



Glendale Climate Action and Adaptation Plan

City Council Meeting
August 13, 2024



What is a Climate Action and Adaptation Plan (CAAP)?



Climate Action & Adaptation Plan

- A roadmap for increasing community resilience to extreme weather, like heatwaves and wildfires, improve air quality, and reduce greenhouse gas emissions
- A plan that reflects the diverse voices of the community



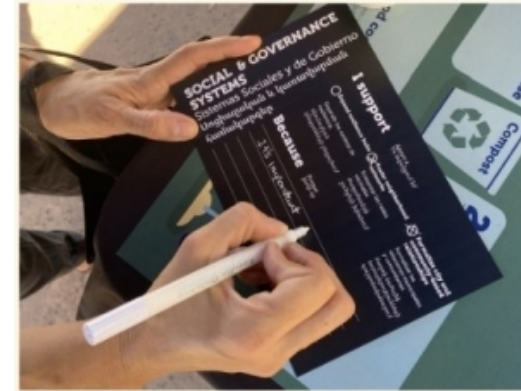
Why Develop a CAAP?



Climate Action & Adaptation Plan

State Regulations

- **Senate Bill 32 (Health & Safety Code § 38566)** achieve 40% reduction of greenhouse gas emissions below 1990 levels by 2030
- **Assembly Bill 1279 (Health & Safety Code § 38562.2)** achieve net zero greenhouse gas emissions as soon as possible, but no later than 2045
- **Senate Bill 100 (Public Utilities Code § 399 and 454.53)** achieve 100% zero-carbon electricity by 2045
- **Senate Bill 1383 (Code of Regulations Title 14 § 17409.5.1)** divert 50% of organic waste from landfills below 2014 levels by 2020 and 75% by 2025



CEQA Qualified CAAP



Climate Action & Adaptation Plan

- A CEQA qualified CAAP is one that meets Senate Bill 32 so that future development projects requiring environmental review under State law can **streamline greenhouse gas impact analyses by demonstrating consistency with the CAAP.**

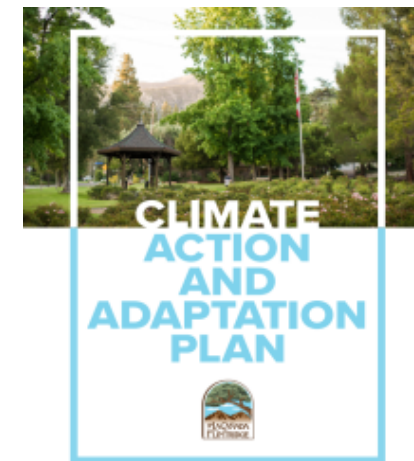
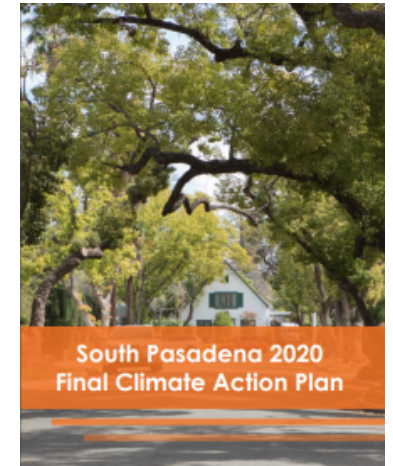
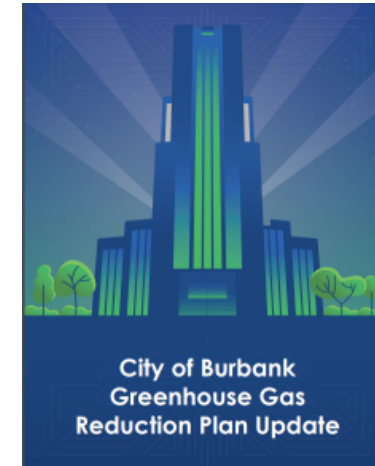


Climate Planning in Surrounding Cities



Climate Action & Adaptation Plan

- City of Burbank Greenhouse Gas Reduction Plan
- South Pasadena Climate Action Plan
- Pasadena Climate Action Plan
- Santa Monica Climate Action & Adaptation Plan
- La Cañada Flintridge Climate Action Plan
- Camarillo Climate Action Plan

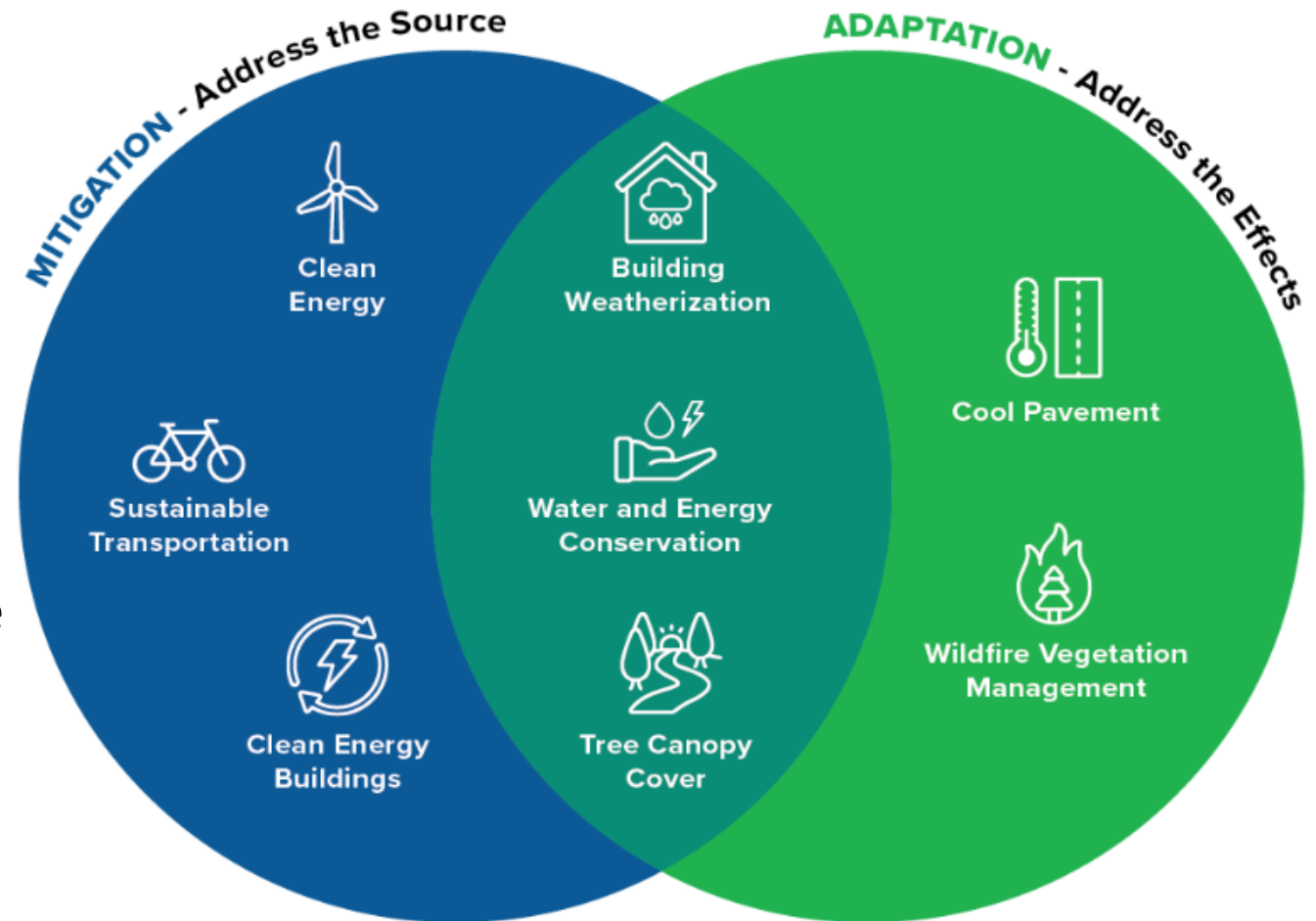


CAAP Project Overview



Climate Action & Adaptation Plan

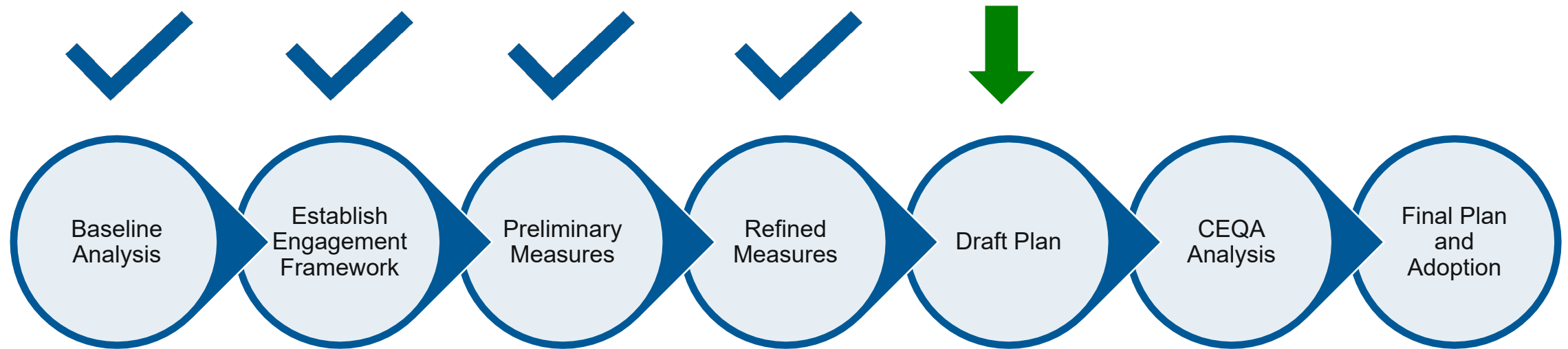
- Identify and assess the potential impacts of climate change
- Establish goals and actions that:
 - Reduce greenhouse gas emissions (climate mitigation)
 - Build resilience and adapt to the inevitable impacts of climate change (climate adaptation)
- Integrate the diverse voices of the community and remove hurdles



CAAP Process Overview



Climate Action & Adaptation Plan

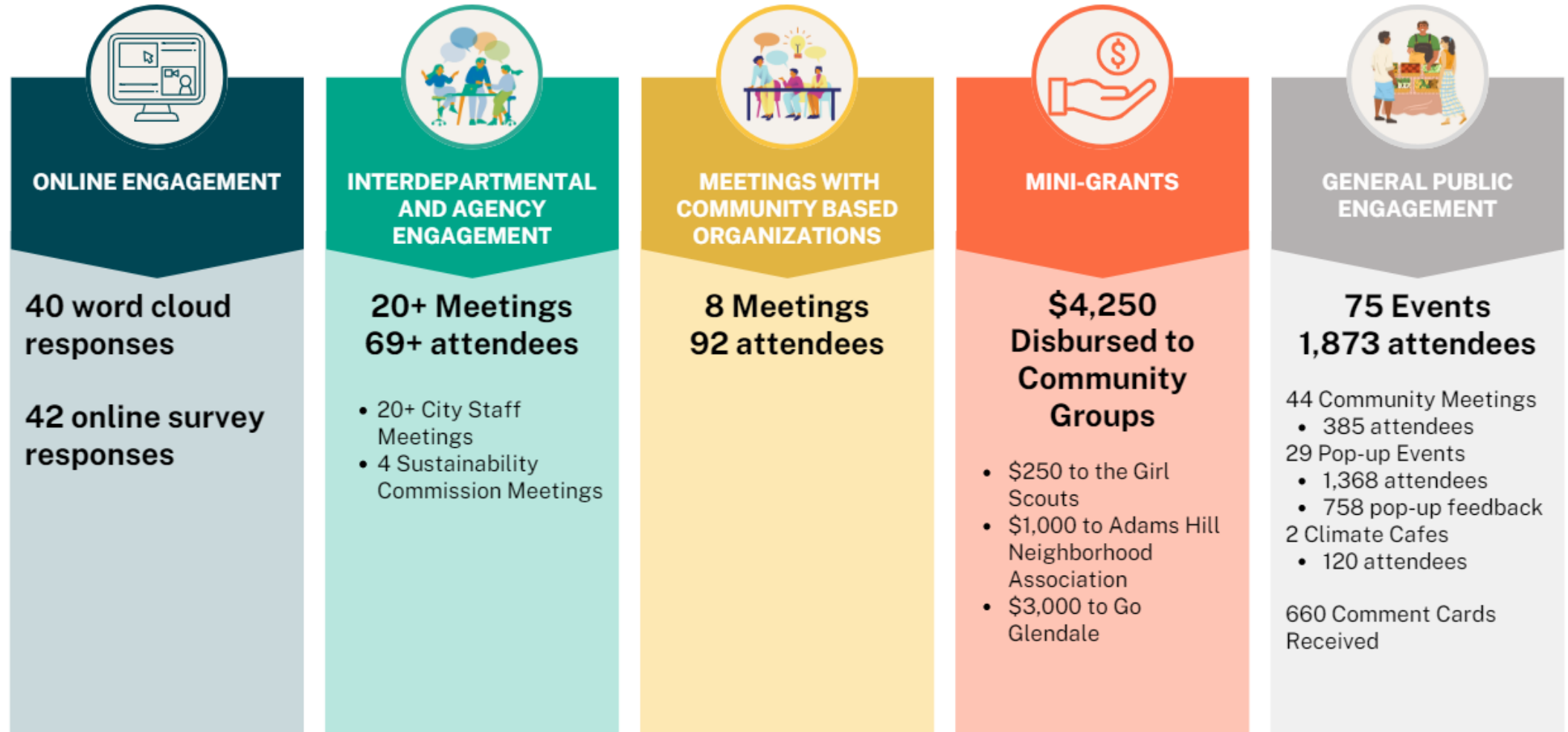


Public, Sustainability Commission, Community-Based Organizations, and City Staff feedback collected and incorporated throughout!

CAAP Engagement By the Numbers



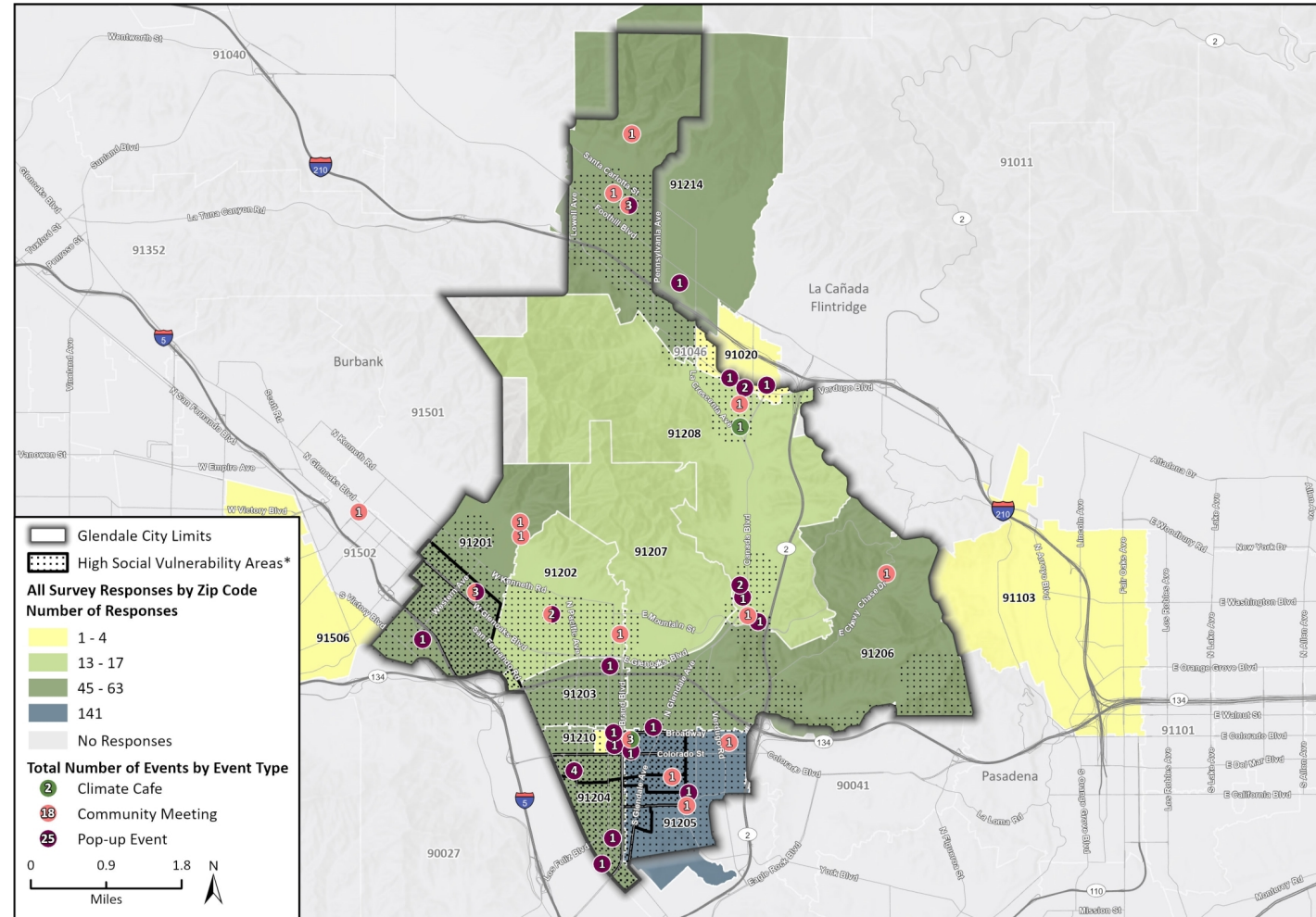
Climate Action & Adaptation Plan



CAAP Engagement By Location



Climate Action & Adaptation Plan



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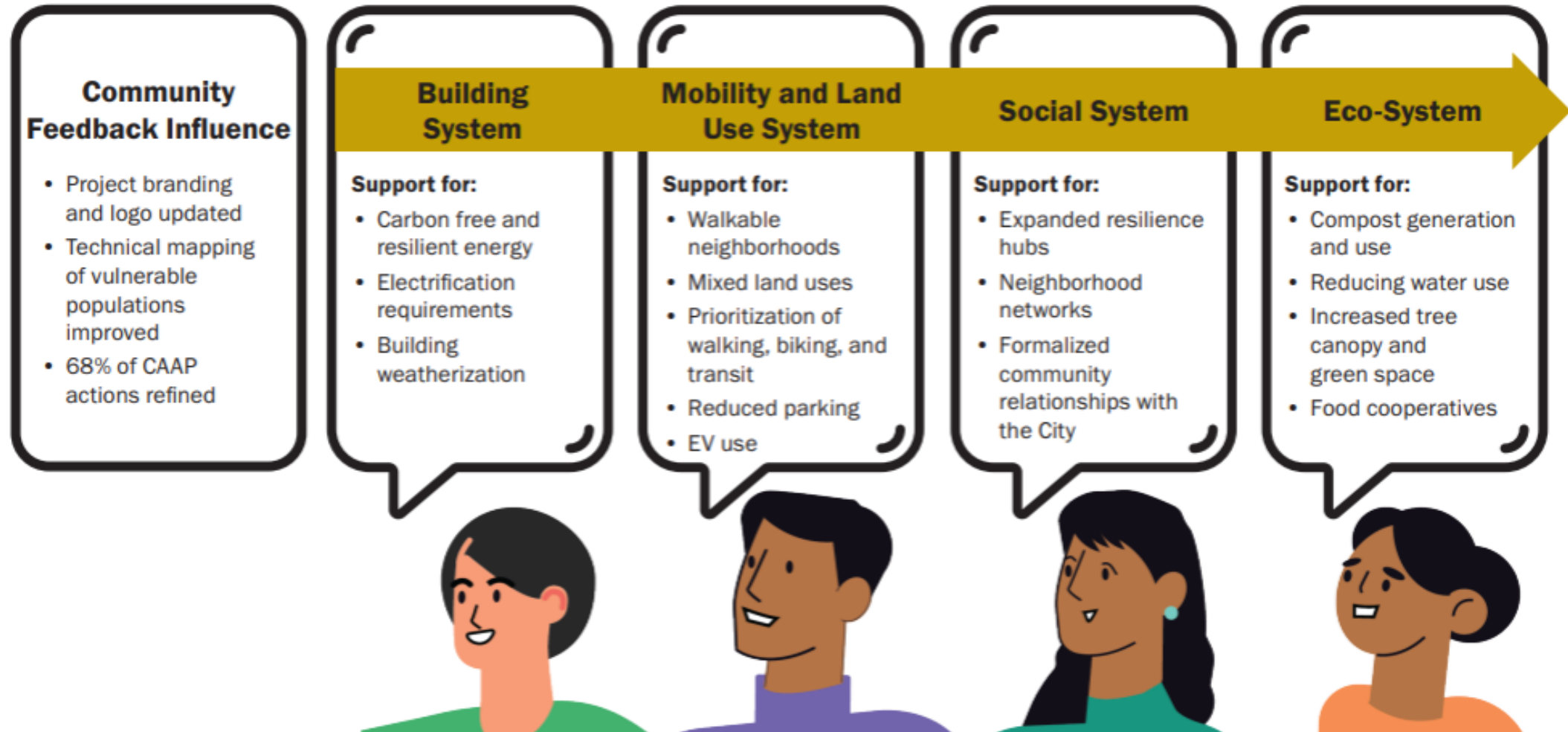
* Census tracts that are above the 60th percentile are considered a High Social Vulnerability Area.

21-11575 Glendale CAAP V1A.aprx
Fig X All Survey Responses and High Social Sensitivity Landscape

Highlights of What We Heard



Climate Action & Adaptation Plan



CAAP Structure - Systems Approach



Climate Action & Adaptation Plan



Next Steps



Climate Action & Adaptation Plan

- Funding Matrix (in progress)
- Draft and Final CAAP document and CEQA in Fall/Winter 2024



Thank you for your time!

*Please contact: David Jones,
DJones@Glendaleca.gov
with any follow-up questions or thoughts!*





Glendale Climate Action and Adaptation Plan

City Council Meeting
August 20, 2024



What is a Climate Action and Adaptation Plan (CAAP)?



Climate Action & Adaptation Plan

- Framework for community and environmental health
- A roadmap for increasing community resilience to extreme weather, like heatwaves and wildfires, improve air quality, and reduce greenhouse gas emissions
- A plan that reflects the diverse voices of the community

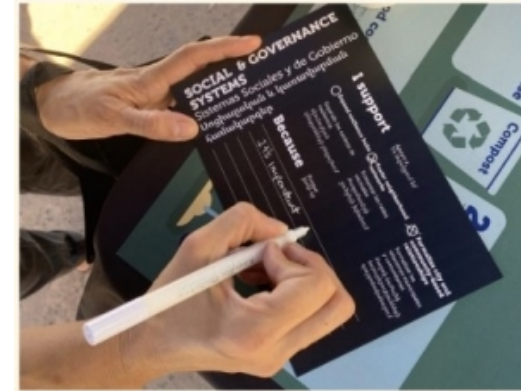


Why Develop a CAAP?



Climate Action & Adaptation Plan

- Plan to Protect Human and Environmental Health
- Provides Health and Safety Benefits
- Building a Resilient Community
- Aligns with State Regulations
 - SB 32, AB 1279, SB 100, SB 1383, etc.



Risks of Climate Change: What's at Stake?



Climate Action & Adaptation Plan

- Human health and loss of life
 - 5,000+ hospitalizations, nearly 10,600 emergency department visits, more than 138,000 outpatient visits and nearly 344 adverse birth outcomes
 - Thousands of people have died due to extreme heat in California over the past decade
 - Effects of extreme heat are disproportionately borne by low-income communities, older adults and outdoor workers
- Economic Impact \$7.7 billion dollars over 10 years
 - Lost wages and productivity
 - Agricultural and manufacturing disruptions
 - Power outages
 - Infrastructure damage

CEQA Qualified CAAP



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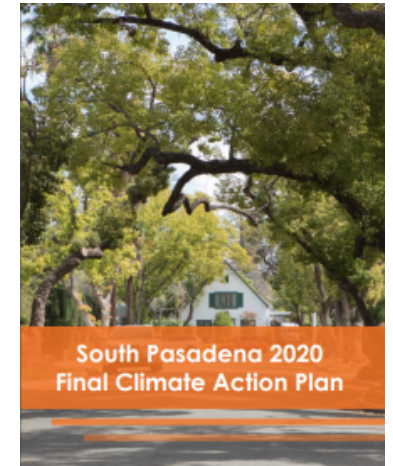
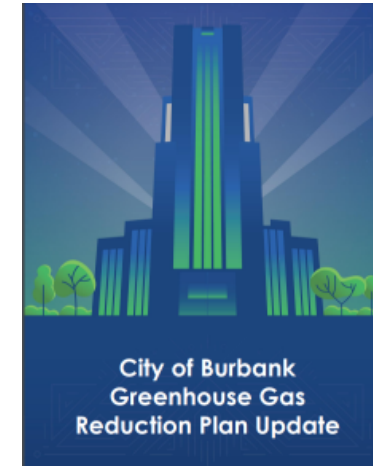


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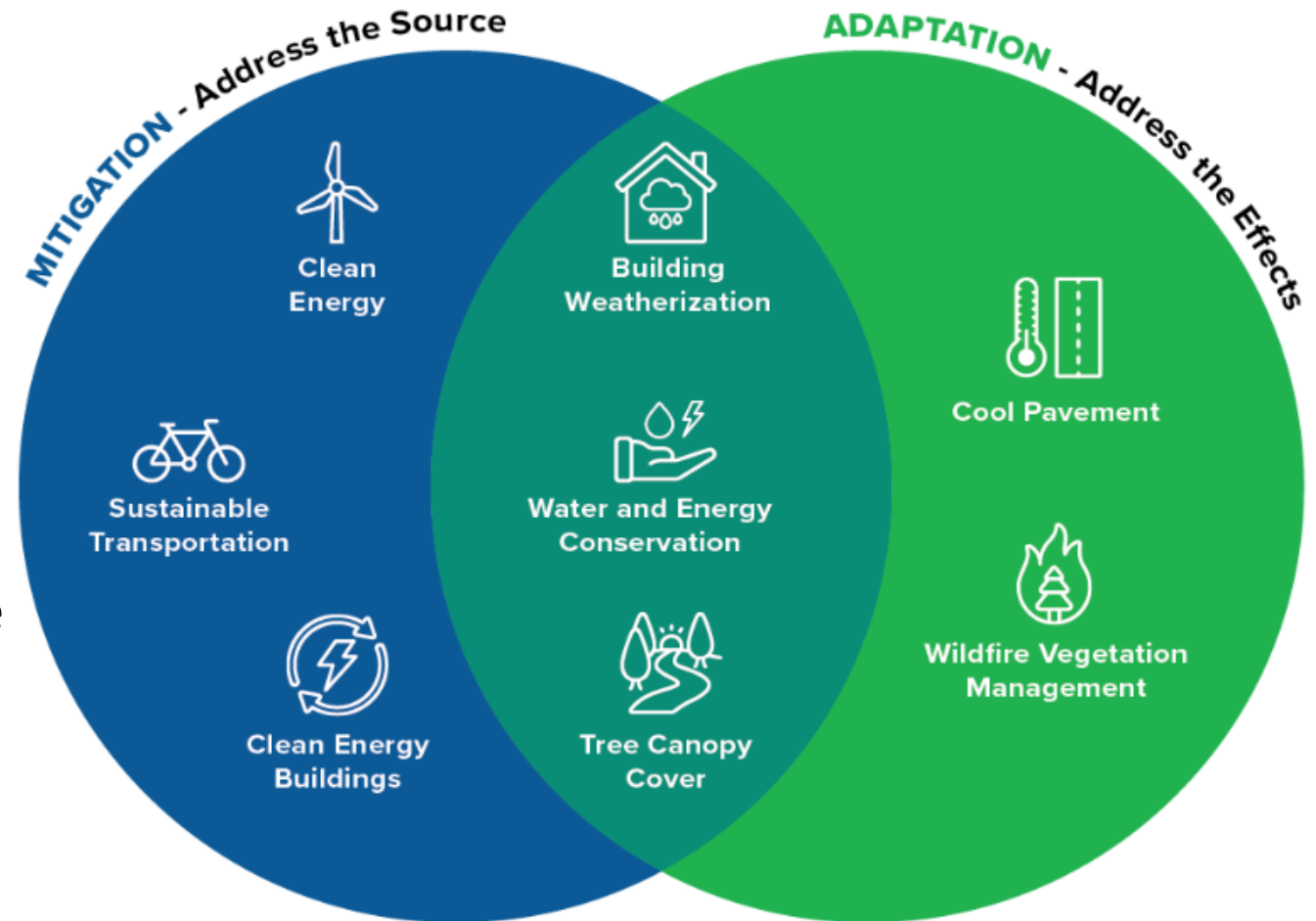


CAAP Project Overview



Climate Action & Adaptation Plan

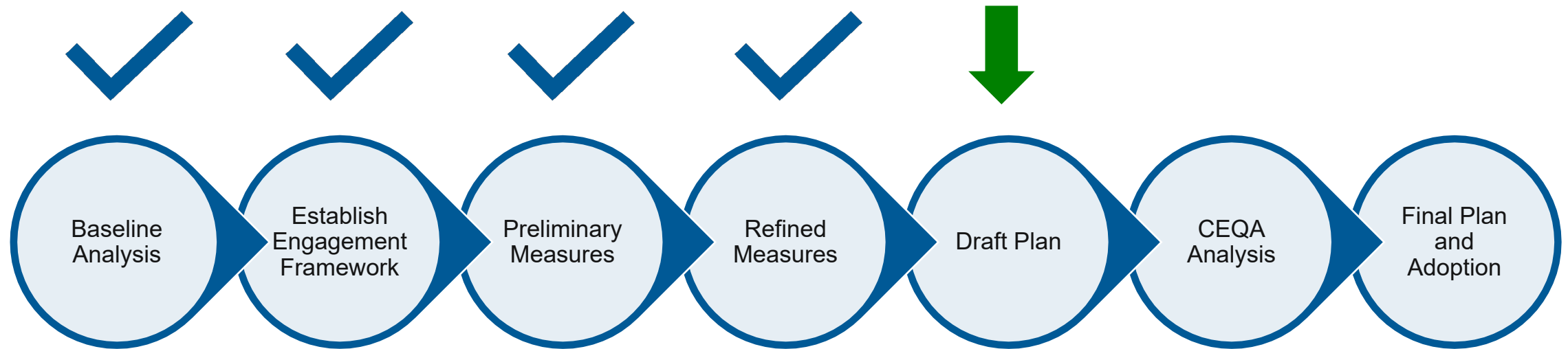
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CAAP Process Overview



Climate Action & Adaptation Plan

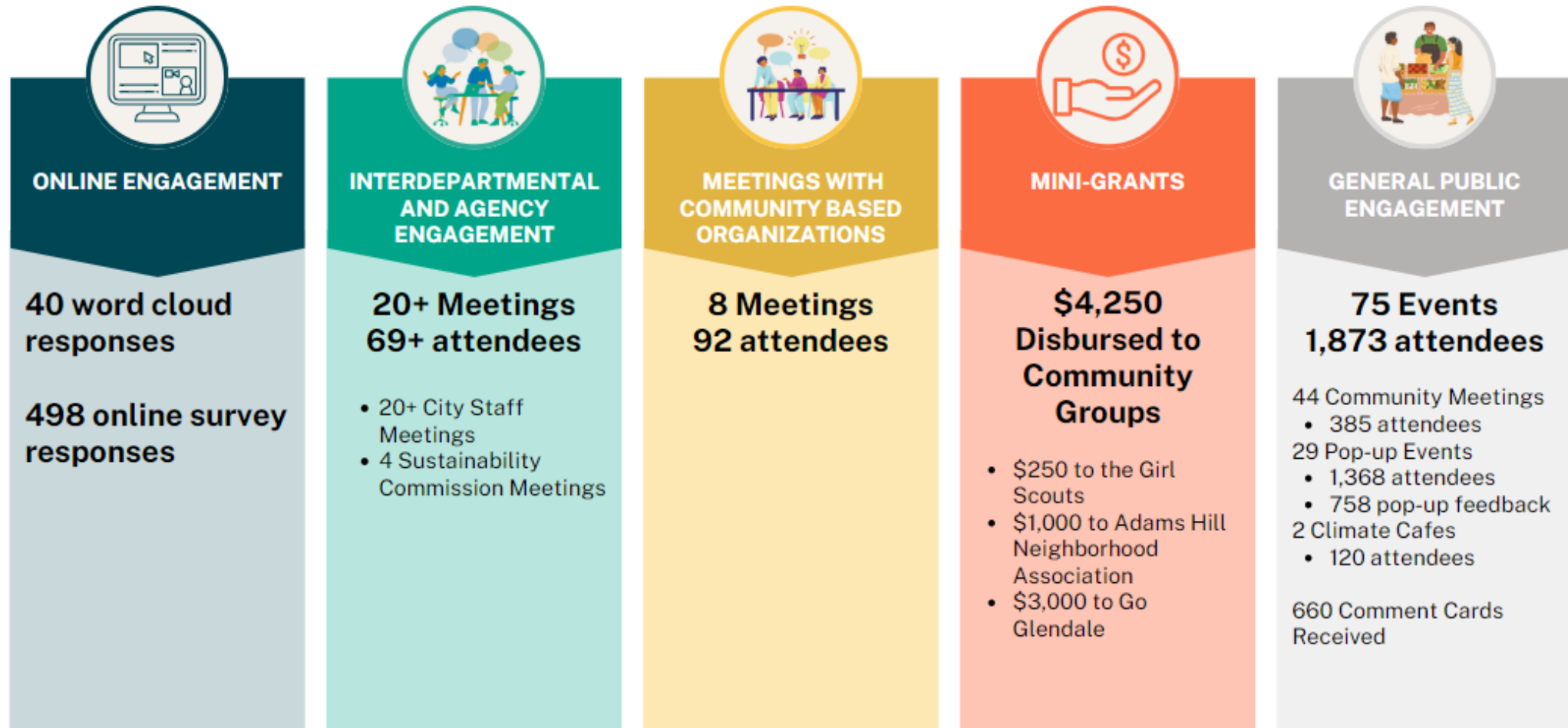


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CAAP Engagement By the Numbers



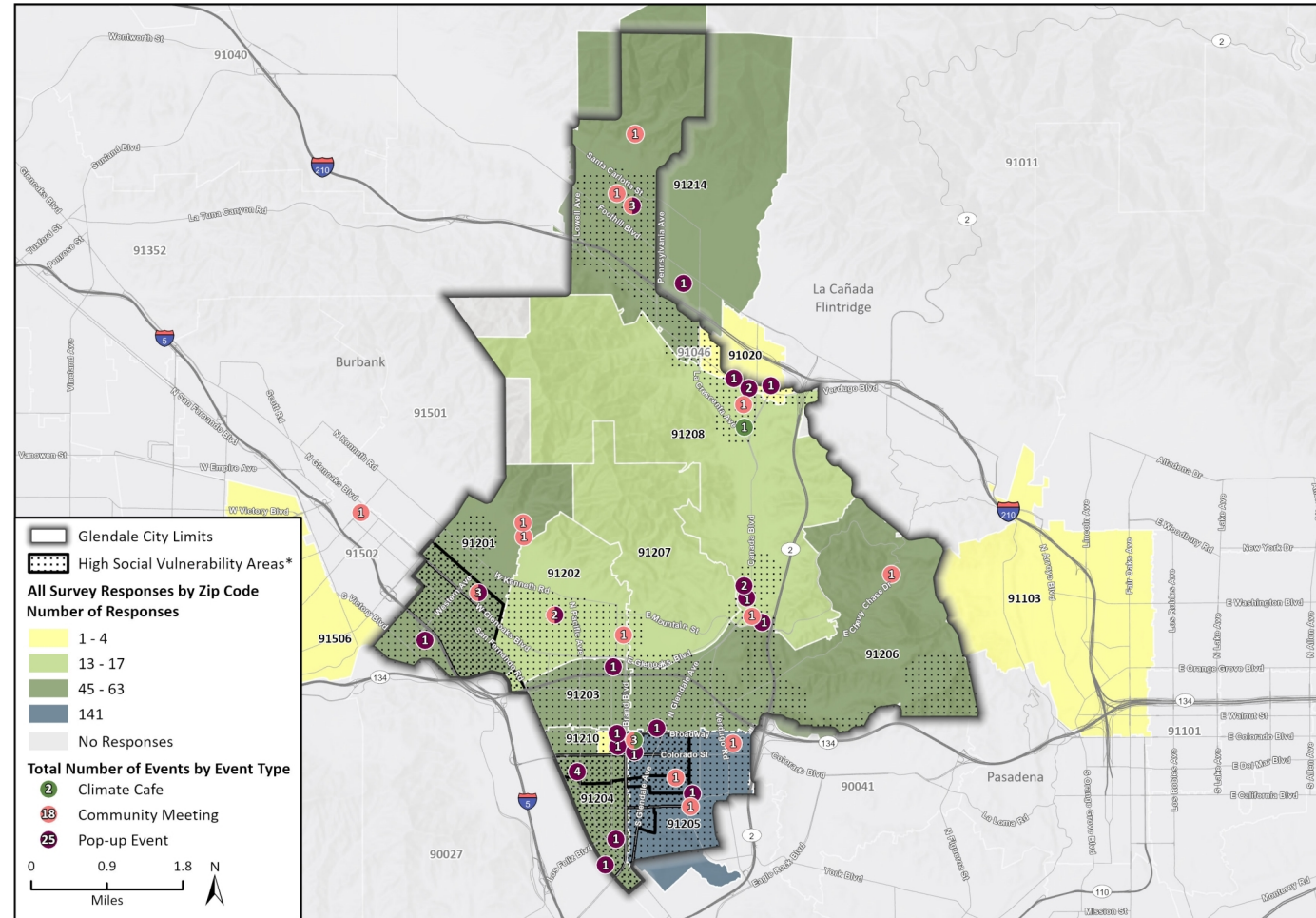
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CAAP Engagement By Location



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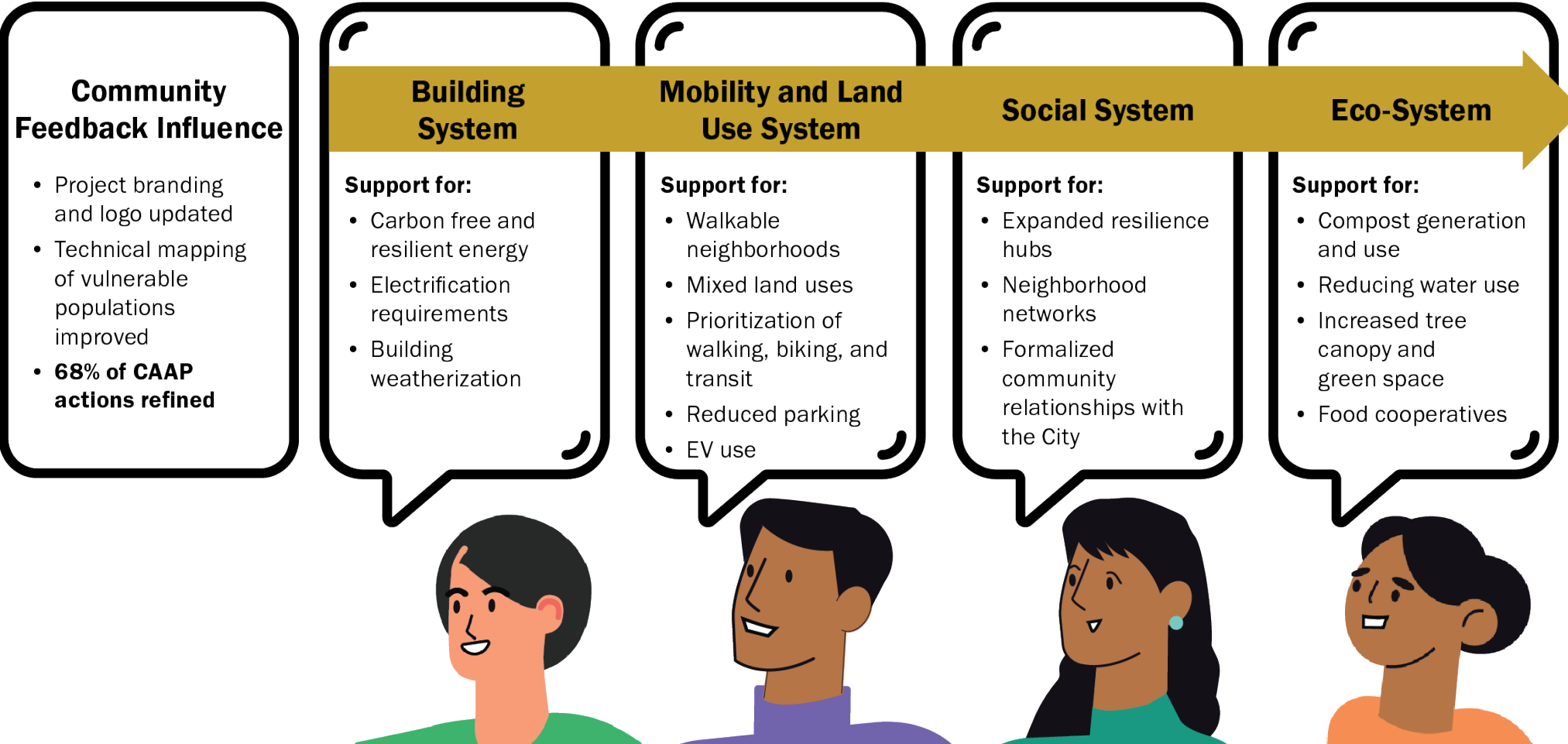


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Highlights of What We Heard



Climate Action & Adaptation Plan



CAAP Structure - Systems Approach



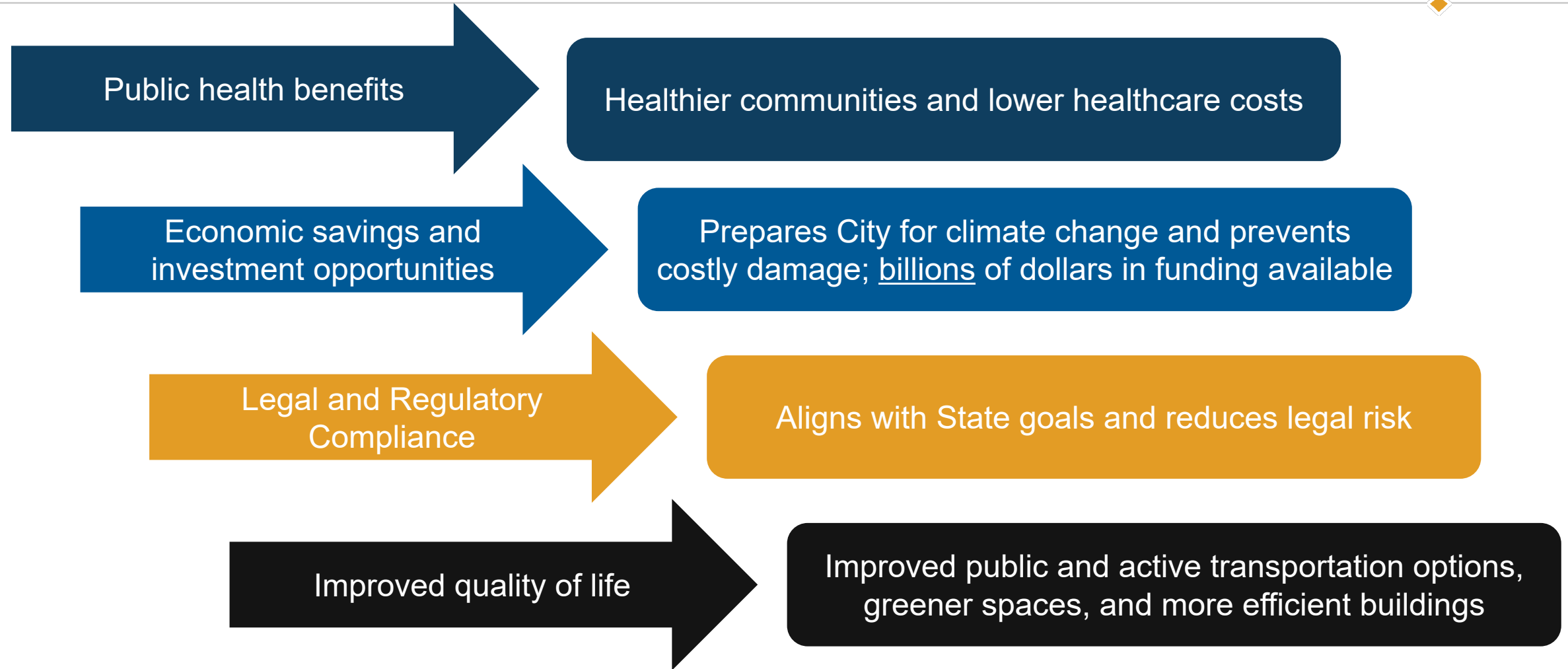
Climate Action & Adaptation Plan



Act Today, Protect Tomorrow



Climate Action & Adaptation Plan



Next Steps



Climate Action & Adaptation Plan

- Funding Matrix (in progress)
- Draft and Final CAAP document and CEQA in Fall/Winter 2024
- Bi-annual Status Updates to City Council
- CAPDash - public-facing dashboard



Thank you for your time!

*Please contact: David Jones,
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with any follow-up questions or thoughts!*



Appendix Slides



Building on Our Existing Plans



Climate Action & Adaptation Plan

- GWP Integrated Resource Plan (IRP)
- GWP Strategic Plan
- GWP Turf Replacement Program
- Bicycle Transportation Plan
- Be Street Smart Glendale
- Glendale Safe and Healthy Streets Plan
- Glendale Citywide Pedestrian Plan
- Vision Zero Pedestrian Plan
- General Plan Circulation Element
- General Plan Safety Element
- Glendale Narrows Riverwalk Master Plan
- Glendale Water and Power Electric
- Vehicle Navigator Program
- Economic Development Strategic Plan
- Wildfire Mitigation Plan
- Community Forest Management Plan (Draft)
- Solar and Energy Storage Plan
- Clean Energy Resolution
- Recycling Center Master Plan
- Zero Waste Action Plan
- Glendale Edible Food Recovery Program
- Citywide Emergency Plan
- Urban Water Management Plan
- Recycled Water Master Plan
- Glendale Green Business Program
- Greener Glendale Plan - community activities
- Greener Glendale Plan - municipal operations
- Green Building Standards
- Glendale Downtown Specific Plan
- Pedestrian Plan
- Safe & Healthy Streets Plan
- Zero Waste Action Plan
- No Water Waste Policy, Chapter 13.36 of the Glendale Municipal Code
- Converting Glendale Street Lights To LED

Cost Considerations



- Upfront versus lifecycle costs
 - E.g., cost of buying an LED light bulb versus the costs of purchasing, operating, maintaining, and ultimately disposing of that lightbulb. LED lightbulbs may be more expensive upfront, but their lifecycle costs are significantly lower.
- Incremental or marginal costs
 - E.g., a new electric vehicle could cost \$30,000, however, the marginal cost of purchasing an electric vehicle versus a new internal combustion vehicle may be zero or near zero because of long-term operating and maintenance costs (no fluids to replace fewer moving parts like transmission, less brake wear).
- Financing – leveraging the time value of money
 - E.g., Cost of a solar array may cost \$20,000 and result in an energy bill that is \$200 less per month. A loan for a solar array requires a monthly payment of \$150/month, resulting in a net monthly savings in \$50.
- The Cost of Inaction
 - Cost of inaction is not \$0. Estimates show hundreds of trillions of dollars in losses.

Cost of Inaction



Climate Action & Adaptation Plan

nature

[nature](#) > [scientific reports](#) > [articles](#) > [article](#)

Article | [Open access](#) | Published: 08 June 2020

Assessing the costs of historical inaction on climate change

[Benjamin M. Sanderson](#)  & [Brian C. O'Neill](#)

[Scientific Reports](#) **10**, Article number: 9173 (2020) | [Cite this article](#)

25k Accesses | **30** Citations | **363** Altmetric | [Metrics](#)


Abstract

We consider alternative history scenarios in which explicit climate mitigation begins before the present day, estimating the total costs to date of delayed action. Considering a 2(1.5) degree Celsius stabilization target, peak costs are greater and reached sooner with a later start to mitigation, reaching 15(17)% of global GDP in 2085(2070) for a 1990 start and 18(35)% in 2080(2035) for a 2020 start. Further mitigation delay costs a best estimate of an additional 0.5(5) trillion dollars per year. Additional simulations show how optimal mitigation pathways evolve without imposing a warming limit, finding that median abatement levels and costs are not strongly dependent on start date. However, whereas 18(5) percent of optimal solutions starting in 1980 meet the 2(or 1.5) degree target, 5(or 0)% of 2020 simulations meet the goals. Discounted damages due to delayed mitigation action rise by 0.6 trillion US dollars per year in 2020.

Forbes

FORBES > INNOVATION > SUSTAINABILITY

Climate Inaction Could Cost \$1,266 Trn, As US Pushes Back On Reporting

Felicia Jackson Contributor 

I write about innovation, finance, energy, climate and sustainability.

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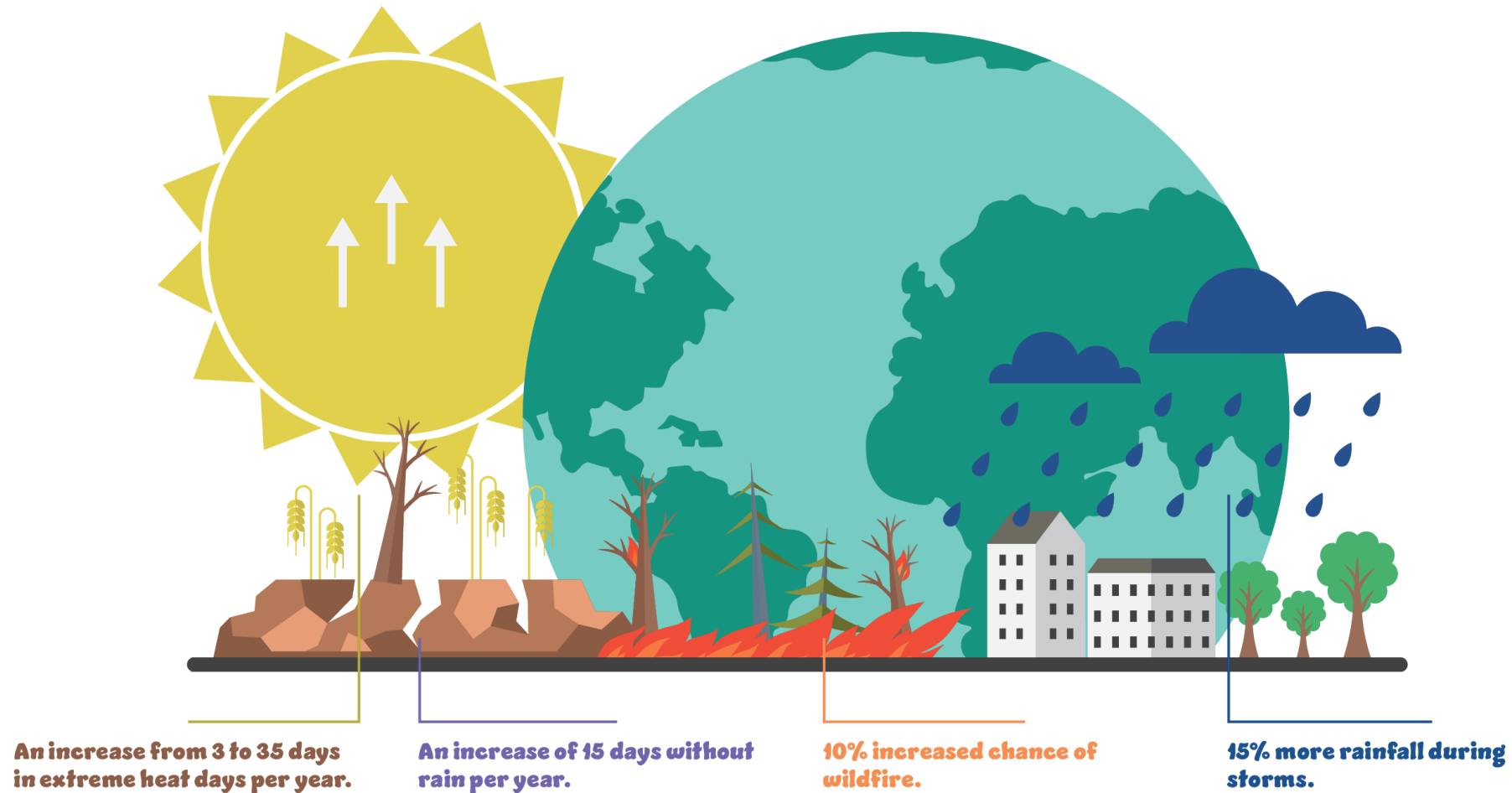
Mar 20, 2024, 07:54am EDT

“Aggregating over the period 2025-2100, the total cost of inaction is estimated at \$1,266 trillion; that is, the difference in losses under a business-as-usual scenario and those incurred within a 1.5°C pathway. This figure is, however, likely to be a dramatic underestimate.”

Climate Change Vulnerabilities



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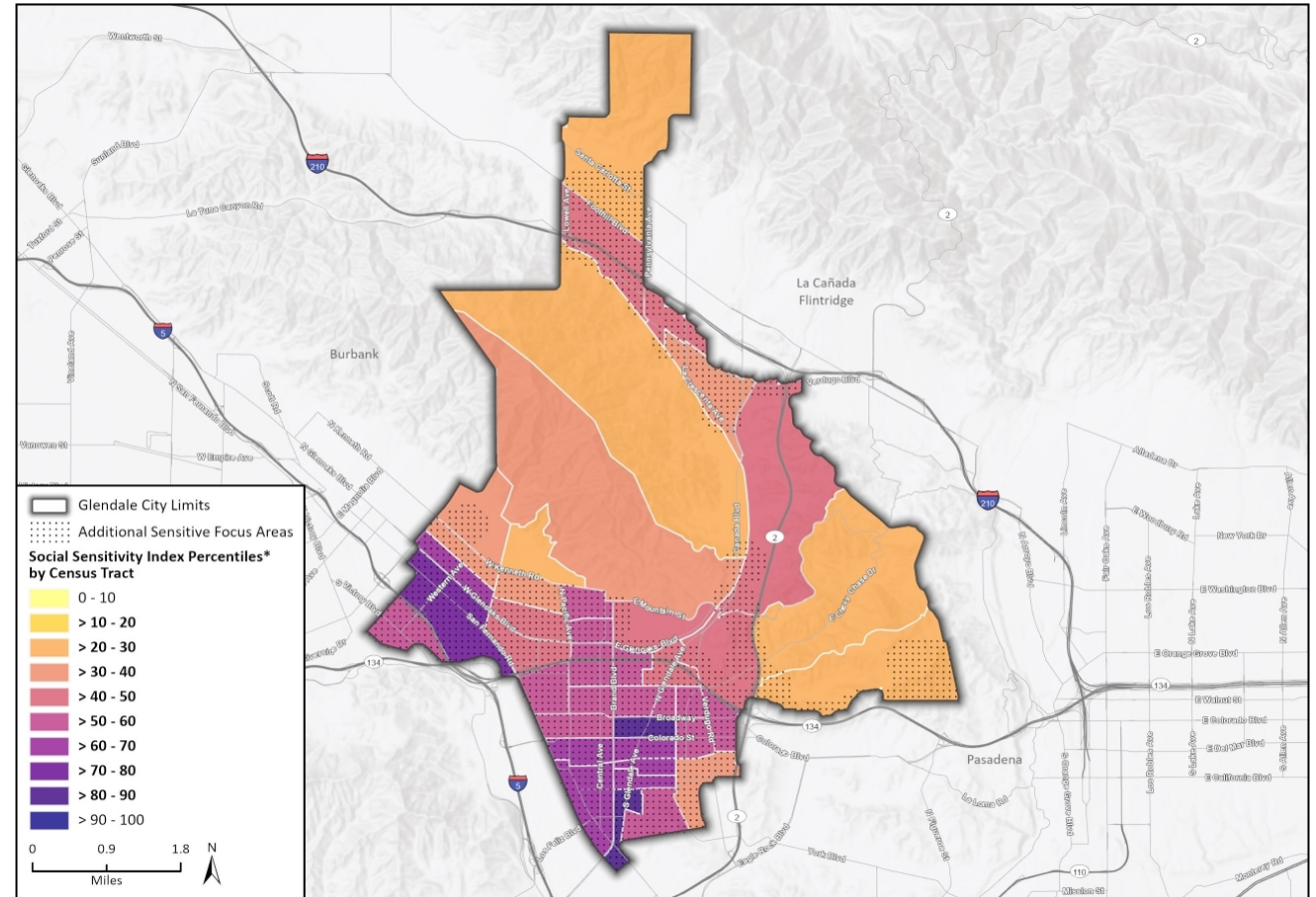


Vulnerable Populations



Climate Action & Adaptation Plan

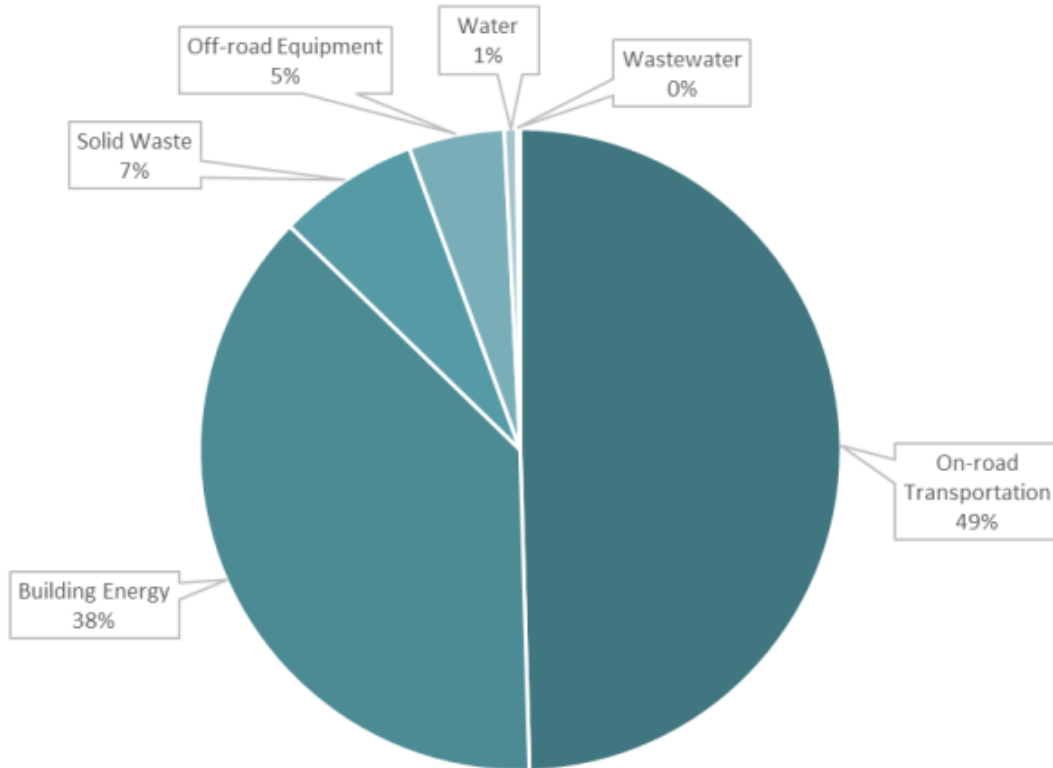
- Vulnerable Populations Map
 - Data from Census and Center for Disease Control and Prevention (CDC) and refined using Focus Group Feedback
 - Shows areas in the City that have high proportions of environmentally-sensitive residents



2021 Community Inventory



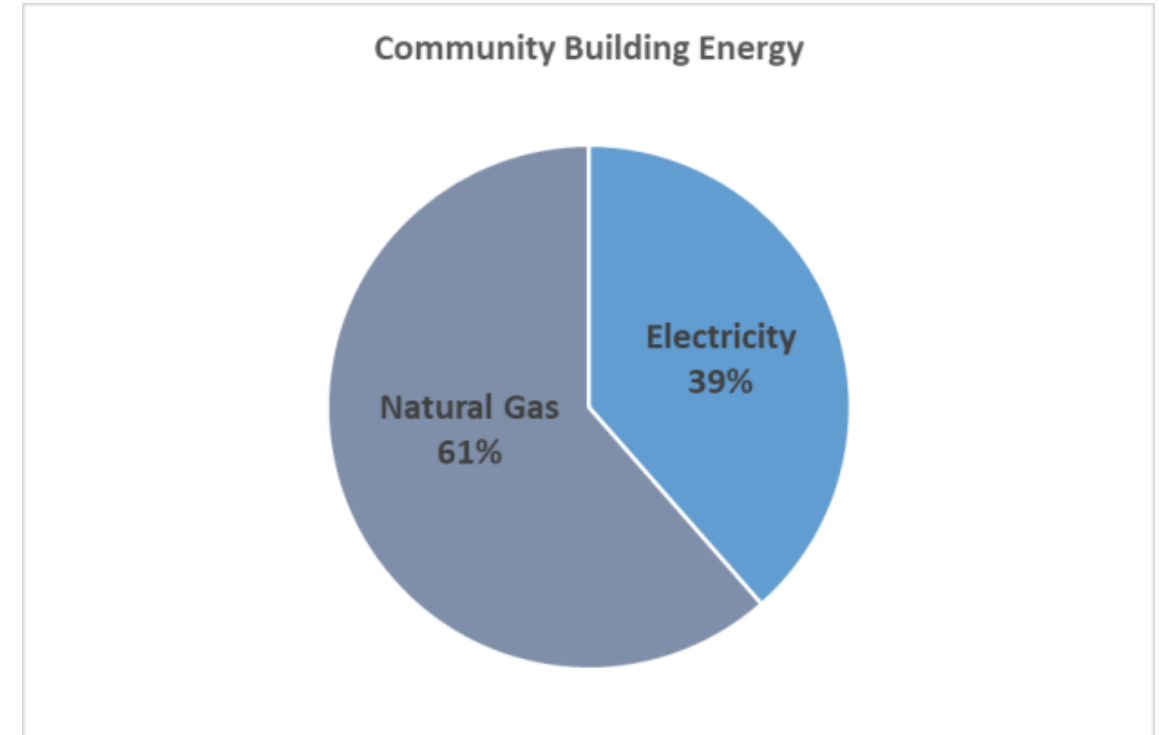
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Note:

On-road transportation includes fossil-fuel powered cars, trucks, transit vehicles, and motorcycles

Off-road equipment includes construction, lawn, and all terrain vehicle



What is the Social and Governance System?



Climate Action & Adaptation Plan

- The systems the City puts in place for implementing the plan
- Alerts and communication
- Government services and social cohesion, how community members interact and look after each other

Social and Governance System



Climate Action & Adaptation Plan

Measure ID	Measure Text
Social and Governance System	
SG-1	Provide evacuation and health alert messaging in English, Spanish, Armenian, and Korean, and in multiple forms (e.g., online, brochure, radio) to amplify the Glendale community's awareness of extreme weather and events (including wildfires, landslides, extreme heat events, and poor air quality days).
SG-2	Establish three resilience centers by 2030 in high social sensitivity areas that provide refuge for vulnerable populations from poor air quality and extreme heat conditions that serve as year-round community resource centers.
SG-3	Change internal protocols and procedures to incorporate a climate and equity lens into all government operational decision-making to increase investments in CAAP implementation for vulnerable populations.
SG-4	Formalize City and community-based relationships to create meaningful and long-lasting relationships with non-profit organizations and increase engagement of vulnerable communities and Tribal governments in local government decision-making processes.
SG-5	Increase community capacity to better withstand climate shocks and stresses.

What is the Building System?



- The buildings where we live, work, and play
- The energy those buildings consume for heating, cooling, cooking, and more
- How well prepared those buildings are for tomorrow's climate
 - Extreme Temperatures
 - Flooding
 - Fire
 - Air Quality

Building System



Climate Action & Adaptation Plan

Measure ID	Measure Text
Building System	
BLD-1	Increase carbon-free electricity procurement to provide 100% carbon-free electricity community-wide by 2035 and improve electrical system resiliency through additional distributed energy resources, transmission capacity, and demand response.
BLD-2	Require healthy, safe, decarbonized, and resilient new buildings by 2026.
BLD-3	Retrofit 25% of existing buildings by 2030 and 95% by 2045 to be zero-carbon and resilient to extreme heat and wildfires.
BLD-4	Decarbonize and make municipal buildings resilient by 2035.

What is the Mobility and Land Use System?



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- The layout and zoning of the City
- The mobility options available – transit, bike/ped, vehicles
- The kinds of vehicles we drive (EV)
- The ability to move around in an emergency or climate event

Mobility and Land Use System



Climate Action & Adaptation Plan

Measure ID	Measure Text
Mobility and Land Use System	
MLS-1	Reduce reliance on single-occupancy vehicles by promoting increased residential densities along transit and commercial corridors, increasing mix of land uses and expanding the range of attainable housing choices.
MLS-2	Increase active transportation mode share to 3% by 2030 and 10% by 2045 by increasing the safety and availability of the transportation system to support walking and biking for all members of the community.
MLS-3	Enhance the transit system to be more resilient, accessible, and convenient to increase mode share to 5% by 2030 and 10% by 2045.
MLS-4	Increase passenger and commercial zero-emission vehicle use and adoption to 25% by 2030 and 90% by 2045, respectively.
MLS-5	Electrify or otherwise decarbonize 30% of community-operated off-road equipment (e.g., lawnmowers, leaf blowers, and chainsaws) operations by 2030 and 100% by 2045.
MLS-6	Transition to 75% zero-emission municipal fleet by 2030 and 100% by 2040.

What is the Urban Eco-System?



- The parks and greenspace the City provides
- Water consumption and conservation
- Organic waste diversion and composting
- Mitigating wildfire and flooding
- Growing local foods

Urban Eco-System



Climate Action & Adaptation Plan

Measure ID	Measure Text
Urban Eco-System	
UE-1	Increase organics diversion through SB-1383 to divert 75% of organic material by 2025.
UE-2	Increase tree canopy to 25% by 2030 and 30% by 2045 by focusing on communities most vulnerable to extreme heat.
UE-3	Reduce the potential for wildfire to spread in Glendale by actively managing 50-75 acres of land annually through prescribed burns, brush clearance, grazing, and building hardening.
UE-4	Increase access to affordable and fresh produce through partnerships and technical assistance.
UE-5	Reduce per capita water use X% by 2030 and Y% by 2045 by enhancing water conservation and water quality and increase the Glendale water system's resilience to climate extremes by upgrading water and stormwater facilities.
UE-6	Showcase municipal leadership through increased landfill diversion rates, climate-smart food and purchasing behavior, and enhanced water efficiencies.

CAAP Engagement By the Numbers



Climate Action & Adaptation Plan

Online Engagement

- 40 word cloud responses
- 42 survey responses

2. Interdepartmental and Agency Engagement

- Total Meetings: 3 interdepartmental workshops, 25+ department meetings, 4 sustainability commission meetings
- Total Attendees: 69

3. Focus Groups

- Total Meetings: 8
- Total Attendees: 92

4. Mini-grant

- \$1,150 disbursed to Adams Hill Neighborhood Association
- \$3,000 disbursed to Go Glendale
- \$X disbursed to Girl Scouts

5. General Public Engagement

- 44 Community Meetings
- 385 community meeting attendees
- 29 pop-ups at existing community events
- 1,368 attendees at pop-ups at existing community events
- 223 CAAP comment cards received
- 437 Greener Glendale Comment cards received
- 758 pop-up feedback
- 100 CAAP information booklets distributed
- Total Open Houses (climate cafes): 2
- Total Open house/climate café Attendees: 120

CAAP Online Engagement



Climate Action & Adaptation Plan

Share Your Thoughts!

In one word, what does a sustainable and livable Glendale look like?



Online Surveys – What we heard

- Survey #1 – CAAP Strategies (29 responses, all English)
 - 97% are concerned or very concerned about climate change
 - 22% identified needing financial incentives for building upgrades
 - 21% identified needing expansion of dedicated/protected bike lands and more secure bike parking options in public places to increase safety while biking
 - 4 respondents would like to see an increase in green spaces
 - 28% had not participated in a public planning process before
- Survey #2 – CAAP Hurdles (13 responses, all English)
 - 54% identified needing financial support and 23% identified needing landlord support to replace existing gas-powered appliances with electric
 - 46% identified needing financial support and 31% identified not needing any additional support to install solar panels
 - 3 respondents noted safety concerns either related to biking or taking public transit in the city
 - 62% had not participated in a public planning process before