City of Stockton

Meeting Agenda - Final

Climate Action Plan Advisory Committee

James Jimison, Member
Jeanice Nyung, Member
Julie Dunning, Chair
Tanisha Raj, Member
Tim Robertson, Member
Mary Elizabeth, Vice Chair
Kristine WIlliams, Member

Wednesday, November 19, 2025 **10:00 AM** **Council Chamber - City Hall, 425 N. El Dorado Street, Stockton CA**

1. CALL TO ORDER/ROLL CALL

2. PUBLIC COMMENT*

3. ADOPTION OF CONSENT CALENDAR

3.1 25-1220 APPROVAL OF COMMITTEE MINUTES

Recommended Action: RECOMMENDATION

Approve the minutes from the Climate Action Plan Advisory Committee meeting of September 17, 2025 and the amended minutes from August 1, 2025.

Department: Climate Action Plan Advisory Committee

Attachments: Attachment A - CAPAC 2025-08-01 Minutes_final.pdf

Attachment B - CAPAC 2025-09-17 Minutes_final.pdf

4. UNFINISHED BUSINESS

5. NEW BUSINESS*

5.1 25-1284 FINALIZE SELECTION OF REMAINING GREENHOUSE GAS REDUCTION ACTIONS FOR SECTORS OFF-ROAD, AGRICULTURE, SEQUESTRATION, CROSS-CUTTING, WATER SUPPLY, AND WASTE

Recommended Action: RECOMMENDATION

Select up to 16 remaining greenhouse gas (GHG) reduction mitigation actions for the off-road, agriculture, sequestration, cross-cutting, water supply and waste sectors and vote to finalize the selected actions from the following:

1. Off-road (OR):
 a. OR.1-Promote the use of cleaner-fuel off-road equipment,
 b. OR.2-Require cleaner-fuel off-road equipment for new development,
 c. OR.3-Use cleaner-fuel off-road equipment for municipal operations.

2. Agriculture (A):
 a. A.1-Implement best management practices for manure management,
b. A.2-Implement best management practices to improve the health and function of agricultural lands.

3. Sequestration (S):
 a. S.1-Expand urban tree planting,
 b. S.2-Increase public parks with natural vegetation,
 c. S.3-Create an urban forestry standard or regional urban forest master plan.

4. Cross-Cutting (C):
 a. C.1-Develop a climate information hub.

5. Water Supply (WS):
 a. WS.1-Require water efficiency in new commercial developments and renovations,
 b. WS.2-Install smart water meters,
 c. WS.3-Use recycled water to supply drinking water treatment plant.

6. Waste (W):
 a. W.1-Provide outreach and education on recycling and composting programs,
b. W.2-Develop food waste diversion and recovery incentive and enforcement program,
c. W.3-Increase construction and demolition waste diversion requirements,
d. W.4-Require sustainable local government purchasing practices,
e. W.5-Collect and use biogas at landfills and wastewater treatment plants.

Department: Climate Action Plan Advisory Committee

Attachments: Attachment A - PPT Remaining Sector Action Selection

5.2 25-1290 GHG FORECASTING AND TARGET SETTING

Recommended Action: RECOMMENDATION

Review the recommended greenhouse gas (GHG) emissions reduction targets for 2030 which include option 1 (Gross emissions: 29% below 2022 levels (3,639,577 MTCO2e), which equates to 40% below 1990 levels aligned with Senate Bill 32) and option 2 (Gross emissions: 39% below 2022 levels (3,154,300 MTCO2e), which equates to 48% below 1990 levels aligned with 2022 CA Scoping Plan recommendation) and determine the most encouraging reduction target for adoption and approval for the Stockton region.

Department: Climate Action Plan Advisory Committee

Attachments: Attachment A - PPT GHG Forecasting and Target Setting

6. REPORTS/WRITTEN COMMUNICATIONS/ INFORMATIONAL ITEMS

6.1 25-1291 REVIEW OF GREENHOUSE GAS EMISSIONS AND CO-POLLUTANT REDUCTION QUANTIFICATION METHODOLOGY

Recommended Action: RECOMMENDATION

Review methodology used to quantify greenhouse gas (GHG) emissions and co-pollutant reductions resulting from GHG mitigation actions selected for the Stockton Climate Action and Adaption Plan (CAAP).

Department: Climate Action Plan Advisory Committee

Attachments: Attachment A - PPT Quantification Methodology

6.2 25-1292 OVERVIEW OF CLIMATE HAZARD AND CLIMATE ADAPTATION ACTIONS

Recommended Action: RECOMMENDATION

Review climate hazards for the City of Stockton and preliminary climate adaptation actions.

Department: Climate Action Plan Advisory Committee

Attachments: Attachment A - PPT Climate Hazards Overview

7. BOARD/COMMISSION COMMUNICATIONS OR COMMENTS

8. ADJOURNMENT

CERTIFICATE OF POSTING

I declare, under penalty of perjury, that I am employed by the City of Stockton and that I caused this agenda to be posted in the City Hall notice case on November 12, 2025 in compliance with the Brown Act.

Katherine Roland, CMC, CPMC
City Clerk

By: _____

Deputy

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PUBLIC COMMENT
Citizens may comment on any subject within the jurisdiction of this governing body, including items on the Agenda. Anyone wishing to speak on a consent item or public hearing item, please complete a "Request to Speak Card" and submit it to the Recording Secretary prior to the meeting. No speaker cards will be received after the close of the Citizen's Comments portion of the meeting. The time limit for public comment is at the discretion of the presiding officer and shall be set at the start of the meeting. Speakers must be prepared to speak when called. Speakers should hold comments on items listed as a Public Hearing until the Hearing is opened.

The City of Stockton invites public comments in multiple forms. You provide your comments by using one of these methods:
1. Email - you may email your comments to publiccomment@stocktonca.gov
2. Voicemail - you can leave a voice message by dialing (209) 937-8459.
3. In-Person Comments - a) Speakers must submit "request to speak cards" to the Clerk prior to the Public Comment portion of the agenda. No speaker cards will be accepted after the close of Public Comment. b) Address only issues over which the meeting body has jurisdiction. c) The time limit for public comment is at the discretion of the presiding officer and shall be set at the start of the meeting. Donating time is not authorized. d) Your time will be displayed on the speaker podium for convenience.
**All written and voicemail public comments received by the Clerk's Office 90 minutes prior to the meeting start time will be forwarded to the meeting body members as correspondence and attached the minutes. All comments received after that time will be forwarded as correspondence the following business day. Written and voicemail comments will not be read into the record.*

NOTE: All proceedings are conducted in English. The City of Stockton does not furnish language interpreters and, if one is needed, it shall be the responsibility of the person(s) needing one.

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Materials related to an item on this agenda submitted to City Council after distribution of the agenda packet are available for public inspection in the City Clerk's Office at 425 North El Dorado Street, Stockton, California 95202, during normal business hours. Such documents are also available on the City's website at www.stocktongov.com subject to staff's ability to post the documents before the meeting.

AGENDA ITEMS: Information concerning the agenda items have been forwarded to this governing body prior to the meeting. Unless a governing body member or member of the audience has questions concerning a particular item and asks that it be removed from the Consent Calendar, the items are approved at one time by a roll call vote.

** For any person wishing to address this governing body on any matter not on the printed agenda. The Chairperson may set a time limit for individual speakers/groups.*

File #: 25-1220, **Version:** 1

APPROVAL OF COMMITTEE MINUTES

RECOMMENDATION

Approve the minutes from the Climate Action Plan Advisory Committee meeting of September 17, 2025 and the amended minutes from August 1, 2025.

Attachment A - CAPAC 2025-08-01 Minutes
Attachment B - CAPAC 2025-09-17 Minutes

MINUTES
CLIMATE ACTION PLAN ADVISORY COMMITTEE
MEETING OF AUGUST 1, 2025

Council Chamber, City Hall 425 N. El Dorado St. Stockton, CA

1. CALL TO ORDER/ROLL CALL - 10:00 AM

Roll Call
Present:
James Jimison
Jeanice Nyung
Julie Dunning
Mary Elizabeth
Tim Robertson
Tanisha Raj
Absent:
Pat Barrett.

Note: Member Barrett arrived at 11:06 AM

2. PUBLIC COMMENT

None

3. ADOPTION OF CONSENT CALENDAR

None

4. UNFINISHED BUSINESS

None

5. NEW BUSINESS

5.1 25-0840 Selection of Chair and Vice Chair of the Climate Action Plan Advisory Committee

Legislation Text

Approved_Resolution_2025-07-15-1202.pdf

Approve **Motion 2025-08-01-0501-01** electing Julie Dunning as Chair of the Climate Action Plan Advisory Committee.

Moved by: Mary Elizabeth, seconded by Tanisha Raj.

Vote: Motion carried 6-0

Yes: James Jimison, Jeanice Nyung, Julie Dunning, Mary Elizabeth, Tim Robertson, and Tanisha Raj.

Absent: Pat Barrett.

Approve **Motion 2025-08-01-0501-02** electing Mary Elizabeth for Vice Chair of the Climate Action Plan Advisory Committee.

Moved by: Julie Dunning, seconded by Tim Robertson.

Vote: Motion carried 6-0

Yes: James Jimison, Jeanice Nyung, Julie Dunning, Mary Elizabeth, Tim Robertson, and Tanisha Raj.
Absent: Pat Barrett.

5.2 25-0841 Climate Action Plan Advisory Committee Roles and Responsibilities

Informational only. No action taken.

Legislation Text

5.3 25-0842 Introduction to the Comprehensive Climate Action and Adaptation Plan (CCAAP)

Informational only. No action taken.

Legislation Text

Stockton CAPAC Draft Deck 08.01.2025.pptx

PowerPoint Presentation

5.4 25-0843 Greenhouse Gas (GHG) Inventory for the Stockton-San Joaquin Metropolitan Statistical Area

Informational only. No action taken.

Legislation Text

Draft 2022 SJ Region GHG Inventory Results_CAPAC Mtg 1.xlsx

PowerPoint Presentation

5.5 25-0844 Draft Greenhouse Gas (GHG) Action Development

Informational only. No action taken.

Legislation Text

Draft GHG Action List_CAPAC Mtg 1.xlsx

PowerPoint Presentation

6. REPORTS/WRITTEN COMMUNICATIONS/ INFORMATIONAL ITEMS

None

8. BOARD/COMMISSION COMMUNICATIONS OR COMMENTS

Vice Chair Elizabeth - Greenhouse gas emissions inventory; ICLEI U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions Version 1.2 published July 2019; August 13th community workshop.

Document Filed - Vice Chair Elizabeth

Chair Dunning - Meeting packet; Preparation and discussion; Meeting frequency, timeframe.

9. ADJOURNMENT - 12:37 PM

Shalilah Bess
Program Manager III

MINUTES
CLIMATE ACTION PLAN ADVISORY COMMITTEE
MEETING OF SEPTEMBER 17, 2025

Council Chamber, City Hall 425 N. El Dorado St. Stockton, CA

1. CALL TO ORDER/ROLL CALL - 10:40 AM

Roll Call
Present:
James Jimison
Jeanice Nyung
Julie Dunning
Kristine Williams
Mary Elizabeth
Tanisha Raj
Tim Robertson

2. PUBLIC COMMENT

Patricia Barrett - committee perception, community engagement.

3. ADOPTION OF CONSENT CALENDAR

3.1 25-1036 APPROVAL OF COMMITTEE MINUTES

Legislation Text

Climate Action Plan Advisory Committee_Draft Meeting Minutes #1 Aug 1, 2025.pdf

Approve **Motion 2025-09-17-0301** rejecting the minutes from the Climate Action Plan Advisory Committee meeting of August 1, 2025, and directing staff to bring back the minutes with requested changes to incorporate committee comments to reports/ written communications/ informational items and board/commission communications or comments.

Moved by: Mary Elizabeth, seconded by Julie Dunning.

Vote: Motion carried 6-1

Yes: Jeanice Nyung, Julie Dunning, Kristine Williams, Mary Elizabeth, Tanisha Raj, and Tim Robertson.
No: James Jimison.

3.2 25-1038 ADOPTION OF MEETING CALENDAR

Legislation Text

Approve **Motion 2025-09-17-0302** adopting the meeting calendar to establish meeting frequency. The CAPAC will meet every third Wednesday of the month at 10:00 AM, allowing a maximum 3-hour time block per meeting until April 30, 2026.

Meeting frequency can be revisited upon completion of the final Climate Action and Adaptation Plan.

Moved by: Tim Robertson, seconded by Jeanice Nyung.
Vote: Motion carried 6-1

Yes: James Jimison, Jeanice Nyung, Julie Dunning, Kristine Williams, Tanisha Raj, and Tim Robertson.
No: Mary Elizabeth.

4. UNFINISHED BUSINESS

None

5. NEW BUSINESS

5.1 25-1024 REVIEW CLIMATE ACTION PLAN ADVISORY COMMITTEE MEETING #2 OBJECTIVES

Legislation Text

Stockton CAPAC Presentation September 2025_Final.pdf

PowerPoint Presentation

Informational only. No action taken.

5.2 25-1025 PREVIEW PRIORITY CLIMATE ACTION PLAN

Legislation Text

Informational only. No action taken.

5.3 25-1026 2022 SAN JOAQUIN COUNTYWIDE GREENHOUSE GAS INVENTORY

Legislation Text

Stockton GHG Inventory Inputs and Outputs.pdf

Informational only. No action taken.

5.4 25-1028 ACTION DEVELOPMENT OVERVIEW, ENGAGEMENT RECAP, AND PCAP MEASURES

Legislation Text

CAPAC Meeting 2 Action List_Final.pdf

Note: Member Raj left at 12:17 PM

Approve **Motion 2025-09-17-0504-01** Selecting five mitigation actions to include in the Priority Climate Action Plan (PCAP), progress indicator report to the EPA, preliminary action and due diligence toward the Comprehensive Climate Action Plan development include; Action 1- T.5-Improving transit service and frequency, Action 2- T.8-Support rail expansion, Action 3 -T.17- Develop a regional clean freight plan,

Action 4 - W.4-Require sustainable local government purchasing practices and Action 5 - A.1-Implement best management practices for manure management.

Moved by: Julie Dunning, seconded by Tim Robertson.
Vote: Motion carried 7-0

Yes: James Jimison, Jeanice Nyung, Julie Dunning, Kristine Williams, Mary Elizabeth, Tanisha Raj, and Tim Robertson.

The following person(s) spoke to this item: Pandora Crowder

6. REPORTS/WRITTEN COMMUNICATIONS/ INFORMATIONAL ITEMS

None

8. BOARD/COMMISSION COMMUNICATIONS OR COMMENTS

Note: Member Williams left at 12:45 PM

Vice Chair Elizabeth - Delta Sierra group comments; request for quarterly reports for grants; CAPAC members, statement of economic interest; City collaboration with SJCOG.

Chair Dunning - contract allocations; advocacy for community outreach.

Vice Chair Elizabeth - timeline for draft/final plan, public comment period; Council adoption.

9. ADJOURNMENT - 12:49 PM

_____

Shalilah Bess
Program Manager III

File #: 25-1284, **Version:** 1

FINALIZE SELECTION OF REMAINING GREENHOUSE GAS REDUCTION ACTIONS FOR SECTORS OFF-ROAD, AGRICULTURE, SEQUESTRATION, CROSS-CUTTING, WATER SUPPLY, AND WASTE

RECOMMENDATION

Select up to 16 remaining greenhouse gas (GHG) reduction mitigation actions for the off-road, agriculture, sequestration, cross-cutting, water supply and waste sectors and vote to finalize the selected actions from the following:

1. Off-road (OR):
   a. OR.1-Promote the use of cleaner-fuel off-road equipment,
   b. OR.2-Require cleaner-fuel off-road equipment for new development,
   c. OR.3-Use cleaner-fuel off-road equipment for municipal operations.

2. Agriculture (A):
   a. A.1-Implement best management practices for manure management,
   b. A.2-Implement best management practices to improve the health and function of agricultural lands.

3. Sequestration (S):
   a. S.1-Expand urban tree planting,
   b. S.2-Increase public parks with natural vegetation,
   c. S.3-Create an urban forestry standard or regional urban forest master plan.

4. Cross-Cutting (C):
   a. C.1-Develop a climate information hub.

5. Water Supply (WS):
   a. WS.1-Require water efficiency in new commercial developments and renovations,
   b. WS.2-Install smart water meters,
   c. WS.3-Use recycled water to supply drinking water treatment plant.

6. Waste (W):
   a. W.1-Provide outreach and education on recycling and composting programs,
   b. W.2-Develop food waste diversion and recovery incentive and enforcement program,
   c. W.3-Increase construction and demolition waste diversion requirements,
   d. W.4-Require sustainable local government purchasing practices,
   e. W.5-Collect and use biogas at landfills and wastewater treatment plants.

Summary

Based on engagement feedback, CAPAC will review and vote to finalize their selection of the remaining action in the sectors off-road (OR), agriculture (A), sequestration (S), cross-cutting (C), water supply (WS) and waste (W), to be included in the final Stockton Comprehensive Climate Action and Adaptation Plan (CCAAP).

DISCUSSION

Background

The list of 44 suggested mitigation actions has been developed based on the GHG inventory, community feedback via workshop and online survey, jurisdiction input, and existing plans. The CAPAC is tasked to select up to 40 GHG measures to be analyzed and included in the CCAAP. The CAPAC reviewed the list of 44 GHG measures at its August 1, 2025, and September 17, 2025, meetings. At the October 29, 2025, meeting the CAPAC finalized their selection of deprioritized GHG measures, selecting 4 actions to deprioritize and 4 to combine into 2, thus reducing the initial 44 actions to 38. Additionally, at the October 29, 2025, meeting, the CAPAC also finalized their selection of GHG measures for inclusion in the CCAAP for the transportation and energy sectors, selecting 20 transportation measures, 2 building energy measures and 2 electricity generation measures for a total of 24 measures selected to be included in the CCAAP. These measures are:

Transportation Sector
1) T.1-Expandand improve pedestrian Network,
2) T.2 (combined)-Expand Bike Networks and Facilities and Provide Last-mile Solutions to transit,
3) T.3-Develop and Implement Safe Routes to School Plans,
4) T.4-Establish a School Bus Program,
5) T.5-Improve Transit Service and Frequency,
6) T.6-Provide Transit Pass and Incentives,
7) T.7-ExpandCarpool/vanpool and Carshare Programs,
8) T.8-Support Rail Expansion,
9) T.9-Incentivize Infill Development,
10) T.10-Establish Transit-Oriented Development Overlay Zones,
11) T.11-Improve Traffic Signaling,
12) T.13-Incorporate TDM Elements in New Developments,
13) T.14-Convert Municipal Fleets to Cleaner Fuels,
14) T.15-Convert buses to cleaner fuels,
15) T.16-Provide public EV chargers,
16) T.17-Develop a Regional Clean Freight Plan,
17) T.18-Develop Warehouse Freight Truck Clean Fuel Requirements in New Projects, 18) T.20-Install Hydrogen Fueling Infrastructure,
19) *New*-Support development of Stockton Airport Sustainability Plan,
20) *New*-Implement Port of Stockton Clean Air Action Plan,

Building Energy Sector
21) BE.1-Upgrade Public Outdoor Lighting (street/traffic lights),

22) BE.2-Promote Existing Incentives for Energy Efficient and Electric Building Equipment (e.g., utility incentives),

Electricity Generation
23) EG.1-Install Solar on Local Government Properties and,
24) EG.2-Promote Solar Installations.

Present Situation

The CAPAC can select up to 16 additional GHG measures out of the remaining sectors of off-road (OR), agriculture (A), sequestration (S), cross-cutting (C), water supply (WS) and waste (W) for inclusion in the final Climate Action and Adaptation Plan. For these remaining sectors the technical consultant has provided community feedback and survey results including the number of respondents for CAPAC consideration. Action selection will be discussed for each remaining sector and finalized via vote at this meeting.

FINANCIAL SUMMARY

This action will have no direct financial impact on the City Departments.

Action Selection for Off-road, Agriculture, Sequestration, Cross-cutting, Water supply, and Waste Sectors

Action Development Process

1. Actions were developed based on the GHG inventory, initial community feedback, jurisdiction input, and existing plans.
2. Initial actions were reviewed with the CAPAC, which removed and/or deprioritized 6 out of 44 actions during Meeting #1.
3. Through workshops (August 13, Lathrop; October 29, Stockton), a virtual workshop (October 23), pop-up events, and an online survey, the project team collected community feedback on the updated actions, documenting concerns, suggestions, and new action ideas.
4. In October, the CAPAC voted to finalize 24 transportation, building energy, and electricity generation actions.
5. Next, based on community feedback and individual expertise, the CAPAC will select 16 remaining actions, from the off-road, waste, water supply, agriculture, sequestration, and cross-cutting sectors.

Summary of Community Feedback – Survey #3

Survey Overview

- **12 questions** total
- **77 respondents** participated

Top Focus Areas for Remaining Actions

- Carbon Sequestration actions had the strongest support.
- Waste & Water Supply was next, especially education/outreach and water efficiency.
- Agriculture and Off-Road had moderate interest.

Most-Supported Actions

- Urban Tree Planting (S.1)
- Increase Public Parks with Natural Vegetation (S.2)
- Waste Education & Outreach (W.1)
- (Organic) Waste Diversion & Food Recovery Incentives (W.2)
- Water Efficiency in New Developments (WS.1)
- Increase Recycled Water Use (WS.3)

Summary of Workshop Feedback – Off-Road and Cross-Cutting

Off-Road:

- Public support for these actions emphasized the importance of considering **sustainability and ethics for off-road equipment**, while **cost** was also a concern.
- Community members noted they wanted to see infrastructure projects.

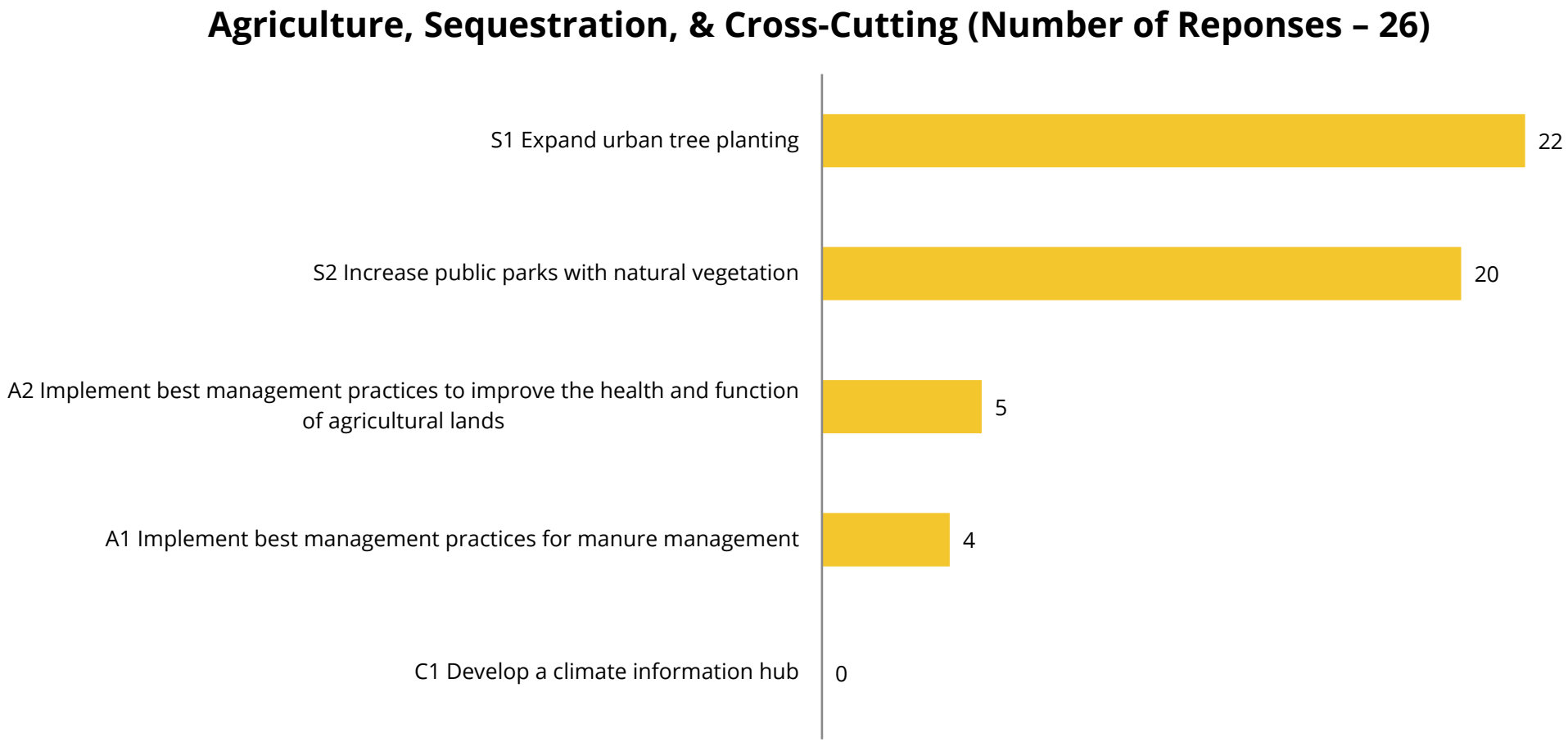
Cross-Cutting:

- Some feedback on C.1 Climate Information Hub **questioned its usefulness and accessibility**, raising concerns about duplication of existing resources and whether people would have the capacity to regularly visit the hub.
- Some thought this would be helpful if tailored to San Joaquin residents and can increase awareness and accessibility of information.

Summary of Workshop Feedback – Agriculture and Sequestration

- **S.1 urban tree planting** had the highest public support out of all actions, with interest in fruit trees and an urban forest master plan.
- For both **S.1 urban tree planting** and **S.2 increasing public parks**, respondents pointed to the need to maintain existing trees and parks, involve community members and youth, and train city staff.
- For agriculture actions, feedback emphasized **co-benefits for water resources and supply.**

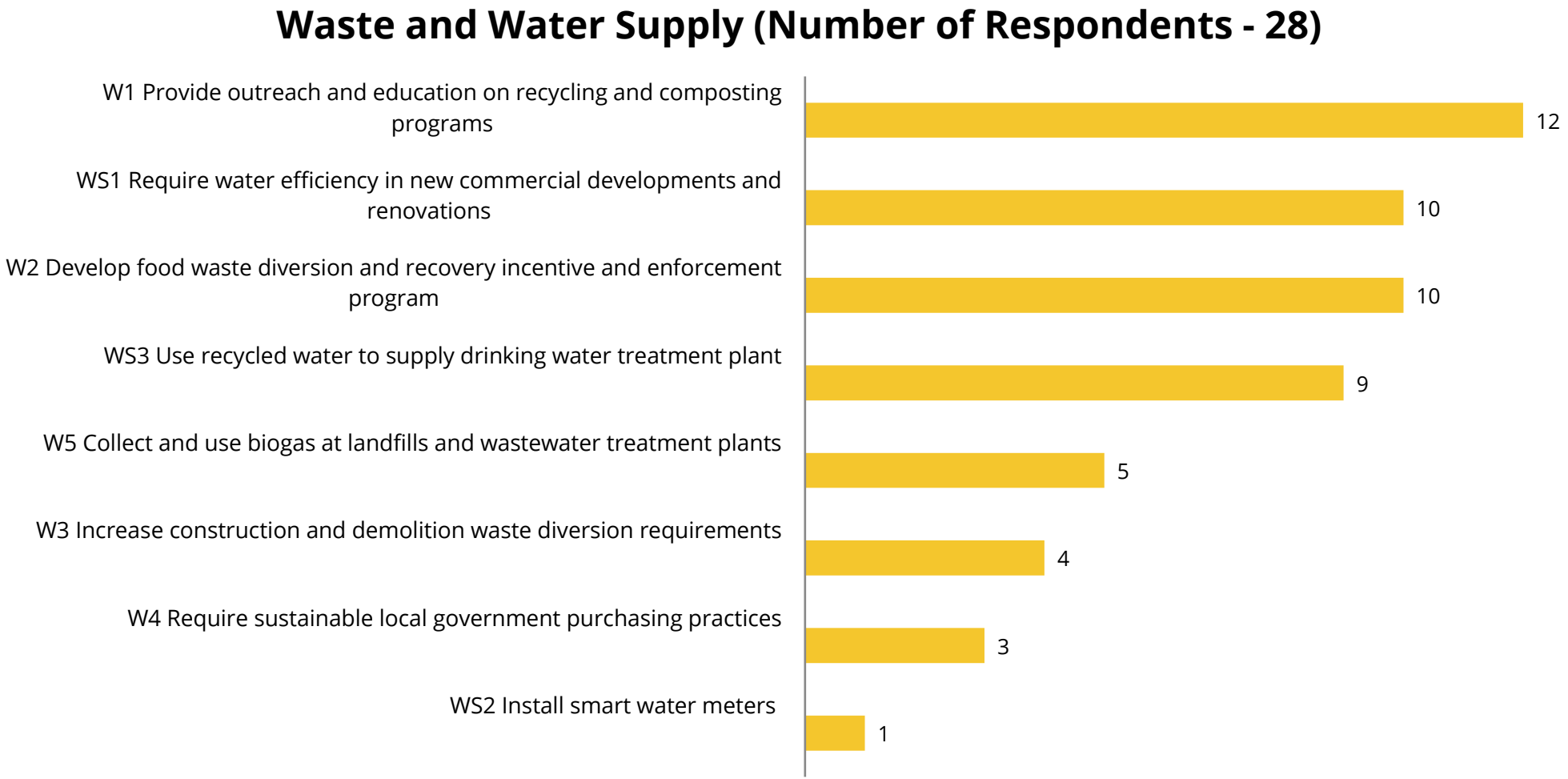
Survey Feedback – Agriculture, Sequestration, and Cross-Cutting



Summary of Workshop Feedback – Water and Waste

- **W.1 Education and outreach on recycling and composting** had the strongest support at each workshop, with respondents listing it as a top priority in this sector.
- **W.2 Waste diversion and food recovery programs** also had strong support, but residents pointed out the word "enforcement" may put people off.
- Support for water actions, especially **WS.1 Water Efficiency Requirements for New Commercial Developments**.
- **WS.3 Increase Recycled Water Use for Supply** had strong interest, but some residents shared concerns around safety, trust, and cost.

Survey Feedback – Waste and Water Supply



Actions – Off-road (OR), Agriculture (A), Sequestration (S), and Cross-Cutting (C) TOTAL = 9

#	Action
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
C.1	Develop a climate information hub

#	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
S.3*	Create an urban forestry standard or regional urban forest master plan

**Suggested action from Workshop 2*

Actions – Water Supply (WS) and Waste (W)
TOTAL = 8

#	Action*
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

#	Action*
W.1	Provide outreach and education on recycling and composting programs
W.2	Develop food waste diversion and recovery incentive and 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

**Suggested edit for clarity*

Finalize Remaining Actions

Objective: There are 17 actions on the previous slides (including new recommended action S3). If no other action were added, only one action needs to be removed to reach the targeted 16 actions.

Discussion Questions:

- Are there any actions you would like to revise or adjust?
- Are there any actions you would like to remove or deprioritize?
- Which of these actions would you like to finalize for CCAP analysis?

File #: 25-1290, **Version:** 1

GHG FORECASTING AND TARGET SETTING

RECOMMENDATION

Review the recommended greenhouse gas (GHG) emissions reduction targets for 2030 which include option 1 (Gross emissions: 29% below 2022 levels (3,639,577 MTCO2e), which equates to 40% below 1990 levels aligned with Senate Bill 32) and option 2 (Gross emissions: 39% below 2022 levels (3,154,300 MTCO2e), which equates to 48% below 1990 levels aligned with 2022 CA Scoping Plan recommendation) and determine the most encouraging reduction target for adoption and approval for the Stockton region.

Summary

Staff and the technical consultant have reviewed and analyzed business-as-usual (BAU) and adjusted business-as-usual (ABAU) scenarios to exhibit potential emission impacts based on state and federal regulations. The CAPAC will review the BAU and ABAU comparisons, forecast results, and target recommendations to determine the most encouraging reduction target for 2030 for the Stockton region.

DISCUSSION

Background

As part of the Climate Pollution Reduction Grant Comprehensive Climate Action Plan (CCAP) development process, the Environmental Protection Agency (EPA) requires economy-wide near-term and long-term GHG emissions targets and strongly recommends setting sector-based targets. This GHG reduction targets for the Stockton MSA should align as closely as possible with those established by the State of California. These targets are not meant to replace any existing community GHG reduction targets within the MSA but can act as initial targets for communities that have not yet established official targets.

The consultant developed GHG reduction targets for the Stockton Metropolitan Statistical Area by establishing a baseline emissions inventory for 2022 and reviewing State of California GHG emissions targets set by legislation and agency planning documents. The State of California GHG reduction targets are 40% below 1990 levels by 2030 (based on Senate Bill 32) or 48% below 1990 levels by 2030 (based on the State of California's 2022 Scoping Plan), as well as 85% below 1990 levels by 2045 (based on Assembly Bill 1279). Because the State of California's targets use a 1990 baseline, the consultant used the Stockton MSA's 2022 baseline inventory and the GHG emissions trajectory for the State of California from 1990 to 2022 to back estimate the Stockton MSA's 1990 GHG emissions inventory. The state's percent emission reduction targets (e.g., 48% by 2030 and 85% by 2045) were then applied to Stockton's estimated 1990 emission levels to estimate Stockton's targeted emissions levels in 2030 and 2045. Because the State of California has two target options

for 2030, the Stockton MSA also has two target options for 2030, based on either the Scoping Plan or Senate Bill 32.

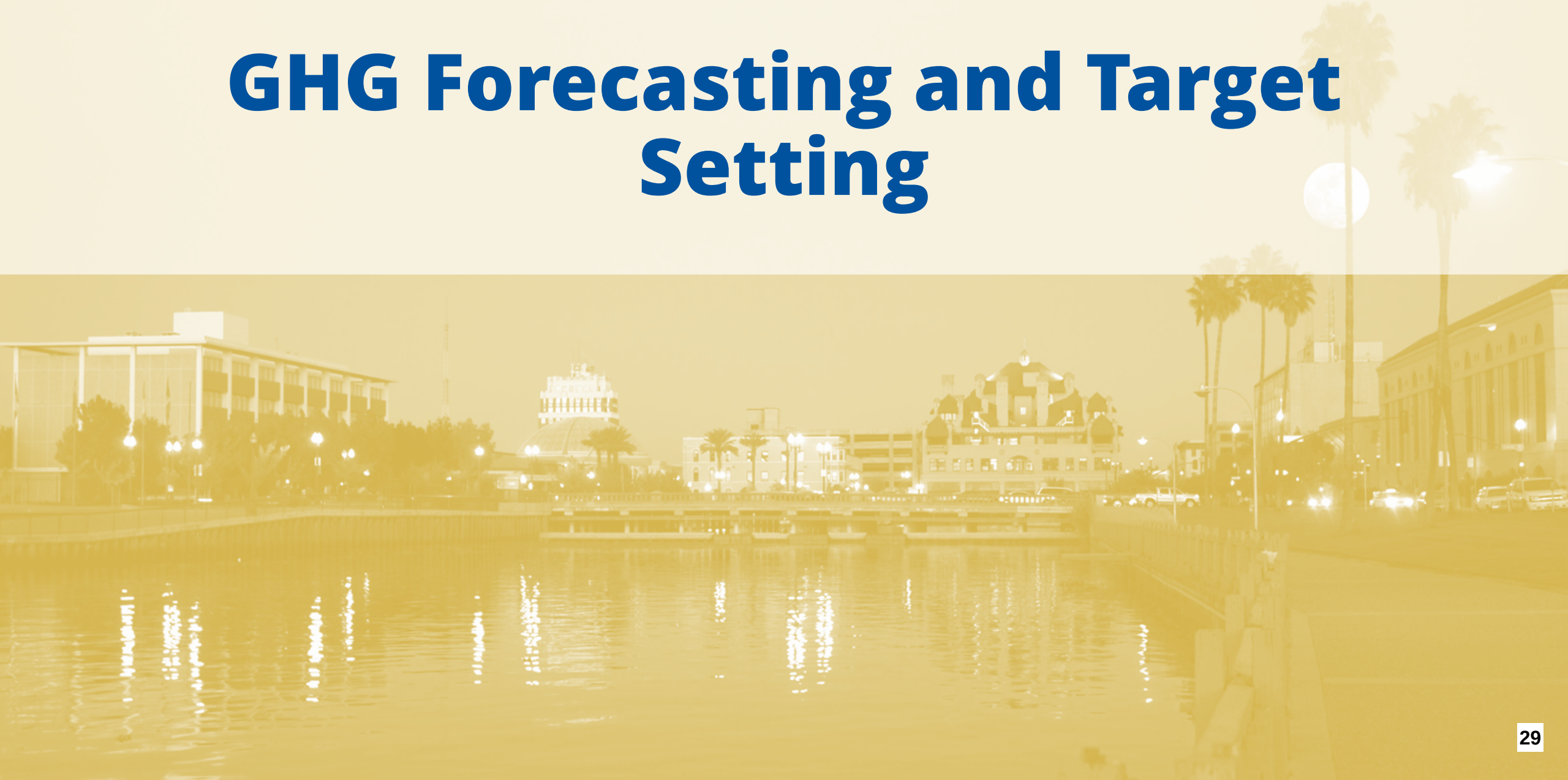
Present Situation

The City of Stockton has a Climate Action Plan established in 2014. However, there is no regional Climate Action Plan for the Stockton MSA. The determination of GHG emissions reduction targets for 2030 will allow the City of Stockton to propose a target for GHG emissions reductions based on its current set of GHG emissions inventory with a baseline of 2022. The CAPAC will review all the presented data and two emissions target options for 2030 to determine the most encouraging GHG reduction target option to approve and adopt.

FINANCIAL SUMMARY

This is informational only and will have no direct financial impact on the City Departments.

GHG Forecasting and Target Setting



GHG Forecasts

The Stockton MSA region's 2022 GHG emissions were projected to 2045 under two scenarios:

- A **"business-as-usual" (BAU)** scenario that shows how emissions could change if no additional action is taken to curtail their growth.
- A **"adjusted business-as-usual" (ABAU)** scenario that shows the potential emissions impacts of existing California and federal regulations/programs but assumes the region will not take further action to reduce emissions.

BAU and ABAU Scenario Comparison

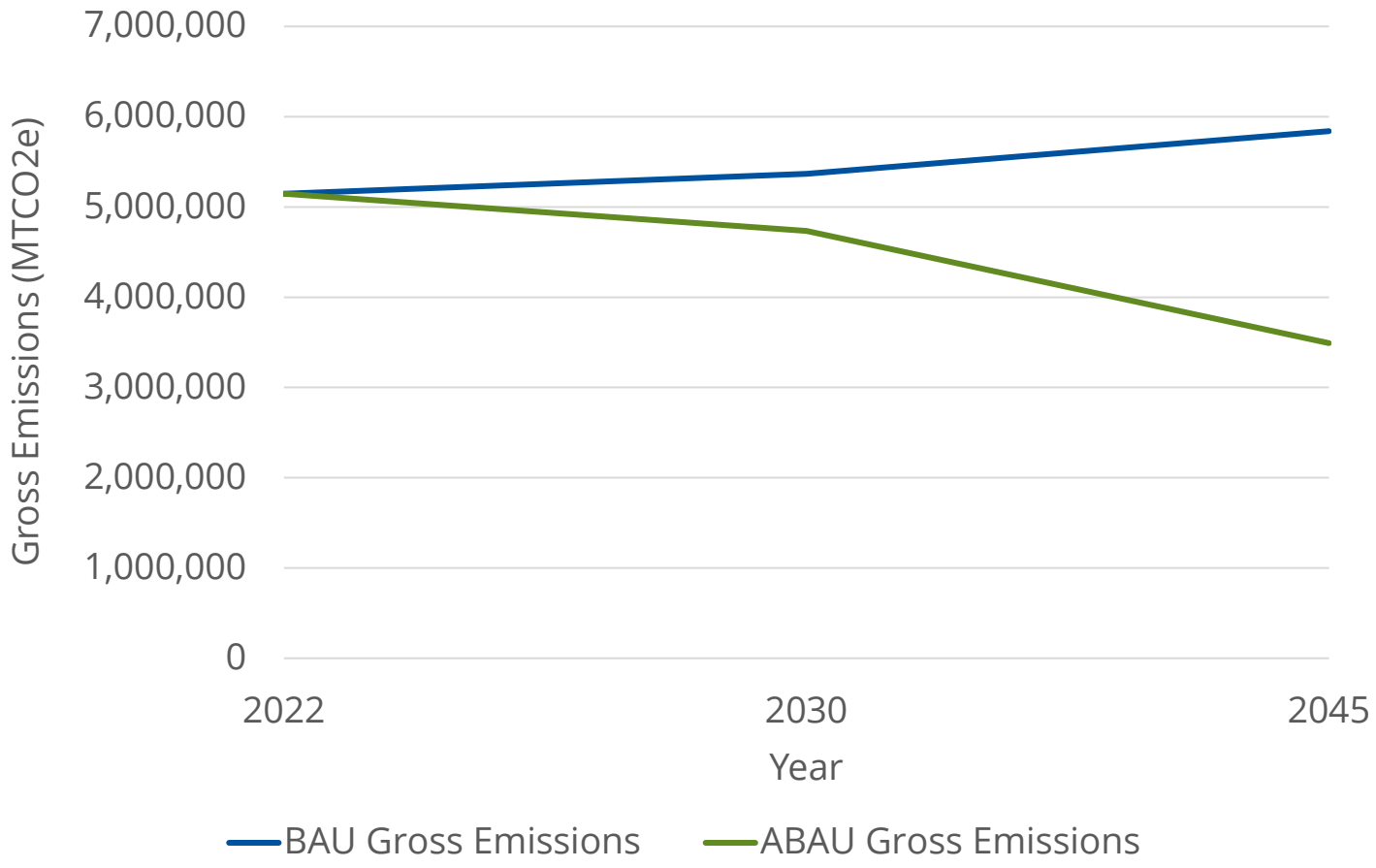
Similarities	Differences

• Forecast emissions for the following activities using **population and jobs** growth rates:
  • Natural Gas
  • Waste
  • Freight Rail
 	
• Held emissions **constant**:
  • Agriculture
  • Industrial Processes
  • Forests and Trees
 	
• Forecast **VMT** using **SJCOG travel demand model**
	• **On-road Vehicles**: BAU on-road vehicle types remain constant; ABAU reflects state and federal policies (e.g., ACCII).
	
	• **Electricity Emissions Factor**: BAU electricity emission factor remains constant; ABAU electricity emission factor reflects SB 100 adoption (100% clean energy by 2045).
	
	• **Off-road Emissions**: BAU off-road emissions forecast using service population growth; ABAU integrates state regulations.

Forecast Results

From 2022 to 2045, **BAU emissions increases 13%** while **ABAU emissions decreases 32%.**

This emphasizes the importance of external regulation on regional emissions and how most emission sources are out of the region's direct control.

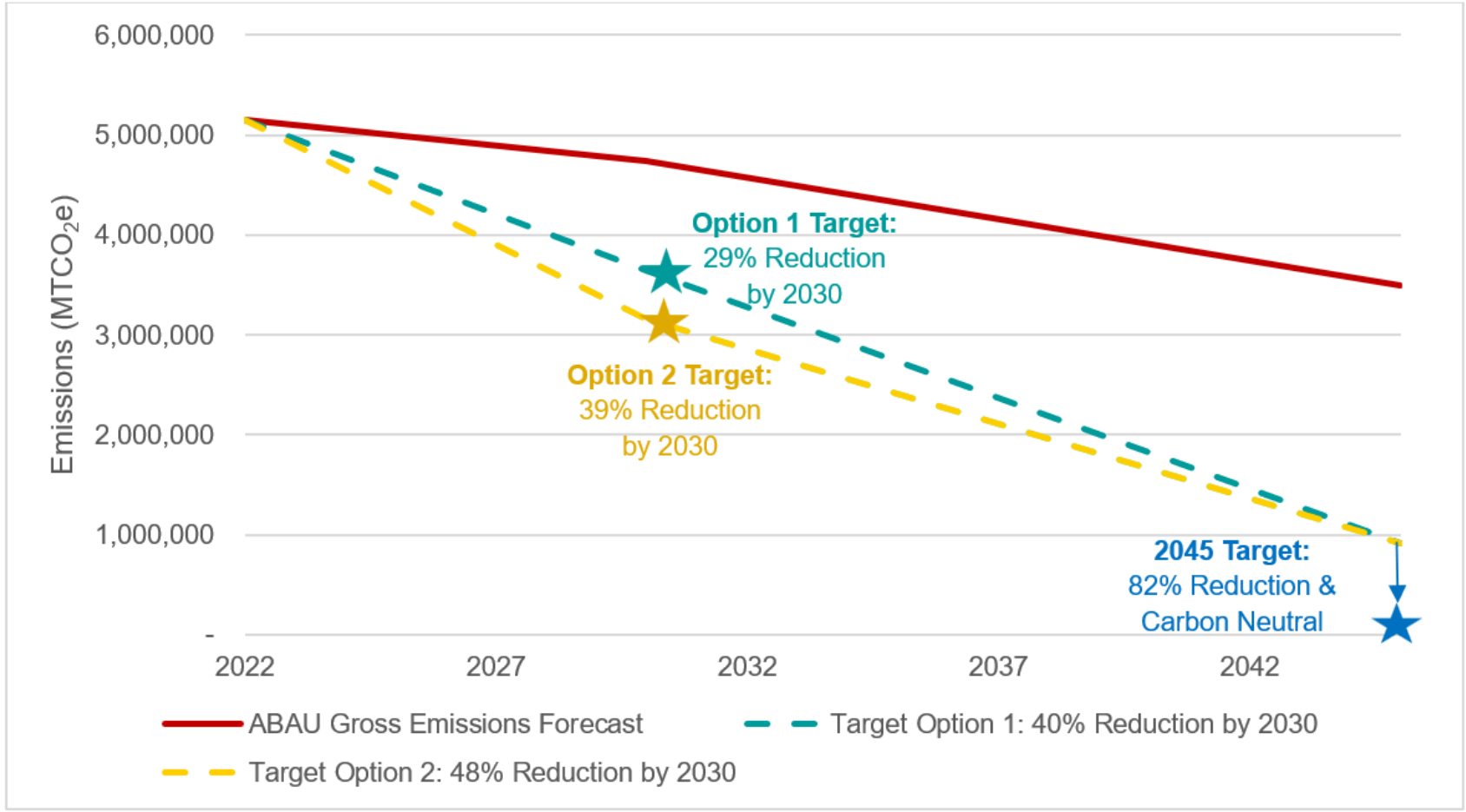


Target Recommendations

- EPA requires voluntary GHG reduction targets to be established (not required/mandatory to meet targets under EPA program)
- As best practice, GHG targets should be aligned with State of California legislation and climate targets.

Target Option	2030	2045
Emissions Target Option 1	**Gross emissions**: 29% below 2022 levels (3,639,577 $MTCO_2e$) *Equates to 40% below 1990 levels aligned with Senate Bill 32*	**Gross emissions**: 82% below 2022 levels (909,894 $MTCO_2e$) *Equates to 85% below 1990 levels aligned with AB 1279* **Net emissions**: Carbon neutral *Aligned with AB1279*
Emissions Target Option 2	**Gross emissions**: 39% below 2022 levels (3,154,300 $MTCO_2e$) *Equates to 48% below 1990 levels aligned with 2022 CA Scoping Plan recommendation*	

Target Comparison



Recommend selecting Target Option 2 to align with the State of California's latest climate research and policy direction

Target Selection

- Which target option should be selected?

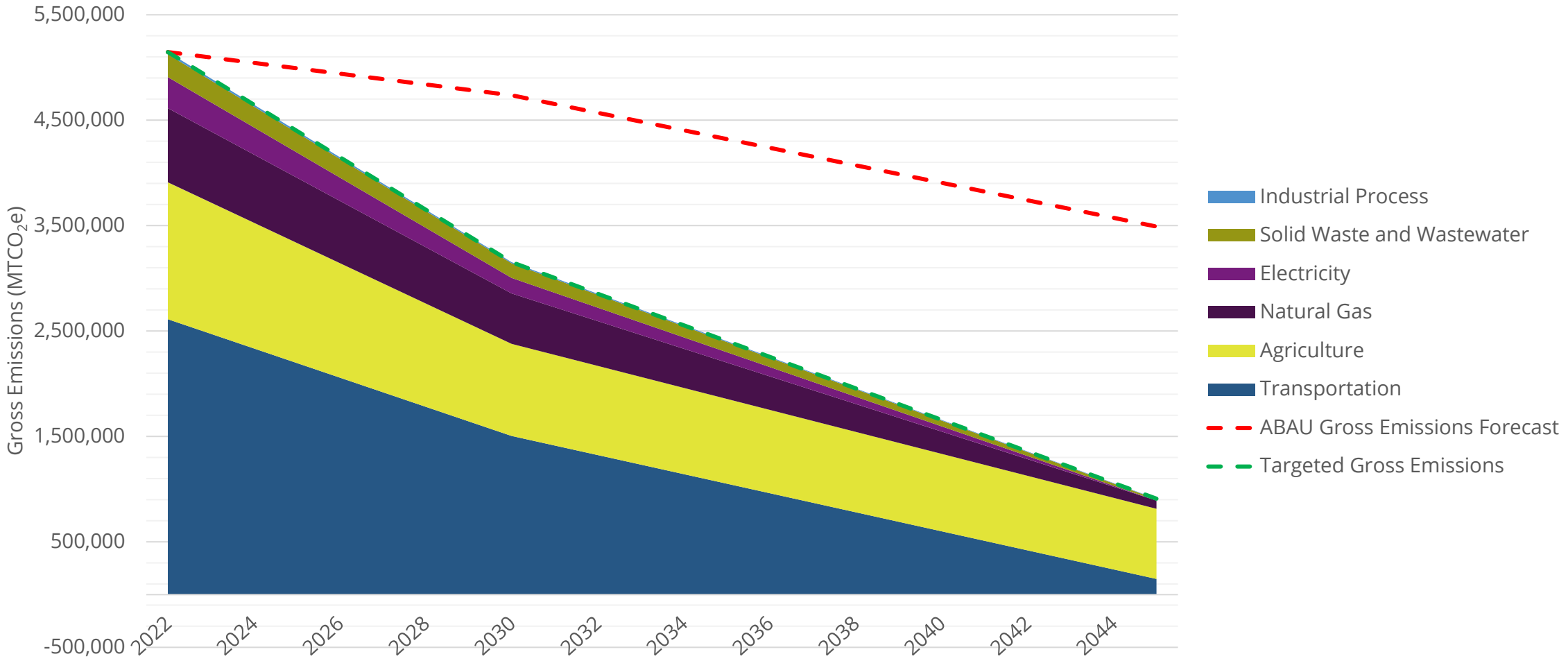
Sector-Specific Targets

- **Sector-specific GHG reduction targets** are recommended (but not required) by EPA
- While it is not necessary to achieve the exact sector-specific targets to meet the economy-wide targets, the sectoral targets can act as **guideposts** to demonstrate the **relative level of effort** needed to meet regional reduction targets
- The recommended sectoral targets were developed to meet **Target Option 2** and were informed by the California Scoping Plan Scenario sector-specific reductions

Sector-Specific Targets

Sector	2030 Target (% reduction from 2022 levels)	2045 Target (% reduction from 2022 levels)	Reasoning
Transportation (On-Road, Off-Road, Waterborne, Aviation, Rail)	-42%	-94%	In line with 2022 Scoping Plan
Agriculture	-33%	-49%	In line with 2022 Scoping Plan
Natural Gas	-32%	-89%	In line with 2022 Scoping Plan
Electricity	-50%	-100%	In line with SB100
Solid Waste and Wastewater	-36%	-94%	In line with meeting gross targets
Industrial Processes	-44%	-84%	In line with 2022 Scoping Plan
Total Region-wide GHG Reductions (in Line with Target Option 2)	**39% below 1990 levels**	**82% below 2022 levels**	**-**

Sector-Specific Target Achievement



Sector-Specific Target Selection

- Are these sector-specific targets acceptable as general guideposts for target achievement?

File #: 25-1291, **Version:** 1

REVIEW OF GREENHOUSE GAS EMISSIONS AND CO-POLLUTANT REDUCTION QUANTIFICATION METHODOLOGY

RECOMMENDATION

Review methodology used to quantify greenhouse gas (GHG) emissions and co-pollutant reductions resulting from GHG mitigation actions selected for the Stockton Climate Action and Adaption Plan (CAAP).

Summary

The technical consultant will provide a high-level review of the approach and process in which the select GHG mitigation reduction strategies will be quantified based on the potential impact of the action to reduce the co-pollutants and emissions.

DISCUSSION

Background

As part of the Climate Action and Adaptation Plan (CAAP) development, the technical consultant will quantify greenhouse gas emissions reductions and co-pollutant reductions from each strategy to 2030 and 2045.

There are three types of greenhouse gas emission reduction strategies: direct, indirect, and foundational:

- Direct actions are those where the local government has full influence over the activity shift and therefore the resulting emissions reductions; the quantification for these actions will be the most reliable because local governments have higher control over action implementation.
- Indirect actions are those that are meant to influence behavior change and therefore indirectly impact activity shifts and the resulting emissions reductions, such as by providing incentives or building bike lanes; the local government only has indirect and limited control over the emissions activity, and therefore emissions reductions will have lower reliability.
- Foundational actions include plans, studies, and policies that support the implementation of direct and indirect actions, and their emissions cannot be quantified.

The CAAP's GHG reduction actions will contain a mix of these three types of actions, and the actual quantification for each will vary based on the action type and the specificities of each action. This information will aid in the understanding of how each GHG action is quantified.

Present Situation

The technical consultant will perform an in-depth analysis of each selected action to quantify the action's ability and impact to reduce co-pollutants and GHG emissions. The actual quantification for each action is specific and will vary based on the contents of each action. This information will aid in the understanding of how each GHG action is quantified. The consultant will present the reduction methodology principles and review the types of quantifications for each action type including an example for the edification of the CAPAC.

FINANCIAL SUMMARY

This is informational only and will have no direct financial impact on the City Departments.

GHG and Co-Pollutant Emission Reductions Quantification Methodology

Reduction Methodology Principles

- CCAP efforts are focused on **identifying priority actions**
- Actions are written broadly as they apply across multiple jurisdictions (e.g., no detailed information on exact extent, number of people reached, money allocated, etc.)
- Therefore, CCAP action emissions reductions are **high-level, rough order of magnitude estimates**
- Estimates can be refined during implementation plan development, when details are reviewed with implementers

Identifying Action Types

- Actions are written from the perspective of local governments (e.g., cities, counties)
- An action's emission reduction type is determined by understanding:
  1) the level of control local governments have over the emission source; and
  2) the action implementation mechanism.

Emissions Reduction Type	Definition	Examples	Reliability of Emission Estimates
Direct	Actions where the local government has full influence over the activity shift and therefore the resulting emissions reductions.	Local governments transitioning fleets to ZEVs, installing solar panels on public facilities, planting trees, etc.	Higher Reliability
Indirect	Actions that are meant to influence behavior change and therefore indirectly impact activity shifts and the resulting emissions reductions.	Financial incentives (e.g., heat pump rebates), investments in infrastructure that promotes low-emissions behaviors (e.g., bike lanes), informational campaigns (e.g., waste education), regulatory requirements (e.g., all-electric building requirements)	Lower Reliability (requirements can have higher reliability)
Foundational	Actions that support the implementation of indirect or direct actions. The emissions reductions of these types of actions are not quantified.	Plans, studies, research and development, pilot programs	Not Quantified

Quantifying Emissions Reductions

- The CCAP attempts to quantify each action's **maximum annual GHG reduction potential** range (low to high) for 2030 and 2050 to enable:
  - Consistent, standardized comparison across actions
  - More efficient data collection, given that most actions currently lack sufficient implementation detail to estimate a feasible emissions reduction range
  - The development of an emissions reduction 'ceiling' to illustrate how close the actions could theoretically come to meeting emissions reduction targets

- Note that the collective action reductions will most likely not meet the identified GHG targets – this is common for communities as most emissions sources are out of local government control and dependent on external factors to meet targets (e.g., local governments can't require residents to use ZEVs).

Example – T14: Convert municipal fleets to cleaner fuels

- Action Emissions Reduction Type: Direct
  - Reductions have higher reliability as municipal fleets are under local government control
  - Emissions reductions account for reductions in fleet gasoline emissions and increases in electricity emissions.
- Assumptions:
  - Percent regional on-road emissions from municipal vehicle fleets: 1%
  - Average fleet vehicle life: 12 years
  - Assuming fleet transitions to electric and end of life starting in 2027
- Outputs:
  - By 2030: X MTCO2e reduced/year
  - By 2050: Y MTCO2e reduced/year

Example 2 – A2: Implement best management practices for manure management

- Action Emissions Reduction Type: Indirect
  - Local governments are trying to influence agricultural emissions, which they do not directly control – reductions have lower reliability.
- Assumptions:
  - Percent of farms with anaerobic digesters in the county: <1%
  - Manure emissions reductions from best management practices: 15-80% (depending on practice)
  - Percent of farms that will implement practices due to action: 20% by 2045

We will attempt to confirm assumptions with lead implementers, but most will be a rough estimate for CCAP (estimates can be refined later during implementation plan development)

File #: 25-1292, **Version:** 1

OVERVIEW OF CLIMATE HAZARD AND CLIMATE ADAPTATION ACTIONS

RECOMMENDATION

Review climate hazards for the City of Stockton and preliminary climate adaptation actions.

Summary

The technical consultant will review the climate hazards projected for the City of Stockton in mid-century and late-century and will review the process for the vulnerability assessment required as part of the Adaptation Planning Grant program (APGP).

DISCUSSION

Background

The City of Stockton is already experiencing climate impacts such as extreme heat, drought, and flooding. On December 12, 2023, (Resolution No. 2023-12-12-1202), staff accepted a grant award from the Adaptation Planning Grant program (APGP) through the State of California Governor's Office of Land Use and Climate Innovation to help in the evaluation and determination of solutions to address the City's climate impacts. The APGP grant requires that the City of Stockton prepare a climate risk vulnerability assessment. This climate risk assessment will provide an overview of the City of Stockton's climate hazards. Staff and the technical consultant AECOM have undergone extensive evaluation and analysis of Stockton planning and strategy documents to inform the climate risk assessment and develop a list of suggested adaptation strategies to be included in the final Climate Action and Adaptation Plan (CAAP). These strategies will also be informed by input from community members in workshops and surveys on climate hazards, risks, and solutions.

Present Situation

The consultant is working on finalizing the climate risk vulnerability assessment and the adaptation strategies. The consultant will present preliminary adaptation actions based on current findings. These adaptation actions will be further refined by the Climate Action Plan Advisory Committee (CAPAC) and community feedback. The actions will ultimately be included in the final CAAP.

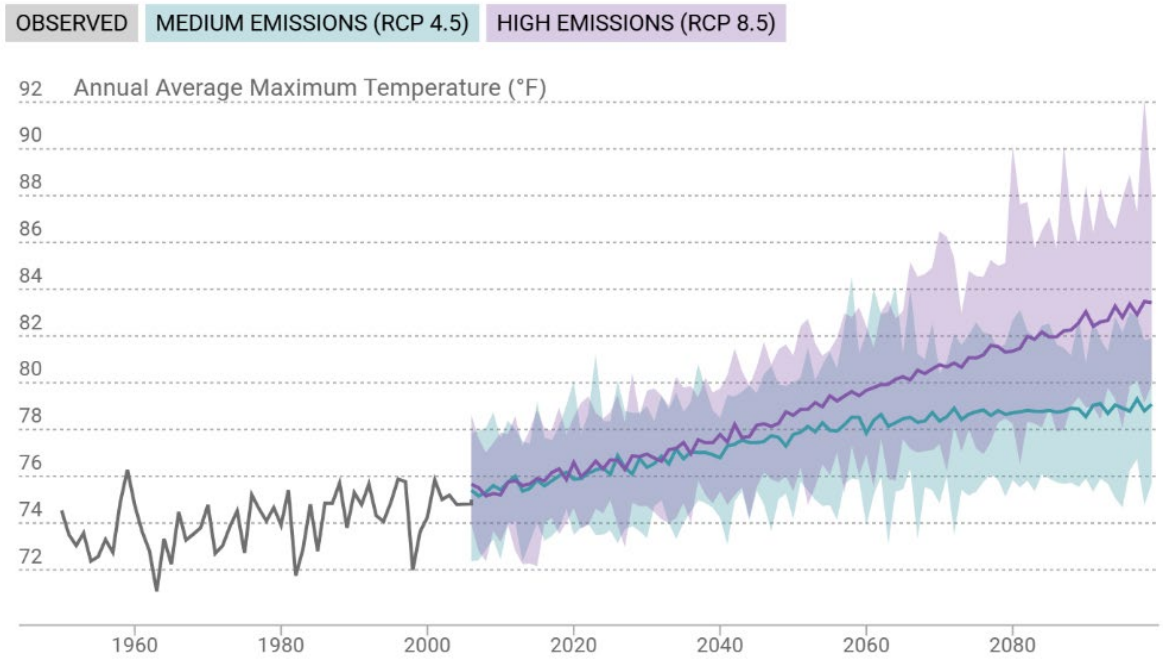
FINANCIAL SUMMARY

This is informational only and will have no direct financial impact on the City Departments.

Climate Hazards Overview

Climate Vulnerability Assessment Overview

- Focused on the City of Stockton
- Develop a **vulnerability assessment** for the City of Stockton's infrastructure and communities through geospatial analysis.
- **Climate data:**
  - Extreme heat, drought, and precipitation climate projections are downscaled through Cal-Adapt, developed by the State of California
  - Flooding data uses FEMA flood maps.
  - Wildfire uses CalFIRE's Fire Hazard Severity Zone maps.
  - Climate projections use the "business as usual" Representative Concentration Pathway (RCP) 8.5 scenario for global GHG emissions.
- **Asset data:** Sourced from the City of Stockton and State of California, and include:
  - Transportation (roads, highways, bridges, bike lanes, etc.)
  - Water and stormwater infrastructure (treatment plants, mains, etc.)
  - Community facilities (hospitals, community centers, schools, etc.)
  - Communities (evaluated through Healthy Places Index and other indicators).



Extreme Heat

- San Joaquin County is projected to see **a significant rise in extreme heat days** – when the daily max temperature is above the 98th percentile of historical temperatures (1961-1990), or **101.6°F**
- Extreme heat is projected to increase from 5 days historically to **over 40 days annually by mid-century (2035-2064).**
- Impacts:
  - Heat illness, heat stroke, and fatalities, particularly for vulnerable populations
  - Infrastructure damage; power outages and rolling blackouts
  - Worsened drought and agricultural impacts
  - Disruptions to outdoor activity.

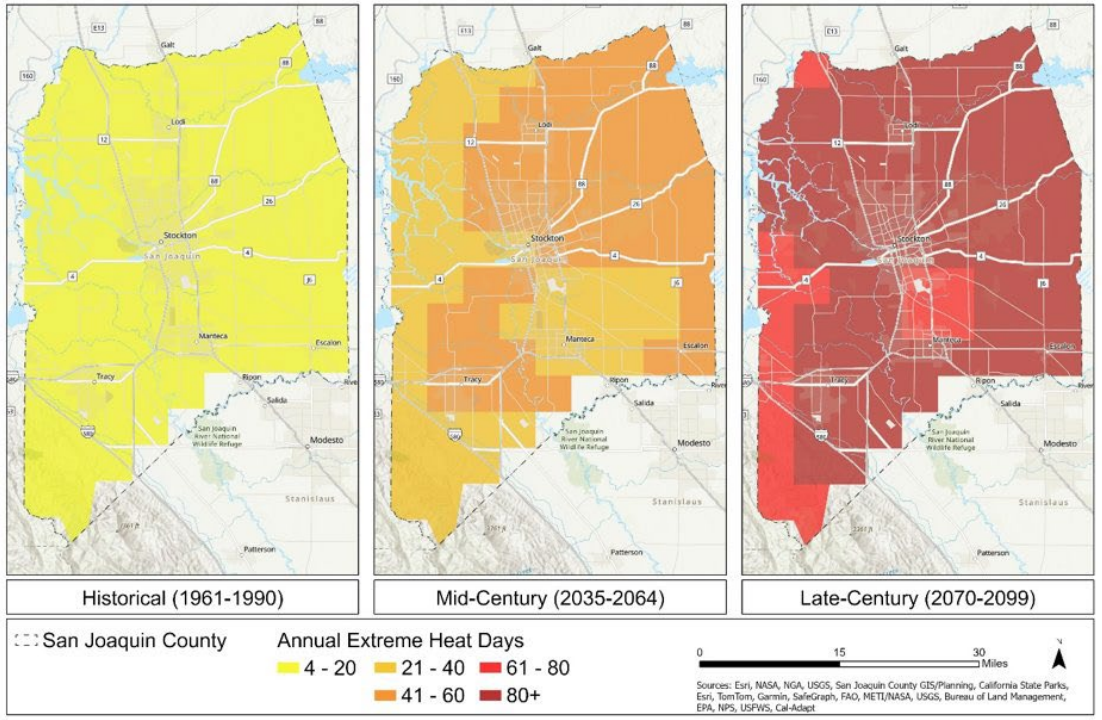


Image: RCP 8.5 Emissions Scenario for San Joaquin County (Cal Adapt)

Drought

- San Joaquin County is projected to experience **longer stretches of dry days**—up to **147 consecutive days annually by mid-century.**
- The 2011–2016 drought led to **$3.8 billion in agricultural losses**, much of which was concentrated in and around San Joaquin County—highlighting the region's vulnerability to prolonged dry periods.
- Impacts:
  - Stressed water resources and water use restrictions
  - Tree mortalities and reduced ecosystem health
  - Reduced crop productivity, contribute to agricultural job losses
  - Drought-related dust exposure can increase Valley Fever, a respiratory illness for which the San Joaquin Valley has the highest rates in California

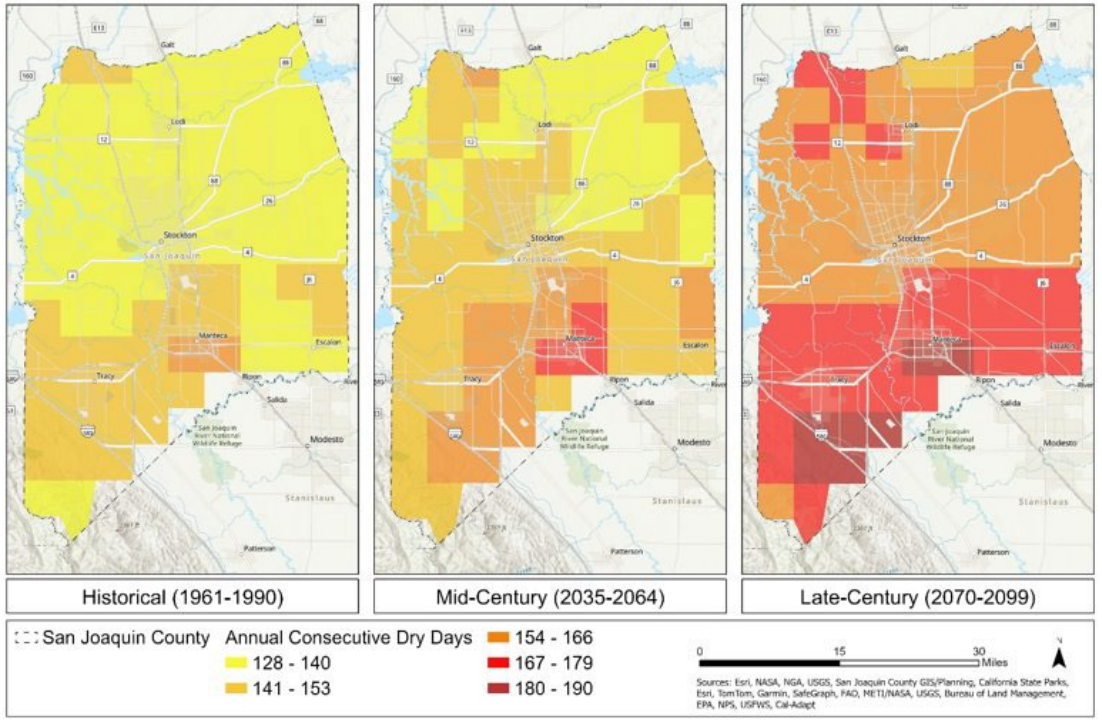


Image: RCP 8.5 Emissions Scenario for San Joaquin County (Cal Adapt)

Precipitation, Sea Level Rise, and Flooding

- By the end of the century, **southern Stockton** is projected to experience some of the **highest one-day precipitation totals** in San Joaquin County, increasing flood risk.
- By the end of the century, sea levels could rise as much as 7-10 feet, **threatening San Joaquin County's levee system**.
- Impacts:
  - Risks to public safety
  - Property damage, particularly for buildings suffering reoccurring floods
  - Infrastructure damage
  - Transportation disruptions
  - Salt-water intrusion into drinking water supply
  - Higher insurance costs
  - Population displacement, particularly for vulnerable populations

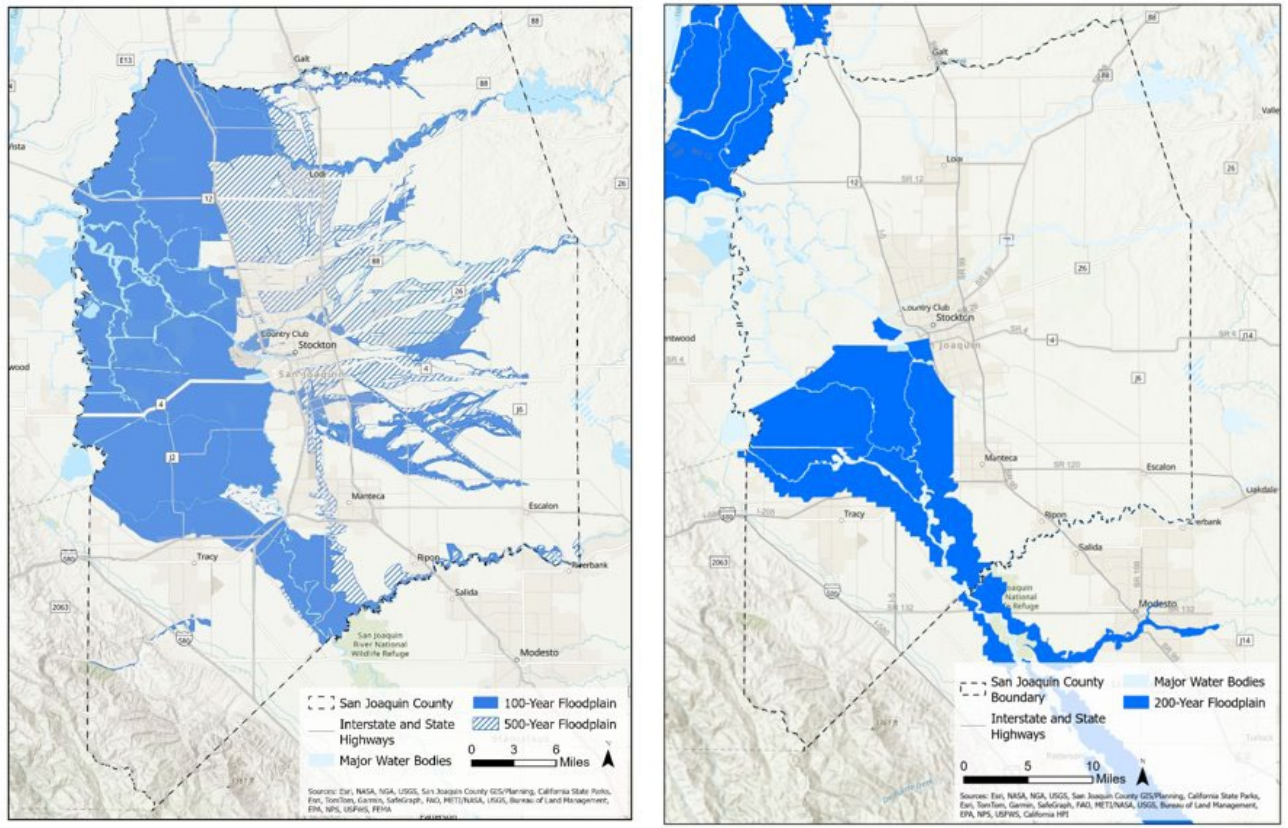


Image: 100- and 500-year floodplain (FEMA) and 200-year floodplain (USACE)

Adaptation Actions

Multi-Hazard Resilience Actions

- Create **resilience hubs** to provide community support and climate adaptive services.
- Ensure critical facilities can operate and provide **refuge** during extreme heat and flooding events.
- Create a partnership agreement with ride share programs and the bus system to provide **free rides to resilience hubs/cooling facilities** during extreme heat events and other disasters.
- **Connect residents** with resources and programs to improve resilience of their homes to flooding and extreme heat.
- Establish a **multilingual climate hazards alert system.**
- Enhance **community resilience** to wildfire smoke and poor air quality.
- Establish a **dedicated fund** to support retrofitting and resilience upgrades.
- Use **nature-based solutions** to support groundwater recharge and stormwater mitigation.
- Upgrade **road and pedestrian surfaces** in areas with high vulnerability to extreme heat and flooding.

Hazard-Specific Actions

- **Extreme Heat**
  - Develop an **extreme heat action plan** and conduct outreach campaigns to enhance community understanding of how to be prepared for extreme heat.
  - Increase **tree canopy** and integrate **heat-resilient infrastructure** in heat-vulnerable neighborhoods
- **Flooding**
  - Implement and expand **General Plan infrastructure flood resilience strategies.**
- **Drought**
  - **Conserve water** by using smart metering and sensors on water distribution lines and prioritizing repairs in areas with older infrastructure.
  - **Update codes** to allow greywater infrastructure, dual plumbing, and rainwater capture systems for on-site water reuse.
  - Develop **drought-tolerant landscaping** where it doesn't yet exist, ideally with stormwater benefits, and implement a watering schedule to prevent watering during the hottest time of day

Government Operations Actions (Applicable to All Hazards)

- Establish an **adaptation strategy review process** with CAPAC oversight to monitor and track progress of climate strategy implementation.
- Pursue **funding** to implement adaptation projects.
- Enhance regional planning efforts by developing a **citywide ecosystem services inventory.**
- Conduct **climate vulnerability audits** for community-owned facilities and critical facilities.
- Ensure that **backup generators** at city facilities are properly placed, connected, maintained, and operated during hazard events (e.g., heatwaves, floods, power outages).
- Update the **2022 Wastewater Master Plan** and **2021 Water Master Plan** to integrate climate projections into utility planning.
- Ensure **wastewater treatment plants and sewer systems** are functional during heat and flood events
- Improve **asset monitoring systems** to identify deteriorating infrastructure.