

(d) 4. City Initiatives Roadmap: Resilient And Sustainable City Infrastructure And Emergency Preparedness Enterprise Priority Quarterly Status Report

(d) 5. City Infrastructure Strategy Report

TRANSPORTATION & ENVIRONMENT COMMITTEE JUNE 5, 2023



PRESENTED BY: Kip Harkness, Deputy City Manager
Erica Garaffo, Lead Resilience Strategist

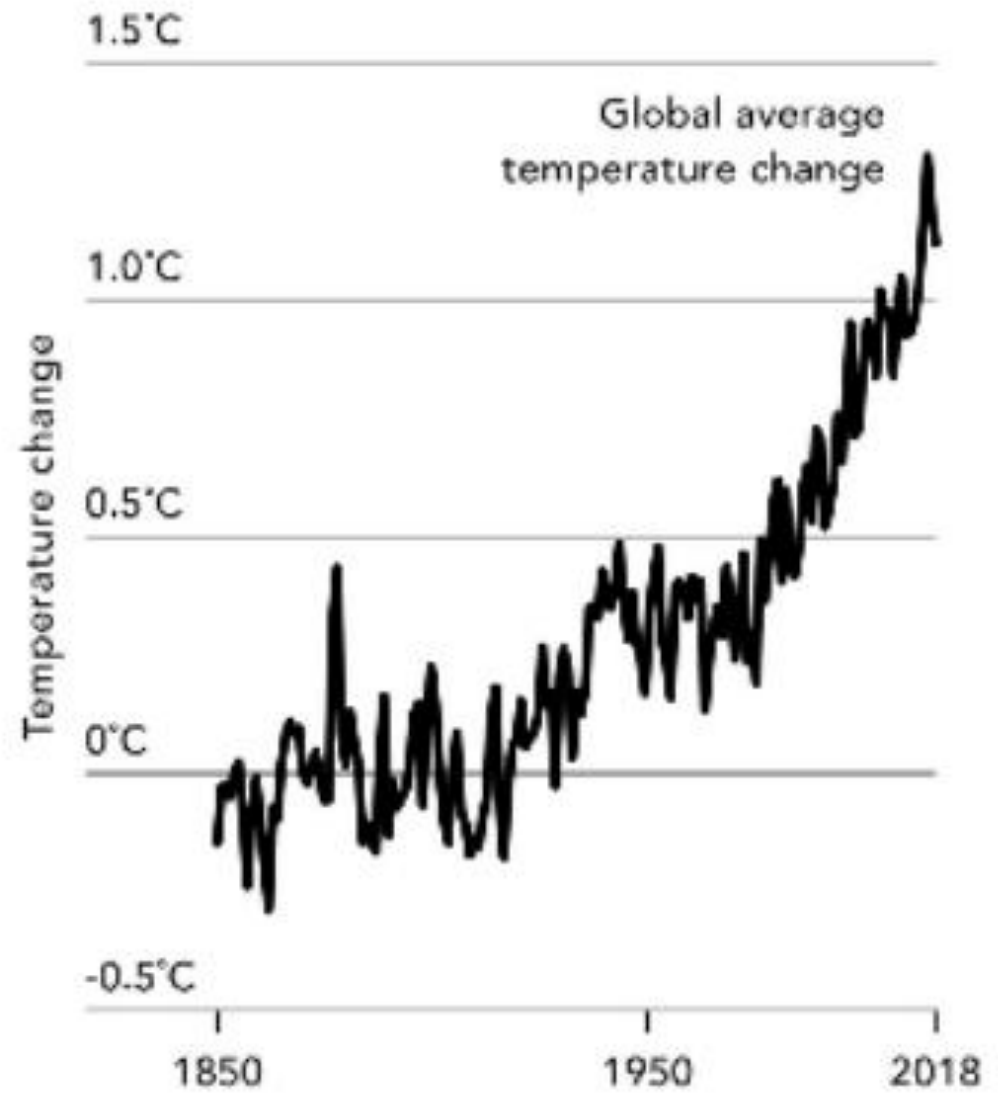
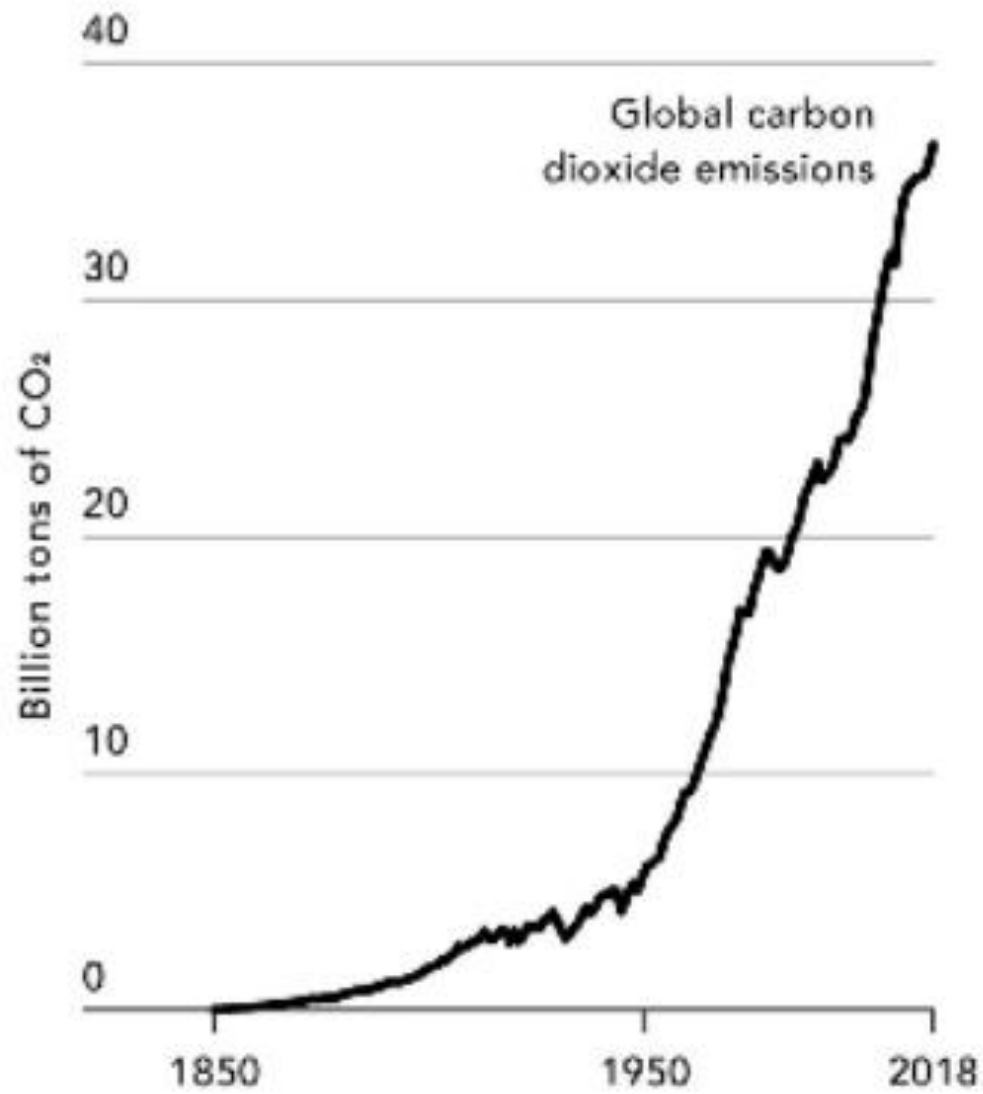
MAYOR'S
MARCH
BUDGET
MESSAGE

The city
faces four
challenges:

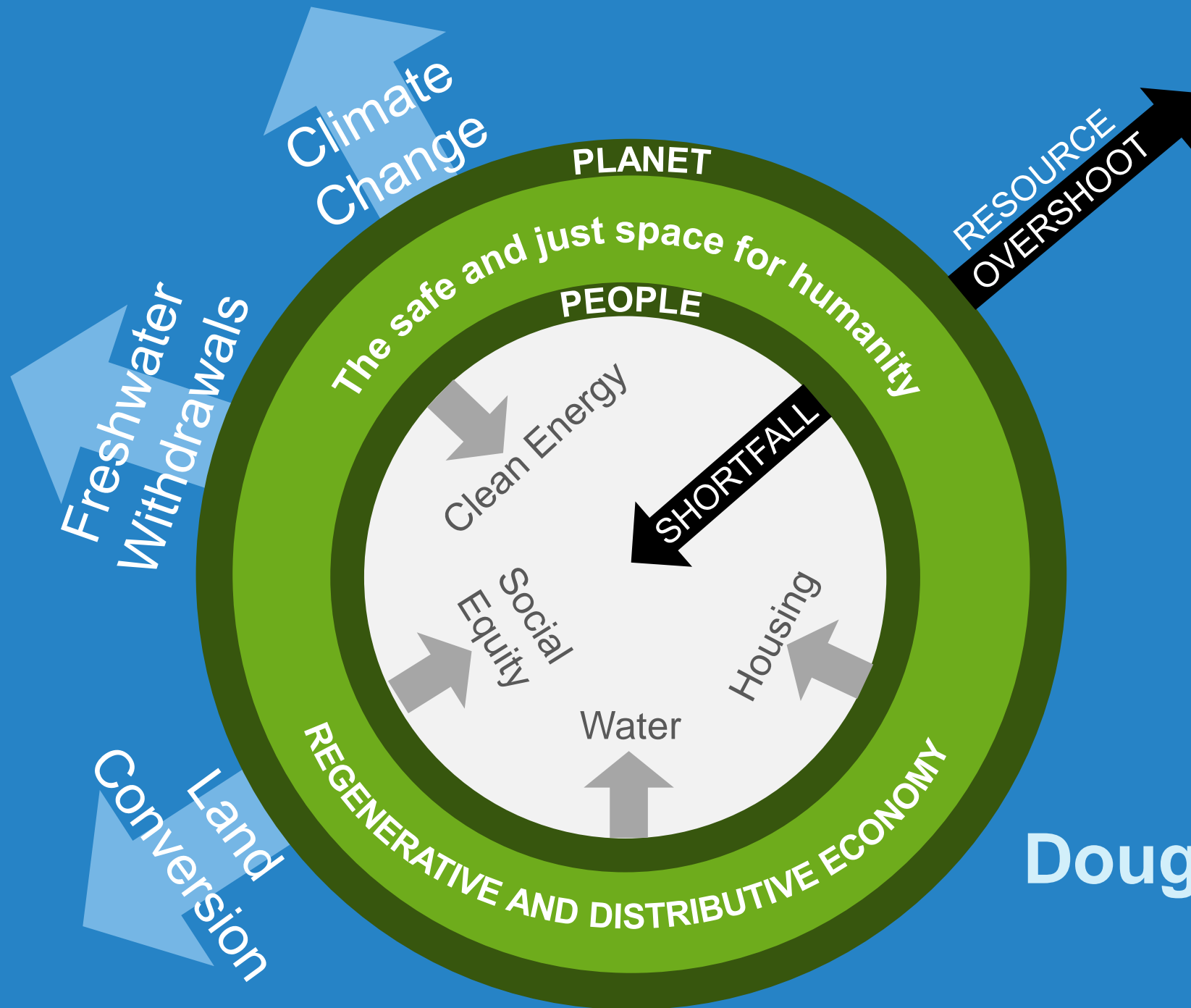
- › we must rehabilitate our existing aging infrastructure,
- › grow our infrastructure for a growing population,
- › mitigate and adapt to climate change and
- › become more sustainable and resilient

The City
Manager
is directed
to:

Continue the workstreams included in the FY 2022-2023 Roadmap and, develop a City Infrastructure Strategy



Gates, Bill. (2021). *How to Avoid a Climate Disaster: The Solutions We Have and the Breakthroughs We Need*.



Doughnut Economics
by Kate Raworth

AS A CITY, WE NEED TO SHIFT OUR THINKING

CHANGE IN MINDSET

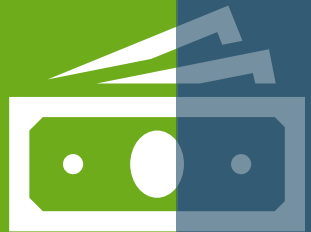
- 1 Departmental Orientation to Systems Thinking
- 2 Short Term Tactics to Longer Term Future Action
- 3 The Past is No Longer Prologue, Model the Likely Future



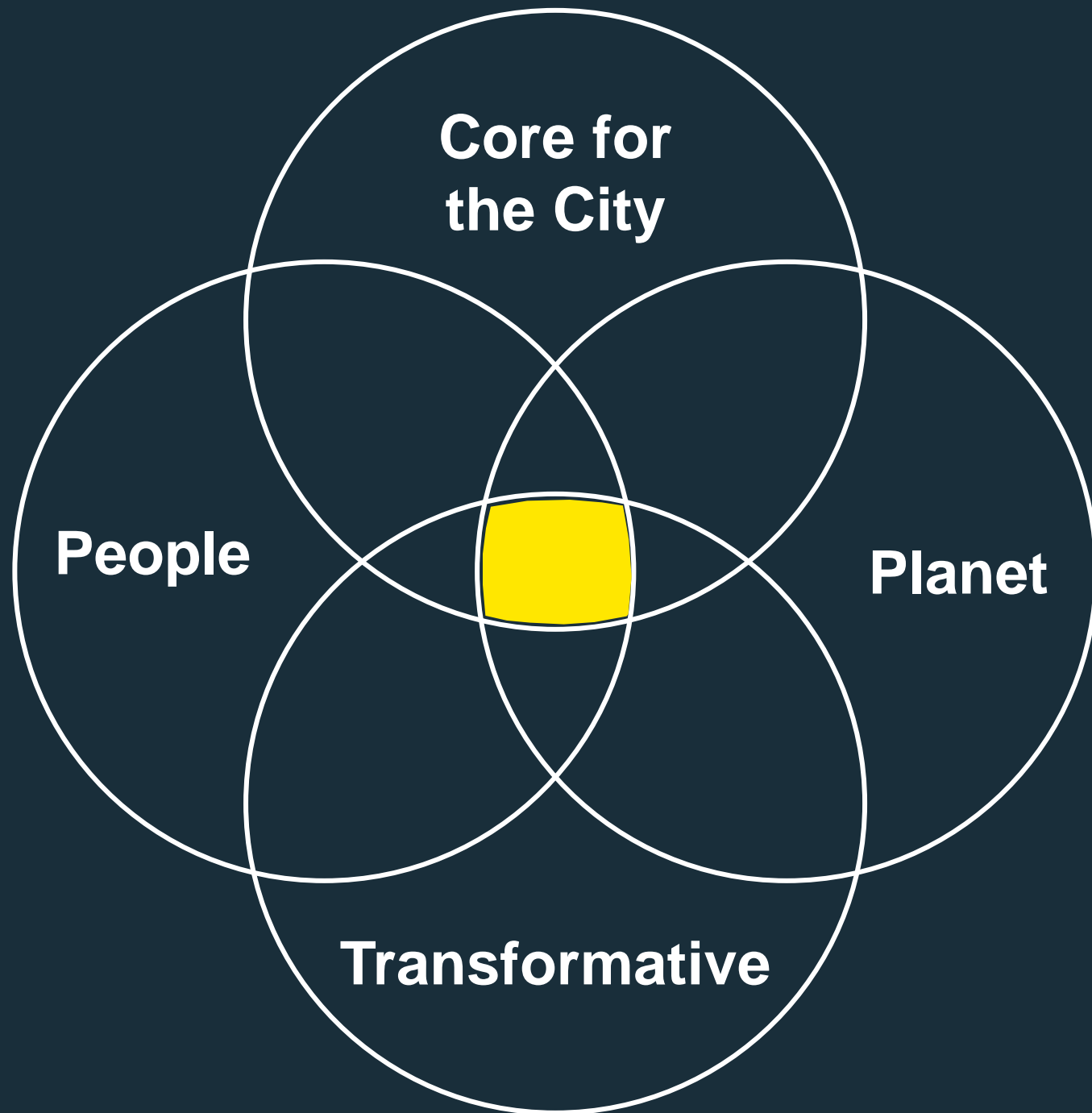
EXPANDING BEYOND SUSTAINABILITY TO ADAPTATION



INNOVATIVE & BOLD APPROACH TO FUNDING CAPITAL INFRASTRUCTURE



WHAT
is our
focus?



Sustainable & Resilient City Infrastructure and Emergency Preparedness Enterprise Priority – FY 2022-23

Objectives	Disaster Ready & Climate Smart	Infrastructure Resilience	Clean Energy Resilience	Water Resilience	Natural Environment Restoration
Workstreams & Drivers	Prepare the City for the Next Disaster OEM	Complete Funded Projects (Measure T) PW	Deploy Micro Grids for Resilience PW	Rebuild Regional Wastewater Facility ESD	Restore the Urban Tree Canopy DOT
	Seismically Safe “Soft Story” Apartments PBCE	Address Infrastructure Backlog + O&M PW	Downtown Large Project Electrification CED	Create New Water Supply Opportunities ESD	Protect Coyote Valley Open Space PBCE
	Climate Smart Decarbonization & Mitigation ESD	Seek New State/ Federal Funding & Policy CMO - API	City Wide Building Electrification ESD	Sustainable Sewers - Sanitary & Storm PW	
	Understand Sea-Level Rise PW	Ensure Cybersecurity ITD	Electric Vehicle Charging CED	Green Infrastructure (Stormwater) PW	

Sustainable & Resilient City Infrastructure and Emergency Preparedness

Q3 Key Results (JAN - MAR)

Objectives

Key Results

Disaster Ready & Climate Smart



Prepare the City for the Next Disaster

1. Finalize COVID-19 AAR.
2. Reach 80% completion on EOC construction.
3. Reach 100% technology purchases for EOC.
4. Reconstitute Post Disaster Housing Work Group. (postponed).
5. Define City LHMP Team

Seismically Safe "Soft Story" Apartments

1. Draft initial soft story properties inventory
2. Finalize business requirements with ITD for online portal (property owner and staff)
3. Calculate mass Care and Shelter expenses (BCA for ordinance)

Climate Smart Decarbonization & Mitigation

1. Bring phase 2 reach code update (EV charging at multifamily new developments) to City Council for approval
2. Bring NWL Element to City Council for approval

Understand Sea-Level Rise

1. Restart conversations with Valley Water District on Sea Wall Levee project with Army Corps of Engineers

Infrastructure Resilience



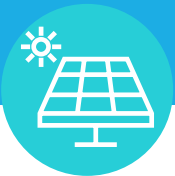
Complete Funded Projects (Measure T)

1. Obtain permitted drawing sets for bidding for FS 8, FS 32 & PD Training & Academy
2. Advertise and obtain bids for FS 32.
3. Provide annual Measure T update and funding strategy for consideration/approval by council
4. Continue to pursue best site for relocation of FS 23

Seek New State/ Federal Funding & Policy

1. Advocate for the Federal-State Partnership for Intercity Passenger Rail grant application for Diridon Station.
2. Facilitate Citywide responses to Requests for Information on the allocation of Inflation Reduction Act funds.
3. Meet with one member of Congress to advance infrastructure priorities.
4. Conduct Legislative Advocacy Day with state delegation in Sacramento.

Clean Energy Resilience



Deploy Micro Grids for Resilience

1. Train new Program Manager and integrate with the Engineering team and develop CY2023 workplan
2. Complete recruitment for vacant Associate Engineer position to assist in Microgrid program
3. Conduct pre-work and prepare for upcoming BRIC grant opportunity
4. Prepare capital budget proposals for 2 - 3 microgrid installations in FY 23 - 24

City Wide Building Electrification

1. Develop BlocPower Maps tool and establish Accelerator Program's Community Advisory Board

Electric Vehicle Charging Infrastructure

1. Complete site control analysis and site selection for fast charging hubs pilot
2. Begin negotiations for the tolling agreement for DCFC hubs
3. Update EV educational materials

Water Resilience



Rebuild Regional Wastewater Facility

1. Achieve Substantial Completion/ Beneficial Use on Advanced Facility Controls and Meter Replacement Phase 2, and Blower Improvements projects.
2. Open bids and award the construction contract for Yard Piping Improvements Phase 2 project.
3. Complete final design and advertise the construction contract for the Facility-Wide Water Systems Improvements project

Create New Water Supply Opportunities

1. Prepare water supply resiliency budget proposal and work plan for next fiscal year.
2. Signed MOU with SJ Water.
3. Hire Principal Engineer or similar position.

Sustainable Sewers - Sanitary & Storm

1. Submit budget proposal for an assessment of investment needs for stormwater related initiatives
2. Bring on consultant to evaluate financing intervention options

Green Infrastructure (Stormwater)

1. Submit budget proposal for Greet Stormwater Infrastructure as part of the assessment above
2. Perform hydraulic analysis and modelling, and review criteria to identify and validate at least one additional regional project

Natural Environment Restoration



Restore the Urban Tree Canopy

1. Complete CFAC recruitment and plan first official meeting.
2. Hire and onboard Urban Forester.
3. Plant 1000 trees.
4. Go/No-go decision on negotiated agreement with OCF.

Protect Coyote Valley Open Space

1. Conduct first public presentation on key objectives
2. Initiate Baseline Assessment (data collection for existing conditions in the area) and Land Use/Economic Assessment

STATUS

- Completed
- ≥ 60% Complete
- < 60% Complete

POSTCARD:






Seek New State/ Federal Funding & Policy + Understand Sea Level Rise

Intergovernmental
Relations worked
with Valley Water to
secure an additional
\$91.2M toward the
Shoreline Levee
Project




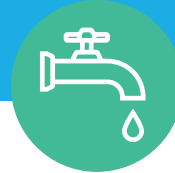



Restarted
conversations with
Valley Water & State
Coastal Conservancy
on design of final two
levee reaches
(segments)






Sustainable & Resilient City Infrastructure and Emergency Preparedness Enterprise Priority – FY 2022-23

Objectives	Disaster Ready & Climate Smart	Infrastructure Resilience	Clean Energy Resilience	Water Resilience	Natural Environment Restoration
					
Workstreams & Drivers	<p>Prepare the City for the Next Disaster</p> <p>Jay McAmis</p>	<p>Complete Funded Projects (Measure T)</p> <p>Katherine Brown</p>	<p>Deploy Micro Grids for Resilience</p> <p>Walter Lin</p>	<p>Rebuild Regional Wastewater Facility</p> <p>Mariana Chavez</p>	<p>Restore the Urban Tree Canopy</p> <p>Rick Scott</p>
	<p>Seismically Safe “Soft Story” Apartments</p> <p>Lisa Joiner</p>	<p>Address Infrastructure Backlog + O&M</p> <p>Mathew Nguyen</p>	<p>Downtown Large Project Electrification</p> <p>Jim Caldwell</p>	<p>Create New Water Supply Opportunities</p> <p>Jeff Provenzano</p>	<p>Protect Coyote Valley Open Space</p> <p>Michael Brilliot</p>
	<p>Climate Smart Decarbonization & Mitigation</p> <p>Julie Benabente</p>	<p>Seek New State/ Federal Funding & Policy</p> <p>Zane Barnes</p>	<p>City Wide Building Electrification</p> <p>Julie Benabente</p>	<p>Sustainable Sewers - Sanitary & Storm</p> <p>Mathew Nguyen</p>	
	<p>Understand Sea-Level Rise</p> <p>Mathew Nguyen</p>	<p>Ensure Cybersecurity</p> <p>Marcelo Peredo</p>	<p>Electric Vehicle Charging</p> <p>Zach Struyk</p>	<p>Green Infrastructure (Stormwater)</p> <p>Mathew Nguyen</p>	

Which workstreams won't be called out specifically on the new City Infrastructure Strategy?

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	Seismically Safe “Soft Story” Apartments Lisa Joiner	Address Infrastructure Backlog + O&M Mathew Nguyen	Downtown Large Project Electrification Jim Caldwell	Create New Water Supply Opportunities Jeff Provenzano	Protect Coyote Valley Open Space Michael Brilliot
	Climate Smart Decarbonization & Mitigation Julie Benabente	Seek New State/ Federal Funding & Policy Zane Barnes	City Wide Building Electrification Julie Benabente	Sustainable Sewers - Sanitary & Storm Mathew Nguyen	
	Understand Sea-Level Rise Mathew Nguyen	Ensure Cybersecurity Marcelo Peredo	Electric Vehicle Charging Zach Struyk	Green Infrastructure (Stormwater) Mathew Nguyen	

Which items are new or updated from the previous version?

Objectives	Disaster Ready & Climate Smart	Transportation & Aviation	Clean Energy Resilience	Water Resilience	Natural Environment Restoration
					
Workstreams & Departments	Prepare the City for the Next Disaster OEM	SJC Airport New Terminal AIR, PW	Municipal Microgrids and Electrical Service CED, PW	Municipal Regional Permit (Stormwater) ESD	Community Forest (Urban Tree Canopy) DOT
	Seismically Safe “Soft Story” Apartments PBCE	BART Silicon Valley Extension DOT, PW	Electric Vehicle Fleet/ Charging Infrastructure CED, PW, DOT	Sanitary & Storm Sewer Collection Systems + Green Stormwater Infrastructure ESD, PW	Protect Coyote Valley Open Space PBCE
	Shoreline Levee (Sea Level Rise) PW	Vehicle Blight DOT	City Wide Building Electrification ESD		
	Climate Smart Decarbonization & Mitigation ESD	Diridon Station and Airport Connector DOT		Water Supply ESD	

City Infrastructure Strategy for FY 2023-24

Objectives

Disaster Ready & Climate Smart



Transportation & Aviation



Clean Energy Resilience



Water Resilience



Natural Environment Restoration



Workstreams & Departments

Prepare the City for the Next Disaster

OEM

Seismically Safe "Soft Story" Apartments

PBCE

Shoreline Levee (Sea Level Rise)

PW

Climate Smart Decarbonization & Mitigation

ESD

SJC Airport New Terminal

AIR, PW

BART Silicon Valley Extension

DOT, PW

Vehicle Blight

DOT

Diridon Station and Airport Connector

DOT

Municipal Microgrids and Electrical Service

CED, PW

Electric Vehicle Fleet/ Charging Infrastructure

CED, PW, DOT

City Wide Building Electrification

ESD

Municipal Regional Permit (Stormwater)

ESD

Sanitary & Storm Sewer Collection Systems + Green Stormwater Infrastructure

ESD, PW

Water Supply

ESD

Community Forest (Urban Tree Canopy)

DOT

Protect Coyote Valley Open Space

PBCE

GUIDING PRINCIPLES

1

Addressing
Inequity

2

Identifying
Ongoing/ New
Local, State,
Federal
Funding
Sources

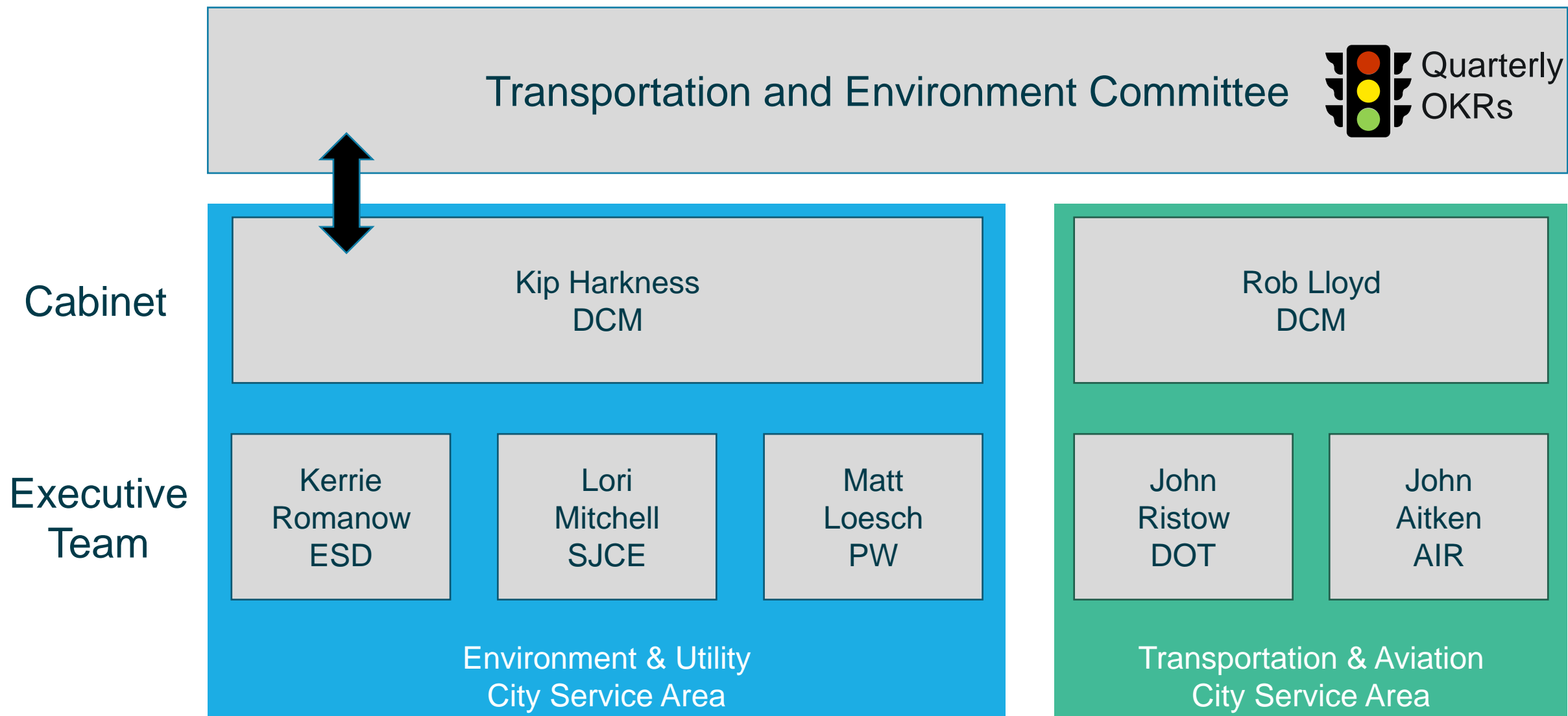
3

Build The
Team To
Deliver



IMPLEMENTATION APPROACH

CITY INFRASTRUCTURE





CITY INFRASTRUCTURE TEAM

- › Monthly Infrastructure Meetings for relevant department heads and workstream drivers
- › Workstream Deep Dives
- › Field Trips to City Infrastructure Sites
- › Thought Partner Gatherings with External Stakeholders

Overall, the City is proposing to invest \$14 Million in City Infrastructure Strategy Initiatives in FY 2023-24.

Workstream	Positions	Total Funds (\$)
Prepare the City for the Next Disaster	5 new, 4 continued	\$1.98M
Climate Smart Decarbonization & Mitigation, Citywide Building Electrification	-	\$0.4M
Vehicle Blight	-	\$0.5M
Municipal Microgrids and Electrical Service	11 new	\$2.46M
Municipal Regional Stormwater Permit	2 new	\$0.4M
Sanitary & Storm Sewer Collection Systems + Green Stormwater Infrastructure	3 new	\$4.62M
Water Supply Negotiations	1 new	\$3.66M
TOTAL	26 Positions	\$14.0M

City Infrastructure Strategy for FY 2023-24

Objectives

Disaster Ready & Climate Smart



Transportation & Aviation



Clean Energy Resilience



Water Resilience



Natural Environment Restoration



Prepare the City for the Next Disaster

OEM

SJC Airport New Terminal

AIR, PW

Municipal Microgrids and Electrical Service

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Electric Vehicle Fleet/ Charging Infrastructure

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Vehicle Blight

DOT

City Wide Building Electrification

ESD

Water Supply

ESD

Climate Smart Decarbonization & Mitigation

ESD

Diridon Station and Airport Connector

DOT



Quarterly OKRs

Workstreams & Departments

City Infrastructure Strategy for FY 2023-24

Objectives

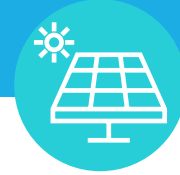
Disaster Ready & Climate Smart



Transportation & Aviation



Clean Energy Resilience



Water Resilience



Natural Environment Restoration



Workstreams & Departments

Prepare the City for the Next Disaster

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Shoreline Levee (Sea Level Rise)

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Vehicle Blight

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Municipal Microgrids and Electrical Service

CED, PW

Electric Vehicle Fleet/ Charging Infrastructure

CED, PW, DOT

City Wide Building Electrification

ESD

Municipal Regional Permit (Stormwater)

ESD

Sanitary & Storm Sewer Collection Systems + Green Stormwater Infrastructure

ESD, PW

Water Supply

ESD

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