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# Office of Climate Action, Sustainability, & Resiliency (CASR)

2024 City Council Presentation

# Mission / Vision

## Sec. 2-403. - Mission

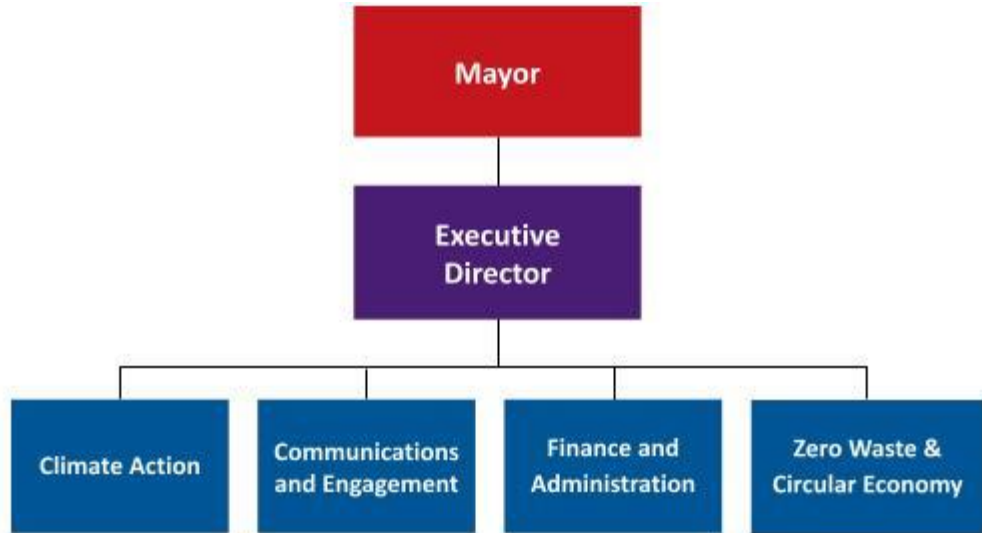
a) The office's mission is to:

1. **Act with urgency** to proactively mitigate climate change by advancing science-based strategies to **reduce greenhouse gas emissions** on a scale and timeline that align with the recommendations from the Intergovernmental Panel on Climate Change;
2. **Cultivate resiliency** in the face of potential climate change-related emergencies;
3. Secure an economically, socially, and environmentally **sustainable city for generations to come**; and
4. Ensure that the setting of goals and metrics and monitoring of results considers **equity**.

b) The office must pursue its mission while ensuring that **equity, access and inclusion are integrated as a core value**.

c) The office must coordinate with other agencies as appropriate to assist in developing and transitioning a **local skilled workforce** to implement low-carbon or zero-carbon solutions.

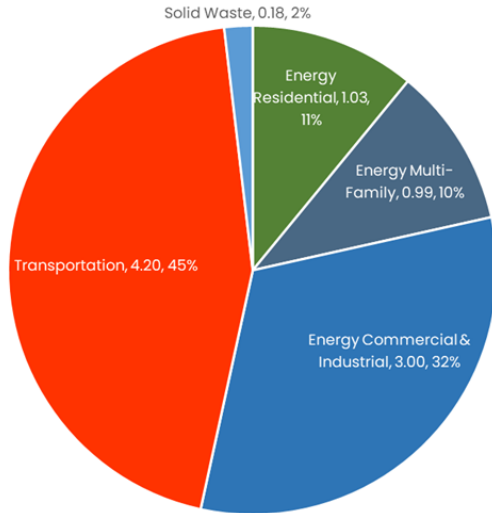
# Organizational Chart



# Key Strategic Metrics

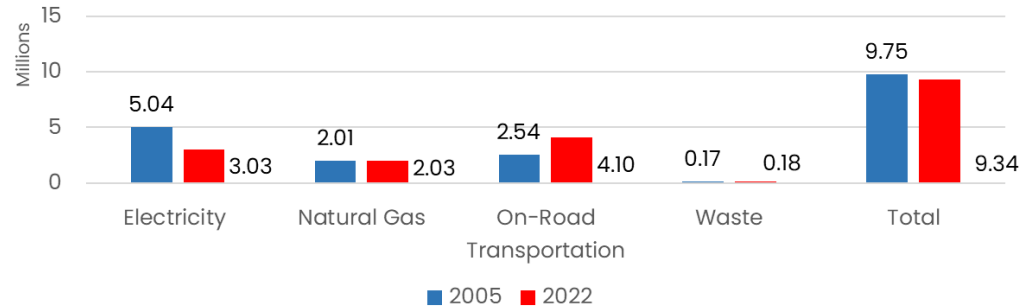
Denver's 2022 GHG Emissions (Mmt - CO<sub>2</sub>e)

Shown in million metric tonnes and % of total



Note: In 2022 Denver utilized updated data sources for Transportation. These sources utilized models based on actual vehicle movements in 2022 as compared to older models.

Emission Sectors 2005 compared to 2022  
metric tonnes CO<sub>2</sub>e



# Addressing Inequities

## CASR Addressing Inequities

There are tree equity gaps in Denver's neighborhoods. Tree canopy cover affects temperature, quality of life, and human health. Many of our NEST neighborhoods have lower tree canopy cover compared to other neighborhoods. For example, Sun Valley only has 5% tree canopy cover compared to 52% in Country Club. The Equitable Community Tree Planting Initiative is a program that addresses low tree canopy through community partnership.

## Communities Served

We will plant 2,100 trees over the next three years using culturally relevant engagement approaches in the following neighborhoods: Globeville, Elyria Swansea, Chaffee Park, Sunny Side, Highlands, West Colfax, Villa Park, Barnum, and Valverde. A new grant will allow us to double this, plus plant 100 trees in Sun Valley.

# 2024 Budget Goals

## 2024 Base Budget

### Fulfill Regulatory Obligations and Enhance Equity Services

- Energize Denver (Building Benchmarking, Performance, Electrification) – Enhance existing compliance assistance, consolidate data systems, provide greater financial and technical assistance to affordable housing and other equity priority buildings
- Waste Reduction (Bag Fee, Skip the Stuff, Waste No More) -- Initiate new compliance assistance, create compliance reporting portal, develop and deliver education and outreach

### Deliver Programmatic Services

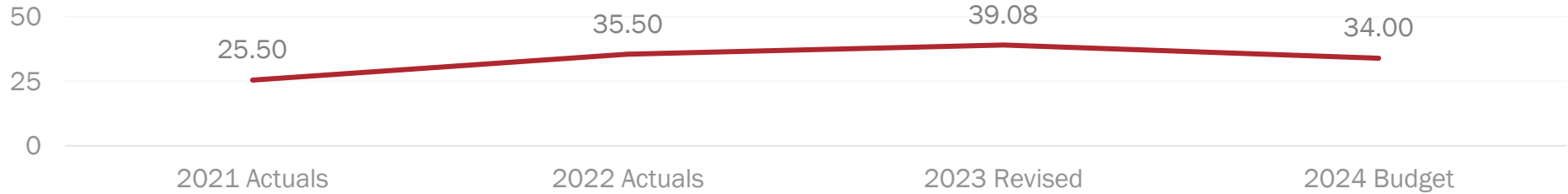
- Electrified mobility, solar installations, healthy homes
- Workforce development, tree planting, cooling, environmental justice

### Provide Consistent Community Engagement

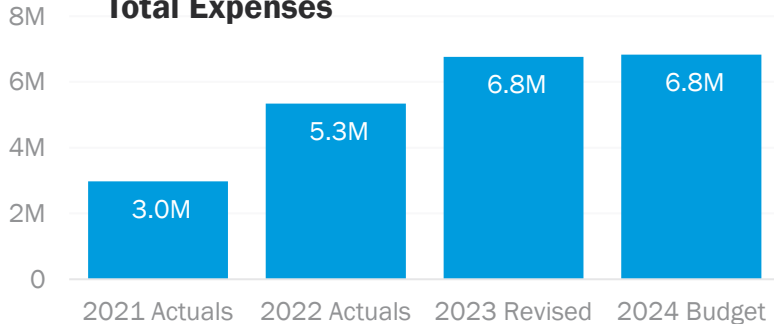
- Certifiably Green Denver, Sustainable Neighborhoods, Sustainable Schools
- NEST outreach, Promotoras, digital communications

# General Fund Expenses, Revenues, and FTEs

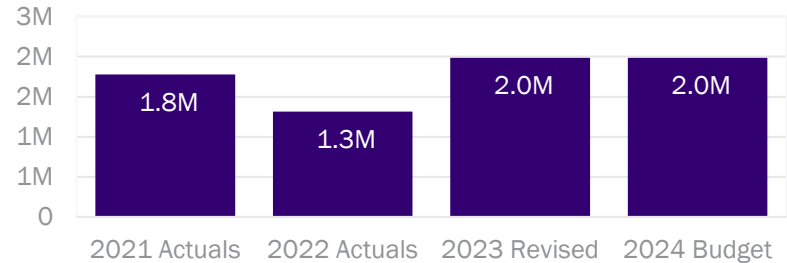
## Total FTE



## Total Expenses

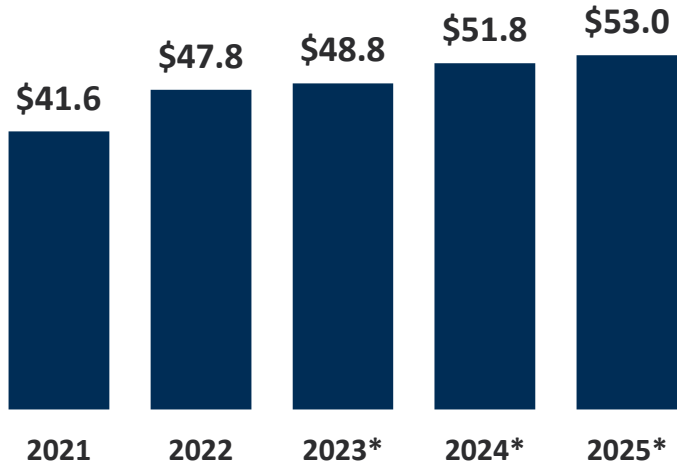


## Total Revenues



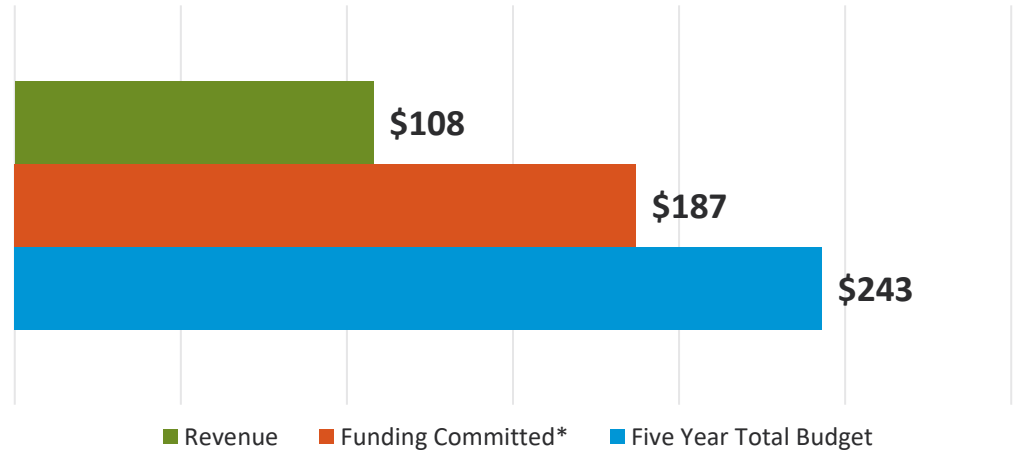
# Non-General Fund Funding Sources -- CPF

### CPF Revenue (in millions)



\*Projected

### Climate Protection Fund Summary as of 8/31/2023 (in millions)

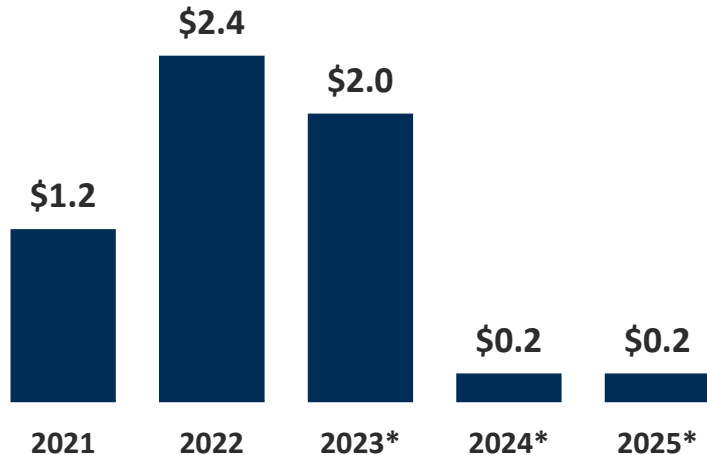


\*Committed = Contract in effect, RFP has been issued, grant matching funds earmarked or inter-agency agreement has been made.



# Non-General Fund Funding Sources – Bag Fee

**Bag Fee Revenue** (in millions)



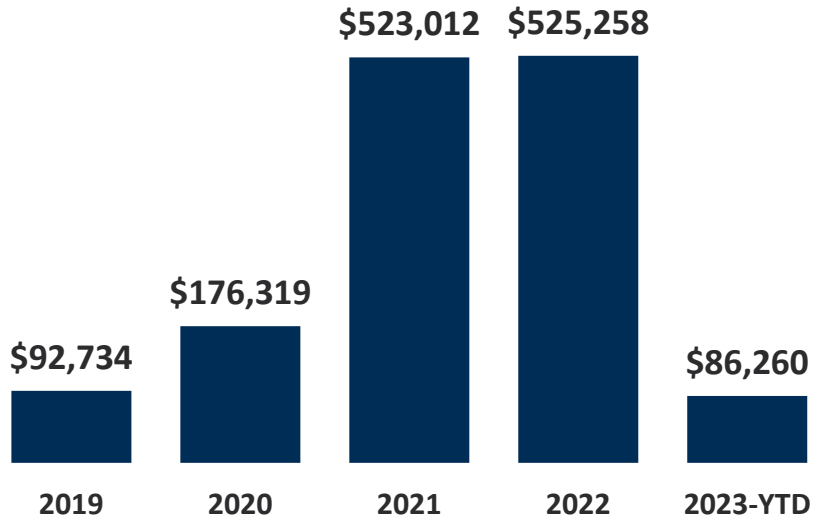
\*Projected

## Allowable Uses for the Disposable Bag Fee Fund include:

- Administration of the program
- Education, program requirements, benefits to the environment and provision of reusable bags to residents
- Fund community clean-up events and other activities aimed at reducing trash and other single-use products

# Non-General Fund Funding Sources – GBF

## Green Building Fund (GBF) Revenue



\*Projected

## Allowable Uses for the fund include:

- Acquisition and improvements to existing green space within the city
- Water quality improvements and green infrastructure
- Urban forest protection and expansion
- Green roof creation
- Solar adoption and energy efficiency projects in areas of low-income and affordable housing populations.

# Non-General Fund Funding Sources – Grants

Grant	Amount	Purpose
State DOLA Grant	\$1,000,000	Supporting community solar garden construction
HUD - Congressionally-directed Economic Development Initiative-Community Project Funding (CPF) grant	\$2,000,000	Funding will be used for the Healthy Homes program to support electrification of space and water heating and improvement in indoor air quality in 100 affordable multifamily apartment units for those with respiratory conditions
Inflation Reduction Act (IRA) Direct Pay	\$20,340,000*	Direct pay reimbursements through the Inflation Reduction Act for approximately 37% of the costs for renewable energy investments in city-owned/funded projects

\*Estimated

# 2024 Budget Alignment with City Council Priorities



Community Engagement and  
Customer Service



Affordable Housing and  
Support for People  
Experiencing Homelessness



Community Safety and  
Wellness



Workforce, Small Business,  
and Non-profit Support



Climate Action



Multi-Modal  
Transportation

# 2024 Budget Alignment with City Council Priorities (continued)



## City Council Priorities

Electricity consumption accounts for 30% of Denver’s greenhouse gas emissions. The deployment of clean energy resources in Denver can accelerate decarbonization, enhance community resilience, and create economic benefits for the community. CASR’s 2024 CPF budget allocates over **\$8.5 million** for clean energy resources:

- **\$3 million** for Denver owned and operated solar projects at public facilities
- **\$1.5 million** to support residential solar adoption and increased solar access for income-qualified households; and
- **\$4 million** for solar incentive programs to support clean energy installations at schools and non-profit human service providers.

# 2024 Budget Alignment with City Council Priorities (continued)



City Council Priorities

Buildings and Homes account for 53% of Denver’s greenhouse gas emissions. CASR’s 2024 budget allocates over **\$22 million** for lowering the greenhouse gas emissions and improving the resiliency of buildings and homes in Denver:

- **\$15.6 million** for Energize Denver’s Building Electrification Program.
- **\$3.5 million** for Home Energy Rebates incentivizing homeowners to upgrade to a heat pump.
- **\$2.2 million** for the Healthy Homes program for income-qualified households.
- **\$1.5 million** to implement the Energize Denver Performance Requirements.
- **\$520,000** for all electric new building pilots, including affordable housing projects.
- **\$500,000** for building code consultants.
- **\$920,000** capital for Westwood Recreation Center to be built all-electric.
- **\$350,000** for a Data Solution to help analyze impact of building and homes team programs and work.

# 2024 Budget Alignment with City Council Priorities (continued)



## City Council Priorities

Transportation accounts for 45% of Denver’s greenhouse gas emissions and is our top source of air pollution. Our 2024 budget allocates over **\$7 million** for electric transportation options, including:

- **\$2 million** for EV replacements of city vehicles that are at the end of their useful life;
- **\$1.5 million** for EV charging infrastructure that will both expand public access to charging at city facilities that serve under resourced neighborhoods and in support of Denver's municipal fleet electrification efforts;
- **\$2.8 million** to continue Denver’s popular e-bike voucher program; and
- **\$1.3 million** for additional community-facing rebates, incentive programs, and electrified microtransit services that encourage a transition to electric transportation options.

# 2024 Budget Alignment with City Council Priorities (continued)



## City Council Priorities

Eliminating waste and creating a circular economy are essential to reduce greenhouse gas emissions from consumption and conserve natural resources. In 2022, 70% of Denver voters approved the Waste No More ballot initiative. To support implementation of this ordinance and broader zero waste and circular economy goals, CASR will:

- Invest **\$500,000** to implement a robust, citywide education and outreach effort to support Waste No More implementation.
- Invest **\$232,000** towards the development of an information technology (IT) solution to support the Waste No More requirement for covered businesses to submit Annual Recycling Plans.
- Invest **\$500,000** of Disposable Bag Fee funds to launch new zero waste programming designed to bolster citywide litter abatement efforts and study local impacts of single-use plastic pollution.



## 2024 Budget Alignment with City Council Priorities (continued)



City Council Priorities

Climate change necessitates that we plan for adaptation and build community resilience. Our top vulnerabilities are extreme heat, increased intensity of extreme weather, unhealthy air quality, and increased drought and water scarcity. In 2024, we plan to invest:

- **\$823,000** on the Equitable Community Tree Planting Initiative
- **\$500,000** on raingardens and water wise native landscapes
- **\$500,000** on the Promotoras program to engage the community in climate education and solutions
- **\$200,000** (cost share with renewable energy) in the Renewables and Resilience program for Human Service Providers to help our nonprofits lower costs and stay open during outages
- **\$1.2M** in the Healthy Homes program (cost share with Buildings)
- **\$1M** on heat planning, response and mitigation efforts
- **\$500,000** on resilience hubs

## 2024 Budget Alignment with City Council Priorities (continued)



City Council Priorities

Environmental justice demands that everyone—regardless of race, ethnicity, national origin, or income—has the right to the same environmental protections and benefits, as well as meaningful involvement in the policies that shape their communities. In 2024, we plan to invest:

- **\$795,000** for the Environmental Justice Support Fund that will co-create and implement programs in 5 of Denver’s most polluted neighborhoods to have meaningful representation and a voice in air quality, greenhouse gases and water quality rule-making proceedings.
- **\$350,000** in Environmental, Climate and Community Empowerment Programs for Indigenous communities and organizations
- **\$695,000** for Food Justice and Healthy Foodsheds solutions that increase overall health of people and nature
- **\$400,000** for the Promotoras program to engage NEST neighborhoods in climate and environmental justice solutions

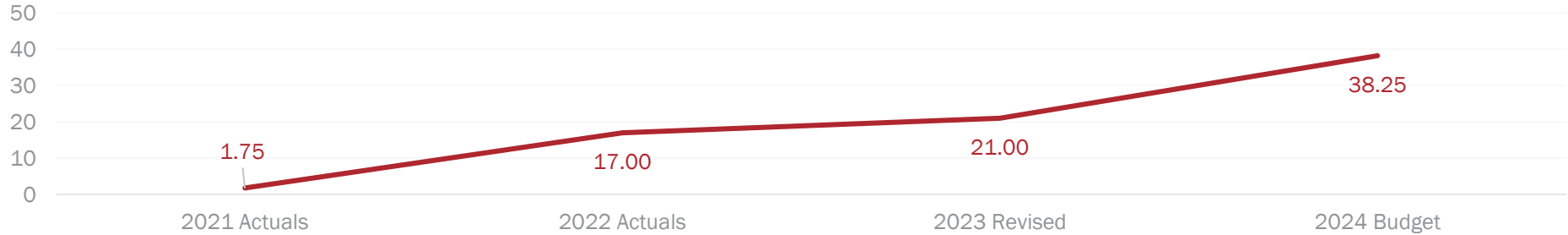
# Summary of 2024 General Fund Budget Expansions

Account Category	Permanent	One-Time	Total 2024
Personnel	-\$770,251	\$0	-\$770,251
Services and Supplies	\$539,750	\$400,000	\$939,750
Capital Equipment	\$0	\$0	\$0
Internal Services	\$0	\$0	\$0
<b>Total</b>	<b>-\$230,501</b>	<b>\$400,000</b>	<b>\$169,499</b>

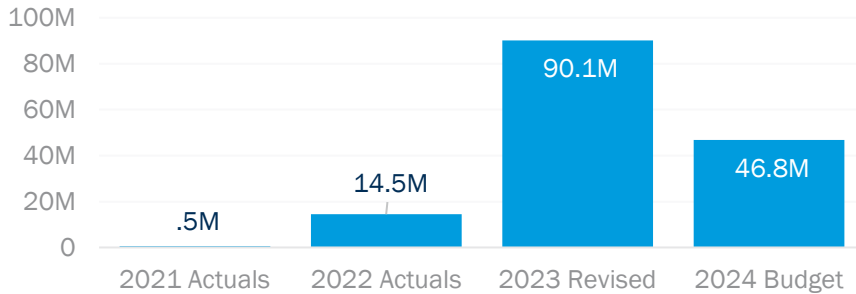
Permanent FTE	On-Call/Limited FTE	Total 2024 FTE
-4.25	0.00	-4.25

# Climate Protection Fund Expenses, Revenues, and FTEs

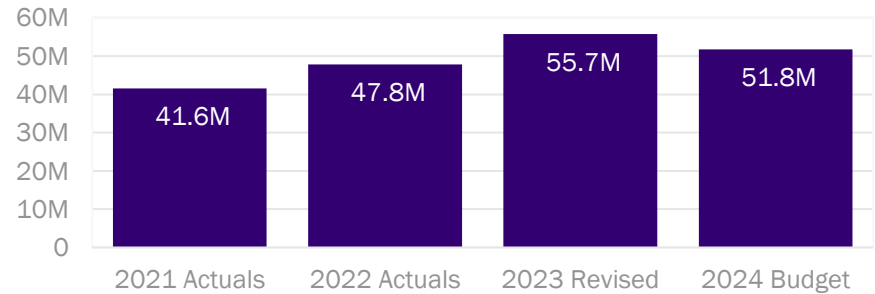
## Total FTE



## Total Expenses *\*2023 Budget includes roll forward of unencumbered funds*



## Total Revenues



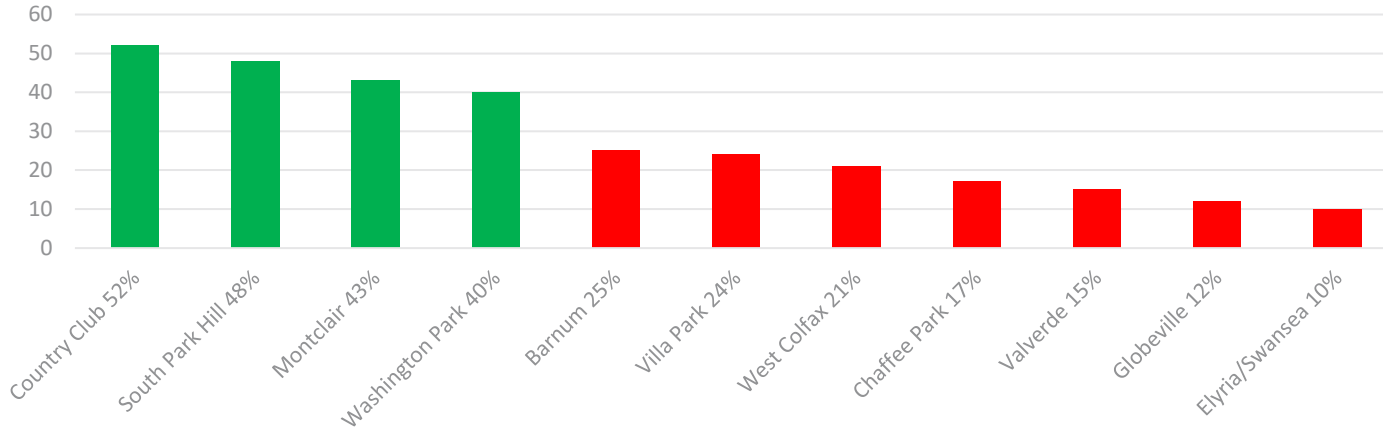
# Approved Capital Improvement Programs

Title/Description	Budget Impact
Solar Infrastructure Improvements	\$3,000,000
Energy Conservation Improvements	\$900,000
Electrified Mobility Improvements	\$1,000,000
Solar Infrastructure Maintenance	\$75,000
Electrified Mobility Maintenance	\$50,000
Colfax BRT Support	\$6,000,000

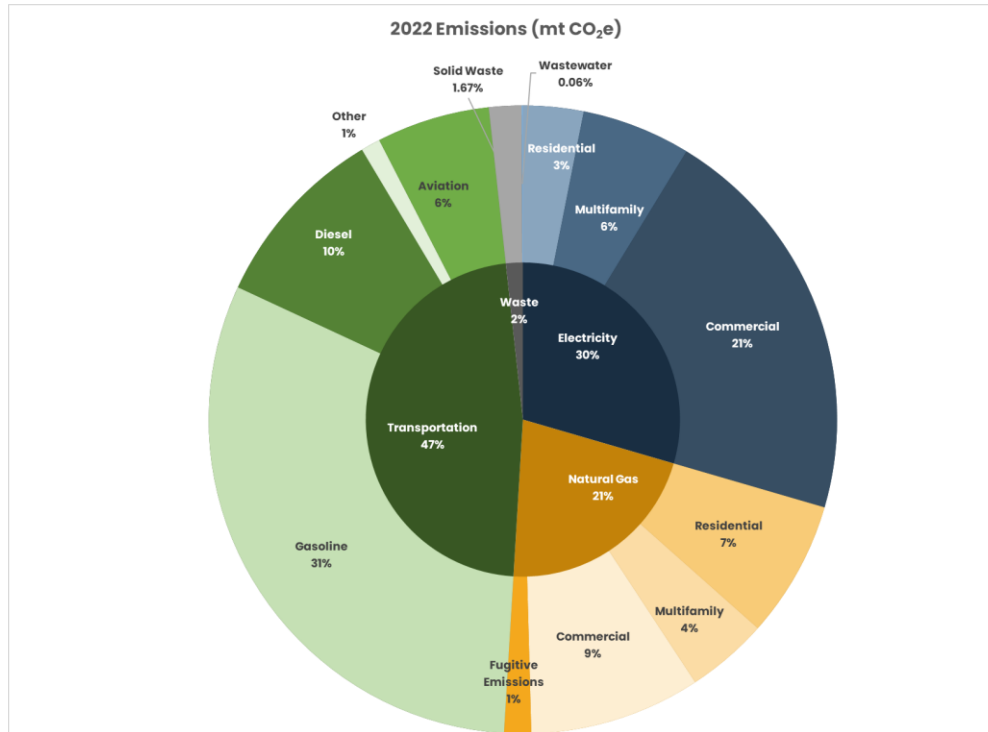
# Appendix

# Tree Canopy Inequity

Denver's Highest Tree Canopy Neighborhoods vs. ECTPI Tree Planting NEST Neighborhoods



# 2022 GHG Emissions by Source and Sector





# Scale of near-term IRA direct pay opportunity for city-owned/funded projects

Description	Total Cost	Est. IRA Direct Pay %	Direct Pay Value (\$)
CASR owned/operated solar projects	\$41,250,000	37%	\$15,450,000
RDCS Tranche 1 - DPR Carports, DEN, NWC, etc.,	\$18,000,000	30%	\$5,400,000
RDCS Tranche 2 - Botanic Gardens	\$3,750,000	50%	\$1,875,000
RDCS Tranche 3 - Denver Public Schools*	\$9,000,000	50%	\$4,500,000
On-Call Solar Deployment (2023)	\$3,500,000	35%	\$1,225,000
On-Call Deployment (2024)	\$3,500,000	35%	\$1,225,000
On-Call Deployment (2025)	\$3,500,000	35%	\$1,225,000
CASR solar awards to eligible non-profits	\$12,000,000	40%	\$4,800,000
CASR-funded projects 2023	\$4,000,000	40%	\$1,600,000
CASR-funded projects 2024	\$4,000,000	40%	\$1,600,000
CASR-funded projects 2025	\$4,000,000	40%	\$1,600,000
CCD Ground Source HP Installations**	\$7,050,000	30%	\$2,115,000
DPR - Smith Rd. (2024)	\$550,000	30%	\$165,000
DPR - Westwood Rec Center (2024)	\$6,500,000	30%	\$1,950,000
Other CCD new construction/HVAC retrofits?	tbd	30%	tbd
<b>Total (2023-2025)</b>	<b>\$54,300,000</b>	<b>37%</b>	<b>\$20,340,000</b>

No EVSE projects included at this time as eligibility of current projects is reviewed.

\*Not confirmed. 1 of 8 submitted projects selected as part of recent RFP. Planning to resubmit remaining projects.

\*\*CASR can help other CCD capital agencies recover IRA dollars for qualifying HVAC systems (i.e., Ground Source Heat Pumps)

Case Studies: Potential cost recovery of GSHP installations at bond funded projects

### Smith Rd. ~4% of construction costs

\$165,000 in direct pay value for Smith Rd. out of \$4,178,351 construction work order for the entire project (May 3, 2023)

### Westwood ~5% of original cost estimate

\$1.95 million in estimated direct pay value out of \$37.5 million original Elevate Denver estimate ([May 20, 2021 – information sheet](#))