

CITY OF ELK GROVE

**CLIMATE COMPASS: A PLAN FOR IMPLEMENTING ELK GROVE'S
CLIMATE, SUSTAINABILITY, AND RESILIENCE GOALS**

**COMMUNITY WORKSHOP #1
NOVEMBER 15, 2023**



Agenda

- Welcome and Introductions
- Climate Compass Overview
- Greenhouse Gas Inventory
- Key Climate Hazards
- Community Strengths and Weaknesses Activity
- Questions and Next Steps



Introduction

In the chat, please share:

Name, zip code of residence, affiliation, and favorite place in Elk Grove



Team Organization and Roles

City of Elk Grove

- Carrie Whitlock, AICP, Strategic Planning & Innovation Program Manager
- Christal Love-Lazard, Community Engagement & Government Relations Manager
- Kaylah Ball, CivicSpark Fellow

Ascent

- Hannah Kornfeld, AICP, Project Manager
- Luis Montes, Assistant Project Manager
- John Steponick, Climate Adaptation Analyst
- Natalie Kataoka, Climate Action Intern

Climate Compass Overview

A Plan for Implementing Elk
Grove's Climate, Sustainability,
and Resilience Goals



Key Terms

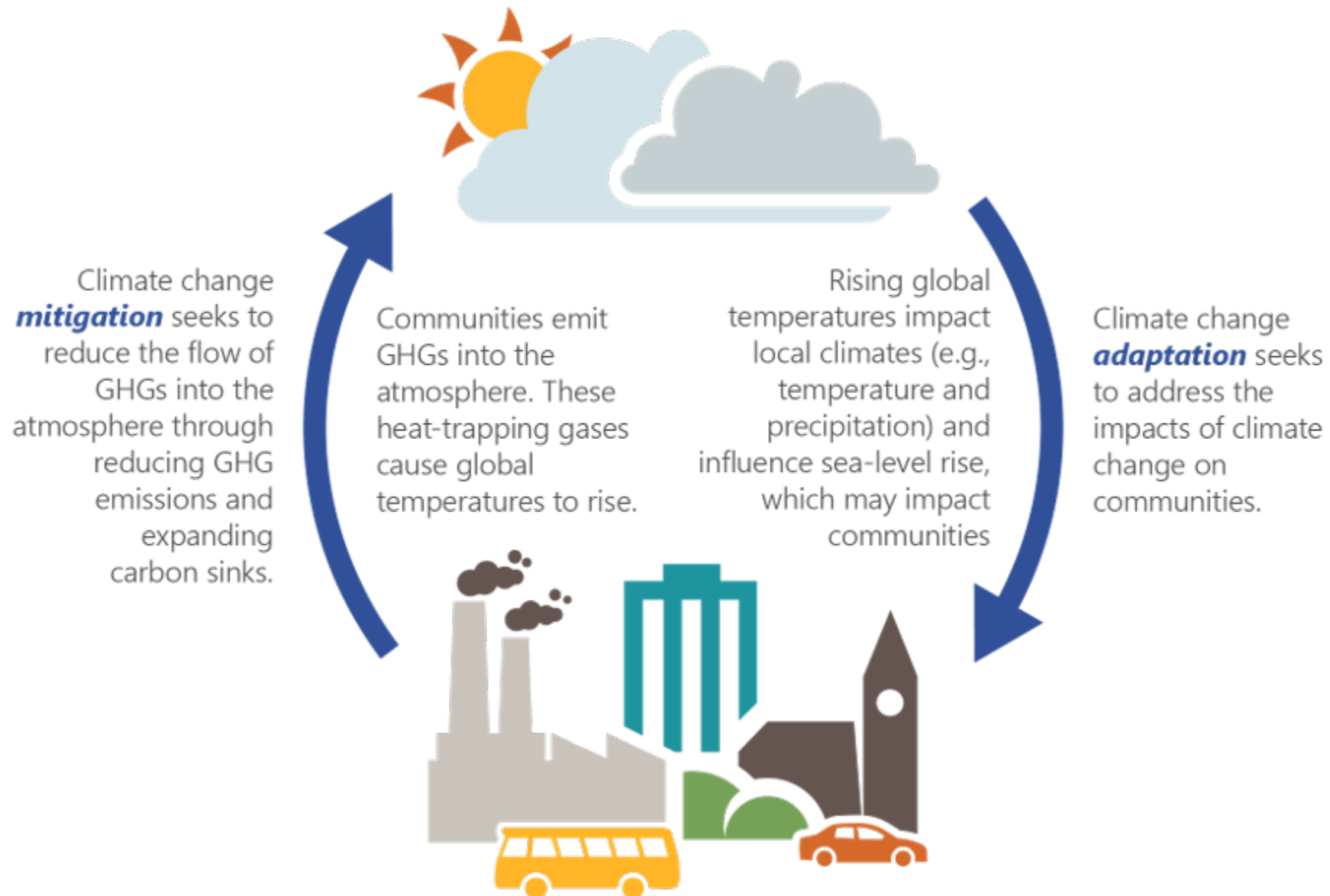
- **Greenhouse Gas** – Gases that **trap heat** in the atmosphere
- **Climate Change** – Long-term shifts in temperature and weather patterns **driven by greenhouse gas emissions** which are primarily produced from burning fossil fuels
- **Sustainability** – Meeting the needs of the present **without compromising** the ability of future generations to meet their own needs
- **Resilience** – The capacity of individuals, communities, institutions, businesses, and systems to **survive, adapt, and thrive** in the face of chronic stresses and acute shocks.
- **Climate Adaptation** – Seeks to address the **impacts of climate change** on communities
- **Mitigation** – Reduce communities' generation of greenhouse gas emissions and **minimize contributions** to climate change

What is the Climate Compass?

- A **roadmap** for reducing GHG emissions and mitigating climate change
- Identifies **existing and projected** GHG emissions
- Sets GHG **reduction targets**
- Establishes **policies and actions** to meet reduction targets
- Integrates **climate adaptation** and resilience strategies
- Meaningfully engages **community**
- Provides an **implementation program**

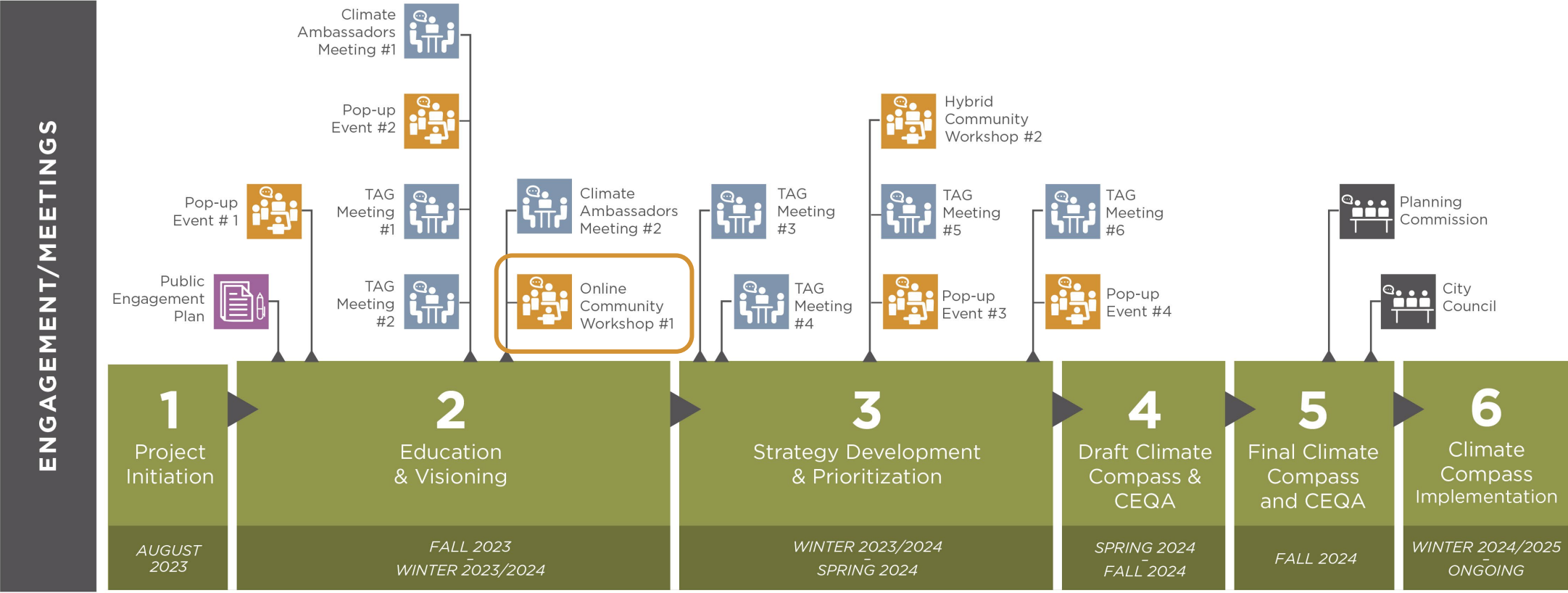


Climate Mitigation vs. Adaptation



GHG = greenhouse gas

Project Timeline



Climate Compass: Elk Grove's Climate Action Plan Update
 TAG: Technical Advisory Group

GHG Inventory Overview

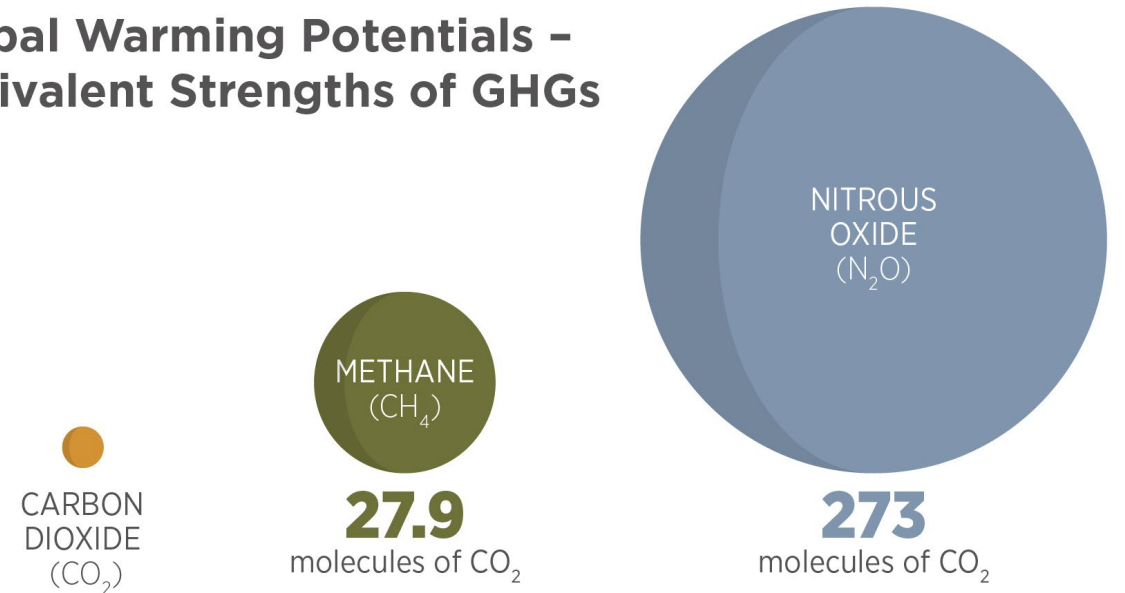
Identifies **existing**
GHG emissions



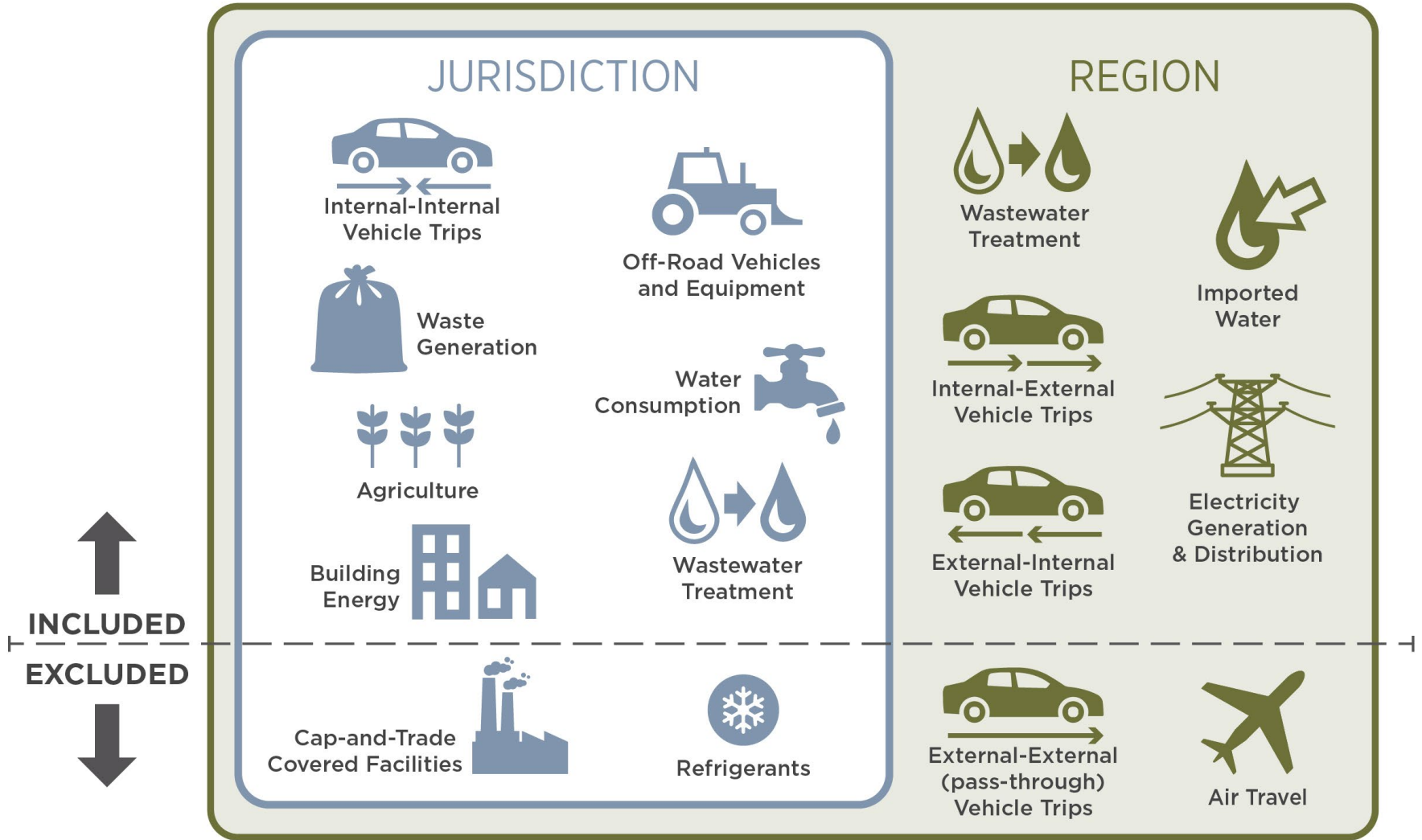
Defining Greenhouse Gases

- Atmospheric gases:
 - carbon dioxide (CO₂)
 - methane (CH₄)
 - nitrous oxide (N₂O)

Global Warming Potentials – Equivalent Strengths of GHGs



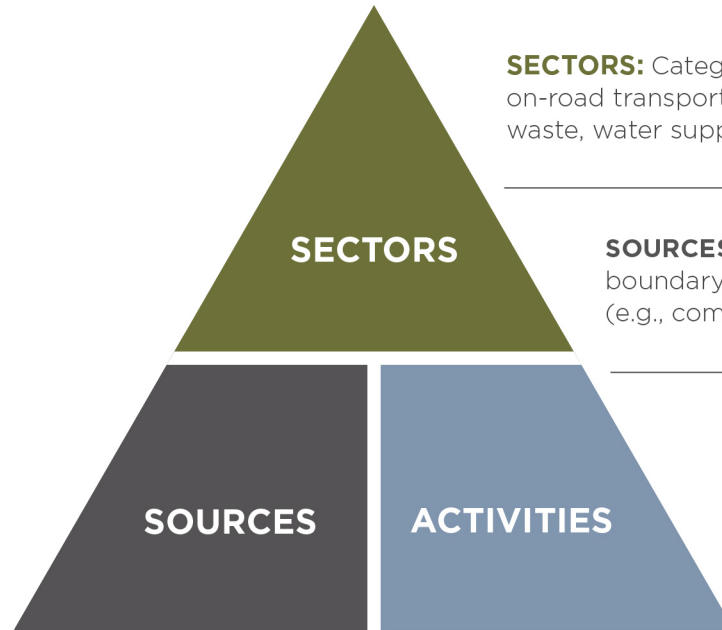
GHG Emissions Inventory Boundary



Greenhouse Gas Emissions Sectors

- Sectors/Sources

- On-road transportation
- Building Energy
- Solid Waste
- Off-Road Vehicles and Equipment
- Wastewater Treatment
- Water Supply
- Agriculture



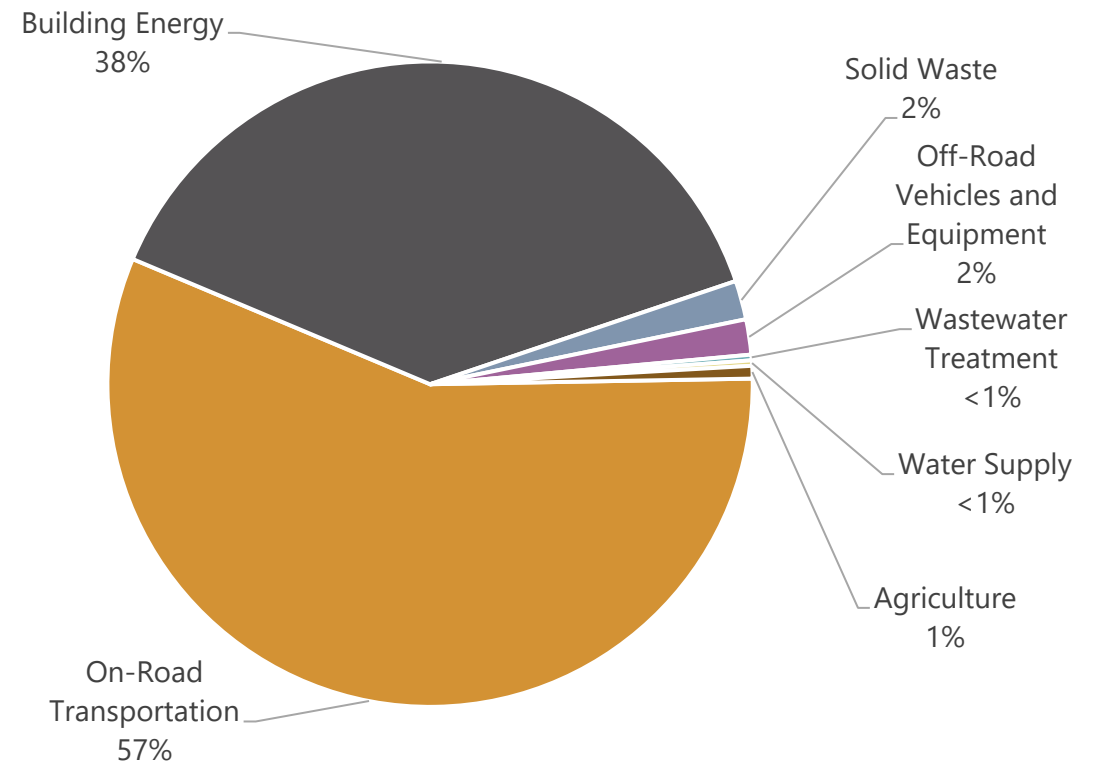
SECTORS: Categories of GHG emissions including building energy, on-road transportation, off-road vehicles and equipment, solid waste, water supply, wastewater treatment, and agriculture.

SOURCES: Any physical process inside the jurisdictional boundary that releases GHG emissions into the atmosphere (e.g., combustion of gasoline in vehicles).

ACTIVITIES: The use of energy, materials, and/or services by members of the community that result in GHG emissions either directly (e.g., use of household furnaces) or indirectly (e.g., use of electricity created through combustion of fossil fuels at a power plant).

2021 Communitywide Inventory

Sector	2021 GHG Emissions (MTCO ₂ e)
On-Road Transportation	586,220
Building Energy	398,365
Solid Waste	20,222
Off-Road Vehicles/Equipment	18,284
Wastewater Treatment	2,928
Water Supply	2,802
Agriculture	6,544
Total	1,035,364



Key Climate Hazards

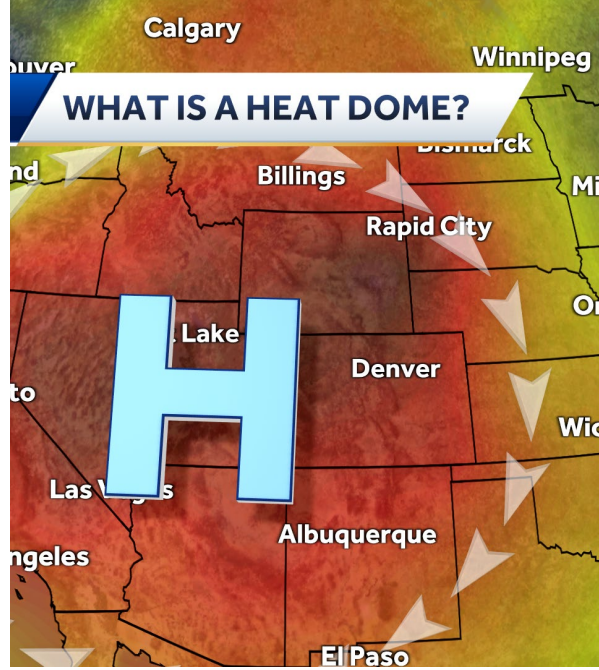
Climate-related events or trends that pose risks to its environment


















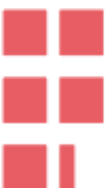


Climate Hazards

- Extreme Heat
- Flooding
- Drought
- Wildfire/Smoke Impacts



Extreme Heat

Table ES-1: Changes in Annual Extreme Heat Days and Heat Wave Events (Historic to 2099) – High-Emissions Scenario

EXTREME HEAT INDICATOR	EXTREME HEAT DAYS AND HEAT WAVE EVENTS			
	HISTORIC (1961–1990)	NEAR TERM (2020–2050)	MIDTERM (2040–2070)	LONG TERM (2070–2099)
Number of annual extreme heat days (daily max temp of 103.1°F)	 4 DAYS	 15 DAYS	 24 DAYS	 40 DAYS
Annual heat wave event frequency (4+ consecutive days above 103.1°F)	 0.2 HEAT WAVE EVENTS	 1.6 HEAT WAVE EVENTS	  3.1 HEAT WAVE EVENTS	    5.8 HEAT WAVE EVENTS
Average heat wave duration (days)	 2 DAYS	 5.3 DAYS	 7 DAYS	 11.1 DAYS

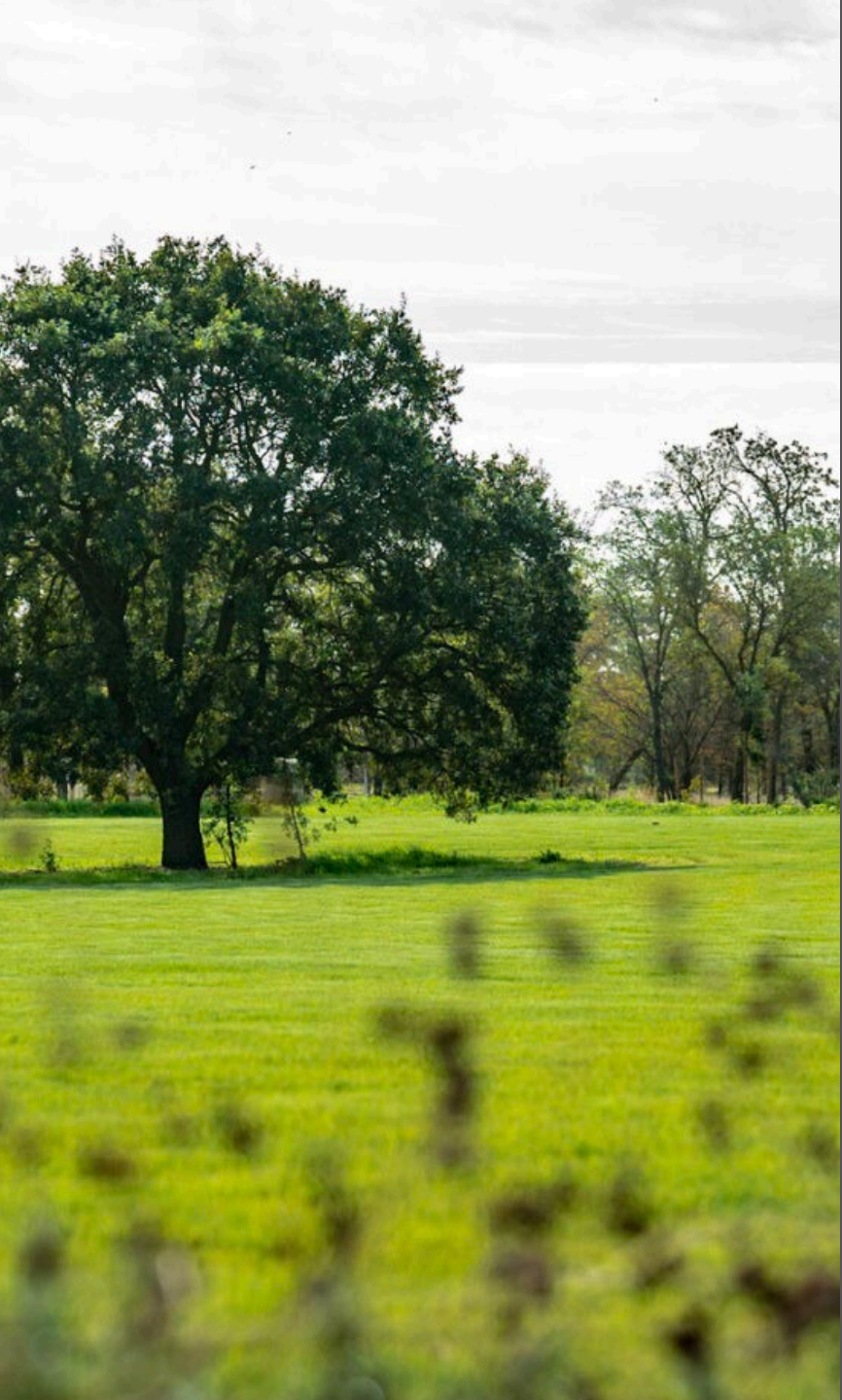
Flooding

Table ES-2: Storm Event Changes in Elk Grove Watersheds through 2099 under a High-Emissions Scenario

WATERSHEDS	CHANGE IN 24-HOUR RAINFALL PERIOD (INCHES) FOR 2-, 10-, AND 100-YEAR STORM EVENTS					
	MIDCENTURY (2035–2064)			LATE CENTURY (2070–2099)		
	2-YEAR	10-YEAR	100-YEAR	2-YEAR	10-YEAR	100-YEAR
Morrison Creek	+6%	-5%	-16%	+20%	+22%	+26%
Snodgrass Slough	-2%	+3%	-9%	+28%	+27%	+26%
Upper Cosumnes River	-2%	+6%	+23%	+8%	+17%	+40%
Deer Creek	-3%	-3%	-1%	+11%	+12%	+15%

An aerial photograph of a suburban neighborhood. The scene is dominated by residential houses with various roof colors (grey, brown, blue) and styles. There are many green trees scattered throughout the area, particularly around the houses and along the streets. A road with a few cars is visible on the left side, curving through the neighborhood. In the background, there's a larger, flat-roofed building, possibly a school or community center, and a green field. The overall atmosphere is peaceful and typical of a suburban setting. The text 'Questions?' is overlaid in the center in a large, white, sans-serif font.

Questions?



Overview of Discussion Topic

- Collaboratively identify and discuss Elk Grove's infrastructure, societal, and environmental **vulnerabilities** and **strengths**
- Examples
 - Infrastructural - buildings, houses, bridges, utilities
 - Societal - healthcare, food, emergency response
 - Environmental - pollution, recreation, tree cover



Ground Rules for Discussion

- Be here now.
- One speaker at a time.
- “Step up” to voice your thoughts
- “Step back” to let others speak
- Be additive, not repetitive
- Listen actively (seek to understand, keep an open mind)
- Help the facilitator to keep things on-time

Next Steps



An aerial photograph of a suburban neighborhood, showing a dense arrangement of houses with grey roofs, interspersed with green trees. A road curves through the scene on the left side. The overall tone is slightly muted and semi-transparent, serving as a background for the text.

Thank You