SAN JOAQUIN VALLEY REGIONAL MEETING

California's 2030 Natural and Working Lands Climate Change Implementation Plan

CalEPA California Environmental Protection Agency

California Natural Resources Agency

California Air Resources Board

cdfa California Department of Food & Agriculture

California Strategic Growth Council

Agenda

1. Overview of state direction for natural and working lands
2. Overview of draft goals for conservation, restoration, and management in the San Joaquin Valley
3. Discussion on draft goals and outlook for future implementation

California's natural and working lands

rangeland

forests

wetlands

grasslands

farms

riparian areas

seagrass

urban green-space

Overarching goal

California's Climate Policy Portfolio

Double building efficiency

50% renewable power

More clean, renewable fuels

Cleaner zero or near-zero emission cars, trucks, and buses

Walkable/Bikeable communities with transit

Cleaner freight and goods movement

Slash potent "super-pollutants" from dairies, landfills and refrigerants

Cap emissions from transportation, industry, natural gas, and electricity

Invest in communities to reduce emissions

Protect and manage natural and working lands

Fully integrate natural and working lands into California's climate change policy portfolio

December 2017 Scoping Plan directive

- **Maintain** lands as a **resilient carbon sink –** achieve net zero or negative greenhouse gas emissions
- **Minimize,** where applicable, net greenhouse gas and black carbon **emissions**
- Sets a **preliminary goal** for sequestration and avoided emissions of at least 15-20 MMT CO_2e by 2030 through existing pathways and new incentives

Achieving California's vision for natural and working lands

2030 Natural and Working Lands Climate Change Implementation Plan

→

Blueprint for achieving state vision for natural and working lands:

1. ***Protect*** land from conversion to more intensified uses by increasing conservation practices and local planning processes that avoid greenfield development;
2. ***Enhance*** the resilience of and potential for carbon sequestration on lands through management and restoration;
3. ***Innovate*** biomass utilization such that harvested wood and excess agricultural and forest biomass can be used to advance renewable energy and fuels objectives

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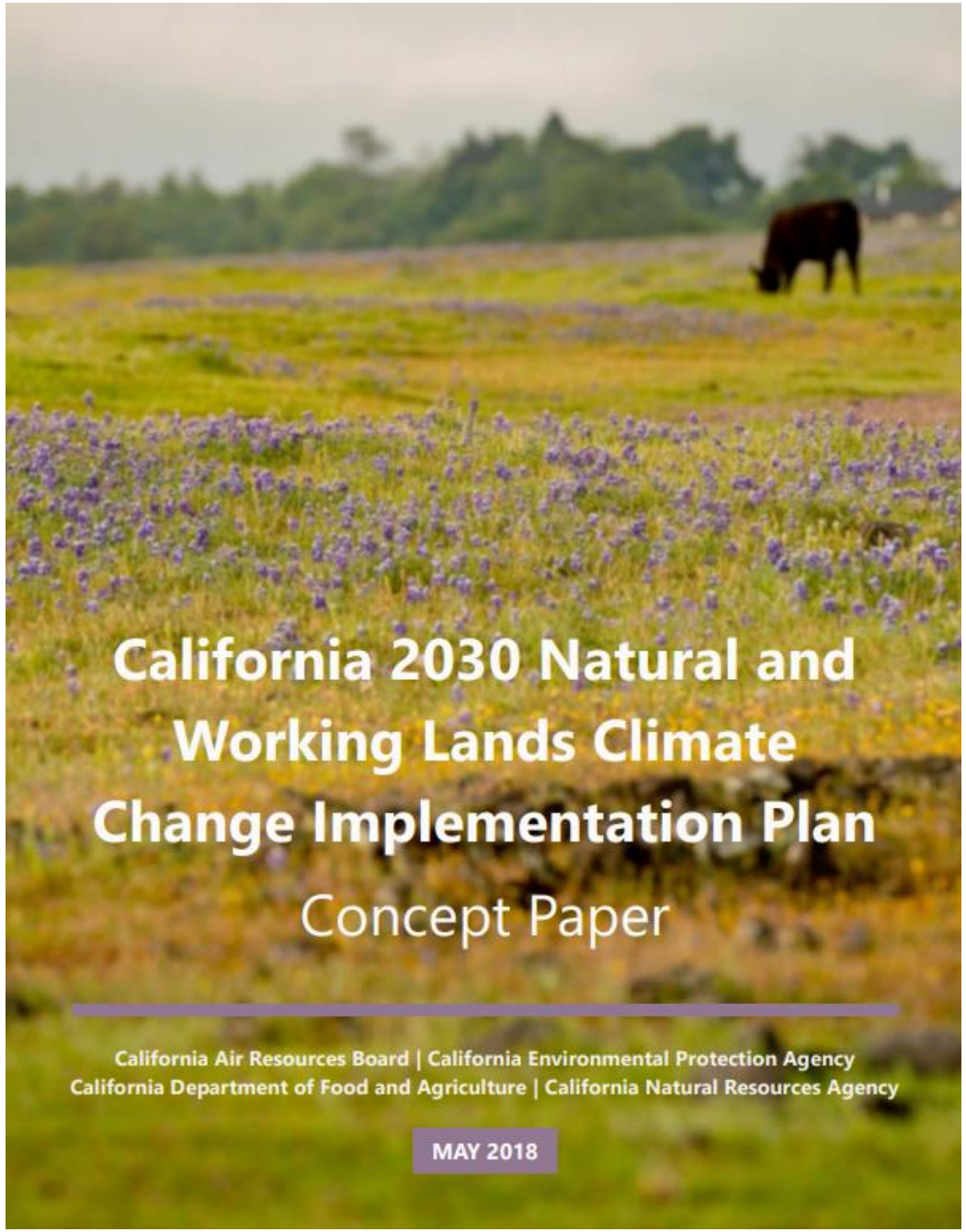
Increased ability for land to sequester carbon and provide other benefits

- ***Health***
- ***Social***
- ***Economic***
- ***Environmental***

May 2018 Concept Paper for the final Plan

https://arb.ca.gov/cc/natandworkinglands/nwl-implementation-plan-concept-paper.pdf



State-funded activity ("intervention-based") approach

- Plan relies on using **identified activities** (interventions)
- Sets an ambitious but achievable goal with targets that are **scaleable**
- Focuses on **State-supported land conservation, restoration, and management activities** for State agency departments, boards, and conservancies
- Implementation will leverage **new and existing programs** at various departments and agencies & California's history of implementing conservation programs
- Programs will continue to provide **ecosystem and societal co-benefits** while sequestering carbon
- Facilitates **tracking and reporting** on progress towards goal

Multiple benefits of implemented projects

Land protection, restoration, and management activities in the plan

Land protection	Avoided conversion of land for development
Agricultural practices	Cultivated land soil conservation, rangeland compost amendment, rotational grazing, conservation crop rotation, mulching, riparian restoration
Urban forests	Expansion of existing urban tree canopy
Forest management	Understory treatment, partial cut, prescribed burn, biomass utilization, improved management
Restoration activities	Restoration and expansion of the extent of mountain meadows, managed wetlands, oak woodlands, riparian areas, and seagrass

Goals of final Plan

1. Help integrate natural and working lands with broader State climate strategy and future Scoping Plan

2. Include a final statewide 2030 intervention-based sequestration goal for natural and working lands

3. Identify scale and scope of State-supported **land conservation, restoration, and management acreage targets** needed for long-term objectives & 2030 goal

Tools for setting the 2030 carbon goal

Tools for projecting the carbon impacts of conservation, restoration, and management activities:

California Natural and Working Lands Carbon and Greenhouse Gas Model (CALAND)

COMET-Planner
Compost-Planner

California Natural and Working Lands Carbon and Greenhouse Gas Model (CALAND)

- Developed by Lawrence Berkeley National Laboratory
- Empirically-based landscape-scale carbon accounting model
- Simulates effects of various practices and land use or land cover change on carbon dynamics

COMET-Planner & Compost-Planner

- **COMET-Planner:** developed by Colorado State University and U.S. Department of Agriculture Natural Resources Conservation Service
- **Compost-Planner:** developed by CARB with an interface developed by USDA-NRCS
- Both provide estimates of the net climate benefits resulting from implementation of various land-based management practices

Setting acreage targets

Three scenarios based on:

no state activities

BASELINE SCENARIO

Regulatory minimum only

two alternatives

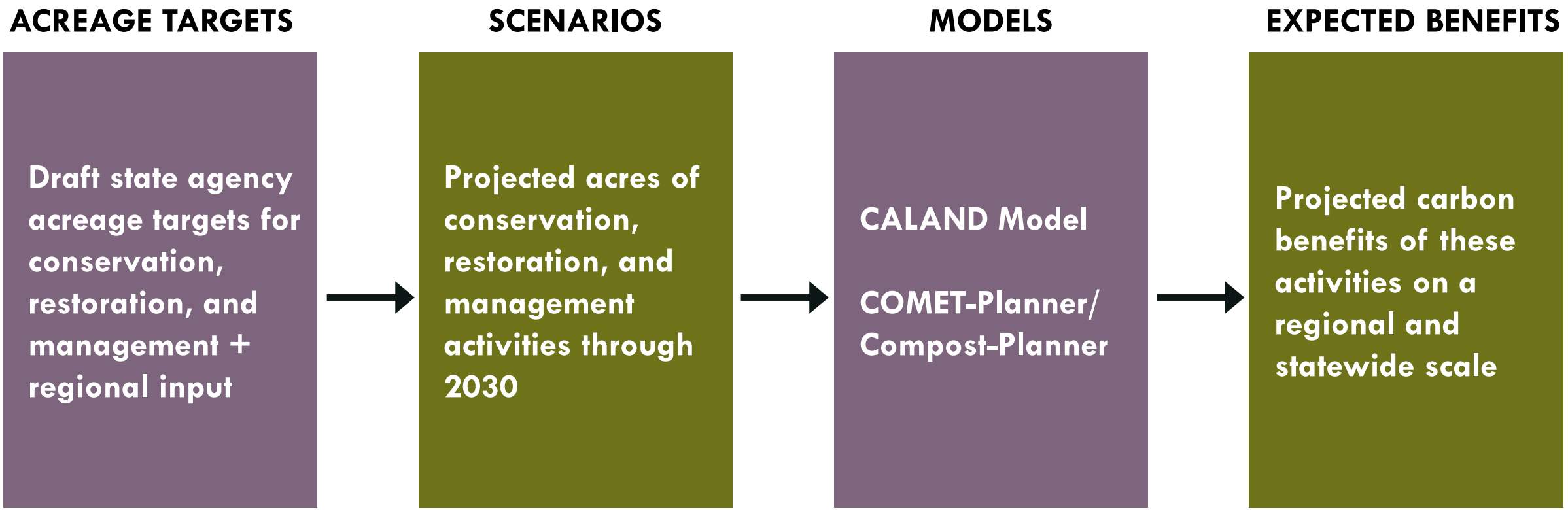
BUSINESS-AS-USUAL SCENARIO

Maintaining California's current track

AMBITIOUS SCENARIO

More aggressive levels of state funding for programs/ voluntary efforts

Projecting carbon impacts of conservation, restoration, and management targets



Results of projections

- Alternative scenarios compared to baseline to show impact of state activities
- Projections will provide outlook on scale needed and reasonableness of proposed strategies

Additional considerations

- Near and long-term carbon impacts
- Climate change impacts, health, social, economic, and environmental benefits
- Cost effectiveness
- Geographic, environmental, social, and economic suitability
- Permanence, or long-term effect

Tracking and reporting

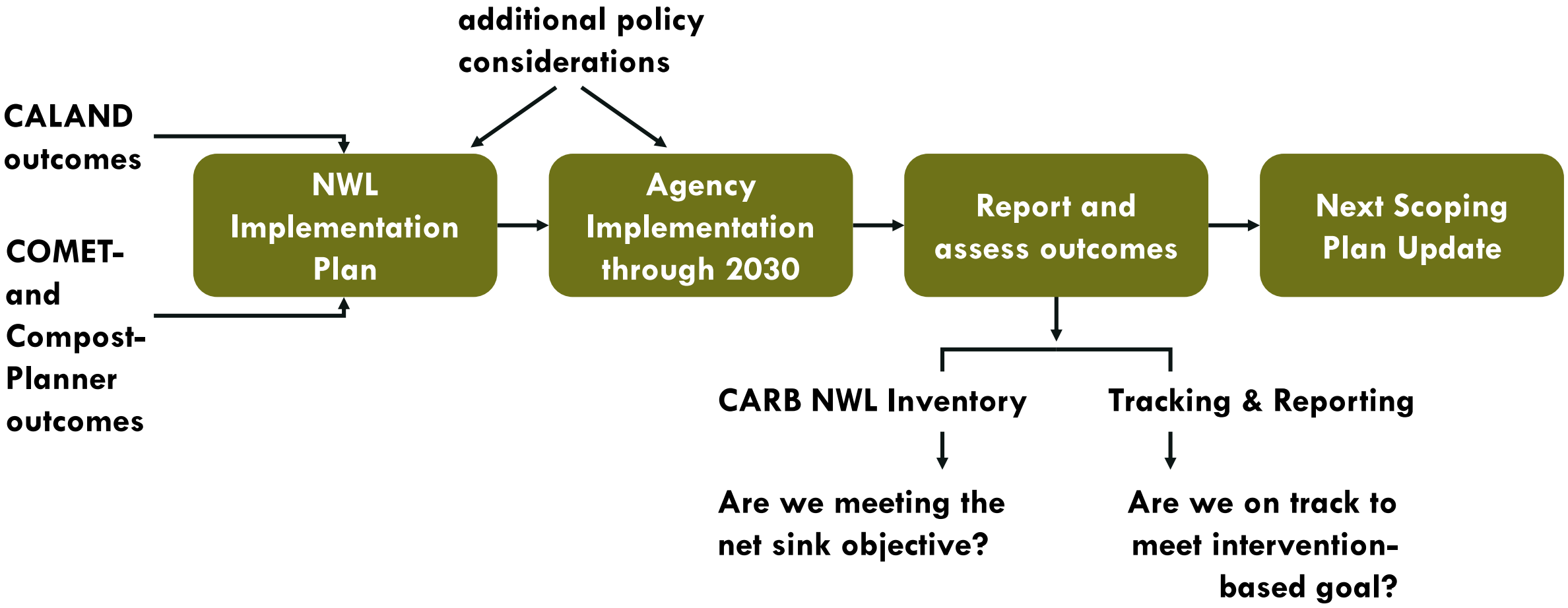
- Annual reporting on expected benefits based acres protected and brought under management using:
  - CALAND and other methods
  - COMET-Planner, Compost-Planner and existing quantification methodologies developed as part of California Climate Investments
- Develop a system for tracking and reporting actual outcomes

Assessing progress towards long-term objective

Natural and Working Lands GHG Inventory

- Retrospective snapshot of carbon stocks, stock-change and resulting GHG flux
- Used to assess progress on sector objective of net sequestration or negative emissions
- Will capture the effects of implemented interventions, along with other gains or losses that occur over the same timeframe
- Will help indicate scale of interventions needed

Framework: putting it all together



Moving Forward

June 2018

Regional meetings

Summer 2018

Develop draft 2030 natural and working lands goal and Plan

September 2018

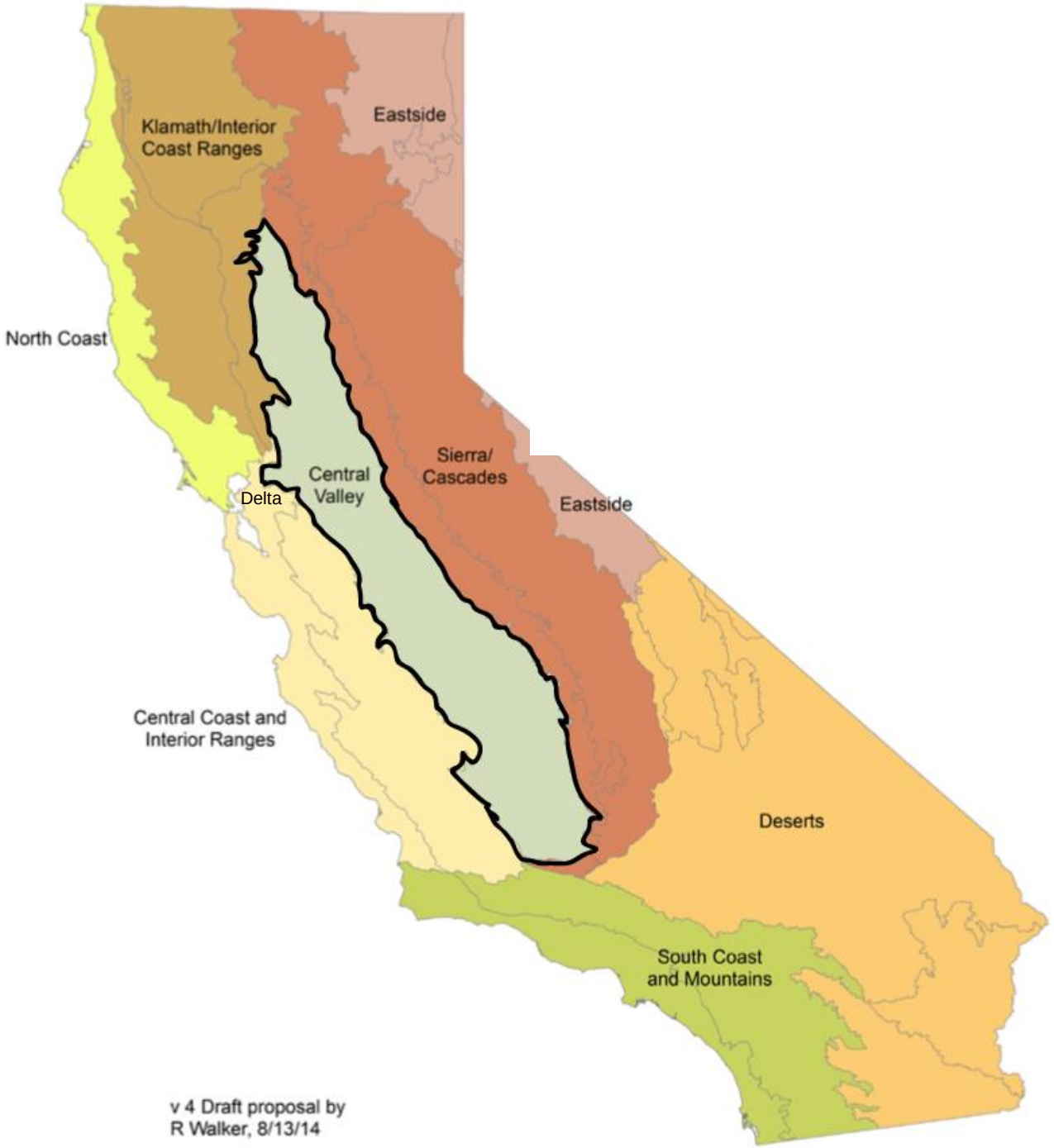
Announce natural and working lands intervention-based carbon goal

November 2018

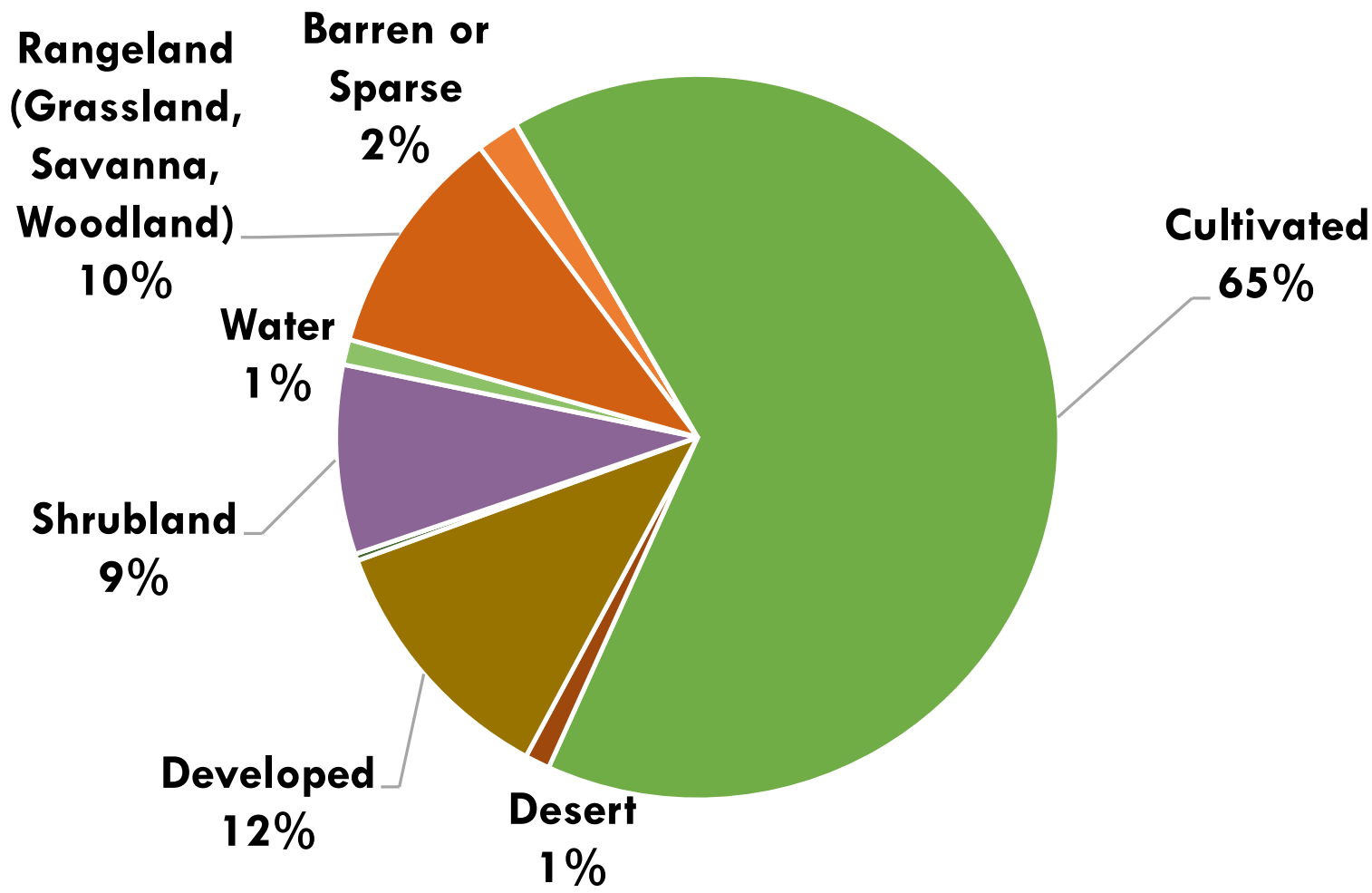
Release final Implementation Plan

DRAFT GOALS FOR NATURAL & WORKING LANDS IN THE SAN JOAQUIN VALLEY

Central Valley Ecoregion



Land Cover in the Central Valley Ecoregion



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Agency and department projections

- **Business-as-usual alternative:** How many acres could be restored or managed over 12 years assuming current bond and program funding?
    - Includes projections based on current grant and bond-funded programs through the Delta Conservancy, Department of Fish and Wildlife, Department of Water Resources
- **Ambitious alternative:** How many acres could be restored or managed over 12 years with an ambitious but achievable increase in funding?
    - Assumes acceleration of business-as-usual work

CA Natural Resources Agency Departments reporting conservation, restoration, and management targets in the Central Valley Region

Department of Conservation (DOC)
Department of Fish and Wildlife (CDFW)
Department of Water Resources (DWR)
Department of Forestry and Fire Protection (CAL FIRE)
State Parks
Wildlife Conservation Board (WCB)

CENTRAL VALLEY REGION: Compiled acreage targets

Practice	BAU (acres)	Ambitious (acres)	Reporting Agencies
Land Protection	155,554	236,801	Department of Water Resources, Wildlife Conservation Board, Department of Conservation, State Parks
Forest expansion	455	683	Department of Water Resources
Partial cut/ fuel reduction	13,620	20,710	Department of Water Resources, State Parks
Forest Understory Treatment	120	900	State Parks
Forest Prescribed Burn	-	600	State Parks
Oak Woodland Restoration	496	1,452	State Parks
Meadow Restoration	481	570	State Parks, Department of Water Resources
Riparian Restoration	14,913	22,462	Department of Conservation, State Parks, Department of Water Resources, Wildlife Conservation Board
Soil Conservation Practices	120	300	State Parks
Rangeland Rotational Grazing	-	60	State Parks
Urban Forest Expansion		10% canopy expansion	Department of Forestry and Fire Protection, Natural Resources Agency

Practices not reported for this region: reforestation, improved forest management, additional forest biomass utilization, rangeland composting, coastal wetland restoration, seagrass restoration

CENTRAL VALLEY LAND CONSERVATION & RESTORATION TARGETS

14,913 - 22,462 ACRES OF RIPARIAN RESTORATION
Riparian trees, primarily oaks, are established on grassland or cultivated lands

155,554 - 236,801 ACRES OF LAND PROTECTION
Reduced conversion of natural and working lands to urbanized land

496 – 1,452 ACRES OF OAK WOODLAND RESTORATION
Riparian trees, primarily oaks, are established on grassland or cultivated lands

Developing targets for practices on rangelands and cultivated lands funded by CDFA's Healthy Soils Program

Soil management practices

Cropland to herbaceous cover practices

Compost application practices

Establishment of woody cover practices

Soil Management Practices

Cropland Management Practices
Mulching (484)
Residue and Tillage Management – No-Till (329)
Residue and Tillage Management – Reduced Till (345)
Cover crops (340)

Compost Application Practices

Compost Application to Annual Crops (CDFA)
Compost Application to Perennials, Orchards and Vineyards (CDFA)
Compost Application to Grassland (CDFA)

Cropland to Herbaceous Cover Practices:

Herbaceous Wind Barriers (603)
Vegetative Barriers (601)
Riparian Herbaceous Cover (390)
Contour Buffer Strips (332)
Field Border (386)
Filter Strip (393)

Establishment of Woody Cover Practices:

Windbreak/ shelterbelt establishment (380)
Riparian Forest Buffer (391)
Hedgerow Planting (422)
Silvopasture (381)

Note: Final grant awards subject to change pending CDFA budget evaluations.

★ Incentives Program

51 projects

22 counties

8,992 tons CO2e/yr GHG Reduction

- Total grant amount requested: $1.4 million
- 69 applications

★ Demonstration Projects

22 projects

20 counties

1,642 tons CO2e/yr

- Total grant amount requested: $3.2 million
- 27 applications

Note: Final grant awards subject to change pending CDFA budget evaluations.

★ Incentives Program

33 projects **16** counties

7,470 metric tons CO2e/yr
GHG Reduction

- Total grant amount requested: $918,496
- 43 applications

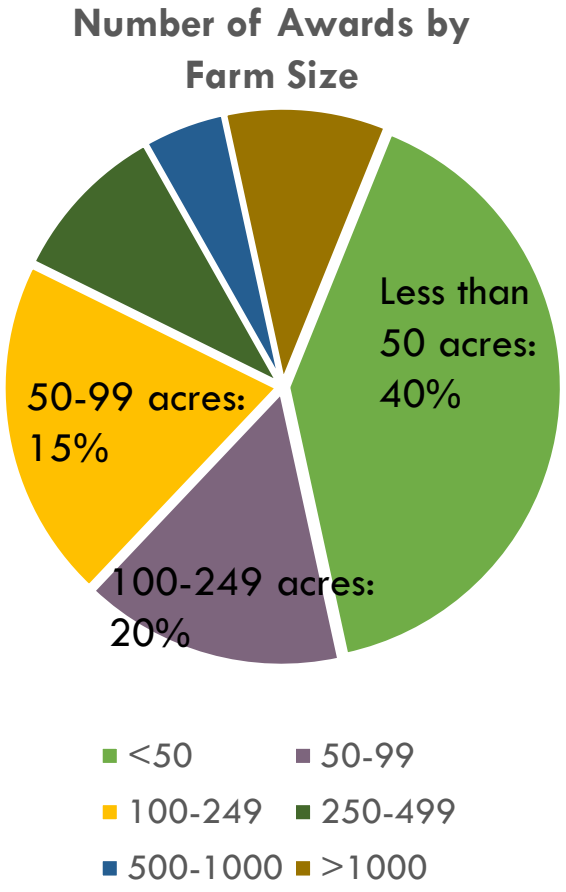
★ Demonstration Projects

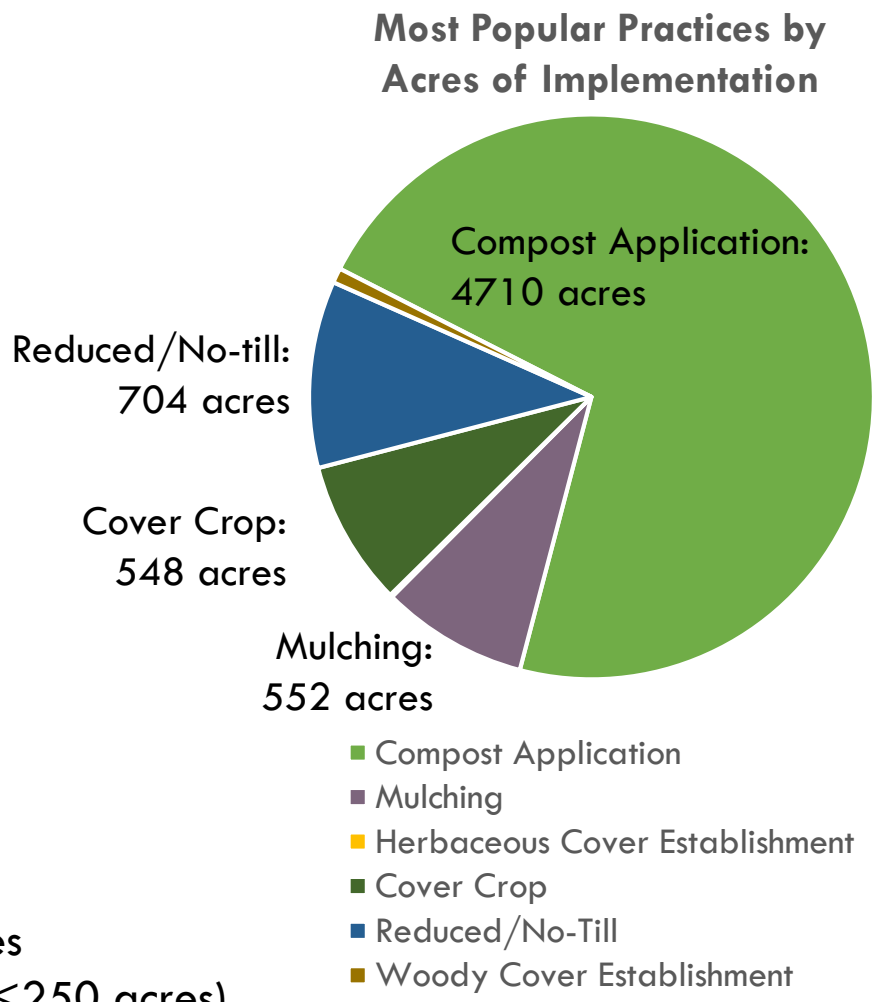
6 projects **7** counties

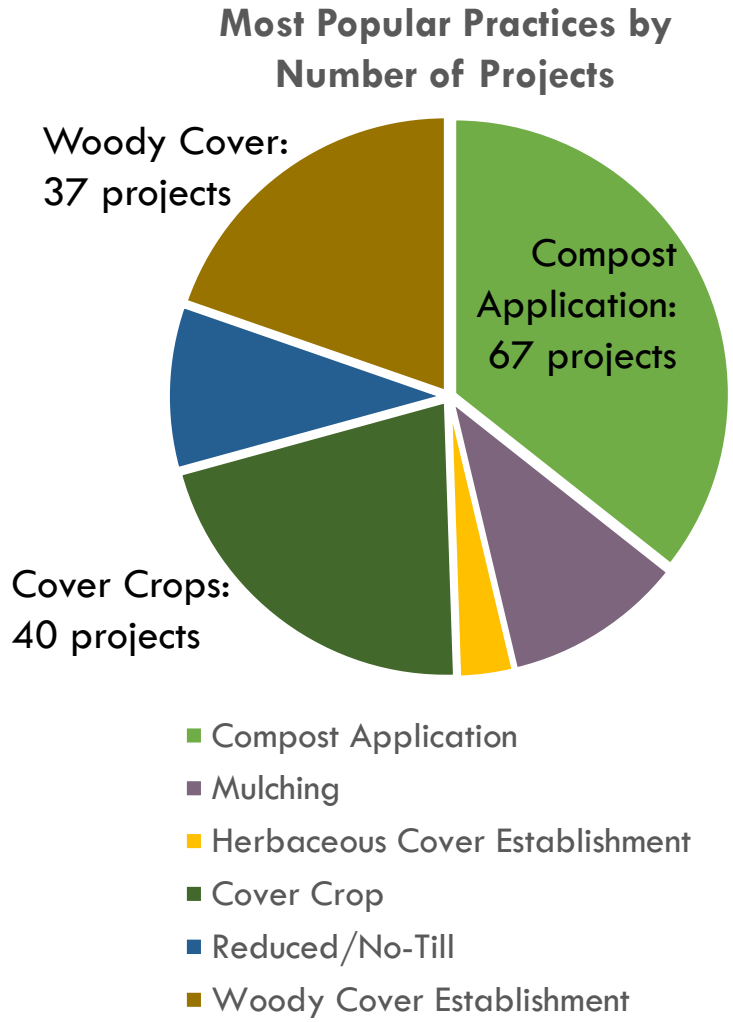
899 tons CO2eq /year
GHG Reduction

- Total grant amount requested: $549,429
- 11 applications

2017 HSP INCENTIVES PROJECTS INCLUDING SECOND SOLICITATION







Average CA farm size: 329 acres
79% projects on smaller farms (<250 acres)

Applications Received: 66 + 43 = 109
Selected for Awards: 51 +33 = 84


QUESTIONS &
DISCUSSION

GENERAL QUESTIONS

1. Are **regional projects** reflected in the baseline and more ambitious draft acreage targets for conservation, restoration, and management?

2. How should the **ambitious** scenario be scoped for activities in your region? Are there existing regional planning and goal-setting documents that should be included within the ambitious scenario?

3. What are your regional implementation **priorities**? What is needed to support successful regional implementation?

HEALTHY SOILS PROGRAM QUESTIONS

1. How extensively are the Healthy Soils Program practices used in this agricultural region?

2. What are the challenges and opportunities of using these practices in this agricultural region?

Feedback on Acreage Targets

BY JULY 10

please submit written comments on

acreage targets to:

emma.johnston@resources.ca.gov

THANK YOU

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