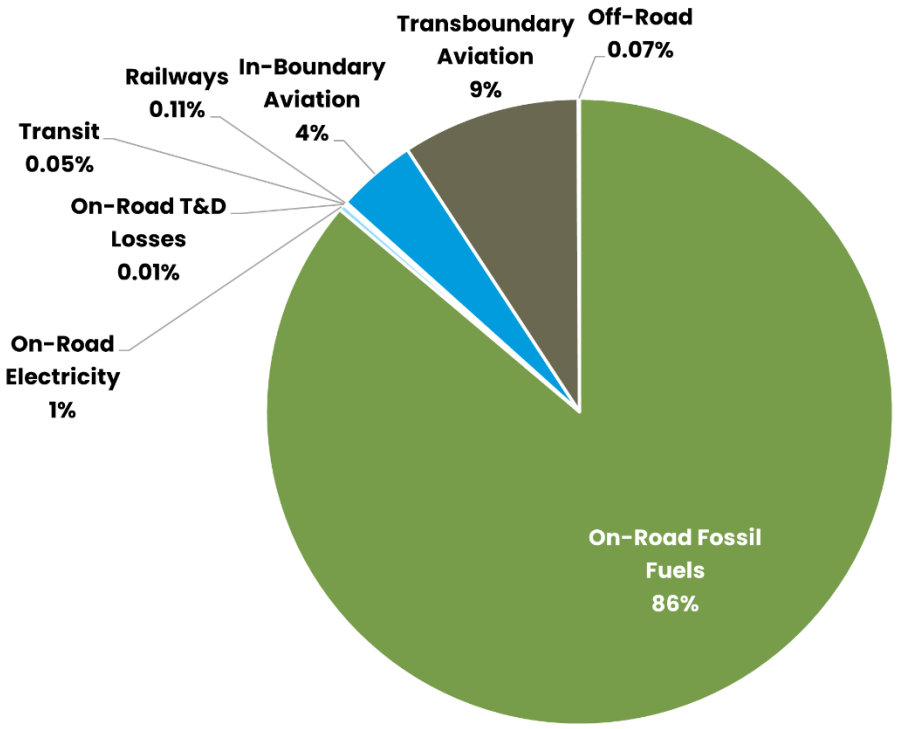

Figure 7. Transportation sector emissions by source in 2021 (mt CO_2e).

In-boundary transportation emissions are made up of multiple sources including:

- On-road transportation of all vehicles traveling within Grand Junction's boundaries (86% of total transportation emissions), which are broken up between two types of miles:
    - Miles for trips that start and end within Grand Junction
    - Miles that occur within the Grand Junction boundary for trips that originated or ended outside the boundary.
- Railways (0.11% of total transportation emissions).
- In-boundary public transit (0.05% of total transportation emissions).

- In-boundary aviation - local flights out of Grand Junction Regional Airport (4% of total transportation emissions).
- Off-road emissions – emissions from the use of airport equipment at Grand Junction Regional Airport (0.07% of total transportation emissions).

As for emissions from transboundary transportation, Grand Junction's inventory includes:

- Transboundary aviation - flights out of Grand Junction Regional Airport (GJT) that began or ended outside the boundary (9% of total transportation emissions). These transboundary flights make up 69% of total flights leaving GJT.

Transportation Trends

As the community began to adjust after the life-altering COVID-19 pandemic of 2020, emissions from transportation showed just a slight decrease of 2% between 2018 and 2021. Since 2018, on-road transportation fuel use emissions have decreased 3%, while transit emissions decreased by 45% and railway emissions decreased by 50%. Both in-boundary and transboundary aviation emissions increased by 5%. Off-road emissions decreased by 6% between 2018 and 2021.

Overall, VMT decreased by 2% between 2018 and 2021. It is unlikely that 2021 is fully representative of the post-COVID rebound. Globally, travel remained suppressed for much of 2021 due to ongoing transmission and hospitalization rates, and associated restrictions and vaccination requirements. Businesses and workers are still defining new norms in terms of telework locally and globally. Ridership decline, driver shortages, COVID-exposure fears, and changes in commute requirements have shifted travel modes back to single occupancy vehicles. Trends in the transportation section should continue to be tracked to assess the full impact of the COVID-19 pandemic.

It should be noted that railway emissions showed a 50% decrease, but it is assumed this was due to a methodology change by the US EPA, which provides railroad emissions data.

The COVID-19 Impact

- **Decrease in vehicle miles traveled (VMT).** In 2021, vehicle miles traveled (VMT) decreased by 2% compared to 2018. Less travel associated with COVID-19 restrictions and increased telework is the likely cause of the decrease in the VMT, as well as the shift away from public transportation.

- **Rebound in aviation travel:** Within the aviation sector, gallons of jet fuel increased by 5% between 2018 and 2021. Gallons of aviation gasoline increased by 6%. Jet fuel is used in airplanes with turbine engine jets (commercial airliners) while aviation gas is used in

airplanes using propellers or piston engines.[13] In addition, Grand Junction is a growing tourism hub for Colorado and is home to Colorado Mesa University. Both industries were deeply affected by COVID-19 restrictions. The removal of travel restrictions due to the COVID-19 pandemic, the return of full-time in-person learning, and population growth could be causes of this increase in fuel use.

- **Impacts of the shift to working from home:** Many people rely on public transit for their commute to work, especially the essential workers who continued to work in person during the pandemic. The onset of COVID-19 caused a shift to more telework for those who were able, reducing the amount of daily traffic drastically, and it is unclear how many employees will return to full-time work in the office. From 2018 to 2021, overall transportation emissions and on-road travel emissions decreased by 2%, while transit emissions decreased by 45%.

Shifts in Fuel and Vehicle Type and Efficiency Gains

- **Increase in fuel efficiency:** Corporate average fuel economy (CAFE) standards have increased the fuel efficiency of vehicles since they were created in the 1970s. Since 2005, the average fuel economy for a new light-duty vehicle has increased by 29%.[14] As more efficient vehicles are driven, the amount of fuel used per mile (MPG) has decreased. Additionally, more states are adopting California's Clean Car Standards, which created even stricter vehicle emissions standards. If enough states adopt these standards, it could result in automakers moving to produce more efficient, less carbon-intense vehicles which may lead to additional fuels and consequently emissions savings in the future.
- **Increase in electric vehicles:** The City saw 226 additional EV registrations in 2021, even amidst numerous supply chain issues brought on by the COVID-19 pandemic. Between 2018-2021, electricity use by electric vehicles nearly doubled.
- **Transit emissions:** In addition to the COVID-19 impacts previously mentioned, the 45% decrease in transit emissions can partially be attributed to the use of more compressed natural gas (CNG) in the City's buses rather than diesel. This natural gas, collected from Grand Junction's wastewater treatment plant, has less of an emissions and air quality impact. Although Grand Junction is switching buses to CNG, Lotus recommends that Grand Junction work towards swapping out all buses for electric ones. Switching to CNG still helps to decrease emissions, but switching to electricity eliminates significantly more emissions. While it is encouraged that Grand Junction eventually swaps all its buses for electric ones, it would still be helpful if the City converted to all CNG buses in the meantime.

Action Plan

The City has been working to reduce the amount of gasoline and diesel vehicle emissions in

[13] See: https://ijet.aero/ijet-blog/different-types-aviation-fuel-jet-fuel#:~:text=AVGAS%2C%20or%20aviation%20gasoline%2C%20is,the%20thrust%20of%20expelled%20air.
[14] See: https://www.energy.gov/eere/vehicles/articles/fotw-1177-march-15-2021-preliminary-data-show-average-fuel-economy-new-light.

recent years. So far, the City has swapped two diesel-powered street sweepers to CNG-powered sweepers. Additionally, the City has installed two public level two electric vehicle chargers at the Los Colonias Amphitheater and is currently working on a comprehensive, City-wide EV Readiness Plan. To continue reducing emissions in the transportation sector, the following high-level strategies should be explored:

- **Multimodal transportation investments**: Continue investing in multimodal infrastructure and programs to diversify transportation options in order to meet GHG reduction goals, as well as broader community sustainability goals. Programs may include working with local employers to provide employee commute benefits, implementing an electric micro-mobility program, and incentivizing telecommuting options. Expanding the safety and ease of using alternative modes of transportation, such as biking, walking, electric scooters, etc., will allow residents to feel more confident in using these forms of transportation, which will in turn reduce the amount of on-road transportation emissions for Grand Junction.

- **Electrification strategy:** Pursuing funding opportunities for public charging infrastructure, as well as electric vehicle and bicycle rebate and incentive programs. The state has several grant programs, such as the Charge Ahead Colorado grant, that are aimed at expanding the state's electric vehicle charging infrastructure and expanding fleet electric vehicles in communities across the state. Once the City's EV Readiness Plan is complete, the City should pursue grant funding to help implement some of the strategies in the plan. Other entities, like Xcel Energy, offer rebates and incentives to residents to help make the cost of electric vehicles more affordable. Expanding electric vehicles in the community will help bring down on-road transportation emissions, especially as Xcel Energy continues its work to add renewable, carbon-free energy to the electricity grid.

- **Expanding the use of CNG/electric-fueled public transit vehicles:** Converting public transit vehicles to fully CNG or fully electric. Keep in mind that CNG buses do decrease emissions; however, electric buses would produce significantly fewer emissions than CNG buses. Targeting years to reach these goals to empower the City to work towards meeting each goal. As well, the City could consider expanding the transit routes to reach growing areas or to increase the frequency of routes to make using transit more convenient for residents. Increasing transit use will take more car trips off the road, leading to decreased on-road fossil fuel emissions in Grand Junction.

WASTE AND WASTEWATER

Waste and Wastewater Trends

Overall waste and wastewater emissions make up a small amount of Grand Junction community emissions in 2021 at 1.5% and 0.08%, respectively. However, these emissions are

limited to the treatment of waste and do not include the emissions associated with the production of goods and services consumed in Grand Junction, or "embodied emissions." New methods of measuring consumption emissions that are under development show that urban consumption is a key driver of global greenhouse gas emissions.

Figure 8 shows the breakdown of waste emissions in 2018 vs. 2021.

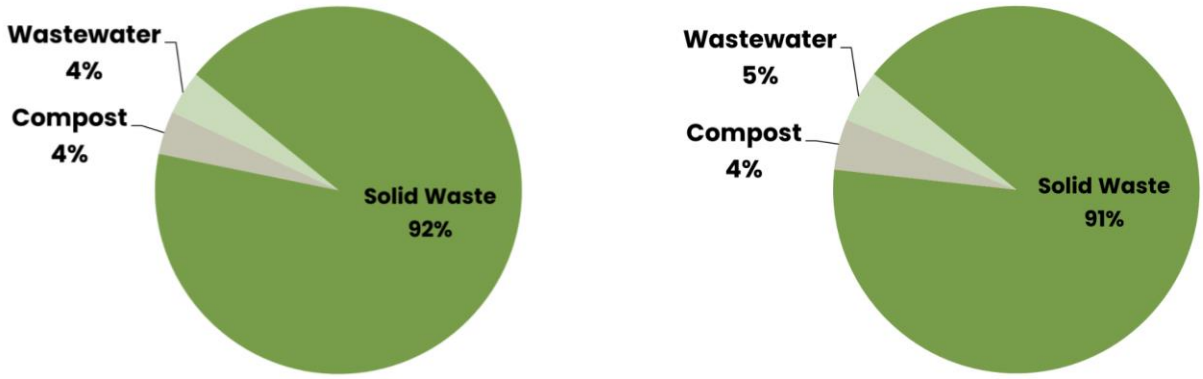

Figure 8. GHG emissions from the waste and wastewater sectors in 2018 (left) and 2021 (right).

Emissions from wastewater increased by 8% compared to 2018 (from 619 mt CO_2e to 670 mt CO_2e in 2021), while emissions from solid waste have decreased by 15% (from 15,437 mt CO_2e to 13,152 mt CO_2e in 2021). Composting emissions increased by 2% (from 633 mt CO_2e to 644 mt CO_2e in 2021) since 2018. These trends can be attributed to:

- **Waste:** The amount of waste collected for the landfill has decreased since 2018 despite population growth and the continued increase in single-use items and takeout containers associated with the COVID-19 pandemic. This decrease could be a combination of better recycling and composting (increased by 75% and 5%, respectively). The City also experienced a pause in construction projects due to the pandemic, which could account for less related waste.
- **Composting emissions:** The tonnage of compost composted, and associated emissions, increased in 2021. This is a positive trend because it means there has been more waste diversion. In fact, 66,787 tons of waste went to a landfill in 2018, while 59,324 tons of waste was sent to a landfill in 2021.
- **Wastewater:** Grand Junction has a highly efficient wastewater treatment plant, but the increase in emissions could be due to the increase in population and therefore, the number of people the plant must accommodate. However, innovative improvements are being made to the existing wastewater treatment process. Grand Junction's Persigo Wastewater Treatment Facility collects biogas, creating vehicle-grade natural gas fuel known as renewable natural gas (RNG) or biomethane. This ultra-low-carbon fuel powers 36

municipal vehicles as of June 2016. Ten Grand Valley Transit regional buses are also fueled by RNG, with hopes to add additional buses in the future.[15]

Wastewater treatment emissions primarily stem from treatment volumes and population. Grand Junction's population increased by 9% between 2018-2021, leading to more effluent discharge treated at the wastewater treatment plant. Additionally, it should be noted that emissions from the wastewater treatment plant are also attributable to electricity used to treat the effluent, and these emissions, which are captured in the commercial electricity use emissions, have been decreasing over time with Xcel's greening of the grid.

Action Plan

At a high level, reducing waste and wastewater sector emissions involves:

- **Waste diversion:** Developing and expanding waste services and infrastructure to increase waste diversion rates. Expanding recycling and compost services at an affordable price to make waste diversion easy and accessible for the entire community. This year, Colorado's statewide fee on plastic bags went into effect, which will help reduce the tonnage of waste sent to the landfill.[16] It is estimated that the average American uses 300 plastic bags per year, most of which end up in the landfill and take thousands of years to decompose, if at all.[17] Next year, the City's businesses will no longer be able to offer single use plastic and Styrofoam takeout items.[18] This will also lead to a decrease in the tonnage of waste sent to the landfill, therefore lowering Grand Junction's waste emissions.

- **Built environment:** Understanding the opportunity for and promoting the adoption of low-carbon construction materials, maximizing reuse of building materials and designing buildings for reuse in deconstruction, supporting market development for construction waste diversion. The City could consider enacting a Construction & Demolition Debris Diversion Ordinance similar to that in Pitkin County, which offers a refund of building permit costs if a builder achieves a recycling rate of 25% and separates all recoverable materials for recycling.[19] Recycling these materials diverts them from the landfill and helps reduce emissions.

- **Sustainable consumption and production:** Setting up a policy framework on sustainable consumption and production patterns within the City to reduce waste at the retail and consumer levels. This may include creating partnerships with local businesses to help them reduce their waste and move them away from disposable and hard-to-recycle materials.

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[15] See: https://energy-vision.org/case-studies/persigo-wastewater-treatment-plant/.
[16] See: https://tax.colorado.gov/carryout-bag-fee.
[17] See: https://environmentamerica.org/massachusetts/wp-content/uploads/2013/04/Bag-Ban-Fact-Sheet-_0.pdf.
[18] See: https://tax.colorado.gov/carryout-bag-fee.
[19] See: https://pitkincounty.com/CivicAlerts.aspx?AID=522.

The City can also lead by example by enacting sustainable purchasing policies at the municipal level to emphasize the use of recycled material in items like printer paper and other frequently used materials.

BUSINESS-AS-USUAL

A business-as-usual emissions projection model was developed to help Grand Junction understand the impact of not implementing sustainability measures through 2040. To project emissions, sources were either held constant (not projected to change measurably over time), projected using population growth, or projected using visitation trends. Sources were projected in the following manner:

- **Constant:** Propane; stationary diesel; railways; transit.
- **Population Growth:** electricity; natural gas; on-road transportation; local aviation; waste; compost; wastewater treatment; refrigerants.
- **Visitation Trends:** transboundary aviation.

Other factors were also considered, such as projected decreases in Xcel Energy's electricity emissions factor and projected increase in electric vehicle adoption. When all factors are taken into account, emissions in Grand Junction in 2040 total 628,942 mt CO_2e (Figure 9). Compared to emissions in 2018, emissions reduce by 31% in 2040. The largest driver of the emissions reduction is Xcel Energy's work to green the electricity grid and their state-mandated goals for emissions reductions. Electricity and on-road fuel use emissions are the only sectors that see reductions in this model, as it is assumed that electric vehicle adoption will lead to reduced vehicle miles traveled by fossil fuel powered vehicles. It is evident that the City will need to create strategies to address natural gas usage, landfilled waste, and emissions from on-road fossil fuel powered vehicles in order to reduce emissions even further by 2040.

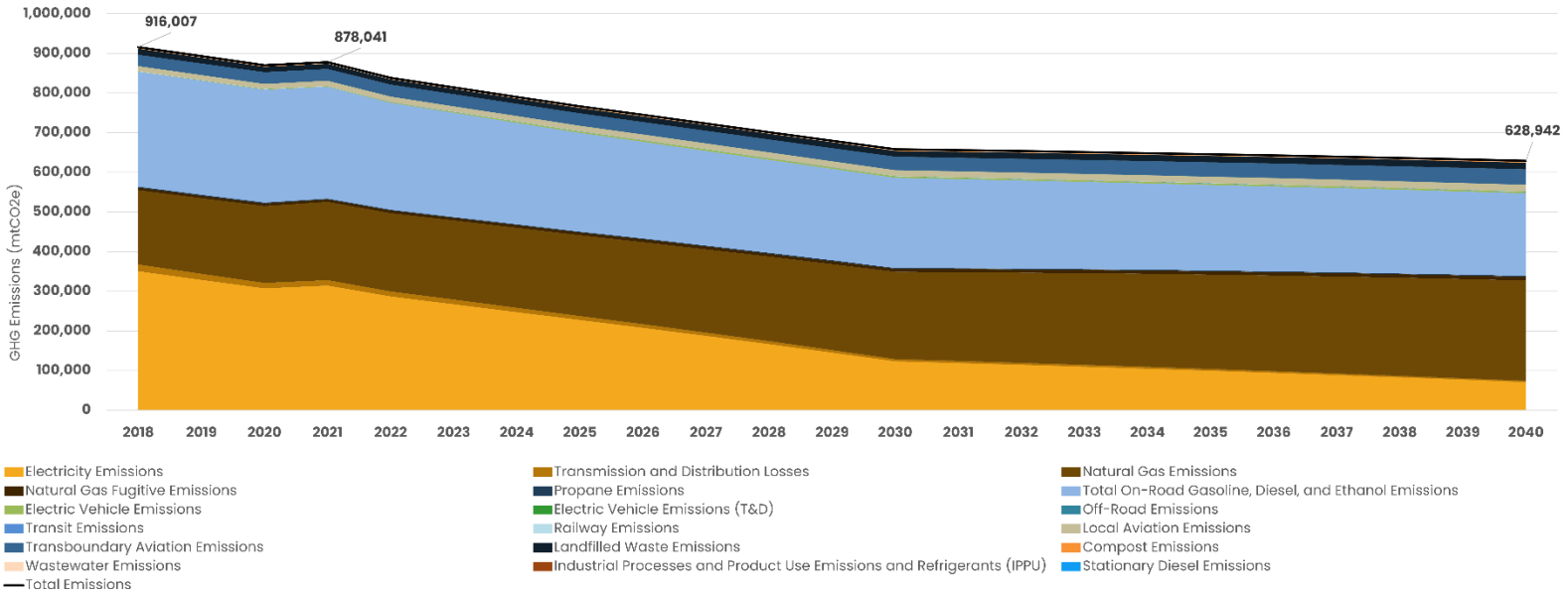


Figure 9. Business-as-usual greenhouse gas emissions projection through 2040 in Grand Junction.

RESILIENCE AND EQUITY METRICS

In addition to tracking GHG emissions, understanding other factors that may alter the environment is important in planning for the future as the City grows. Drought, changes in air quality, and increased temperatures are all factors that may change how people interact with their environment. Grand Junction, situated in the Mountain West, already understands the importance of water conservation and the rate at which water is becoming a scarce resource. Sustainable water use strategies have important implications for the City, as it continues to grow, and for Grand Junction's residents, as water scarcity continues to exacerbate environmental inequities. While several water conservation efforts and public education campaigns exist in the City, Grand Junction has an opportunity to further integrate sustainability and equity into these strategies.

Grand Junction's water utilities all focus on water conservation. Ute Water Conservancy District, Clifton Water District, and City Water Services all have web pages that contain information about sustainable water use. These websites include information ranging from conservation-related news stories to FAQs about water management. The Drought Response Information Project (DRIP)[20], a collaboration between water utilities and other entities, is a compelling example of public engagement. This project's focus is to report drought conditions and

[20] Drought Response Information Project (DRIP): https://www.dripinfo.com/

increase public awareness of water conservation strategies. Between its water utilities and the DRIP project, Grand Junction has a robust hub of water conservation resources.

The City, through this greenhouse gas inventory process, is working to integrate sustainability more thoroughly into its operations. In addition to measuring greenhouse gas emissions and other science-based metrics, Grand Junction can integrate equity into its sustainability strategy by monitoring and measuring environmental inequities present in the City. Recommended equity-related metrics to track include area median income (AMI), asthma rates, race and ethnicity, and air quality. Several online tools and data hubs can help the City track these metrics, such as DataUSA, the US Census, and PurpleAir.

In addition to tracking equity-related metrics, the City can look towards coalitions that work in the sustainable water management space for strategies and inspiration. Coalitions, such as Water for Colorado and the Colorado Water Equity Partnership, work with the public and local governments to increase awareness of water-related environmental inequities. Equity has recently become an important part of water conservation strategy development. The newest update to the Colorado Plan focused the majority of its strategies around equity.

Another way to increase public awareness and engagement is to provide simple and accessible ways for people to get involved in water conservation efforts. Sustainable lawn care and gardening practices are becoming more important as drought in the Mountain West intensifies. Colorado has many educational resources about xeriscaping and sustainable gardening. Some examples include a handbook from Denver Water about gardening methods that promote natural water conservation and resources from DRIP about native plants and xeriscaping.

Two unique tools that help put climate change and environmental inequities into perspective are Colorado EnviroScreen[21] and Colorado Water Conservation Board's Future Avoided Cost Explorer (FACE)[22]. Colorado EnviroScreen is a tool for mapping environmental injustices and vulnerabilities. This tool calculates percentiles for a selected county, in this case Mesa County, and compares the data with other counties in Colorado. A higher percentile means a higher likelihood of vulnerability. The five categories in which Mesa County ranks highest for environmental vulnerability are air toxins, wastewater discharge, proximity to hazardous waste facilities, proximity to oil and gas, and proximity to mining locations (Figure 10).

[21] Colorado EnviroScreen: https://teeo-cdphe.shinyapps.io/COEnviroScreen_English/
[22] Future Avoided Cost Explorer: https://cwcb.colorado.gov/FACE

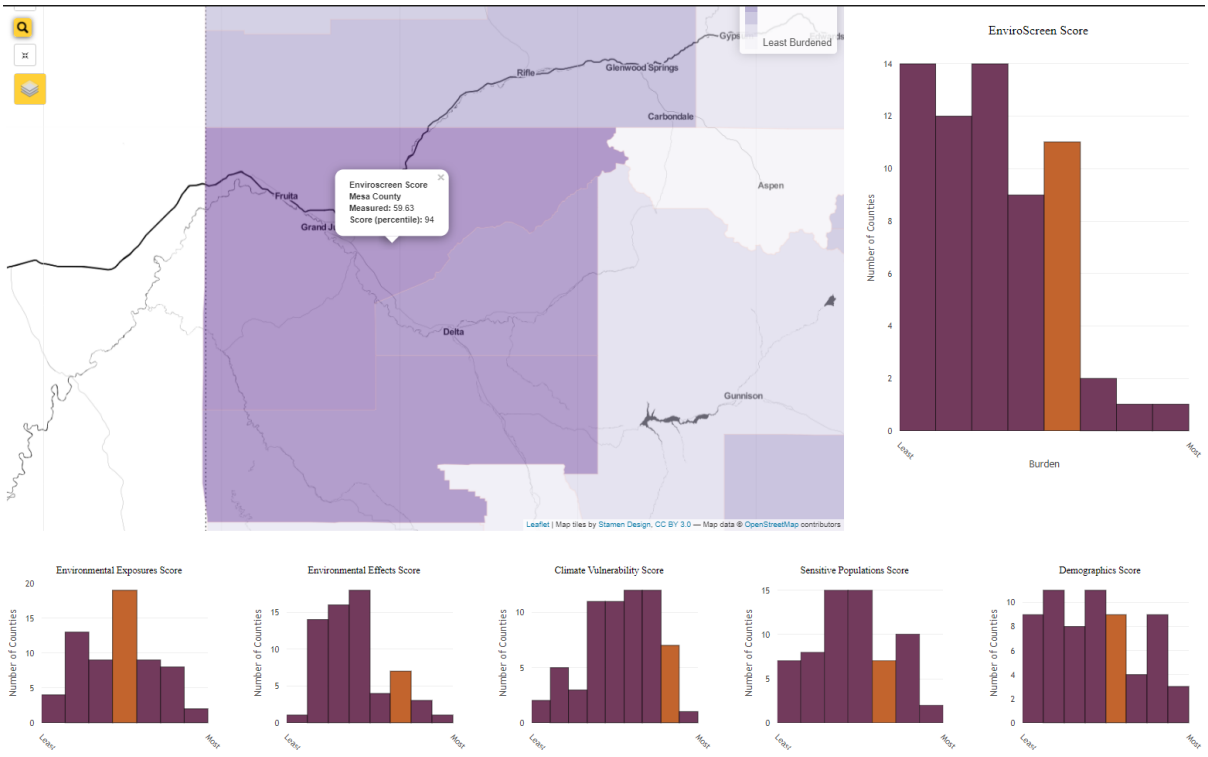


Figure 10. Mesa County's Climate Vulnerability EnviroScreen score.

The FACE tool projects estimated economic costs due to environmental hazards such as drought, floods, and wildfires. Estimates vary based on projected rates of population growth and the severity of climate change. The tool also estimates potential future costs in different sectors such as agriculture and infrastructure. For Mesa County, the highest financial costs due to environmental hazards are expected to result from flood damage. Changing climate intensifies weather events, increasing the likelihood of major flood events. In the agricultural

sector, the highest financial costs are expected to result from crop failures due to intensified drought (Figure 11).

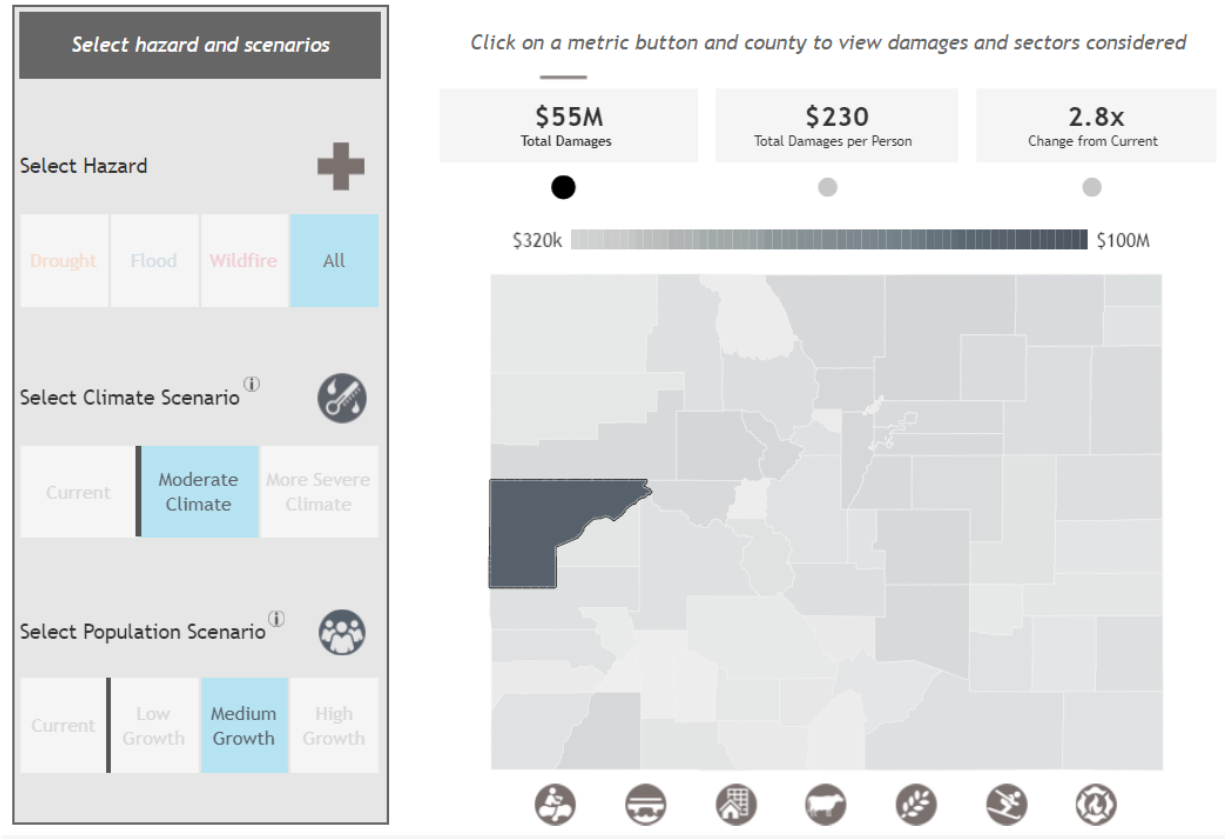


Figure 11. Projected impacts in Mesa County from the FACE tool.

Between tracking equity-focused metrics and using results from Colorado EnviroScreen and FACE to inform strategies and policies, Grand Junction will have a stronger understanding of how climate change is manifesting in the City. Involving the public through education and engagement will also help to spread awareness and cultivate support for participating in sustainability actions. This wealth of knowledge, combined with results from the greenhouse gas inventory, will be important in planning for the future as the climate in the Mountain West changes. More information can be found in the accompanying *Grand Junction Climate Adaptation and Resilience Metrics* memo.

NATURE-BASED CLIMATE SOLUTIONS

Biological carbon sequestration is the process by which atmospheric carbon dioxide is taken up by plants through photosynthesis and stored as carbon in biomass and soils. The plants and soil that hold the carbon taken from the atmosphere make up a **carbon sink**. The quantity of carbon stored in the plants and soil is the **carbon stock**. Plants are continually taking in

carbon from the atmosphere and storing it. But when plants burn, are eaten, or land changes from one cover type to another (i.e., from a forest to developments), carbon gets released back into the atmosphere. The annual change to the carbon stock is called the carbon flux.

ICLEI's Land Emissions and Removals Navigator (LEARN) tool was used to estimate the annual carbon flux of the land within Grand Junction's City boundary. The LEARN tool uses the National Land Cover dataset to estimate land cover changes over time and the associated changes in carbon stock. Carbon stock changes are divided by the number of years in the analysis period to generate an annual carbon sequestration value.

The LEARN tool was run for Grand Junction's City boundary across the period of 2011-2019, with 2019 being the most recent data available. To analyze the impact of urban trees on Grand Junction's annual carbon sequestration, the City of Boise, ID was selected as a proxy for Grand Junction's geography and climate. It should be noted that the LEARN tool emphasizes carbon sequestration occurring through trees and forests. This is because this land cover type generates the most carbon sequestration per land area and maintaining or planting additional trees is one of the easiest ways to maintain and increase the amount of carbon sequestered.

Additionally, the iTree Eco tool was utilized to better estimate the carbon sequestration occurring in Grand Junction's urban tree canopy. The iTree Eco tool was developed to help users analyze the carbon sequestration of specific tree species or to help analyze a potential tree planting project. Since the City of Grand Junction has an urban tree inventory with species and other metrics (such as diameter at breast height [dbh]), a more nuanced carbon sequestration analysis of the urban tree canopy could be completed.

The urban tree inventory was imported into the iTree Eco tool and the average annual carbon sequestration was calculated. Other metrics related to the urban tree canopy were also calculated, such as the quantity of air pollution removed and the quantity of avoided runoff. To calculate the total annual carbon sequestration occurring in Grand Junction's City boundary, the iTree tool's carbon sequestration estimate for urban trees was substituted for the value from the LEARN tool.

Most of Grand Junction's terrestrial carbon sequestration occurs in trees outside of forests, or the City's urban trees. A small amount of sequestration is occurring in the City's 260 acres of forest (Table 2). The majority of the City's land is classified as Settlement or Grasslands. Grand Junction should work to preserve and expand its urban trees and forests (especially drought-tolerant plants and local species of plants), within reason given water availability, to maintain the City's annual carbon sequestration.

Despite the magnitude of the net GHG balance compared to Grand Junction's total emissions, this indicates that carbon offsets are not the only way to reduce emissions. Carbon sequestration plays a key role. Maintaining urban trees and forests is critical if the City wants to maintain the other benefits of urban trees, such as improvements to air and water quality,

improved public health and wellbeing, reduced runoff and lessening of flooding impacts, and reduction in building energy use.

Table 2. Average annual carbon sequestration in Grand Junction.

Land Cover Type	Average Annual Sequestration	
	Removals (mt CO_2e / yr)	**Emissions (mt CO_2e / yr)**
Undisturbed Forest	-47	
Forest disturbances		
Non-forest to forest	-8	
Forest to settlement		94
Forest to grassland		
Forest to other non-forest lands		
Trees outside of forests	-118	
Harvested wood products		
Totals	**-172**	**158**
Net GHG Balance (mt CO_2e)	**-14**	

CONCLUSION

Grand Junction has taken a critical first step in expanding its sustainability work: assessing its greenhouse gas emissions. It will be necessary to continue tracking emissions over time to better understand the impact of additional emissions reduction work supported by actions taken and policies enacted by the City. An additional next step would be to set an emissions reduction target and to use future GHG inventories to track progress towards the goal. It will also be prudent for the City to track metrics related to resilience, water, and equity to create a more widely sustainable, resilient community. The science is clear: the climate is changing, and the world is just beginning to feel the impacts. To lessen the impacts of climate change, actions must be taken to reduce greenhouse gas emissions and enhance the resilience of the Grand Junction community.

APPENDIX A: POLICY RECOMMENDATIONS LIST

Below is a full list of policy recommendations spanning the following sectors: Stationary Energy, Transportation, Waste, and Wastewater.

Stationary Energy

- **High-performance emissions-free healthy buildings:** developing innovative electrification programs for existing buildings and updating building codes to require all new construction and major renovations to be electric ready as well as to require or incentivize the use of low carbon building materials in construction. Funding for building electrification can be achieved through rebates or incentive programs administered at the local, state, or federal level. Both updating building codes and developing electrification programs will help create more efficient new buildings, leading to decreased electricity and natural gas use as well as eliminating natural gas use with new all—electric buildings. The City should also consider creating its own building code, rather than adopting the County's.

- **Building performance standards:** creating measurable energy and greenhouse gas emissions-based performance targets to ensure the above programs and code requirements are effective and to empower the local government to meet these targets within the buildings sector.

    - Also consider that in 2021, Colorado passed the Energy Performance for Buildings bill (HB-21-1286).[23] The bill requires buildings over 50,000 square feet across the state to report their building energy use annually to the Energy Office. In the coming years, the Energy Office will be developing building performance standards that these reporting buildings will need to meet by given target dates. The standards will be aimed at increasing energy efficiency in commercial buildings, leading to decreases in electricity and natural gas usage in the commercial sector over time.

- **Weatherization and energy audits for residential and commercial buildings:** conducting energy audits for all buildings and investing in weatherization techniques to improve the energy efficiency of buildings. Pursuing funding opportunities to expand these services to the community through rebates and/or incentives. As the building stock in the City ages, buildings become more inefficient. Performing an audit helps to identify where these inefficiencies are so that the homeowner or building owner can take steps to make necessary updates to save energy and energy costs. Adding more insulation and ensuring all cracks are sealed, or weatherized, will lead to reductions in electricity and natural gas use in both sectors. The City could also consider partnering with a local energy efficiency

[23] See: https://energyoffice.colorado.gov/climate-energy/energy-policy/building-benchmarking

non-profit to administer the audits and incentives, similar to those found in neighboring counties such as San Miguel/Ouray, Pitkin, Eagle, Summit, and Routt counties.

Transportation

- **Multimodal transportation investments**: Continue investing in multimodal infrastructure and programs to diversify transportation options in order to meet GHG reduction goals, as well as broader community sustainability goals. Programs may include working with local employers to provide employee commute benefits, implementing an electric micro-mobility program, and incentivizing telecommuting options. Expanding the safety and ease of using alternative modes of transportation, such as biking, walking, electric scooters, etc., will allow residents to feel more confident in using these forms of transportation, which will in turn reduce the amount of on-road transportation emissions for Grand Junction.

- **Electrification strategy:** Pursuing funding opportunities for public charging infrastructure, as well as electric vehicle and bicycle rebate and incentive programs. The state has several grant programs, such as the Charge Ahead Colorado grant, that are aimed at expanding the state's electric vehicle charging infrastructure and expanding fleet electric vehicles in communities across the state. Once the City's EV Readiness Plan is complete, the City should pursue grant funding to help implement some of the strategies in the plan. Other entities, like Xcel Energy, offer rebates and incentives to residents to help make the cost of electric vehicles more affordable. Expanding electric vehicles in the community will help bring down on-road transportation emissions, especially as Xcel Energy continues its work to add renewable, carbon-free energy to the electricity grid.

- **Expanding the use of CNG/electric-fueled public transit vehicles:** Converting public transit vehicles to fully CNG or fully electric. Keep in mind that CNG buses do decrease emissions; however, electric buses would produce significantly fewer emissions than CNG buses. Targeting years to reach these goals to empower the City to work towards meeting each goal. As well, the City could consider expanding the transit routes to reach growing areas or to increase the frequency of routes to make using transit more convenient for residents. Increasing transit use will take more car trips off the road, leading to decreased on-road fossil fuel emissions in Grand Junction.

Waste and Wastewater

- **Waste diversion:** Developing and expanding waste services and infrastructure to increase waste diversion rates. Expanding recycling and compost services at an affordable price to make waste diversion easy and accessible for the entire community. This year, Colorado's statewide fee on plastic bags went into effect, which will help reduce the tonnage of waste

sent to the landfill.[24] It is estimated that the average American uses 300 plastic bags per year, most of which end up in the landfill and take thousands of years to decompose, if at all.[25] Next year, the City's businesses will no longer be able to offer single use plastic and Styrofoam takeout items.[26] This will also lead to a decrease in the tonnage of waste sent to the landfill, therefore lowering Grand Junction's waste emissions.

- **Built environment:** Understanding the opportunity for and promoting the adoption of low-carbon construction materials, maximizing reuse of building materials and designing buildings for reuse in deconstruction, supporting market development for construction waste diversion. The City could consider enacting a Construction & Demolition Debris Diversion Ordinance similar to that in Pitkin County, which offers a refund of building permit costs if a builder achieves a recycling rate of 25% and separates all recoverable materials for recycling.[27] Recycling these materials diverts them from the landfill and helps reduce emissions.

- **Sustainable consumption and production:** Setting up a policy framework on sustainable consumption and production patterns within the City to reduce waste at the retail and consumer levels. This may include creating partnerships with local businesses to help them reduce their waste and move them away from disposable and hard-to-recycle materials. The City can also lead by example by enacting sustainable purchasing policies at the municipal level to emphasize the use of recycled material in items like printer paper and other frequently used materials.

[24] See: https://tax.colorado.gov/carryout-bag-fee.
[25] See: https://environmentamerica.org/massachusetts/wp-content/uploads/2013/04/Bag-Ban-Fact-Sheet-_0.pdf.
[26] See: https://tax.colorado.gov/carryout-bag-fee.
[27] See: https://pitkincounty.com/CivicAlerts.aspx?AID=522.

Grand Junction City Council

Workshop Session

Item #1.d.

Meeting Date:	June 5, 2023
Presented By:	Rick Dorris, Trenton Prall, Public Works Director
Department:	Community Development
Submitted By:	David Thornton, Principal Planner

Information

SUBJECT:

Transportation Engineering Design Standards (TEDS) Update

EXECUTIVE SUMMARY:

In July of 2022, the City hired Fehr and Peers to work on updating the City's Transportation Engineering Design Standards (TEDS) manual. This effort has occurred alongside the City's work with Fehr and Peers on the Pedestrian and Bicycle Plan and will incorporate changes reflecting community values for multimodal transportation and support implementation of the adopted Pedestrian and Bicycle Plan.

BACKGROUND OR DETAILED INFORMATION:

The Transportation and Engineering Design Standards (TEDS) Manual establishes requirements and provides guidance to the City and developers on how streets and multimodal transportation infrastructure are to be designed within Grand Junction. It includes guidance and requirements for preparing transportation impact statements (TIS), street design standards, access control, traffic signal design, street lighting, pavement, and pedestrian, bicycle, and transit facility design standards.

The TEDS Manual has not had a major update for almost 20 years. Some aspects of the Manual are out of date and not reflective of current community values or current design practices being applied within the City.

The TEDS Manual is being updated to incorporate the following general improvements:

- Reflect current community values for multimodal transportation (including for pedestrians, bicyclists, and transit users)
- Incorporate current state and national design standards
- Improve the usability of the manual
- Support implementation of the vision established in the recently adopted Pedestrian & Bicycle Plan

FISCAL IMPACT:

This item is for discussion purposes only. If City Council moves forward with adoption, capital projects will be budgeted according to the requirements in the design standards.

SUGGESTED ACTION:

For Discussion Only

Attachments

1. TEDS_Manual_Update_Summary_Sheet

TEDS Manual Update

Informational Sheet

May 24, 2023

1. What is the TEDS Manual?

The TEDS (Transportation and Engineering Design Standards) Manual establishes requirements and provides guidance to the city and developers on how streets and multimodal transportation infrastructure are to be designed within Grand Junction. It includes guidance and requirements for preparing transportation impact statements (TIS), street design standards, access control, traffic signal design, street lighting, pavement, and pedestrian, bicycle, and transit facility design standards.

2. Why is the TEDS Manual Being Updated?

The TEDS Manual has not had a major update for almost 20 years ago. Some aspects of the Manual are out of date and not reflective of current community values or current design practices being applied within the city.

The TEDS Manual is being updated to incorporate the following general improvements:

- Reflect current community values for multimodal transportation (including for pedestrians, bicyclists, and transit users).
- Incorporate current state and national design standards.
- Improve the usability of the manual.
- Support implementation of the vision established in the recently adopted Pedestrian & Bicycle Plan.

3. What is the Process for Updating the TEDS Manual?

The project team kicked-off in late summer of 2022 and is aiming to finalize updates to TEDS in late summer 2023. The project is being guided by a Technical Advisory Committee (TAC), which has met four times over the course of the project at key milestones. The TAC is made up of representatives of different city departments, CDOT, Mesa County, the RTPO, neighboring jurisdictions, private developers, and transportation engineering consultants in the Valley that regularly use the TEDS Manual.

The process for updating the TEDS Manual has involved two major phases:

1) **TEDS Manual Assessment:** In fall of 2022 the team conducted a thorough assessment of the existing TEDS Manual to identify all the updates that are needed to achieve the project goals mentioned above. This included guidance from the TAC, and a survey that was sent to stakeholder agencies,

departments, and the broader development and transportation engineering community in Grand Junction.

2) **TEDS Manual Draft Updates:** Based on the outcomes of the TEDS Manual Assessment, the project team is updating the TEDS Manual. The updates are being done through an iterative process with city staff and the TAC and include two drafts prior to the final updates. The Second Draft was developed in May, 2023 and stakeholder comment is currently being solicited on this draft. Following feedback from meetings with stakeholders in June the TEDS Manual will be updated to a Final Draft in July and presented to City Council to be adopted by ordinance in late summer 2023.

4. What Major Updates are in the Revised Draft of the TEDS Manual?

The Second Draft of the TEDS Manual includes the following major updates:

- Reflect current design guidance from CDOT, AASHTO, ITE, NACTO, and other state and national sources.
- Update the standard street cross sections primarily to:
    - Incorporate low stress bicycle and pedestrian facilities in alignment with the Pedestrian and Bicycle Plan,
    - To reflect current city design practices, and
    - To be consistent with the current Fire Department Access standards.
- Include new requirements for transportation Impact Studies (TIS) to:
    - Document bicycle and pedestrian impacts, and
    - Require a Traffic Assessment for mid-size developments (generating 10 to 99 peak hour trips) in alignment with current CDOT practice to assess need for turn lanes, sight distance, and pedestrian and bicycle impacts.
- Add requirements for inter-parcel connectivity between developments to:
    - Mitigate traffic impacts on streets,
    - Improve mobility and access for people walking and biking to and through developments, and
    - To provide access to transit by providing more direct connections between developments and transit stops on the adjacent street network.
- Added a new requirement to establish a maximum block length of 700 feet for pedestrian access.
- Update traffic calming requirements on local streets to support slower design speeds.
- Removed the Fire Department Access Document and only reference it in TEDS.
- TEDS Exceptions are only allowed for alternative streets.
- Modified “effective” turn radii requirements to account for streets with bike lanes and on-street parking to encourage slower design turning speeds to mitigate intersection conflicts with pedestrians and bicyclists.
- Added illuminance requirements for bike and pedestrian facilities.

- Updated signing and striping requirements and signal design to match current city practice.
- Updated pedestrian and bicycle design standards to match the vision and guidance in the Pedestrian & Bicycle Plan and to reflect current national best practices.
- Added design guidance on pedestrian and bicycle crossings.
- Removed the chapter on transit design standards and instead reference the Mesa County *Transit Design Standards*.
- Removed the chapter on Private Streets, Shared Driveways, and Loop Lanes which is provided in the Zoning and Development Code.

5. What are the Major Changes to the Standard Street Sections?

- Lane widths were updated to 11′ on arterial and collector streets.
- Sidewalk widths were updated to 6′ on local and collector streets with posted speeds <35 mph, and to 8′ on arterial and collector streets with posted speed >35 mph.
- Detached sidewalks are standard on all arterial and major collector streets and options for detached sidewalks are included on local and minor collector street standards.
- Low-stress bicycle facilities are included on all arterial and major collector street standards consistent with the Pedestrian and Bicycle Plan.
- Narrower street cross-section options are included for local streets that meet requirements in the Fire Department Access standards.
- The Multipurpose Easement was updated to 10′ on street sections with a detached sidewalk, which is consistent with existing practice on major arterial streets (14′ width was preserved on streets sections with attached sidewalks).
- The Rural streets section was removed.
- All streets are required to have a sidewalk on both sides of the street unless there is a public walkway on the other side of houses/businesses.
- A 5′ sight zone has been added behind the walk to the local street sections.
- Right-of-Way width was increased on the following street sections to accommodate pedestrian and bicycle infrastructure:
    - Minor Arterial – increases from 80′ to 100′
    - Major Collector – increases from 60′ to 78′ or 70′ depending on posted speed
    - Minor Collector/Commercial – increases from 52′ to 64′
    - Local Street – standard with attached sidewalk increases from 44′ to 46′ (other options are provided that vary in ROW width from 38′ to 63′).

6. What Input is the City Seeking from the Public/Stakeholders?

The City is seeking broad input from stakeholders and citizens on the recommended changes in the 2nd draft (May 2023). Information is posted on the City's website www.gjcity.org and at www.EngageGJ.org.

Grand Junction City Council

Workshop Session

Item #1.e.

Meeting Date:	June 5, 2023
Presented By:	Ken Sherbenou, Parks and Recreation Director
Department:	Parks and Recreation
Submitted By:	Ken Sherbenou

Information

SUBJECT:

Orchard Mesa Recreation Facility Study

EXECUTIVE SUMMARY:

The history of the Orchard Mesa Pool is complex and a long-term resolution has yet to be identified. It was constructed in 1983 and the facility requires a full renovation. The attached auxiliary space and gym was built in the early 1960s and it was decommissioned as a part of the new Orchard Mesa Middle School built in 2019. It is also in need of a complete renovation should the decision be made to reactivate it.

The Orchard Mesa Pool is a partnership between Mesa County School District 51, Mesa County, and the City of Grand Junction. District 51 owns the land and the building and pays the utilities. The City operates the facility, and the City and the county split the annual subsidy required to run the facility. While maintenance has been conducted on a regular basis since 1983, all the mechanical, pool, and building systems are at the end of their useful life and the facility requires a full renovation. In late 2022 and early 2023, the pool broke down and had to be closed for multiple weeks. Given the age of the facility and the age of all of its major systems, similar occurrences are expected moving forward.

The City was on a path to consider renovation in the fall of 2022, but one of the pool partners, District 51, declined to make any contribution to the effort. As a result, design halted. The issue then came to the forefront with feedback from numerous community members at Council meetings, in letters to the editor and in media coverage. In response, on February 1, 2023, the City resumed the planning to consider possible long-term solutions to the Orchard Mesa Pool issue.

Now that the Community Recreation Center (CRC) is approved by the voters, the City is delving back into examining the Orchard Mesa Pool. The City has hired Ohlson

Lavoie Corporation (OLC) to facilitate this planning process. A primary consideration involves the substantial state-of-the-art aquatic facilities that will be present in the $70,000,000 CRC, $35,000,000 of which will be spent on aquatic components. OLC is assembling several options for consideration, ranging from minimal investment to ensure the operation of the Orchard Mesa Pool until the CRC opens, to a basic modernization of the pool, to a reinvented facility that provides indoor field space.

OLC will present these options at the Council workshop on June 5 and then hold two focus groups and a public forum on June 6 at the Lincoln Park Barn at 910 N. 12th Street.

BACKGROUND OR DETAILED INFORMATION:

The 2014 Intergovernmental Agreement (IGA), which is included with this agenda documentation as a part of the November 18th, 2022 memo to Council, is the most recent agreement between the pool partners, School District #51, the City and Mesa County. This was signed on December 9, 2014. It expired on December 9, 2019, and was not renewed by the parties.

Although it was not renewed, the pool partners have, for the most part, continued to honor their historic obligations related to the pool. In the same vein, the City proposed a three-way agreement committing that all three partners would continue their respective contributions through at least October 2026, almost a full year after the Community Recreation Center (CRC) is scheduled to open. Similarly, the parties have yet to sign this agreement but have continued to pay their parts.

In the 2014 IGA, several terms are relevant to this current discussion as cited in that document:

1. “The term of this Agreement will be for five years commencing on the date that it is signed by all parties and ending five years thereafter. On mutual agreement of the Parties, this Agreement, together with amendments if any, may be renewed for three additional five-year terms”.

The 2014 IGA affirms ownership of the pool by the School District as noted in the 2014 Agreement:

1. “The Parties agree that because the Pool is located on District property that the District is and shall be the owner of the Pool. As the owner, the District shall provide property loss coverage for the Pool/pool building. The City and/or the County may separately procure property coverage (s) insuring their own interests”.

The 2014 IGA explains that upon termination of this agreement, the School District as the owner shall have the right to use, sell or otherwise dispose of the Pool premises:

1. “The City and County shall have no claim to the Pool and/or the real property on which it is located. The parties may upon expiration or termination agree to a disposition of the Pool and/or equipment but absent an agreement, the District as owner shall have the sole right to use, sell or otherwise dispose of the Pool premises, including but not limited to the real property, as it determines in its sole and absolute discretion. Improvements made to the Pool including but not limited to fixtures as defined by Colorado law shall accrue to the District upon expiration or termination of the Agreement”.

Instead of continuing to meet regularly under the 2014 IGA, the pool partners met sporadically from late 2019 and into 2020. At the most recent meeting on February 20, 2020, all pool partners agreed to continue funding the pool based on the current arrangement for the time being. The City and the County split the operational subsidy (costs minus revenue from fees) and the School District covered utilities.

Mesa County informed the other partners in the fall of 2021 that they would reduce their annual contribution to $75,000 for 2022 (down from about $110,000 from the previous year). This has increased the City’s share of covering the operating subsidy. District 51 obtained a quote on the cost of demolition of the facility for $905,000, due in large part to the presence of asbestos. The value of the land after demolition and asbestos remediation is appraised at $240,000. Also of note, a recent analysis of pool patrons found that 49% of Orchard Mesa Pool patrons were Mesa County residents, non-City residents.

The City has been leading the effort to identify a long-term resolution for the Orchard Mesa Pool, which began in the spring/summer of 2022 at Council direction. This included selecting Ohlson Lavoie Corporation (OLC) partnered with Counsilman-Hunsaker (CH), aquatic specialty design, to complete a study to inform decision making.

Since Council’s approval of the contract, the design process began in mid-2022 and costs were incurred by the City. The City acted on the assumption the other pool partners would contribute to the renovation. The School District pledged, during the 2020 discussions, $547,000 towards the needed improvements. This pledge by the School District is verified in the letter from then School Board President Tom Parrish that is included in attachments to the November 18th, 2022 memo to Council enclosed with this agenda documentation. This money was originally budgeted in the 2019 Orchard Mesa Middle School re-build to demolish the Orchard Mesa Pool and adjoining gym.

Mesa County budgeted $800,000 towards a potential renovation in their 2023 budget. However, School District #51 pulled out and refused any type of financial contribution despite the pledge in 2020 by the School Board President.

Relevant to the conversation, the City Council held a workshop on January 9, 2023 to

consider a possible indoor recreational amenity in Orchard Mesa, which was discussed in a January 3, 2023 memo enclosed with this agenda documentation. This workshop item centered around a possible indoor turf field house that would provide amenities that would complement the new CRC. Once built, the CRC's aquatic amenities will be much more attractive, substantial and provide a much higher level of service than the aquatic features at the Orchard Mesa Pool.

At the February 1, 2023 Council meeting, City Council voted to resume the planning process to consider options for a long term resolution on the Orchard Mesa Pool.

Enclosed with this agenda documentation is:

1. City Council memo from November 18, 2022 Regarding Orchard Mesa Pool History
2. City Council memo from January 3, 2023 Regarding a Possible Orchard Mesa Recreational Facility

FISCAL IMPACT:

Initial costs of renovation options will be discussed at the June 5th workshop and costs associated with operational subsidy will be presented at a future workshop.

SUGGESTED ACTION:

For Council discussion and possible direction.

Attachments

1. OM Pool with Attachments 111822
2. Orchard Mesa Rec Facility Concept 010323

CITY OF Grand Junction COLORADO

CITY MANAGER'S OFFICE

Memorandum

TO: Members of City Council

FROM: Greg Caton, City Manager
Ken Sherbenou, Parks and Recreation Director

DATE: November 18, 2022

SUBJECT: Orchard Mesa Pool History

The Orchard Mesa pool was constructed in 1983 and needs a full renovation. As a follow up to current discussions regarding the Orchard Mesa Pool, staff would like to provide additional background.

To clarify, School District #51 is the owner of the facility. Below is an image from GIS testifying to this ownership.

The 2014 Intergovernmental Agreement (IGA) that is included with this memo is the most recent agreement between the pool partners, School District #51, the City and Mesa County. This was signed on December 9, 2014. Therefore, it expired on December 9, 2019 and was not renewed by the parties. In the IGA, several terms are relevant to this current discussion as cited in that document:

1. "The term of this Agreement will be for 5 years commencing on the date that it is signed by all parties and ending 5 years thereafter. On mutual agreement of the Parties, this Agreement, together with amendments if any, may be renewed for 3 additional 5 years terms".

The 2014 IGA affirms ownership of the pool by the School District as noted in the 2014 Agreement:

2. "The Parties agree that because the Pool is located on District property that the District is and shall be the owner of the Pool. As the owner the District shall provide property

loss coverage for the Pool/pool building. The City and/or the County may separately procure property coverage (s) insuring their own interests".

The 2014 IGA explains that upon termination of this agreement, the School District as the owner shall have the right to use, sell or otherwise dispose of the Pool premises:

3. "The City and County shall have no claim to the Pool and/or the real property on which it is located. The parties may upon expiration or termination agree to a disposition of the Pool and/or equipment but absent an agreement, the District as owner shall have the sole right to use, sell or otherwise dispose of the Pool premises, including but not limited to the real property, as it determines in its sole and absolute discretion. Improvements made to the Pool including but not limited to fixtures as defined by Colorado law shall accrue to the District upon expiration or termination of the Agreement".

Instead of continuing to meet regularly under the 2014 IGA, the pool partners met sporadically from late 2019 and into 2020. At the most recent meeting on February 20, 2020, all pool partners agreed to continue funding the pool based on the current arrangement for the time being. The City and the County split the operational subsidy (costs minus revenue from fees) and the School District covered utilities. The minutes from this meeting are enclosed with this memo, which speak to these discussions.

Mesa County informed the other partners in the fall of 2021 that they would reduce their annual contribution to $75,000 for 2022 (down from about $110,000) from the previous year. This has increased the City's share of covering the operating subsidy.

The most significant recent development is that the City has been leading the renovation effort of the Orchard Mesa Pool, which began in the spring/summer of 2022 at Council direction. This included selecting Ohlson Lavoie Corporation (OLC) partnered with Counsilman-Hunsaker (CH) to renovate the pool. This contract is for $523,722, which was approved by City Council on August 17. The contract includes fees for full design including construction administration through the completion of the renovation project. OLC and CH have collectively designed over 600 similar aquatic facilities.

Since Council's approval of the contract, the design process has begun, and costs have been incurred by the City. The City has acted on the assumption the other pool partners would contribute to the renovation. The School District pledged, during the 2020 discussions, $547,000 towards the needed improvements. This pledge by the School District is verified in the enclosed letter from then School Board President Tom Parrish. This money was originally budgeted in the 2019 Orchard Mesa Middle School re-build to demolish the Orchard Mesa Pool and adjoining gym.

Mesa County has budgeted $800,000 towards the project in their 2023 budget. However, School District #51 has now pulled out and refuses any type of financial contribution despite the pledge in 2020 by the School Board President. Although not the owner, the City was willing to take on the operation and spearhead the renovation as evidenced by the $523,722 design and engineering contract executed on August 17, 2022.

In short, the City has come forth with a proposal to take on sole operation, maintenance, and ownership of the Orchard Mesa Pool if the other pool partners, Mesa County and School District #51 each contribute $800,000. The City would then renovate the facility and the other pool

partners would be released from their obligations, historical or otherwise, to contribute to the Orchard Mesa Pool. Mesa County has agreed. School District #51 has declined.

C: Department Directors

Attachments:

- 2014 Intergovernmental Agreement (IGA) Restating and Amending the Relationship Between the City of Grand Junction, Mesa County Valley School District 51 Concerning the Orchard Mesa Swimming Pool
- Letter from District #51 Board President Tom Parrish
- Pool Partner Meeting minutes from February 20, 2020

Orchard Mesa Pool IGA

INTERGOVERNMENTAL AGREEMENT RESTATING AND AMENDING THE RELATIONSHIP BETWEEN THE CITY OF GRAND JUNCTION, MESA COUNTY AND MESA COUNTY VALLEY SCHOOL DISTRICT 51 CONCERNING THE ORCHARD MESA SWIMMING POOL

THIS AGREEMENT ("Agreement") is made and entered into by and between MESA COUNTY, hereinafter called "County," MESA COUNTY VALLEY SCHOOL DISTRICT NO. 51 hereinafter called "District" and THE CITY OF GRAND JUNCTION, hereinafter called "City," collectively the City, the County and the District may be referred to as the "Parties." The Agreement shall be effective on the date that it is signed by all Parties.

RECITALS:

The City, County and District are currently parties to a 1982 agreement together with subsequent amendments ("Old Agreement(s)") concerning the operation and maintenance of the Orchard Mesa Pool ("Pool" or "the Pool"), the floor plan of which is depicted in the attached Exhibit "A", the northern edge of which abuts a common hallway shared with Orchard Mesa Middle School. The parties agree that this shared hallway and the Orchard Mesa Middle School are the District's sole responsibility.

The Old Agreement(s) have served the Parties well since their inception in 1982; however, the arrangement(s) together with the amendments thereto that have been made over time, in totality, are not perfectly clear and a comprehensive restatement of the terms concerning the Pool would be beneficial to the Parties.

Beginning in 2010 the County determined that it would no longer participate in funding the Pool as it had for many years in accordance with the Old Agreement(s). Despite the County's decision, the Old Agreement(s) were never terminated and recently the County re-considered its position and agreed that it would again fund the Pool on condition that the Old Agreement(s) be restated and amended by the Parties. It is the Parties' intent that this new agreement supersedes and replaces the previous agreement between the Parties.

Each party, the City, the County and the District have certain obligations under the Old Agreement(s) that could be better defined. With better definition the Parties will clearly understand and agree on such important topics as 1) ownership, 2) continued operations and 3) a method for setting a budget and expending funds for the continued operation and maintenance of the Pool.

In the main the Parties agree that the provision of aquatic recreation is important to the public in general and specifically to those persons utilizing the Pool. With that understanding and for the general purposes of meeting the needs of the community, the Parties enter into this agreement as authorized by §18, Article XIV of the Colorado Constitution, §29-1-203, C.R.S., § 22-32-122(1), C.R.S. and other applicable law.

The Parties individually and collectively do hereby express their present and future intentions to support the continued success of the Pool on the terms and conditions stated herein.

NOW, THEREFORE, in consideration of the mutual covenants and conditions contained herein and other valuable consideration, the sufficiency of which is acknowledged for both the formation and enforcement of this Agreement, the Parties agree as follows:

1. The term of this Agreement will be for 5 years commencing on the date that it is signed by all parties and ending 5 years thereafter. On mutual agreement of the Parties this Agreement, together with amendments if any, may be renewed for 3 additional 5 year terms. The Agreement is subject to annual appropriation by the Parties of the funds necessary to defray the expenses arising out of or under the Agreement and/or operation of the Pool. In the event of non-appropriation the agreement shall terminate. The Parties agree that consideration paid and given is sufficient to support this Agreement and the enforcement of the same.

2. The Parties agree that because the Pool is located on District property that the District is and shall be the owner of the Pool. As the owner the District shall provide property loss coverage for the Pool/pool building. The City and/or the County may separately procure property coverage(s) insuring their own interests.

3. The City and County shall have no claim to the Pool and/or the real property on which it is located. The Parties may upon expiration or termination agree to a disposition of the Pool and/or equipment but absent an agreement, the District as owner shall have the sole right to use, sell or otherwise dispose of the Pool premises, including but not limited to the real property, as it determines in its sole and absolute discretion. Improvements made to the Pool including but not limited to fixtures as defined by Colorado law shall accrue to the District upon expiration or termination of the Agreement.

4. The Parties shall jointly establish a board or committee ("Pool Board") to provide policy direction relating to the funding and management of the Pool during the term of this Agreement or any extension thereof. The Pool Board shall be comprised of one member of City Council, one member of the Board of Commissioners and one member of the District 51 School Board. The Parties shall each respectively designate and assign a member to the Pool Board.

Appointment shall be by and in a manner customary to each appointing entity. City personnel, as the managers of the Pool shall serve as staff to the Pool Board. Bylaws and/or procedural rules deemed necessary or required for the conduct of the Pool Board shall be drafted and approved by it.

5. The Pool Board shall recommend an annual budget and capital improvement plan(s) to the City Council, the Board of County Commissioners and the School Board; in the event that all three do not agree on a budget the last approved budget shall control until a new budget is approved or this Agreement is terminated. The annual review and budget recommendation by the Pool Board may include but not necessarily be limited to recommending changes to programming, scheduling and/or alternative approach(es) to management such as privatization, creation of a district and/or other alternatives; however, no recommendation shall be effective until formally adopted by the City, the County and the District.

6. The City and the County shall equally share the cost, less the expenses paid by the District, of the operation and maintenance of the Pool. Expenses shall be reviewed by the Pool Board and a budget shall be recommended by the Pool Board for adoption by each member.

a) The Pool Board shall compare the expenses for operation and management services with the revenue derived from the operation of the Pool and the budgeted subsidies and shall recommend the subsequent years' budget(s) such that expenses do not exceed revenue (including a subsidy from the City and County as recommended by the Pool Board and as the same is annually budgeted as provided in paragraphs 4 and 5.)

b) For purposes of this Agreement expenses is defined as and includes City inter-fund charges, which are the costs associated with the City's overhead and management of the operations including, information technology, finance, legal, risk management and other , fees and costs of operation and maintenance of the Pool and all direct staff costs, indirect staff costs of the Recreation Supervisor and Recreation Coordinator assigned to manage and oversee the Pool operations and serve as staff to the Pool Board, hiring costs incurred by the City, lifeguard certification and training (currently Ellis and Associates) fees, mileage and uniform costs.

c) The Pool Board shall recommend the fees and charges for Pool usage to the governing bodies of the City, County and District. All fees and charges collected by the City above and beyond the expenses (except for fees charged by District 51 for its use as the same is further described in paragraph 17) shall be considered revenue for the use and benefit of the Pool Board's recommendation of a budget for the operations and maintenance of the Pool.

7. The Parties acknowledge and agree that the City staff will occasionally recommend major capital expenditures related to the Pool facilities and/or necessary to provide the services referenced in this Agreement. The Pool Board shall consider capital expenditures as part of the annual budget process.

8. The Pool Board shall consider, and if a majority thereof deems it advisable, recommend the establishment of a capital maintenance fund for the Pool. Any and all supplemental budget requests shall first be presented to the Pool Board for its consideration. If and/or when budgeted the City and County shall contribute equally to the maintenance fund in order to maintain the Pool and pool building in a safe and useful condition. The City, as staff to the Pool Board, will make recommendations for improvements that:

a) are planned;

b) will keep the Pool in reasonable compliance with the Americans with Disabilities Act ("ADA"), 42 U.S.C. 1201 *et seq.* and the Virginia Graeme Baker Pool and Spa Safety Act, 15 U.S.C. 8001 *et seq.* and all other applicable legal and safety standards;

c) fund emergency repairs, pending the payment of insurance claim(s), if any; and,

d) fund necessary capital maintenance.

9. All supplies and equipment reasonably required by the City and the cost of the Ellis and Associates Comprehensive Aquatic Risk Management Program ("Ellis") or a comparable program, which shall be purchased by the City and County and shall be accounted for as expenses. A list of supplies and equipment necessary or required to operate the Pool is provided in Exhibit "B" – OM Pool Maintenance – Supplies.

10. In its operation of the Pool the City shall apply the standards and customary practices it requires together with those required by the Ellis Program or a comparable successor to Ellis. , called for in the program. A description of the Ellis program is attached as Exhibit C and incorporated by this reference as if fully set forth herein.

11. The City shall promptly notify the Pool Board and the District's Chief Operations Officer if the physical condition of the Pool is not conducive to the safe conduct of any programmed activity in the Pool and/or if maintenance practices may impact in any way, the scheduling of activities in the Pool.

12. With and through the budget process the Pool Board shall be responsible for reviewing and recommending changes to the funding and/or operations of the Pool. In the event that a budget is not approved by the Pool Board or one or more of the governing bodies (City, District or the Board of County Commissioners) then the Pool Board may recommend that the Pool be closed, [or privatized; any recommendation that results in the permanent

closure, or fundamental change to the operation of the Pool as contemplated by this Agreement shall a) require unanimity of the Pool Board and b) absent an emergency as defined herein occur no sooner than 12 months after the recommendation is made to the District, the City and the Board of County Commissioners.

13. For purposes of this Agreement an emergency is:

a) an Act of God or the declaration of a local, state or federal emergency that directly effects the continued ability to operate the Pool; and/or

b) an unforeseen event, such as contamination by bacteria, communicable disease or some other happening and/or order by an agency having authority following an event or happening to close the Pool and/or render it unusable;

c) lacking the occurrence of a) or b) above a failure of any Party to budget and/or fund the Pool is not an emergency.

14. The District agrees to allow the City and County to use the Pool during the term of this Agreement or any extension thereof without need or requirement of compensation to the District; during the term of this Agreement or any extension thereof the District's sole financial obligations to the Pool's operating expenses shall be the payment of premiums for property insurance covering the Pool, internet access in the Pool area (recurring charges and network connection(s) for use by the City for scheduling), and payment for all gas and electric utilities, water and trash service reasonably necessary for operation of the Pool.

15. The City agrees to provide all required labor for the operation of the Pool. Labor for purposes of this Agreement is lifeguards, janitorial staff, swim instructors, guest service representatives and pool managers. The City will pay as an expense of the operation of the Pool all wages, salaries, benefits and workers' compensation insurance premiums and inter-fund charges for the required labor and operations of and for the Pool. Personnel who will work on District property are required to meet the same requirements for background checks, CBI criminal history and fingerprinting as District personnel.

16. The City will provide basic daily maintenance and janitorial services.

17. The City will manage the Pool for and schedule all open swim, swim lesson and special event participants, including for District sponsored uses. The City staff will collect the revenues generated by public swim, swim lessons, private parties and special events and concessions and the revenue shall be used to pay the expenses of the Pool. Fees and charges for District-sponsored users (i.e., physical education classes, swim team practice/meets and District-sponsored events) shall be determined by the District; the District shall not be required to pay the City and/or County for use of the Pool for District purposes.

Fees, if any, collected by the City for the District shall be promptly paid to the District in the amount agreed and determined by the District and the City. District-sponsored uses shall have priority over use by the general public during normal school hours.

18. The City will pay as an expense of the operation of the Pool the liability insurance premiums, for coverage with limits and deductibles to be agreed-upon by the Parties but in any event in amounts no less than the most current limits established by the Colorado Governmental Immunity Act, 24-10-101 *et seq.*, C.R.S., as from time to time amended. The County and the District shall be named as loss payees, with insurance declaration sheets provided to them.

19. As part of the budget the Pool Board shall budget for and create an insurance reserve account for the purposes of paying the property and casualty deductible(s) incurred in the event of a claim(s). The City shall maintain the account for the use and benefit to the parties.

20. The Parties understand and agree that each and every one of them may be protected by, and will rely on and do not waive or intend to waive by any provision of this Agreement, the limitations or any other rights, immunities and protections provided by the Colorado Governmental Immunity Act, 24-10-101 *et seq.*, C.R.S., as from time to time amended.

21. To the extent authorized by law and/or insurance the City agrees to indemnify and hold harmless the County and the District and their officers and employees, from and against all liability, claims, demands and expenses, including court costs and attorney fees, on account of any injury, loss or damage, which arise out of or are in any manner connected with the operations and programming work to be performed by the City under this agreement, if such injury, loss or damage is caused by, or is claimed to be caused by, the act, omission, or other fault of the City or any officer or employee of the City.

22. Any person(s) employed by the City, the County or the District that performs work hereunder shall be and remain the employee(s) of the respective party and not agent(s) or employee(s) of another party.

23. No party may assign or delegate its obligations under this Agreement or any portion thereof without the prior written consent of the other Parties.

24. Each and every term and condition hereof shall be deemed to be a material element of this Agreement. In the event either Party should fail or refuse to perform according to the terms of this Agreement; such party may be declared in default.

25. This Agreement may, absent an emergency, only be terminated by giving the other parties written notice of no less than three hundred sixty-five (365) days advance notice of termination. In the event of an emergency the Pool

Board shall recommend a means for termination or suspension of this Agreement. Termination shall not prevent any party from exercising any other legal remedies which may be available to it. Any party's failure to appropriate the funds necessary to defray the expenses assumed by each through the adopted budget shall constitute a default and be cause for termination of the agreement.

26. The Parties shall reasonably comply with the applicable provisions of the ADA and any and all other applicable federal, state or local laws and regulations.

27. This Agreement represents the entire agreement between the Parties and there are no oral or collateral agreements or understandings. Only an instrument in writing signed by the parties may amend this Agreement.

28. The traditional rule that ambiguities shall be construed against the drafter is waived.

29. Venue for any action arising out of or occurring under this Agreement shall be in the District Court for Mesa County, Colorado. The agreement shall be controlled by, construed and interpreted in accordance with the law of the State of Colorado.

30. The Parties agree that any and all disputes, claims or controversies arising out of or relating to this Agreement shall be submitted for mediation, and if the matter is not resolved through mediation, then the parties may proceed to District Court.

This Agreement has been negotiated and agreed to by, with and through the common effort of the Parties and as such each waives and foregoes the customary rule that ambiguities are construed against the drafter.

In the event of any ambiguities the Parties agree to a liberal construction of the Agreement and to give meaning, purpose and effort to attempting to resolve the ambiguity(ies) in favor of continuing the Agreement for the benefit of the communities that they serve.

The Parties, individually and collectively, intending to be bound to the terms and conditions hereof do sign and bind the entity for which he/she/they sign.

Bruce Harris 11-26-14

City of Grand Junction – date

Mayor Title

John Justman 11-24-14

Mesa County Board of Commissioners - date

Chair Title

[signature] 12-9-14

Mesa County Valley School District 51 – date

President Title

Exhibit A

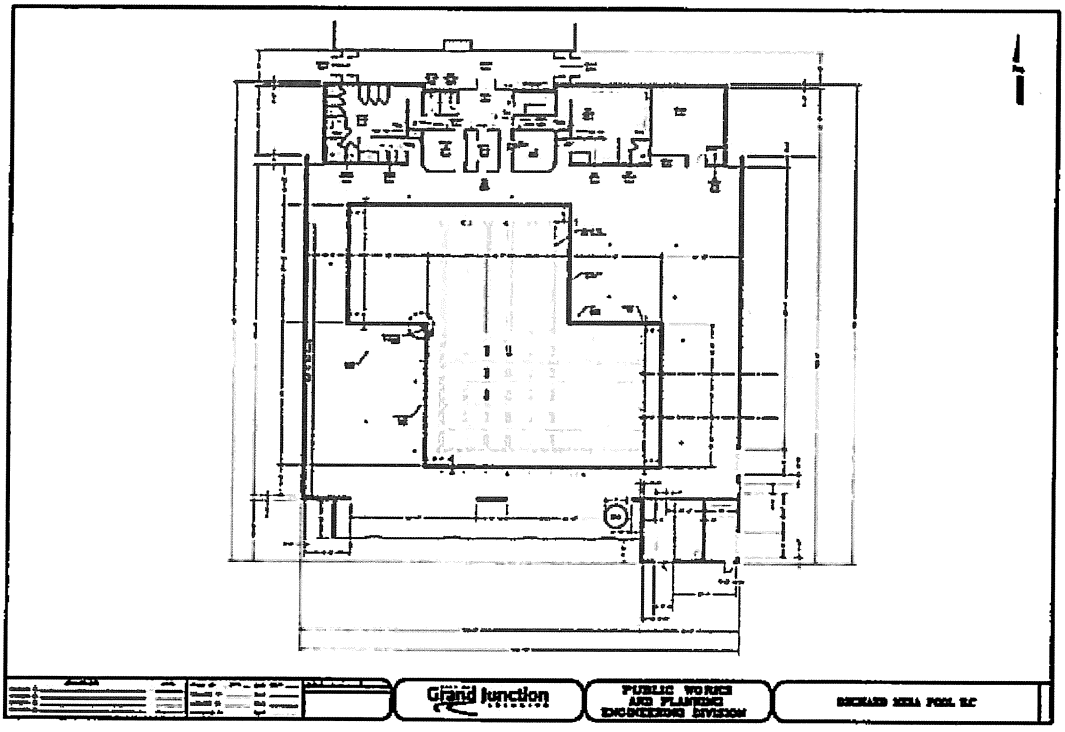

Grand Junction
PUBLIC WORKS AND PLANNING ENGINEERING DIVISION

Exhibit B

Orchard Mesa Community Center Pool
Operating Supply/Equipment List

Cost of Goods Sold
- Swim diapers, goggles, and miscellaneous resale items
- Lifeguard supplies

Food Stuffs
- Pre-packaged concession items for resale

Operating Supply
- Life vests
- Cleaning supplies (brushes, cleaners, detergent, etc.)
- Lifeguard textbooks
- Lifeguard renewal fees
- Rescue equipment
- Wristbands
- Office supplies (printer paper, receipt paper, pens, etc.)

Uniforms/Clothing
- Shorts, shirts, and swimsuits
- Whistles and lanyards
- Fanny packs and hats

Chemicals/Fertilizers
- Calcium hypochlorite, shock, muriatic acid, etc.

Repairs/Maintenance
- Plumbing repair and equipment
- Door repair and equipment
- Boiler, solar pump, slide, hot tub, and all other pool mechanical repair and maintenance
- HVAC repair and maintenance
- Window repair and maintenance
- Lighting repair and maintenance

Telephone
- *Monthly service fees
- Air cards for back-up internet access

Utilities
- Gas
- Sewer
- Solid Waste
- Water

Professional Development
- Safety School registration and travel expense
- Lifeguard instructor training registration and travel expense

Contract Services/Maintenance
- Ellis & Associates operational audits
- Ellis & Associates retainer fee
- Alarm fees
- Pest control
- Armored car service
- Fire alarm inspection
- Health Department inspection
- Chemical system service

Data Processing
- **Annual and replacement IT related charges

Exhibit B cont.

* Telephone includes basic telephone service, voice lines, and long distance service based on the two phones assigned to the pool.

** Includes equipment replacement accrual to replace PCs, laptops, and tablets. PC's and Laptops are replaced every 4 years so the accrual amount each year is 1/4 of the estimated replacement cost for each PC or laptop, and basic charges which is a share of the costs for network infrastructure and support, help desk, desktop software, and copier/printer charges and is based on the number of PCs assigned to each department/division. Two computers are assigned to the facility.

Exhibit C

Ellis & Associates, Inc. (E&A)

Jeff Ellis & Associates, Inc. (E&A) was founded in 1983 with the express purpose of reducing the loss of life due to drowning. Since that time the Mission statement has progressed toward "elimination of drowning events through Proactive Aquatic Risk Management". This began through the creation of a unique lifeguard training, today known as the International Lifeguard Training Program™ (ILTP®). Over the years, Ellis & Associates has built upon the implementation of this training and developed the Comprehensive Aquatic Risk Management Program™ (CARMP™). CARMP™ utilizes the ILTP® Training as a foundation for the overall aquatic safety protection systems deployed at client facilities.

Comprehensive Aquatic Risk Management Program™ (CARMP™)

CARMP™ is the flagship program, providing aquatics risk management consultation that goes way beyond simply "lifeguard training". Its unique services along with 24 hour a day, year round access to resources and experts gives facilities who are serious about aquatic safety all the tools needed to be successful. Among the many services included is the onsite aquatic facility operational safety audit. Audits are designed to identify potential risk exposures before they become catastrophic followed by consultation to reduce or eliminate the identified exposure. Ellis & Associates' CARMP™ client facilities have an unmatched performance record and include some of the largest recreational aquatic venues in the world, hosting millions of visitors each season.

International Lifeguard Training Program™ (ILTP®)

The ILTP® is a comprehensive course that includes complete CPR/Emergency Oxygen/First Aid/AED Training. Practical hands-on training, in conjunction with scenario based training, provides for an experiential training content. When practicing rescue skills for an unconscious Guest in Distress, participants are practicing water skills, and also implementing AR/CPR/FBAO, First Aid skills, Oxygen Administration/BVM/Manual Suction and AED use, all in a single scenario based emergency simulation. All of the skills are integrated – CPR/First Aid/AED/Oxygen/BVM are not strictly classroom based. The textbook information is covered in a classroom setting, however, these skills are then integrated and practiced repeatedly, in scenario based simulated emergencies. These simulated events are never the same; all elements of the skill base must be utilized in order to be successful, and lifeguards must complete given tactile, hands-on, practice with simulated events and real people.

Accomplishments of Ellis & Associates

The REACH of Ellis & Associates:

- E&A works with over 600 organizations in the United States and around the world, servicing approximately 100 million guests annually.
- E&A clients and training centers train over 37,000 lifeguards every year.
- E&A conducts over 1,500 Aquatic Safety Operational Audits every year.

The INNOVATION of E&A:

The first training organization to develop equipment based rescues, utilizing the rescue tube.

- This increased not only the effectiveness of the rescue, but it made it significantly safer for the rescuer and the guest.
- Other training organizations, such as the American Red Cross have since adopted the use of the rescue tube after it was proven effective by E&A.

The first training organization to incorporate proactive elements to lifeguard training that could be measured and evaluated such at the 10/20 Protection Standard.

- Lifeguards required to be able to see all parts of their Zone of Protection® area and spotting a guest in distress within 10 seconds and subsequently be able to reach the guest in distress within 20 seconds of recognition.

The first training organization to include in-water rescue breathing as part of its training and rescue protocol.

- Other training organizations have since included similar protocol as an option, but not as standard practice.
- The American Heart Association, in its 2010 ECC Guidelines, highlighted the effectiveness of in-water rescue breathing to a guest in distress who can be recognized and reached quickly – something E&A lifeguards are uniquely qualified to do!

Uniquely recognize the need for site-specific training techniques that are appropriate for the many environments and staffing situations. E&A helps our clients, "Make it work!"

- For example, lifeguards are taught techniques to perform suspected spinal injury management with a large team or with two lifeguards regardless of depth of water. They then extend beyond this ability with innovative use of backboard equipment to extricate guests from a pool safely that makes the most effective use of available staff and maximizes the safety of the guest.
- While other training organizations have adopted some of these procedures, they default to a "one size fits all" approach that limits the practical application of skills in unique environments.

The first training organization to include all required training elements in one comprehensive training course, requiring one textbook.

- Other training organizations have since combined some course elements, but E&A remains the only that covers all content in a single textbook.

As of 2005, the first training organization to have a blended-learning course option that includes both an online learning portion and an in-person practical test out.

- Years later, other training organizations have added an online course option to their offerings.

As of 1996, the first training organization to require supplemental oxygen support as a training component and rescue protocol.

- Despite years of evidence that emergency supplemental oxygen is effective treatment of a guest who has been rescued after a submersion event, other training organizations still maintain this as optional.

As of 2000, the first training organization to require the use of automated external defibrillators (AED) as training and rescue protocol.

- This was instituted years before it became commonplace to even see AED equipment in public places.
- E&A is proud of the role it has played in raising awareness and training in the use of AED equipment for over 14 years.

The first and only training organization that incorporates a one-of-a-kind Comprehensive Aquatic Risk Management Program (CARMP) that works with the lifeguard training to provide systems that create and maintain a culture of safety, reducing or eliminating risk exposures, and ultimately keeping guests safe.

- This accountability-based program focuses on key objective accomplishment with protocols that meet both uniform standards and site-specific needs of each unique aquatic environment.

The first training organization to include accountability audits of lifeguards – Aquatic Safety Operational Audits.

- Lifeguards at E&A CARMP facilities receive a license that requires that all aspects of their position be demonstrable at a "test-ready" level at all times.
- Lifeguards are secretly video recorded while they are performing their lifeguarding duties and evaluated on their ability to maintain the 10/20 Protection Standard, professionalism, protection from the environment, and other behavior components designed to maximize the lifeguard's effectiveness in preventing an incident from occurring in the first place. Next, those lifeguards are subjected to on-the-spot evaluation of their rescue abilities, followed by an administrative evaluation for supervisor and facility. If problems are discovered at any point, they are remediated thus mitigating risk before a catastrophic event can take place.

The first and only training organization that maintains long term data on rescue trends and outcomes, allowing E&A to adjust or refine training when the evidence suggests this is needed.

- Most other training organizations rely on theoretical opinions while we seek to constantly test the norms to ensure that we are always providing the best care possible.

As of 2001, the first and only training organization that evaluates and measures the effectiveness of its lifeguards in both qualitative and quantitative manners. This is accomplished through the Vigilance Awareness Training Program® (VAT®).

- E&A has utilized its VAT® program to train and condition lifeguards to recognize guests in distress at the surface, below the surface and on the bottom of a pool in the actual conditions the lifeguard will be expected to perform. This is then evaluated at the facility and audit levels to make sure the standard is being maintained.

E&A continues to innovate its training and risk management to provide the cutting edge in aquatic safety and education to its clients and ultimately, the industry.

School District 51
MESA COUNTY VALLEY
Every student, every day, learning for life!

February 10, 2020

City Council of Grand Junction
Mesa County Commissioners

Dear City Council of Grand Junction and Mesa County Commissioners,

As members of the Mesa County Valley District 51 School Board of Education, we want to reiterate our position that, first and foremost, our mission is to provide a high quality education and pathways to the future for all of our students. All of our resources, financial, as well as, the efforts of nearly 3,000 employees, are targeted to accomplishing that mission. Our community, as well as, the State of Colorado expect this of us.

While we do not want to be in the business of operating a pool on an ongoing basis, we are willing to divest our interests in the pool by giving it to the City of Grand Junction. We will then contribute the cost of the planned demolition and abatement for the pool building (approximately $547,000) to the City/County to be applied towards the needed repairs.

It is clear from a review of the attached OM Pool agreements (see attachment) that the City and County are responsible for operation and maintenance of the pool, including any capital improvements. District 51 has fulfilled all of our obligations under these agreements.

As an alternative proposal, D51 would continue our annual contribution of nearly $40,000, through the spring of 2021, for operation of the pool facility. This will give the City/County another opportunity to find some other means to fund improvements and continued operation of the pool.

If the City and/or County chooses to close the pool, District 51 will complete our obligations under the 2014 agreement and dispose of the property.

Sincerely,

Tom Parrish

Tom Parrish, President
Board of Education

Attachment

c: Diana Sirko, Superintendent
Phil Onofrio, Chief Financial Officer

Attachment

The School District, the City and the County have a long history of cooperating on community issues, one of which is the Orchard Mesa Pool, which dates back to 1982. In the original agreement, the District provided the land for the "pool and building and related parking". "Construction costs and fees for the erection of the Orchard Mesa Community Center Pool will be shared equally by the City and the County". "Pool facilities and the structure containing the same shall be owned jointly by the City and the County". In addition, "The City and County agree to pay all operational and maintenance costs...and pay such extraordinary expenses as may be necessary to keep the pool facility operational". In addition, "the City and County will be responsible for demolition and removal of pool and / or building once it ceases to exist as a pool".

In 1987 the City Council, County Commissioners, and the School Board reviewed the agreement with all three parties agreeing to extend the contract. The School District also agreed to assume all electrical costs.

In 2014, an agreement was signed that restated and amended the 1982 agreement. The District agreed that the "shared hallway and the Orchard Mesa Middle School (Gym) are the District's sole responsibility". "Beginning in 2010 the County determined that it would no longer participate in funding the Pool". "Despite the County's decision...the County re-considered its position and agreed that it would again fund the Pool".

Item 2 of the 2014 agreement states, "The Parties agree that because the Pool is located on District property that the District is and shall be the owner of the Pool." Before this statement, the Pool facility was considered to be owned by the City and County and located on District property. The District believes that in 2014 there was considerable deferred maintenance when the City and County "gave" the pool to the School District.

Item 3 "The City and County shall have no claim to the Pool and/or the real property on which it is located. The Parties may upon, expiration or termination, agree to a disposition of the Pool and/or equipment; but absent an agreement, the District as owner shall have the sole right to use, sell or otherwise dispose of the Pool premises...". It is the District's responsibility to demolish the pool and gym upon termination of this agreement and therefore we would offer the cost of demolishing to the City and /or County.

Item 7, of the 2014 agreement, "The Parties acknowledge and agree that the City will occasionally recommend major capital expenditures related to the Pool facilities and/or necessary to provide the services referenced in this Agreement. The Pool Board shall consider capital expenditures as part of the annual budget process".

Item 8, "the Pool Board shall consider, and if a majority thereof deems it advisable, recommend the establishment of a capital maintenance fund for the Pool. All supplemental budget requests shall first be presented to the Pool Board for its consideration. If and/or when budgeted the City and County shall contribute equally to the maintenance fund in order to maintain the pool and pool building in a safe and useful condition." Please notice the School District is not asked to contribute to capital requests.

Item 14, "during the term of this Agreement or any extension thereof the District's sole financial obligations to the Pool's operating expenses shall be the payment of premiums for property insurance covering the Pool, internet access in the Pool area... and payment for all gas and electric utilities, water and trash service reasonably necessary for operation of the Pool.

Orchard Mesa Pool Meeting
February 20, 2020

Meeting Location:	Hospitality Suite in the Stadium Tower 1315 North Avenue
Roll Call	
City of Grand Junction Members Present:	Greg Caton, City Manager Rick Taggart, Mayor Phillip Pe'a, Councilmember Ken Sherbenou, Parks and Recreation Director Larry Manchester, Recreation Supervisor Tricia Rothwell, Recreation Coordinator
Mesa County Members Present:	Rose Pugliese, Mesa County Commissioner
Mesa County Valley School District 51 Members Present:	Diana Sirko, Superintendent Brian Hill, Assistant Superintendent Phil Onofrio, Chief Operations Officer Doug Levinson, School Board Member

Item 1: Meeting Called to Order by Phillip Pe'a at 10:05 a.m.
Councilmember Pe'a welcomed everyone. Mr. Pe'a said that the entities would present the progress that was made since the January 28, 2020 meeting and then take public comment.

Item 4: Orchard Mesa Pool Discussion
Greg Caton stated that there has been discussion since the last pool meeting and that the School District offered an extension. Doug Levinson elaborated that the School District will continue to cover utilities through December 2021. Diana Sirko added that the School District has been exploring grants to bring the pool up to an operable condition; a grant can buy time. Rose Pugliese shared that the County had a conversation with the V.A., and that they are willing to come to the table. Ms. Pugliese said that the County will remain a partner for up to $100,000.

Item 2: Public Comment
The following members of the public spoke:

Allison Colby
Mary Mastin
Mercedes Borman
Rhonda Bates
Julie Dorsey
Dixie Fawson
Carissa Fisher
Nick Allen

Item 3: Approve Minutes from January 28, 2020.
This item was not discussed.

Item 5: Orchard Mesa Pool Operation July 2020 to June 2021
Rose Pugliese thanked everyone for coming and reiterated that they are trying to come to a solution, it will just take some time. Greg Caton also thanked everyone for coming and stated that the pool will be open through December 2021. Mr. Caton explained that things are coming to the end of their useful life. Greg Caton summarized that in 2017 the needs of the pool were discussed. Mr. Caton said that when the ballot didn't pass, repairs and upgrades were scaled back to about $2,000,000. Greg Caton explained that the City didn't want to take on a facility that needed a lot of repairs. Mr. Caton said that twenty-two months will give us time to find solutions but cautioned that grants for end of life cycle problems aren't very likely. A member of the audience asked if there will be a new Board. Rose Pugliese answered that the commitments are the same from the three entities, and that the next meeting will be announced when scheduled. Diana Sirko wanted to clarify the grant. The BEST grant asked what the plans were for the pool and gym. Diana Sirko explained that the grant had more options than originally thought. Ms. Sirko reiterated that the School District will not be in the pool business but is interested in remaining a partner for the community.

Item 6: Joint Press Release
This item was not discussed.

Item 7: Next Meeting
A date was not set.

Item 8: Adjourn
Meeting adjourned at 10:57 a.m.

Respectfully submitted,

Tricia Rothwell
Recreation Coordinator

CITY OF Grand Junction COLORADO

CITY MANAGER'S OFFICE

Memorandum

TO: Members of City Council

FROM: Greg Caton, City Manager

Ken Sherbenou, Parks and Recreation Director

DATE: January 3, 2023

SUBJECT: Recreational Amenity for Orchard Mesa

Recognizing the need for additional recreational services in the Orchard Mesa area, and in alignment with the priorities set forth in the PROS Master Plan, Staff wanted to introduce the concept of developing an indoor recreational amenity. This amenity would expand recreational opportunities for Orchard Mesa residents while providing access to indoor space for turf sports and other uses currently lacking in the community.

The 2021 Parks, Recreation and Open Space Master Plan has identified the Orchard Mesa community as having a lower level of service. Dixon Park, a 4-acre Park used extensively for field sports was also sold to a new owner recently who has closed off the park from public access. Dixon Park and the Orchard Mesa Pool were the only major park and recreation facilities in Orchard Mesa aside from Eagle Rim Park. Their removal makes the already low level of service in Orchard Mesa even lower.

To address this challenge, the idea of an alternative recreational amenity on Orchard Mesa has surfaced. The trajectory of indoor recreational facility development in communities often includes first an indoor pool (which are usually phased out), followed by a multi-purpose indoor CRC, and then finally an indoor Field House to complement the CRC. Field Houses can offer a wide array of recreational amenities including, first and foremost, indoor turf for field sports such as soccer and lacrosse. Field Houses do not have an aquatic component. As such, they are less expensive to build and operate, and well complement a multi-purpose CRC that is heavy on aquatics. Furthermore, field sports such as soccer and lacrosse, are on the rise with thousands of current participants in Grand Junction. There is a lack of indoor space for these users, which has worsened with the recent closure of the privately run Skyline Sports next to Sam’s Club, 2522 Highway 6 and 50.

As shown in the highlighted areas above from the PROS Master Plan, the pursuit of a Field House in Orchard Mesa fits the PROS Master Plan vision. Should Council provide direction to pursue this opportunity, the next step would be to engage with an architectural firm to conduct a planning process to include site selection, concept design and an operational plan. Several sites should be considered but there is one leading contender given an initial examination: Burkey Park South.

See the enclosed map with this memo for the location of this 9-acre undeveloped park. With close proximity to the Mesa County Fairgrounds and with the continued improvement and increasing utilization of the outdoor fields at Veterans Park (located at the Fairgrounds), synergy with other recreational components is possible. The Gunnison Bluffs trail system and the Old Spanish Trail is also connected to Burkey Park South. Mesa County is currently doing a Trails Master Plan to expand this trail network and connections. Finally, the land is owned by the City, and similar to Matchett, a facility would be owned and operated by the City.

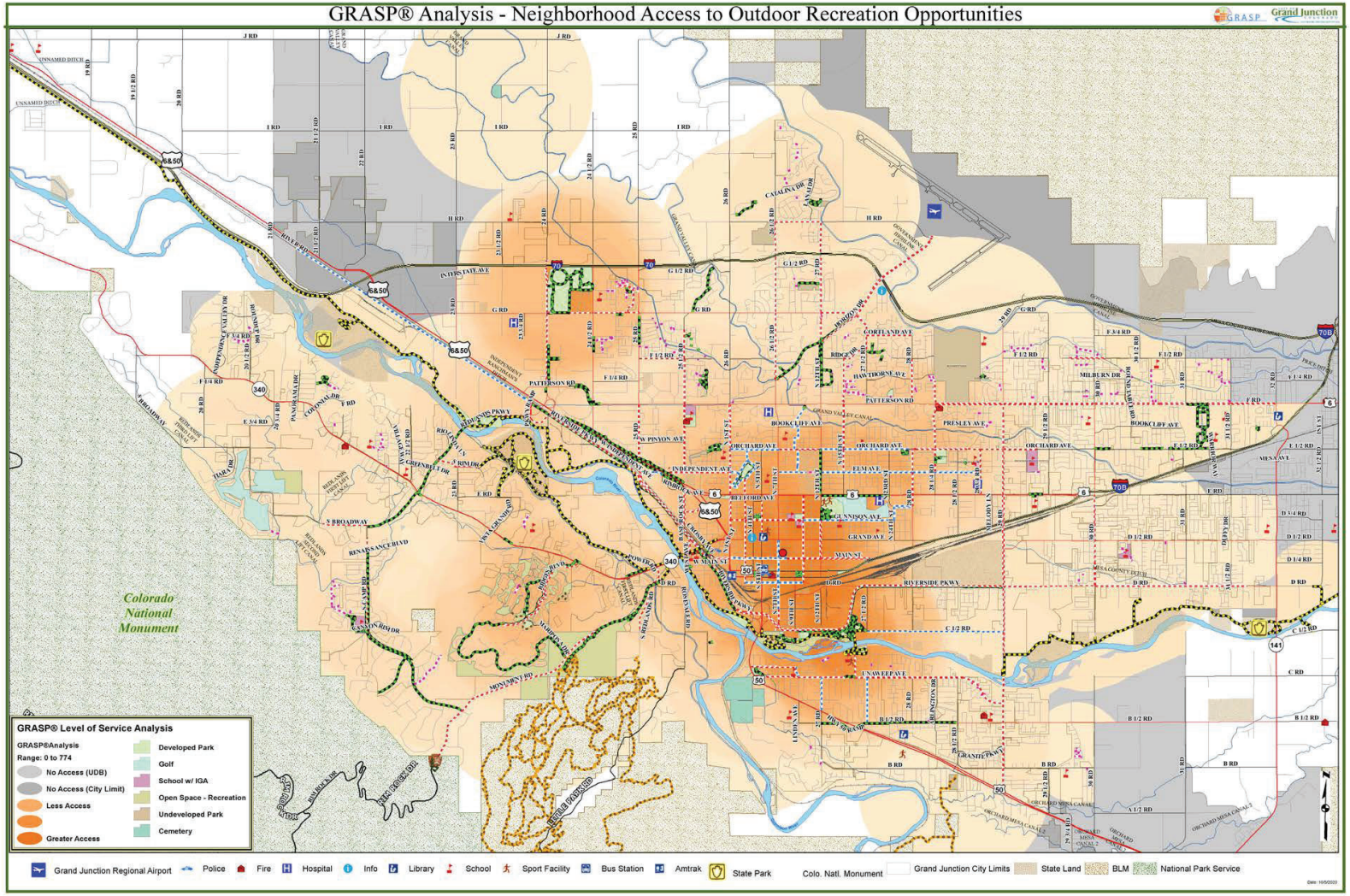
The development of an indoor recreation facility would address a priority outlined in the PROS Master Plan and embarking on a planning process for this facility in Orchard Mesa would send a clear message about the City's commitment to serve this part of the Grand Junction community. Staff would be available to discuss this concept further if it is scheduled for a future workshop.

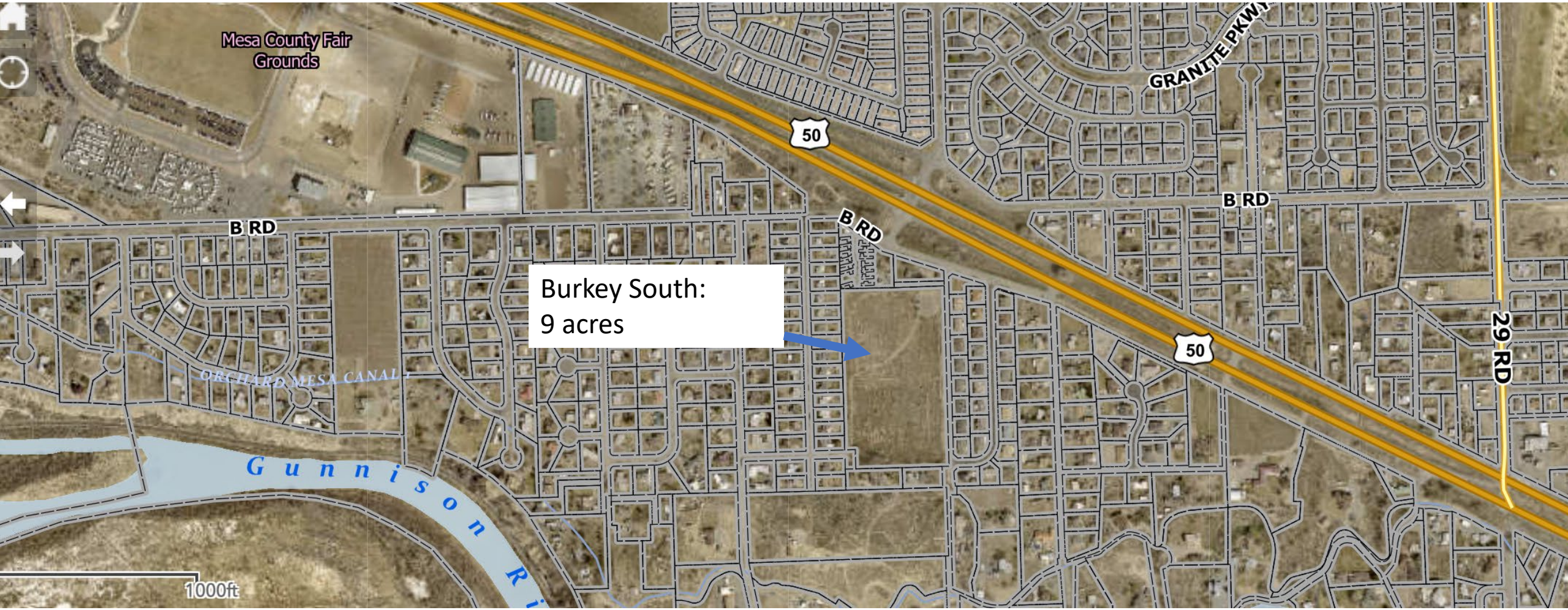
C: Department Directors

Attachments:

- GRASP (Georeferenced Amenities Standards Program) Map Showing Current Level of Service community wide and including Orchard Mesa
- Burkey Park South Location

Figure 9: Neighborhood Access to Outdoor Recreation
*(Refer to **Appendix C** for the Outdoor Recreation List)*




Mesa County Fair Grounds
B RD
B RD
B RD
50
50
GRANITE PKWY
29 RD
Burkey South:
9 acres
ORCHARD MESA CANAL
Gunnison Ri
1000ft