

# 2022 Scoping Plan Update Kick-off Focus Area Workshop



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NATURAL AND WORKING LANDS

JUNE 9, 2021

# Agenda

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- Introduction and Overview
- Panel Presentations
- Moderated Panel Discussion
- Public Comments, Questions and Discussion
- Closing

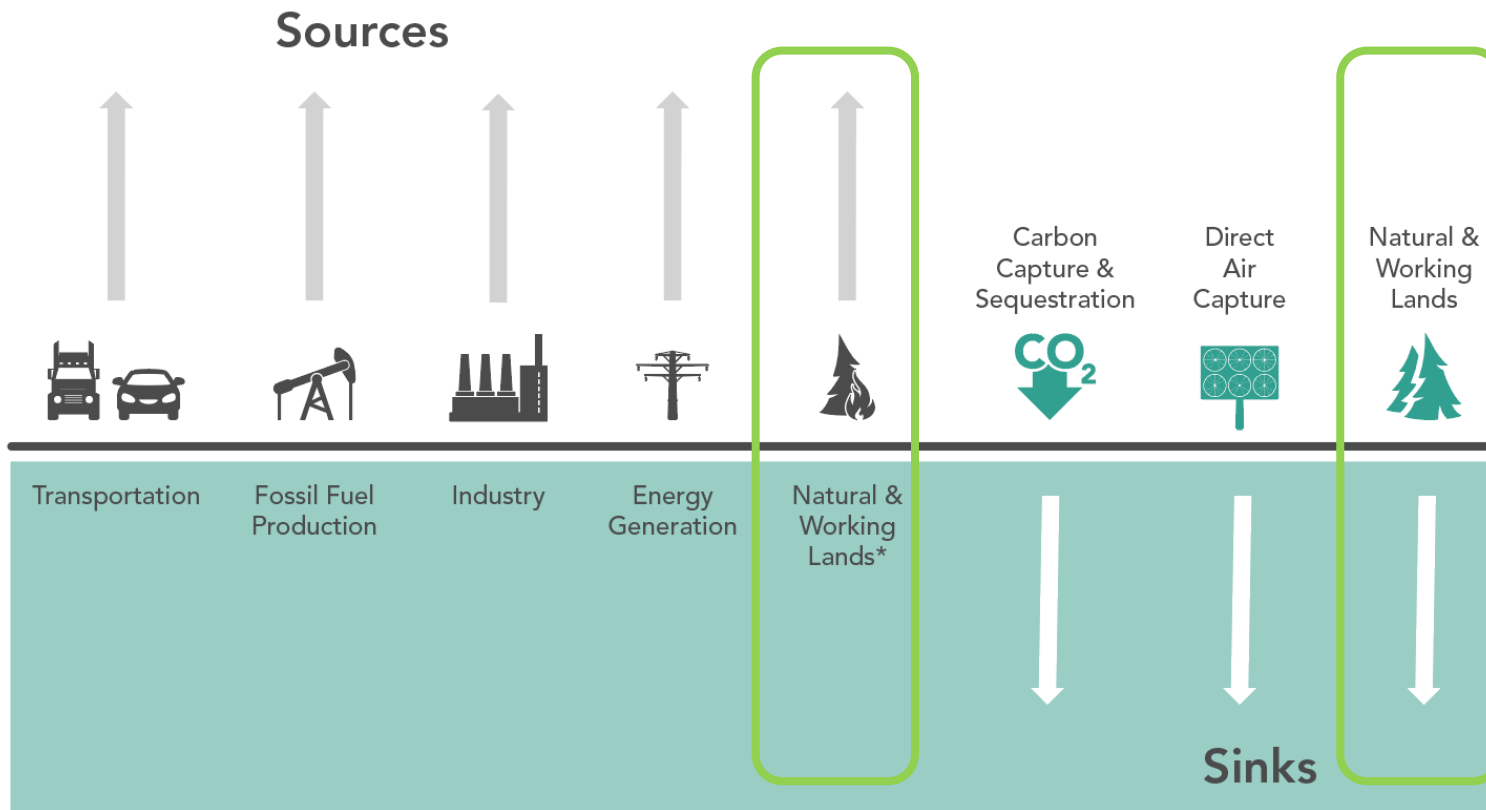
# Purpose of Today's Workshop

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- Build from Day 1 Scoping Plan overview workshop
- Enable more focused discussion of California's natural and working lands, current agency efforts, and trends over the next decade
- Raise questions for stakeholder input
- Provide an opportunity to influence how the approach and recommendations evolve

# Science-based Target: Achieve Carbon Neutrality (CO<sub>2</sub>e) Mid-Century

## Sources Equal Sinks



- Include NWL emission sources and sinks
- Prioritize minimizing emissions from sources
- Maximize sinks

\*Natural and working land emissions come from wildfires, disease, land and ag management practices, and others

# California's Natural and Working Lands

*rangeland*



*forests*



*wetlands*



*grasslands*



*farmland*



*riparian areas*



*seagrass*



*urban green-space*





# Natural & Working Lands (NWL) Ecosystem Carbon Inventory

SCOPING PLAN WORKSHOP ON NATURAL &  
WORKING LANDS

JUNE 9, 2021



# CARB's Statewide GHG & Carbon Inventories

## Statewide GHG Inventory

- Fossil fuel combustion & fugitive leaks
- Industrial processes
- Releases of human-created GHG compounds through product use
- CH<sub>4</sub> and N<sub>2</sub>O from agriculture and other biological processes
- Biogenic CO<sub>2</sub> emissions from industrial and agricultural activities

## NWL Ecosystem Carbon Inventory

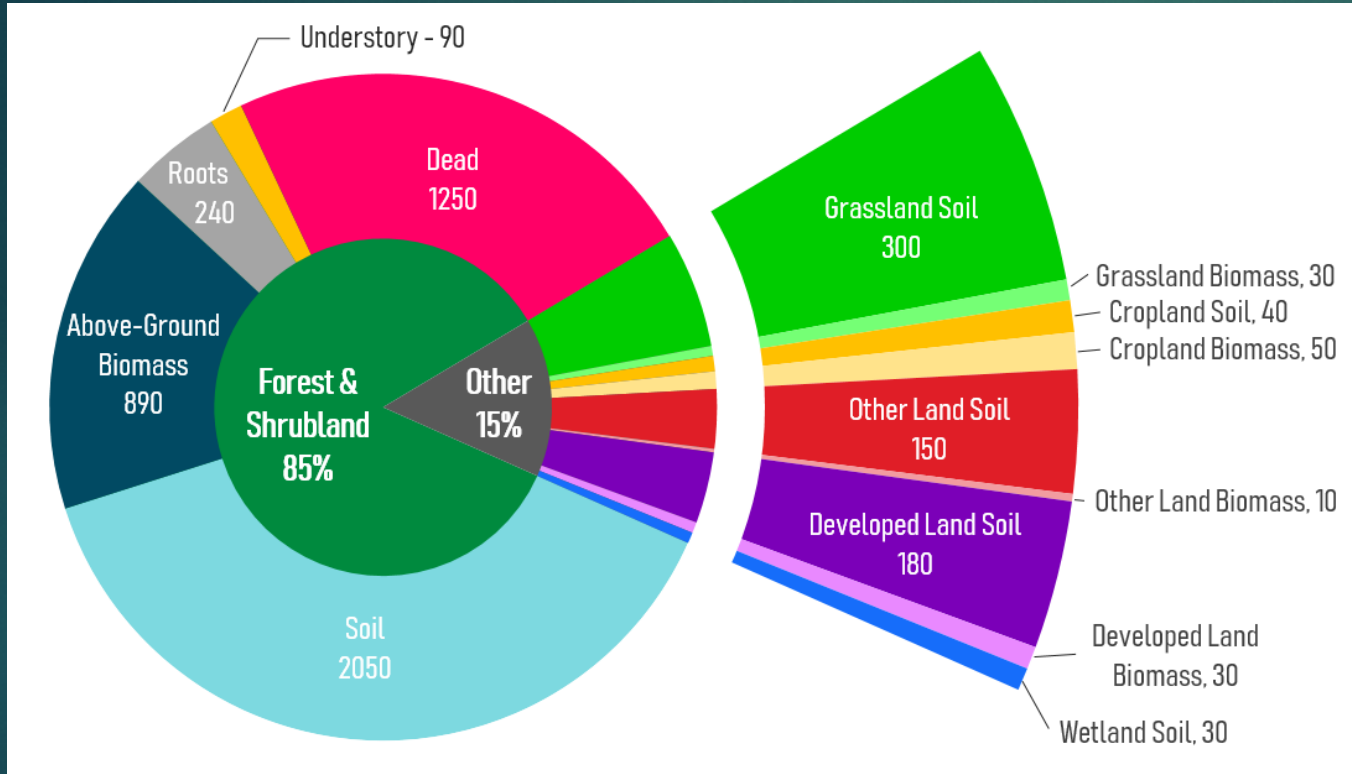
- Carbon stock and stock change of biomass and soils
  - land types: forest, shrubland, grassland, wetland, cropland, and urban forest

# NWL Ecosystem Carbon Inventory

- ▶ Provides a quantitative estimate of the existing state of ecosystem carbon stored in California's land base
  - ▶ Evaluates carbon stocks and stock change over time
  - ▶ Attributes carbon stock change to disturbances (e.g., wildfire, harvest, etc.)
- ▶ Tracks the effects of human activities (e.g., land conversion, interventions) and environmental change
- ▶ Utilizes a combination of satellite-based and ground measurement data

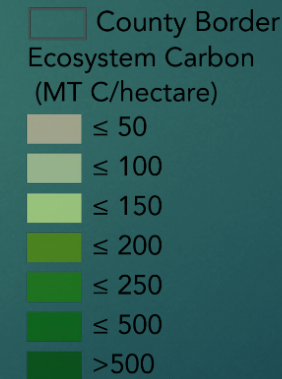


# NWL Inventory Summary



5,340 million metric tons (MMT) of carbon

2014 distribution of biomass and soil carbon stocks on the California landscape  
(rounded to the nearest 10 MMT)



# Wildfire Emissions



# Putting Wildfire Emissions Into Context

**14 MMTCO<sub>2</sub>e** equivalent to:

- ▶ amount of carbon removed from the atmosphere by plant photosynthesis in all of California's forest and rangeland in **six months**
- ▶ **0.1% to 0.2%** of the carbon stored in biomass in California's forest and rangeland
- ▶ **0.07%** of the total ecosystem carbon in all lands in California\*
- ▶ Amount of carbon contained in the structural lumber of **800,000** average single-family homes in California

# SB 901— Wildfire Emissions

**SB 901 Section 4** (Dodd, Statutes of 2018, chaptered 626) **adds to Health & Safety Code, Sec. 38535:** “The state board, in consultation with the California Department of Forestry and Fire Protection, shall develop... On or before December 31, 2020, and every five years thereafter, a report that assesses greenhouse gas emissions associated with wildfire and forest management activities.”

- Provides estimates of
  - Wildfire CO<sub>2</sub> emissions
  - Prescribed fire CO<sub>2</sub> emissions
  - Amount of carbon impacted by forest management activities
- Identifies additional research and data needs



Public Comment Draft

**Greenhouse Gas Emissions of Contemporary  
Wildfire, Prescribed Fire, and Forest  
Management Activities**

*Prepared by the California Air Resources Board  
December 2020*

# Next Steps: Continued Collaboration with Partner Agencies

- ▶ CARB is working with
  - ▶ CAL FIRE on refining elements of the NWL Inventory
  - ▶ U.S. Forest Service on exploring the development of a new forest carbon dataset
  - ▶ Various partner agencies on increasing data collection and utilization for the second edition of the SB 901 Report (2025)

# Next Steps

- ▶ Publish final 2020 wildfire estimate
- ▶ Finalize the SB 901 Report
- ▶ Update NWL Inventory

# Opportunities and Actions

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# Nature-Based Climate Solutions: Four Broad Pathways



## Conservation

- Land protection
- Avoided conversion



## Forestry

- Improved forest health and reduced fire severity
- Enhanced carbon in forested ecosystems
- Reforestation
- Enhanced biomass utilization
- Urban forests and green spaces



## Restoration

- Riparian restoration
- Oak woodland restoration
- Wetland restoration
- Seagrass restoration
- Montane meadow restoration
- Chaparral and shrubland restoration



## Agriculture

- Compost application
- Agroforestry
- Grazing land and grassland management
- Cropland management



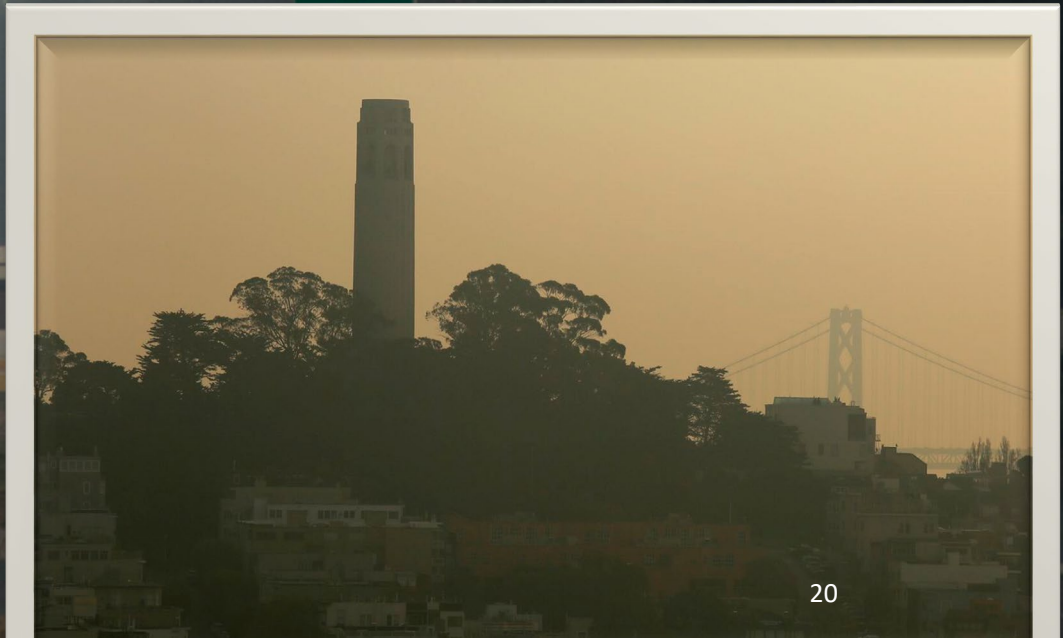
# Fire On the Landscape

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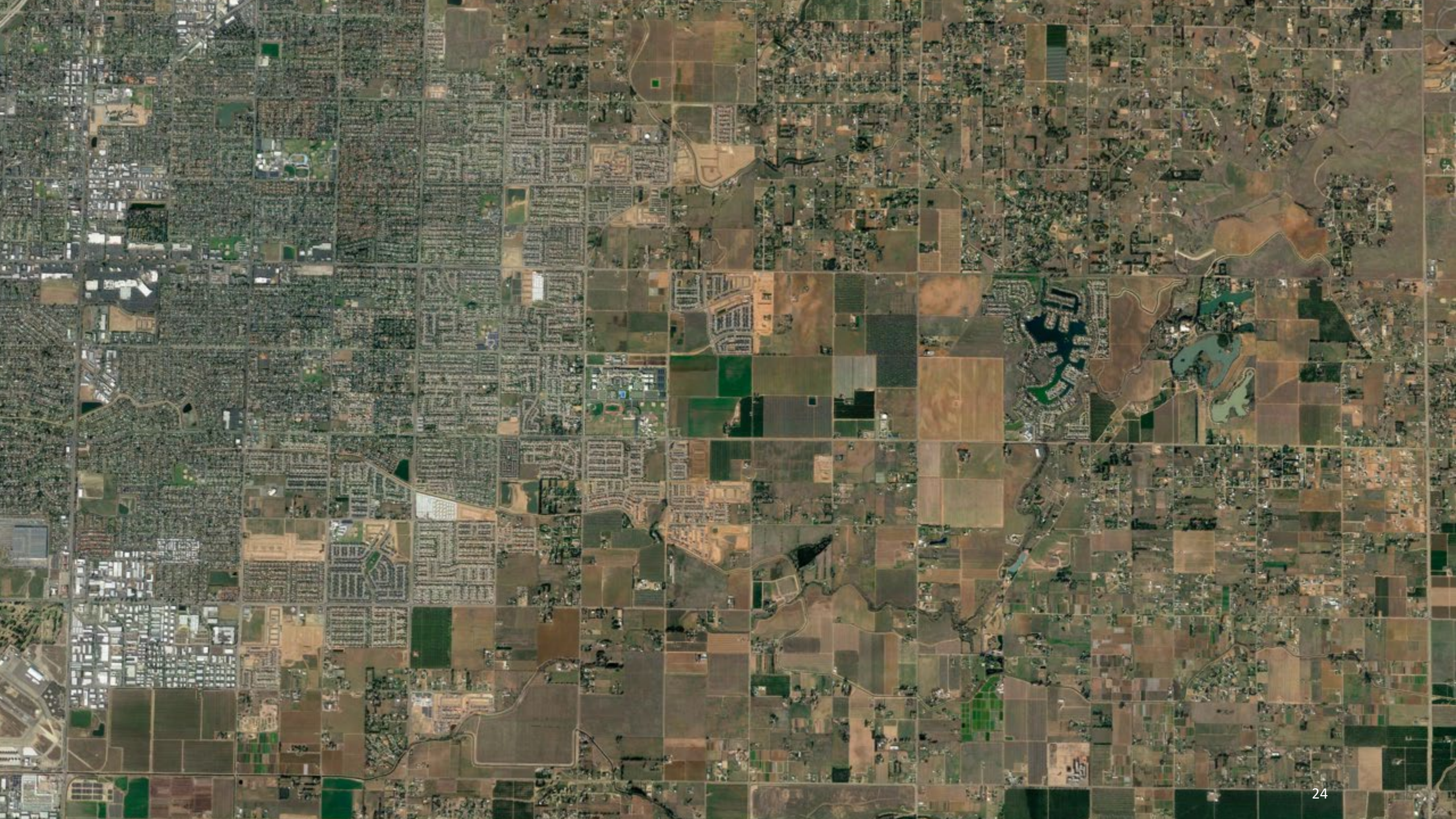
















# Recognition of Opportunity

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- Executive Orders
- Extensive planning, technical work, and coordination
- 2008 Scoping Plan
  - Forests only
  - 5MMT sequestration by 2030
- 2013 Scoping Plan
  - Natural and Working Lands
  - Forest Carbon Plan
- 2017 Scoping Plan
  - Preliminary target
  - Reduce NWL emissions 15-20 MMT
  - Natural and Working Lands Climate Change Implementation Plan



# Key Takeaways from Previous Work

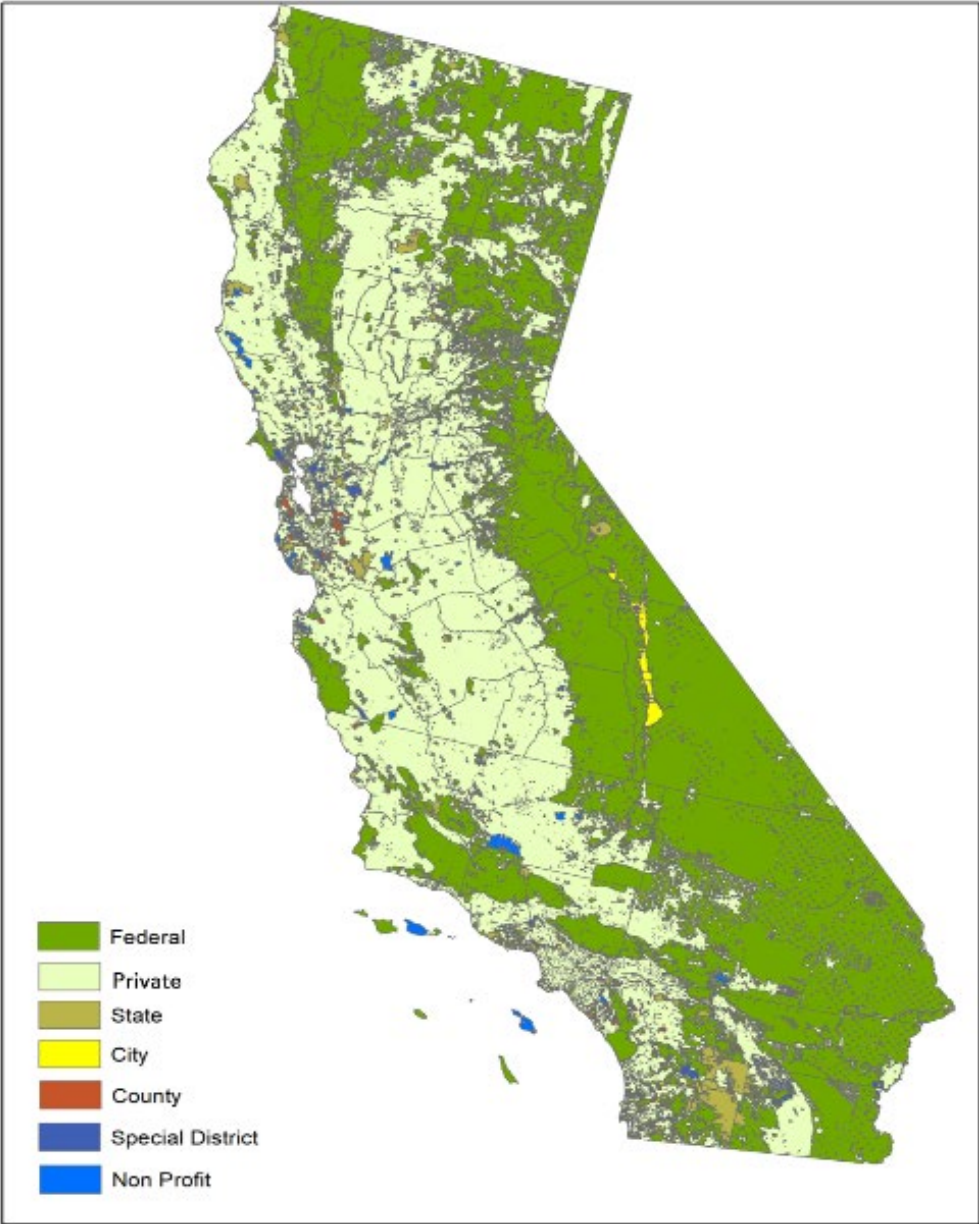
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# Activity Examples: Expected Climate Benefits

Pathway	Near-term Climate Benefits (to 2030)	Long-term Climate Benefits (to 2050/2100)
Coastal wetlands restoration		
Reforestation		
Forest fuel reduction treatments		
Less intensive forest management		
Agricultural soil conservation		

# Land Ownership

Ownership	% of Total Acreage
Federal	48%
Private	47%
State	3%
City/County/Special District	< 2%
Non-Profit	< 1%



# Timescale

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The best time to plant a tree was 20 years ago.

The second-best time is now.

~ Chinese Proverb

- Benefits from actions on lands can take years to decades to accrue
- Near-term action is critical to maximize long-term gains

# Leveraging Efforts

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**Integrated  
Multi-Benefit  
Approach**



# Panel Presentations

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- Jessica Morse, Deputy Secretary for Forest Resources Management, California Natural Resources Agency
- Jenny Lester-Moffitt, Undersecretary, California Department of Food and Agriculture, and
  - Michael Wolff, Senior Environmental Scientist, California Department of Food and Agriculture
- Nathaniel Roth, Chief Science and Data Advisor, California Department of Conservation



# Moderated Panel Discussion

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# Comments

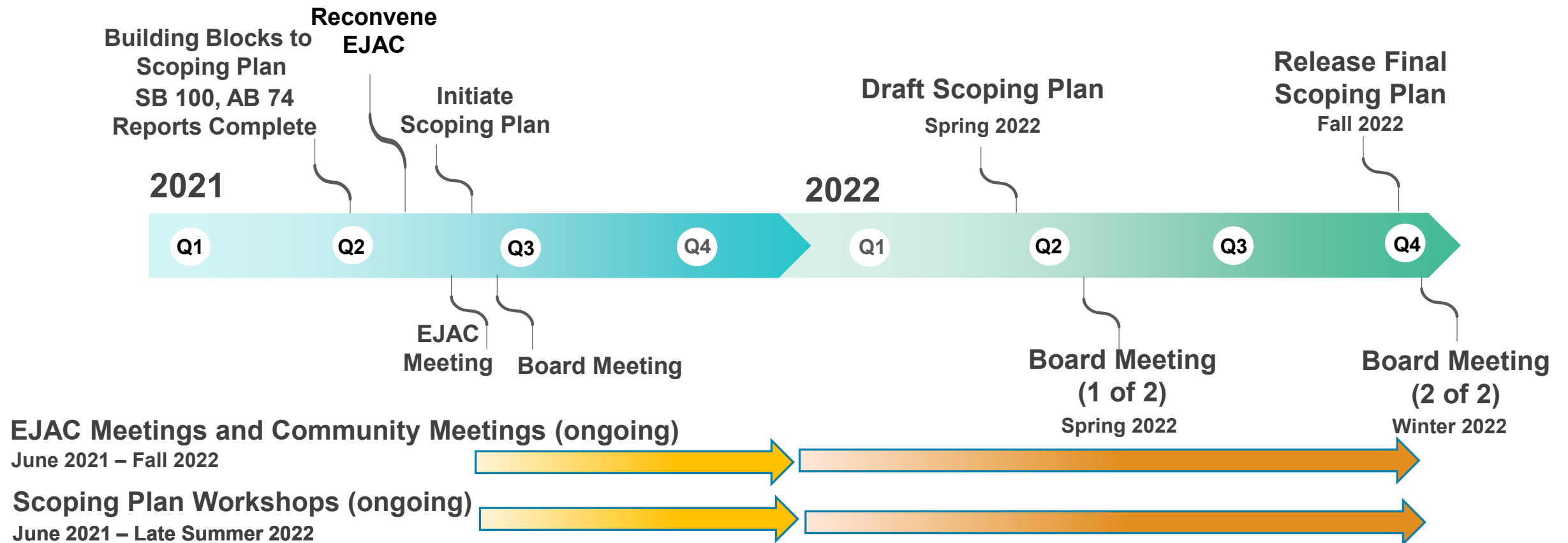
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- Today
  - Environmental Justice Advisory Committee Member
  - Public
- Written comments
  - [https://www.arb.ca.gov/lispub/comm2/bcsubform.php?listname=sp22-kickoff-ws&comm\\_period=1](https://www.arb.ca.gov/lispub/comm2/bcsubform.php?listname=sp22-kickoff-ws&comm_period=1)
  - Comment closing date July 9, 2021 (midnight)

# Closing Remarks

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# 2022 Scoping Plan Update Schedule



# Some Key Scoping Plan Lands Questions

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- What is the scale of the carbon sequestration and losses that we should expect by 2045? Beyond 2045?
- How do we reflect upcoming and past actions on the landscape?
- What Federal, State, Regional, Local, plans or policies should inform the effort?
- What are some of the environmental and economic trade-offs of these actions for California's communities?
- What are the varying equity and environmental justice considerations for different land types and how do they vary regionally?
- How do land-based actions and outcomes intersect with our work to decarbonize other sectors (i.e. electricity, fuels, etc)?

# Staying Engaged

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Scoping Plan Workshops	Environmental Justice Advisory Committee Meetings
Supporting Material and Information	Board Meetings
<a href="http://www.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan"><u>www.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan</u></a>	

# Additional Information

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AB 32 Climate Change Scoping Plan

[AB 32 Climate Change Scoping Plan | California Air Resources Board](#)

Environmental Justice Advisory Committee

[Environmental Justice Advisory Committee | California Air Resources Board](#)

Carbon Neutrality

[Carbon Neutrality | California Air Resources Board](#)

Thank You for Attending

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