

Stockton Region Comprehensive Climate Action and Adaptation Plan (CCAAP)

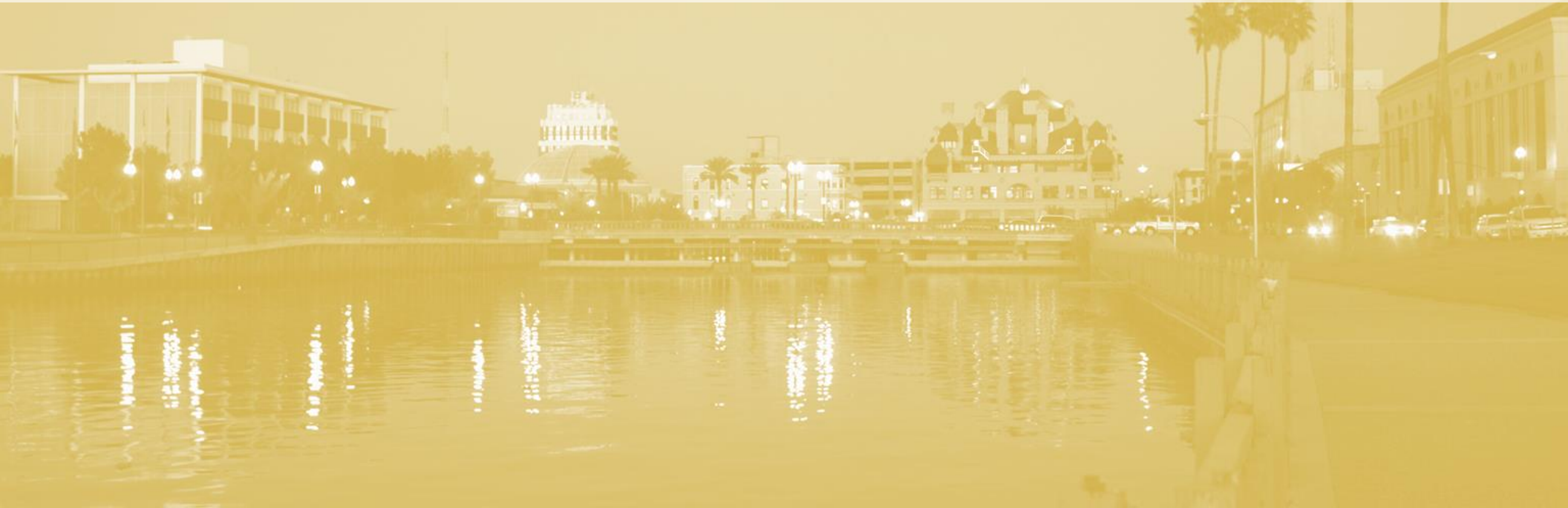
Climate Action Plan Advisory Committee #2

September 17, 2025

Agenda

- Welcome and Introductions
- CAPAC Meeting #2 Objectives
- Preview Priority Climate Action Plan
- 2022 San Joaquin Countywide Greenhouse Gas Inventory
- Action Development Overview & Workshop #2 Feedback
- Next Steps

Welcome and Introductions



Welcome and Introductions



City of Stockton

Shalilah Bess

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AECOM

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Vanessa Goh



Little Manila Rising

Jasmine Peterson

Meeting Objectives



CAPAC Meeting #2 Objective

Objective: Select **5 actions** to include and preliminarily evaluate in PCAP interim deliverable:

- All other actions can be included in CCAAP
- After 5 actions are selected, AECOM will evaluate for GHG reduction potential, authority to implement, and lead implementer(s)
- Reference Action List for full list of actions with detailed descriptions

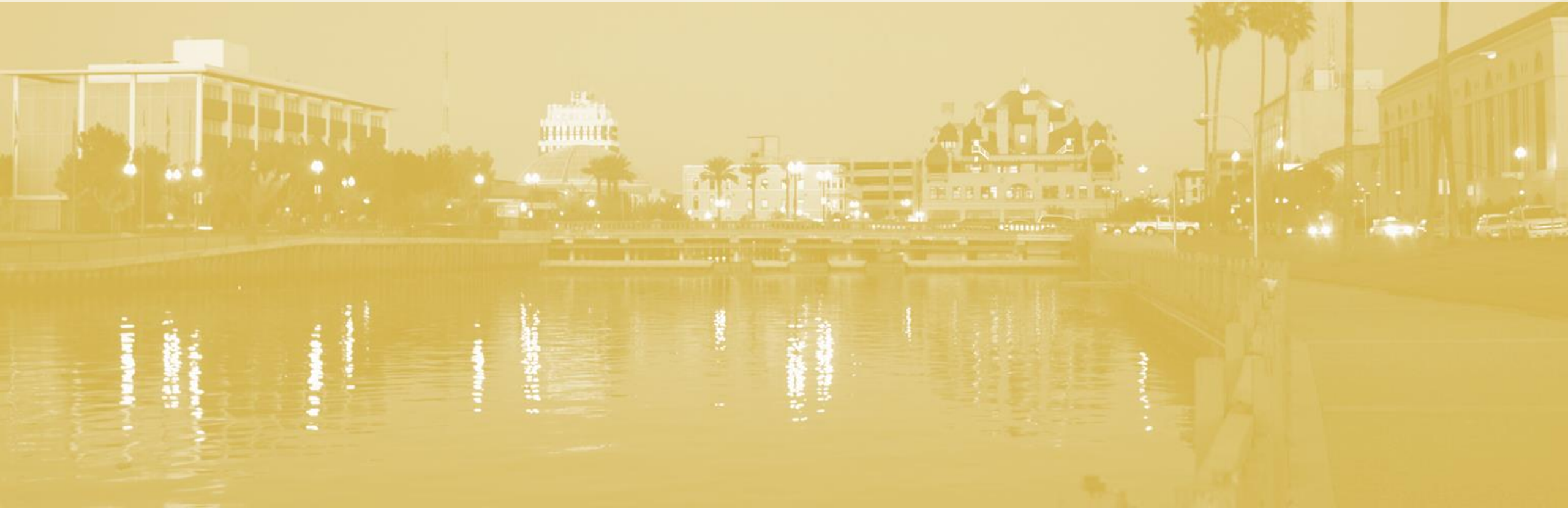
CCAAP Adaptation Tasks

- **California Governor's Office of Land Use and Climate Initiatives' Adaptation Planning Grant (APG) Program** - Supports communities to identify climate resilience priorities and develop a pipeline of resilient infrastructure projects, prioritizing equity and integrated social and physical infrastructure planning:
 - Develop climate vulnerability assessment
 - Define adaptation actions



CA Governor's Office of
**Land Use and
Climate Innovation**

Preview Priority Climate Action Plan (PCAP)



Priority Climate Action Plan (PCAP)

Comprehensive Climate Action Plan (CCAP)

Status Report

PCAP and CCAP Required Elements

- **PCAP Elements**

- GHG inventory
- Quantified GHG reduction measures (for 'priority' measures only)
- LIDAC analysis*
- Review of authority to implement
- Stakeholder engagement activities

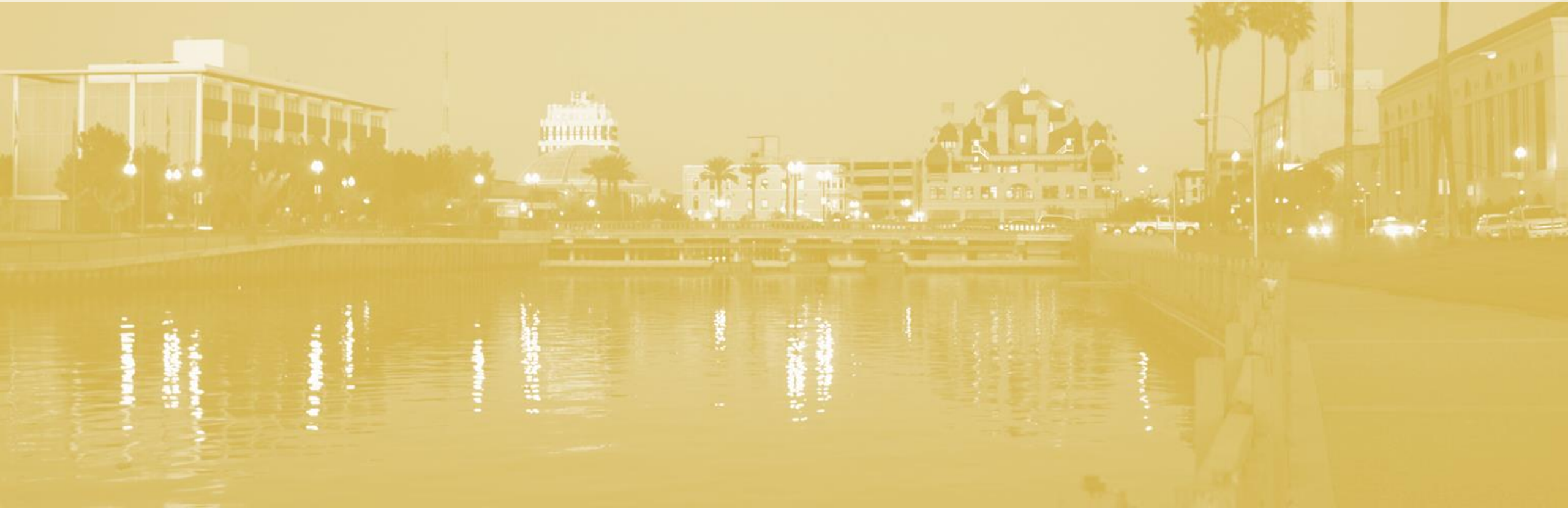
- **Additional CCAP Elements**

- GHG projections
- GHG reduction targets
- Quantified GHG reduction measures (for all plan measures)
- Benefits analysis
- Intersection with funding availability
- Workforce planning analysis

PCAP Structure

- Tentative PCAP Outline
 - Introduction
 - Outreach & Engagement
 - GHG Inventory
 - PCAP Measures
- PCAP due to EPA in November 2025 per CPRG grant requirements
 - Acts as milestone on path to full CCAAP – internal working draft document

GHG Inventory



GHG Inventory Development

GHG Inventory Development Steps

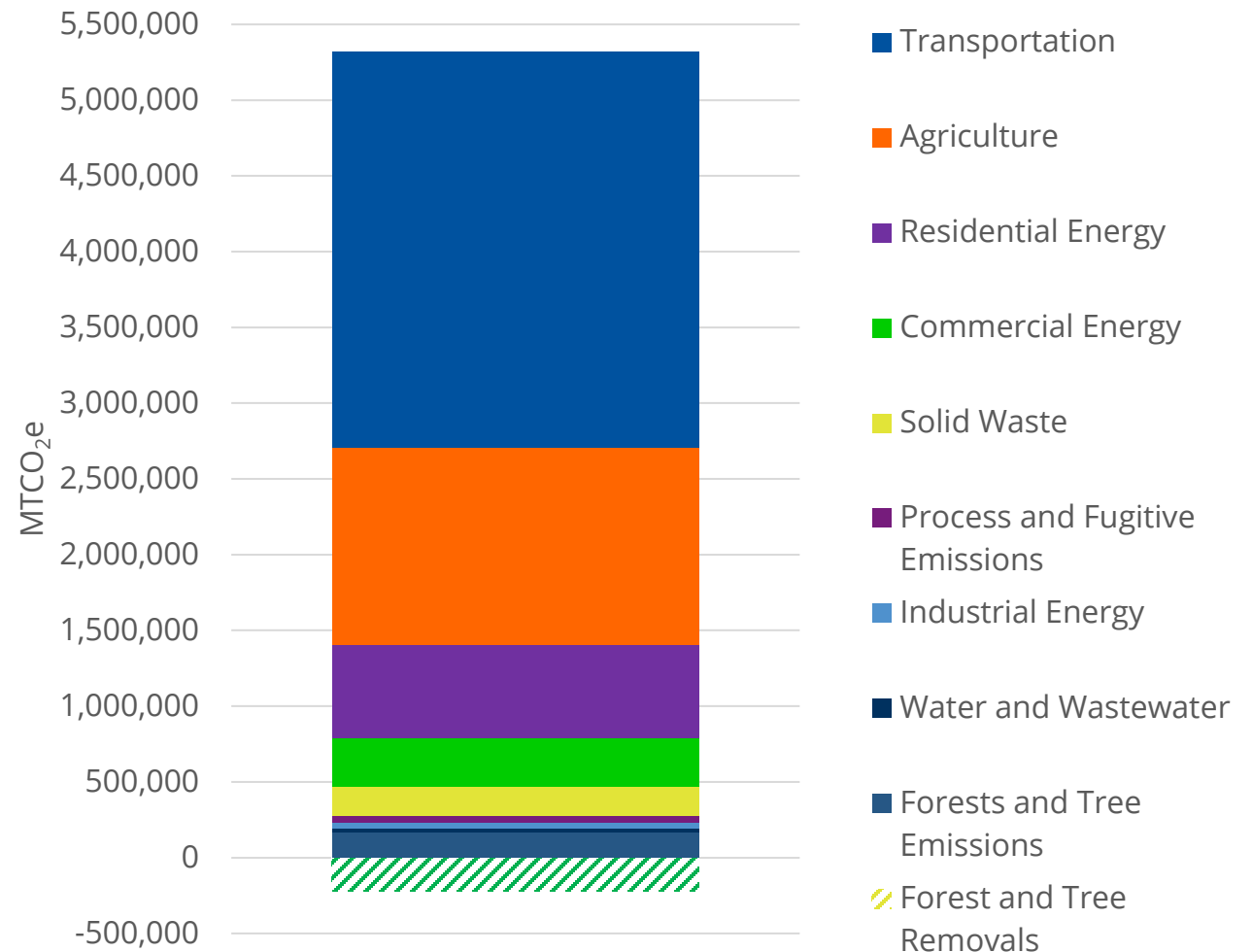
1. Collected or estimated **activity data** and **emissions factors**
2. Entered data into **ICLEI USA ClearPath** inventory tool to calculate GHG emissions
3. Transferred results to regional inventory Excel file for use in CCAAP development

GHG Inventory Notes

- Inventory follows **US Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions** – commonly used protocol for US communities
- Obtained best available data to balance EPA CPRG program requirements and project schedule
- Inventory can **guide climate action development** and **track future emissions reduction progress** – directional progress indicator

Where do the region's GHG emissions come from?

- Chart shows San Joaquin county-wide 2022 GHG emissions inventory
- Emissions are primarily from **Transportation (51%)**, **Agriculture (25%)**, and **Residential Buildings (12%)** – **88% of total emissions**
- Transportation emissions are mainly from on-road vehicle fuel use; agricultural emissions mainly from livestock; and residential emissions mainly from natural gas use



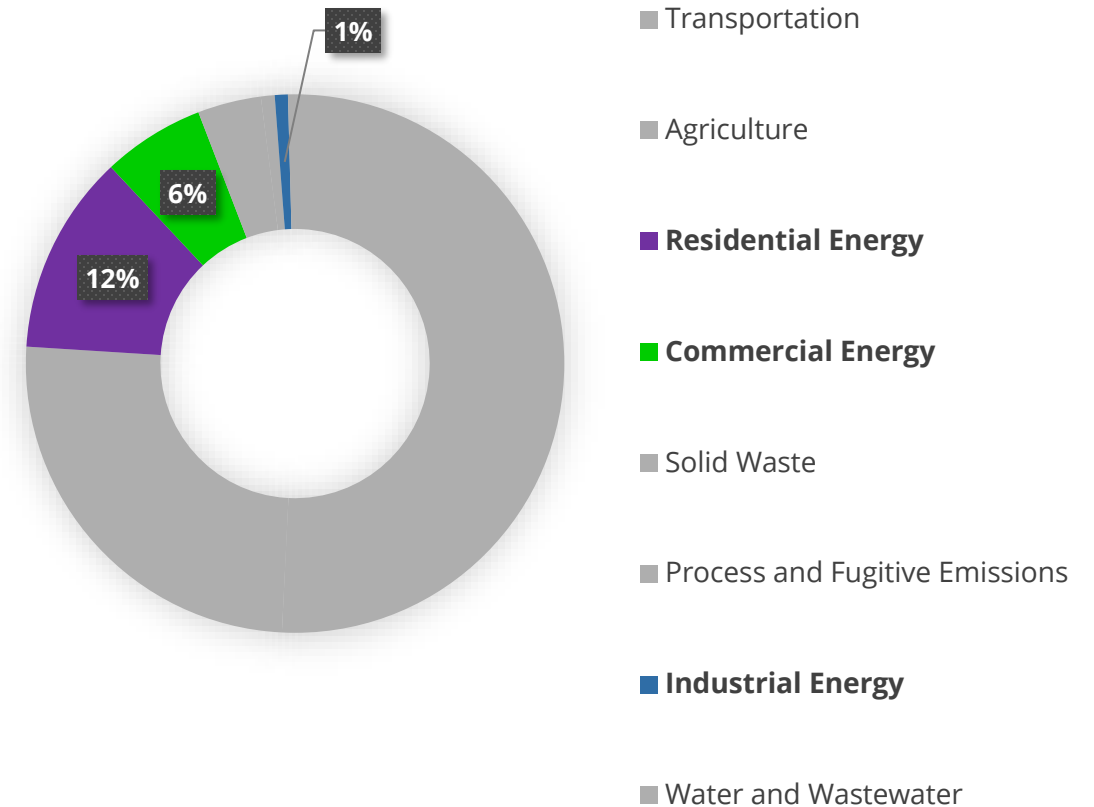
Buildings & Facilities

- **Data Sources**

- County-wide electricity and natural gas use data provided by PG&E
- Additional electricity data provided by Lodi Electric, Lathrop Irrigation District, and Ava Community Energy
- Electricity emissions factors from CEC Power Content Labels (publicly available)
- Industrial process emissions from EPA FLIGHT data base for facilities that emit over 25,000 MTCO₂e (publicly available)

- **Notes and Caveats**

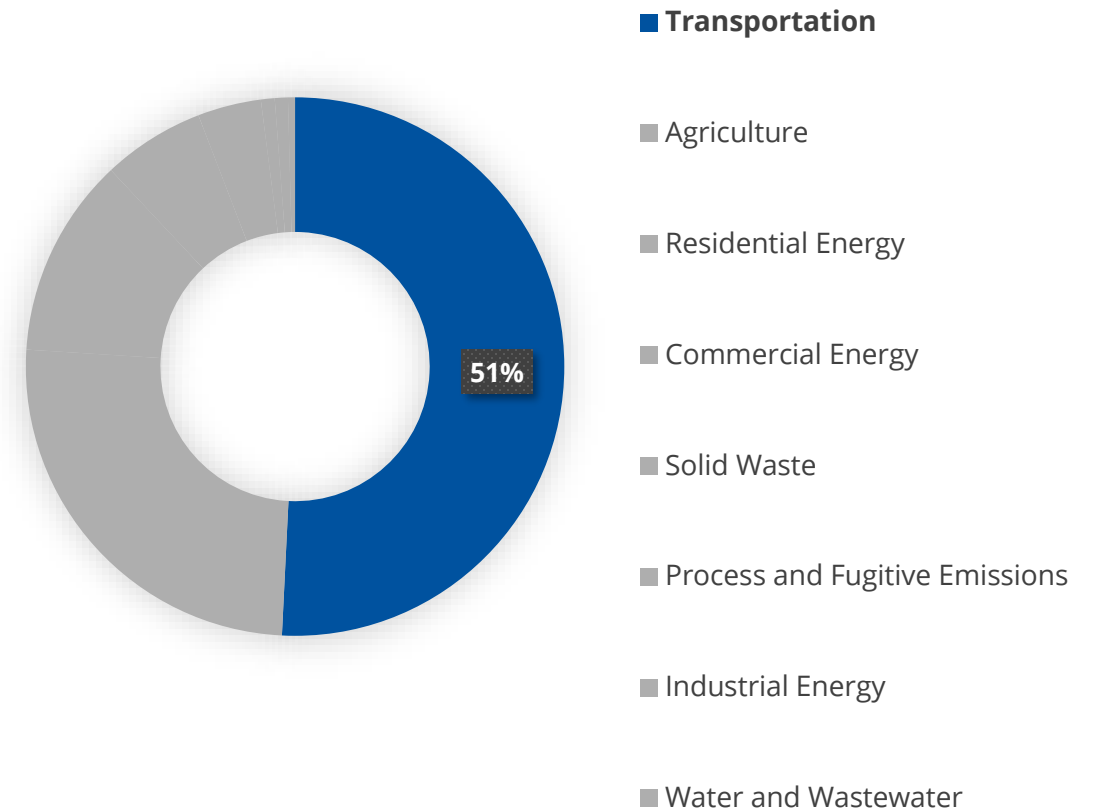
- Utility data redacted in shared inventory file due to PG&E NDA; total emissions are aggregated for presentation



Transportation

• Data Sources

- On-road vehicle miles traveled (VMT) by vehicle type from 2021 regional SJCOG travel forecasting model, which was updated to reflect 2022 conditions by adding land use developed from 2016 – 2022
- Vehicle fuel types from CARB EMFAC tool for county (publicly available)
- Off-road data (e.g., passenger rail, aircraft, waterborne, etc.) from CARB Off-Road tool for county (publicly available)
- Freight rail from EPA National Emissions Inventory database (publicly available)



On-road Transportation Modeling Approach

- **Purpose**

- Estimate and forecast vehicle miles traveled (VMT) for Stockton CCAAP
- Covers residents, workers, students, and visitors

- **Study Jurisdiction**

- San Joaquin County (all cities + unincorporated areas)
- City of Stockton

- **Modeling Approach**

- Based on SJCOG regional travel demand model (2021 version, 2016 RTP)
- Updated to reflect 2022 land use (new base year)
- Forecasts prepared for 2046 cumulative year
- CCAAP years 2030 and 2050 derived by linear interpolation/extrapolation

VMT Accounting Methods

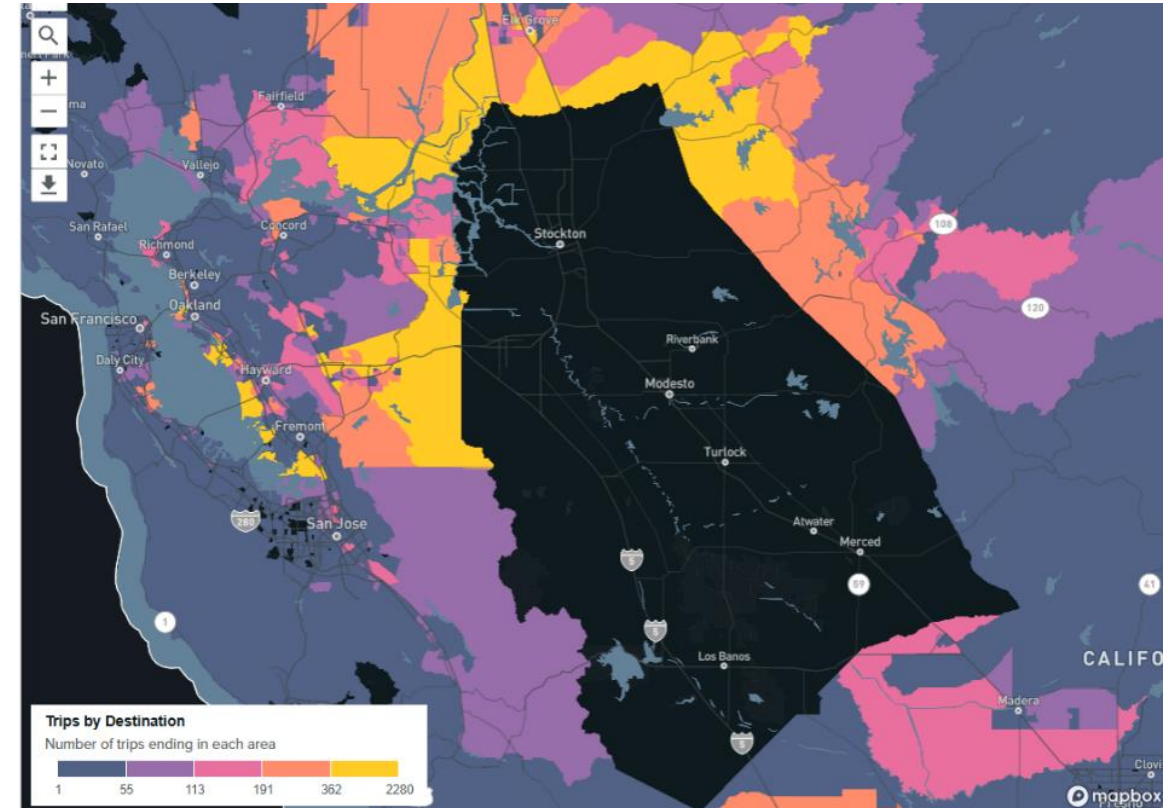
	Approach	Trip Types Included	Source
Proportional (RTAC) Method	Total network level VMT by Study Jurisdiction accounting for entire length of travel for II trips but only half of external trips (IE, EI)	100% of II 50% of IX 50% of XI	SJCOG Model select zone assigned network
II – Internal-Internal, IX – Internal-External, XI – External-Internal			

- Metrics Reported

- VMT by trip type (II, IX, XI) and vehicle class (personal vehicle, small trucks, medium trucks, and large trucks)
- VMT by speed bin and geography (SJ County, Stockton)

External Trip Length Adjustment

- SJCOG model cover San Joaquin, Merced, Stanislaus Counties
- Replica captures full trip lengths from mobile-device data, better reflecting current regional travel behavior
- Trips beyond boundaries (IX-XI trips) length were adjusted using Replica (Fall 2022 data)
- SJ County trips: Model average 76.4 miles, adjusted to 56.1 miles
- City of Stockton trips: Model average 81.5 miles, adjusted to 63.8 miles



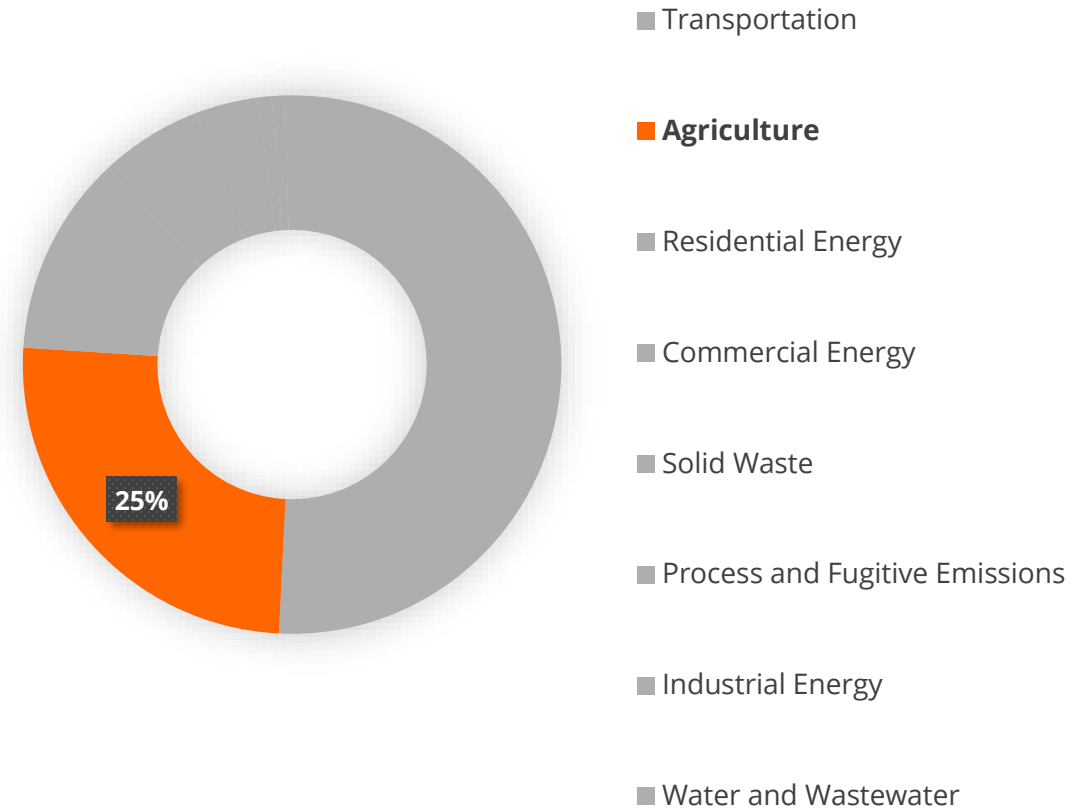
Agriculture

- **Data Sources**

- Agriculture activity data (number of livestock, weight of crops) from USDA National Agricultural Statistics Service Census (publicly available)
- Emission factors from EPA State Inventory Tool data (publicly available)

- **Notes and Caveats**

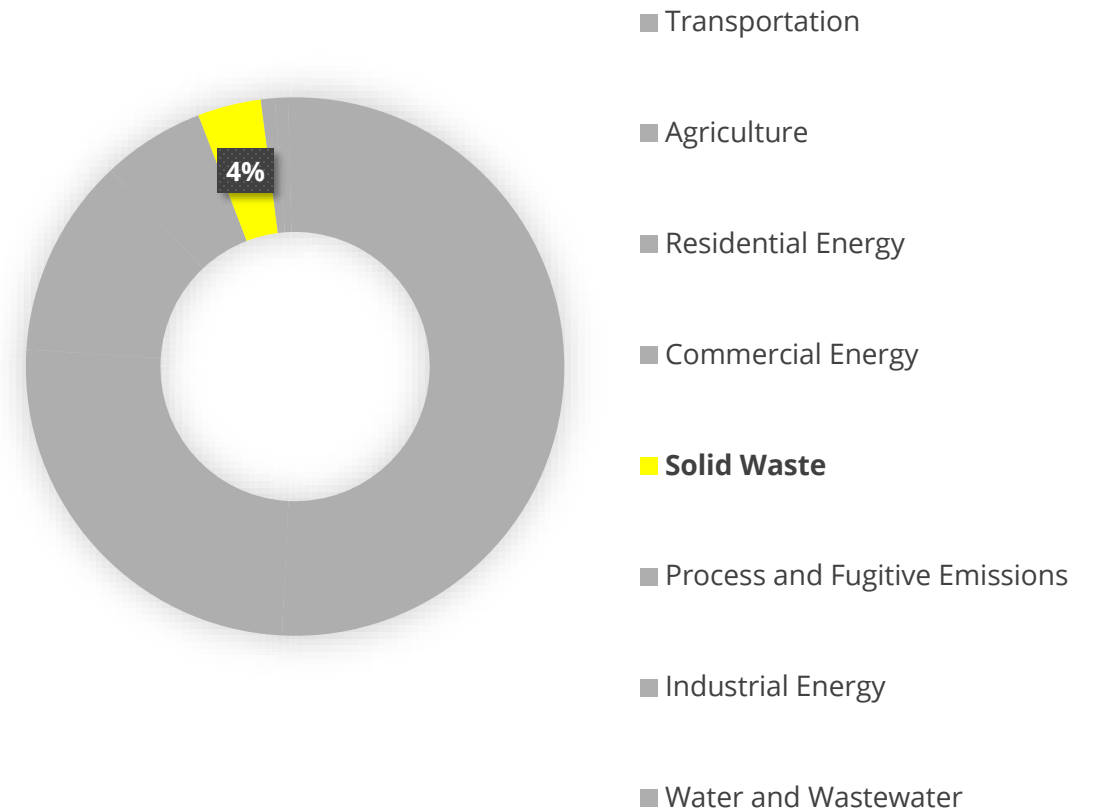
- Used ICLEI Agriculture Data Scaling tool to complete calculations



Waste

• Data Sources

- Landfill data (e.g., waste disposed at in-county landfills) from CalRecycle (publicly available)
- Composted waste data collected from Stockton, Lodi, Manteca, and Unincorporated County; per capita composting value used to estimate composted waste for remainder of region
- Wastewater facility data collected directly from facilities (i.e., Manteca, Stockton, White Slough) or assumed through average values (i.e., Escalon, Lathrop, Ripon, Tracy)



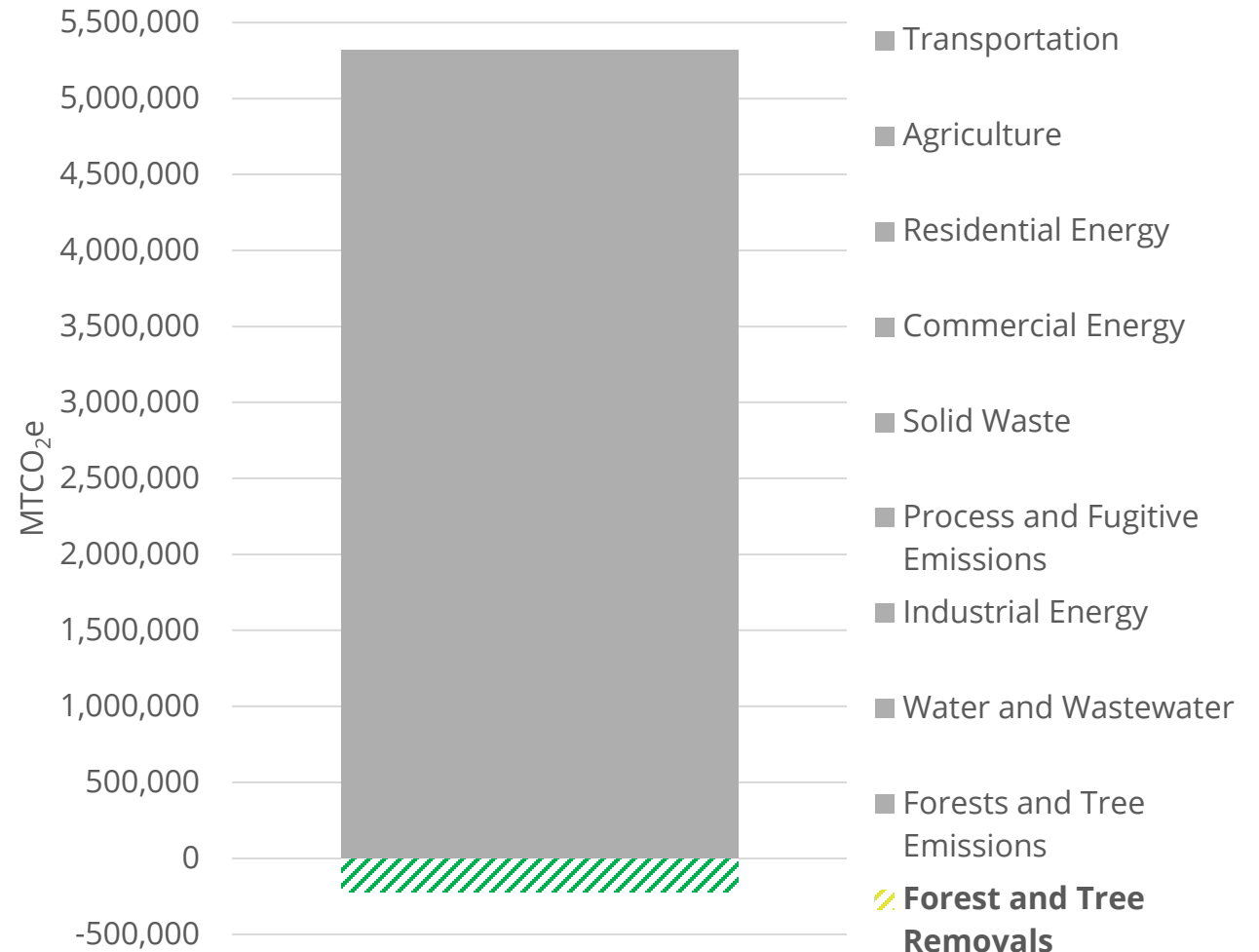
Forest & Trees

- **Data Sources**

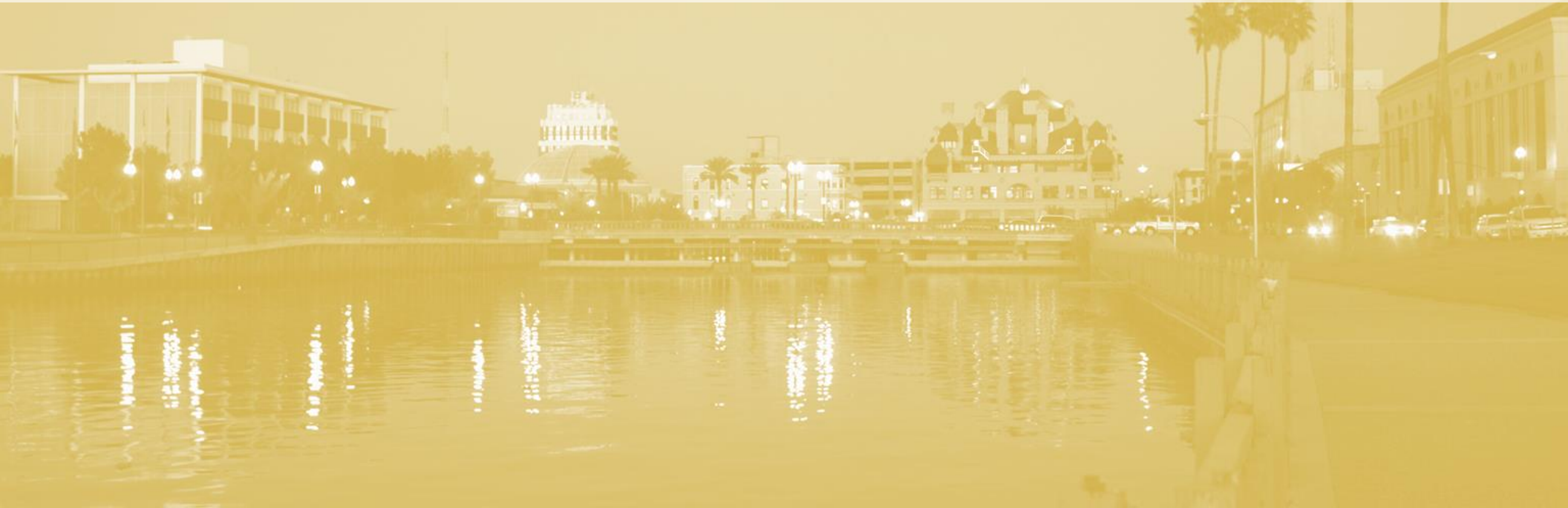
- ICLEI LEARN tool data that uses spatial mapping (publicly available)

- **Notes and Caveats**

- Sector total includes emissions from tree loss (e.g., forest conversion to other land uses) and emissions removals from carbon sequestration
- Regional inventory **gross** emissions exclude Forest & Trees sector; regional inventory **net** emissions include Forest and Trees sector



Action Development Overview



Action Development Overview

1. CAPAC discussed potential to remove and/or deprioritize 6 actions among list of 44 actions down to 38 during CAPAC Meeting #1
2. Updated actions were presented at community workshop #2 held on Wednesday, August 13 in Lathrop, CA and through online survey for feedback
3. Workshop #2 collected community feedback on action concerns, improvements, and new action ideas
4. Survey #2 became live to public on August 13, 2025 and is collecting information on highly supported actions, important co-benefits, and other concerns (survey to close mid-October)

Actions – Transportation

#	Action*
T.1	Expand and improve pedestrian network
T.2	Expand bike networks and facilities
*	Expand electric bikeshare program
T.3	Develop and implement Safe Routes to School Plans
T.4	Establish a school bus program
T.5	Improve transit service and frequency
T.6	Provide transit pass and incentives
*	Provide last-mile solutions to transit
T.7	Expand carpool/vanpool and carshare programs
T.8	Support rail expansion
T.9	Incentivize infill development
T.10	Establish Transit-Oriented Development overlay zones

#	Action*
*	Revise parking standards
T.11	Improve traffic signaling
T.12	Create community-based travel education program
T.13	Incorporate TDM elements in new developments
T.14	Convert municipal fleets to cleaner fuels
T.15	Convert buses to cleaner fuels
T.16	Provide public EV chargers
*	Install Hydrogen fueling infrastructure
T.17	Develop a regional clean freight plan
T.18	Develop warehouse freight truck clean fuel requirements in new projects

*CAPAC discussed de-prioritizing or combining in CAPAC Meeting #1

Actions – Building Energy (BE), Electricity Generation (EG), Water Supply (WS), Off-road (OR)

#	Action*
BE.1	Upgrade public outdoor lighting (street/traffic lights)
BE.2	Promote existing incentives for energy efficient and electric building equipment (e.g., utility incentives)
EG.1	Install solar on local government properties
EG.2	Promote solar installations
*	Join Community Choice Energy program (Ava Community Energy)
WS.1	Require water efficiency in new commercial developments and renovations
WS.2	Install smart water meters
WS.3	Use recycled water to supply drinking water treatment plant
OR.1	Promote the use of cleaner-fuel off-road equipment
OR.2	Require cleaner-fuel off-road equipment for new development
OR.3	Use cleaner-fuel off-road equipment for municipal operations

* CAPAC discussed de-prioritizing or combining in CAPAC Meeting #1

Actions – Waste (W), Agriculture (A), Sequestration (S), & Cross-cutting (C)

#	Action*
W.1	Provide outreach and education on recycling and composting programs
*	Provide assistance for food recovery programs
*	Develop waste diversion enforcement program
W.2	Develop waste diversion and food recovery enforcement program
W.3	Increase construction and demolition waste diversion requirements
W.4	Require sustainable local government purchasing practices
W.5	Collect and use biogas at landfills and wastewater treatment plants

#	Action*
A.1	Implement best management practices for manure management
A.2	Implement best management practices to improve the health and function of agricultural lands
S.1	Expand urban tree planting
S.2	Increase public parks with natural vegetation
C.1	Develop a climate information hub

* CAPAC discussed de-prioritizing or combining in CAPAC Meeting #1

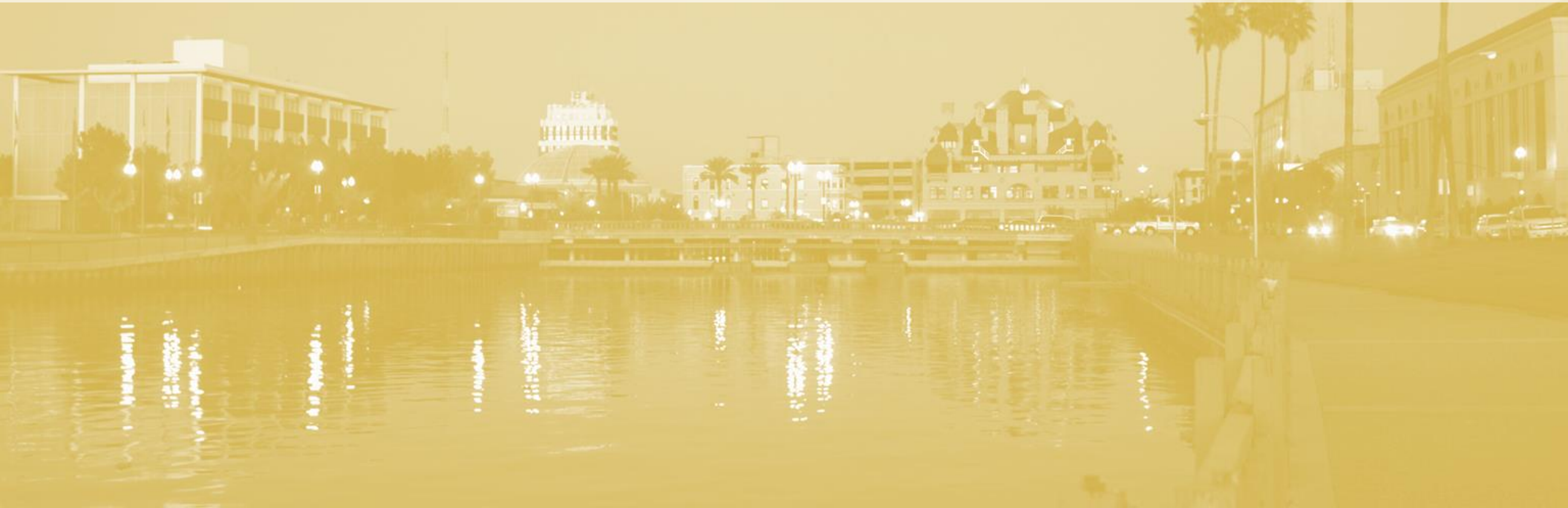
Workshop #2 and Initial Survey #2 Feedback

- General themes:
 - Emphasis on community engagement and tapping into community partners to inform action development/implementation
 - Emphasis on *where* actions will be implemented/what locations will be prioritized
 - Integrating actions into schools, especially waste actions
 - Concerns over general safety (more public lighting, bike/ped safety, etc.)
 - Focus on improving equity and decreasing social, economic, and environmental disparities between communities

Workshop #2 and Initial Survey #2 Feedback

- Actions with most support from Survey #2 (received most votes out of 6 responses)
 - T1: Expand and improve pedestrian network
 - T6: Provide transit pass and incentives
 - T8: Support rail expansion
 - S1: Expand urban tree planting
 - BE2: Promote existing incentives for energy efficient and electric building equipment
- Potential new actions from Workshop #2:
 1. Support development of Stockton Airport Sustainability Plan
 2. Implement Port of Stockton Clean Air Action Plan
 3. Create urban forestry standard or regional urban forest/canopy master plan

Next Steps



CAPAC Meetings & Tentative Topics

- **#1 – Aug 2025:** Held 8/1/2025
- **#2 – Sep 2025:** Review GHG inventory and PCAP deliverable
- **#3 – Oct 2025:** Review draft action feedback, finalize actions, PCAP review
- **#4 – Nov 2025:** Review co-pollutants, LIDAC analysis, climate vulnerability assessment, adaptation measures, GHG target-setting
- **#5 – Dec 2025:** Review workforce planning analysis, funding & financing, action prioritization, and APGP case study overview
- **#6 – Jan 2026:** Review Draft CCAAP, discuss implementation roadmaps
- **#7 – Feb 2026:** Discuss next steps following CCAAP adoption

Next Steps

01

Promote Survey #2

02

CAPAC Meeting #3 – Finalize
CCAAP Actions **October 2025**

Time TBD

Thank you!

