CENTRAL COAST 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 Central Coast Region
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

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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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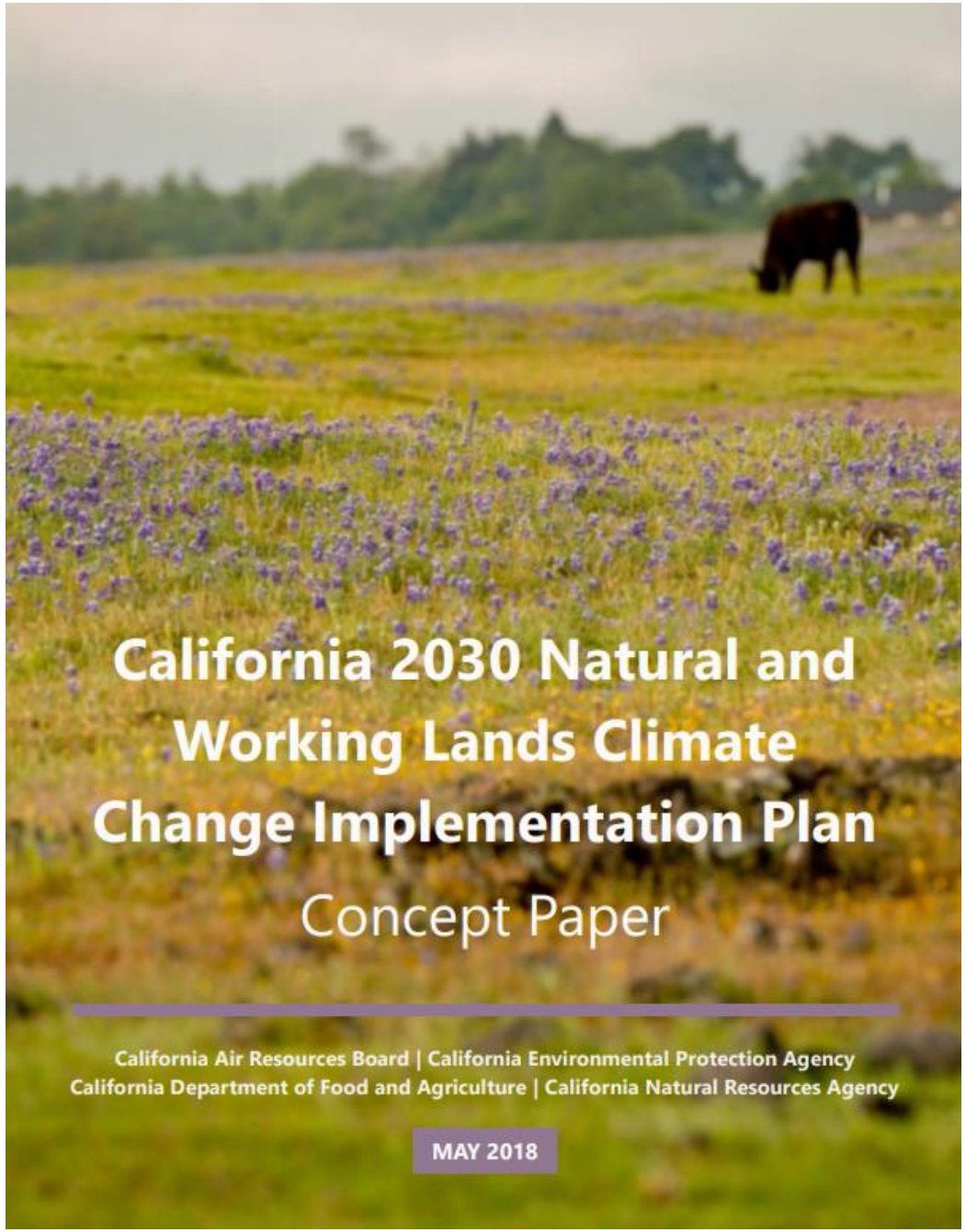
Increased ability for land to sequester carbon and provide other benefits

- ***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 scalable
- 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 these activities through programs that often do not have carbon sequestration as their primary goal
- 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

- biodiversity & habitat
- water supply & quality
- climate adaptation
- tourism & recreation
- public health
- economic development
- cultural & spiritual values
- temperature cooling

Land protection, restoration, and management activities in the plan

Land protection	Avoided conversion of land for development
Agricultural practices	Soil management practices, cropland to herbaceous cover practices, compost application practices, establishment of woody cover practices
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

Two 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

ACREAGE TARGETS

Draft state agency acreage targets for conservation, restoration, and management + regional input

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SCENARIOS

Projected acres of conservation, restoration, and management activities through 2030

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MODELS

CALAND Model

COMET-Planner/ Compost-Planner

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EXPECTED BENEFITS

Projected carbon benefits of these activities on a regional and statewide scale

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

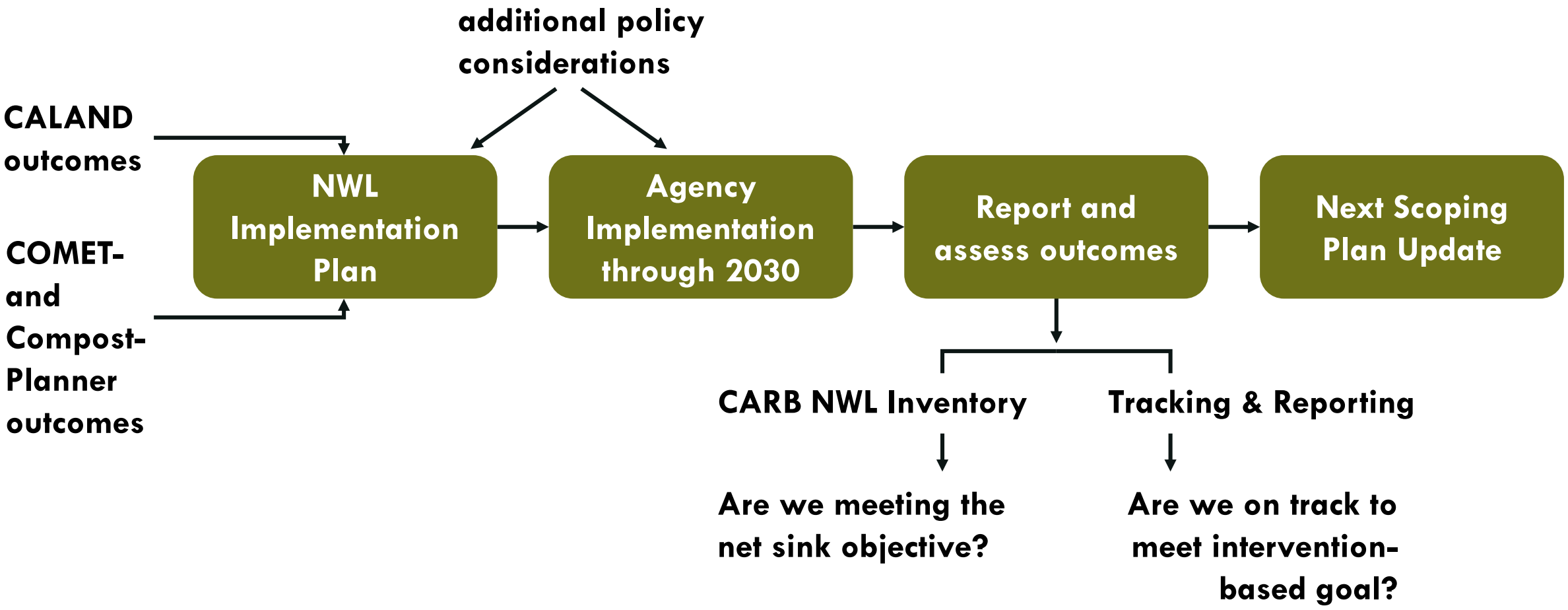
- Annual reporting on expected benefits based acres protected and brought under management using:
  - CALAND and other methods
  - COMET-Planner and existing quantification methodologies developed as part of California Climate Investments
- Develop a system for tracking and reporting actual outcomes

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

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Summer 2018

Develop draft 2030 natural and working lands goal and Plan

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September 2018

Announce natural and working lands intervention-based carbon goal

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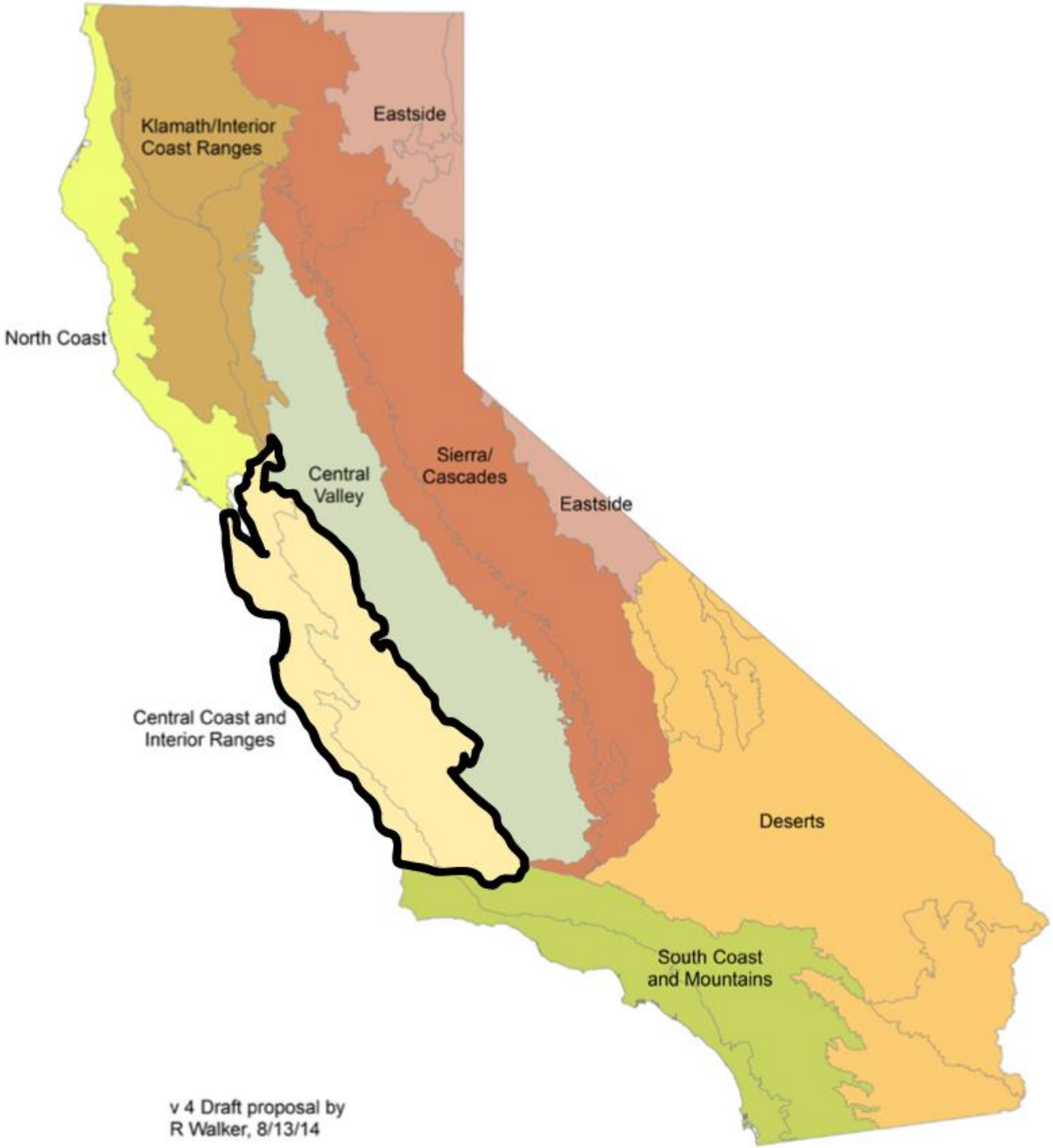
November 2018

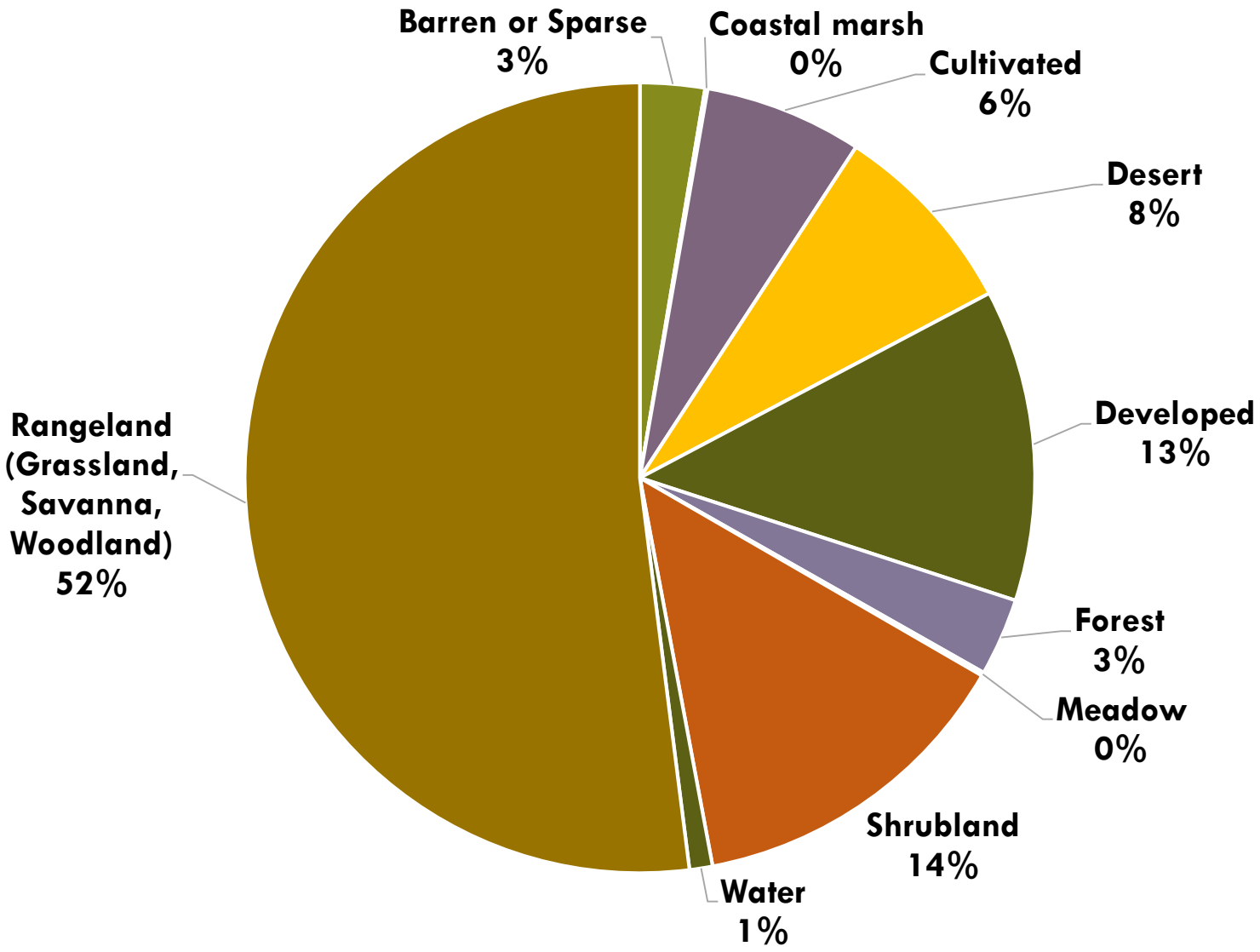
Release final Implementation Plan

DRAFT GOALS FOR NATURAL AND WORKING LANDS IN CENTRAL COAST

Central Coast Ecoregion



Central Coast Land Types



Setting acreage targets

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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 State Coastal Conservancy, Department of Fish and Wildlife, State Parks, and other departments and existing plans and goals
- **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

Departments reporting draft conservation, restoration, and management targets in the Central Coast*

State Coastal Conservancy
Department of Conservation
Department of Fish and Wildlife
Department of Water Resources
State Parks
Department of Forestry and Fire Protection
Wildlife Conservation Board

***THE CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE'S CONTRIBUTIONS TO THESE ACREAGE TARGETS ARE NOT YET LISTED IN THE FOLLOWING SLIDES, AS THEY ARE STILL BEING DEVELOPED**

Compiled draft acreage targets for the Central Coast

Practice	BAU	Ambitious	Reporting Agencies
Land Protection	118,739	142,001	Wildlife Conservation Board, Department of Water Resources, Coastal Conservancy, State Parks, Department of Conservation
Reforestation	-	-	-
Partial Cut/ Fuel reduction	31,344	37,652	CAL FIRE, State Parks
Forest Understory Treatment	3,840	4,080	Department of Parks and Recreation
Forest Prescribed Burn	14,328	20,024	CAL FIRE, State Parks
Less Intensive Forest Management	-	-	-
Forest Biomass Utilization	-	-	-
Oak Woodland Restoration	2,323	7,089	State Coastal Conservancy, State Parks
Meadow Restoration	-	-	-
Coastal Wetland Restoration	19,294	27,271	Coastal Conservancy, Wildlife Conservation Board; Department of Fish and Wildlife, Department of Water Resources, State Parks
Riparian Restoration	3,073	4,467	Department of Conservation, State Parks, Department of Water Resources, Wildlife Conservation Board
Soil Conservation Practices	1,715	2,741	State Parks
Rangeland Rotational Grazing	101,400	111,000	State Parks
Rangeland Composting	-	-	-
Seagrass Restoration	-	-	Coastal Conservancy, Ocean Protection Council
Urban Forest Expansion	-	+10% expansion in canopy	CAL FIRE, Natural Resources Agency

Ecological Restoration and land protection draft acreage targets for the Central Coast

Description	Practice	BAU	Ambitious	Reporting Agencies
Reestablishment of oak woodlands on grasslands and cultivated lands	**Oak Woodland Restoration**	2,323	7,089	State Coastal Conservancy, State Parks
Creation of saline tidal wetlands in coastal regions	**Coastal marsh Restoration**	19,294	27,271	State Coastal Conservancy, Wildlife Conservation Board; Department of Fish and Wildlife, Department of Water Resources, State Parks
Riparian trees, primarily oaks, are established on grassland or cultivated lands	**Riparian Restoration**	3,073	4,467	Department of Conservation, State Parks, Department of Water Resources, Wildlife Conservation Board
Creation of sub-tidal seagrass beds where none previously existed	**Seagrass Restoration**	-	-	State Coastal Conservancy, Ocean Protection Council
Reduced conversion of natural and working lands to urbanized land	**Land Protection**	118,739	142,001	Wildlife Conservation Board, Department of Water Resources, State Coastal Conservancy, State Parks, Department of Conservation

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)

2017 HSP AWARDED PROJECTS

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

2017 HSP SECOND SOLICITATION AWARDED PROJECTS

★ 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

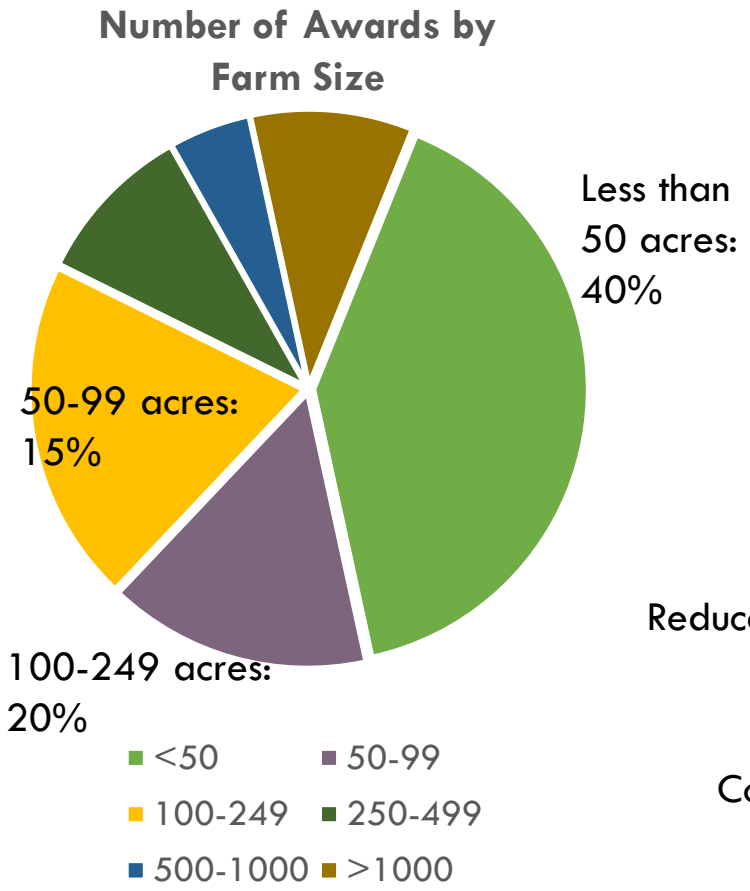
7 counties

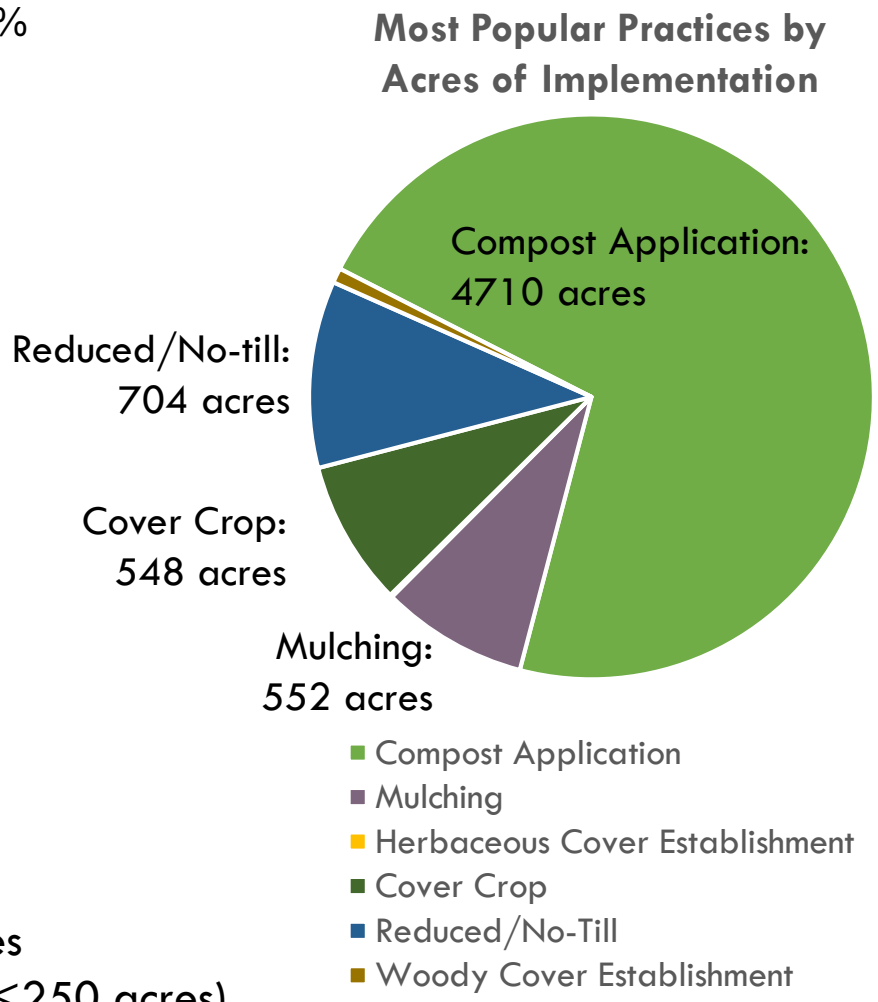
899 tons CO2eq /year
GHG Reduction

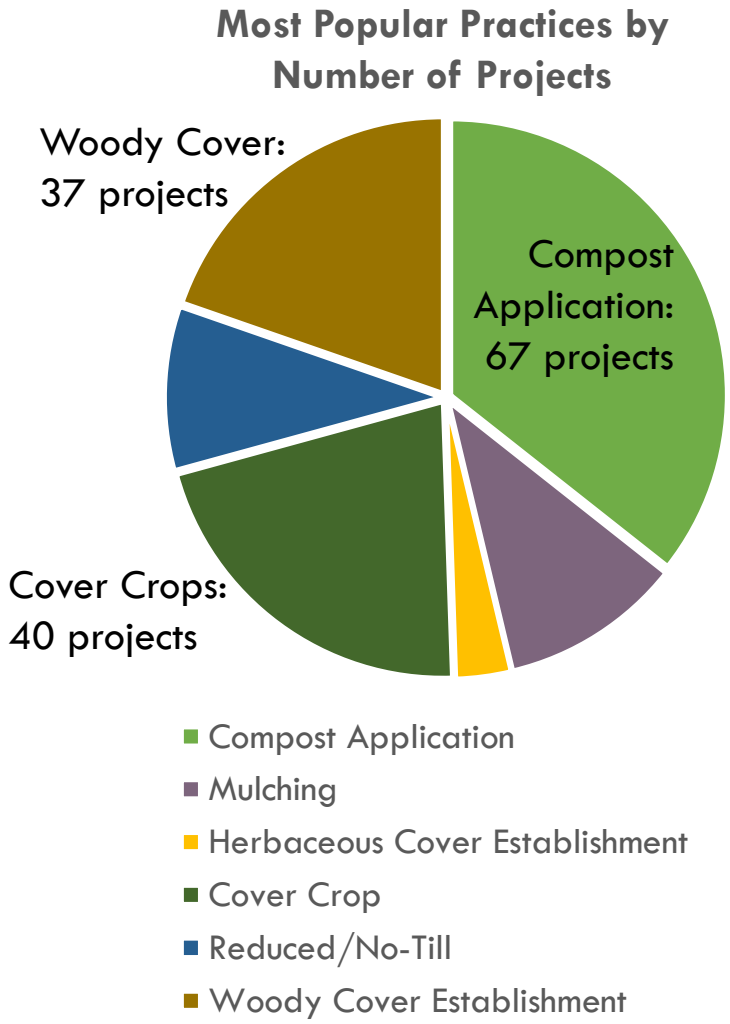
- Total grant amount requested: $549,429
- 11 applications

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

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 13

please submit written comments on

acreage targets to:

emma.johnston@resources.ca.gov

THANK YOU

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