NORTH 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 North Coast region
3. Discussion of regional 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

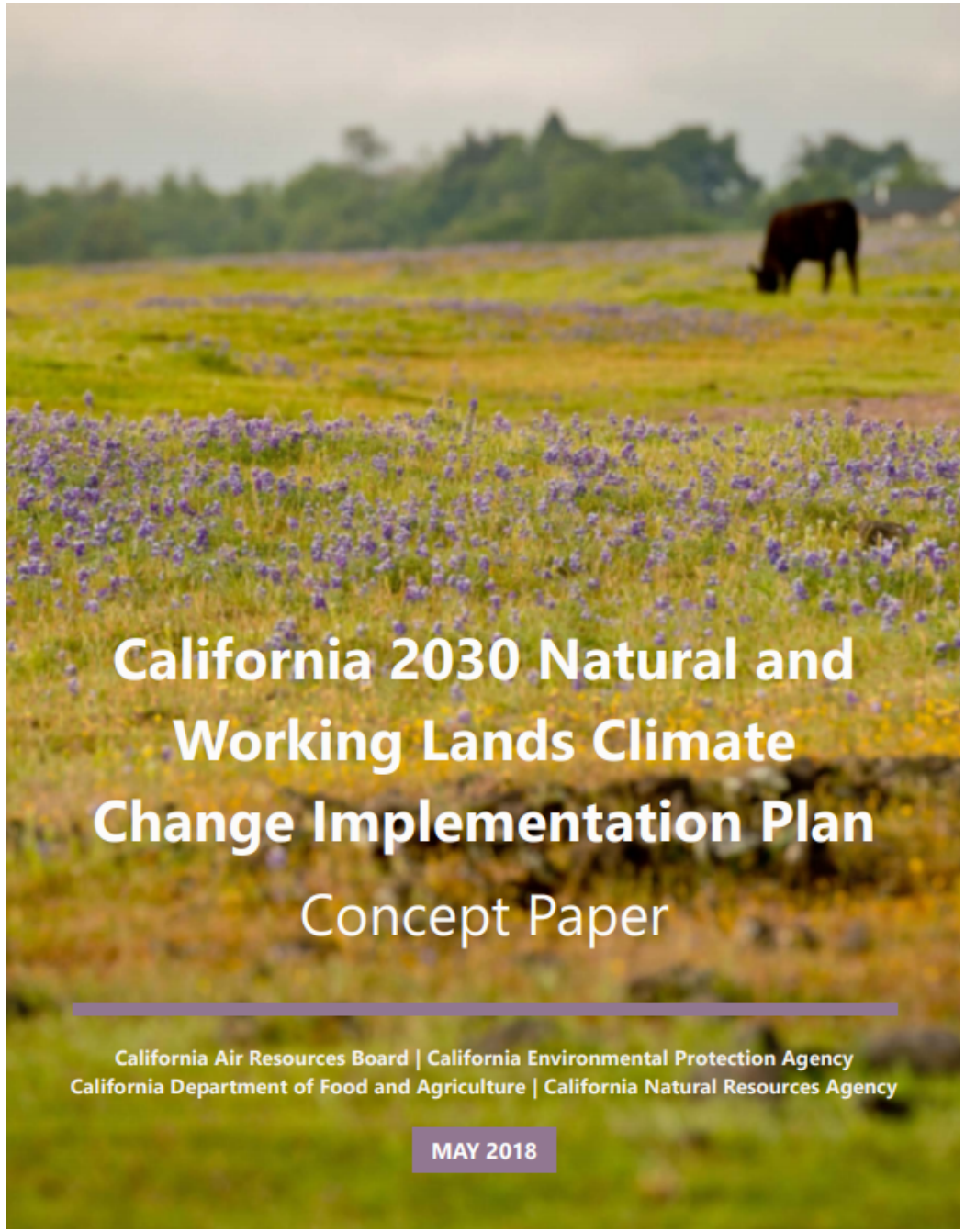
→

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 saleable
- 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

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

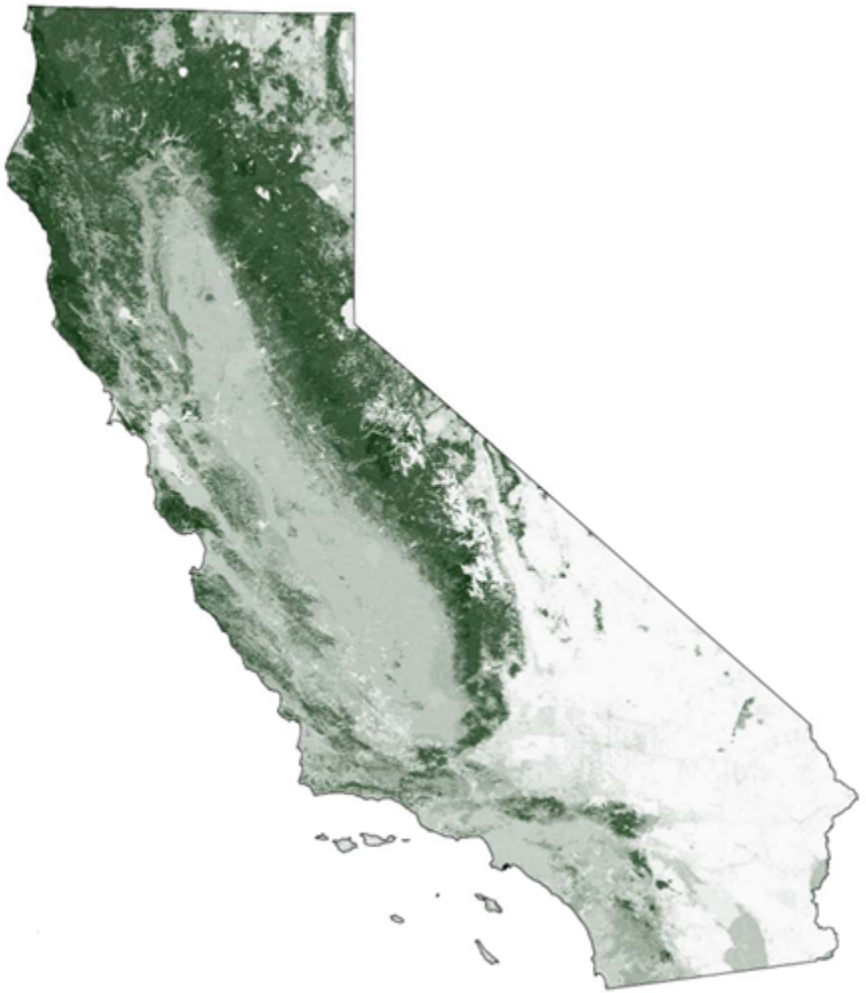
Two tools for projecting the carbon impacts of conservation, restoration, and management activities:

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

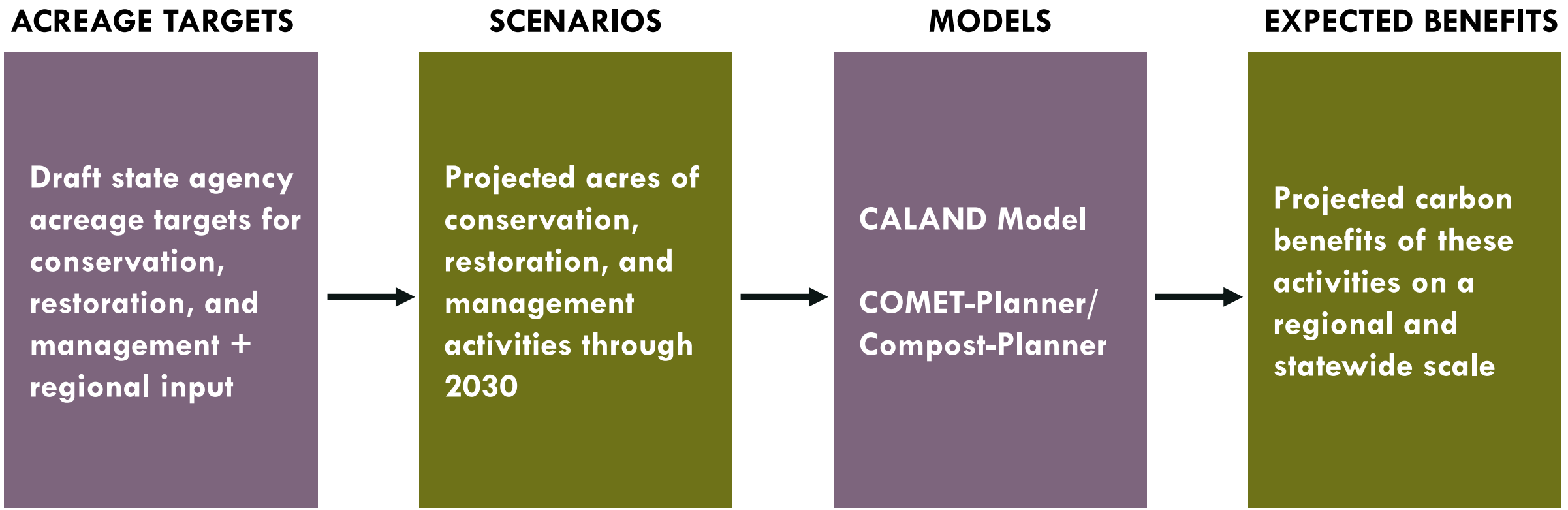
BUSINESS-AS-USUAL SCENARIO

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



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

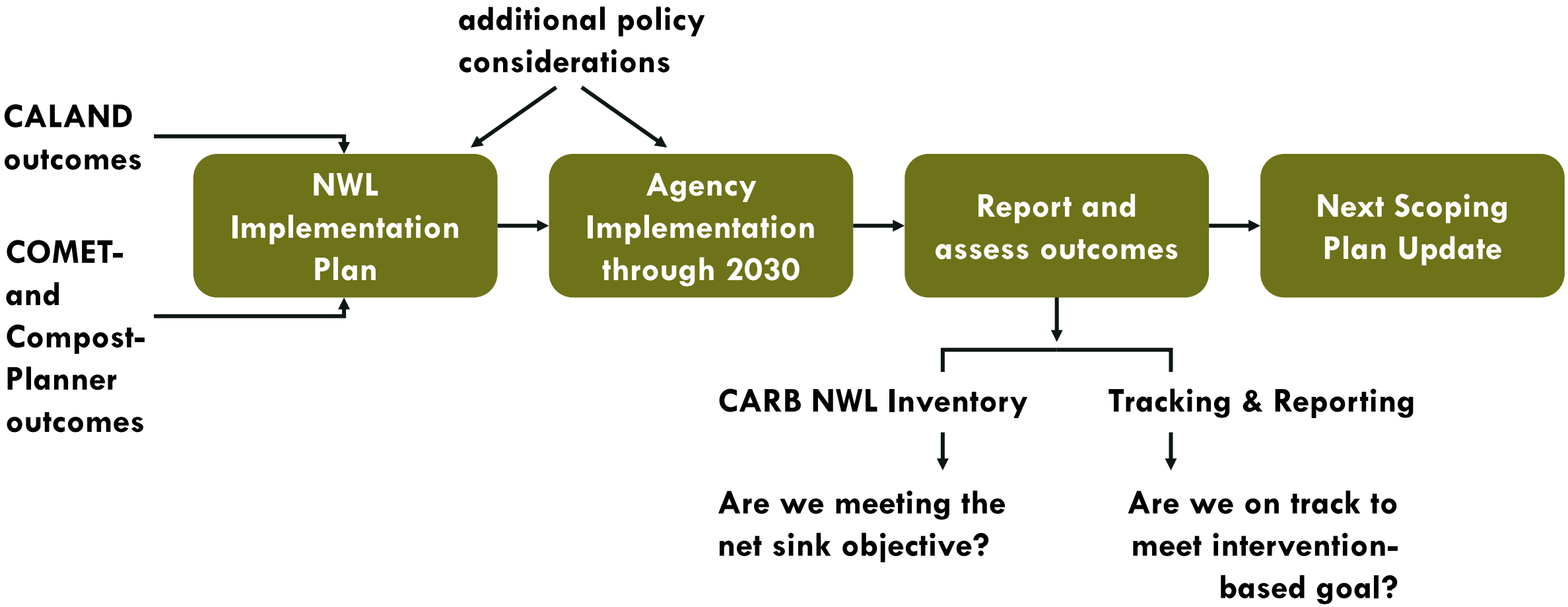
- Annual reporting on expected benefits based acres protected and brought under management using:
  - CALAND and other methods
  - COMET-Planner and existing quantification methodologies developed as part of California Climate Investments
- Develop a system for tracking and reporting actual outcomes

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

Summer 2018

Develop draft 2030 natural and working lands goal and Plan

September 2018

Announce natural and working lands intervention-based carbon goal

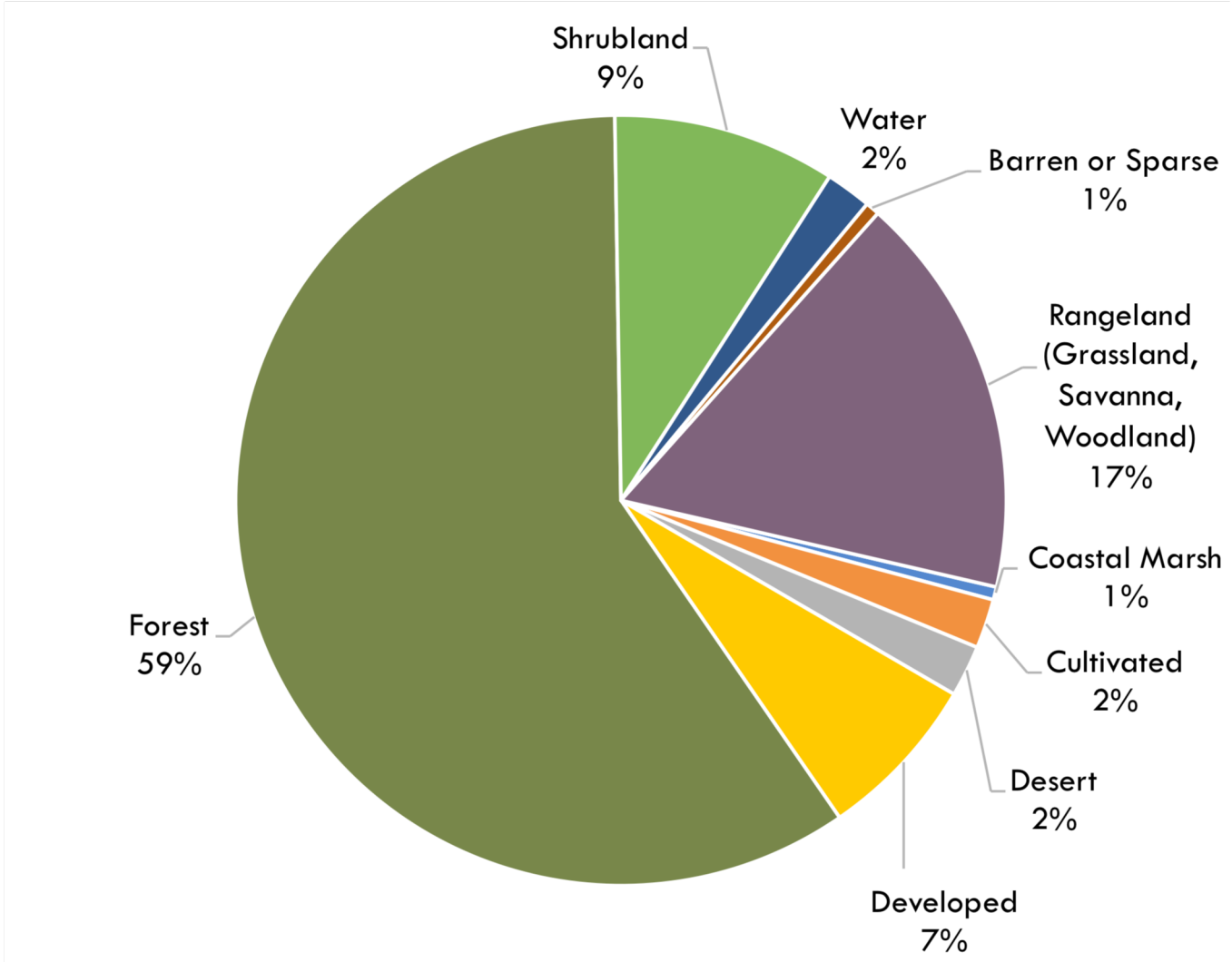
November 2018

Release final Implementation Plan

DRAFT GOALS FOR NATURAL AND WORKING LANDS FOR THE NORTH COAST REGION

North Coast Ecoregion

Land Cover in the North Coast Region



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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
- **Ambitious alternative:** How many acres could be restored or managed over 12 years with an ambitious but achievable increase in funding?
    - Includes projections based on scaling up implementation from plans and goals

State agencies contributing to conservation, restoration, and management targets in the SF Bay Area

State Coastal Conservancy

Department of Conservation (DOC)

Department of Fish and Wildlife (CDFW)

Department of Water Resources (DWR)

Department of Parks and Recreation (DPR)

Department of Forestry and Fire Protection

Wildlife Conservation Board (WCB)

Compiled acreage targets for the North Coast

Practice	BAU	Ambitious	Implementing Agencies
Land Protection	445,632	586,337	State Coastal Conservancy, State Parks, Wildlife Conservation Board, Department of Forestry and Fire Protection
Reforestation	120	120	State Parks
Partial cut/ Fuel reduction	21,607	35,194	Department of Forestry and Fire Protection, State Parks, Department of Water Resources
Forest Understory Treatment	-	-	-
Forest Prescribed Burn	44,772	63,052	Department of Forestry and Fire Protection, State Parks
Less Intensive Forest Management	136,551	221,895	State Coastal Conservancy
Add. Forest Biomass Utilization	-	-	-
Oak Woodland Restoration	4,512	10,686	State Coastal Conservancy, State Parks
Meadow Restoration	1,980	3,060	State Parks
Coastal Wetland Restoration	23,131	38,985	Coastal Conservancy, State Parks, Department of Water Resources
Riparian Restoration	22,485	33,815	Department of Conservation, Department of Water Resources, State Parks, Wildlife Conservation Board
Soil Conservation Practices	977	2,201	State Parks
Rangeland Rotational Grazing	2,700	4,050	State Parks
Rangeland Composting	1,200	2,000	State Coastal Conservancy
Seagrass Restoration	-	-	State Coastal Conservancy, Ocean Protection Council
Urban Forest Expansion	-	10% increase*	Department of Forestry and Fire Protection, Natural Resources Agency

The current goal for urban forests is a 10% increase in canopy above current levels, in alignment with the California Forest Carbon Plan.

Forest management targets for the North Coast

Description	Practice	BAU	Ambitious	Implementing Agencies
Reforestation of non-regenerated forest area post-wildfire	Reforestation	120	120	State Parks
Removal of a portion (20%) of the live canopy and standing dead trees for forest health objectives; represents a group of specific practices that require high levels of basal area to remain in the forest, such as uneven-aged management and thinning for fuel reduction*	Partial Cut/ Fuel reduction	21,607	35,194	Department of Forestry and Fire Protection, State Parks, Department of Water Resources
Clearing and removal of forest understory to support forest health objectives	Forest Understory Treatment	-	-	-
Prescribed burning for forest fire fuel reduction and ecological restoration; can be modeled as in sequence with mechanical thinning	Forest Prescribed Burn	44,772	63,052	Department of Forestry and Fire Protection, State Parks
Change from even-aged management to uneven-aged management (partial cut) or areas of no harvest (reserve areas) or extension in harvest rotation period	Less Intensive Forest Management	136,551	221,895	State Coastal Conservancy
Increase in the percentage of slash material diverted to bioenergy and wood products, away from pile burning and decay	Additional Biomass Utilization	-	-	-

Ecological restoration and land protection targets for the North Coast

Description	Practice	BAU	Ambitious	Implementing Agencies
Reestablishment of oak woodlands on grasslands and cultivated lands	Oak Woodland Restoration	4,512	10,686	State Coastal Conservancy, State Parks
Restoration of meadows in mountain regions	Meadow Restoration	1,980	3,060	State Parks
Creation of saline tidal wetlands in coastal regions	Coastal Wetland Restoration	23,131	38,985	Coastal Conservancy, State Parks, Department of Water Resources
Riparian trees, primarily oaks, are established on grassland or cultivated lands	Riparian Restoration	22,485	33,815	Department of Conservation, Department of Water Resources, State Parks, 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	445,632	586,337	State Coastal Conservancy, State Parks, Wildlife Conservation Board, Department of Forestry and Fire Protection

Developing targets for conservation and restoration: what regional plans, goals, and strategies should be included?

Land protection

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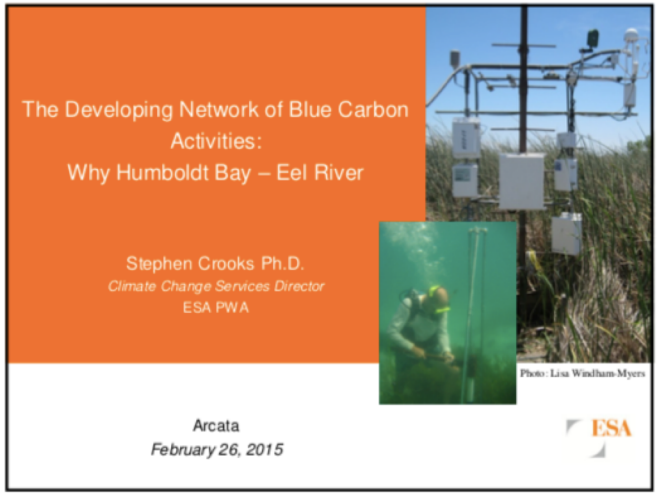
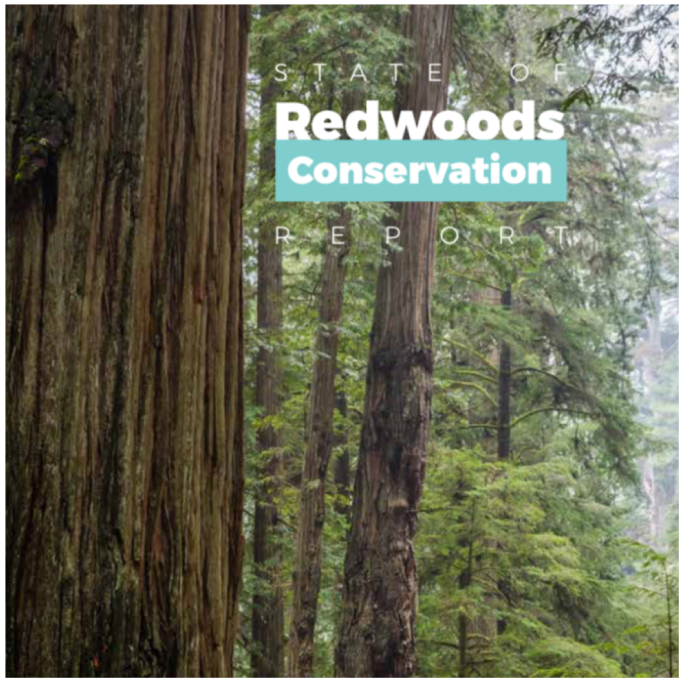
VITAL
LANDS
INITIATIVE

Wetland restoration



Coastal Ecosystems Institute
of Northern California

Forest management



Developing targets for rangelands and cultivated lands

Soil conservation practices
Includes cover cropping, reduced tillage, no-till, mulching, and compost

Rangeland compost application
Compost is applied to traditionally managed rangeland (grassland, savanna, and woodland land types in CALAND) and repeated either every 10 years or every 30 years. The base land type is traditionally managed rangeland.

Prescribed grazing practices
Managing the harvest of vegetation with grazing and/or browsing animals with the intent to achieve specific ecological, economic, and management objectives.

88,000

total acres of ***cultivated land*** *in the North Coast*

723,000

total acres ***rangeland*** *in the North Coast*


QUESTIONS &
DISCUSSION

Discussion 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?

CONSERVATION, RESTORATION, & MANAGEMENT ACTIVITIES

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Feedback on Acreage Targets

BY JULY 9

Please submit written comments on acreage targets to:

emma.johnston@resources.ca.gov

Thank you

Angie Lottes, California Department of Forestry and Fire Protection
angela.lottes@fire.ca.gov

Claire Jahns, California Natural Resources Agency
claire.jahns@resources.ca.gov

Shelby Livingston, California Air Resources Board
shelby.livingston@arb.ca.gov

Jenny Lester Moffitt, California Department of Food and Agriculture
jenny.lestermoffitt@cdfa.ca.gov

Emma Johnston, Natural Resources Agency *(contact for meeting materials; workshop information; feedback on targets)*
emma.Johnston@resources.ca.gov