SOUTH
COAST
REGIONAL
MEETING

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











Agenda

- 1. Overview of state direction for natural and working lands
- 2. Overview of draft goals for conservation, restoration, and management in the South Coast region
- 3. Discussion on regional draft goals and outlook for future implementation

California's natural and working lands

















Overarching goal

CALIFORNIA'S CLIMATE POLICY PORTFOLIO



Double building efficiency



Cleaner freight and goods movement



50% renewable power



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



More clean, renewable fuels



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



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



Invest in communities to reduce emissions



Walkable/Bikeable communities with transit



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
 CO₂e 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

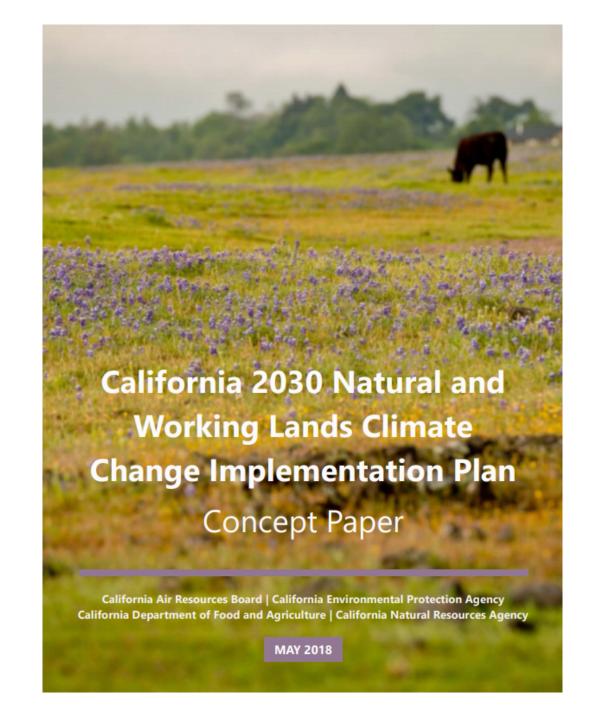


Increased ability for land to sequester carbon and provide other benefits

- 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

- Help integrate natural and working lands with broader State climate strategy and future Scoping Plan
- Include a final statewide 2030 intervention-based sequestration goal for natural and working lands
- 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 landscapescale 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 landbased management practices



Setting acreage targets

Three scenarios based on:

no state activities



BASELINE SCENARIO

Regulatory minimum only

two alternatives



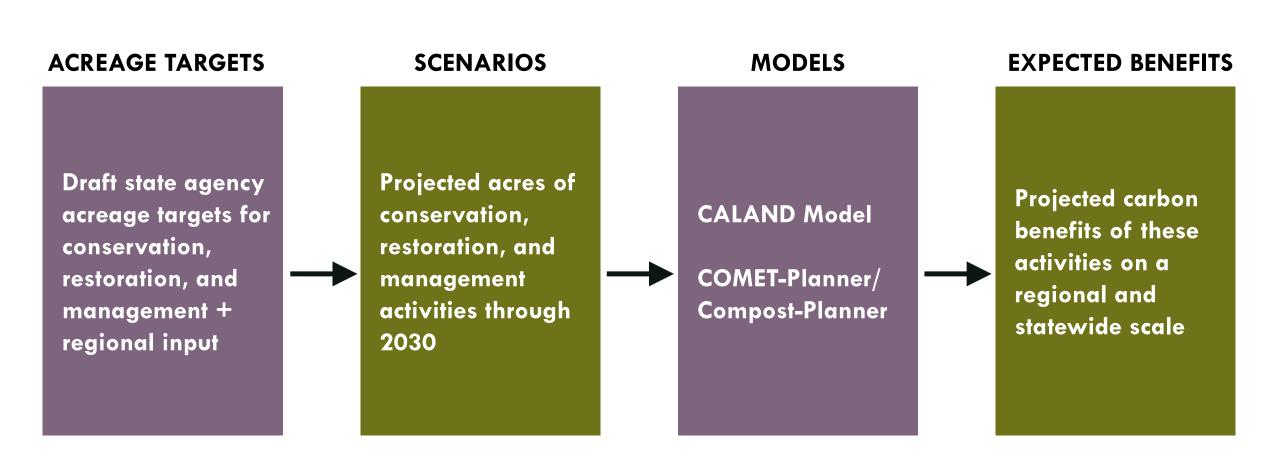
BUSINESS-AS-USUAL SCENARIO

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

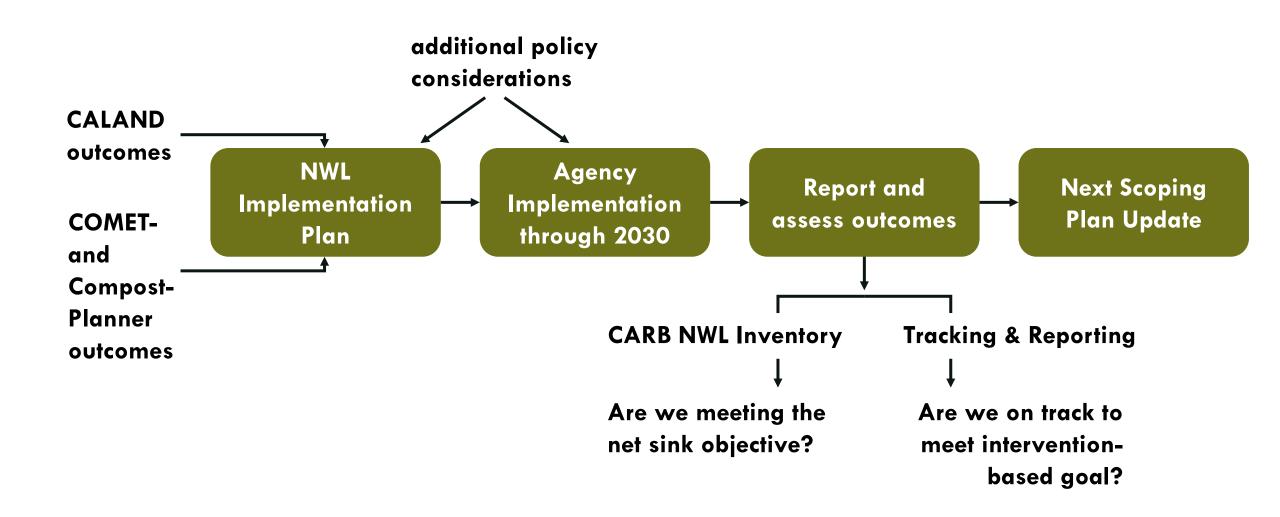
- Annual reporting on expected benefits based acres protected and brought under management using:
 - CALAND and other methods
 - COMET-Planner and existing quantification methodologies developed as part of California Climate Investments
- Develop a system for tracking and reporting actual outcomes

Assessing progress towards long-term objective

Natural and Working Lands GHG Inventory

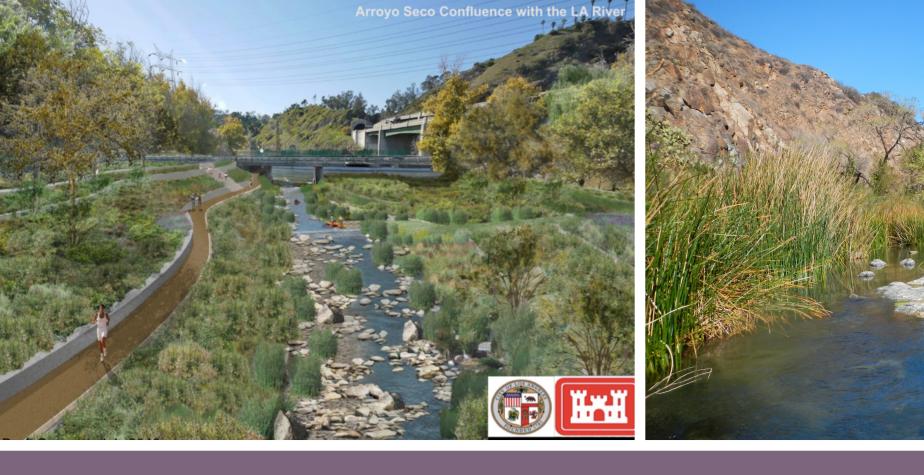
- Retrospective snapshot of carbon stocks, stock-change and resulting GHG flux
- Used to assess progress on sector objective of net sequestration or negative emissions
- Will capture the effects of implemented interventions, along with other gains or losses that occur over the same timeframe
- Will help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

Framework: putting it all together



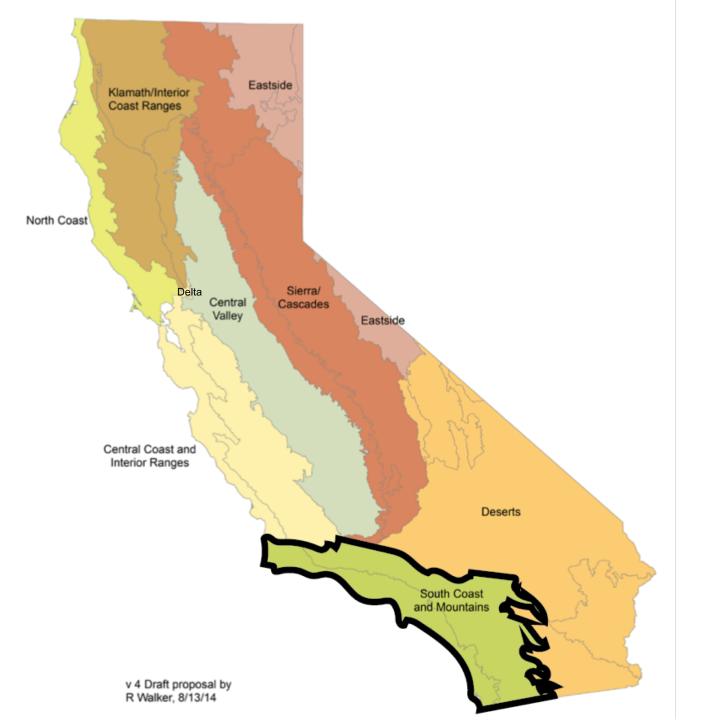
Moving Forward

November September Summer 2018 June 2018 2018 2018 Release final Regional meetings Develop draft Announce natural and working **Implementation** 2030 natural and working lands lands Plan goal and Plan interventionbased carbon goal

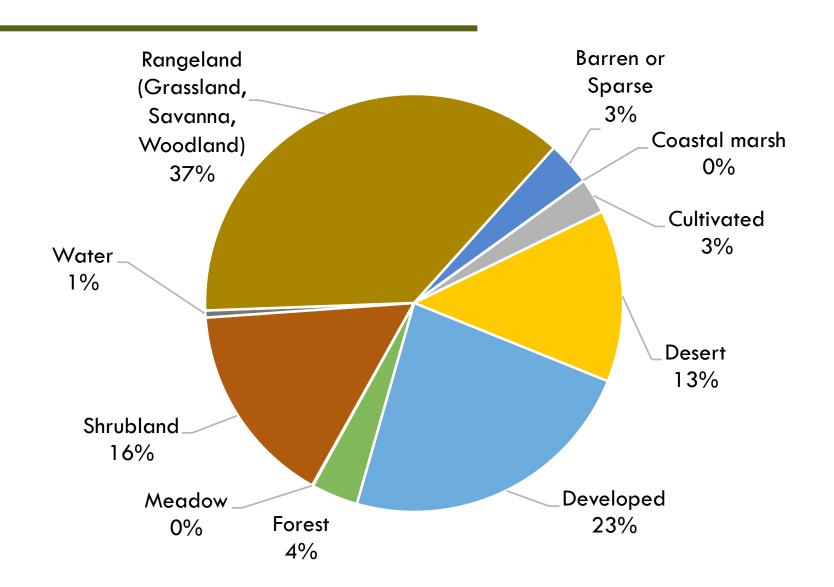


DRAFT GOALS FOR NATURAL AND WORKING LANDS IN THE SOUTH COAST

South Coast and Mountains Ecoregion



Land Cover in the South Coast



Departments working to conserve, restore, and manage lands in the South Coast

State Coastal Conservancy				
Santa Monica Mountains Conservancy				
San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy				
San Diego River Conservancy				
Baldwin Hills 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 (CAL FIRE)				
Wildlife Conservation Board (WCB)				
California Department of Food and Agriculture				

Setting acreage targets

Three scenarios based on:

no state activities



BASELINE SCENARIO

Regulatory minimum only

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Maintaining
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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 state conservancies, departments, and other 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?
 - Aims to reflect goals from existing regional plans and ecological restoration needs assessments

Compiled acreage targets for the South Coast

Practice	BAU	Ambitious	Implementing Agencies
			Rivers and Mountains Conservancy, San Diego River Conservancy, Santa Monica Mountains
			Conservancy, State Coastal Conservancy, Department of Water Resources, Department of
Land Protection	75,645	131,778	Conservation, State Parks, Wildlife Conservation Board
Reforestation	-	60	State Parks, San Diego River Conservancy
			Department of Forestry and Fire Protection, State Parks, Santa Monica Mountains Conservancy,
Partial cut/ fuel reduction	32,637	61,822	San Diego River Conservancy, Department of Water Resources
Forest Understory Treatment	300	12,500	San Diego River Conservancy, Santa Monica Mountains Conservancy
Forest Prescribed Burn	27,975	50,480	Santa Monica Mountains Conservancy, Department of Forestry and Fire Protection, State Parks
Improved Forest Management	300	12,500	Santa Monica Mountains Conservancy
Add. Forest Biomass Utilization	-	-	Santa Monica Mountains Conservancy
			Rivers and Mountains Conservancy, State Coastal Conservancy, Santa Monica Mountains
Oak Woodland Restoration	2,229	5,438	Conservancy, San Diego River Conservancy, State Parks
Meadow Restoration	1,498	1,808	State Parks, San Diego River Conservancy
6	2.700	11 /0/	Rivers and Mountains Conservancy, State Coastal Conservancy, Department of Water
Coastal Marsh Restoration	3,729	11,426	Resources, State Parks
Riparian Restoration	4,395	9,816	San Diego River Conservancy, Santa Monica Mountains Conservancy, Department of Conservation, State Parks, Department of Water Resources, Wildlife Conservation Board
Soil Conservation Practices	5,496	5,736	San Diego River Conservancy, State Parks
Rangeland Composting	300	500	State Coastal Conservancy
Rangeland Rotational Grazing	-	-	<u>-</u>
Seagrass Restoration	_	_	State Coastal Conservancy, Ocean Protection Council
Urban Forest Expansion	1,320	2,168	San Diego River Conservancy, Santa Monica Mountains Conservancy, Rivers and Mountains Conservancy, Department of Forestry and Fire Protection, Natural Resources Agency

Ecological Restoration and land protection targets for the South Coast

Description	Practice	BAU	Ambitious	Implementing Agencies
Reestablishment of oak woodlands on grasslands and cultivated lands	Oak Woodland Restoration	2,229	5,438	Rivers and Mountains Conservancy, State Coastal Conservancy, Santa Monica Mountains Conservancy, San Diego River Conservancy, State Parks
Creation of saline tidal wetlands in coastal regions	Coastal Marsh Restoration	3,729	11,426	Rivers and Mountains Conservancy, State Coastal Conservancy, Department of Water Resources, State Parks
Riparian trees, primarily oaks, are established on grassland or cultivated lands	Riparian Restoration	4,395	9,816	San Diego River Conservancy, Santa Monica Mountains Conservancy, 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	75,645	131,778	Rivers and Mountains Conservancy, San Diego River Conservancy, Santa Monica Mountains Conservancy, State Coastal Conservancy, Department of Water Resources, Department of Conservation, State Parks, Wildlife Conservation Board

Developing ecological restoration targets: what regional plans, goals, & strategies should be included?

Coastal marsh restoration

SOUTHERN CALIFORNIA WETLANDS RECOVERY PROJECT

REGIONAL STRATEGY



NOVEMBER 2001

Fuel reduction





Fire & Fuels Management

outhern California Adaptation Implementation Plan

Overviev

During a two-day workshop in January 2016, southern California resource managers and regional stakeholders discussed fire and fuels management goals and core activities, highlighted priority climate change vulnerabilities that could affect the ability to achieve goals, and identified adaptation strategies and actions that reduced highlighted vulnerabilities. Adaptation strategies and actions identified included those currently being implemented as well as new actions prioritized for future implementation. Managers and stakeholders then developed implementation action plans for some adaptation strategies identified as future prioritizes.

Fire and Fuels Management Goals and Core Activities¹

- 1. Restore natural fire regimes to the landscape
 - a. Restore ecosystem health
 - b. Prevent stand-replacing fire in montane conifer and oak woodlands
 - c. Reduce fire frequency by increasing patrols, reducing fuels (focusing first on the immediate vicinity of buildings and then expanding out), engaging a fire-safe council, and increasing education/outreach activities
- Prevent major erosion events and sedimentation that can result from stand-replacing fire
 - a. Use fire prevention strategies (see above)
 - Increase land use planning and collaboration with watershed agencies and organizations
- 3. Protect sensitive habitats (e.g., Big-cone Douglas fir, old growth chaparral stands)
 - Identify high-value areas (e.g., sites that haven't burned recently, areas that burned and are now in recovery)
 - b. Strategically reduce fuels in high-value areas
 - Include information about actions and prioritized high-value areas in fire management plans
 - d. Include information about sensitive habitats in the incident commander briefings

Oak woodland restoration

Oak Woodland Conservation Management Planning in Southern CA – Lessons Learned¹

Rosi Dagit²

Abstract

The California Oak Woodlands Conservation Act (AB 242 2001) established requirements for the preservation and protection of oak woodlands and trees, and allocated funding managed by the Wildlife Conservation Board. In order to qualify to use these funds, counties and cities need to adopt an oak conservation management plan. Between 2008 and 2011, a team of concerned arborists, biologists, county foresters, planners, and other stakeholders wrestled with questions such as how to define an oak woodland in southern Califomia, how much oak woodlands are worth, and examined the costs associated with a) losing existing oak woodlands; b) preserving existing oak woodlands; and c) expanding oak woodland habitat to suitable areas in the county. These efforts resulted in adoption of the Los Angeles County Oak Woodland Conservation Management Plan in 2011. However, it took until 2014 to work out the associated implementation plans for regional planning and public work staffs. The pitfalls and successes of developing this plan will be discussed in hopes of sharing the lessons learned with others.

Key words: conservation planning, oak woodlands

Introduction

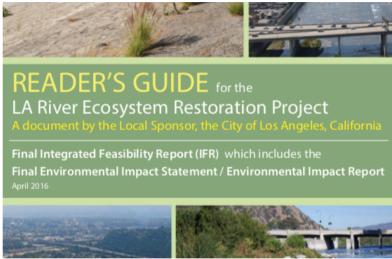
Many counties and cities throughout California have long protected individual oak trees, and Los Angeles County led the way with the enactment of their Oak Tree Ordinance in 1982. However, these local regulations have had limited scope and success in protecting oak resources. Recognizing that loss of oak woodlands was

Developing urban greening targets: what regional plans, goals, & strategies should be included?

Urban forests and urban river restoration









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.

283,000

acres of cultivated land &

3,868,00

acres of rangeland in the South Coast ecoregion



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

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			
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Restoration activities	Restoration and expansion of the extent of mountain meadows, managed wetlands, oak woodlands, riparian areas, and seagrass			

Feedback on Acreage Targets

BY JULY 9

please submit written comments on

acreage targets to:

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Thank you

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