

Environmental Management& Sustainability

Fiscal Year 22/23 Proposed Budget

APRIL 18, 2022

Department's Purpose

To provide a clean, healthy environment for ourcommunity with a focus on reducing carbon emissions, increasing use of renewable energy and reducing waste.









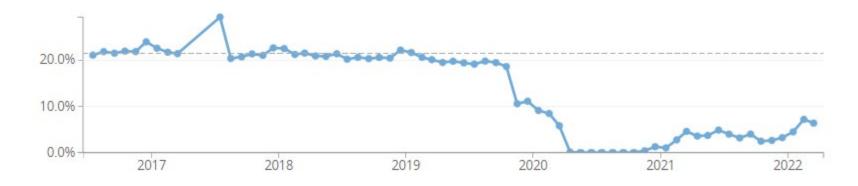




Household Hazardous Materials Facility Users



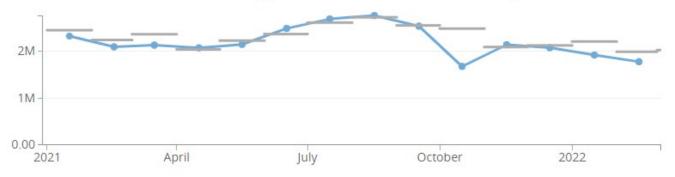
Recycle Blue Barrel Diversion Rate (% of total trash that is recycled)



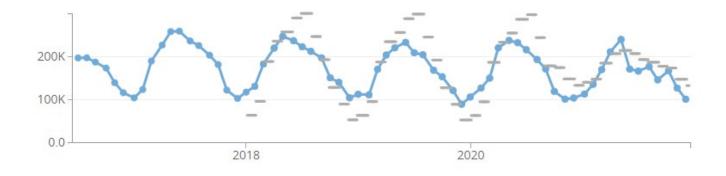
Performance Measures:

Solid Waste

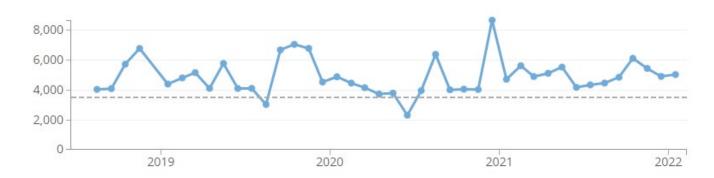
Energy Use in kWh Across All Buildings



Sustainability - Renewable Energy in kWh



Sustainability - Public Outreach and Engagement



Performance Measures:

Environmental & Sustainability

FY 22/23 Budget Enhancements

8 Additional Operators

Allows the department to maintain adequate service levels for a growing City as well as balance workload.

Routing Specialist

Allows the department to continue to maintain efficiencies in balanced routing operations.

2 Front Load Trucks

Allows the department to continue to service the growing commercial sector within the City.

1 Container Truck

Allows the department to continue to service the growing commercial sector within the City.

1 ASL Truck

Allows the department to continue to service the growing residential sector within the City, specifically within Southeast Mesa.

Expenditure Summary - Solid Waste Management

Core Business Process	FY 20/21 Year End Actuals	FY 21/22 Revised Budget	FY 21/22 Year End Estimate	FY 22/23 Proposed Budget
Solid Waste Operations				
Support & Administration	\$5.6	\$7.1	\$7.2	\$7.7
Barrel Collection	\$18.5	\$17.5	\$19.5	\$19.8
Bin Collection	\$5.6	\$6.7	\$6.4	\$7.3
Roll-Off and Neighborhood Cleanup	\$2.2	\$2.6	\$2.3	\$2.5
Household Hazardous Waste	\$0.6	\$1.2	\$1.2	\$0.9
Recycling Outreach & Education	\$0.4	\$0.6	\$0.6	\$0.6
Total	\$32.9	\$35.7	\$37.2	\$38.8
	,			
Total FTE	150.0	150.0	150.0	159.0

Dollars in Millions

Expenditure Summary - Environmental and Sustainability

	FY 20/21	FY 21/22	FY 21/22	FY 22/23
Core Business Processes	Year End Actuals	Revised Budget	Year End Estimate	Proposed Budget
Water Quality	\$0.2	\$0.3	\$0.3	\$0.3
Air Quality	\$0.2	\$0.2	\$0.2	\$0.2
Hazardous Materials/Waste	\$0.2	\$0.2	\$0.2	\$0.2
Storage Tanks	\$0.1	\$0.2	\$0.2	\$0.5
Sustainability	\$1.0	\$1.2	\$0.9	\$1.3
Asbestos & Lead	\$0.1	\$0.1	\$0.2	\$0.2
Total	\$1.8	\$2.2	\$2.0	\$2.7

Total FTE	11	11	11	11

^{*} Earned \$300,000 in SRP energy efficiency rebates in FY22

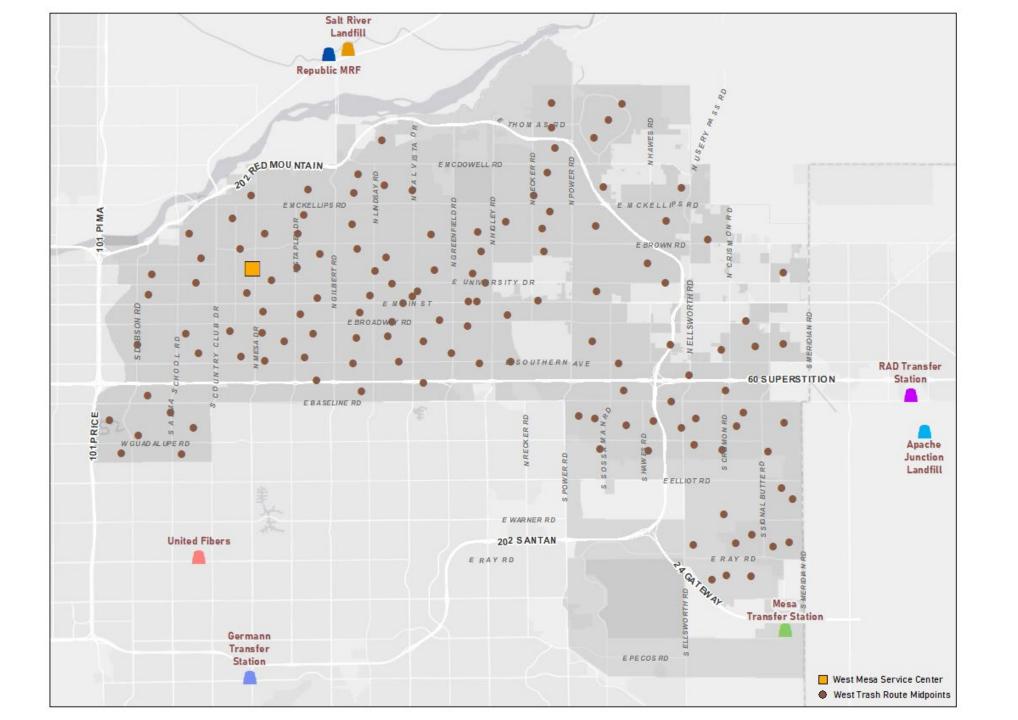
Recycling Update

Current State of Recycling

- United Fibers Contract
 - Final extension of existing contract ends 12/31/22
 - 12,500 annual tons max
 - Current cost \$35/ton, no revenue share

Future State of Recycling

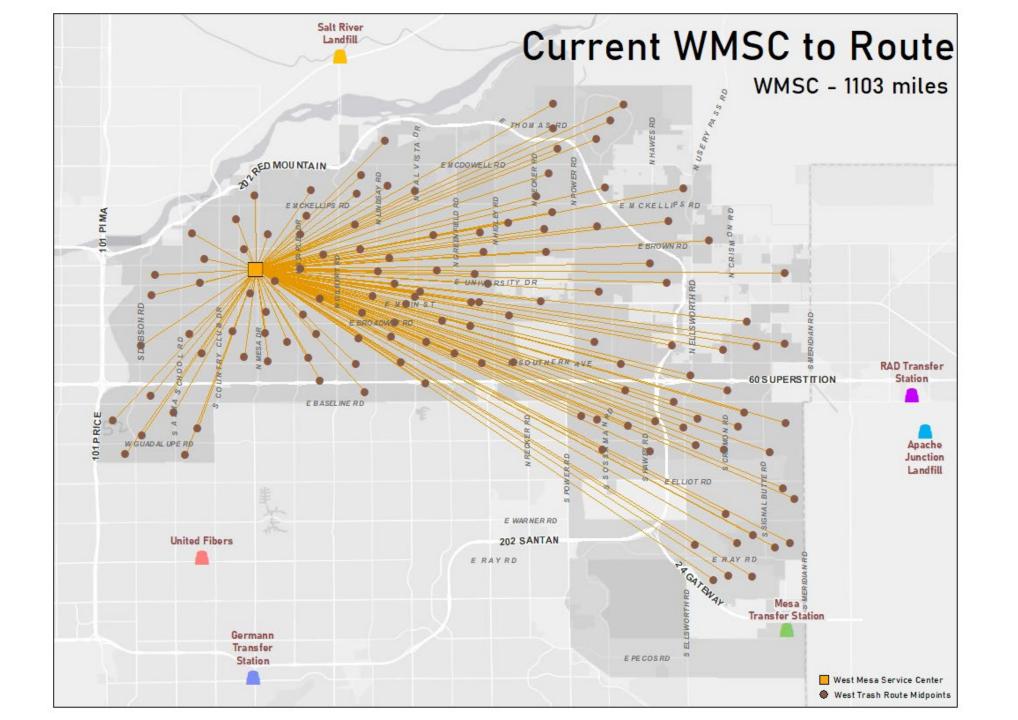
- Issue RFP for Recycling Materials
- Contract in place by 1/1/23
- Goal: All recycling materials have a facility
- Feasibility Study

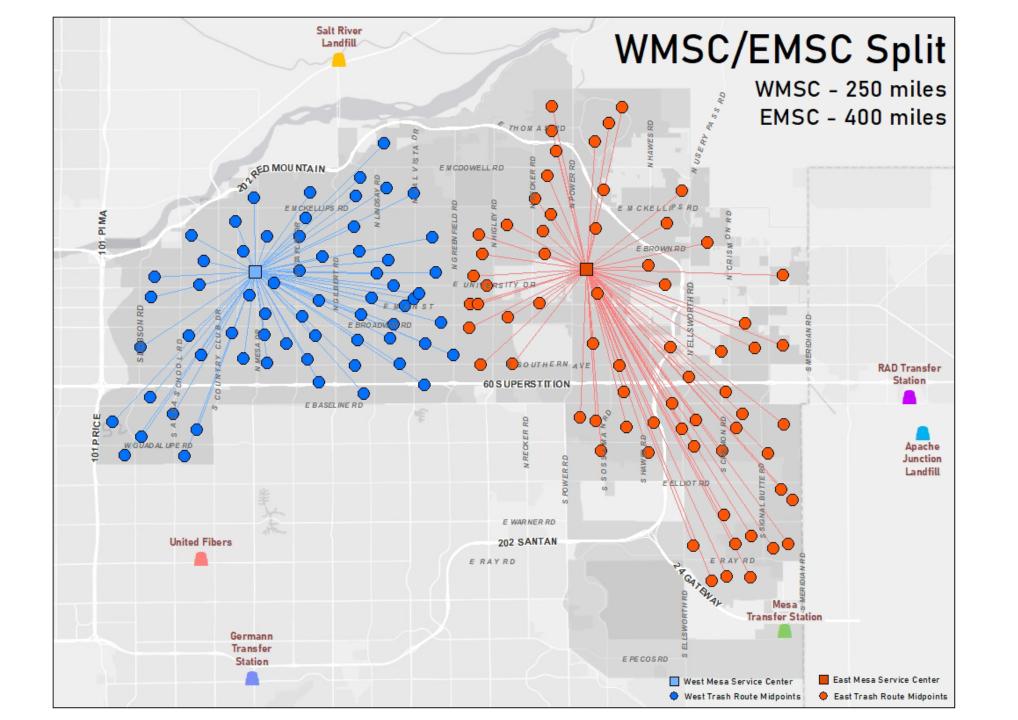


Infrastructure Update

Recommendations

- Phased approach
 - Splitting operations between East Mesa and West Mesa
 - Transfer Station/Materials Recovery Facility (MRF)

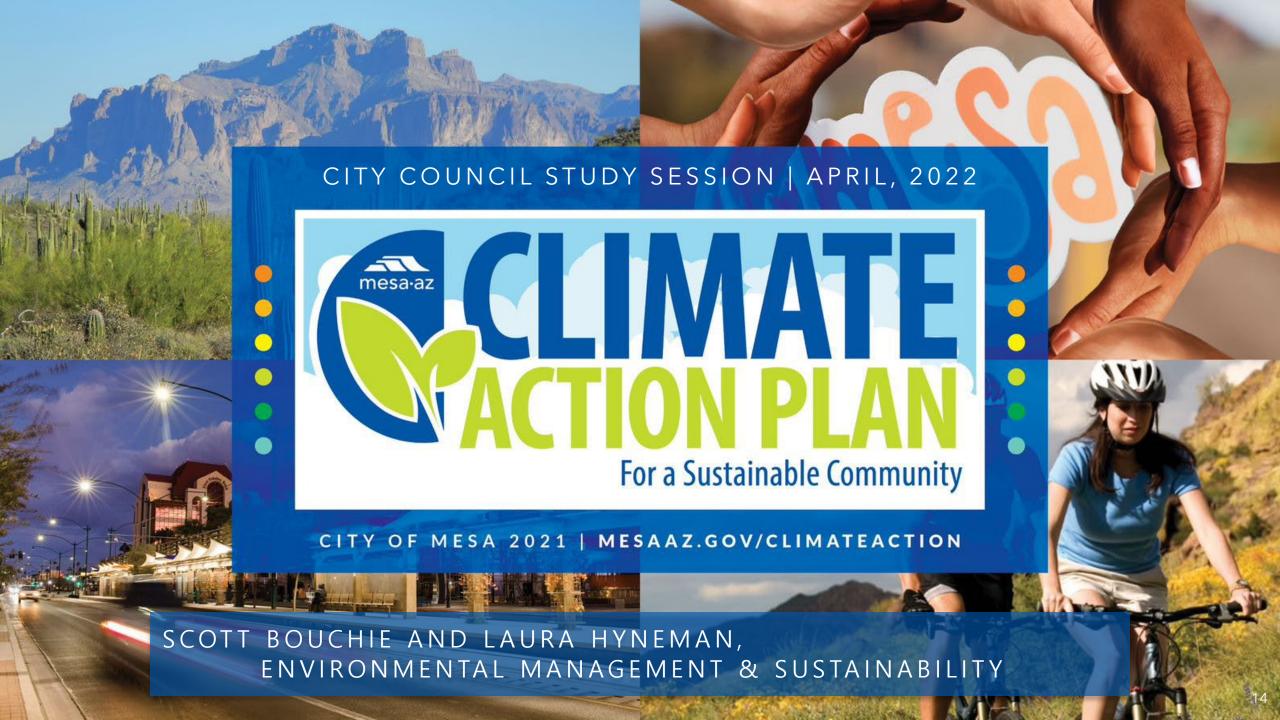




Infrastructure Update

Next Steps

- Funding identified for splitting operations
- Regional partnership discussions





Overview

Path to Achieving MCAP Goals

Tracking Progress

Projects Funded and Underway

Proposed \$10,000,000 Projects

Summary



ASPIRATIONAL GOALS



ASPIRATIONAL GOAL #1: Carbon Neutrality

- Achieve carbon neutrality by 2050 by reducing greenhouse gas emissions and enhancing carbon sinks
- Strive to reduce the carbon footprint of City Operations by 50% by 2030



ASPIRATIONAL GOAL #2: Renewable Energy

• Prioritize the use of renewable, resilient energy to achieve 100% renewable energy by 2050



ASPIRATIONAL GOAL #3: Materials Management

• Manage material responsibly and divert 90% waste from the landfill by 2050



ASPIRATIONAL GOAL #4: Community Action

• Develop community-based action items to be incorporated into the Plan

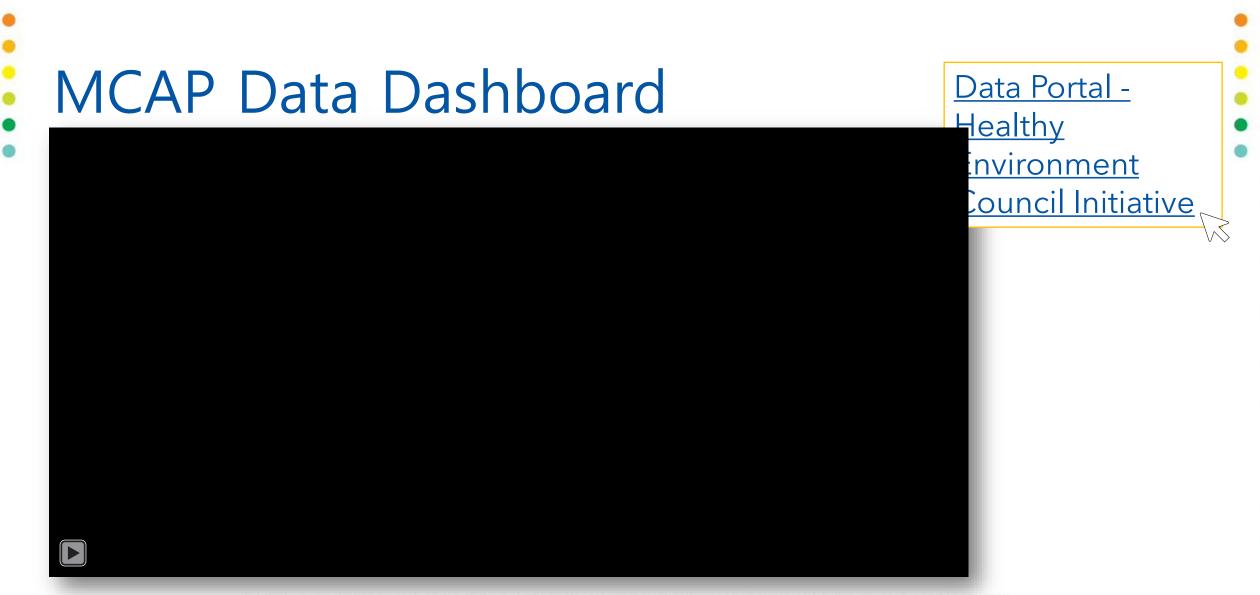




	Carbon Neutrality	Renewable Energy		Materials Management
	GHG Emissions	Renewable Energy		Tons Diverted
Milestones	(MTCO2e)	Electric	RNG	Toris Diverted
MCAP 2021	97,243	2%	0%	Not Measured
2025	72,932	25%	23%	Initiate Programs
2030	48,622	50%	50%	Optimize Programs
2050	0	100%	100%	90% Diversion

- Existing projects & market conditions
- Mesa's investment in projects



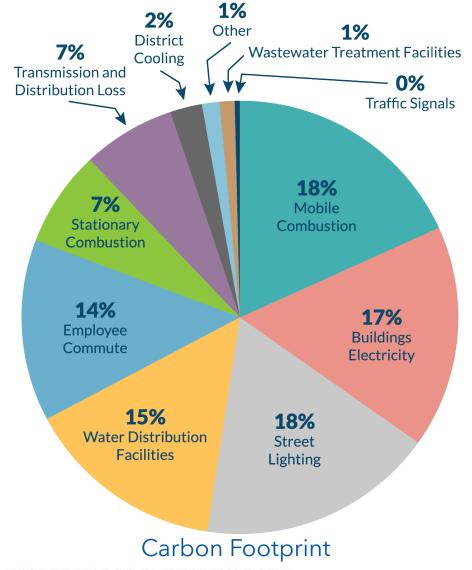






Projects Underway

- Energy Management Systems
- Solar Projects
- Utility-Scale Solar
- Streetlight Replacement Project
- Equipment Upgrades
- Smart Utility Meters (AMI)
- Teleworking
- Fleet Electrification





Fleet Electrification



Fleet Vehicles:

- 2 Plug-in hybrid EVs
- 29 EV Lightning pick-up trucks Charging Stations:
- West Mesa Service Center
- East Mesa Service Center
- Additional City sites
 Coordination with Utilities



EV Charging Downtown



Open To The Public - Fee-Based 11 Stations - Upgraded

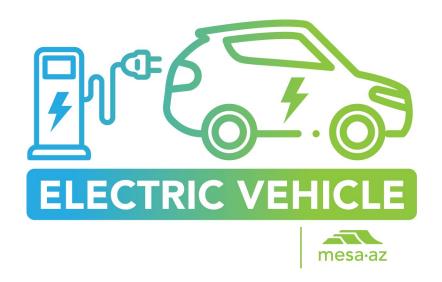
- Library
- Mesa Arts Center
- Convention Center
- ECO Mesa public parking

11 New Charging Stations (In Design)

- Mesa City Plaza
- Mesa Arts Center



EV Charging Master Plans



City Property

- 68 City sites with fleet parking
- City sites with public access
- Parks, libraries and rights-of-way

Communitywide

- Downtown development
- Partner with SRP Electric
- Collaborate with property owners and developers
- Collaborate with Mesa businesses





Proposed MCAP Projects



- \$10M set aside for MCAP Projects
- MCAP Projects Ranking Tool developed
- Departments across the City are engaged
- 50 projects were evaluated





CATEGORY	SCORING	
Goal #1 – Carbon Neutrality	100 points	
Goal #2 – Renewable Energy	100 points	
Goal #3 – Materials Management	100 points	
GHG Emission Reduction	MTCO2e value	
MTCO2e/\$1000 spent	Calculation	
Renewable Energy	% of total energy	
Resiliency of Operations	Scale	











PROJECT DESCRIPTION	AMOUNT	MTCO2e REDUCED*	TOTAL POINTS
Community EV Master Plan	\$200,000	8,300	8,650
Flare to Fuel Project	\$5,457,000	1,676	2,080
Lighting @ City Buildings	\$1,451,000	770	1,070
Solar @ Red Mountain Ballfields	\$120,000	67	443
Lighting @ Red Mountain Park	\$2,772,000	55	330
Total	\$10,000,000	10,953	

*MTCO2e = metric tons carbon dioxide equivalent emissions



Flare to Fuel Project*



*Step 1 - Food Waste to Energy Project

Existing Funding - \$5,119,000 Requested Funding - \$5,457,000







Benefits:

- Resiliency
- Emissions and Waste Reduction
- Waste to Resource



Energy Projects



Reduce energy Transition to renewable energy





Benefits:

- Resiliency
- Reduce Emissions and Hazardous Waste
- Sustainable Supply



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Summary – Impact of \$10M Investment

	Carbon Neutrality	Renewable Energy		Materials Management
	GHG Emissions	Renewable Energy		Tons Diverted
Milestones	(MTCO2e)	Electric	RNG	Toris Diverted
MCAP 2021	97,243	2%	0%	Unknown
Proposed				
Projects	-10,953*	+2%	+23%	Unknown

*EV Master Plan will reduce community emissions



