



CITY OF RIVERSIDE
2050
GENERAL PLAN UPDATE

CITY OF RIVERSIDE
CAAP
CLIMATE ACTION & ADAPTATION PLAN

CITY OF RIVERSIDE GENERAL PLAN UPDATE & CLIMATE ACTION AND ADAPTATION PLAN

Board of Public Utilities
June 8, 2026



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CLIMATE ACTION & ADAPTATION PLAN

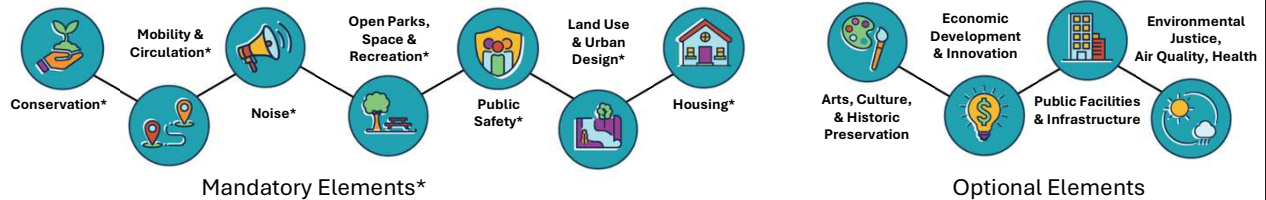
CITY OF RIVERSIDE

**Project Background
and Overview**

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What is the GPU?

- A **strategic vision** for the city over a generation
- A blueprint for **physical growth, development, and preservation**
- The **community's vision** informs the contents of General Plan Elements in addition to statutory requirements
- Elements include **goals, policies and implementation** measures for the various topics
- Influences **zoning** and the types of **development** desired, goals for improving and adding **public amenities, natural spaces** to restore and protect, delivery of **public services, budgeting** decisions and more
- General Plans have a typical planning horizon of **20-25 years**



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What is the Climate Action & Adaptation Plan?

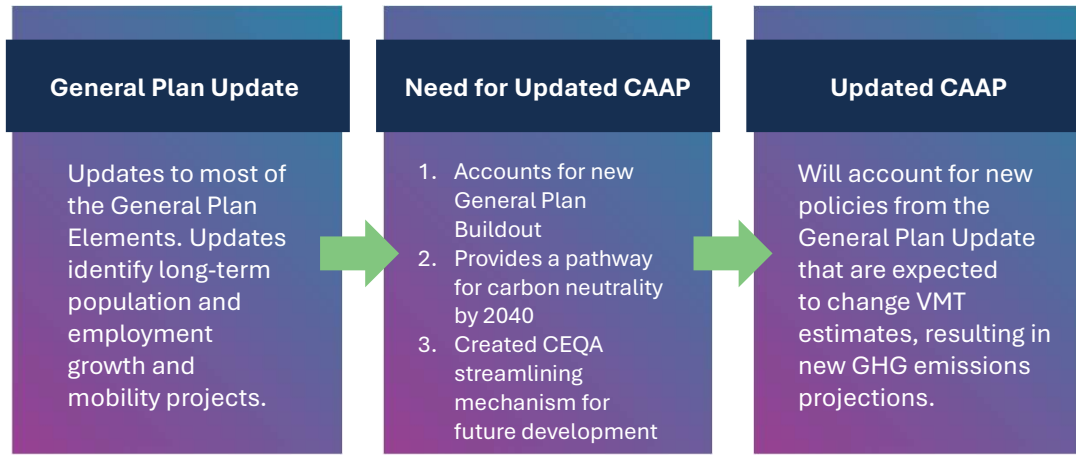


- Inventory of Greenhouse Gas Emissions and Climate Risks
- Sets ambitious, yet achievable emissions reduction targets for the City
- A strategic roadmap to guide the City in reducing GHG emissions and preparing for climate risks
- Includes both mitigation and adaptation efforts to promote a sustainable future for all



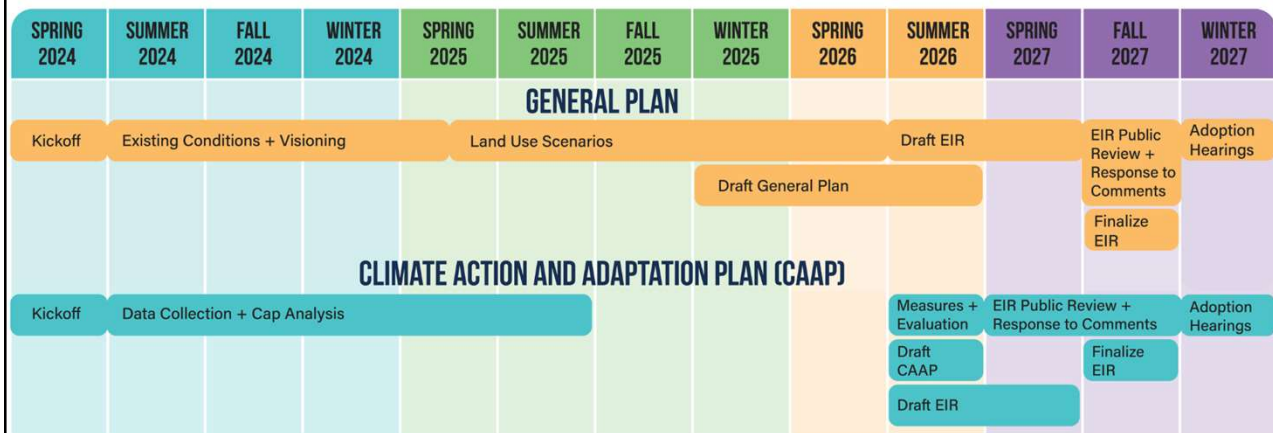
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CAAP and General Plan Relationship

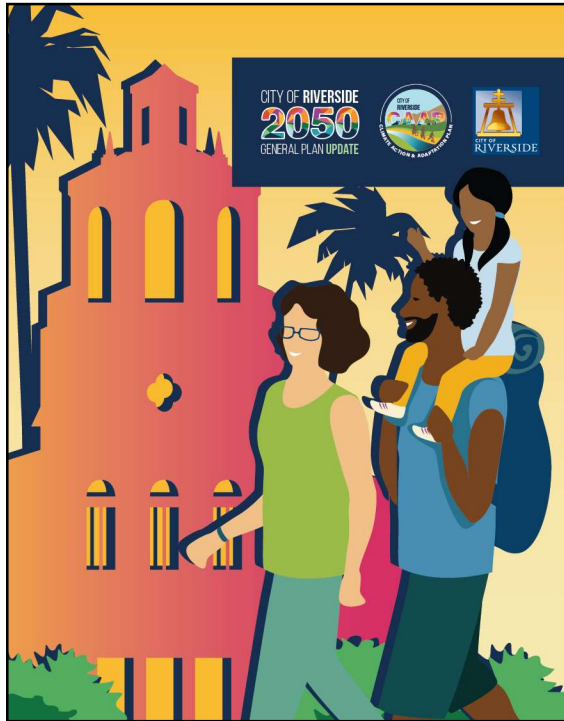


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Project Schedule: GPU & CAAP Adoption Process



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Community Outreach

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Outreach Overview – What We've Done



- **40+** Social media posts to 199,000 followers
- **20+** Email blasts and newsletters
- Project website updates – www.riverside2050.com
- **2,400+** email opt-ins to-date
- Statistically Valid Surveys – **1,400+** participants
- **13** Pop-up workshops – **2,200+** engagements
- FutureFest launch event – **500+** attendees
- 2 Community-wide workshops – **200+ attendees**
- Online Mapping Activity – **350+** comments
- **112,000** Utility Bill inserts – December 2024
- Community Mural artwork – **1,772** submissions
- **14** movable exhibits – **578** Climate Pledges
- General Plan Advisory Committee – **6** meetings
- CAAP Advisory Committee – **3** meetings
- **4,300+ comments received and logged**



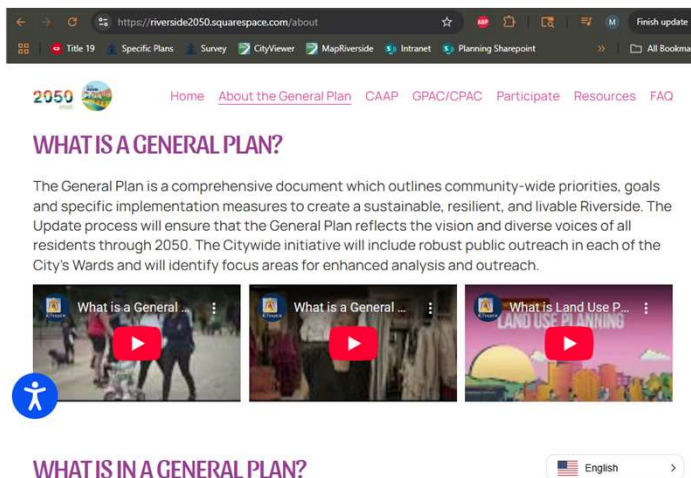
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Pop-Up Events & Movable Exhibits



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Project website

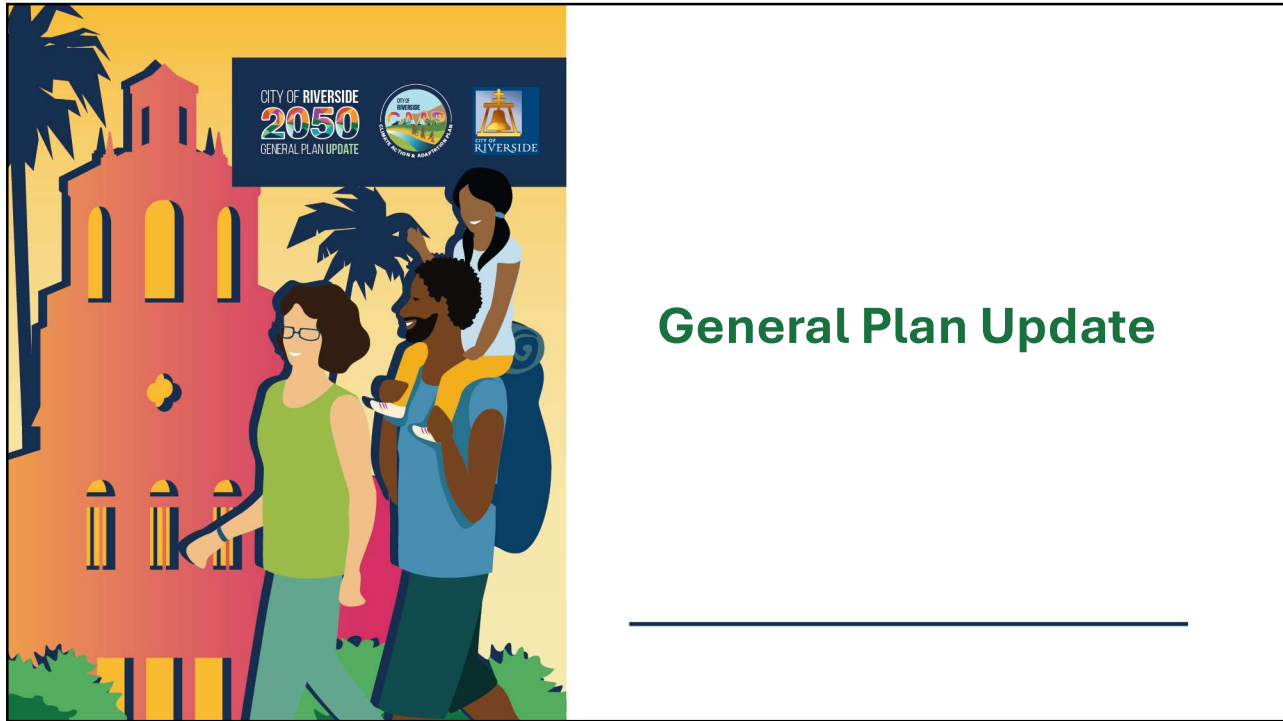


www.Riverside2050.com

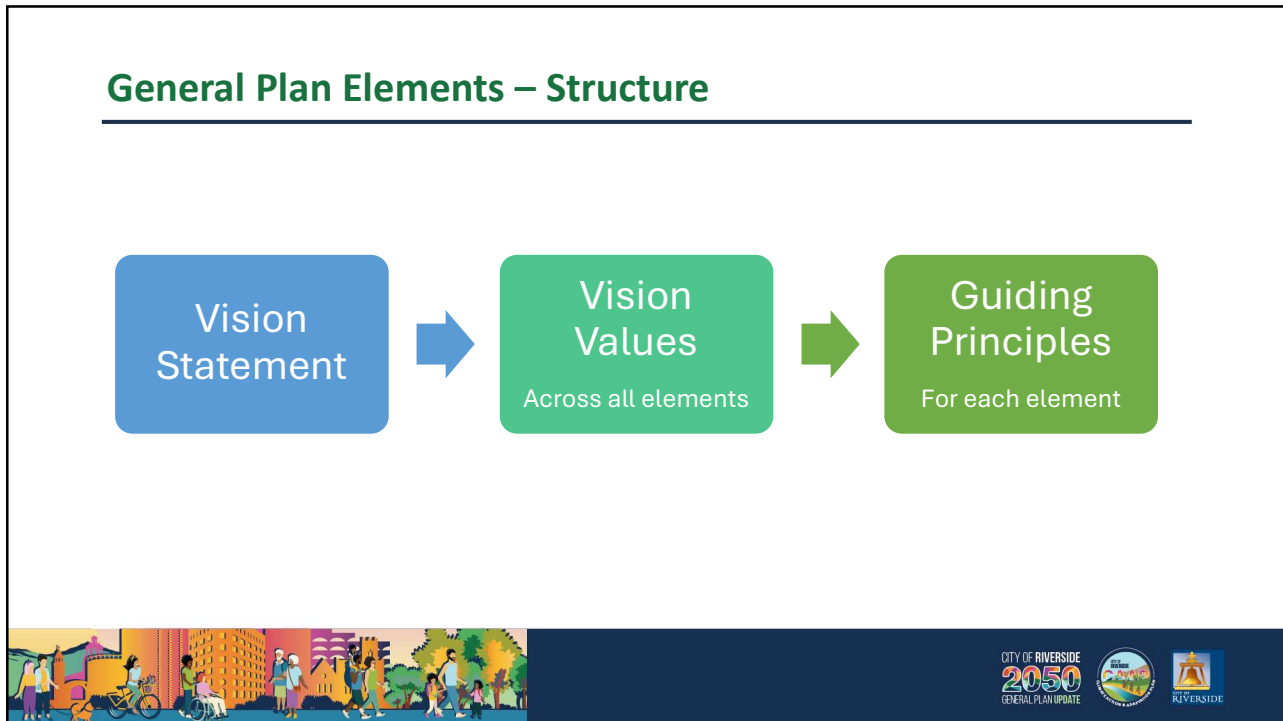
- Documents and publications
- Planning 101 video series
- Frequently Asked Questions
- Outreach activities map, summaries, survey results and more
- GPAC and CPAC materials
- Interactive Land Use Mapping tool
- Contact information and email opt-in



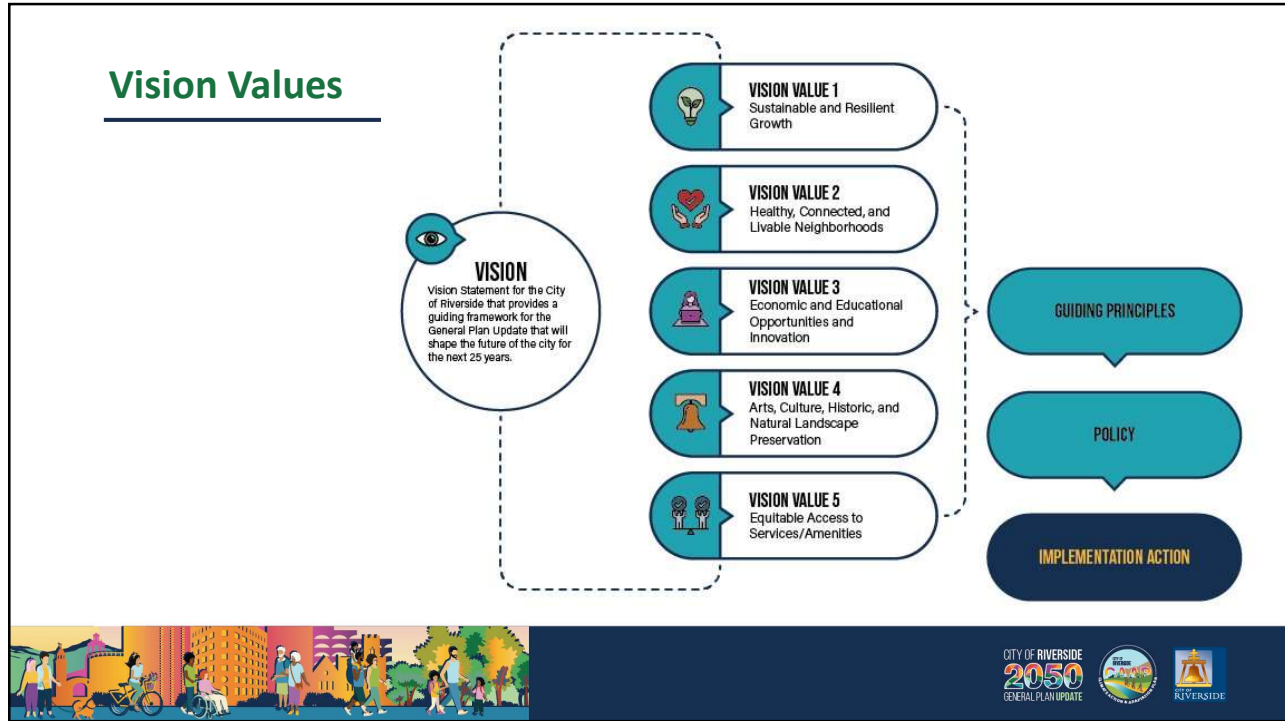
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Draft Vision Statement

The vision for Riverside in 2050 is a **thriving** city that honors its distinctive **history** and **character** while embracing a **future of innovation and inclusivity**.


Residents envision a city where **walkable neighborhoods**, well **connected open spaces**, and a diverse mix of land uses create vibrant and connected communities.

Investments in sustainability ensure a **greener, more resilient city**, where natural resources are protected, and innovative solutions drive progress.

Access to **parks, essential services**, and **fresh food** is prioritized, fostering a city where all residents can thrive.

A dynamic mix of **entertainment, shopping**, and **recreational opportunities** enhances quality of life, while a strong sense of place and neighborhood character is maintained through thoughtful growth.

Riverside will continue to be a **dynamic** and **welcoming** city to live, study, work, and play for future generations.



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Land Use & Urban Design Element

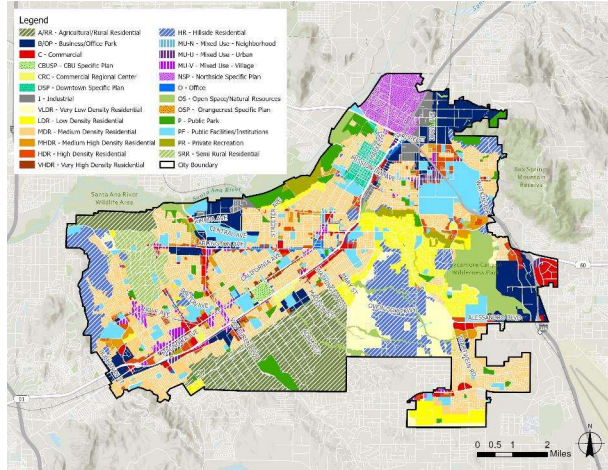
What is Land Use

Land Use is the community’s vision of how land will be used in the future and the general location of those uses.

Why is it important?

Land use designations determine what can and cannot be built in each neighborhood moving forward to the year 2050.

Land use underpins the future economic vitality, prosperity, and livability of the City and sets us up for future success.



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Exploring Land Use Scenario Concepts



Innovation & Economic Growth

- Focus on job creation and innovation economy
- Support and nurture key industries (Areas of Excellence)
- Build new urban cores and business districts well connected to residences and transportation



Housing Choice

- Allow more housing in more locations
- Promote variety of home types and tenures
- Balance growth with neighborhoods and open space



Connectivity

- Focus growth in areas with less car dependence
- Mix homes, shops, parks, businesses for smoother and shorter connections
- Link neighborhoods through trails, paths, transit and safe streets


Common Themes

- Keep Downtown as the civic and cultural heart of Riverside
- Create mixed-use corridors where housing and services come together
- Strengthen campuses and medical hubs
- Preserve established neighborhoods, agricultural areas and natural vistas
- Retain productive industrial areas with innovative new industries
- Expand access to everyday services in neighborhoods



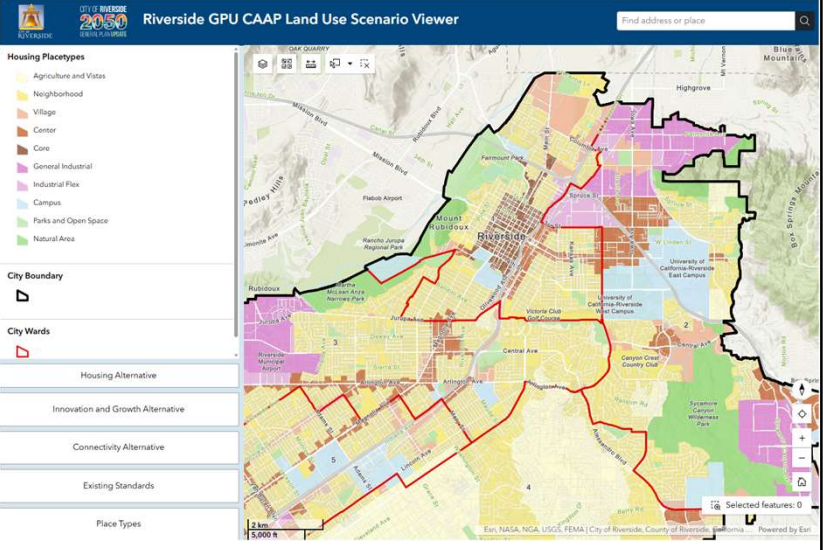

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Place Types Survey



SCAN HERE to try it out!

Take the survey:
<https://www.surveymonkey.com/r/DT6T7KL>

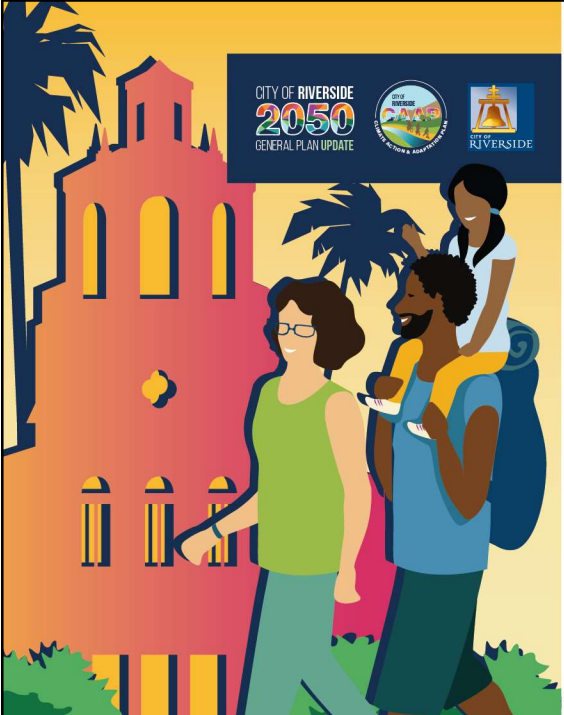



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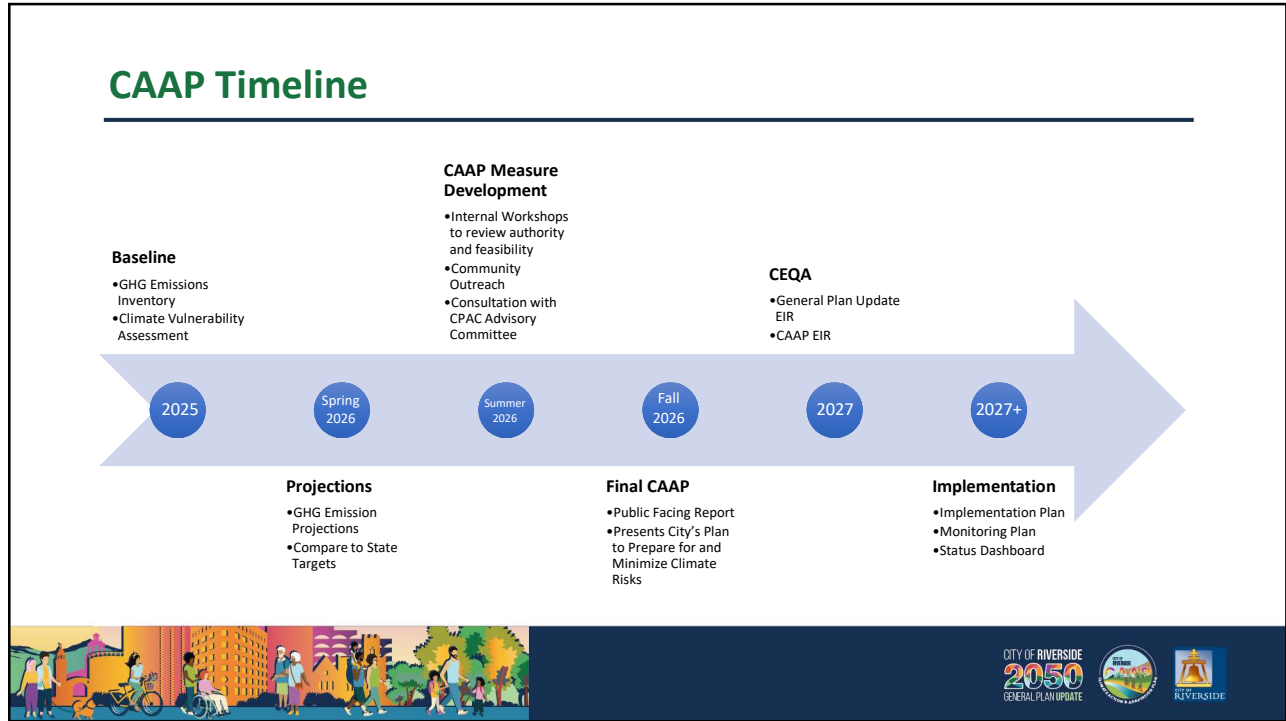
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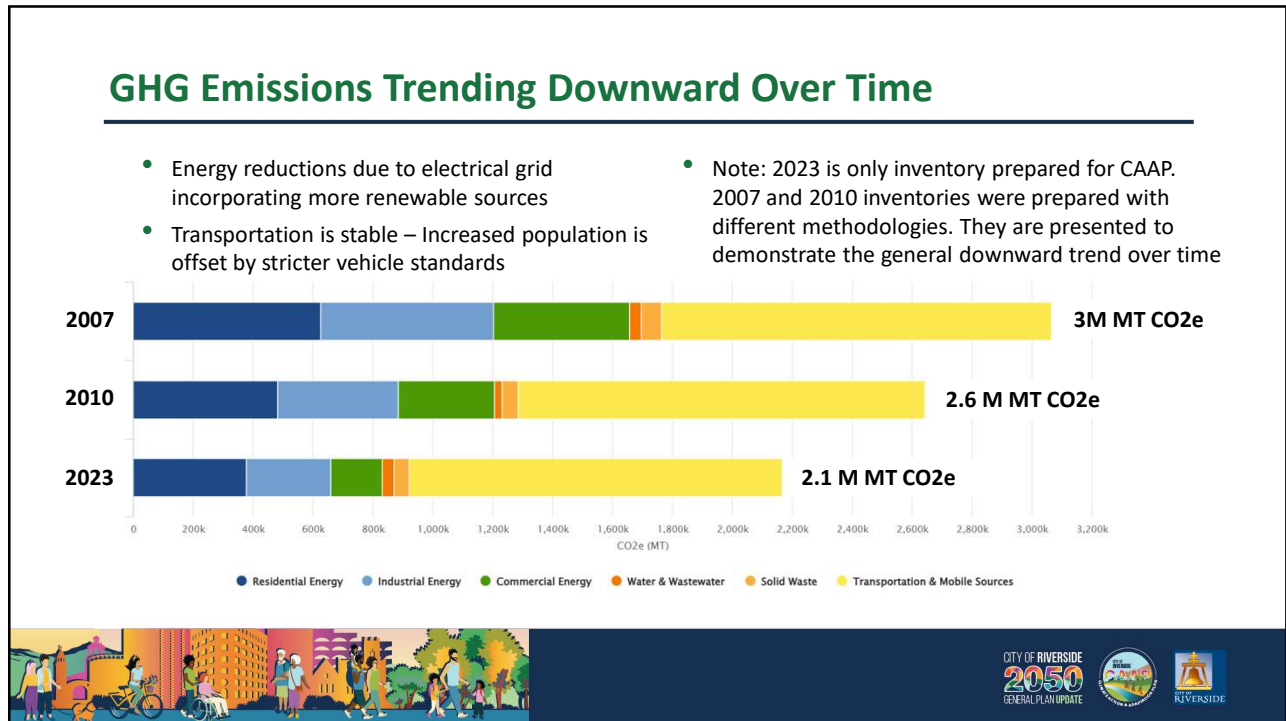
RIVERSIDE

Climate Action & Adaptation Plan

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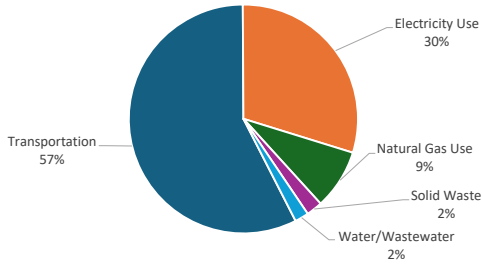


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Riverside 2023 GHG Inventory



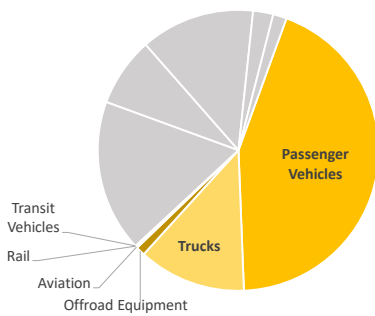
Sector	MT CO ₂ e	Percent of Total
Transportation	1,244,196	57%
Energy – Electricity	646,848	30%
Energy – Natural Gas	183,780	9%
Solid Waste	49,625	2%
Water & Wastewater	42,615	2%
Total	2,167,064	100%

MT CO₂e = metric tons of carbon dioxide equivalent



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Transportation Details



Emission Source	Description	Data Source	MT CO ₂ e	Percent of Total Inventory
Passenger Vehicles	Motorcycles, passenger cars, light duty passenger trucks (SUVs, pickups)	WRCOG regional travel demand model	947,061	45%
Medium and Heavy Trucks	Medium and heavy trucks for freight and commercial use	WRCOG regional travel demand model	267,926	13%
Offroad Equipment	Construction equipment, landscaping, recreational vehicles	CARB OFFROAD Model	22,919	1%
Aviation	Aircraft emissions	Riverside Municipal Airport	4,720	0.2%
Rail	Line-haul, switcher, passenger rail, commuter rail	CARB OFFROAD Model	1,134	0.1%
Transit Vehicles	Transit buses, mini buses, RTA, Riverside Connect		436	<0.1%



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Transportation Details (continued)

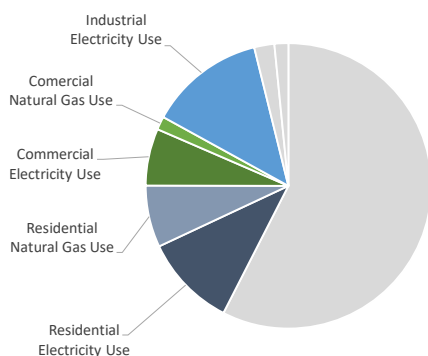
Emission Source	Annual Activity	MT CO2e	Percent of Total Inventory
Passenger Vehicles	11,107,882,544 vehicle miles traveled	947,061	45%
Medium and Heavy Trucks	3,628,743,228 vehicle miles traveled	267,926	13%
Offroad Equipment - gasoline	445,733 gallons of fuel	22,919	1%
Offroad Equipment - diesel	1,764,336 gallons of fuel		
Aviation	525,263 gallons of fuel	4,720	0.2%
Rail	110,063 gallons of fuel	1,134	0.1%
Transit Vehicles	4,134,480 vehicle miles traveled	436	<0.1%

VMT excludes pass-through traffic, limited to miles traveled within Riverside and ½ of all trips beginning or ending within Riverside
 Rail includes pass-through traffic, limited to miles traveled through Riverside
 Aviation based on all aircraft fueled at Riverside Municipal Airport



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Energy Details



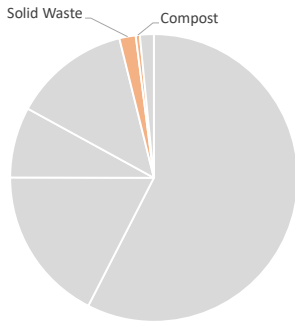
Emission Source	Data Source	MT CO2e	Percent of Total Inventory
Residential Electricity	RPU	226,801	11%
Residential Natural Gas	SoCalGas	151,531	7%
Commercial Electricity	RPU	139,408	7%
Commercial Natural Gas	SoCalGas	32,249	2%
Industrial Electricity	RPU	280,639	13%

- RPU classifies customers as commercial or industrial based on energy demand
- SoCalGas does not provide industrial natural gas information due to privacy concerns



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Solid Waste Details



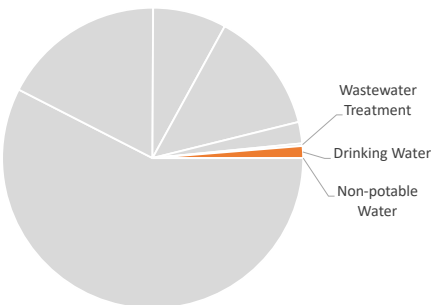
Emission Source	Description	Data Source	MT CO2e	Percent of Total
Solid Waste	Methane emissions from landfilled waste	Riverside Public Works, Athens Services	40,052	1.9%
Compost	Methane and nitrous oxide emissions from biowaste and greenwaste	Riverside Public Works	9,573	0.5%

- Landfills are located outside of city limits, but Riverside is responsible for its share of emissions that occur at landfills due to waste generated by city residents and businesses



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Water and Wastewater Details



Emission Source	Description	Data Source	MT CO2e	Percent of Total
Drinking Water	Electricity and natural gas needed to supply drinking water	Riverside Public Utilities, Eastern Municipal Water District, Western Municipal Water District	28,090	1.3%
Wastewater Treatment	Electricity and natural gas needed to power wastewater treatment process, emissions released during wastewater treatment process	Riverside Regional Water Quality Control Plant	6,787	0.3%
Non-Potable Water	Electricity and natural gas needed to supply non-potable water used for irrigation	Riverside Public Utilities	5,553	0.3%

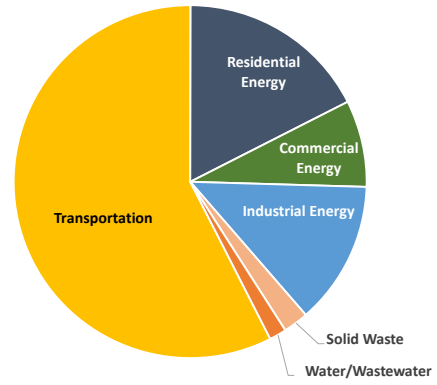
- Some water is provided by utilities outside of city limits, but Riverside is responsible for its share of emissions that occur due to water used by city residents and businesses



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Additional Sectors Not Included in Inventory

- **Industrial Processes**
 - A review of SCAQMD and EPA records did not identify any industrial sources that produce enough GHG emissions to require annual reporting
 - Electricity use is included in industrial energy sector
- **Agriculture**
 - Emissions from livestock and soil management are not available at the city level and assumed to be negligible
- **Carbon Sinks**
 - Vegetation that removes GHG from atmosphere are not included in inventory
 - Measures that promote carbon sequestration will be included in CAAP, but they are not used to compare to reduction targets for CEQA



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Inventory Summary

- GPU will impact future on-road VMT
- GHG from electricity sources will reduce as grid moves to carbon neutrality by 2040
- On-road vehicle GHG will reduce as fuel economy standards, emissions standards, and EV mandates are phased in
- CAAP measures can be developed for most sources

Emission Source	MT CO2e	Percent of Total	Impacted by GPU	Impacted by Current Legislation	Potentially Impacted by CAAP
Passenger Vehicles	947,061	45%	✓	✓	✓
Industrial Electricity	280,639	13%		✓	✓
Medium and Heavy Trucks	267,926	13%	✓	✓	✓
Residential Electricity	226,801	11%		✓	✓
Residential Natural Gas	151,531	7%			✓
Commercial Electricity	139,408	7%		✓	✓
Commercial Natural Gas	32,249	2%			✓
Solid Waste	40,052	1.9%			✓
Drinking Water	28,090	1.3%			✓
Offroad Equipment	22,919	1.1%		✓	✓
Compost	9,573	0.5%			✓
Non-potable Water	5,553	0.3%		✓	✓
Wastewater Treatment	6,787	0.3%		✓	
Aviation	4,720	0.2%			
Rail	1,134	0.1%			
Transit Vehicles	436	<0.1%	✓	✓	✓

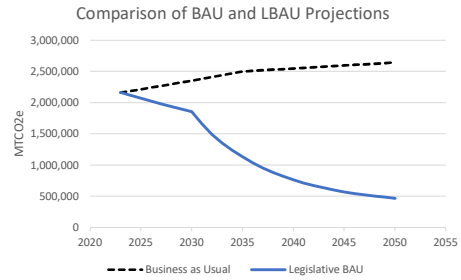


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GHG Projections - Summary

Three forecasts will be developed for the CAAP

- Business as Usual (BAU) Forecast
 - Based only on assumptions about Riverside’s population and economic growth
 - Assumes no other GHG reduction actions
- Legislative BAU Forecast
 - Includes assumptions about Riverside’s population and economic growth
 - Includes GHG reduction impacts from federal and state legislative actions
- CAAP Forecast (forthcoming)
 - Applies GHG reduction measures to Legislative BAU

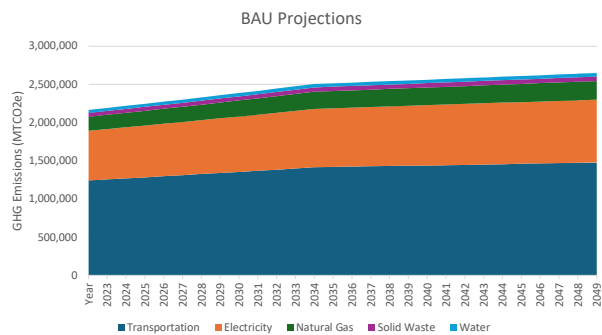


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GHG Projections – BAU Development

- Baseline is 2023 GHG Inventory
- Each sector scaled according to Southern California Association of Governments (SCAG) growth estimates

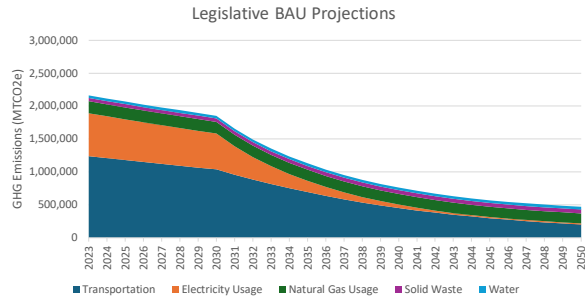
Metric	2019	2023 (interpolated)	2035	2050
Population	311,100	326,075	371,000	387,300
Households	94,200	102,225	126,300	137,200
Employment	158,600	166,650	190,800	204,500



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GHG Projections – Legislative BAU Development

- Baseline is 2023 GHG Inventory
- Each sector scaled according to SCAG growth estimates
- Impacts from state energy legislation
- Impacts from federal and state vehicle emissions legislation



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GHG Projections – Legislative BAU Details

Emissions Source	Regulation	Emissions Impact	Resources
Electricity Usage	Renewables Portfolio Standard, SB 100	Emission factor decrease	RPU
Natural Gas Usage	Title 24 Building Efficiency Standards	Activity decrease due to efficiency	California Gas Report
On-road vehicles	CAFE, LEV III, Advanced Clean Cars II, Advanced Clean Trucks	Emission factor decrease due to stricter emissions standards, efficiency, and fuel switching	CARB
Off-road vehicles	Off road engine regulations	Emission factor decrease due to stricter emissions standards, efficiency, and fuel switching	CARB
Water and wastewater	RPS, SB 100, Title 24	Emission factor and activity decrease	RPU
Solid Waste	SB 1383	Emission decrease from organic waste	CalRecycle



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GHG Projections – Evolving Regulatory Landscape

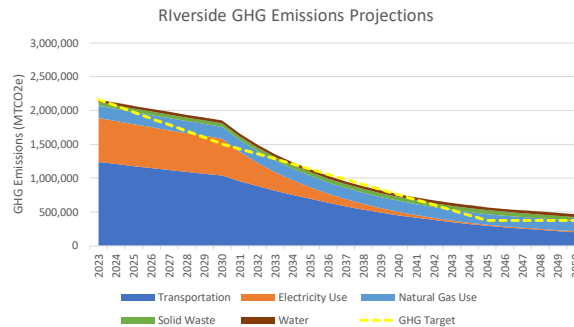
- **Multiple Vehicle Emissions Regulations Repealed and Challenged**
 - California waivers of federal preemption impact Advanced Clean Cars II and Advanced Clean Trucks (EV and ZEV sales)
 - Amended CAFE standards impact light duty vehicle emissions standards
 - EPA’s Greenhouse Gas Endangerment Finding impacts GHG emissions regulations
- **CARB permanently adopted Emergency Vehicle Emissions Regulations**
 - Earlier emissions regulations will remain in place until court cases are resolved
- **Riverside CAAP will follow CARB’s lead and assume that pre-2025 regulations remain in place**



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GHG Reduction Targets

- Targets align with AB 32 Climate Change Scoping Plan
 - 40% below 1990 levels by 2030
 - 85% below 1990 levels by 2045



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Examples of GHG Reduction Strategies

Reduce Vehicle Emissions

- Shift from driving alone to transit
- Shift from gasoline vehicles to electric vehicles
- Develop communities that do not require driving to work, school, or shopping

Reduce Energy Consumption

- Replace natural gas appliances with electric options
- Make homes and buildings more energy efficient
- Increase amount of renewable sources used to generate electricity

Reduce Waste

- Divert waste from landfills by increasing recycling and composting

Reduce Water Consumption

- Utilize low-flow water fixtures
- Design water-efficient landscapes

Carbon Sequestration

- Plant trees and create greenspaces to absorb carbon from atmosphere



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Adaptation to Climate Change

Climate Vulnerability Analysis

- How climate change may alter climate-related hazards such as extreme heat, drought, and wildfire
- Evaluates the exposure, sensitivity, and adaptive capacity of community

Adaptation Measures

- Strategies to address climate vulnerabilities

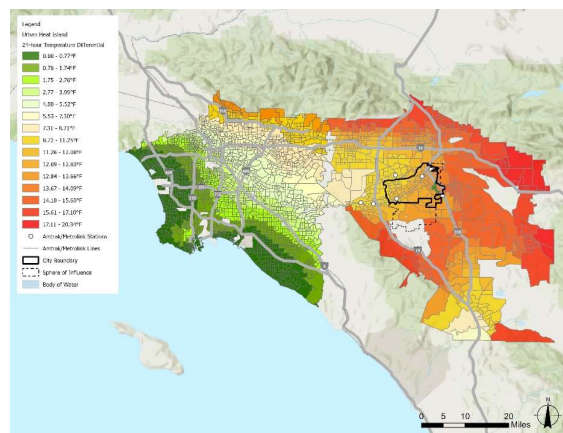


Figure 12 Regional Urban Heat Island Map (Source: Cal EPA)



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CAAP Outreach & Discussion

Which of the following potential GHG reduction measures do you support?

	GHG Reduction Measure	I support this measure	I am undecided about this measure	I don't support this measure
1	Expand Bicycle and Pedestrian paths			
2	Support the expansion of Electric Vehicle charging infrastructure citywide			
3	Add dedicated Bus Lanes on major streets to improve transit speed and reliability			
4	Provide incentives to switch to cleaner vehicles (electric, hydrogen, and low-emission options)			
5	Use cleaner energy sources to power Riverside through Riverside Public Utilities			
6	Expand programs that help homes and businesses save energy and water			

Follow this link to submit your feedback: <https://www.surveymonkey.com/r/KPBCHMK>



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CAAP Outreach & Discussion

Which of the following potential adaptation measures do you support?

	Climate Adaptation Measure	I support this measure	I am undecided about this measure	I don't support this measure
1	Implement Aquifer Storage & Recovery System to store surplus water for use during droughts			
2	Organize Community Resilience Centers to provide shelter and resources during climate emergencies			
3	Use climate-resilient landscaping in new developments to better withstand climate impacts			
4	Use Recycled Water Habitat Restoration to improve the resilience of natural habitats			
5	Encourage communities to become Firewise USA recognized to prepare for wildfire resilience			
6	Expand Tree Canopy throughout the City, including residential, commercial and public land uses.			

Follow this link to submit your feedback: <https://www.surveymonkey.com/r/KPBCHMK>



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Outreach – Pop-Up Events

Completed:

- Ward 1: Riverside Insect Fair – April 25th
 - 678 stakeholders engaged
- Ward 2: UC Riverside Earth Day – April 22nd
 - 106 stakeholders engaged
- Ward 3: Arbor Day Celebration – April 18th
 - 70 stakeholders engaged
- Ward 7: Community Health & Wellness Resource Fair – April 25th
 - 113 stakeholders engaged



Upcoming:

- Ward 4: Mission Grove Neighborhood Alliance Meeting – May 13th
- Ward 5: Cinco de Mayo Celebration – May 9th
- Ward 6: Tyler Galleria Farmers' Market – May 17th



Statistical Survey conducted by FM3 is forthcoming



Recommendation

That the Board of Public Utilities receive and file this update on the Riverside 2050 General Plan Update and Climate Action & Adaptation Plan and provide feedback.





The graphic features a vibrant, stylized cityscape at sunset. In the foreground, a diverse group of people is shown walking, pushing a stroller, riding a bicycle, and using a wheelchair. A red and black bus is on the left. The background includes colorful buildings, trees, and a large yellow sun. At the top center, there are two logos: 'CITY OF RIVERSIDE 2050 GENERAL PLAN UPDATE' and 'CITY OF RIVERSIDE CLAAP CLIMATE ACTION & ADAPTATION PLAN'.

CITY OF RIVERSIDE GENERAL PLAN UPDATE & CLIMATE ACTION AND ADAPTATION PLAN

Stay Connected

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