APPENDIX C

NATURAL AND WORKING LANDS

NATURAL AND WORKING LANDS CARBON SEQUESTRATION

Purpose of the Carbon Sequestration Analysis

Resolution No. 20-114, Resolution Declaring a Climate Crisis Requiring an Urgent and Inclusive Mobilization in Yolo County (2020), established Yolo County's (County's) goal to achieve net-negative carbon (greenhouse gas or GHG) emissions by the year 2030. A net-negative GHG emissions goal means that Yolo County must remove more atmospheric carbon dioxide (CO_2) than it emits. This ambitious goal aims to achieve carbon negativity 15 years earlier than the State's adopted carbon neutrality goal as outlined in Assembly Bill 1279, which requires the State to achieve net zero GHG emissions no later than 2045 and to achieve and maintain net-negative GHG emissions thereafter. The California Air Resources Board (CARB) 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan), which outlines the State's plan to achieve the 2045 neutrality target, indicates that there is "no path to carbon neutrality without carbon removal and sequestration," and re-envisions California's natural and working lands (NWL) for their role in incorporating and storing carbon to help reach reduction targets (CARB 2022a).

Yolo County's NWL include woodlands, chaparral, grasslands, and agricultural lands. Generally, natural lands are uncultivated lands that serve as wildlife habitat or recreational areas, while working lands are used to produce food and fiber. Natural lands include parks, open space, and preserves, while working lands include rangeland, cropland, orchards, and vineyards.

Consistent with CARB's findings for the statewide strategy, the County has incorporated the following NWL carbon sequestration analysis into the Climate Action and Adaptation Plan (CAAP) to supplement the emissions reduction strategies from anthropogenic sources. The aim is to utilize Yolo County's NWL to help close the emissions gap and achieve net-negative emissions.

Carbon Sequestration

Carbon sequestration is the capture, removal, and storage of atmospheric CO_2. There are three types of carbon sequestration: biological, geological, and technological. Biological carbon sequestration is the storage of atmospheric carbon in vegetation such as crops, forests, and grasslands, as well as in soils and oceans. NWL serve as a terrestrial carbon pool, whereas vegetation (i.e., trees, crops, grasses) uptake CO_2 during photosynthesis and store the processed carbon as biomass and below ground in soils. Stewardship practices can affect the amount of CO_2 stored, or "sequestered"; some farm, ranch, and natural lands stewardship practices will increase the amount of carbon stored in the soil, while others will lead to decreases in the amount of carbon storage. Increasing carbon sequestration on NWL is connected directly to ecological health, biodiversity, water infiltration and retention, and ecological resilience.

Carbon sequestration analyses provide an estimate of total sequestered carbon for a given location over a given period (e.g., annually), based on default carbon sequestration values, expressed as a rate (i.e., metric tons [MT] CO_2/acre/year). As opposed to carbon storage inventories that estimate total carbon for a given location for a particular point in time, sequestration analyses quantify the amount

of CO_2 that is being removed from the atmosphere with a given action. Given that the County aims to achieve net-negative GHG emissions, quantifying the expected rate of atmospheric CO_2 sequestration resulting from the implementation of NWL practices that are known to increase carbon sequestration is crucial to estimating the potential NWL contribution towards achieving the County's climate goals.

Core Approaches

As described above, Yolo County's NWL can sequester and store carbon into the future, while also providing food, habitat, pollination, and other ecosystem services and contributing to the local economy. These lands are also vulnerable to the impacts of climate change, and if not thoughtfully managed, can also release more atmospheric CO_2 than they store, becoming a source of atmospheric CO_2 and driving future warming and climate change. Ensuring that NWL continue to sequester atmospheric CO_2 requires climate-smart land stewardship strategies that support healthy ecosystem function (CARB 2022a). Actions implemented within NWL to support carbon sequestration involve stewardship, restoration, and conservation efforts, as described in the following.

Land Stewardship and Enhancement

Carbon sequestration can be achieved within NWL through voluntary land stewardship and enhancement, which are defined by the Yolo Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP) as follows (Yolo County 2018):

- **Land Stewardship:** the maintenance of ecological conditions and values within a natural community to prevent its degradation.
- **Land Enhancement:** manipulation of the physical, chemical, or biological characteristics of a land cover type to heighten, intensify, or improve one or more specific existing ecological function(s).

Examples of land stewardship and enhancement strategies that support sequestration include livestock grazing to prevent the spread of invasive species or agricultural practices that support carbon storage in soils.

Restoration

Consistent with the Yolo HCP/NCCP, natural community restoration refers to actions to alter the physical, chemical, or biological characteristics of a site with the intent to return natural or historical functions that have been lost due to the loss of one or more necessary ecological factors or the result of past disturbance (Yolo County 2018). To support carbon sequestration, degraded lands can be appropriately restored and managed to provide ecosystem services including increased carbon storage.

Conservation

Conservation efforts involve land use planning and policy intervention to avoid and minimize the conversion of NWL land cover types that store large amounts of carbon to those with less carbon sequestration and storage potential. In isolation, the conservation of natural lands does not result in additional carbon sequestration, but it can be supplemented with the other core approaches (i.e., stewardship and enhancement, and restoration) to ensure increased or continued carbon storage (e.g., no loss of carbon through emissions due to wildfire) and sequestration. Land conservation can protect existing carbon stocks, and if managed properly, the protected land can continue sequestering carbon. Conversion of

NWL to alternative land uses can lead to increased GHG emissions, such as conversion of irrigated cropland to urban development (Jackson et. al. 2012).

Framework and Context

Several programs and plans at the Federal, State, regional, and local levels support carbon sequestration in NWL as summarized in the following.

Federal

U.S. Department of Agriculture Natural Resources Conservation Service Environmental Quality Incentives Program. The Environmental Quality Incentives Program is the flagship conservation program of the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS); it helps farmers, ranchers, and forest landowners integrate conservation into working lands. NRCS works one-on-one with producers to develop a conservation plan that outlines conservation practices and activities to help solve on-farm resource issues. These voluntary actions can lead to cleaner water and air, healthier soil, and better wildlife habitat while improving agricultural operations. Financial assistance for practices may be available.

U.S. Fish & Wildlife Service Partners for Fish and Wildlife. The Partners for Fish and Wildlife Program provides technical and financial assistance to landowners, managers, tribes, corporations, schools, and nonprofits interested in improving wildlife habitat on their land. Projects are voluntary and customized to meet landowners' needs. Participating landowners continue to own and manage their land while they improve conditions for wildlife.

State

A Climate Platform for California Agriculture. The Climate Platform for California Agriculture two-part report covers the potential of agriculture in California to be climate resilient and carbon neutral. Part 1: State of the State reviews GHG emissions reduction efforts to date. Part 2: Tools for Transformation dives into farm-focused policy recommendations with scientific and economic support.

Ag Vision For the Next Decade (2023). The revitalized Ag Vision for the Next Decade effort is a project of the California State Board of Food and Agriculture, which sets a vision for the desired future of agriculture in California. The process involves prioritizing the needs of historically underserved farmers and small farming operations.

Alternative Manure Management Program (AMMP). The AMMP is a Climate Smart Agriculture Program that provides grants for manure management strategies that reduce potent methane emissions. The program provides support to farmers for modernizing equipment.

Assembly Bill 1757. Assembly Bill 1757 (September 2022) requires the California Natural Resources Agency (CNRA) to determine a range of targets for natural carbon sequestration and to determine nature-based climate solutions that reduce GHG emissions for future years 2030, 2038, and 2045. These targets will help support the State's carbon neutrality goals and climate adaptation and resilience. The bill also requires CARB to develop standard methods for tracking GHG emissions and reductions, carbon sequestration, and other benefits from NWL over time.

California 2030 Natural and Working Lands Climate Change Implementation Plan. This plan proposes an increase in State-led conservation, restoration, and management activities from two to five times above current levels, to achieve a level of effort

commensurate with that invested in other sectors of California's climate change portfolio.

California Air Resources Board's Climate Change Scoping Plan. The importance of carbon storage and sequestration in the NWL sector of California was emphasized in the 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target (CARB 2017). CARB's 2017 Scoping Plan specified "California's climate objective for NWL to maintain them as a carbon sink (i.e., net zero or negative GHG emissions), and where appropriate, minimize the net GHG and black carbon emissions associated with management, biomass utilization, and wildfire events." Two important State strategies for the NWL sector are the protection of land and land uses and the enhancement of carbon sequestration and resilience through management and restoration. CARB's 2022 Scoping Plan Update requires CARB to expand proposed actions from just the reduction of anthropogenic sources of GHG emissions to also include those that capture and store carbon (e.g., through NWL or through mechanical technologies). The 2022 Scoping Plan Update emphasizes that there is no realistic path to carbon neutrality without carbon removal and sequestration and that to achieve the State's carbon neutrality goal, carbon reduction programs must be supplemented by strategies to remove and sequester carbon, highlighting the importance of nature-based solutions through preservation and deliberate management of California's NWL (CARB 2022b).

California Healthy Soils Program. One of the four California Department of Food and Agriculture (CDFA) Climate Smart Agriculture programs, the California Healthy Soils Program invests in on-farm climate solutions by incentivizing farmers and ranchers to transition to beneficial agricultural management practices. The program offers farmers financial incentives to adopt land use practices that reduce GHG emissions and increase carbon sequestration.

California Natural Resources Agency California's Nature-Based Solutions Climate Targets (2024). This document sets acreage targets for land cover types including grasslands and croplands. Practices to increase carbon sequestration include grassland restoration to native vegetation, soil amendments, prescribed grazing, and prescribed fire. Practices identified to increase carbon storage in croplands include compost application, cover cropping, hedgerows, no and reduced till, riparian buffers, and Whole Orchard Recycling.

California Natural Resources Agency Natural and Working Lands Climate Smart Strategy. The CNRA Natural and Working Lands Climate Smart Strategy identifies land management actions that help protect climate-vulnerable communities, achieve carbon neutrality, improve public health and safety, and expand economic opportunity.

Executive Order N-82-20. Executive Order N-82-20 (October 2020) directs State agencies to deploy nature-based strategies to remove carbon from the atmosphere and store it in California's NWL. The order sets a goal to conserve 30% of the State's land and coastal waters by 2030. To implement Executive Order N-82-20, CNRA developed the Natural and Working Lands Climate Smart Strategy, which defines the natural and working landscapes and identifies land management actions that will help achieve carbon neutrality in alignment with Assembly Bill 1279 and the 2022 Scoping Plan for Achieving Carbon Neutrality (CNRA 2022; CARB 2022a).

Pathways to 30x30 California: Accelerating Conservation of California's Nature. California's 30x30 initiative is part of an international movement to conserve natural areas across our planet, through which scores of countries have established their own 30x30 commitments. California's initiative seeks to protect and restore

biodiversity, expand access to nature, and mitigate and build resilience to climate change. This effort drives and aligns with broader State commitments to advance justice, equity, diversity, and inclusion, strengthen tribal partnerships, and sustain our economic prosperity, clean energy resources, and food supply.

Senate Bill 27. Senate Bill 27 (September 2021) directs CNRA, in coordination with relevant State agencies, to establish the Natural and Working Lands Climate Smart Strategy and establish CO_2 removal targets for 2030 within the CARB Scoping Plan. Senate Bill 27 also requires CNRA to establish and maintain a registry of carbon sequestration projects within California that are seeking funding.

Sustainable Agricultural Lands Conservation Program. As part of CDFA's Climate Smart Agriculture programs, the Sustainable Agricultural Lands Conservation Program funds permanent agricultural conservation easements on land vulnerable to urban or suburban expansion

Williamson Act. The Williamson Act, also known as the California Land Conservation Act of 1965, enables local governments to enter into contracts with private landowners to restrict specific parcels of land to agricultural or related open space use. As of April 2024, Yolo County has roughly 425,930 acres of Williamson Act parcels.

Zero Foodprint. Zero Foodprint is on a mission to combat climate change by rallying the food and beverage industry in support of regenerative agriculture. Using small donations from across the food system, Zero Foodprint funds farm projects that sequester atmospheric carbon and store it underground, supporting agriculture and climate mitigation and adaptation.

Local and Regional

Local and regional efforts related to sequestration in Yolo County's NWL include plans, programs, and organizations that support stewardship, restoration, and conservation, as well as specific efforts supporting sequestration through voluntary climate-smart agricultural practices. These efforts are outlined below. For further details, including specific objectives, goals, and actions related to these plans and programs, please refer to Appendix C-1.

Cache Creek Area Plan. The Cache Creek Area Plan Update is a rivershed management plan addressing the conservation of six resources associated with the Cache Creek area: floodway and channel stability, water resources, biological resources, open space and recreation, aggregate resources, and agricultural resources.

Capay Valley Watershed Stewardship Plan. The Capay Valley Watershed Stewardship Plan provides a community-based framework for maintaining and improving watershed health in Capay Valley. This framework was intended to guide the development of tributary stewardship action plans, so that numerous smaller efforts could push forward the larger goals for the entire Capay Valley.

Habitat Conservation Plan/Natural Communities Conservation Plan. The County is a member of the Yolo Habitat Conservancy Joint Powers Authority, which is responsible for developing a combined HCP/NCCP. Habitat conservation plans identify the most biologically significant regions and outline measures to protect the ecological integrity of valuable habitat areas. Conservation plans are required to address special-status species, which are those plants and animals that are considered sufficiently rare by the scientific community and qualify for legal protection under the State and/or Federal Endangered Species Acts. The purpose of the Yolo HCP/NCCP is to identify, protect, and enhance Yolo County's most biologically

significant regions and most valuable habitat areas on working and natural lands, in amounts and locations sufficient to sustain target species.

Lower Putah Creek Watershed Management Plan. The Lower Putah Creek Watershed Management Plan provides a description of the existing and historical resources in the lower Putah Creek watershed, identifies goals and objectives for resource management and restoration, and roadmaps the implementation of those actions that are consistent with landowner interests to restore ecosystem processes and enhance aquatic and terrestrial habitats in the lower Putah Creek watershed.

Willow Slough Watershed Integrated Resources Management Plan. The overall goal of the Willow Slough watershed planning project is to enhance the natural resources of Yolo County through integrated resources management on individual farms and across the watershed. This goal encompasses stormwater, erosion, sedimentation, agriculture, wildlife habitat, and groundwater recharge.

Yolo Bypass Wildlife Area Land Management Plan. The Yolo Bypass Wildlife Area Land Management Plan states objectives for the future of the Yolo Bypass Wildlife Area, including the management of habitats, establishing an inventory of native species, and directing an ecosystem-centric approach to land management.

Yolo County Agricultural Conservation Priority Plan. The Agricultural Conservation Priority Plan details conservation methods that include creating an agricultural mitigation bank, managing privately held conservation easements, locating conservation lands within the same areas as lands conserved for open space and habitat conservation easements, and implementing carbon sequestration and other programs.

Yolo County Community Wildfire Protection Plan. The Community Wildfire Protection Plan aims to assist communities in increasing their adaption to wildfires and minimizing risk. An action plan is included, with the following five focus areas: (1) community education and outreach; (2) defensible space and home hardening; (3) hazardous fuel management; (4) evacuation and access planning; and (5) other mitigation and preparedness. The Community Wildfire Protection Plan contains projects that reduce the likelihood of catastrophic wildfires. Catastrophic fires directly emit large quantities of GHGs and also volatilize carbon stored in vegetation such as trees when they burn. Reducing the possibility of wildfire through strategic management generally will reduce GHG emissions and support ongoing carbon sequestration.

Yolo County Oak Woodland Conservation and Enhancement Plan. The Yolo County Oak Woodland Conservation and Enhancement Plan promotes voluntary efforts to conserve and enhance Yolo County's existing oak woodlands to minimize the effects of land conversion and other factors that disturb the health and longevity of existing oak woodlands. Furthermore, the plan details the intentions of the County to work with existing organizations involved with oak woodlands conservation and enhancement efforts to implement the plan, some of which already have valuable relationships with private landowners interested in oak woodland conservation.

Yolo County Resource Conservation District Strategic Plan. The plan outlines locally relevant areas of conservation focus on both NWL and associated goals and actions for their efforts for 2019–2024. These areas include noxious and invasive weeds, biodiversity, water quality and quantity, riparian and aquatic habitats, soil, wildfire, and carbon. The Yolo County Resource Conservation District (YCRCD) is currently in the process of developing a strategic plan for 2025-2030.

Yolo Regional Conservation Investment Strategy/Local Conservation Plan (RCIS/LCP). The RCIS/LCP is intended to provide a complementary framework for future conservation efforts that includes voluntary stewardship-driven conservation, in addition to mitigation-driven conservation, to enhance the conservation benefits in Yolo County. The RCIS/LCP may guide voluntary stewardship-driven conservation efforts that support the protection and enhancement of focal species habitat across a variety of natural communities and compatible agricultural lands, assist in obtaining grants for these efforts, and promote the protection of wildlife corridors.

Yolo County Carbon Farming Partnership. This partnership provides Yolo County growers, including growers who identify as Black, Indigenous, and People of Color (BIPOC), as well as new farmers, with tools, training, and technical assistance to develop and implement Carbon Farm Plans and other practices to reduce carbon emissions and sequester carbon. The partnership consists of the Center for Land-Based Learning, Yolo County Resource Conservation District, Yolo Land Trust, and Carbon Cycle Institute. Through this program, several Carbon Farm Plans have been completed, with more in progress.

Analysis Methods and Assumptions

To evaluate Yolo County's NWL carbon sequestration potential, YCRCD, in collaboration with the Natural and Working Lands Technical Advisory Committee (NWL TAC) and other partners, implemented the following analysis steps:

1. **Outreach.** Connecting with the community, primarily the agricultural community, to understand local opinions, current practices that are being implemented and can continue to be implemented, and barriers to implementation.
2. **Existing Setting.** Identifying the land on the ground within unincorporated Yolo County using available data, such as geographic information system (GIS) databases for land use types (e.g., cropland, grazing, open space, etc.) and vegetation types (e.g., forest, grassland, woodland, etc.).
3. **Sequestration-Related Measure and Action Development.** Identifying feasible practices that have the potential to sequester carbon within Yolo County's NWL and grouping similar practices into measures by their core approach for implementation tracking. In natural lands, example sequestration strategies include habitat restoration, which entails restoring native habitat that supports greater sequestration and carbon storage in disturbed or degraded areas. On working lands, example strategies include the voluntary use of cover crops, compost, and hedgerow planting.
4. **Potential Acreage.** Identifying total suitable acreage within unincorporated Yolo County for which each carbon sequestration practice is applicable.
5. **Sequestration Quantification.** Quantifying the potential carbon that may be sequestered by action (practice), typically on a per acre and per year basis, using annual sequestration rates developed for each of the practices by authoritative sources. The total sequestration potential for Yolo County's NWL was then quantified.

Each of these steps in the analysis process is further explained below. Importantly, the total maximum potential MT carbon dioxide equivalent (CO_2e) per year that can be sequestered in unincorporated Yolo County NWL as estimated in Step 5 can then be subtracted from the County's 2030 adjusted business-as-usual GHG emissions inventory to evaluate how the County can meet the CAAP's net-negative emissions goal by 2030. NWL play an important role in achieving the County's CAAP goals; this is detailed in CAAP

Chapter 6, along with other mitigation and crosscutting strategies, measures, and actions to reduce the community's GHG emissions.

Outreach

The NWL TAC, chaired by YCRCD, developed a Working Lands Outreach survey to understand the extent of climate-resilient practices currently implemented within Yolo County and the feasibility of expanding these practices to achieve CAAP goals and advance associated co-benefits.

Results of the NWL survey were used to help guide the sequestration quantification and to address barriers and challenges to the implementation of the proposed sequestration practices. For example, if there is large sequestration potential for a practice that respondents believe is not feasible due to financial constraints, future implementation efforts should be targeted at funding opportunities to address those constraints to maximize sequestration benefit. Survey respondents indicated that the costs of implementation and economic sustainability considerations were of importance when making decisions about sequestration practice adoption. For this reason, financial incentives are recommended to increase the likelihood of practice implementation.

The online survey was available from July 2023 to November 2023, and was distributed via the following channels:

- **Electronic Distribution.** Electronic copies of the survey were distributed to relevant community partners through the following listservs:
  - Yolo County Resource Conservation District
  - Yolo County Sustainability Division
  - The Center for Land-Based Learning
  - The Capay Valley Regenerative Agriculture Group
  - The Rumsey Improvement Association
  - University of California Cooperative Extension Agronomy listserv (Yolo County specific)
  - University of California Cooperative Extension Vegetable Crops listserv (Yolo County specific)
  - Yolo County Flood Control & Water Conservation District
  - Kitchen Table Advisors (Yolo County specific)
- **Hard Copy Distribution.** Hard copies of the survey were distributed at the following community events:
  - Yolo County Cattlemen and Wool Growers Association Meeting
  - Yolo County Farm Bureau Board Meeting
- **Mailed Surveys.** Paper surveys were sent by mail to the 280 Yolo Cattlemen and Wool Growers Association members and the 730 members of the Yolo County Farm Bureau.
- **Social Media:** Links to online versions of the survey were shared via social media by YCRCD (five times) and by the Yolo County Sustainability Division (two times).

Results are summarized below and include 83 responses from the following:

- 58 completed hard copy surveys from Yolo County farmers and ranchers (including 46 received by mail and 12 received from the Yolo County Farm Bureau Board Members)
- 25 completed online surveys

Demographic data related to survey results is provided in Figures C-1 and C-2 below.

Figure C-1. Respondent Operation Type

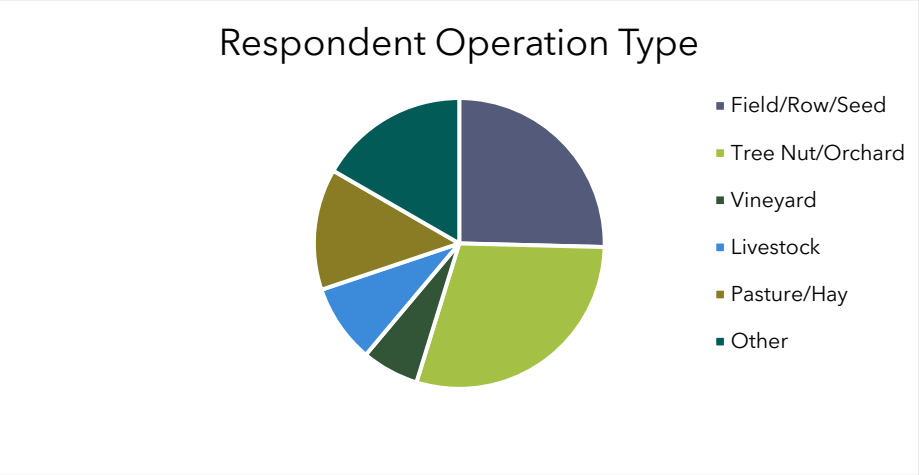
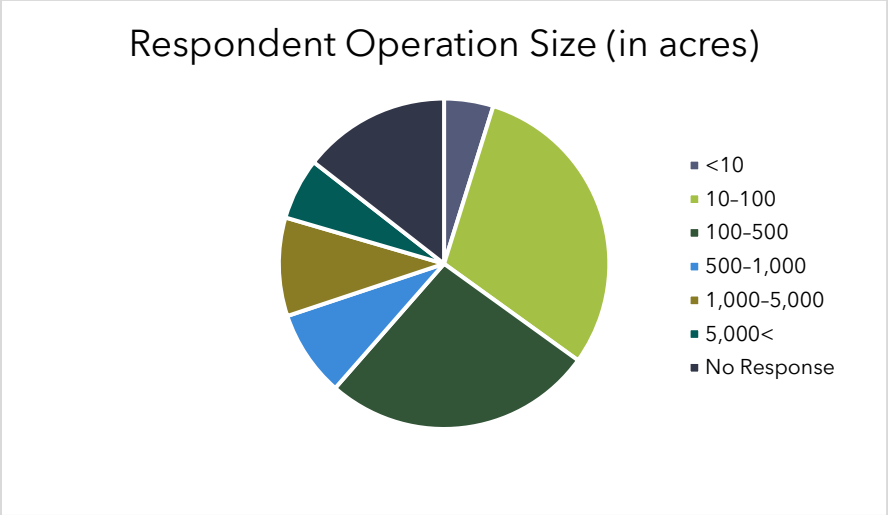


Figure C-2. Respondent Operation Size



Figures representing responses to survey questions are included below.

Figure C-3. Yolo County Responses to Survey Question 2

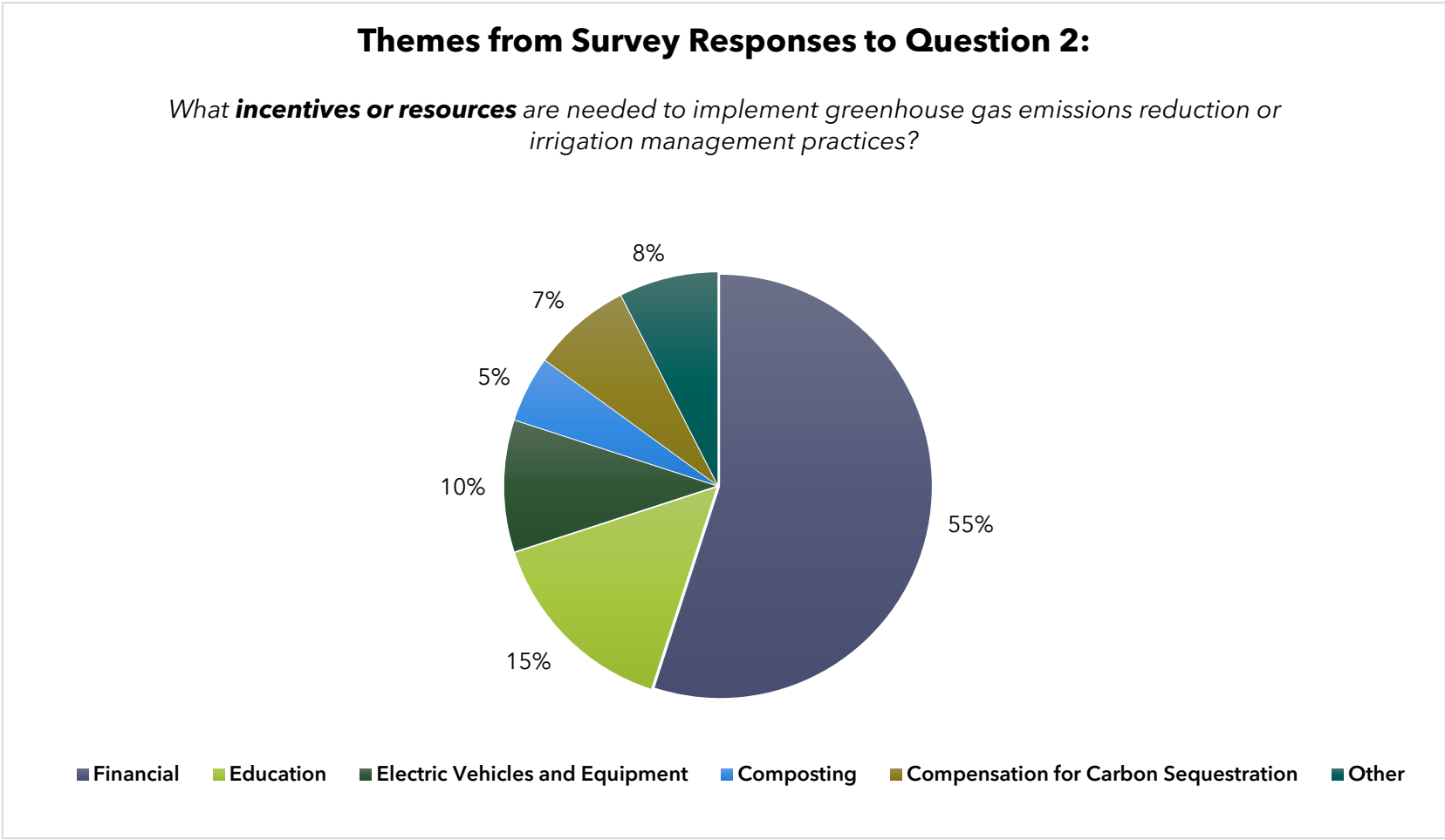


Figure C-4. Yolo County Responses to Survey Question 3

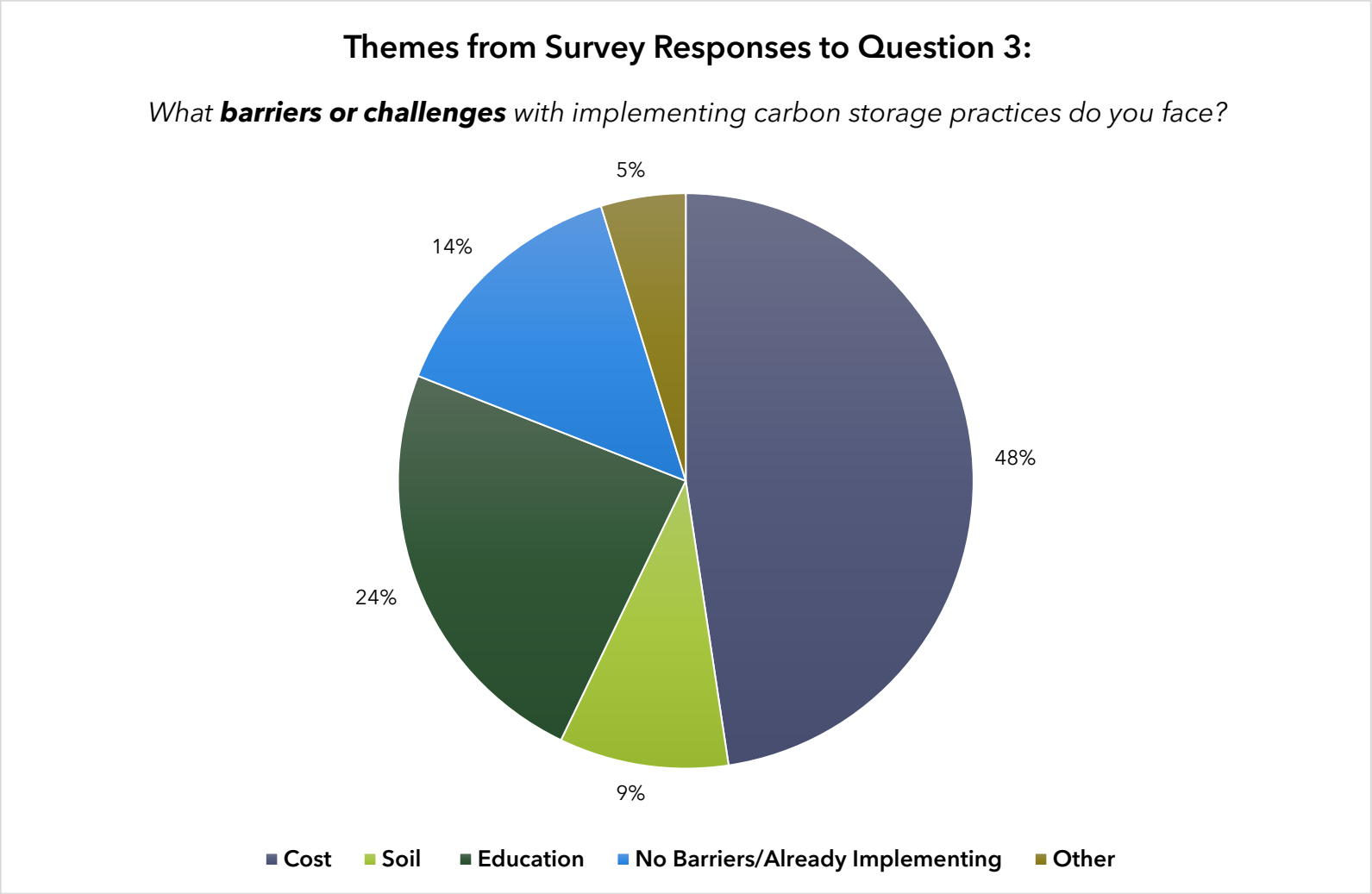
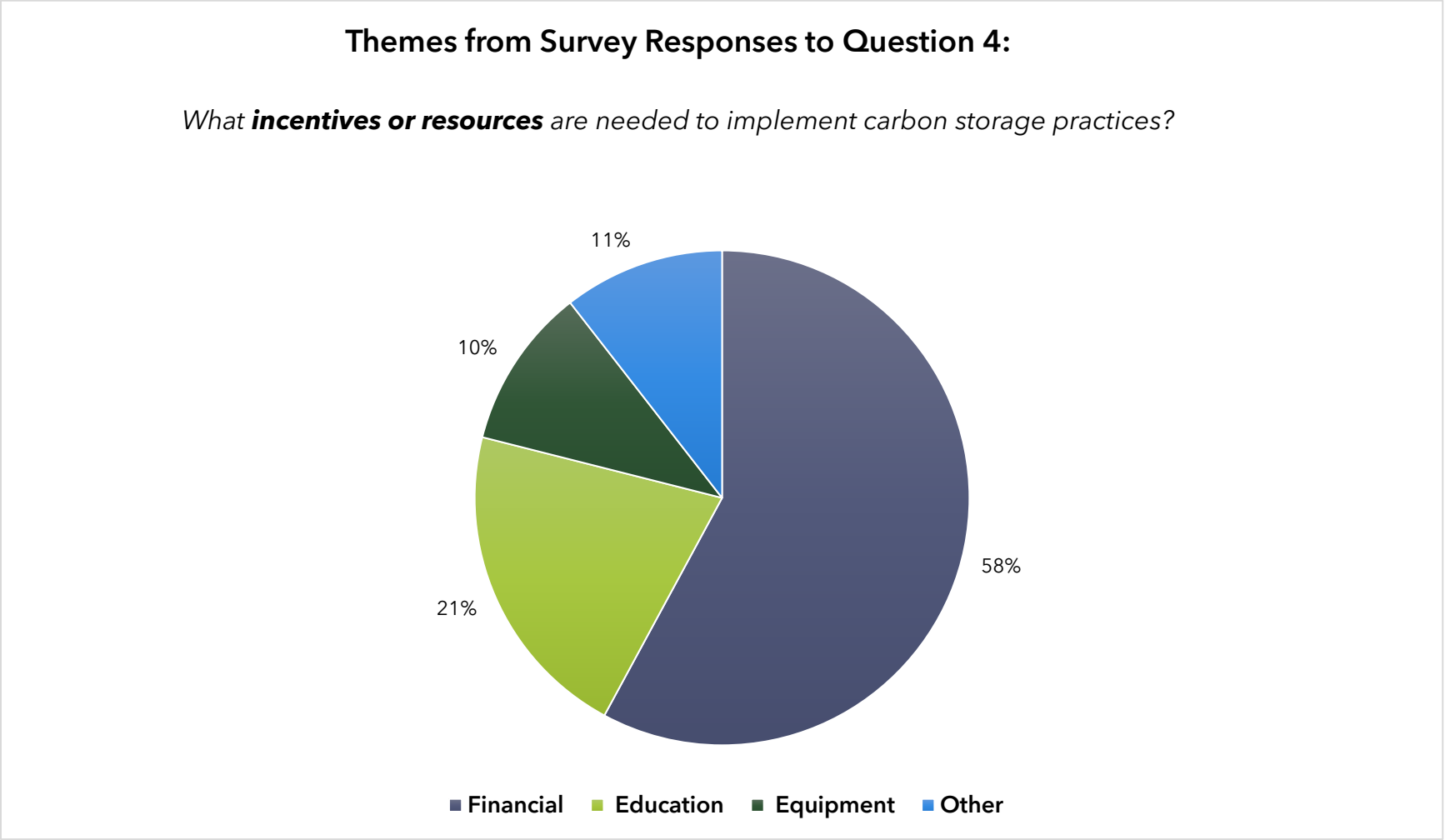


Figure C-5. Yolo County Responses to Survey Question 4



In addition to the 83 survey responses received, YCRCD completed 12 one-on-one interviews with leaders in Yolo County agriculture who represent a broad swath of Yolo County agricultural operations. Figures representing responses to interview questions are included below.

Figure C-6. Yolo County Responses to Interview Question 1

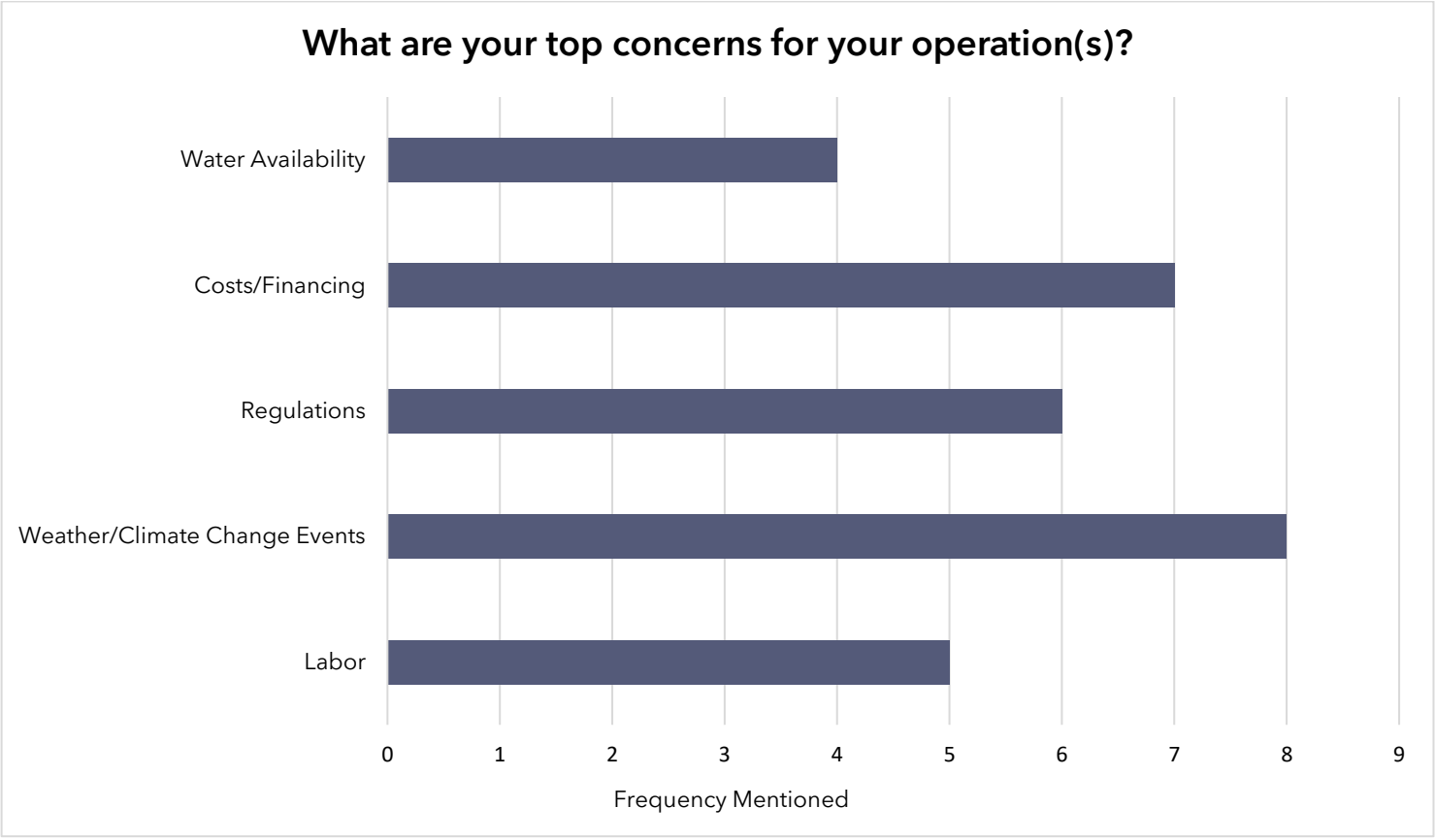


Figure C-7. Yolo County Responses to Interview Question 3a

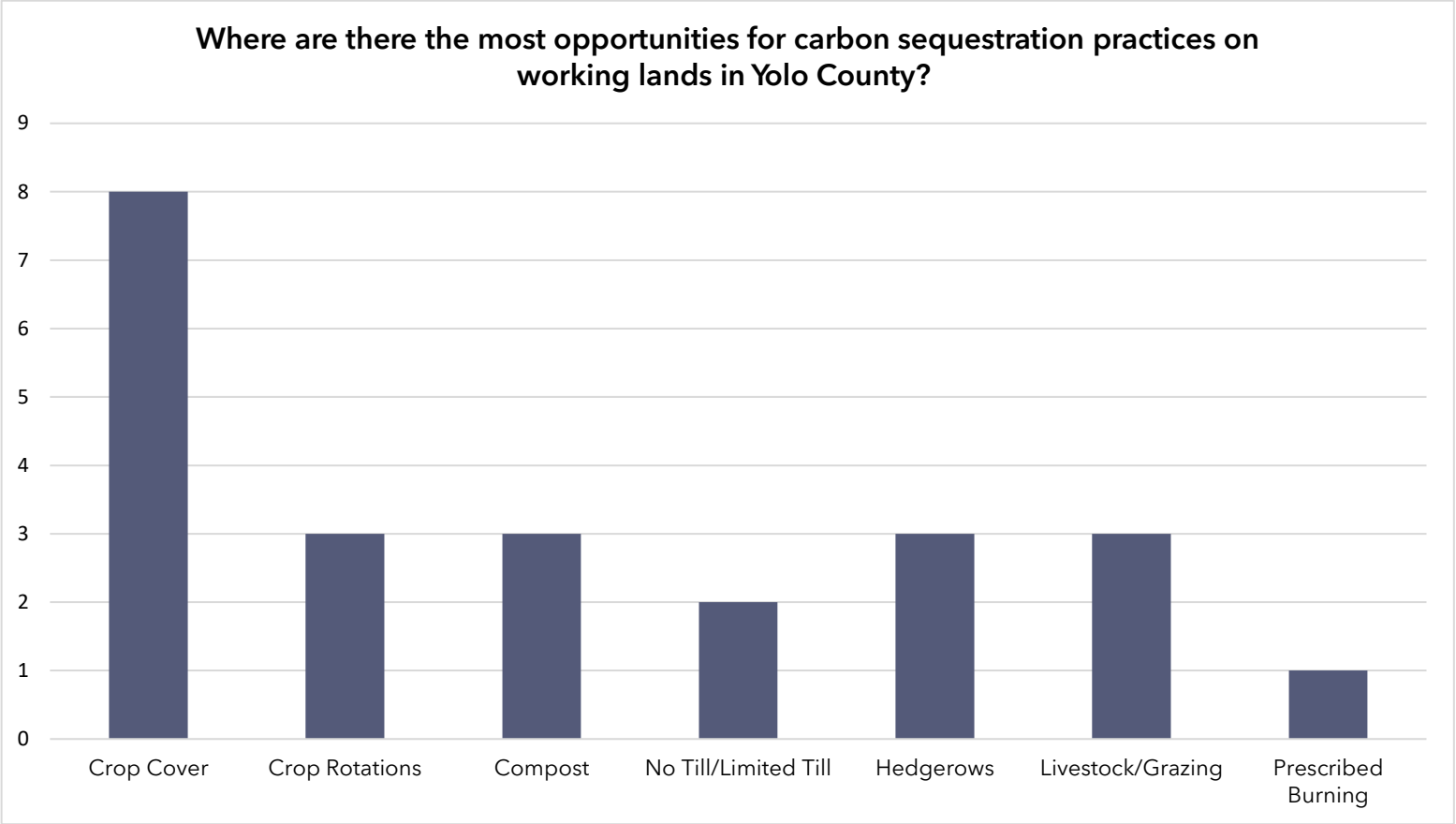
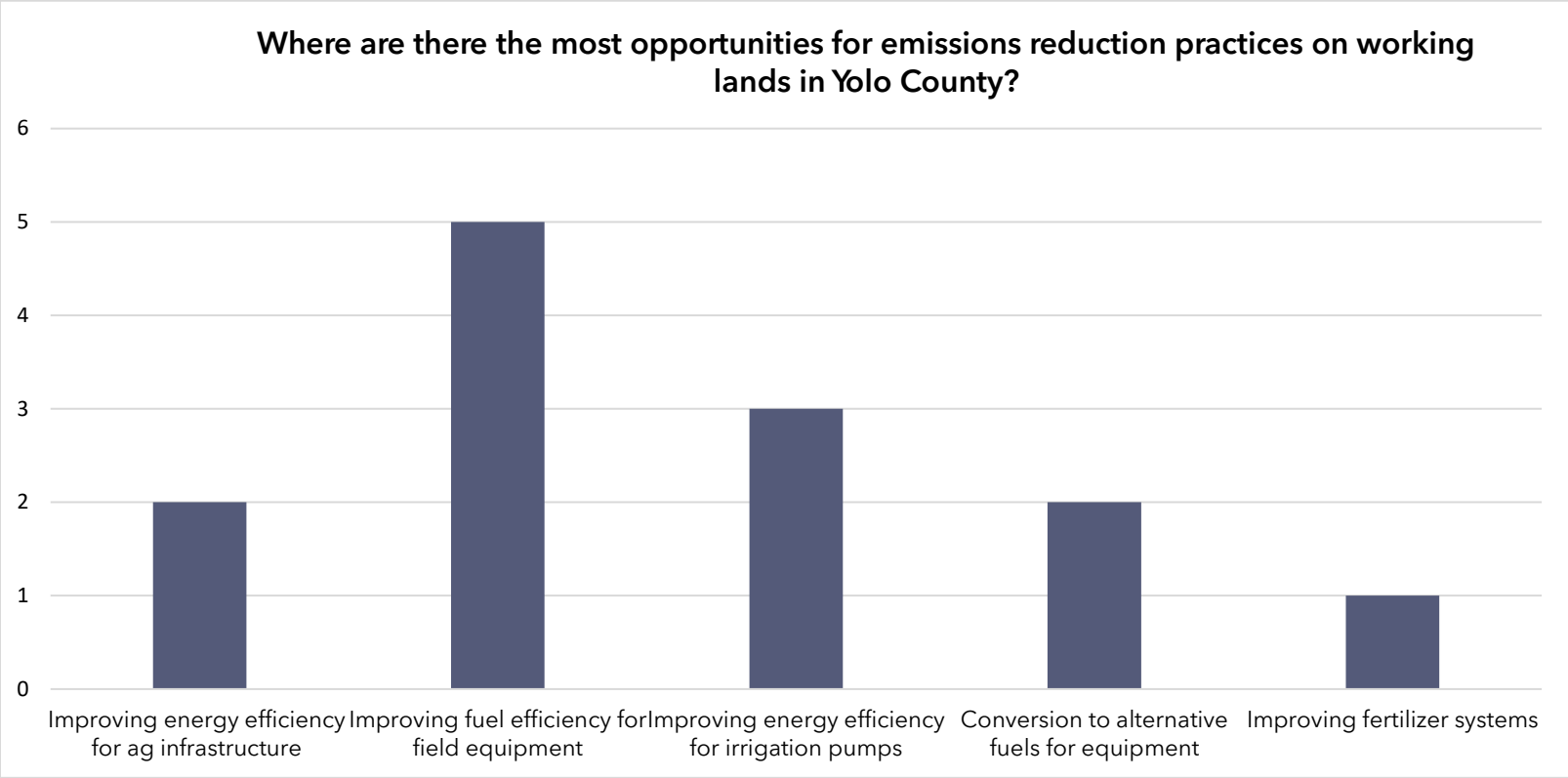


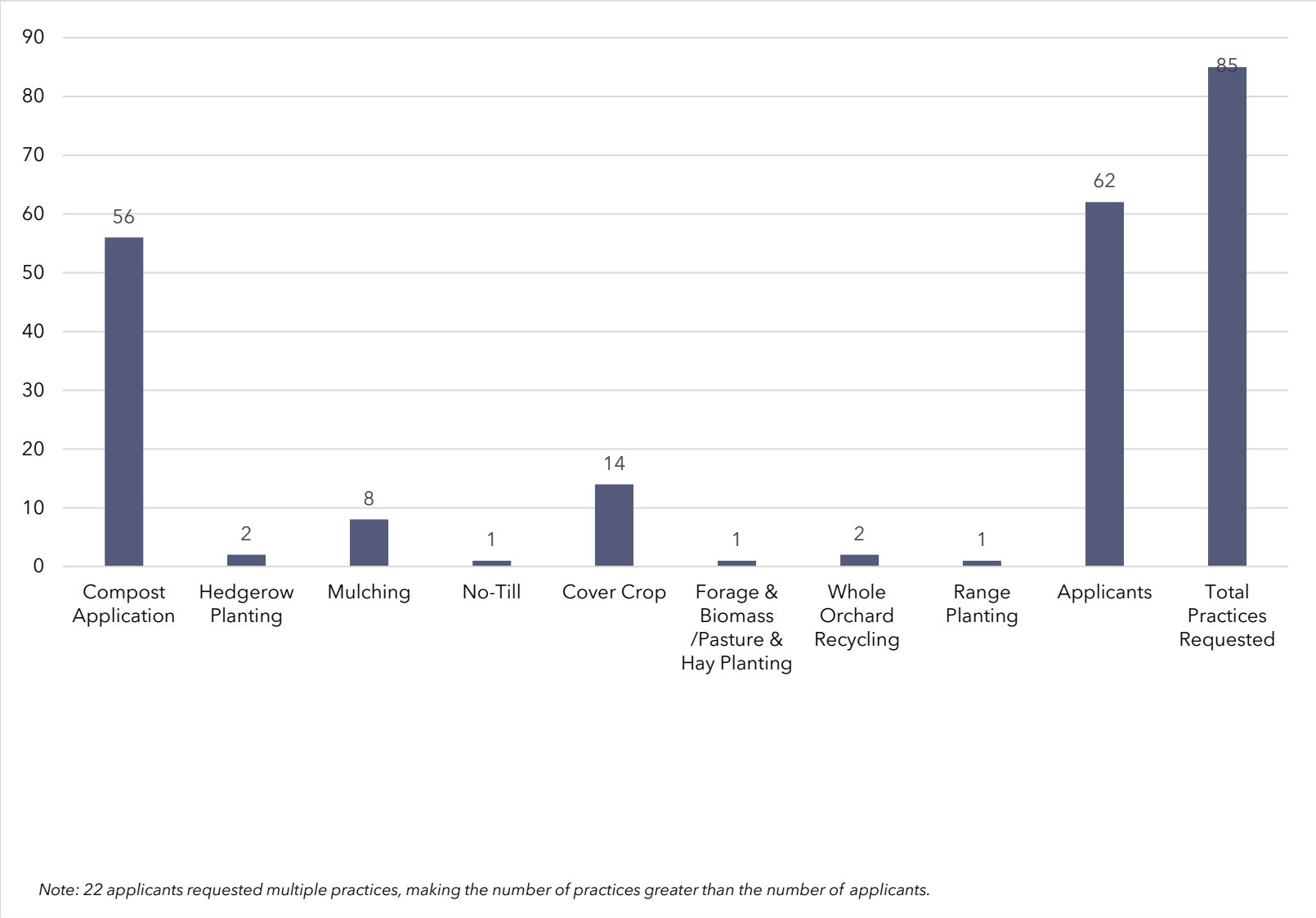
Figure C-8. Yolo County Responses to Interview Question 3b



Overall, the results of the NWL outreach and survey efforts indicate that there is concern among the community about the imposition of new regulations and the cost of technologies and practices that those regulations may entail. Furthermore, while the respondents were concerned with the apparent effects of climate change, their priority was economic sustainability. A majority of respondents expressed an openness to change their practices as long as it did not hinder them financially.

California Department of Food and Agriculture's 2024 Healthy Soils Program. In an analysis of Yolo County growers' applications to CDFA's Healthy Soils Program in 2024, YCRCD found that of 62 applicants, 90% (56) included compost as a conservation practice. Of the 40 applicants who requested just one conservation practice, 95% (38) requested compost. Of the 85 practices requested, compost comprised 66% of all practice requests, followed by cover crops at 17%, and mulching at 10%. Other requested practices included hedgerow (2%), Whole Orchard Recycling (2%), no-till (1%), range planting (1%), and planting of forage and biomass/pasture (1%) (Figure C-9).

Figure C-9. 2024 Yolo County CDFA Healthy Soils Program Requested Conservation Practices



Note: 22 applicants requested multiple practices, making the number of practices greater than the number of applicants.

Figure C-10. Yolo County CDFA Healthy Soils Program Applicants Requesting One Practice

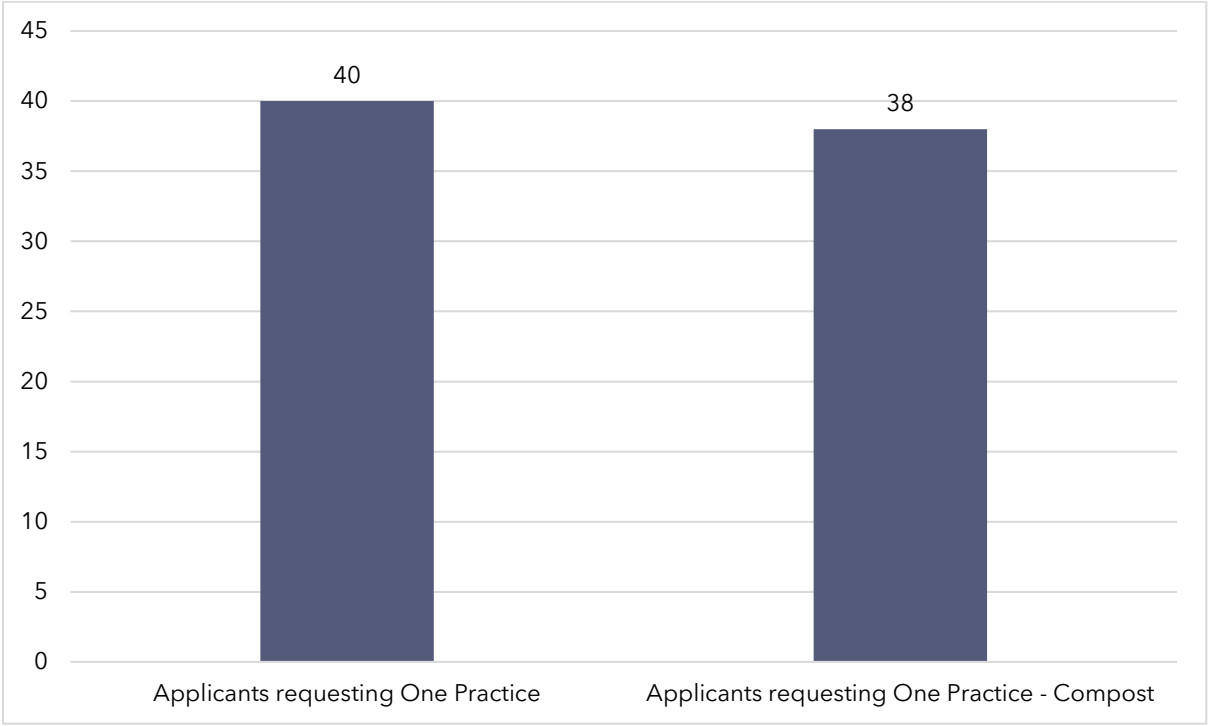
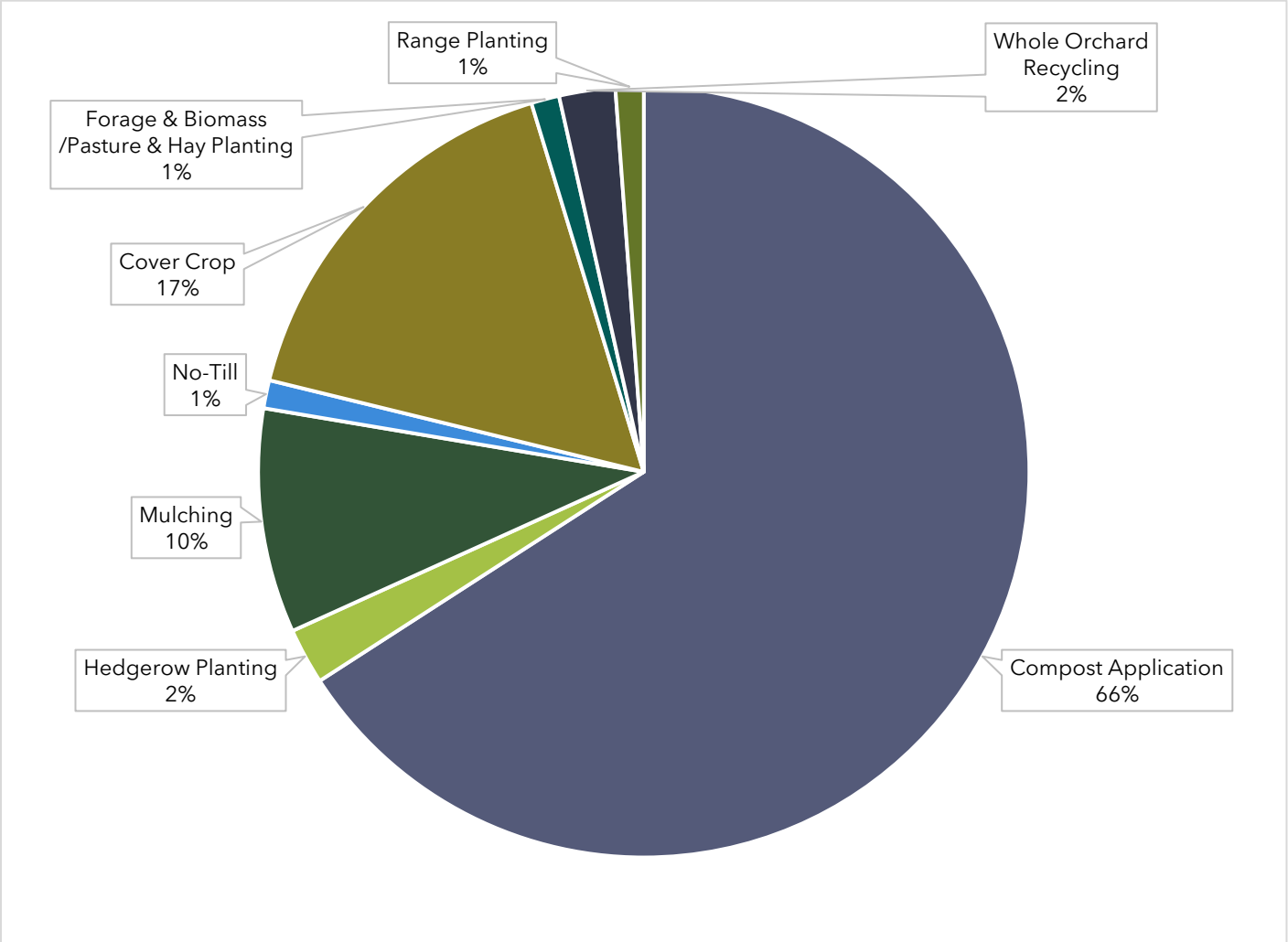


Figure C-11. 2024 Yolo County CDFA Healthy Soils Program Requested Conservation Practices



Existing Setting. Yolo County land cover GIS data, land use zoning, and protected and conserved lands database information was used to spatially analyze the existing landscape for unincorporated Yolo County. Land cover and land use are related, and each is important for this analysis. These spatial details are summarized below and described in detail in Appendix C-2.

Land Cover

Spatial land cover GIS data was provided by the County and includes vegetation and crop type details. The main land cover types within Yolo County include agriculture, grasslands, riparian and wetlands, shrublands and scrub, unvegetated/vacant/urban, and woodlands and forest. These lands are described below. The acreage by land cover type is provided in Table C-1, and the existing land cover map is provided in Figure C-12.

- **Agriculture:** includes a variety of row and grain crops, hay crops, rice, orchards and vineyards, nursery and berry crops, and dryland and irrigated pasturelands.
- **Grasslands:** typically lands with less than 10% tree canopy cover that are dominated by grasses or herbaceous vegetation (CNRA 2022). In Yolo County, grasslands include annual grasslands, dryland pasture, and serpentine.
- **Riparian and Wetlands:** includes woody vegetation growing adjacent to bodies of water as well as lands saturated by water for all or portions of a year (CNRA 2022). In Yolo County, these land cover types include alkali sink, fresh emergent wetlands, open water, valley–foothill riparian, and vernal pools.
- **Shrublands and Scrub:** includes land with greater than or equal to 10% canopy cover composed of shrub and chaparral species. In Yolo County, these include chamise and mixed chaparral.
- **Unvegetated, Vacant, Urban:** includes lands characterized by low levels of vegetation (i.e., 10% or less) and those developed for human use, such as suburban, and rural infrastructure (CNRA 2022). In Yolo County, these lands include barren sites (e.g., rock outcrops, and gravel and sand bars), and built-up sites.
- **Woodlands and Forest:** forested lands include those with greater than or equal to 10% canopy cover composed of trees (CNRA 2022). In Yolo County, these include primarily oak woodlands, and to a smaller extent pine, eucalyptus, and montane hardwoods with a grassland understory.

Figure C-12.

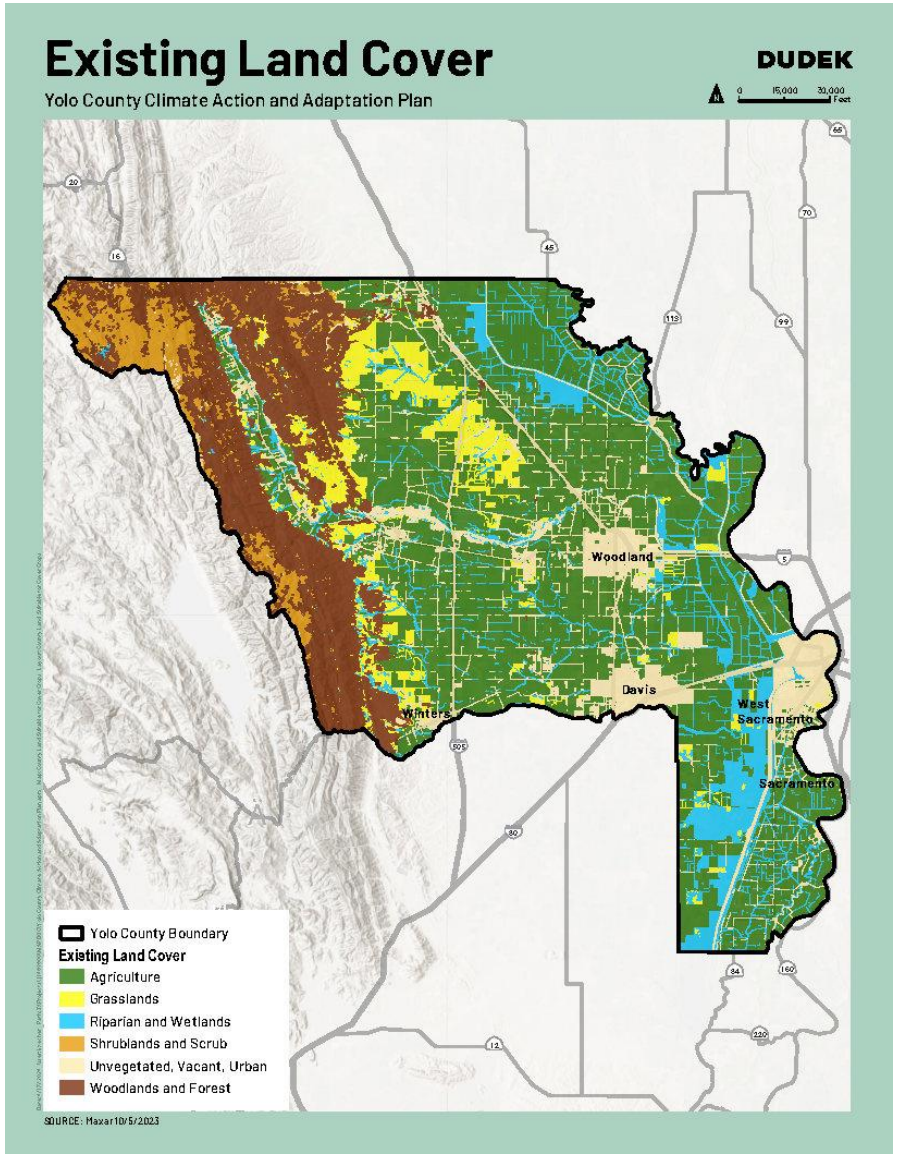

Existing Land Cover
Yolo County Climate Action and Adaptation Plan
DUDEK
0 15,000 30,000 Feet
Woodland
Davis
West Sacramento
Winters
Sacramento
Yolo County Boundary
Existing Land Cover
Agriculture
Grasslands
Riparian and Wetlands
Shrublands and Scrub
Unvegetated, Vacant, Urban
Woodlands and Forest
SOURCE: Maxar 10/5/2023

Table C-1. Yolo County Land Cover Type Acreage

Land Cover Type[a]	Acres	Percentage
Agriculture	372,981	57%
Grasslands	62,879	10%
Riparian and Wetlands	45,403	7%
Shrublands and Scrub	44,651	7%
Unvegetated/Vacant/Urban	44,262	7%
Woodlands and Forest	82,957	13%
Total	**653,582**	**100%[b]**

Source: Yolo GIS, Land Cover at SuperAssoc level.
Notes:
[a] Land cover refers to the vegetative characteristics or manmade construction on the land's surface.
[b] Percentage may not total 100% due to rounding.

Zoning

Zoning governs how property can be used within Yolo County; it determines potential land use. Zoning laws outline what types of developmental and operational activities are permitted on a given tract of land. Zones may be defined for a single use (e.g., residential) or can combine several potential uses. Zoning within Yolo County was used as an indicator of which lands are appropriate for the sequestration analysis and associated actions.

Total Yolo County acreage by zone is summarized in Table C-2 and depicted spatially in the zoning map in Figure C-13. As shown, approximately 84% of Yolo County is zoned for agriculture, which provides considerable opportunity for sequestration through climate-smart agricultural practices. Further detail of Yolo County's zoning and use in determining suitable acreage for sequestration is provided in Appendix C and Appendix C-3.

Figure C-13. Yolo County Zoning Category Map

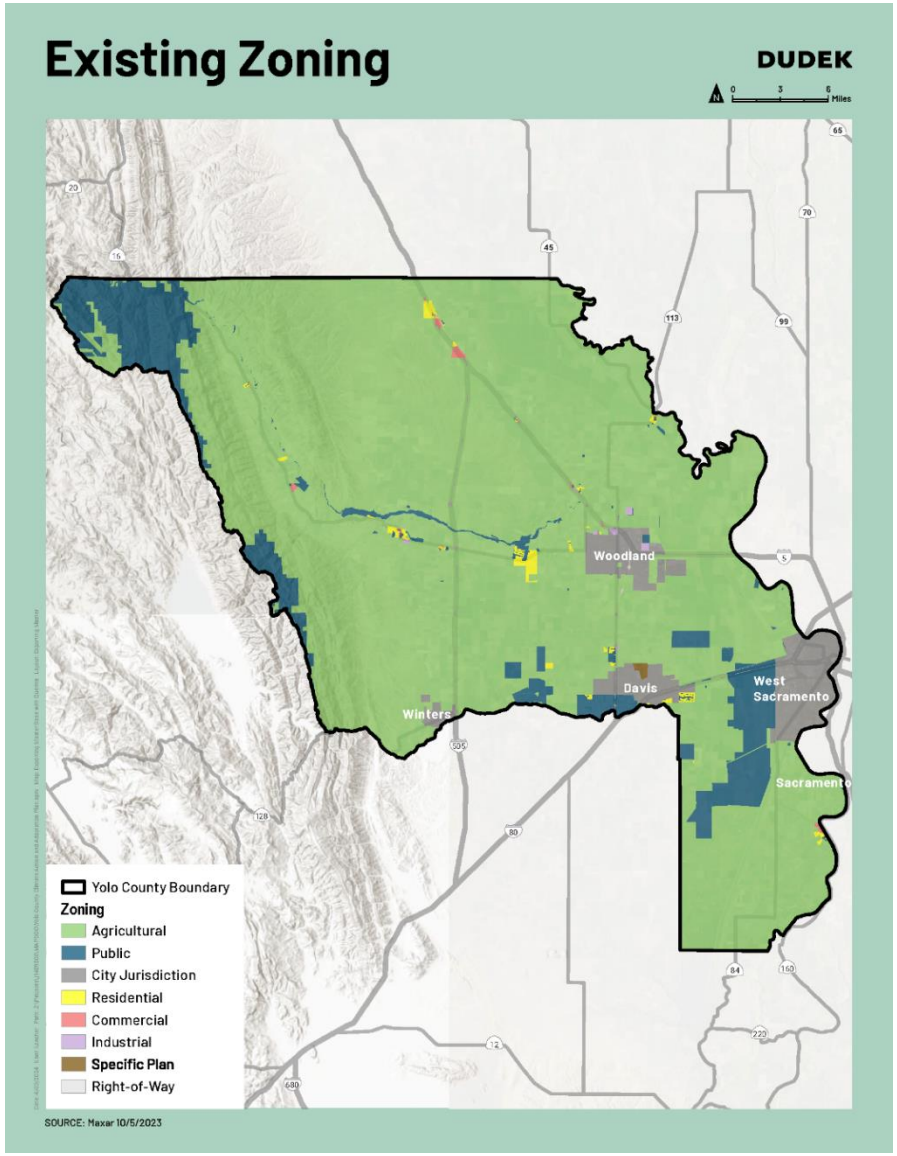


Table C-2. Yolo County Zoning

Zoning Category	Acres	Percentage
Agriculture	546,726	84%
Cities Jurisdiction	27,148	4%
Commercial	760	<1%
Industrial	607	<1%
Public	61,241	9%
Residential	2,936	<1%
Specific Plan	383	<1%
Right-of-way	13,752	2%
Total	**653,553**	**100%** [a]

Source: Yolo GIS.

[a] Percentage may not total 100% due to rounding.

Protected and Conserved Lands Data

California Protected Areas Database is a GIS dataset depicting lands that are owned in fee and protected for open space purposes by over 1,000 public agencies or nonprofit organizations (CPAD 2018). Lands that are owned in fee and protected for open space purposes by public agencies or nonprofit organizations include:

- National/State/regional parks, forests, preserves, and wildlife areas
- Large and small urban parks that are mainly open space (as opposed to recreational facility structures)
- Land trust preserves
- Special district open space lands (watershed, recreation, etc.) and other types of open space

The California Conservation Easement Database (CCED) contains lands protected under conservation easements. CCED is a parallel data set to the CPAD, which as noted above, covers protected areas owned in fee (CCED 2018). Easements and deed-based restrictions limit land uses to those compatible with maintaining it as open space. Lands under easement may be actively farmed, grazed, forested, or held as nature reserves. Easements are typically held on private lands with no public access, including the following:

- Land trusts and nonprofit organizations
- Local jurisdictions (city and county)
- State and national governmental agencies

This data allows the County to assess the extent of current conserved and protected lands and to identify areas for improved land stewardship and regions for possible future conservation efforts to support carbon sequestration within Yolo County. A detailed breakdown of these protected and conserved areas is provided in Appendix C-2.

Measure and Action Development

Ten strategies were identified for the CAAP, including Strategy 8, Sequester and Store Carbon in Natural and Working Lands (abbreviated as "NWL"). For each CAAP strategy, measures are identified to further specify the sector goal, and actions were developed that include specific policies, programs, plans, initiatives, or tools that will be deployed to achieve the expressed goals of the related measure and strategy.

The existing Yolo County setting, including land cover types, land use and zoning, and past and ongoing programs and planning efforts were evaluated in coordination with YCRCD and NWL TAC to develop a list of candidate measures and actions (USDA NRCS conservation practices) to support carbon sequestration and the County's 2030 net-negative goal. After all potentially feasible and relevant NWL carbon sequestration actions were identified, they were collectively reviewed, and specific actions tailored to Yolo County were selected for the CAAP. Measures were intentionally organized to represent groups of related actions for ease of implementation and progress tracking. For Strategy 8, NWL, four measures were identified:

- **NWL 1:** Encourage Climate-Smart Practices in Working Lands
- **NWL 2:** Restore Natural Lands
- **NWL 3:** Promote Stewardship of Natural Lands
- **NWL 4:** Conserve Natural and Working Lands

For each measure, specific actions were identified, which are detailed below under the Yolo County Carbon Sequestration Potential section.

Potential Acreage

Appropriate spatial parameters were identified for each of the applicable sequestration actions in coordination with YCRCD and the NWL TAC. Spatial parameters incorporated into the land suitability assessment include zoning, land cover type, and current land use practices within Yolo County. These parameters are summarized below. A detailed summary of appropriate acreages per action based on these spatial parameters is provided in Appendix C-3.

- **Zoning.** While the County will continue to coordinate closely with neighboring jurisdictions and municipalities on shared goals, only lands within the jurisdictional control of the unincorporated area of Yolo County were considered for quantitative sequestration potential. Additionally, zoning allowed for consideration of areas within Yolo County appropriate for implementation of the given actions.
- **Land Cover Type.** Lands suitable for each action were further refined by land cover type, given that some practices are unique to specific vegetation and natural communities.
- **USDA Census of Agriculture.** Results from the 2022 Census of Agriculture were also incorporated into land suitability, including information on irrigation and current land use practices. According to the census data, there were 795 total farms within Yolo County in 2022, with an average farm size of 605 acres. The breakdown of the size of farms within Yolo County in 2022 is provided in Figure C-14.

Census data also provides information on land use practices currently implemented within Yolo County. Relevant land use practice data is provided in Table C-3. This data was incorporated, where possible, to further refine suitable Yolo County acreage (USDA 2024).

Figure C-14. Yolo County Total Farms by Size

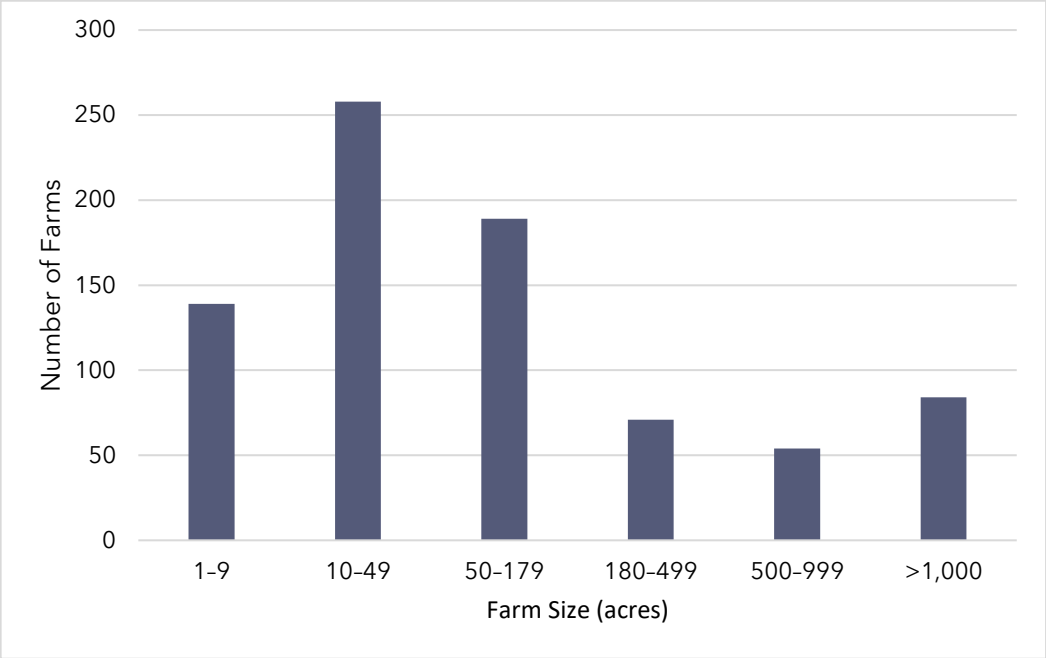


Table C-3. U.S. Department of Agriculture Census of Agriculture 2022, Yolo County

Land Use Practices	Total Farms	Acres
Cropland on which no-till practices were used	94	7,603
Cropland on which conservation or reduced tillage, excluding no-till, practices were used	89	42,899
Cropland on which intensive or conventional tillage practices were used	165	79,676
Cropland planted to a cover crop	151	20,616
Practiced alley cropping, silvopasture, forest farming, or had riparian forest buffers or windbreaks	28	—
Practiced rotational or management-intensive grazing	66	—

Source: USDA 2024.

Sequestration Quantification

Carbon sequestration rates vary across the landscape and are influenced by numerous intrinsic and extrinsic factors, such as vegetation and land cover types, vegetation stand age, soils, land stewardship regimes, and environmental factors.

The main database used for sequestration rates for Yolo County was COMET-Planner, a USDA-affiliated online tool that derives emission reduction coefficients for USDA NRCS conservation practices in MT CO_2e per acre per year (USDA and CSU 2024). COMET-Planner uses quantification methods aligned with the USDA entity-scale GHG inventory methods within COMET-Farm and is the industry-standard large-scale planning tool for estimating NWL GHG emissions. All actions under the umbrella of Measure NWL 1 (Encourage Climate-Smart Practices in Working Lands) were quantified using COMET-Planner or the related CDFA Healthy Soils Program version of COMET-Planner (USDA et al. 2024).

To quantify the GHG benefit provided by each action in Measure NWL 1, regionally-specific sequestration rates for each action were pulled from the COMET-Planner database. These rates included average, minimum, and maximum GHG sequestration, providing a range to account for natural variability. The average sequestration rate was chosen to account for the natural variability.

Note that COMET-Planner estimates are typically conservative (i.e., typically underestimate sequestration), so even the "maximum" sequestration values provided by COMET-Planner are conservative estimates. In addition, estimating an annual sequestration value for these practices can underestimate the total benefit, given that practices can have secondary benefits, including enhanced soil fertility and photosynthetic capture, and carbon continues to be sequestered over time and the lifespan of implementation. For example, a recent study in Salinas found that compost application significantly increased soil organic carbon over a six-year period (White et al. 2020). Given that the analysis here reports sequestration potential for a single year, the estimates do not account for the carbon accrual that is likely to occur after practice implementation, which could result in greater sequestration.

The conservation practices (actions) were matched to their applicable land cover types and associated acreages that were assembled using GIS. The average COMET-Planner sequestration rates for each action and applicable acreages were then multiplied to calculate the total annual GHG benefit for each action across Yolo County.

Of note, several COMET-Planner sequestration rates are conditional, so can vary based on current land use practices in situ (e.g., sequestration potential for cover crops is higher on irrigated versus non-irrigated cropland). Current land use practices that impact COMET-Planner sequestration potential include irrigation and tillage practices (i.e., intensive/conventional tillage, reduced tillage, no-till). As such, to attain a more accurate sequestration rate and potential, USDA Census of Agriculture data was used, where possible, to refine suitable Yolo County acreage for the sequestration analysis. The census-reported percentage of applicable land within Yolo County that engaged in the land use practice (i.e., irrigation or tillage) was applied to the identified available acreage, which was then used to estimate the conditional sequestration rates and potential.

The Yolo County COMET-Planner rates are provided in Appendix C-4.

Yolo County Carbon Sequestration Potential

For Strategy 8, NWL, each of the four measures and supporting voluntary actions are detailed below along with additional information regarding the available acreage and maximum sequestration potential for each. Maps are provided where appropriate.

Available acreage is the amount of acreage within unincorporated Yolo County to which the action, such as a climate-smart practice, may be applied (e.g., suitable land). Maximum sequestration potential is the estimated MT of CO_2e that can be achieved on an annual basis if the action is applied to 100% of the available acreage. Understanding that it is infeasible to apply all practices to 100% of suitable land, the annual sequestration rate (MT CO_2e/acre/year) and a range of adoption scenarios (5%, 20%, 50%, and 70%) is also provided for each practice.

Some actions are site specific and/or require in situ information to quantify suitable acreages. For these actions, sequestration potential has been provided as a rate (i.e., "per 10 acres of implementation"), and the potential suitable acreage is provided along with an estimate of the current amount of each practice implemented each year. In some cases, even though a practice is known to increase carbon sequestration, there is insufficient research for USDA NRCS to develop sequestration estimates. These practices are noted with "No COMET-Planner data available" in the maximum sequestration potential field. Additional details are provided in Appendix C-4.

NWL 1: Encourage Climate-Smart Practices in Working Lands

Measure NWL 1 includes financial and educational support and voluntary actions that could be implemented within Yolo County agricultural lands by those within the agricultural community to promote carbon sequestration and storage.

The NWL 1c supporting actions, which are USDA NRCS Conservation Practice Standards (CPSs), have been researched and approved for use in the NRCS's cost-share program (Environmental Quality Incentives Program) and by the CDFA's Healthy Soils Program. These practices were reviewed by the NWL TAC for feasibility for Yolo County ranches, orchards, vineyards, and farms. These practices have been researched for carbon sequestration potential over the past few decades and have been found to effectively increase carbon sequestration rates and to provide co-benefits including increased water retention, improved soil health, and reduced erosion. Actions NWL 1a (Carbon Credit Exchange and Other Financial Incentives) and NWL 1b (Farmer Outreach and Education) will support Measure NWL 1 but are not provided below, as they have no direct quantifiable acreage sequestration benefit.

NWL 1c. Support Climate-Smart Practices

Action NWL 1c includes practices that support carbon sequestration on working lands and provide co-benefits such as enhanced soil health, reduced erosion, and/or reduced fertilizer costs. Sequestering carbon in working lands results in beneficial changes in a wide array of system attributes, including soil water-holding capacity and hydrological function, biodiversity, soil fertility, and resilience to drought and flood. Additionally, some practices can increase agricultural productivity. The practices provided below focus on increasing the capacity of the working farm or ranch to capture

carbon and store it beneficially: in the crop, as standing carbon stocks in permanent vegetation, and/or as soil organic matter (SOM).

The following text from the Carbon Cycle Institute provides additional context on carbon farm planning (CFP), which the NWL 1c practices support (Carbon Cycle Institute 2019).

> While agricultural practices can lead to a gradual loss of carbon from the farm system, particularly from working land soils, CFP is successful when it leads to a net increase in farm-system carbon. By increasing the amount of photosynthetically captured carbon sequestered, in long-term carbon pools on the farm or ranch, including in soil organic matter (SOM), perennial plant roots, and standing woody biomass, carbon farming results in a direct reduction in the amount of CO_2 in the atmosphere while supporting crop production and farm resilience to environmental stress, including flood and drought.
>
> On-farm carbon in all its forms (SOM, perennial and annual herbaceous vegetation, plant roots, root exudates, and standing woody biomass) contains energy, which originated as the solar energy used by the plants to synthesize carbohydrates from atmospheric CO_2, water, and nutrients from the soil. The carbon in plants and SOM can thus be understood as the embodied solar energy that drives on-farm processes, including the essential soil ecological processes that determine water and nutrient holding capacity and availability for the growing crop.

The carbon sequestration conservation practices presented below have been identified by Yolo County producers and agricultural and natural resources professionals as those most likely to provide multiple benefits for Yolo County crops. The crop types most likely to benefit from the practice are listed along with the current available acreage. The maximum sequestration potential represents the carbon sequestration potential if 100% of the available acreage has the practice applied. Where relevant, estimates of current rates of a specific practice are provided (i.e., MT CO_2e/acre/year) to allow for comparison between the practices. Sequestration potential scenarios (5%–70% adoption) are also provided for the practices to demonstrate that even partial implementation can contribute to sequestration goals.

Additional information and technical assistance is available to Yolo County producers through YCRCD and the USDA NRCS Woodland field office. For detailed descriptions and practice-specific co-benefits for the CPSs, please see the USDA NRCS Field Office Technical Guide.

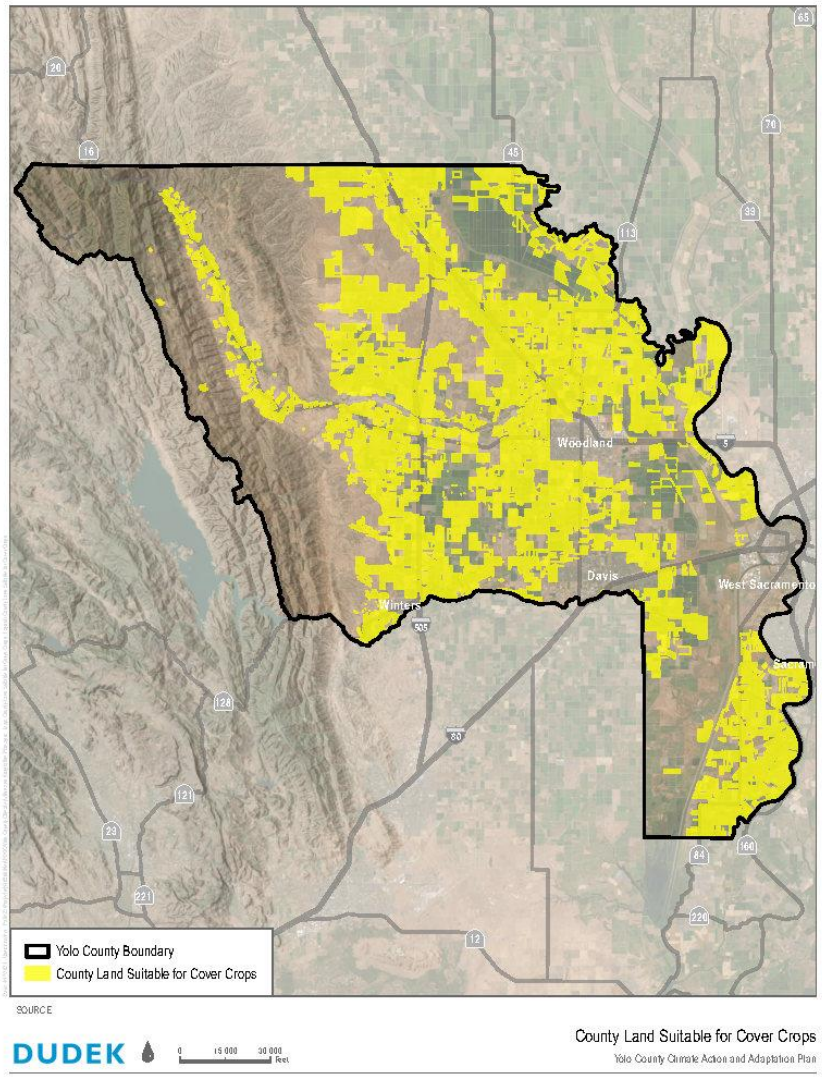
It is important to acknowledge that despite grower willingness and County encouragement, advances in sequestration may be reversed for economic reasons. For example, over the last 1– 2 years (2022–2024), many large almond orchards, which contain significant amounts of sequestered carbon, have been uprooted and burned because of a substantial drop in the world almond market. The reality of the razor-thin profit margin on which many farms operate can make such decisions necessary even if a grower would prefer to keep their land in production or retire the trees using whole-orchard recycling or some other method that would result in less carbon lost to the atmosphere. Financial incentives that subsidize the maintenance of productive orchards or more climate-friendly termination may be necessary to support sustainable agriculture and maximize carbon sequestration.

Appendix C: Natural and Working Lands

Cover Crops (NRCS CPS 340)

Cover crops are grasses, legumes, and other plants grown for seasonal vegetative cover. This voluntary practice helps to reduce erosion and maintain or increase organic matter content. This practice can be applied to lands that would benefit from seasonal vegetative cover for natural resource protection or improvement. Crops appropriate for the practice include vineyards, deciduous fruits/nuts, and field and truck/nursery/berry crops. Co-benefits include reduced erosion, increased pollination services, weed suppression, and improved water quality.

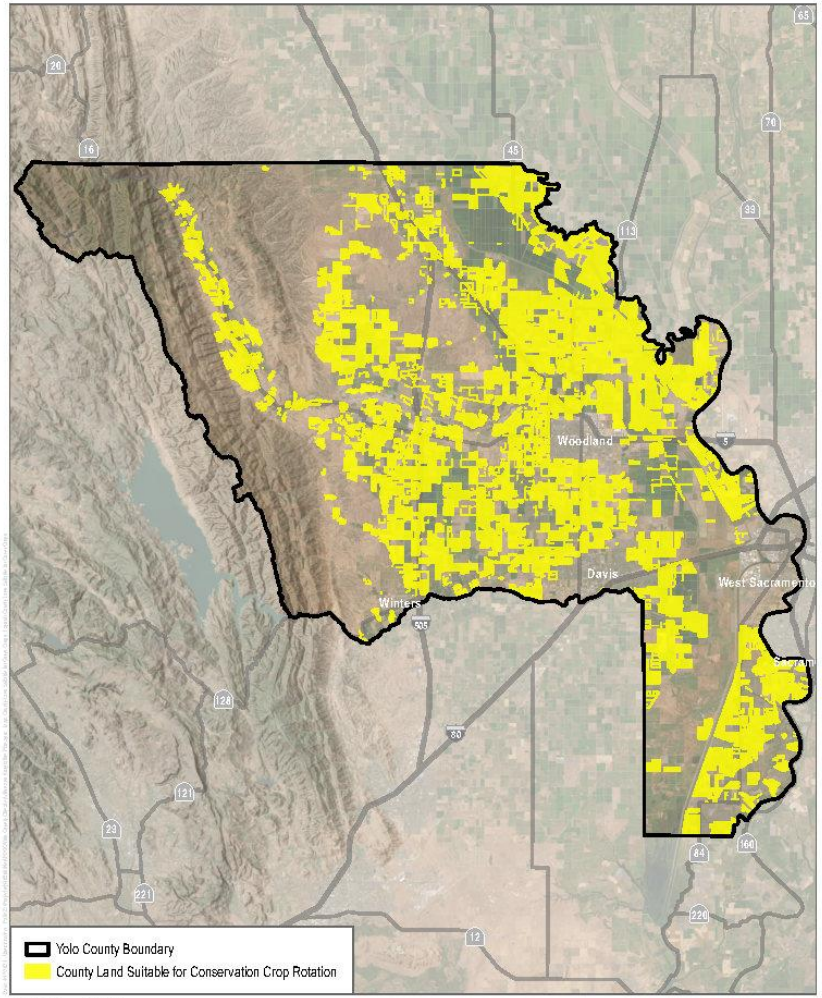
- **Available acreage:** 178,291
- **Maximum Sequestration Potential:** 51,007 MT CO_2e/year
- **Per Acre Sequestration Rate:** 0.29 MT CO_2e/acre/year
- **Sequestration Potential Scenarios:**
  - ***Sequestration Potential at 5% Adoption:*** 2,550 MT CO_2e/year
  - ***Sequestration Potential at 20% Adoption:*** 10,201 MT CO_2e/year
  - ***Sequestration Potential at 50% Adoption:*** 25,504 MT CO_2e/year
  - ***Sequestration Potential at 70% Adoption:*** 35,705 MT CO_2e/year



Conservation Crop Rotation (NRCS CPS 328)

Conservation crop rotation involves a planned sequence of crops grown on the same ground over a period of time. This voluntary practice increases soil carbon. This practice can be applied to all cropland where at least one annually planted crop is included in the crop rotation. Crops appropriate for the practice include alfalfa, field, grain/hay, and truck/nursery/berry crops. Co-benefits include increased wildlife habitat, pollination services, reduced erosion, and improved soil moisture efficiency.

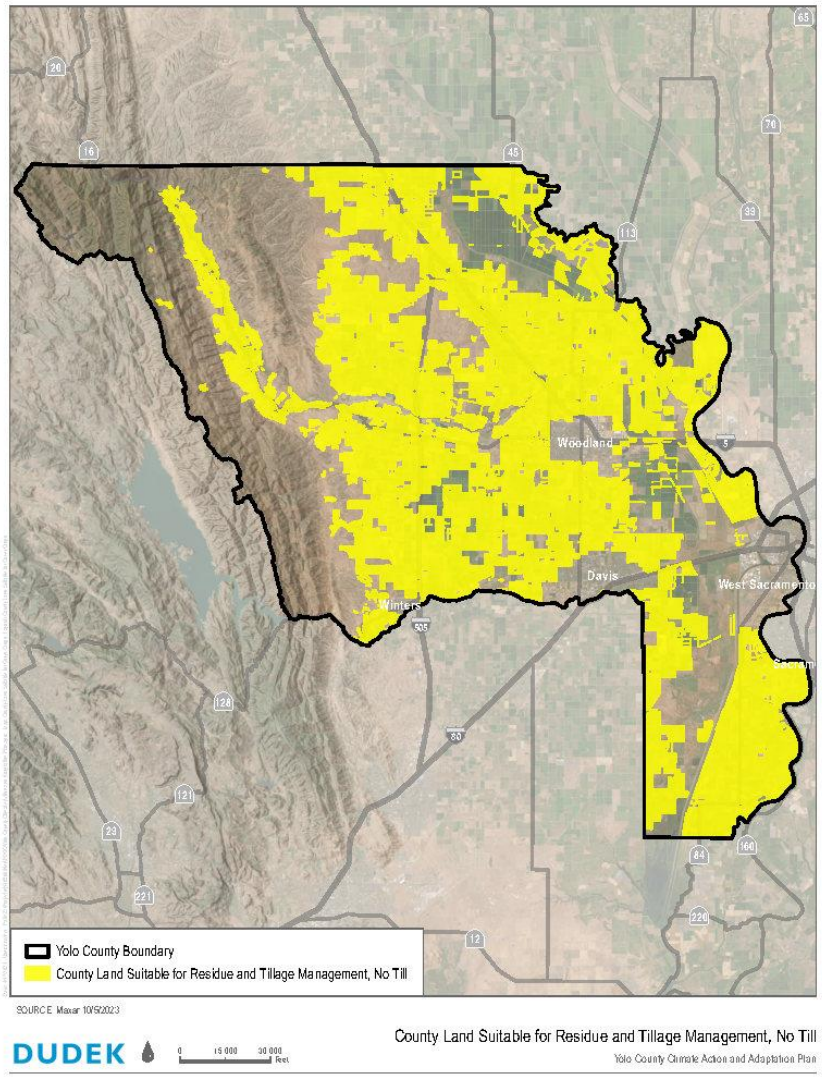
- **Available acreage:** 140,783
- **Maximum Sequestration Potential:** 37,162 MT CO_2e/year
- **Per Acre Sequestration Rate:** 0.26 MT CO_2e/acre/year
- **Sequestration Potential Scenarios:**
  - ***Sequestration Potential at 5% Adoption:*** 1,858 MT CO_2e/year
  - ***Sequestration Potential at 20% Adoption:*** 7,432 MT CO_2e/year
  - ***Sequestration Potential at 50% Adoption:*** 18,581 MT CO_2e/year
  - ***Sequestration Potential at 70% Adoption:*** 26,013 MT CO_2e/year



Residue and Tillage Management, No Till (NRCS CPS 329)

"No till" refers to limiting soil disturbance to manage the amount, orientation, and distribution of crop and plant residue on the soil surface year-round. This voluntary practice improves soil health and maintains or increases organic matter content. This practice can be applied to all croplands currently practicing intensive till or reduced till. Crops appropriate for the practice include alfalfa, deciduous fruits/nuts, pasture, vineyards, field, grain/hay, and truck/ nursery/berry crops. Co-benefits include food and cover for wildlife, reduced erosion, reduced tillage-induced particulate emissions, increased plant-available moisture, and reduced energy use.

- **Available acreage:** 252,011[1]
- **Maximum Sequestration Potential (MT CO_2e/year):** 42,994 MT CO_2e/year
- **Per Acre Sequestration Rate:** 0.17 MT CO_2e/acre/year
- **Sequestration Potential Scenarios:**
  - ***Sequestration Potential at 5% Adoption:*** 2,150 MT CO_2e/year
  - ***Sequestration Potential at 20% Adoption:*** 8,599 MT CO_2e/year
  - ***Sequestration Potential at 50% Adoption:*** 21,497 MT CO_2e/year
  - ***Sequestration Potential at 70% Adoption:*** 30,096 MT CO_2e/year

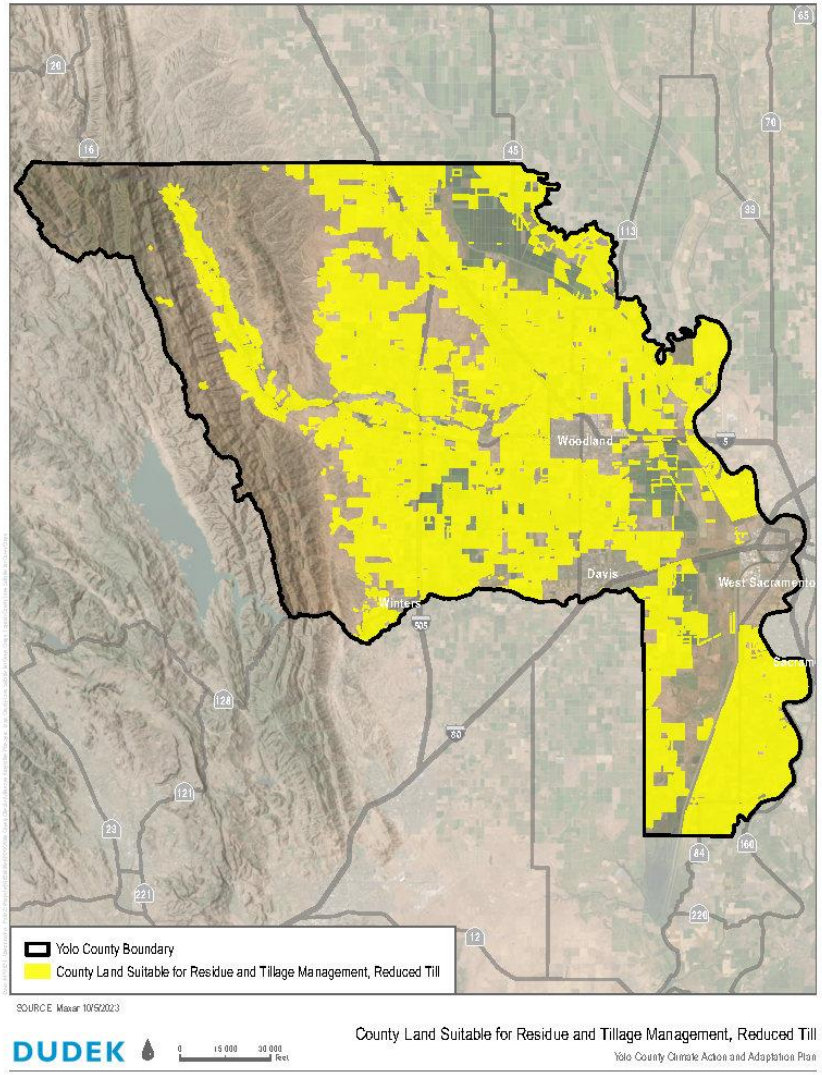


[1] Assumes percentage of available land already participates in no-till practices, consistent with USDA Census of Agriculture 2022.

Residue and Tillage Management, Reduced Till (NRCS CPS 345)

Practicing reduced tillage means managing the amount, orientation, and distribution of crop and other plant residues on the soil surface year-round while limiting soil-disturbing activities used to grow and harvest crops in systems where the field surface is tilled before planting. This voluntary practice improves soil health and maintains or increases organic matter content. This practice can be applied to all croplands currently practicing intensive till. Crops appropriate for the practice include alfalfa, deciduous fruits/nuts, pasture, vineyards, field, grain/hay, and truck/nursery/berry crops. Co-benefits include increased food and cover for wildlife, reduced erosion, reduced tillage-induced particulate emissions, increased plant-available moisture, and reduced energy use.

- **Available acreage:** 163,812[2]
- **Maximum Sequestration Potential:** 15,583 MT CO_2e/year
- **Per Acre Sequestration Rate:** 0.10 MT CO_2e/acre/year
- **Sequestration Potential Scenarios:**
  - ***Sequestration Potential at 5% Adoption:*** 779 MT CO_2e/year
  - ***Sequestration Potential at 20% Adoption:*** 3,117 MT CO_2e/year
  - ***Sequestration Potential at 50% Adoption:*** 7,792 MT CO_2e/year
  - ***Sequestration Potential at 70% Adoption:*** 10,908 MT CO_2e/year



[2] Assumes percentage of available land already participates in no-till and reduced till practices, consistent with USDA Census of Agriculture 2022.

Soil Carbon Amendments: Compost Application (NRCS CPS 336)

Soil carbon amendments (SCA) are materials derived from plant or animal byproducts, including biochar, that are applied to the soil to improve or maintain SOM, sequester carbon and enhance carbon stocks, improve soil aggregate stability, and/or improve habitat for soil organisms. SCA include compost, biochar, and other regionally appropriate carbon-based materials (e.g., waste plant materials, wood chips, pulverized paper, bagasse, or distillation residue). Compost, one of the voluntary practices positively identified in surveys and interviews for its potential in Yolo County, is a key part of SCA. SCA can also include improving soil biology by using beneficial soil inoculants such as rhizobia and mycorrhizae. This voluntary practice can be applied to areas of crop, pasture, range, forest, associated agricultural lands, developed land, and farmsteads where organic carbon amendment applications will improve soil conditions. Crops appropriate for the practice include alfalfa, citrus/subtropical, deciduous fruits/nuts, pasture, vineyards, field, grain/hay, and truck/nursery/berry crops. Co-benefits include improved habitat for soil organisms, improved SOM, improved soil aggregate stability, and improved soil moisture retention.

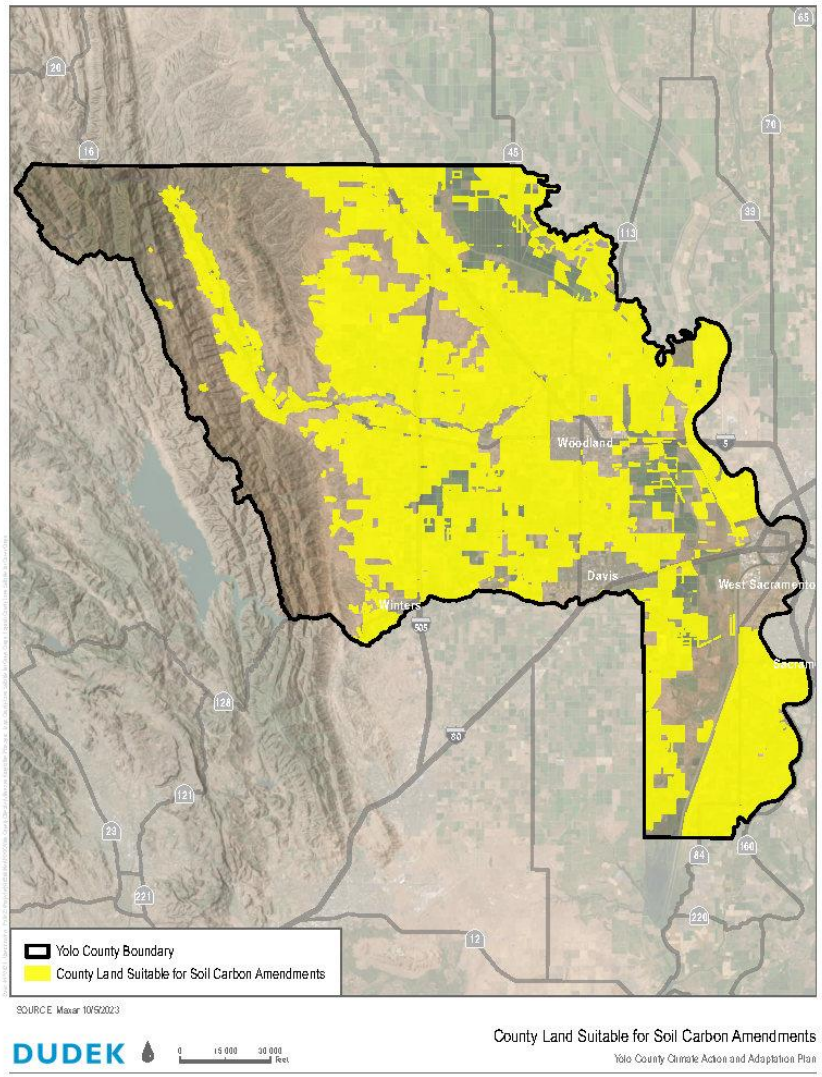
The values below were calculated for the application of compost, one of multiple options for SCA and the one most commonly used by Yolo County growers and ranchers. The values were calculated based on the application of compost (C/N > 11) from a composting facility applied to crops at 6 tons/acre using COMET-Planner for the CDFA Healthy Soils Program, based on the agricultural systems and specific acreages below (USDA and CDFA 2024).

- **Available acreage:** 288,628
  - ***Orchards and Vineyards:*** 102,164
  - ***Pasture:*** 25,512
  - ***Grazed Grassland:*** 55,182
  - ***Cropland:*** 105,770
- **Maximum Sequestration Potential for Compost Application:** 1,291,465 MT CO_2e/year
  - ***Orchards and Vineyards:*** 459,328 MT CO_2e/year
  - ***Pasture:*** 114,166 MT CO_2e/year
  - ***Grazed Grassland:*** 249,092 MT CO_2e/year
  - ***Cropland:*** 468,878 MT CO_2e/year
- **Per Acre Sequestration rate:** Average 4.47 MT CO_2e/acre/year
  - ***Orchards and Vineyards:*** 4.50 MT CO_2e/acre/year
  - ***Pasture:*** 4.47 MT CO_2e/acre/year
  - ***Grazed Grassland:*** 4.51 MT CO_2e/acre/year
  - ***Cropland:*** 4.43 MT CO_2e/acre/year
- **Sequestration Potential Scenarios:** See Table C-4

Table C-4. Yolo County Sequestration Potential with Compost (C/N>11) Application

Crop Type	Available Acreage	Average Sequestration Rate (MT CO_2e/ acre/ year)	Annual Sequestration Potential (MT CO_2e/year)				
			Maximum Potential (100% Practice Adoption)	5% Practice Adoption	20% Practice Adoption	50% Practice Adoption	70% Practice Adoption
Orchards and Vineyards	102,164	4.50	459,329	22,966	91,866	229,665	321,530
Pasture	25,512	4.47	114,166	5,708	22,833	57,083	79,916
Grazed Grassland	55,182	4.51	249,092	12,455	49,818	124,546	174,364
Cropland	105,770	4.43	468,878	23,444	93,776	234,439	328,215
Total	**288,628**	**4.47**	**1,291,465**	**64,573**	**258,293**	**645,733**	**904,026**

Note: Sequestration potential assumes COMET-Planner CDFA HSP value for compost (C/N>11) purchased from a certified composting facility, applied at a rate of 6 tons per acre.



Soil Carbon Amendments (NRCS CPS 808): Whole Orchard Recycling

Whole Orchard Recycling is a type of SCA where orchard trees are chipped and incorporated into the field in which they were grown (i.e., wood chips are not exported off-site). The value below is calculated based on the assumption that Whole Orchard Recycling will be followed by orchard replanting within 3 years. Note that this voluntary practice is listed as "under evaluation," although the carbon sequestration potential is provided in COMET-Planner. Co-benefits include maintained or improved habitat for soil organisms, improved irrigation efficiency, and improved plant productivity and health.

- **Available acreage:** 79,563[3]
- **Maximum Sequestration Potential:** 3,016 MT CO_2e/ year
- **Per Acre Sequestration Rate:** 0.04 MT CO_2e/acre/year
- **Sequestration Potential Scenarios:**
  - ***Sequestration Potential at 5% Adoption:*** 151 MT CO_2e/year
  - ***Sequestration Potential at 20% Adoption:*** 603 MT CO_2e/year
  - ***Sequestration Potential at 50% Adoption:*** 1,508 MT CO_2e/year
  - ***Sequestration Potential at 70% Adoption:*** 2,111 MT CO_2e/year

[3] A small percentage of available orchard (deciduous fruits/nuts) acreage might be taken out of production each year.

Filter Strips (NRCS CPS 393)

A filter strip is a strip or area of herbaceous vegetation that removes contaminants from overland flow. Filter strips are established where environmentally sensitive areas need to be protected from sediment, other suspended solids, and dissolved contaminants in runoff. This voluntary practice can be applied to agricultural land adjacent to waterways. Co-benefits include reduced contaminants in runoff and reduced sedimentation in surface waters.

- **Available acreage:** This practice is viable within 6–10 feet of key irrigation supply and drainage ditches.
- **Maximum Sequestration Potential:** 0.26 MT CO_2e/acre/year

Grassed Waterways (NRCS CPS 412)

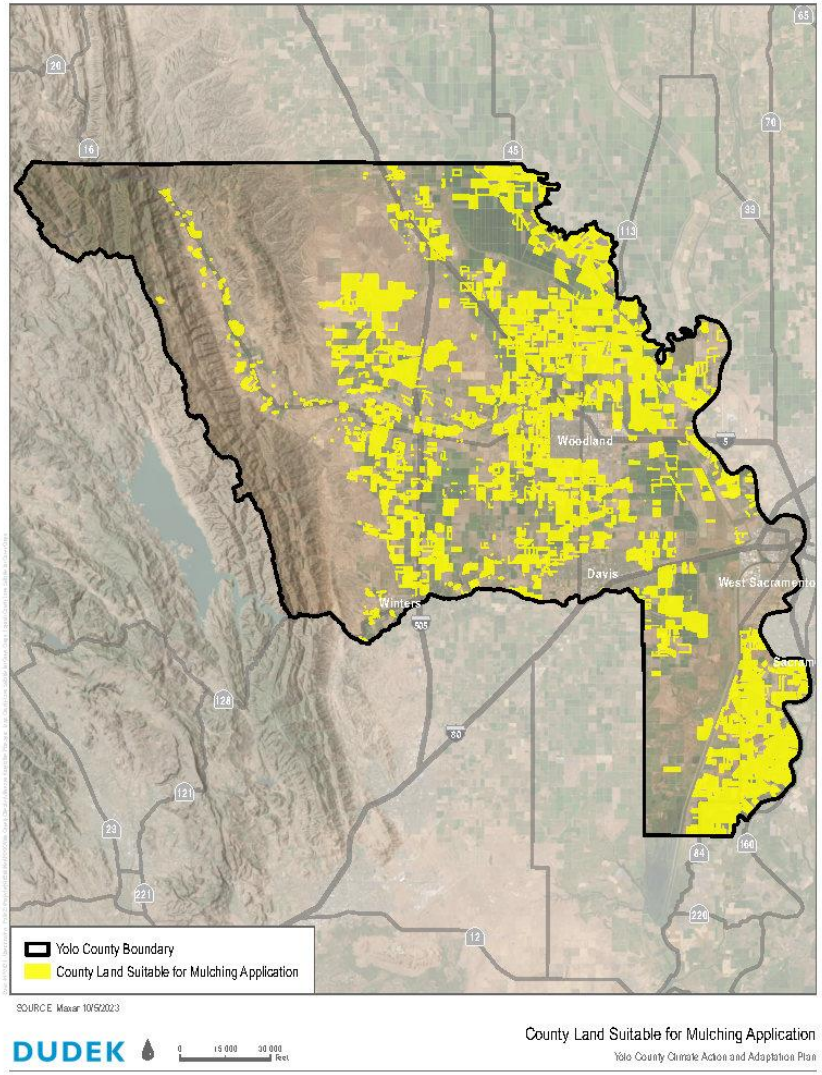
A grassed waterways is a shaped or graded channel established with suitable vegetation to convey surface water to a stable outlet at a non-erosive velocity using a broad and shallow cross-section. This voluntary practice can be applied in agricultural land adjacent to waterways where added water conveyance capacity and vegetative protection are needed to prevent erosion and improve runoff water quality resulting from concentrated surface flow. Co-benefits include protected or improved waterways, reduced erosion, and prevention of gully formation.

- **Available acreage:** This practice applies to about 15% of actively used drain channels.
- **Maximum Sequestration Potential:** 0.26 MT CO_2e/acre/year

Mulching (NRCS CPS 484)

The practice of mulching means applying plant residues or other suitable materials to the land surface. This voluntary practice improves plant productivity and health and maintains or increases organic matter content. It may also provide habitat for beneficial organisms and suppress weeds and insect pests. This practice can be applied to all lands where mulches are appropriate; the type and depth of mulch application will depend on site conditions and material availability. Note that the implementation of this practice is dependent on the availability of mulch. Crops appropriate for the practice include vineyards and truck/nursery/berry crops. Co-benefits include improved moisture-management efficiency, reduced irrigation energy use, reduced erosion, and improved plant productivity and health.

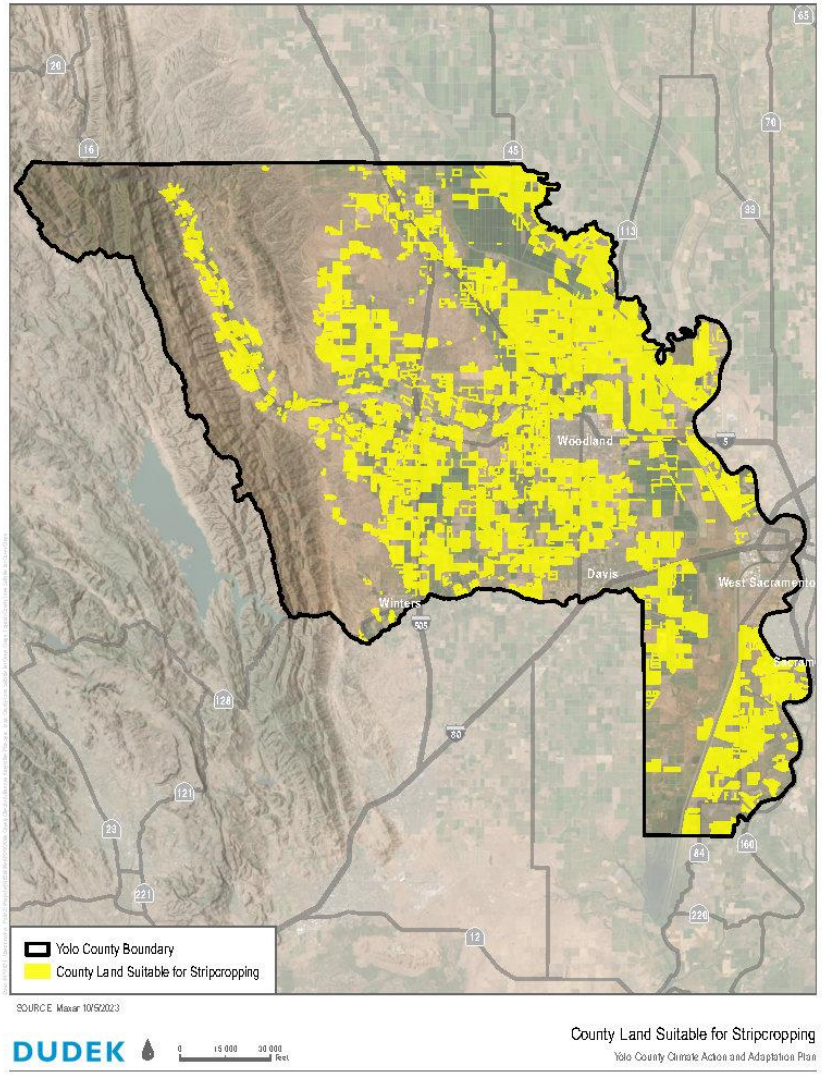
- **Available acreage:** 98,728
- **Maximum Sequestration Potential:** 20,305 MT CO_2e/year
- **Per Acre Sequestration rate:** 0.21 MT CO_2e/acre/year
- **Sequestration Potential Scenarios:**
  - ***Sequestration Potential at 5% Adoption:*** 1,015 MT CO_2e/year
  - ***Sequestration Potential at 20% Adoption:*** 4,061 MT CO_2e/year
  - ***Sequestration Potential at 50% Adoption:*** 10,153 MT CO_2e/year
  - ***Sequestration Potential at 70% Adoption:*** 14,214 MT CO_2e/year



Stripcropping (NRCS CPS 585)

Stripcropping involves growing planned rotations of erosion-resistant and erosion-susceptible crops or fallow in a systematic arrangement of strips across a cropland field. Producers who plant stripcrops, and especially those who add perennial cover grown in strips with annual crops, may increase soil carbon sequestration while delivering the co-benefits of building soil health, reducing soil erosion, improving water quality, and increasing plant productivity and health. Crops appropriate for the practice include alfalfa, field, grain/hay, and truck/nursery/berry crops. Co-benefits include reduced soil erosion, improved water quality, and improved wildlife habitat.

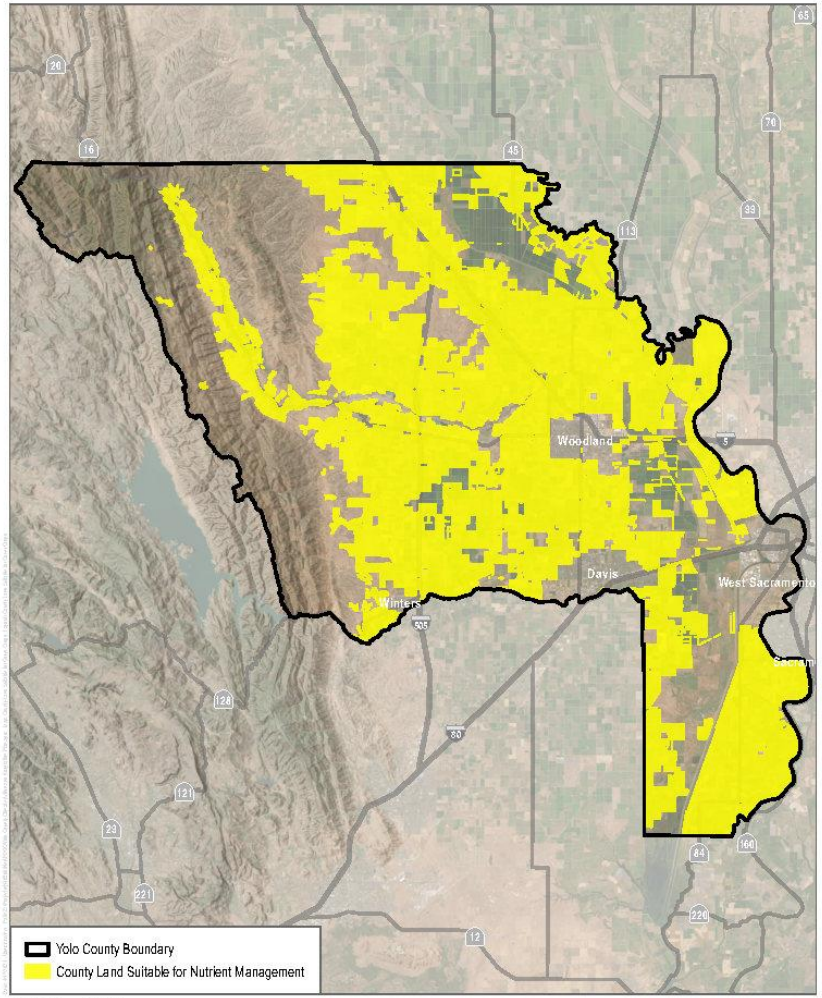
- **Available acreage:** 70,391
- **Maximum Sequestration Potential:** 10,829 MT CO_2e/year
- **Per Acre Sequestration rate:** 0.15 MT CO_2e/acre/year
- **Sequestration Potential Scenarios:**
  - ***Sequestration Potential at 5% Adoption:*** 541 MT CO_2e/year
  - ***Sequestration Potential at 20% Adoption:*** 2,166 MT CO_2e/year
  - ***Sequestration Potential at 50% Adoption:*** 5,415 MT CO_2e/year
  - ***Sequestration Potential at 70% Adoption:*** 7,581 MT CO_2e/year



Nutrient Management (NRCS CPS 590)

This voluntary practice involves managing the rate, source, placement, and timing of plant nutrients and soil amendments by developing a system to track soil nutrients. Amendments can include organic and inorganic fertilizers and pulverized rock minerals. This practice is focused on improving the efficiency of fertilizer use and preventing the loss of fertilizer nutrients, and it can reduce nitrous oxide emissions, nutrient runoff, and nitrate leaching into groundwater. It can be applied to fields where plant nutrients and soil amendments are needed but does not apply to one-time nutrient applications for the establishment of permanent vegetation. Crops appropriate for the practice include alfalfa, citrus/subtropical, deciduous fruits/nuts, pasture, vineyards, field, grain/hay, and truck/nursery/berry crops. Co-benefits include reduced GHG emissions, improved plant health and productivity, and reduced nutrient loading to surface and groundwater.

- **Available acreage:** 288,628
- **Maximum Sequestration Potential:** 78,216 MT CO_2e/year
- **Per Acre Sequestration rate:** 0.27 MT CO_2e/acre/year
- **Sequestration Potential Scenarios:**
  - ***Sequestration Potential at 5% Adoption:*** 3,911 MT CO_2e/year
  - ***Sequestration Potential at 20% Adoption:*** 15,643 MT CO_2e/year
  - ***Sequestration Potential at 50% Adoption:*** 39,108 MT CO_2e/year
  - ***Sequestration Potential at 70% Adoption:*** 54,752 MT CO_2e/year

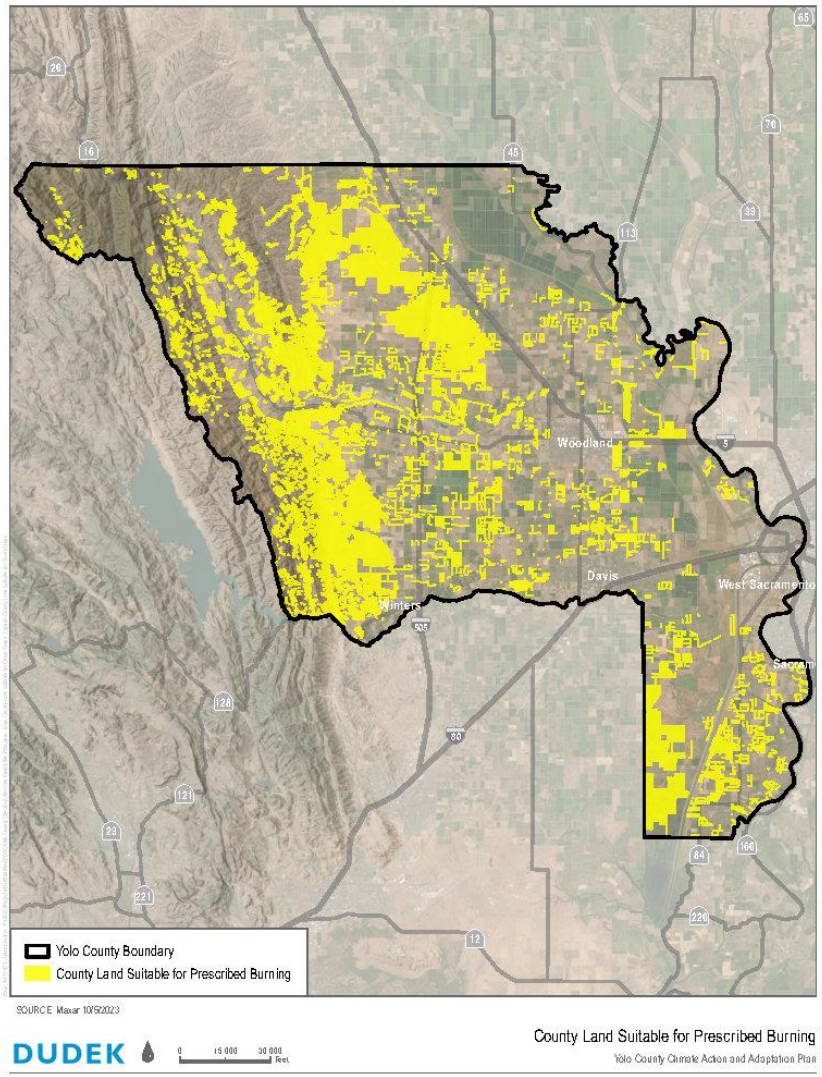


NWL 1d. Support Practices to Sequester Carbon on Grazing and Pastureland

Prescribed Burning (NRCS CPS 338)

Planned fire can be applied to a predetermined area to manage undesirable vegetation, improve plant community structure and composition, reduce wildfire hazards, improve and maintain habitat for soil organisms, and enhance soil health. In Yolo County, this voluntary practice can be applied to pasture and annual grasslands. Co-benefits include improved plant community structure and composition, pest and weed reduction, wildfire risk reduction, improved habitat, and improved plant and seed production of desirable plant species.

- **Available acreage:** 80,934
- **Maximum Sequestration Potential:** Not available in COMET-Planner.

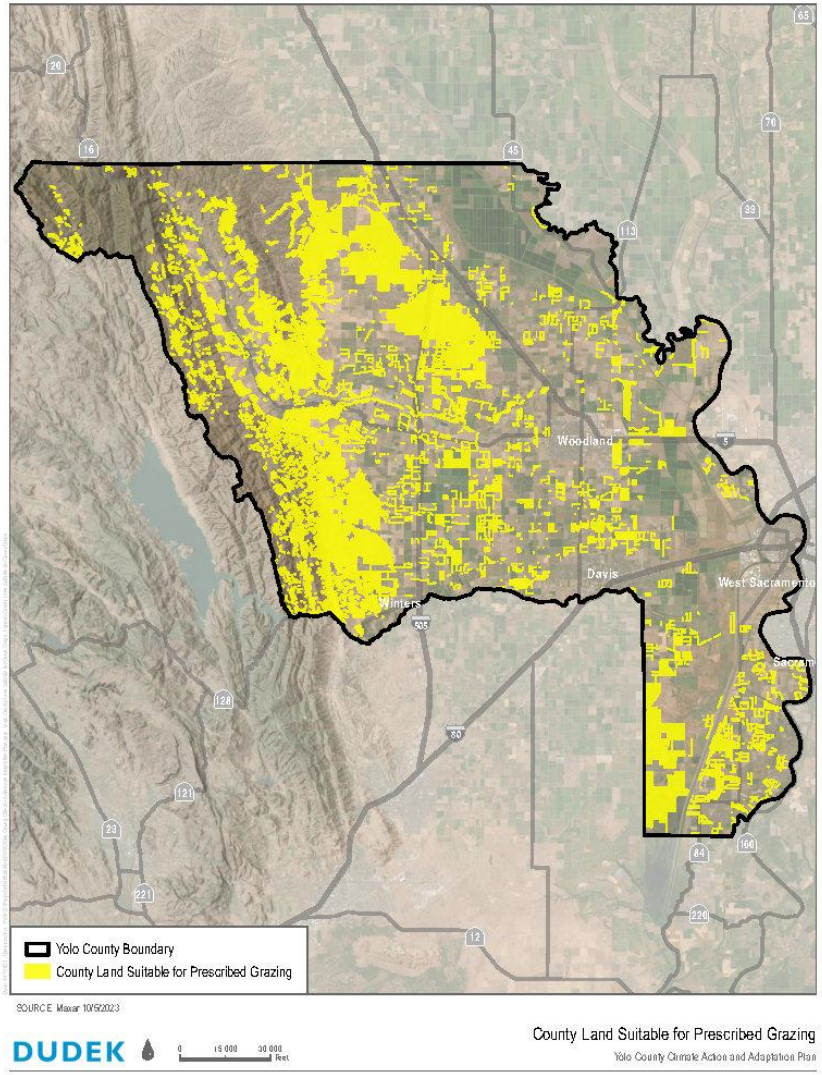


Appendix C: Natural and Working Lands

Prescribed Grazing (NRCS CPS 528)

Prescribed grazing is managing the harvest of vegetation with grazing and/or browsing animals with the intent to achieve specific ecological, economic, and stewardship objectives. This voluntary practice reduces soil erosion and maintains or improves soil health. The practice can be applied to all lands where grazing and/or browsing animals are managed, which includes pasture, grassland, and annual grassland. Co-benefits include maintained or improved species composition, structure, and/or vigor of plant communities, maintained or improved water quality, maintained or improved wildlife food and/or cover, and reduced fuel loads to decrease wildfire risk.

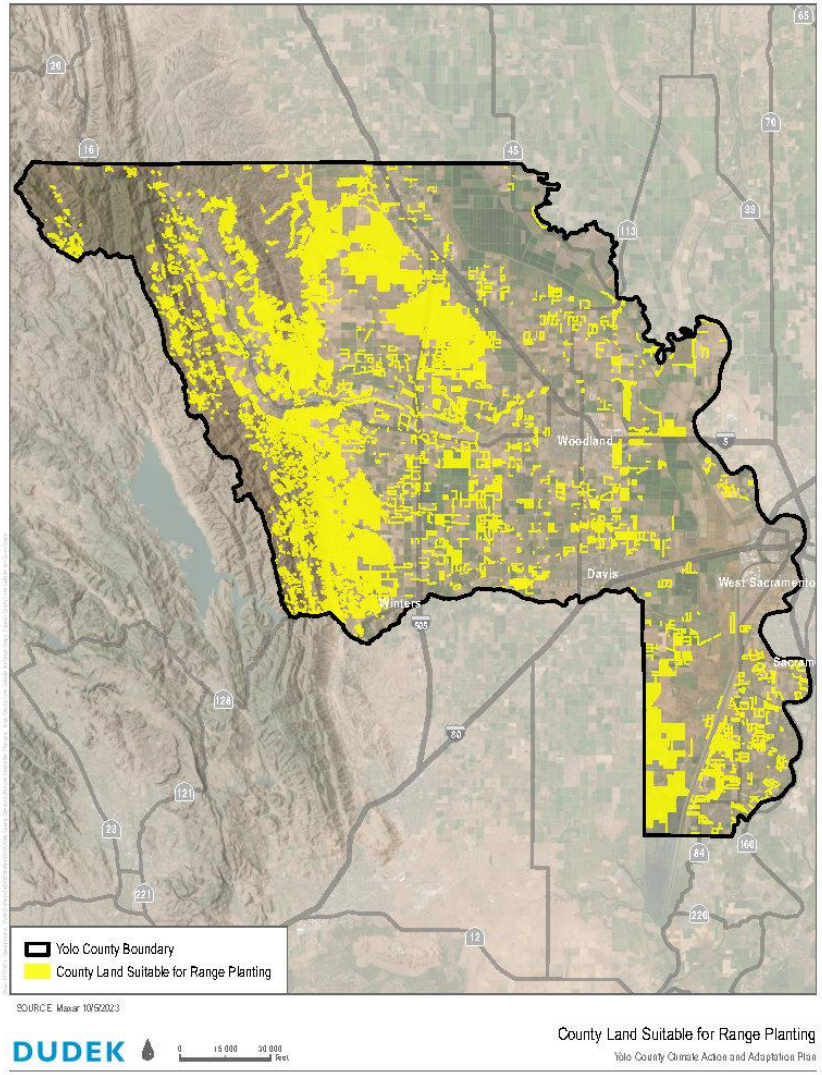
- **Available acreage:** 80,694
- **Maximum Sequestration Potential:** 6,179 MT CO_2e/year
- **Per Acre Sequestration rate:** 0.08 MT CO_2e/acre/year
- **Sequestration Potential Scenarios:**
  - ***Sequestration Potential at 5% Adoption:*** 309 MT CO_2e/year
  - ***Sequestration Potential at 20% Adoption:*** 1,236 MT CO_2e/year
  - ***Sequestration Potential at 50% Adoption:*** 3,089 MT CO_2e/year
  - ***Sequestration Potential at 70% Adoption:*** 4,325 MT CO_2e/year



Range Planting (NRCS CPS 550)

Range planting is the seeding and establishment of herbaceous and woody species for the improvement of vegetation composition and productivity of the plant community to meet management goals. This voluntary practice increases and/or stabilizes carbon balance and sequestration. The practice can be applied where desirable vegetation is below the acceptable level for natural reseeding to occur or where the potential for enhancement of the vegetation by management of herbivory[4] is unsatisfactory. Lands to which this practice is applied include pasture, grassland, and annual grassland. Co-benefits include providing or improving livestock forage, providing or improving wildlife food and/or cover, reduced erosion, improved water quality and quantity, and restoration of hydrologic function.

- **Available acreage:** 80,694
- **Maximum Sequestration Potential:** 27,377 MT CO_2e/year
- **Per Acre Sequestration rate:** 0.34 MT CO_2e/acre/year
- **Sequestration Potential Scenarios:**
  - ***Sequestration Potential at 5% Adoption:*** 1,369 MT CO_2e/year
  - ***Sequestration Potential at 20% Adoption:*** 5,475 MT CO_2e/year
  - ***Sequestration Potential at 50% Adoption:*** 13,689 MT CO_2e/year
  - ***Sequestration Potential at 70% Adoption:*** 19,164 MT CO_2e/year



[4] Herbivores are animals that feed on plant substances.

Herbaceous Weed Treatment (NRCS CPS 315)

The removal or control of herbaceous weeds including invasive, noxious, prohibited, or undesirable plants. This practice is applied to all agricultural lands except active croplands and to the edges of all agricultural pasture and grasslands.

- **Available acreage:** Range
- **Maximum Sequestration Potential:** No COMET-Planner data available.

NWL 1e. Support Implementation of Agroforestry Practices

Alley Cropping (NRCS CPS 311)

Trees or shrubs are planted in sets of single or multiple rows, with agronomic, horticultural crops or forages that generate additional products planted in the alleys between the sets of woody plants. Practice applies to cropland and hayland where trees, shrubs, crops, and forages can be grown in combination.

- **Available acreage:** Range
- **Maximum Sequestration Potential:** No COMET-Planner data available.

Windbreaks/Shelterbelt Establishment and Renovation (NRCS CPS 380)

This practice involves the establishment, enhancement, or renovation of windbreaks, also known as shelterbelts, which are single or multiple rows of trees and/or shrubs in linear or curvilinear configurations. This voluntary practice increases carbon storage in biomass and soils; co-benefits include increasing biodiversity and habitat. The practice may be applied in any area where linear plantings of woody plants are desired and suited for controlling wind and as visual resources. Other tree/shrub practices should be used when wind and aesthetic issues are not concerns. Co-benefits include reduced soil erosion, enhanced plant health, improved moisture management, shelter from wind and excessive heat, and improved air quality.

- **Available acreage:** 10,000–20,000
- **Maximum Sequestration Potential:** 277,844 MT CO_2e/year
- **Per Acre Sequestration rate:** 13.89 MT CO_2e/acre/year
- **Sequestration Potential Scenarios:**
  - ***Sequestration Potential at 5% Adoption:*** 13,892 MT CO_2e/year
  - ***Sequestration Potential at 20% Adoption:*** 55,569 MT CO_2e/year
  - ***Sequestration Potential at 50% Adoption:*** 138,922 MT CO_2e/year
  - ***Sequestration Potential at 70% Adoption:*** 194,491 MT CO_2e/year

Silvopasture (NRCS CPS 381)

Deliberate integration of trees and grazing livestock operations on the same land unit, intensively managed for both forest products and forage. This practice improves soil quality and increases carbon storage and may be applied on any area suitable for the desired forages, trees, and livestock.

- **Available acreage:** Range

- **Per Acre Sequestration rate:** 0.66 MT CO_2e/acre/year[5].

Riparian Herbaceous Cover (NRCS CPS 390)

Riparian herbaceous cover consists of grasses, sedges, rushes, ferns, legumes, and forbs tolerant of intermittent flooding or saturated soils, established or managed as the dominant vegetation in the transitional zone between upland and aquatic habitats. This voluntary practice can be applied to land adjacent to watercourses, water bodies, and wetlands where natural riparian vegetation has been altered and bank stability is adequate to support the practice. Appropriate land for this practice is agricultural land adjacent to perennial or intermittent watercourses or water bodies where the natural plant community is dominated by herbaceous vegetation that is tolerant of periodic flooding or saturated soils. Co-benefits include provision of or improvement to wildlife food and/or cover, maintained or improved water quality, maintenance or establishment of wildlife corridors, improved pollination services, and enhanced streambank protection.

- **Available acreage:** 6,000
- **Maximum Sequestration Potential:** 1,620 MT CO_2e/year
- **Per Acre Sequestration rate:** 0.27 MT CO_2e/acre/year
- **Sequestration Potential Scenarios:**
  - ***Sequestration Potential at 5% Adoption:*** 81 MT CO_2e/year
  - ***Sequestration Potential at 20% Adoption:*** 324 MT CO_2e/year
  - ***Sequestration Potential at 50% Adoption:*** 810 MT CO_2e/year
  - ***Sequestration Potential at 70% Adoption:*** 1,134 MT CO_2e/year

Riparian Forest Buffer (NRCS CPS 391)

This practice establishes an area predominantly covered by trees and/or shrubs located adjacent to and up-gradient from a watercourse or water body. This voluntary practice can be applied to areas adjacent to permanent or intermittent streams, lakes, ponds, and wetlands where channels and streambanks are sufficiently stable. Co-benefits include reduced sediment transport, improved wildlife habitat, and restored diversity, structure, and composition of riparian plant communities.

- **Available acreage:** 6,000
- **Maximum Sequestration Potential:** 27,102 MT CO_2e/year
- **Per Acre Sequestration rate:** 4.52 MT CO_2e/acre/year
- **Sequestration Potential Scenarios:**
  - ***Sequestration Potential at 5% Adoption:*** 1,355 MT CO_2e/year
  - ***Sequestration Potential at 20% Adoption:*** 5,420 MT CO_2e/year
  - ***Sequestration Potential at 50% Adoption:*** 13,551 MT CO_2e/year
  - ***Sequestration Potential at 70% Adoption:*** 18,971 MT CO_2e/year

[5] NRCS CPS 381 practice implementation; Tree/Shrub Planting on Grazed Grasslands

Hedgerow Planting (NRCS CPS 422)

Hedgerow planting is the establishment of dense vegetation (e.g., trees, shrubs, perennial grasses, forbs, rushes, sedges) in a linear design surrounding a farm field. This voluntary practice increases carbon storage in biomass and soils and provides pollinator and wildlife habitat, as well as other co-benefits. The practice can be implemented along the edges of cultivated fields. Co-benefits include improved pollination services, provision of food and cover for wildlife, provision of wildlife corridors, interception of airborne particulate matter, reduced chemical drift, and boundary delineation.

- **Available acreage:** 10,000–20,000
- **Maximum Sequestration Potential:** 277,844 MT CO_2e/year
- **Per Acre Sequestration rate:** 13.89 MT CO_2e/acre/year
- **Sequestration Potential Scenarios:**
  - ***Sequestration Potential at 5% Adoption:*** 13,892 MT CO_2e/year
  - ***Sequestration Potential at 20% Adoption:*** 55,569 MT CO_2e/year
  - ***Sequestration Potential at 50% Adoption:*** 138,922 MT CO_2e/year
  - ***Sequestration Potential at 70% Adoption:*** 194,491 MT CO_2e/year

NWL 1 Sequestration Potential Summary

Table C-5 below provides a summary of carbon sequestration potential with implementation of the quantifiable practices within NWL 1. Maximum sequestration potential is presented and represents sequestration that can be achieved on an annual basis if the action is applied to 100% of the available acreage. Understanding that it is infeasible to apply all practices to 100% of suitable land, the annual sequestration rate (MT CO_2e/acre/year) and a range of adoption scenarios (5%, 20%, 50%, and 70%) is also provided. The practices not shown in the table are those for which the total land available is not currently known or practices with no available COMET-Planner data.

As noted within the table, given the interacting effects of several practices when applied concurrently (i.e., cover crops, residue and tillage management, nutrient management), the independent sequestration benefit of these practices is not necessarily additive. As such, COMET-Planner's "multiple conservation practices" option for cropland and pasture was used to estimate the maximum sequestration potential from these actions within Yolo County.

Additionally, some practices within the table are mutually exclusive and so would not occur together on the same available acreage. To avoid reporting an unrealistic scenario, mutually exclusive practices are indicated within the table and not taken together. Maximum sequestration potential excludes sequestration for mutually exclusive practices, using the higher sequestration value where needed.

As shown, when accounting for mutually exclusive practices, implementing the NWL 1 actions on all suitable lands within Yolo County would result in approximately 2,062,307 MT CO_2e sequestered per year.

Table C-5. Yolo County Sequestration Potential Scenarios with Implementation of NWL 1 Conservation Practices

NRCS CPS	Conservation Practice	Available Acreage	Average Sequestration Rate (MT CO_2e/ acre/ year)	Annual Sequestration Potential (MT CO_2e/year)				
				Maximum Potential (100% Practice Adoption)	5% Practice Adoption	20% Practice Adoption	50% Practice Adoption	70% Practice Adoption
340	Cover Crops[a,d]	178,291	0.29	51,007	2,550	10,201	25,504	35,705
328	Conservation Crop Rotation[a]	140,783	0.26	37,162	1,858	7,432	18,581	26,013
329	Residue and Tillage Management: No Till[b,c]	252,011	0.17	42,994	2,150	8,599	21,497	30,096
345	Residue and Tillage Management: Reduced Till[b,c]	163,812	0.10	15,583	779	3,117	7,792	10,908
336	Soil Carbon Amendments: Compost Application[d]	288,628	4.47	1,291,465	64,573	258,293	645,733	904,026
808	Soil Carbon Amendments: Whole Orchard Recycling	79,563	0.04	3,016	151	603	1,508	2,111
484	Mulching	98,728	0.21	20,305	1,015	4,061	10,153	14,214
585	Stripcropping	70,391	0.15	10,829	541	2,166	5,415	7,581
590	Nutrient Management[c]	288,628	0.27	78,216	3,911	15,643	39,108	54,752
528	Prescribed Grazing	80,694	0.08	6,179	309	1,236	3,089	4,325
550	Range Planting	80,694	0.34	27,377	1,369	5,475	13,689	19,164
380	Windbreaks/ Shelterbreaks	20,000	13.89	277,844	13,892	55,569	138,922	194,491

Table C-5. Yolo County Sequestration Potential Scenarios with Implementation of NWL 1 Conservation Practices

NRCS CPS	Conservation Practice	Available Acreage	Average Sequestration Rate (MT CO_2e/ acre/ year)	Annual Sequestration Potential (MT CO_2e/year)				
				Maximum Potential (100% Practice Adoption)	5% Practice Adoption	20% Practice Adoption	50% Practice Adoption	70% Practice Adoption
390	Riparian Herbaceous Cover	6,000	0.27	1,620	81	324	810	1,134
391	Riparian Forest Buffer	6,000	4.52	27,102	1,355	5,420	13,551	18,971
422	Hedgerow Planting	20,000	13.89	277,844	13,892	55,569	138,922	194,491
888	Multiple Conservation Practices[c]	192,998	0.62	118,726	5,936	23,745	59,363	83,108
			Total[e]	**2,062,307**	**103,115**	**412,461**	**1,031,154**	**1,443,615**

Notes:

[a] Cover Crops(CPS340) and Conservation Crop Rotation (CPS 328) are heavily overlapping practices, and thus their sequestration potentials should not be taken cumulatively.

[b] Residue and Tillage Management practices (CPS 328 and 329) are overlapping practices, and thus their sequestration potentials should not be taken cumulatively.

[c] Given the interacting effect of several practices, applying in combination is not necessarily additive. Therefore, maximum potential sequestration for lands implementing Cover Crops (CPS 340), Residue And Tillage Management (CPS 329 and 345), and Nutrient Management (CPS 590) concurrently is estimated within the Multiple Conservation Practices option within COMET-Planner.

[d] See Table C-4, Yolo County Sequestration Potential with Compost (C/N>11) Application, for details about the values in this row.

[e] Total sequestration excludes sequestration for mutually exclusive practices, taking the higher sequestration value where needed.

Table C-6 below summarizes average rates of carbon sequestration (MT CO_2e/acre/year) for the practices discussed above.[5] Practices are presented in the order of the greatest carbon sequestration potential to the least carbon sequestration potential. The establishment of woody plants for hedgerows, windbreaks, and riparian forest buffers provides a substantial amount of carbon sequestration and should be implemented wherever possible along farm edges and waterways. These three practices not only have significant carbon sequestration potential, but also provide co-benefits including pollination, water filtration, wildlife habitat, and wildlife movement corridors.

Of practices that are implemented as part of growing food, SCA in the form of compost application provide the greatest per-acre sequestration. Range planting, cover crops, nutrient management, and riparian herbaceous cover follow, sequestering less than a tenth of the sequestration achieved through compost application as estimated by COMET-Planner.

Table C-6. Conservation Practice Sequestration Rates Ranked (MT CO_2e/acre/year)

NRCS CPS	Conservation Practice	Annual Sequestration
422	Hedgerow Planting	13.89
380	Windbreaks/Shelterbelt Establishment and Renovation	13.89
391	Riparian Forest Buffer	4.52
336	Soil Carbon Amendments, Compost Application	4.47
888	Multiple Conservation Practices	0.62
550	Range Planting	0.34
340	Cover Crops	0.29
590	Nutrient Management	0.27
390	Riparian Herbaceous Cover	0.27
328	Conservation Crop Rotation	0.26
393	Filter Strips	0.26
412	Grassed Waterways	0.26
484	Mulching	0.21
329	Residue and Tillage Management, No Till	0.17
585	Stripcropping	0.15
345	Residue and Tillage Management, Reduced Till	0.10

[5] For those with COMET-Planner data available.

Table C-6. Conservation Practice Sequestration Rates Ranked (MT CO_2e/acre/year)

NRCS CPS	Conservation Practice	Annual Sequestration
528	Prescribed Grazing	0.08
808	Soil Carbon Amendments, Whole Orchard Recycling	0.04

Notes: only practices with available COMET-Planner data are included.

This information provides a clear path forward for working lands in Yolo County; to sequester the maximum amount of atmospheric carbon, hedgerows, windbreaks/shelterbelts, riparian forest buffers, and SCA in the form of compost application should be prioritized. Simultaneously, hedgerows, windbreaks, and riparian forest restoration should be prioritized and encouraged through financial incentives including property tax reductions wherever willing landowners express interest. Producers should receive incentives for the voluntary use of compost applications in appropriate settings. The in-county production and distribution of compost should be examined, with the intent to scale up production and efficiently and effectively deliver it to willing growers and ranchers.

All carbon sequestration practices should be encouraged to capture and store as much atmospheric carbon as possible. Incentives such as direct payments and/or free compost and technical assistance should be provided to willing producers.

NWL 2: Restore Natural Lands

NWL 2 includes actions that restore landscapes to natural or historical ecological function through manipulation of the physical, chemical, or biological characteristics. These actions are largely assumed to involve revegetation with native plantings. The restoration of natural lands can improve the ability of the land to sequester carbon and support native plant and animal species. Cultivating these native ecosystems, including wetlands, riparian forests, and native grasslands, can provide benefits for the local and regional climate.

NWL 2a. Restore Wetlands

Wetlands are areas where water covers the soil or is present at or near the surface of the soil seasonally or permanently. NWL 2a prioritizes wetland restoration near communities most vulnerable to climate change and where climate-smart land stewardship can improve groundwater and water quantity, protect communities from flooding, and increase access to nature.

Identify opportunities to reconstruct wetlands where possible, for example during construction projects in areas where these nature-based solutions could deliver climate and other beneficial outcomes to communities.

- **Available acreage:** 0–100 acres per year
- **Maximum Sequestration Potential:** 31,835 MT CO_2e/year
- **Per Acre Sequestration rate:** 318 MT CO_2e/acre/year[6]

[6] Wetland Restoration GHG benefit obtained from California Department of Fish and Wildlife Land Restoration 18-19 Tool For Delta wetland restoration (CDFW 2024).

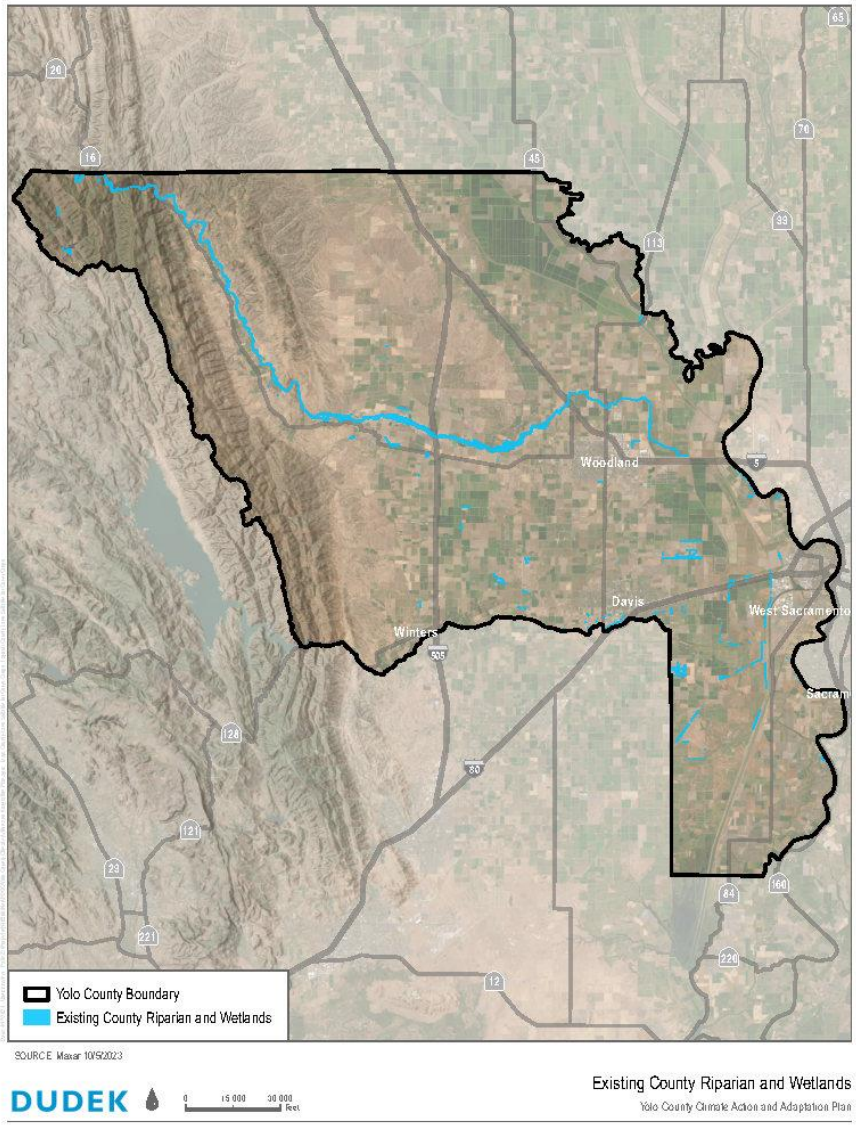
NWL 2b. Restore Riparian Forests

Riparian forests occur along the edges of creeks and other water bodies. NWL 2b seeks to restore riparian forests and other ecosystems, where appropriate, to enhance carbon storage, protect biodiversity, and expand wildlife corridors and climate migration pathways for native species. Work with landowners to support restoration efforts on Putah and Cache Creeks and their tributaries, as well as the mainstream riparian areas and floodplains of the Sacramento River and Yolo Bypass. Reconnect aquatic habitat within forests to help fish and wildlife endure drought and adapt to climate change.

- **Available acreage:** 0–100 acres per year
- **Maximum Sequestration Potential:** 99.60 MT CO_2e/year

Figure C-15 below depicts existing riparian areas and wetlands within unincorporated Yolo County.

Figure C-15. Existing County Riparian and Wetlands



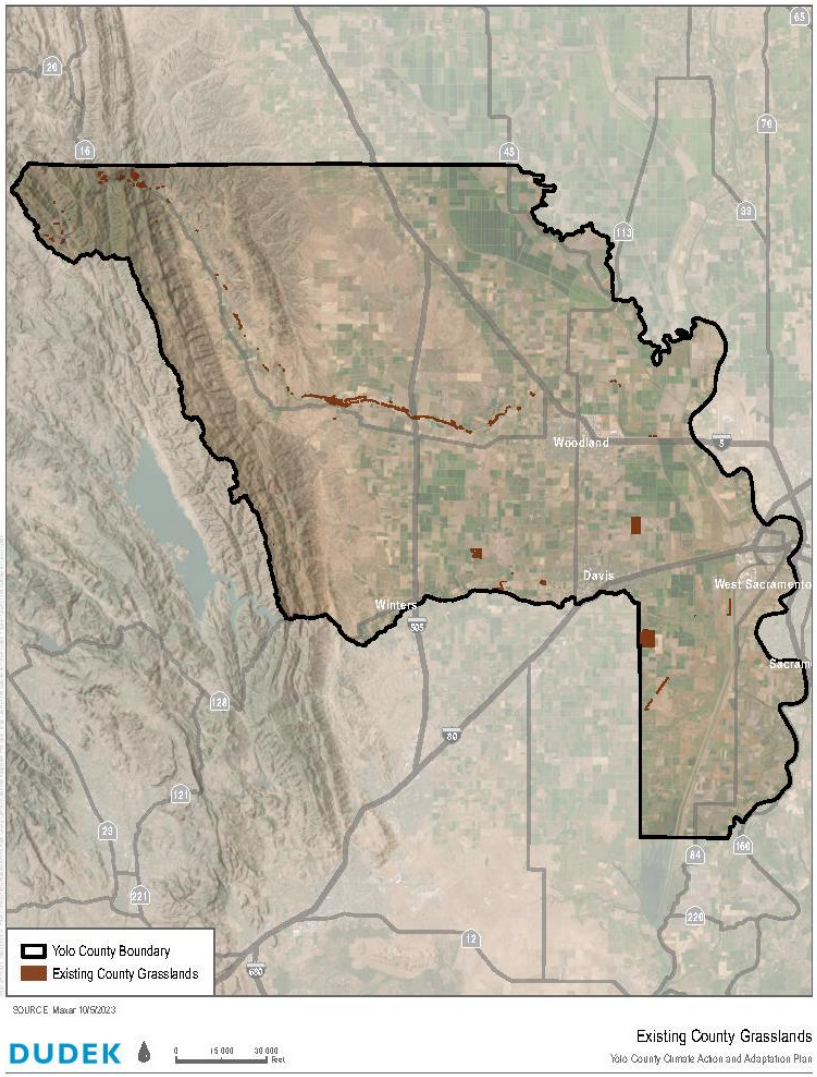
NWL 2c. Restore Native Grasslands

Restore grasslands in Yolo County public lands to improve carbon storage, biodiversity, and connectivity where feasible. For this analysis, only County-owned lands were considered because the County has jurisdiction over them. There is a larger potential for grassland restoration on 61,000 acres of private lands throughout Yolo County.

Figure C-16 below depicts existing grasslands within unincorporated Yolo County.

- **Available acreage:** 0–100 acres per year
- **Maximum Sequestration Potential:** 104.86 MT CO_2e/year[8]

Figure C-16. Existing County Grasslands



[8] Sequestration rate provided by COMET-Planner (Critical Area Planting, CPS 342)

NWL 2d. Repurpose Fallowed Cropland

Convert unused or idle agricultural land for alternative purposes. Some common practices for intentionally uncultivated land include reforestation and wildlife habitat conservation.

- **Available acreage:** 0–100 acres per year
- **Maximum Sequestration Potential:** 944.56 MT CO_2e/year

NWL 3: Promote Stewardship in Natural Lands

NWL 3 includes actions that make stewardship or vegetation changes to the existing landscape to improve ecological function, in this case, to support carbon sequestration. Careful stewardship of natural lands can increase their productivity and climate benefits beyond what would be possible without human intervention. Stewardship can result in healthy and resilient landscapes, thriving natural communities, and increased carbon sequestration.

Actions related to stewardship, such as maintaining and enhancing native plant composition and returning natural fire and flood regimes within Yolo County's natural lands, were not quantified at this time, but they could be quantifiable in the future with the advancement of methodologies and assumptions.

NWL 4: Conserve Natural and Working Lands

NWL 4 includes actions that involve land use planning and policy intervention to avoid and minimize the conversion of carbon-sequestering NWL land cover types to those with lower carbon storage and sequestration potential, as these land cover types would likely have higher GHG emissions.

Conservation of land does not result in direct carbon sequestration, and as such was not quantified for inclusion in the CAAP reduction strategy.

Partners

Partnerships play a critical role in CAAP implementation and increase the probability of achieving CAAP goals. Potential partners specifically relevant to NWL include the following:

- Audubon California Conservation Ranching Program
- Cache Creek Conservancy
- California Alliance of Family Farmers
- California FarmLink
- Clarksburg Wine Growers & Vintners Association
- Delta Protection Commission
- Kitchen Table Advisors
- La Cooperative Campesina
- Lower Bypass Planning Forum
- Lower Putah Creek Coordinating Committee
- Other Yolo County nonprofit and community-based organizations
- Other private individuals in Yolo County
- Putah Creek Council
- Sacramento River Conservation Area Forum
- Sacramento Valley Conservancy
- Sustainable Conservation
- Tuleyome
- University of California Cooperative Extension
- University of California, Davis
- USDA NRCS – Woodland Office
- Valley Vision
- Westside Sacramento Integrated Regional Water Management Coordinating Committee
- Yocha Dehe Wintun Nation
- Yolo Basin Foundation
- Yolo Bypass Working Group and Planning Forum
- Yolo Cattlemen and Wool Growers Association
- Yolo County Agriculture/Weights and Measures
- Yolo County Certified Organic Agriculture
- Yolo County Farm Bureau
- Yolo County Fire Safe Council
- Yolo County Flood Control & Water Conservation District
- Yolo County growers
- Yolo County Parks
- Yolo County ranchers
- Yolo County Resource Conservation District
- Yolo Habitat Conservancy
- Yolo Land Trust
- Yolo Subbasin Groundwater Agency

Incorporated Cities

City of Davis
City of West Sacramento
City of Winters
City of Woodland

Federal

U.S. Bureau of Land Management

- Bureau of Land Management Lands

U.S. Army Corps of Engineers

- Little Holland Tract

Nonprofit

National Audubon Society

- Bobcat Ranch

Cache Creek Conservancy

- Cache Creek Nature Preserve

Yolo Land Trust

- Elkhorn Basin

Sacramento Valley Conservancy

- Hershey Camp
- Sheep Camp Ranch

Tuleyome

- Ireland Ranch

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Yolo County Existing Conservation Efforts

Table C-1a. Yolo County Conservation Plans and Related Goals and Objectives

Goal/Objective	Description
Conservation	
Yolo County Agricultural Conservation Priority Plan [1]	
County Agricultural Conservation Selection Criteria	1. The areas within 2 miles of the urban growth areas of the incorporated cities and the town of Esparto should be the geographic priority areas for agricultural land conservation. 2. The County's acquisition of conservation easements for agricultural land should focus on prime farmland located in areas most subject to development pressures. 3. Other programs beyond those required by the County could be used to support the acquisition of conservation easements, and the County should continue to collaborate with other public and private entities. 4. The County's land acquisition should focus on lands as near as possible to urban growth boundaries, which would multiply the value of conservation by reducing the development potential for lands on the other side of the conserved areas.
Yolo Habitat Conservation Plan/Natural Communities Conservation Plan (Yolo HCP/NCCP) [2]	
Conservation Measure 1: Establish Reserve System	
Objective L-1.1	Conserve 32,406 acres of natural communities and covered species habitats in the Conservation Reserve Area, including 24,406 acres of newly protected lands and 8,000 acres of additional pre-permit reserve lands enrolled into the reserve system. Restore or create 956 acres of wetlands and riparian natural community. On a case-by-case basis, lands outside the Conservation Reserve Area may be enrolled if they benefit the covered species and would be subject to review and approval by the wildlife agencies.
Objective L-1.2	Include a variety of environmental gradients (e.g., hydrology, elevation, soils, slope, and aspect) within and across a diversity of protected and restored natural communities within the Plan Area.
Objective L-1.3	Increase the size and connectivity of the network of protected lands in the Plan Area by acquiring newly protected lands for the reserve system adjacent to and between baseline protected lands.
Objective L-1.4	Prioritize land acquisition and natural community restoration to support a corridor comprised of patches of woody and herbaceous riparian vegetation, where it can be sustained by natural flows, within the Cache Creek floodplain and extending the length of Cache Creek from the west boundary of planning unit 7 to the Cache Creek Settling Basin exclusive of existing and potential aggregate mining areas (Figure 6-3, Ecological Corridors).
Objective L-1.5	Prioritize land acquisition and restoration to support a corridor comprised of patches of woody and herbaceous riparian vegetation within the Putah Creek floodplain extending the length of Putah Creek in planning units 8 and 9 (Figure 6-3, Ecological Corridors).
Objective L-1.6	Prioritize land acquisition and restoration to support a corridor comprised of patches of woody and herbaceous riparian vegetation along the Sacramento River and Yolo Bypass in planning units 12, 14, 15, and 21 (Figure 6-3, Ecological Corridors).
Objective NC-CL1.1	Protect at least 14,362 acres of non-rice that provides habitat value for covered and other native species. Field borders mapped as Semiagricultural/Incidental to Agriculture that provide habitat for covered species will count towards this requirement. Some of these lands may be substituted for grassland habitat upon approval by the wildlife agencies.
Objective NC-CL1.2	Protect at least 2,800 acres of unprotected flooded rice that provides habitat value for covered and other native species. If these fields cannot be flooded due to drought or market conditions, ensure water remains in conveyance channels. This acreage can be substituted for wetlands that provide habitat for the covered species.
Objective NC-CL1.3	Enroll at least 5,424 acres of cultivated lands natural community on baseline public and easement lands into the reserve system as pre-permit reserve lands
Objective NC-G1.1	Protect 4,430 acres of unprotected grassland, including at least 3,000 acres in the Dunnigan Hills planning unit (PU 5).
Objective NC-VFR1.1	Protect, manage, and enhance 1,600 acres of unprotected valley foothill riparian distributed primarily in planning units 7 and 9.
Objective NC-AP1.1	Protect 35 acres of alkali prairie natural community on the Woodland Regional Park prior to any loss of this natural community as a result of covered activities (Figure 6-4, Alkali Prairie Natural Community and Baseline Public and Easement Lands).
Objective NC-FEW1.1	Protect and manage 500 acres of fresh emergent wetland
Objective NC-LR1.1	Protect, manage, and enhance 600 acres of lacustrine and riverine natural community providing habitat for covered and other native species.
Objective VELB1.1	Within the 1,600 acres of protected valley foothill riparian natural community (Objective NC-VFR1.2), prioritize protection of populations of valley elderberry longhorn beetle along Lower Cache Creek, Lower Putah Creek, and Sacramento River and adjacent lands to provide for population expansion consistent with the occupancy commitment for valley elderberry longhorn beetle in Table 6-2(c).
Objective CTS1.1	Within the 3,000 acres of protected grassland in the Dunnigan Hills planning unit (Objective NC-G1.1), include at least 2,000 acres of modeled upland habitat within 1.3 miles of aquatic habitat for California tiger salamander and prioritize protection in designated critical habitat.
Objective CTS1.2	Within the 600 acres of protected lacustrine and riverine natural community (Objective NC-LR1.1), protect at least 36 acres of California tiger salamander aquatic habitat. Restore or create 36 acres of aquatic habitat. Within the protected and restored aquatic habitat, include at least five California tiger salamander breeding pools that are each found to support all life stages of the salamander through all water year types, consistent with the occupancy commitment for this species in Table 6-2(c).
Objective CTS1.3	If California tiger salamander is present or assumed to be present at the site of a covered activity, the covered activity will not remove aquatic habitat until at least four new occupied breeding pools are discovered or established in the Dunnigan Hills area and protected in the Dunnigan Hills area, with sufficient surrounding uplands to support the individuals using the protected aquatic habitat. After the four new breeding pools are protected and with concurrence of USFWS and CDFW, up to three occupied breeding pools discovered may be removed.
Objective GGS1.1	Protect and manage the 2,800 acres of protected rice land (Objective NC-CL1.2) in modeled giant garter snake habitat. Suitable emergent marsh can be substituted for rice land.
Objective GGS1.2	Protect and manage 1,160 acres of upland natural communities (Objective L-1.1) to provide active season upland movement habitat and at least 2,315 acres to provide overwintering habitat for giant garter snake.
Objective GGS1.3	Protect, restore, and manage the 500 acres of fresh emergent wetland natural community (Objective NC-FEW1.1), at least 420 acres of the lacustrine/riverine natural community (Objective NC-LR.11), the restored fresh emergent wetland (Objective NC-FEW1.2), and restored lacustrine and riverine natural community (Objective NC-LR1.2) to conserve the giant garter snake. Ensure at least 80% of the aquatic habitat is perennial, and that the remainder provides aquatic habitat for the giant garter snake during the active season at least through July of each summer.

Yolo County Existing Conservation Efforts

Table C-1a. Yolo County Conservation Plans and Related Goals and Objectives

Goal/Objective	Description
Conservation	
Objective GGS1.4	In addition to the newly protected and restored giant garter snake habitat (Objectives GGS1.1, GGS1.2, and GGS1.3), enroll at least 2,910 acres of giant garter snake habitat on eligible baseline public and easement lands into the reserve system as pre-permit reserve lands.
Objective SH1.1	Within the 14,362 acres of protected non-rice cultivated land natural community (Objective CL1.1), maintain crop types that support Swainson's hawk foraging habitat.
Objective SH1.2	Protect and manage the 4,430 acres of grassland natural community (Objectives NC-GR1.1) to ensure that it provides modeled Swainson's hawk foraging habitat.
Objective SH1.3	Protect and maintain at least 20 unprotected Swainson's hawk nest trees (active within the last five years at the time tree is protected) within the reserve system, consistent with the occupancy requirements for this species in Table 5-2(c).
Objective SH1.4	In addition to newly protected unprotected lands (Objectives SH1.1, SH1.2, and SH1.3), enroll at least 4,580 acres of baseline public and easement lands into the reserve system as pre-permit reserve lands foraging habitat.
Objective WYBC1.1	Of the 1,600 acres of protected valley-foothill riparian natural community (Objectives NC-VFR1.1), site as least 500 acres in modeled yellow-billed cuckoo habitat, and design at least 60 acres of the restored valley foothill riparian (Objective NC-VFR1.2) to provide suitable habitat for this species.
Objective WBO1.1	Of the 4,430 acres of protected grassland natural community (Objective NC-G1.1), site at least 3,000 acres in modeled western burrowing owl habitat.
Objective WBO1.2	Of the 14,362 acres of protected non-rice cultivated lands (Objective NC-CL1.1), provide at least 2,500 acres of western burrowing owl habitat
Objective WBO1.3	Maintain two active nesting sites in the reserve system for each nesting pair displaced by covered activities and maintain one active nesting site or single owl site in the reserve system for each non-breeding single owl displaced by covered activities.
Objective WBO1.4	Within the habitat protected under Objectives WBO1.1 and WBO1.2, prioritize acquisition. The first priority is to identify and preserve occupied habitats in the Yolo Bypass and adjacent lands (southeastern panhandle). This is the portion of the Plan Area that supports the greatest potential for long-term sustainability of breeding colonies. The second priority is to identify and preserve habitat adjacent to occupied sites that have enhancement potential. The third priority will focus on modeled habitat in the Plan Area with historic records of burrowing owl occupancy and lands that are capable of supporting nesting activity through management and enhancement actions. Protect sufficient habitat surrounding occupied and potentially occupied burrows to sustain the breeding pairs, consistent with Staff Report on Burrowing Owl Mitigation (CDFG 2012)
Objective LBV1.1	Of the 1,600 acres of newly protected valley foothill riparian (Objective NC-VFR1.1), site at least 600 acres in modeled least Bell's vireo habitat, and design the restored valley foothill riparian (Objective NC-VFR1.2) to provide suitable habitat for this species
Objective BS1.1	Protect 50 acres of unprotected modeled bank swallow habitat on a site occupied by this species in planning unit 7 or along the Sacramento River.
Objective TRBL1.1	Within the 500 acres of protected fresh emergent wetland natural community (Objective NC-FEW1.1), site at least 200 acres in modeled tricolored blackbird nesting habitat.
Objective TRBL1.2	Enroll at least 4,000 acres of tricolored blackbird foraging habitat and 150 acres of tricolored blackbird nesting habitat on baseline public and easement lands into the reserve system as pre-permit reserve lands.
Objective TRBL1.3	Maintain at least two tricolored blackbird nesting colonies in the reserve system and prioritize newly protected nesting habitat in additional occupied areas as they are found. To avoid intensive disturbances (e.g., heavy equipment operation associated with construction activities) or other activities that may cause nest abandonment or forced fledging, include a buffer zone of at least 250 feet around protected active breeding colonies. This minimum buffer may be reduced in areas with dense trees, buildings, or other habitat features between potential nearby disturbances and the protected nest colonies or where there is sufficient topographic relief to protect the colonies from excessive noise or visual disturbance, as determined by a qualified biologist, with concurrence from the wildlife agencies.
Yolo Regional Conservation Investment Strategy/Local Conservation Plan [3]	
Goal L1: Large Interconnected Landscapes	Maintain interconnected landscapes in Yolo County with the range of physical and biological attributes (e.g., slope, soils, hydrology, climate, and plant associations) that support the distribution and abundance of focal and conservation species and their habitats, provide for the movement and genetic interchange among populations of focal and conservation species, support adaptive adjustments in species distributions in response to climate change, and sustain native biodiversity
Goal L2: Ecological Processes and Conditions	Maintain or restore ecological processes and conditions in Strategy Area landscapes that sustain natural communities, native species, and landscape connectivity
Goal L3: Landscape-level Stressors	Reduce landscape-level stressors that cause widespread effects on native species and ecosystems and on natural processes.
Goal L4: Biodiversity, Ecosystem Function, and Resilience	Maintain and increase biodiversity, ecosystem function, and resilience across landscapes, including agricultural and grazed lands. Maintain landscape elements and processes that are resilient to climate change which will continue to support a full range of biological diversity in Yolo County
Goal CL1: Cultivated land habitat conservation	Conservation of cultivated land habitat values for focal and conservation species and natural communities
Goal CP1: Large contiguous areas of California prairie to support native species	Maintain or increase the extent of large contiguous areas of California prairie to sustain and enhance the distribution and abundance of associated focal and other native species in Yolo County.
Goal CH1: Chaparral conservation	Maintain conserved chaparral that supports viable populations of native wildlife and plant species, supports connectivity in the landscape, and assists in maintaining diverse pollinator species
Goal WF1. Valley oak protection and restoration	Protect and restore Valley oak woodland, forest, savanna, and individual trees in Yolo County, with an emphasis on restoration over protection.
Goal WF2. Upland oak protection and restoration/enl	Implement protection and restoration or enhancement of upland oaks in the Hill and Ridge Landscape Unit, with an emphasis on protection over restoration
Goal WF3. Riparian Oak Protection and Restoration	Protect, restore, or enhance oak woodland and forest in riparian areas, with a focus on the Hill and Ridge Landscape Unit
Goal WF4. Oak woodland management	Manage oak woodland and forest natural communities outside of riparian areas to enhance habitat quality supporting native biodiversity, and to provide enhanced ecosystem functions and services.
Goal FW1: Fresh Emergent Wetland Conservation	Conserve, restore, and enhance fresh emergent wetlands in Yolo County
Goal R1: Riparian Conservation	Establish, maintain, and protect functional riparian habitat well distributed throughout the Yolo County, including protection of existing, and restoration and enhancement of diminished, riparian habitat values
Goal LR1: Stream conservation	Conserve and enhance at least .25 mile of stream systems in Yolo County
Goal AP1: Alkali Prairie Conservation	Conserve alkali prairie in Yolo County.
Goal VP1: Vernal Pool Conservation	Conserve vernal pool complexes in Yolo County
Goal PLANT1	Conserve plant populations. Conserve focal and conservation plant species populations in Yolo County.

Yolo County Existing Stewardship & Restoration Efforts

Table C-1b. Yolo County Stewardship & Restoration Policies

Policy/Program	Description
Land Management (Stewardship) & Restoration	
Cache Creek Area Plan [4]	
Capay Reach Restoration and Management	• Opportunities to restore oak woodlands with native understory communities on upland sites on both the north and south sides of the channel • Riparian forest restoration should also be undertaken within the formerly large forest patch near the downstream end of the reach on the south side of the channel. • Opportunities for riparian forest restoration to expand and connect existing forest patches on upper terraces along the north side of the channel • Efforts should also focus on continuing to treat priority invasive species including arundo, Himalayan blackberry, Ravenna grass, perennial pepperweed, and tamarisk within this reach.
Hungry Hollow Reach Restoration and Management	• On the northern portion of the park, there are opportunities to enhance the existing habitat within the park through grassland, riparian forest, and oak woodland enhancement and restoration. • Just upstream of the County Road 87 bridge on the north side of the channel, there are large open areas that would be suitable for oak woodland or native grassland restoration. • On the portion of the park on the south bank, understory enhancement in the form of invasive species treatment and replanting of native grasses and forbs is recommended. • Monitoring and treatment of invasive plants should continue to prevent spread within this reach and also downstream.
Madison Reach Restoration and Management	• On the south bank but further downstream, oak woodland restoration would be appropriate for a large open area on an upper terrace. • A former mining pit at the midpoint of the reach on the north bank could be restored to a native wetland (e.g., a sedge meadow). • Areas on low terraces with good access to groundwater along this reach could potentially be restored to riparian forest habitat. • Woody riparian species could also be planted along the low-flow channel itself, focusing on relatively stable areas in terms of scour and deposition. • Within a large patch of woody vegetation on the south bank in the upper third of this reach, removal of invasive species and debris could be paired with planting of native shrubs and understory species to improve habitat. • Although not as abundant as in other reaches, continued monitoring and treatment of priority invasive species should also occur in this reach.
Dunnigan Hills Reach Restoration and Management	• First priority restoration site: the Millsap property on the northern side of the channel at the upstream end of the reach. This area is ideal for restoration of a mosaic of oak woodlands interspersed with native grasslands and shrub communities, especially given the substantial effort put into controlling tamarisk and arundo on the site in recent years. Oak woodland restoration and the establishment of a diverse natural understory on northwest portion of the property. • The second priority restoration site: the Wild Wings property on the south side of the channel near the downstream end. The upper portion of the property would greatly benefit from repair and expansion of the existing trail network in addition to interpretive signage, while additional oaks, native shrubs, and native herbaceous species would augment those that survived after past planting efforts. The lower portion of this site is highly compacted with rocky soils, and would likely be suitable for native grassland restoration using species adapted to such harsh conditions (e.g., purple needlegrass, native buckwheat species). • Oak woodland restoration would be appropriate both upstream and downstream of the former Patterson pit, which itself should be retained as a wetland especially given the historical occurrences of tricolored blackbirds on the site. • Portions of the Millsap property require invasive species treatment and understory enhancement, such as the dense forest patch on the southeast portion of the property. • Understory enhancement is needed within existing forest patches on both the northern and southern sides of the channel at the upstream end of this reach. • This reach is characterized by abundant priority invasive species, and both monitoring and treatment should continue to be emphasized.
Hoppin Reach Restoration and Management	• Most of the Granite Woodland Reiff site adjacent to the CCRMP boundary is suitable for native grassland restoration and potentially some scattered oaks. • The Correll and Rodgers properties are composed of a mosaic of different habitat types and have sites appropriate for grassland and wetland restoration in addition to understory enhancement within the large forest patch on the northern edge of the property. • Oaks may also establish well in the more open areas targeted for grassland restoration, as may some riparian forest species especially if the lower areas were hydrologically connected to the creek. • Opportunities to remove embankments and implement other measures to broaden the active floodplain to accelerate vegetation recovery on former mining sites. • Emphasis should be on monitoring and treating priority invasive species that are widespread across this area.
Rio Jesus Maria Reach Restoration and Management	• Open areas would benefit from grassland restoration efforts. • A portion of the mature forest on the northern side of the channel on the downstream end burned sometime from between 2015 and 2016, and re-planting of oaks and other woody species should be investigated. • Restoration recommendations for several of the reaches have included proposals to remove levees and connect formerly mined pits to the channel. Once sufficient material had been accumulated, the area should be planted with riparian vegetation and allowed to mature for two or three years. • Priority invasive species should be monitored and treated within this reach

Yolo County Existing Stewardship & Restoration Efforts

Table C-1b. Yolo County Stewardship & Restoration Policies

Policy/Program	Description
Land Management (Stewardship) & Restoration	
Lower Putah Creek Watershed Management Plan [5]	
Fire and Fuel Load Vegetation Management	• UC Davis South Fork Preserve management plan identifies prescribed burns as both a potential weed control method and restoration tool. • City of Winters Putah Creek Restoration Project: Developed to reduce the fuel load and fire hazards, to remove blackberry and arundo, and to provide a safe and usable space for the residents of the community. The area targeted for restoration stretches from approximately 50 feet west of the County Road 89 bridge to approximately two miles east to the I-505 bridge (Honer, pers. comm., 2003). • City of Davis: manages its restored open space lands to maximize the success of native grass establishment. Current management practices include mowing and prescribed burns. Grazing is also being tested to determine whether it is a viable management tool. Native grass management practices tend to reduce fire danger and intensity. Practices are applied throughout fire season (May–September)
Enhancement Measures Designed to Benefit Plant Communities and Wildlife	• Increasing habitat heterogeneity and microsite topography within the floodplain to create more diverse habitats and hydrologic complexity that will support a greater abundance and diversity of organisms. • Reducing channelization and recontouring streambanks to increase the floodplain and reduce channel incision. • Maintaining instream and bankside woody debris • Increasing vegetative structural complexity and density • Retaining large decadent trees and snags • Improving connectivity along the riparian corridor
Invasive Species Removal	• Arundo: 60 gross acres cleared to date • Eucalyptus: South bank of Winters Putah Creek Park and Yolo Housing cleared to date • Tamarisk: Control campaign on UCD lands; individual clumps removed by landowners • Blackberry: 16 acres removed at Wimmer, 2 acres removed at YHA, 2 acres controlled at Pickerel
Restoration	• Native plant restoration (4 acres of native plant restoration at Winters Putah Creek Park) • Floodplain restoration • Widening the riparian corridor where it is currently narrow and creating upland woodland buffer strips
Yolo Bypass Wildlife Area Land Management Plan [6]	
Restoration Opportunities	• Restore and enhance fish habitat in the Yolo Bypass Wildlife Area along Putah Creek and along the East Toe Drain at the southeast end (Tule Ranch unit) of the Yolo Bypass Wildlife Area. • Potential creation of managed seasonal floodplain areas and tidal channels in the Tule Ranch Unit. • Restoration of seasonal and permanent wetland, vernal pool and grassland, and riparian communities • Restoration of freshwater tidal marsh adjacent to the East Toe Drain below Lisbon Weir • Restoration of Putah Creek and associated aquatic habitats and ecological processes in the seasonal floodplain by creating a south flowing channel alignment from the creek through the sinks of the Tule Ranch and entering the East Toe Drain in a tidal area south of Lisbon Weir • Restore and enhance riparian vegetation for cavity nesters where compatible with flood management. • Opportunities along Putah Creek include potential realignment of the creek channel to improve passage, geomorphic processes, and floodplain connectivity. • Increase length and density of riparian vegetation along Putah Creek and the East Toe Drain will also benefit species in this guild.
Management of Emergent Vegetation	To ensure emergent vegetation does not conflict with necessary flow conveyance requirements of the Yolo Bypass: >no more than 5% emergent vegetation in seasonal wetlands; >no more than 50% emergent vegetation in permanent wetlands (which make up approximately 5% of the total Wildlife Area acreage); and >riparian vegetation allowed only in specifically designated areas as determined by hydraulic modeling
Opportunities for Maintenance and Enhancement of Existing Habitat	• Maintenance, and/or enhancement of seasonal and permanent wetland, vernal pool and grassland, and riparian communities. • Enhancement of freshwater tidal marsh adjacent to the East Toe Drain below Lisbon Weir • Enhancement of Putah Creek and associated aquatic habitats and ecological processes in the seasonal floodplain by creating a south flowing channel alignment from the creek through the sinks of the Tule Ranch and entering the East Toe Drain in a tidal area south of Lisbon Weir • Maintain and enhance riparian vegetation along Putah Creek and the East Toe Drain • Disc, mow, burn, and/or graze vegetation as necessary to promote desirable species, eliminate species not valuable for wildlife (e.g., cocklebur), promote a higher quality seed bed
Prescribed Grazing	• The Tule Ranch grasslands are grazed with cattle as a primary management strategy. • Developing a refined grazing plan for the vernal pool areas throughout the Tule Ranch is a high priority for future management and will most certainly focus on the management of the nonnative Italian ryegrass.
Agricultural Management	Agricultural lands at the Wildlife Area are actively managed to benefit wildlife.
Removal and Management of Invasive Species	• Enhancement of habitats through removal and management of nonnative invasive species that do not benefit wildlife species or that impact special status plants. • Control invasive weeds such as perennial pepperweed and starthistle

Yolo County Existing Stewardship & Restoration Efforts

Table C-1b. Yolo County Stewardship & Restoration Policies

Policy/Program	Description
Land Management (Stewardship) & Restoration	
Capay Valley Watershed Stewardship Plan [7]	
Reduce streambank instability and erosion	• Establish riparian buffers between stream channels and adjacent land use • Vegetate streambanks with native vegetation to maintain bank stability • Manage livestock to control access to streams and riparian areas • Remove and/or control non-native invasive vegetation in the stream channel and riparian areas • Increase rainfall infiltration in upland areas and decrease peak flows by establishing native perennial grasses on rangelands and open spaces
Reduce erosion resulting from agricultural activities	• Use cover crops where possible between rows in permanent crops and over winter in annual cropping systems. • Establish hedgerows on field edges, roadsides, and adjacent to irrigation canals • Establish vegetated filter strips at the tail end of irrigated crop land and orchards • Construct tailwater return systems with cleanable sediment traps • Establish riparian buffer strips using native vegetation between agricultural land and stream channels • Vegetate irrigation ditches and canals with native perennial grasses • Implement management intensive grazing for livestock where appropriate
Increase the use of erosion control techniques and practices for existing land uses	• Include erosion control and sediment control plans as priorities when planning soil disturbing activities and projects • Revegetate disturbed soil with native grasses and forbs and cover with straw mulch or erosion control fabric as appropriate
Manage non-native invasive vegetation	• Develop invasive vegetation management strategies in cooperation with the Yolo County Weed Management Area (WMA) to coordinate regional invasive vegetation management efforts • Develop an Invasive Riparian Vegetation Management Strategy for Cache Creek and its tributaries • Coordinate invasive non-native riparian management in Capay Valley with similar efforts (i.e. Cache Creek Conservancy, County of Yolo, BLM-Ukiah) throughout the Cache Creek watershed • Remove invasive non-native riparian vegetation from the stream channel and riparian areas (i.e. Tamarisk, Arundo, Perennial Pepperweed) • Replace invasive non-native riparian vegetation with native vegetation appropriate to the site • Plant native perennial grasses on roadsides, ditch banks, and on rangelands to compete with non-native species • Utilize a diverse set of practices (e.g. prescribed burning, herbicides, grazing, mowing, mulching, etc.) in developing invasive vegetation management strategies
Reestablish native plant communities	• Plant native vegetation on unfarmed or unproductive corners of agricultural land • Install native vegetation hedgerows along field edges, fence lines and roadsides • Expand existing riparian areas using native vegetation • Install native vegetation around ponds • Install native vegetation along irrigation canals and ditches as appropriate
Establish wildlife corridors between open spaces	• Install native vegetation hedgerows along field edges, fence lines and roadsides • Enhance and connect riparian areas that are contiguous across property lines to increase both wildlife habitat and property value • Install native vegetation along irrigation canals and ditches as appropriate
Yolo County Oak Woodland Conservation and Enhancement Plan [8]	
Policy #5: Best Management Practices	Encourage the use of Best Management Practices (BMPs) to maintain oak resources in a healthy and safe condition in developed areas. BMPs will include practices for ensuring the long-term protection of oak trees in areas potentially impacted by construction and maintenance practices that maximize the longevity and safety of oaks incorporated into developed settings.
Policy #7: Oak Mitigation Bank	Establish an oak woodland mitigation bank to ensure that oak woodlands with high resource value, as evaluated by system to establish priorities in the 2007 Oak Woodland Conservation and Enhancement Plan, are available in a timely manner for mitigation resulting from infrastructure expansion and urban and rural development.
Policy #8: Development Plan Consideration	Require development plans to consider the protection of oak woodlands and other sensitive resources at an early scoping stage and design projects to minimize impacts to these resources starting at the earliest design stages.
Policy #9: Local Genetic Stock	Use only oaks of local genetic stock for plantings located in and near native oak stands to conserve the genetic integrity of local oak populations. Local trees are adapted to local conditions, so conserving genetic integrity is an important part of sustaining local oak populations.
Policy #10: Landscaping Projects	Encourage the use of local native oaks in public landscaping projects where appropriate.
Policy #11: Public Project Guidelines	Establish guidelines for county government-led public projects to avoid harm to oak woodlands and individual oaks. Explore the feasibility of establishing oak woodland mitigation guidelines for county government-led public projects.

Yolo County Existing Stewardship & Restoration Efforts

Table C-1b. Yolo County Stewardship & Restoration Policies

Policy/Program	Description
Land Management (Stewardship) & Restoration	
Yolo Habitat Conservation Plan/Natural Communities Conservation Plan [2]	
Conservation Measure 2: Restore Natural Communities*	
Wetlands and Riparian Natural Community Restoration (Objective L-1.1)	Restoration commitment: 912 acres dependent on effect[a] 44 acres independent of effect[b]
Valley Foothill Riparian Natural Community Restoration (Objective NC-VFR1.2)	Restoration commitment: 588 acres dependent on effect 20 acres independent of effect
Fresh Emergent Wetland Natural Community Restoration (Objective NC-FEW1.2)	Restoration commitment: 88 acres dependent on effect 0 acres independent of effect
Lacustrine and Riverine Natural Community Restoration (Objective NC-LR1.2)	Restoration commitment: 236 acres dependent on effect. 24 acres independent of effect.[c]
Aquatic Habitat Restoration (Objective CTS1.2)	Restoration commitment: 12 acres dependent on effect 24 acres independent of effect
Conservation Measure 3: Manage and Enhance the Reserve System**	
Objective L-2.1	Increase native species diversity and relative cover of native plant species, and reduce the introduction and proliferation of nonnative plant and animal species.
Objective L-2.2	Increase the abundance of native insect pollinators that support reproduction of native plant species and long-term production of agricultural crops that support habitat for covered and other native wildlife species.
Objective L-2.3	Allow for natural fluvial processes (erosion, deposition, meandering channels) along river reaches within the reserve system, consistent with goals of the Cache Creek Resources Management Plan and other relevant creek management plans that balance the need for natural fluvial processes with flood and erosion control needs.
Objective NC-CL1.4	Maintain or enhance the habitat value of the cultivated lands natural community in the reserve system for raptors.
Objective NC-G1.2	Maintain and enhance the functions of protected grassland in the reserve system as habitat for covered and other native species by increasing burrow availability for burrow-dependent species, and increasing prey abundance and accessibility for grassland-foraging species.
Objective NC-VFR1.1	Protect, manage, and enhance 1,600 acres of unprotected valley foothill riparian distributed primarily in planning units 7 and 9.
Objective NC-AP1.3	Implement management activities (primarily control of nonnative plants and human activities) within the Woodland Regional Park to reduce adverse effects on habitat conditions and enhance the functions of alkali prairie within the Reserve System as habitat for covered and other native species, such as saltgrass
Objective NC-FEW1.3	Enhance the functions of protected fresh emergent wetland as habitat for covered and other native species.
Objective PBBB1.1	Increase the 10-year running average of the size of the palmate-bracted bird's beak population on Woodland Regional Park by 10%, by managing and enhancing habitat.
Objective CTS1.2	Within the 600 acres of protected lacustrine and riverine natural community (Objective NCLR1.1), protect at least 36 acres of California tiger salamander aquatic habitat. Restore or create 24 acres of aquatic habitat, and restore or create an additional acre of aquatic habitat for each acre lost as a result of covered activities. Within the protected and restored aquatic habitat, include at least five California tiger salamander breeding pools that are each found to support all life stages of the salamander through all water year types consistent with the occupancy commitment for this species in Table 6-2(c).
Objective WPT1.1	Within protected and restored lacustrine and protected and enhanced riverine natural communities, add logs, rocks, and/or emergent vegetation for basking sites and other WPT habitat features and meet the occupancy commitment for this species in Table 6-2(c).
Objective GGS1.1	Protect and manage the 2,800 acres of protected rice land (Objective NC-CL1.2) in modeled giant garter snake habitat. Suitable emergent marsh can be substituted for rice land.
Objective GGS1.2	Protect and manage 1,160 acres of upland natural communities (Objective L-1.1) to provide active season upland movement habitat and at least 2,315 acres to provide overwintering habitat for giant garter snake.
Objective GGS1.3	Protect, restore, and manage the 500 acres of fresh emergent wetland natural community (Objective NC-FEW1.1), at least 420 acres of the lacustrine/riverine natural community (Objective NCLR.1.1), the restored fresh emergent wetland (Objective NCFEW1.2), and restored lacustrine and riverine natural community (Objective NC-LR1.2) to conserve the giant garter snake. Ensure at least 80% of the aquatic habitat is perennial, and the remainder provides aquatic habitat for the giant garter snake during the active season at least through July of each summer.
Objective SH1.5	In addition to restoration of riparian natural community (Objective NC-VFR1.2), establish trees suitable for Swainson's hawk nesting (native trees at least 20 feet in height, particularly valley oaks if conditions are suitable) within the cultivated lands reserve system to meet a density of at least one tree per 10 acres (protected existing trees count toward the density requirement). Riparian restoration adjacent to these community types will also count toward nesting tree establishment.).
Objective WBO1.5	Implement management and enhancement practices to encourage burrowing owl occupancy on preserve lands. Management practices include maintaining appropriate vegetation height, minimizing the spread of invasive weed species, and encouraging the presence of ground squirrels. Enhancement practices include the installation of artificial burrows where natural burrows are lacking, creating berms as future burrowing sites, and creation of debris piles to enhance prey populations. These actions are designed to maintain existing populations and encourage the expansion of nesting populations in the Plan Area.
Objective BS1.2	Manage the 50 acres of protected bank swallow habitat (Objective BS1.1) to enhance bank swallow foraging habitat value by promoting open grass and forb vegetation, and controlling invasive plant species.

Yolo County Existing Stewardship & Restoration Efforts

Table C-1b. Yolo County Stewardship & Restoration Policies

Policy/Program	Description
Land Management (Stewardship) & Restoration	
Objective TRBL1.4	Maintain at least 300 acres, consisting of at least 150-acre blocks, of tricolored blackbird foraging habitat in the reserve system without pesticides
Objective TRBL1.5	Manage and enhance protected tricolored blackbird nesting habitat to maintain habitat value for this species.
RCD 2024 Strategic Plan Update [9]	
Control and Management of Noxious and Invasive Weeds	• Mapping rated weeds and high value sites to help prioritize projects • Developing Invasive Weed Management Plans for motivated landowners and/or watersheds • Conducting weed control and eradication projects • Supporting the Yolo County Weed Management Area • Promoting biological weed control methods, where effective • Replacing weeds with non-weedy vegetation • Providing science-based education about herbicide use • Supporting long-term management/follow-up treatment to protect treated and/or restored sites • Conducting weed control and eradication projects
Promote Biodiversity	• Promote and implement enhancement, revegetation, restoration, protection, conservation and management for critical habitat types including riparian, upland, grassland, shrub/scrub, oak woodland and wetlands on farms, ranches and open spaces. • Pond enhancement, vegetation establishment with biodiversity in mind • Establishment of hedgerows and other field edge or roadside plantings that include a diverse range of climate resilient plant species that provide cover, forage, and nesting habitat for pollinators, birds, small mammals, and other species. • Canal revegetation and promotion of management practices that maintains some vegetation along canal banks for erosion control and species cover and movement. • Explore opportunities, strengthen our skillset and build experience in wetland diversity • Invasive weed control • Incorporate diverse flowering forbs into any restoration type as forb plots, companion plants, or other seeding or transplanting methods. • Develop framework/guidelines to ensure these actions are resilient to climate change. • Support connecting interested landowners to habitat conservation easement opportunities • Promote fencing riparian areas on rangelands where feasible • Promoting, implementing and demonstrating agronomic practices that promote on-farm diversity (cover crops, insectary strips, herbicide and pesticide use)
Enhance and Protect Riparian and Aquatic Habitats	• Habitat enhancement and restoration on local wetlands, ditches, canals, creeks and rivers • Invasive species management • Bank stabilization • Erosion control • Development and implementation of stormwater best management practices • Pesticide, herbicide and nutrient management programs • Sediment control projects • Water quality improvements that reduce urban and agricultural runoff • Promote restoration projects in agricultural lands • Create riparian habitat corridors • Promote restoration and other projects that support groundwater recharge • Develop new partnerships with agencies that work in wetlands (DU, TU, CWA)
Promote Healthy Soils	• Public workshops on prevention of soil erosion prevention and soil health management and improvement. • Implement soil health projects with local landowners. • Promote land-use practices that reduce soil erosion. • Design and develop permanent or temporary vegetative cover crop projects that improve soil health and water infiltration. • Focus conservation efforts on hillsides and highly erodible land, such as areas in the Capay Valley, Dunnigan Hills and Hungry Hollow. • Continue to work with cooperative landowners on hedgerows and other conservation practices to hold the soil in place and increase soil organic matter content. • Research the cost-benefit analysis of cover crops, compost and mulching for reducing soil erosion and improving soil health with the goal of providing technical assistance to farmers and landowners • Promote the use of compost on irrigated lands to improve soil health and store carbon at workshops and outreach events and provide guidance on developing compost programs to interested individuals • Partner with farmers and organizations to promote and support soil organic matter building practices. • Recognize the rights and responsibilities of land users in making land use decisions on private land. • Ensure that RCD and NRCS programs do not encourage the conversion of farmlands, rangelands, forestlands and floodplains to non-agricultural land-use or the excessive expansion of the peripheral boundaries of existing communities.
Wildfire Prevention and Reduction	• Meet with and work with local and regional fire district officials to develop Community Wildfire Prevention Plans (CWPP) appropriate to the different regions and landscapes of the County • Meet with and work with local communities to develop Fire Safe Councils (FSC) • Work with the Office of Emergency Services (OES) on fire prevention and management plan development and county-wide coordination related to fire • Seek funding to implement prioritized projects within these plans.

Yolo County Existing Stewardship & Restoration Efforts

Table C-1b. Yolo County Stewardship & Restoration Policies

Policy/Program	Description
Land Management (Stewardship) & Restoration	
Carbon Planning and Sequestration	• Participate in the newly formed Sacramento Valley Regional Carbon Farming Hub • Secure funding from state and federal partners to implement actionable carbon-driven conservation projects. • Identify carbon planning and calculation tools • Assist the county and the region in meeting its GHG emission reduction goals through carbon sequestration.

*the manipulation of the physical, chemical, or biological characteristics of a site, with the goal of returning natural or historic functions to a site that historically supported such functions but no longer does because of the loss of one or more required ecological factors or as a result of past disturbance. Restoration typically involves altering the soil or other substrate to improve a site's ability to support the historic land cover types, although it may also include physical manipulation to restore specific ecological function in a site where that function has been lost (e.g., removal of hardscape in a stream channel and revegetation with riparian plantings). In contrast to enhancement, restoration results in the reestablishment of ecological function, value, and acreage of a natural community or land cover type.

**manipulation of the physical, chemical, or biological characteristics of a land cover type to heighten, intensify, or improve one or more specific existing ecological function(s). Enhancement results in the gain of selected existing ecological function(s), but may also lead to a decline in other ecological function(s). Natural community enhancement implemented in the reserve system will result in an increase or improvement in specific ecological function without a change in the amount of land cover types.

a. "Dependent on effect" means that an acre will be restored or created for each acre of this natural community lost as a result of covered activities.

b. "Independent of effect" means that these acres will be restored or created regardless of how many acres are lost as a result of covered activities. This includes 24 acres of California tiger salamander aquatic habitat and 20 acres of riparian natural community.

c. The 24 acres independent of effect are for California tiger salamander habitat. They may, however, be subsumed within the total 236 acres of lacustrine and riverine natural community restored, and are not in addition to the 236 acres

References

[1]https://www.yolocounty.org/home/showpublisheddocument/76582/638163767828870000
[2]https://www.yolohabitatconservancy.org/_files/ugd/8f41bd_8abd3784baaf4d53a3842033ceda33f9.pdf
[3]https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=184748&inline
[4]https://www.yolocounty.org/government/general-government-departments/community-services/natural-resources/cache-creek-area-plan
[5]https://www.scwa2.com/documents/lpccc/Lower_Putah_WMAP_Vol_I_12-05.pdf
[6]https://wildlife.ca.gov/Lands/Planning/Yolo-Bypass-WA
[7]https://data.sacriver.org/projects/1227
[8]https://yolocounty.org/home/showpublisheddocument/4040/635289380535200000
[9]https://yolorcd.org/wp-content/uploads/YCRCD_Strategic_Plan_2019.1120_ADOPTED.pdf

Yolo County Protected Areas[1]

Lands that are owned in fee and protected for open space purposes by public agencies or non-profit organizations. Includes:

- National/state/regional parks, forests, preserves, and wildlife areas
- Large and small urban parks that are mainly open space (as opposed to recreational facility structures)
- Land trust preserves
- Special district open space lands (watershed, recreation, etc.) and other types of open space

Table 1. Protected Area Land Cover Types by Jurisdictional Control

Land Cover Type	City	County	Federal	Non Profit	Private	Special District	State	Total CPAD Acreage
Agriculture	1,543.1	38.1		1,470.7	792.2	3,358.7	6,392.5	13,595.3
Grasslands	141.8	364.8	675.0	1,746.6	114.2	0.7	2,591.1	5,634.2
Riparian and Wetlands	589.3	163.4	183.7	257.0	84.8	48.8	13,270.9	14,597.9
Shrublands and Scrub		215.0	23,476.2	534.3			209.7	24,435.2
Unvegetated, Vacant, Urban	828.8	140.4	238.6	19.8	0.0	1.5	549.9	1,779.0
Woodlands and Forest		758.0	3,907.3	5,019.2			97.8	9,782.3
undetermined	0.0	0.0	8.3			0.0	4.4	12.7
Grand Total	**3,103.1**	**1,679.7**	**28,489.2**	**9,047.5**	**991.2**	**3,409.7**	**23,116.2**	**69,836.5**

Table 2. Protected Area Zoning and Land Cover Types by Jurisdictional Control

Zoning/Land Cover Type	City	County	Federal	Non Profit	Private	Special District	State	Total CPAD Acreage
Agricultural Extensive		**0.3**	**590.9**	**7,419.8**		**0.5**	**10.3**	**8,021.9**
Agriculture				3.3				3.3
Grasslands		0.1	11.6	1,736.9				1,748.5
Riparian and Wetlands		0.0	4.6	124.5		0.5	10.1	139.8
Shrublands and Scrub		0.0	462.6	534.3			0.1	997.0
Unvegetated, Vacant, Urban		0.0	0.0	1.8			0.1	1.9
Woodlands and Forest		0.2	112.1	5,019.0			0.0	5,131.3
undetermined			0.0			0.0	0.0	0.0
Agricultural Intensive	**1,538.7**	**1.5**	**78.9**	**1,506.6**	**991.2**	**3,407.6**	**4,155.6**	**11,680.1**
Agriculture	1,268.8	1.1		1,453.8	792.2	3,358.6	111.8	6,986.4
Grasslands	137.8	0.0	44.1	0.2	114.2	0.7	844.5	1,141.5
Riparian and Wetlands	91.1	0.2	1.2	39.5	84.8	48.3	3,188.4	3,453.5
Shrublands and Scrub			22.1					22.1
Unvegetated, Vacant, Urban	41.1	0.1		12.8	0.0		10.8	64.8
Woodlands and Forest			11.6	0.2				11.8
undetermined	0.0					0.0	0.0	0.0
Cities Jurisdiction	**896.3**	**28.4**	**68.3**				**67.7**	**1,060.7**
Agriculture	97.1						57.5	154.7
Grasslands	4.0							4.0
Riparian and Wetlands	99.9		21.0					120.9
Unvegetated, Vacant, Urban	695.2	28.4	47.3				10.1	781.1
undetermined	0.0							0.0
Light Industrial							**0.6**	**0.6**
Unvegetated, Vacant, Urban							0.6	0.6
Local Commercial		**0.0**						**0.0**
Agriculture		0.0						0.0
Low Density Residential	**0.2**	**0.0**						**0.2**
Riparian and Wetlands	0.0							0.0
Unvegetated, Vacant, Urban	0.2	0.0						0.2
Medium Density Residential	**1.9**							**1.9**
Riparian and Wetlands	0.3							0.3
Unvegetated, Vacant, Urban	1.5							1.5
Parks and Recreation	**89.5**	**27.3**					**0.4**	**117.2**
Agriculture	0.2	22.3						22.6
Riparian and Wetlands	4.7	2.4					0.4	7.6
Unvegetated, Vacant, Urban	84.5	2.5						87.1
undetermined							0.0	0.0
Public Open Space	**569.6**	**1,621.0**	**27,751.0**	**121.0**	**0.0**		**17,103.8**	**47,166.5**
Agriculture	176.8	14.4		13.5	0.0		4,982.6	5,187.3
Grasslands		364.6	619.4	9.4			1,513.9	2,507.3
Riparian and Wetlands	392.3	160.6	156.9	92.8	0.0		9,890.0	10,692.5
Shrublands and Scrub		215.0	22,991.5	0.0			209.7	23,416.2
Unvegetated, Vacant, Urban	0.5	108.7	191.3	5.2	0.0		407.3	713.0
Woodlands and Forest		757.7	3,783.7	0.0			97.8	4,639.2
undetermined		0.0	8.3				2.6	10.9
Public/Quasi-Public		**0.4**				**1.4**	**1,767.8**	**1,769.6**
Agriculture							1,238.1	1,238.1
Grasslands							232.1	232.1
Riparian and Wetlands							179.8	179.8
Unvegetated, Vacant, Urban		0.4				1.4	115.9	117.8
undetermined							1.8	1.8
Specific Plan	**0.0**							**0.0**
Agriculture	0.0							0.0
Grasslands	0.0							0.0
Undetermined	**6.9**	**0.6**	**0.0**	**0.2**	**0.0**	**0.1**	**10.1**	**18.0**
Agriculture	0.2	0.1		0.1		0.0	2.4	2.9
Grasslands	0.0	0.1	0.0	0.0			0.6	0.7
Riparian and Wetlands	1.0	0.3	0.0	0.0		0.0	2.1	3.4
Shrublands and Scrub			0.0				0.0	0.0
Unvegetated, Vacant, Urban	5.7	0.2	0.0	0.0	0.0	0.1	5.0	11.0
Woodlands and Forest		0.0	0.0	0.0				0.0
undetermined	0.0		0.0			0.0	0.0	0.0
Grand Total	**3,103.1**	**1,679.7**	**28,489.2**	**9,047.5**	**991.2**	**3,409.7**	**23,116.2**	**69,836.5**

Yolo County Conservation Easements[2]

Easements and deed-based restrictions on private land. These restrictions limit land uses to those compatible with maintaining it as open space. Lands under easement may be actively farmed, grazed, forested, or held as nature reserves. Easements are typically held on private lands with no public access. Includes:

- Land trusts and nonprofit organizations
- Local jurisdictions (city and county)
- State and national governmental agencies

Table 3. Land Cover Types Under Conservation Easements

Land Cover Type	Conservation Easement	Land Not Under Easement	Total Acreage
Agriculture	31,122.2	341,858.3	372,980.6
Grasslands	4,393.8	58,481.0	62,874.8
Riparian and Wetlands	10,713.2	34,686.5	45,399.6
Shrublands and Scrub	2,290.3	42,351.6	44,642.0
Unvegetated, Vacant, Urban	414.0	43,845.4	44,259.4
Woodlands and Forest	8,845.2	74,101.8	82,947.0
undetermined	23.6	425.5	449.1
Grand Total	**57,802.4**	**595,750.1**	**653,552.5**

Table 4. Zoning Designations and Land Cover Types Under Conservation Easements

Zoning/Land Cover Type	Conservation Easement
Agricultural Extensive	**16,493.1**
Agriculture	2,176.8
Grasslands	3,278.1
Riparian and Wetlands	377.6
Shrublands and Scrub	2,138.7
Unvegetated, Vacant, Urban	69.5
Woodlands and Forest	8,435.5
undetermined	16.7
Agricultural Industrial	**0.2**
Agriculture	0.2
Riparian and Wetlands	
Unvegetated, Vacant, Urban	
undetermined	
Agricultural Intensive	**40,407.7**
Agriculture	28,796.8
Grasslands	1,049.5
Riparian and Wetlands	10,056.7
Shrublands and Scrub	2.4
Unvegetated, Vacant, Urban	160.8
Woodlands and Forest	336.2
undetermined	5.3
Cities Jurisdiction	**185.7**
Agriculture	4.3
Grasslands	
Riparian and Wetlands	22.2
Unvegetated, Vacant, Urban	159.1
Woodlands and Forest	
undetermined	0.0
Public Open Space	**632.4**
Agriculture	102.7
Grasslands	62.5
Riparian and Wetlands	237.2
Shrublands and Scrub	149.2
Unvegetated, Vacant, Urban	5.9
Woodlands and Forest	73.5
undetermined	1.4
Public/Quasi-Public	**5.9**
Agriculture	3.5
Grasslands	1.3
Riparian and Wetlands	0.9
Unvegetated, Vacant, Urban	0.2
(blank)	
Undetermined	**77.5**
Agriculture	38.0
Grasslands	2.4
Riparian and Wetlands	18.5
Shrublands and Scrub	
Unvegetated, Vacant, Urban	18.5
Woodlands and Forest	0.0
undetermined	0.1
Grand Total	**57,802.4**

NWL 1: Encourage Climate-Smart Practices in Working Lands

Table 1. Proposed Acreages for NWL 1 Actions

NRCS Code	Sub action	Description	Spatial Data Parameters			Maximum Acreage
			Where Practice Applies	Zoning	Landcover	Total within County Jurisdiction*
NWL 1c. Support Climate-Smart Practices						
340	Cover Crops (acres)	Grasses, legumes, and forbs planted for seasonal vegetative cover.	Croplands requiring seasonal vegetative cover for natural resource protection.	Agriculture Extensive (A-E) Agricultural Industrial (A-I) Agricultural Intensive (A-N) Agricultural Commercial (A-C)	**Agriculture** Deciduous Fruits/Nuts Field Crops Truck/Nursery/Berry Crops Vineyards	178,291
328	Conservation Crop Rotation (acres)	A planned sequence of crops grown on the same ground over a period of time (i.e. the rotation cycle).	Cropland where at least one annually-planted crop is included in the crop rotation.	Agriculture Extensive (A-E) Agricultural Industrial (A-I) Agricultural Intensive (A-N) Agricultural Commercial (A-C)	**Agriculture** Alfalfa[a] Field Crops Grain/Hay Crops Truck/Nursery/Berry Crops	140,783
329	Residue and Tillage Management, No Till (acres)	Limiting soil disturbance to manage the amount, orientation and distribution of crop and plant residue on the soil surface year around.	Croplands currently practicing intensive till or reduced till.	Agriculture Extensive (A-E) Agricultural Industrial (A-I) Agricultural Intensive (A-N) Agricultural Commercial (A-C)	**Agriculture** Alfalfa[a] Deciduous Fruits/Nuts Field Crops Grain/Hay Crops Pasture Truck/Nursery/Berry Crops Vineyards	267,643
345	Residue and Tillage Management, Reduced Till (acres)	Managing the amount, orientation, and distribution of crop and other plant residue on the soil surface year-round while limiting soil-disturbing activities used to grow and harvest crops in systems where the field surface is tilled prior to planting.	Croplands currently practicing intensive till.	Agriculture Extensive (A-E) Agricultural Industrial (A-I) Agricultural Intensive (A-N) Agricultural Commercial (A-C)	**Agriculture** Alfalfa[a] Deciduous Fruits/Nuts Field Crops Grain/Hay Crops Pasture Truck/Nursery/Berry Crops Vineyards	267,643
336	Soil Carbon Amendments	Application of carbon-based amendments derived from plant materials or treated animal byproducts. In Yolo County, the most frequent method is compost application.	Crop, Pasture, Range, Forest, Associated Agriculture Lands, Developed Land, and Farmstead where organic carbon amendment applications will improve soil conditions.	Agriculture Extensive (A-E) Agricultural Industrial (A-I) Agricultural Intensive (A-N) Agricultural Commercial (A-C)	**Agriculture** Alfalfa[a] Citrus/Subtropical Deciduous Fruits/Nuts Field Crops Grain/Hay Crops Misc. Other Pasture Truck/Nursery/Berry Crops Vineyards	288,628
808	Soil Carbon Amendments (DRAFT) Whole Orchard Recycling (acres)	One of a suite of options in the Soil Carbon Amendment Practice Standard that involves chipping and incorporating orchard trees in place in the field in which they were grown.	Orchards	Agriculture Extensive (A-E) Agricultural Industrial (A-I) Agricultural Intensive (A-N) Agricultural Commercial (A-C)	**Agriculture** Deciduous Fruits/Nuts	79,563

Table 1. Proposed Acreages for NWL 1 Actions

NRCS Code	Sub action	Description	Spatial Data Parameters			Maximum Acreage
			Where Practice Applies	Zoning	Landcover	Total within County Jurisdiction*
393	Filter Strips (acres)	A strip or area of herbaceous vegetation that removes contaminants from overland flow.	Agricultural land adjacent to waterways.	Agriculture Extensive (A-E) Agricultural Industrial (A-I) Agricultural Intensive (A-N) Agricultural Commercial (A-C)		Practice viable within 6-10 ft.of key irrigation supply and drainage ditches.[b]
412	Grassed Waterways (acres)	A shaped or graded channel that is established with suitable vegetation to convey surface water at a nonerosive velocity using a broad and shallow cross section to a stable outlet.	Agricultural land adjacent to waterways.	Agriculture Extensive (A-E) Agricultural Industrial (A-I) Agricultural Intensive (A-N) Agricultural Commercial (A-C)		Practice applies to small percentage (~15%) of actively used drain channels.[c]
484	Mulching[d]	Applying plant residues or other suitable materials to the land surface.	Croplands	Agriculture Extensive (A-E) Agricultural Industrial (A-I) Agricultural Intensive (A-N) Agricultural Commercial (A-C)	**Agriculture** Field Crops Truck/Nursery/Berry Crops Vineyards[e]	98,728
585	Stripcropping	Growing planned rotations of erosion-resistant and erosion-susceptible crops or fallow in a systematic arrangement of strips across a field.	50% total Croplands acreage	Agriculture Extensive (A-E) Agricultural Industrial (A-I) Agricultural Intensive (A-N) Agricultural Commercial (A-C)	**Agriculture** Alfalfa[a] Field Crops Grain/Hay Crops Truck/Nursery/Berry Crops	70,391
590	Nutrient Management	Manage rate, source, placement, and timing of plant nutrients and soil amendments while reducing environmental impacts.	Agricultural lands where plant nutrients and soil amendments are applied.	Agriculture Extensive (A-E) Agricultural Industrial (A-I) Agricultural Intensive (A-N) Agricultural Commercial (A-C)	**Agriculture** Alfalfa[a] Citrus/Subtropical Deciduous Fruits/Nuts Field Crops Grain/Hay Crops Misc. Other Pasture Truck/Nursery/Berry Crops Vineyards	288,628
NWL 1d. Support Practices to Sequester Carbon on Grazing and Pastureland						
338	Prescribed Burning (acres)	Planned fire applied to a predetermined area.	Pasture and grasslands within agricultural operations	Agriculture Extensive (A-E) Agricultural Industrial (A-I) Agricultural Intensive (A-N) Agricultural Commercial (A-C)	**Agriculture** Pasture **Grassland** Annual Grassland	80,694
528	Prescribed Grazing (acres)	Managing the harvest of vegetation with grazing and/or browsing animals with the intent to achieve specific ecological, economic, and management objectives.	Lands where grazing and/or browsing animals are managed	Agriculture Extensive (A-E) Agricultural Industrial (A-I) Agricultural Intensive (A-N) Agricultural Commercial (A-C)	**Agriculture** Pasture **Grassland** Annual Grassland	80,694
550	Range Planting (acres)	The seeding and establishment of herbaceous and woody species for the improvement of vegetation composition and productivity of the plant community to meet management goals.	Uncultivated agricultural land and pasture and grasslands within agricultural operations.	Agriculture Extensive (A-E) Agricultural Industrial (A-I) Agricultural Intensive (A-N) Agricultural Commercial (A-C)	**Agriculture** Pasture **Grassland** Annual Grassland	80,694
315	Herbaceous Weed Treatment (acres)	The removal or control of herbaceous weeds including invasive, noxious, prohibited, or undesirable plants.	Agricultural lands except active croplands. Practice applies to edges of all agricultural pasture and grasslands.	Agriculture Extensive (A-E) Agricultural Industrial (A-I) Agricultural Intensive (A-N) Agricultural Commercial (A-C)		RANGE

Table 1. Proposed Acreages for NWL 1 Actions

NRCS Code	Sub action	Description	Spatial Data Parameters			Maximum Acreage
			Where Practice Applies	Zoning	Landcover	Total within County Jurisdiction*
NWL 1e. Support Implementation of Agroforestry Practices						
311	Alley Cropping (acres)	Trees or shrubs are planted in sets of single or multiple rows with agronomic, horticultural crops or forages produced in the alleys between the sets of woody plants that produce additional products.	Cropland and hayland where trees, shrubs, crops, and forages can be grown in combination.	Agriculture Extensive (A-E) Agricultural Industrial (A-I) Agricultural Intensive (A-N) Agricultural Commercial (A-C)		RANGE
380	Windbreaks/Shelterbelt Establishment and Renovation (feet)	Establishing, enhancing, or renovating windbreaks, also known as shelterbelts, which are single or multiple rows of trees and/or shrubs in linear or curvilinear configurations.	Agricultural lands except active croplands.	Agriculture Extensive (A-E) Agricultural Industrial (A-I) Agricultural Intensive (A-N) Agricultural Commercial (A-C)		20,000
381	Silvopasture	Establishment and/or management of desired trees and forages on the same land unit.	Pasture and grasslands within agricultural operations.	Agriculture Extensive (A-E) Agricultural Industrial (A-I) Agricultural Intensive (A-N) Agricultural Commercial (A-C)	**Agriculture** Pasture **Grassland** Annual Grassland	RANGE
390	Riparian Herbaceous Cover	Grasses, sedges, rushes, ferns, legumes, and forbs tolerant of intermittent flooding or saturated soils, established or managed as the dominant vegetation in the transitional zone between upland and aquatic habitats.	Agricultural lands adjacent to perennial and intermittent watercourses or water bodies where the natural plant community is dominated by herbaceous vegetation that is tolerant of periodic flooding or saturated soils.	Agriculture Extensive (A-E) Agricultural Industrial (A-I) Agricultural Intensive (A-N) Agricultural Commercial (A-C)		6,000
391	Riparian Forest Buffer	An area predominantly covered by trees and/or shrubs located adjacent to and up-gradient from a watercourse or water body.	Agricultural areas adjacent to permanent or intermittent streams, lakes, ponds, and wetlands where channels and streambanks are sufficiently stable.	Agriculture Extensive (A-E) Agricultural Industrial (A-I) Agricultural Intensive (A-N) Agricultural Commercial (A-C)		6,000
422	Hedgerow Planting	Establishment of dense vegetation in a linear design to achieve a natural resource conservation purpose.	Uncultivated agricultural land	Agriculture Extensive (A-E) Agricultural Industrial (A-I) Agricultural Intensive (A-N) Agricultural Commercial (A-C)	Edges of cultivated fields	20,000

Notes:
Some actions are site-specific and/or require in-situ information to quantify suitable acreages. For these actions, sequestration potential can be provided as a rate (e.g., "per 10 acres of implementation"). These actions are noted with "RANGE" in the proposed acreage field.
Not all practices can be implemented to their full extent over all lands. Some practices are mutually exclusive and others don't make sense to occur simultaneously. It is infeasible for most operations to implement all possible practices on their property.
*Does not include CPAD or CCED areas under City, State, or Federal ownership/control.
[a]Alfalfa is a 5-year crop and therefore has a longer rotation relative to the other crop types, which may impact the timing of GHG reduction benefits of this practice.
[b]Practice is mutually exclusive with CPS 412
[c]Practice is mutually exclusive with CPS 393.
[d]Acreage dependent on availability of mulch.
[e]Newer vineyards will mulch for erosion control.

NWL 2: Restore Natural Lands

Table 2. Proposed Acreages for NWL 2 Actions

Action	Description	Spatial Data Parameters	
		Where Practice Applies	Zoning
NWL 2a. Restore Wetlands	Prioritize wetland restoration near communities most vulnerable to climate change and where climate smart land management can improve groundwater and water quantity, protect communities from flooding, and increase access to nature. Identify opportunities to reconstruct wetlands where possible, for example during construction projects in areas where these nature-based solutions could deliver climate and other beneficial outcomes to communities.	Unvegetated and weedy County land adjacent to existing wetlands	Parks and Recreation (P-R) Public Open Space (POS) Public/Quasi-Public (PQP)
NWL 2b. Restore Riparian Forests	Restore riparian forest ecosystems to enhance carbon storage, protect biodiversity, and expand wildlife corridors and climate migration pathways for native species. Work with landowners to support restoration efforts on Putah and Cache Creeks and their tributaries, as well as the mainstem riparian and floodplains of the Sacramento River and Yolo Bypass. Reconnect aquatic habitat within forests to help fish and wildlife endure drought and adapt to climate change.	Unvegetated and weedy County land adjacent to existing riparian forest	Parks and Recreation (P-R) Public Open Space (POS) Public/Quasi-Public (PQP)

Table 2. Proposed Acreages for NWL 2 Actions

Action	Description	Spatial Data Parameters	
		Where Practice Applies	Zoning
NWL 2c. Restore Native Grasslands	Restore and /or manage for native grasslands to improve carbon storage, biodiversity, and connectivity where feasible	Unvegetated and weedy County land adjacent to existing grasslands	Parks and Recreation (P-R) Public Open Space (POS) Public/Quasi-Public (PQP)
NWL 2d. Repurpose Fallowed Cropland	Convert unused or idle agricultural land for alternative purposes. Some common practices for intentionally uncultivated land include soil restoration, reforestation, and wildlife habitat conservation.	Fallowed County cropland that is unused or idle	

NWL 3: Promote Stewardship of Natural Lands

Table 3. Proposed Acreages for NWL 3 Actions

Action	Description	Spatial Data Parameters			(Draft) Proposed Maximum Acres	
		Where Practice Applies	Zoning	Landcover	County Parks and Public Space	Total within County Jurisdiction*
NWL 3a. Implement Grassland Stewardship in County Public Lands	Grassland stewardship practices include: -Controlled grazing, including development of grazing management plans -Invasive species control and noxious weed management -Soil health and erosion control -Prescribed and cultural burning	Existing grasslands within County public spaces.	Parks and Recreation (P-R) Public Open Space (POS) Public/Quasi-Public (PQP)	**Grasslands** Annual Grassland Serpentine Pasture	1,405.9	1,870.1
NWL 3b. Implement Forest and Woodland Stewardship in County Public Lands	Forest and woodland stewardship practices include: -Fire and fuel load vegetation management -Enhancement measures designed to benefit forest and woodland plant communities and wildlife -Invasive species removal	Existing forests and woodlands within County public spaces.	Parks and Recreation (P-R) Public Open Space (POS) Public/Quasi-Public (PQP)	**Woodlands and Forest** Blue Oak Woodland Blue Oak - Foothill Pine Eucalyptus Closed-Cone Pine-Cypress Montane Hardwood Valley Oak Woodland	1,091.3	1,176.0
NWL 3c. Implement Riparian and Wetland Stewardship in County Public Lands	Riparian and wetland stewardship practices include: -Enhancement measures designed to benefit riparian and wetland plant communities and wildlife -Invasive species removal -Bank stability and erosion control	Existing riparian forests and wetlands within County public spaces.	Parks and Recreation (P-R) Public Open Space (POS) Public/Quasi-Public (PQP)	**Riparian and Wetlands** Alkali Sink Fresh Emergent Wetland Open Water Valley Foothill Riparian Vernal Pool Complex	3,776.7	3,872.0
NWL 3d. Support Cache Creek Conservancy, Lower Putah Creek Coordinating Committee, Yolo RCD, Yocha Dehe Wintun Nation, and other entities in their projects and actions aimed at improving habitat in Yolo County	-	-	-	-	-	-

Notes:
*Does not include CPAD or CCED areas under City, State, or Federal ownership/control.

Zoning Descriptions

Zoning Code	Zoning Description	Acreage	Allowable Use
A-X	Agricultural Extensive	168,343.0	The Agricultural Extensive (A-X) Zone is applied to protect and preserve lands that are typically less dependent on high soil quality and available water for irrigation. Such lands require considerably larger parcel sizes to allow extensive agricultural activities such as livestock and ranching operations, and dry land farming. These lands may also be used for open space functions that are often connected with foothill and wetlands locations, such as grazing and pasture land, and wildlife habitat and recreational areas. Minimum lot size for newly created parcels in the A-X Zone is 160 acres for dry land farming and 320 acres for rangeland.
A-I	Agricultural Industrial	258.1	The Agricultural Industrial (A-I) Zone is applied to land in the rural areas for more intensive processing and industrial-type uses, which are directly related to the local agricultural industry. Minimum parcel size in the A-I Zone shall be adequate enough to support the use, with a minimum of five (5) acres.
A-N	Agricultural Intensive	378,040.5	The Agricultural Intensive (A-N) Zone is applied to preserve lands best suited for intensive agricultural uses typically dependent on higher quality soils, water availability, and relatively flat topography. The purpose of the zone is to promote those uses, while preventing the encroachment of nonagricultural uses. Uses in the A-N Zone are primarily limited to intensive agricultural production and other activities compatible with agricultural uses. This includes allowing agriculturally-related support uses, excluding incompatible uses, and protecting the viability of the family farm. Minimum lot size for newly created parcels(1) in the A-N Zone is 40 acres for irrigated parcels primarily planted in permanent crops, such as orchards or vineyards; 80 acres for irrigated parcels that are cultivated; 160 acres for parcels that are generally uncultivated and/or not irrigated.
A-R	Agricultural Residential	2.9	The Agricultural Residential (A-R) Zone shall be applied only to those lots created through a subdivision approved under the Clustered Agricultural Housing Ordinance (see Section 8-2.403). Minimum parcel size in the A-R Zone is 2.5 acres. The maximum parcel size can be increased to 4.0 acres to accommodate an agricultural buffer or farm worker housing.
A-C	Agricultural Commercial	82.0	The Agricultural Commercial (A-C) Zone is applied to existing and planned commercial uses in the agricultural areas. The Agricultural Commercial Use Types set forth in Section 8-2.303(c) and Table 8-2.304(c) do not require rezoning to the A-C Zone. The Agricultural Commercial Zone is to be applied only when the primary use of the property is for significant commercial agricultural activities. The commercial activities must be compatible with and enhance the primary agricultural use of the greater area. Maximum parcel size in the A-C Zone shall be determined by the existing or proposed use, and shall have a minimum parcel size of one (1) acre, and a maximum parcel size of twenty (20) acres.
City	Cities Jurisdiction	27,147.5	--
C-G	General Commercial	261.7	The purpose of the General Commercial (C-G) zone is to allow for a full range of retail, service, and office uses in proximity to residents in rural areas of the county, to reduce the need for residents of remote communities to drive long distances to meet basic needs. Permitted uses include general retail, personal services, professional offices, restaurants, gas and service stations, hotels and motels, and other similar commercial uses. Research and development parks with office and service support are also allowed. Heavier uses such as vehicle repair, light manufacturing, and warehousing and storage are conditionally permitted in the C-G zone with the approval of a Use Permit. Residential uses are allowed on upper floors as an ancillary use. The development intensity in C-G zones will be dependent on whether public services (sewer, water) are available. The maximum permitted floor area ratio in the C-G zone is 1.0 (2.0 for mixed commercial and residential). The C-G zone implements the Commercial General (CG) land use designation in the 2030 Countywide General Plan.
I-H	Heavy Industrial	527.7	The purpose of the Heavy Industrial (I-H) zone is to allow all heavy manufacturing and industrial uses that may create objectionable impacts such as noise, odor, vibrations, and use of hazardous materials. Such uses could include the processing, fabrication, manufacture, and storage of metals, cement, chemicals, agricultural products, animal carcasses, wood, grain, furniture, heavy equipment, automobiles and trucks, building materials, etc. All uses that are allowed in the Light Industrial zones are also allowed in the I-H zones, except where noted in Table 8-2.704. Limited amounts of retail, personal services, and food-related uses are also permitted to serve area workers and to allow sales of products manufactured on-site. The development intensity in the I-H zone will be dependent on whether public services (sewer, water) are available. The maximum permitted floor area ratio in the I-H zone is 0.5. The I-H zone implements the Industrial (IN) land use designation in the 2030 Countywide General Plan.

Zoning Code	Zoning Description	Acreage	Allowable Use
R-H	High Density Residential	16.4	The High Density Residential (R-H) Zone includes parcels and neighborhoods planned for the more dense condominium, townhouse, and apartment projects. The R-H zone is applied only in unincorporated towns that are served by both public water and sewer systems, i.e. Esparto, Knights Landing, Madison, and Dunnigan. Mixed uses are encouraged in the R-H Zone, and a greater variety of neighborhood-serving retail, office, and service uses are allowed within the RH Zone than in the R-M Zone. The R-H Zone is consistent with the Residential High (RH) land use designation set by the 2030 Countywide General Plan. The density allowed in the R-H Zone is greater than 20.0 housing units per net acre. The minimum lot size for newly created parcels in the R-H Zone is 1,500 square feet.
C-H	Highway Service Commercia	406.2	The purpose of the Highway Services Commercial (C-H) zone is to provide for retail, commercial, amusement, and transient residential (hotel/motel) uses which are appropriate to highway locations and dependent upon highway travel. Permitted uses include auto and truck service stations and repair, vehicle and boat equipment sales, hotels/motels, restaurants, small retail sales. The C-H zones are applied on parcels of two (2) acres or more and are located only in the vicinity of highways or major arterials. The maximum permitted floor area ratio in the C-G zone is 1.0. The C-H zone implements the Commercial General (CG) land use designation in the 2030 Countywide General Plan.
I-L	Light Industrial	79.8	The purpose of the Light Industrial (I-L) zone is to accommodate a limited group of light manufacturing and service uses that have little potential to generate noise, odor, vibrations, or similar impacts to adjacent neighbors. Such uses include equipment sales and repair services, light manufacturing and processing involving non-toxic materials, warehousing and storage, wholesaling, and distribution. Limited amounts of retail, personal services, and food-related uses are permitted to serve area workers and to allow sales of products manufactured on-site. The development intensity in the I-L zone will be dependent on whether public services (sewer, water) are available. The maximum permitted floor area ratio in the I-L zone is 0.5. The I-L zone implements the Industrial (IN) land use designation in the 2030 Countywide General Plan.
C-L	Local Commercial	92.2	The purpose of the Local Commercial (C-L) zone is to allow for retail, service, and office uses that meet the daily needs of nearby residents and workers. Residential uses are also allowed on upper floors as an ancillary use. Standards for the C-L zone are intended to reduce the need to drive by providing everyday goods and services close to where people live and work, and by allowing for centers of neighborhood activity that support small, locally-owned businesses. Permitted uses in the C-L zone are similar to the General Commercial (C-G) zone, except that regional-serving uses, large stores, and more intensive commercial uses such as vehicle repair, light manufacturing, and warehousing and storage uses, are not allowed. The development intensity in C-L zones will be dependent on whether public services (sewer, water) are available. The maximum permitted floor area ratio in the C-L zone is 0.5 (1.0 for mixed commercial and residential) and the maximum allowable “floor plate” (the space occupied) for individual uses is 40,000 square feet of ground floor space. The C-L zone implements the Commercial Local (CL) land use designation in the 2030 Countywide General Plan.
R-L	Low Density Residential	1,073.7	The Low Density Residential (R-L) Zone includes traditional low density neighborhoods with primarily detached single family homes located in existing unincorporated towns such as Esparto, Knights Landing, Clarksburg, Madison, Dunnigan, Yolo, and Zamora. Some of these areas have public services including water and sewer, while others do not. Lot sizes in communities zoned R-L with no or limited public services are restricted in size to no less than two acres, in order to accommodate on-site wells and leachfields. Along with single family homes, the R-L Zone also allows duplexes (two family) and small multifamily housing such as “triplexes” (three family), and “four-plexes” (four family). The R-L Zone is the one zoning district that is consistent with the Residential Low (RL) land use designation set by the 2030 Countywide General Plan. The density allowed in the R-L Zone is between 1.0 and 10.0 housing units per net acre. The minimum lot size for newly created parcels in the R-L Zone is 1,200 square feet. The maximum lot size for newly created parcels with water and sewer services is one acre.
R-M	Medium Density Residential	184.3	The Medium Density Residential (R-M) Zone includes parcels in neighborhoods with a mix of housing densities, including detached and attached single family homes, condominiums, townhouses, “garden” apartment complexes, and mobile home parks. The R-M zone is applied only in unincorporated towns that are served by some public water and/or sewer system, i.e. Esparto, Knights Landing, Madison, Dunnigan, and Yolo. Certain small compatible neighborhood serving retail, office, and service uses are also allowed within the R-M Zone as “mixed use residential” activities. The R-M Zone is the one zoning district that is consistent with the Residential Medium (RM) land use designation set by the 2030 Countywide General Plan. The density allowed in the R-M Zone is between 10.0 and 20.0 housing units per net acre. The minimum lot size for newly created parcels in the R-M Zone is 1,200 square feet.

Zoning Code	Zoning Description	Acreage	Allowable Use
P-R	Parks and Recreation	898.3	The purpose of the Parks and Recreation (P-R) zone is to identify lands that are developed as existing County parks and to designate lands for future parks, including privately owned facilities offering recreation to the greater region. Permitted uses in the P-R zone include a wide range of active recreational activities, whether located outdoors or within recreational or community buildings. Typical development in the P-R zone includes sports fields, tot lots, and public pools. Some P-R zones serve as agricultural buffer areas. Detention basins are an allowed ancillary use in the P-R zone when designed with recreation or sports features. The only retail and service activities allowed in the P-R zone are those that are operated by park personnel or under a concession arrangement (gift stores, restaurants, guides, etc.). The P-R zone is not usually applied to undeveloped lands that support only passive recreational activities such as hiking or bicycling. These latter lands are zoned Public Open Space (see below). Note that most park uses would normally be required to locate on lands that have been zoned PQP; however, smaller uses of less than 5,000 square feet of total building space, or one acre in size for a park, may be permitted to locate in other zones, such as commercial and some industrial zones, without a rezoning to PQP. The P-R zone implements the Parks and Recreation (PR) land use designation in the 2030 Countywide General Plan.
POS	Public Open Space	52,759.2	The purpose of the Public Open Space (POS) zone is to recognize major publicly-owned open space lands, major natural water bodies, agricultural buffer areas, and habitat preserves. The POS lands are characterized by passive or low management uses. Detention basins are allowed in the POS zone if they are designed with naturalized features and native landscaping. The POS zone implements the Open Space (OS) land use designation in the 2030 Countywide General Plan.
PQP	Public/Quasi-Public	7,583.3	The Public and Quasi-Public (PQP) zone is applied to lands that are occupied or used for public and governmental offices, places of worship, schools, libraries, and civic uses. Other typical uses include airports, water and wastewater treatment plants, drainage basins, and sanitary landfills. As with park facilities, smaller public/quasi-public uses involving less than 5,000 square feet of building space may be permitted in commercial and some industrial zones. The PQP zone implements the Public and Quasi-Public (PQ) land use designation in the 2030 Countywide General Plan.
RR-2	Residential Rural-2 acre	526.9	The Rural Residential-2 (RR-2) Zone, like the RR-5 Zone, recognizes existing areas in the County that have been developed with very low density (one to five acre) large lot homes with no public services such as water or sewer. The RR-2 Zone allows for a limited variety of agricultural uses, including the keeping of animals, which is regulated based on the size of the parcel. The RR-2 Zone is most notably applied to the Hardwoods area of Dunnigan, which does not currently have public services but is expected to be connected to public water and sewer within the 2030 planning period. The RR-2 Zone is one of the two zoning districts that is consistent with the Rural Residential (RR) land use designation set by the 2030 Countywide General Plan. As in the case of the RR-5 Zone, General Plan policy strongly discourages areas that are now designated as Agriculture from being redesignated to RR or any other non-Agriculture designation. Thus, it is anticipated that the RR-2 zoning will not be extended to any additional areas during the 2030 planning period. The minimum lot size for newly created parcels in the RR-2 Zone is 2.0 acres.
RR-5	Residential Rural-5 acre	1,134.4	The purpose of the Rural Residential-5 Zone (RR-5) is to recognize existing rural residential areas with no public water and sewer systems surrounded by intensive agriculture, with lot sizes of generally five acres or more. The RR-5 Zone is notably applied in Monument Hills, an area of poorer quality soils. The predominant land use in the zone is large lot rural homes, although attached and/or detached ancillary or second units, and farm worker housing is allowed. The RR5 Zone is one of the two zoning districts that is consistent with the Rural Residential (RR) land use designation set by the 2030 Countywide General Plan. General Plan Policy AG-1.5 states that areas designated as Agriculture are strongly discouraged from being redesignated to RR or any other non-Agriculture designation. Thus, it is anticipated that the RR-5 zoning will not be extended to any additional areas during the 2030 planning period. The minimum lot size for newly created parcels in the RR-5 Zone is 5.0 acres.

Zoning Code	Zoning Description	Acreage	Allowable Use
SP	Specific Plan	382.8	The purpose of the Specific Plan (S-P) zone is to identify lands that are planned for future urban growth but which cannot be developed until detailed development standards as outlined in a “specific plan” are adopted. The required contents of a specific plan are defined under State law (Government Code 64540 et seq). In addition, the 2030 Yolo Countywide General Plan includes policies that set parameters or requirements for development in each specific plan area, including approximate acres of planned uses and ranges of residential and commercial unit counts. These policies and development parameters are cited in Table 8-2.905. The area identified for preparation of a specific plan in the 2030 Countywide General Plan includes Covell/Pole Line Road in north Davis (Table 8-2.902-1). The Specific Plan (S-P) zoning allows agricultural uses in the zoned area to continue temporarily until such time as a specific plan has been adopted, or until the zoning or land use designation is otherwise amended. Ultimate land uses must be consistent with the adopted Specific Plan. Capital intensive agricultural uses are discouraged in lands that are zoned S-P so as not to preclude later planned urban uses. The S-P zone implements the Specific Plan (SP) land use designation in the 2030 Yolo Countywide General Plan
(blank)	(blank)	13,751.7	

Agricultural Zones: https://www.yolocounty.org/home/showpublisheddocument/72002/637753306774370000
Residential Zones: https://www.yolocounty.org/home/showpublisheddocument/75743/638073135496030000
Commercial Zones: https://www.yolocounty.org/home/showpublisheddocument/71974/637750786190070000
Industrial Zones: https://www.yolocounty.org/home/showpublisheddocument/71976/637750786200070000
Public and Open Space Zones: https://www.yolocounty.org/home/showpublisheddocument/71978/637750786211500000

COMET-Planner Metadata

COMET-Planner Version 3.1, Build 1
COMET-Farm metamodeling utilized COMET-Farm Version 4.0

Data will be cited as follows: Amy Swan, Crystal Toureene, Mark Easter, Adam Chambers, Kevin Brown, Stephen A. Williams, Jeff Creque, John Wick, Keith Paustian. 2023. COMET-Planner Dataset, Version 3.1, Build 1, and COMET-Planner Report: Carbon and Greenhouse Gas Evaluation for NRCS Conservation Practice Planning. A companion report to www.comet-planner.com. Downloaded at www.comet-planner.com on <date>.

NOTES TO THE USER
* More information on methods, including conservation practice adoption scenario assumptions, can be found in the COMET-Planner Report, available for downoad at www.comet-planner.com
* Mean, minimum and maximum values were estimated by county-rectified USDA Major Land Resource Areas, unless column 'lrr_fill' indicates the LRR value was used
* Standard errors of the mean = sample standard deviation/sqrt(n)
* Standard errors of the mean provide a measure of variability of modeled results in a region due to weather, soil and cropping system heterogeneity. Standard errors of the mean do NOT represent a measure of predictive accuracy.
* Negative values indicate a loss of carbon or increased emissions of greenhouse gases
* Values of -999 are represented in the online tool as 'not estimated'
* Not all agroforestry practices are available in every county; agroforestry practice estimates were restricted to regionally-available NRCS practice prescriptions

* There are a number of GHG source categories that are included in the table for completeness, but that were not estimated because scenarios modeled did not include activities that would lead to emissions in those subsource categories. See the 'additional notes' column in the 'column_descriptions' tab for more information by GHG source category. Standard error columns were not included for sources that were not estimated.

Data columns shaded blue are used in the main calculations in COMET-Planner
Data columns shaded green are given in the 'Detailed Emissions Reductions' table

COMET-Planner Column Descriptions

Column	Column Description
state	Abbreviation for state
county	Name of county
fips	County fips code (unique integer identifier for all U.S. counties)
mlra	USDA Major Land Resource Area rectified to county boundaries
lrr	USDA Land Resource Region rectified to county boundaries
class	Broad class of conservation practice
cpsnum	USDA-NRCS Conservation Practice Standard number
cps_name	USDA-NRCS Conservation Practice Standard name
planner_implementation	The implementation scenario modeled for each conservation practice standard; implementation scenarios are described in more detail in the one-page summaries associated with each practice
n	sample size for COMET-Farm modeled practices
lrr_fill	Indicator column to denote when a value is derived from the LRR average. Value of 1 indicates an LRR average
co2_mean	Mean total carbon dioxide (CO2) emission reductions (sum of all CO2 sources) in metric tonnes CO2 equivalent per acre per year (MT CO2e/ac/yr)
co2_sterr	Standard error of the mean of total carbon dioxide (CO2) emission reductions (sum of all CO2 sources) in metric tonnes CO2 equivalent per acre per year (MT CO2e/ac/yr)
n2o_mean	Mean total nitrous oxide (N2O) emission reductions (sum of all N2O emission sources) in metric tonnes CO2 equivalent per acre per year (MT CO2e/ac/yr)
n2o_sterr	Standard error of the mean for total nitrous oxide (N2O) emission reductions (sum of all N2O emission sources) in metric tonnes CO2 equivalent per acre per year (MT CO2e/ac/yr)
ch4_mean	Mean total methane (CH4) emission reductions (sum of all CH4 emission sources) in metric tonnes CO2 equivalent per acre per year (MT CO2e/ac/yr)
ch4_sterr	Standard error of the mean for total methane (CH4) emission reductions (sum of all CH4 emission sources) in metric tonnes CO2 equivalent per acre per year (MT CO2e/ac/yr)
soil_carbon_co2	Mean carbon dioxide (CO2) emissions reductions from soil carbon in metric tonnes CO2 equivalent per acre per year (MT CO2e/ac/yr)
soil_carbon_co2_sterr	Standard error of the mean for carbon dioxide (CO2) emissions reductions from soil carbon in metric tonnes CO2 equivalent per acre per year (MT CO2e/ac/yr)
biomass_co2	Mean carbon dioxide (CO2) emissions reductions from biomass carbon in metric tonnes CO2 equivalent per acre per year (MT CO2e/ac/yr)
fossil_co2	Mean carbon dioxide (CO2) emissions reductions from fossil energy use in farm equipment in metric tonnes CO2 equivalent per acre per year (MT CO2e/ac/yr)

COMET-Planner Column Descriptions

Column	Column Description
drainedorganicsoils_co2	Mean carbon dioxide (CO2) emissions reductions from drained organic soils in metric tonnes CO2 equivalent per acre per year (MT CO2e/ac/yr)
biomass_burning_co2	Mean carbon dioxide (CO2) emissions reductions from biomass burning in metric tonnes CO2 equivalent per acre per year (MT CO2e/ac/yr)
biomassburning_n2o	Mean nitrous oxide (N2O) emissions reductions from biomass burning in metric tonnes CO2 equivalent per acre per year (MT CO2e/ac/yr)
biomassburning_ch4	Mean methane (CH4) emissions reductions from biomass burning in metric tonnes CO2 equivalent per acre per year (MT CO2e/ac/yr)
liming_co2	Mean carbon dioxide (CO2) emissions reductions from liming in metric tonnes CO2 equivalent per acre per year (MT CO2e/ac/yr)
direct_soil_n2o	Mean nitrous oxide (N2O) emissions reductions from direct soil N2O in metric tonnes CO2 equivalent per acre per year (MT CO2e/ac/yr)
direct_soil_n2o_sterr	Standard error of the mean for nitrous oxide (N2O) emissions reductions from direct soil N2O in metric tonnes CO2 equivalent per acre per year (MT CO2e/ac/yr)
indirect_soil_n2o	Mean nitrous oxide (N2O) emissions reductions from indirect soil N2O (volatilization and leaching) in metric tonnes CO2 equivalent per acre per year (MT CO2e/ac/yr)
indirect_soil_n2o_sterr	Standard error of the mean for nitrous oxide (N2O) emissions reductions from indirect soil N2O (volatilization and leaching) in metric tonnes CO2 equivalent per acre per year (MT CO2e/ac/yr)
drainedorganicsoils_n2o	Mean nitrous oxide (N2O) emissions reductions from drained organic soils in metric tonnes CO2 equivalent per acre per year (MT CO2e/ac/yr)
soil_ch4	Mean methane (CH4) emission reductions from soil in metric tonnes CO2 equivalent per acre per year (MT CO2e/ac/yr)
total_ghg_co2	Mean of total greenhouse gas emission reductions in metric tonnes CO2 equivalent per acre per year (MT CO2e/ac/yr)
total_ghg_co2_sterr	Standard error of the mean for total greenhouse gas emission reductions in metric tonnes CO2 equivalent per acre per year (MT CO2e/ac/yr)
total_ghg_co2_min	Minimum of total greenhouse gas emission reductions in metric tonnes CO2 equivalent per acre per year (MT CO2e/ac/yr)
total_ghg_co2_max	Maximum of total greenhouse gas emission reductions in metric tonnes CO2 equivalent per acre per year (MT CO2e/ac/yr)

COMET-Planner Column

Column	Additional Notes	
state		
county		
fips		
	For Hawaii, MLRAs are not given because all estimates were calculated at the county scale, rather than MLRA scale.	
mlra		
lrr		
class		
cpsnum		
cps_name		
planner_implementation		
	Practices with non-null sample sizes (n values) were modeled with the sample-based modeling approach described in the COMET-Planner report. Practices with null samples sizes were derived from empirical analyses or from meta-analysis of published data.	
n		
	Major Land Resource Area (MLRA) is the regional analysis unit and when sample sizes were too small within an MLRA (n < 20), the value from the Land Resource Region was used. The sample size was updated with the sample size at the LRR scale.	
lrr_fill		
co2_mean		
co2_sterr	Standard errors are intented only to characterize regional variation in modeled results and are not available for practices that were not modeled in COMET-Farm.	not a predictive uncertainty
n2o_mean		
n2o_sterr	Standard errors are intented only to characterize regional variation in modeled results and are not available for practices that were not modeled in COMET-Farm.	
ch4_mean		
ch4_sterr		
soil_carbon_co2		
soil_carbon_co2_sterr	Standard errors are intented only to characterize regional variation in modeled results and are not available for practices that were not modeled in COMET-Farm.	
biomass_co2		
fossil_co2		

COMET-Planner Column

Column	Additional Notes
drainedorganicsoils_co2	No organic soils were included in the analysis
biomass_burning_co2	No simulations included biomass burning in baseline or conservation practice scenarios
biomassburning_n2o	No simulations included biomass burning in baseline or conservation practice scenarios
biomassburning_ch4	No simulations included biomass burning in baseline or conservation practice scenarios
liming_co2	No simulations included liming in baseline or conservation practice scenarios
direct_soil_n2o	
direct_soil_n2o_sterr	Standard errors are intented only to characterize regional variation in modeled results and are not available for practices that were not modeled in COMET-Farm.
indirect_soil_n2o	
indirect_soil_n2o_sterr	
drainedorganicsoils_n2o	No organic soils were included in the analysis
soil_ch4	Wetland rice was not included in simulations, therefore soil methane from rice was not estimated
total_ghg_co2	
total_ghg_co2_sterr	Standard errors are intented only to characterize regional variation in modeled results and are not available for practices that were not modeled in COMET-Farm.
total_ghg_co2_min	
total_ghg_co2_max	

Yolo County COMET-Planner Data

state	county	fipsint	mlra	lrr	class	cpsnum	cps_name
CA	Yolo	6113	17	C	Cropland Management	372	Combustion System Improvement (CPS 372)
CA	Yolo	6113	17	C	Cropland Management	328	Conservation Crop Rotation (CPS 328)
CA	Yolo	6113	17	C	Cropland Management	340	Cover Crop (CPS 340)
CA	Yolo	6113	17	C	Cropland Management	340	Cover Crop (CPS 340)
CA	Yolo	6113	17	C	Cropland Management	340	Cover Crop (CPS 340)
CA	Yolo	6113	17	C	Cropland Management	340	Cover Crop (CPS 340)
CA	Yolo	6113	17	C	Cropland Management	340	Cover Crop (CPS 340)
CA	Yolo	6113	17	C	Cropland Management	340	Cover Crop (CPS 340)
CA	Yolo	6113	17	C	Cropland Management	340	Cover Crop (CPS 340)
CA	Yolo	6113	17	C	Cropland Management	340	Cover Crop (CPS 340)
CA	Yolo	6113	17	C	Cropland Management	484	Mulching (CPS 484)
CA	Yolo	6113	17	C	Cropland Management	888	Multiple Conservation Practices
CA	Yolo	6113	17	C	Cropland Management	888	Multiple Conservation Practices
CA	Yolo	6113	17	C	Cropland Management	888	Multiple Conservation Practices
CA	Yolo	6113	17	C	Cropland Management	888	Multiple Conservation Practices
CA	Yolo	6113	17	C	Cropland Management	888	Multiple Conservation Practices
CA	Yolo	6113	17	C	Cropland Management	888	Multiple Conservation Practices
CA	Yolo	6113	17	C	Cropland Management	888	Multiple Conservation Practices
CA	Yolo	6113	17	C	Cropland Management	888	Multiple Conservation Practices
CA	Yolo	6113	17	C	Cropland Management	888	Multiple Conservation Practices
CA	Yolo	6113	17	C	Cropland Management	888	Multiple Conservation Practices
CA	Yolo	6113	17	C	Cropland Management	888	Multiple Conservation Practices
CA	Yolo	6113	17	C	Cropland Management	888	Multiple Conservation Practices
CA	Yolo	6113	17	C	Cropland Management	888	Multiple Conservation Practices
CA	Yolo	6113	17	C	Cropland Management	888	Multiple Conservation Practices
CA	Yolo	6113	17	C	Cropland Management	888	Multiple Conservation Practices
CA	Yolo	6113	17	C	Cropland Management	888	Multiple Conservation Practices
CA	Yolo	6113	17	C	Cropland Management	888	Multiple Conservation Practices
CA	Yolo	6113	17	C	Cropland Management	888	Multiple Conservation Practices
CA	Yolo	6113	17	C	Cropland Management	888	Multiple Conservation Practices
CA	Yolo	6113	17	C	Cropland Management	888	Multiple Conservation Practices
CA	Yolo	6113	17	C	Cropland Management	888	Multiple Conservation Practices
CA	Yolo	6113	17	C	Cropland Management	888	Multiple Conservation Practices
CA	Yolo	6113	17	C	Cropland Management	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Cropland Management	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Cropland Management	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Cropland Management	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Cropland Management	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Cropland Management	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Cropland Management	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Cropland Management	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Cropland Management	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Cropland Management	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Cropland Management	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Cropland Management	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Cropland Management	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Cropland Management	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Cropland Management	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Cropland Management	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Cropland Management	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Cropland Management	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Cropland Management	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Cropland Management	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Cropland Management	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Cropland Management	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Cropland Management	590	Nutrient Management (CPS 590)

Yolo County COMET-Planner Data

state	county	fipsint	mlra	lrr	class	cpsnum	cps_name
CA	Yolo	6113	17	C	Cropland Management	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Cropland Management	329	Residue and Tillage Management - No-Till (CPS 329)
CA	Yolo	6113	17	C	Cropland Management	329	Residue and Tillage Management - No-Till (CPS 329)
CA	Yolo	6113	17	C	Cropland Management	329	Residue and Tillage Management - No-Till (CPS 329)
CA	Yolo	6113	17	C	Cropland Management	329	Residue and Tillage Management - No-Till (CPS 329)
CA	Yolo	6113	17	C	Cropland Management	345	Residue and Tillage Management - Reduced Till (CPS 345)
CA	Yolo	6113	17	C	Cropland Management	345	Residue and Tillage Management - Reduced Till (CPS 345)
CA	Yolo	6113	17	C	Cropland Management	585	Stripcropping (CPS 585)
CA	Yolo	6113	17	C	Cropland Management	585	Stripcropping (CPS 585)
CA	Yolo	6113	17	C	Cropland to Herbaceous Cover	327	Conservation Cover (CPS 327)
CA	Yolo	6113	17	C	Cropland to Herbaceous Cover	327	Conservation Cover (CPS 327)
CA	Yolo	6113	17	C	Cropland to Herbaceous Cover	327	Conservation Cover (CPS 327)
CA	Yolo	6113	17	C	Cropland to Herbaceous Cover	327	Conservation Cover (CPS 327)
CA	Yolo	6113	17	C	Cropland to Herbaceous Cover	332	Contour Buffer Strips (CPS 332)
CA	Yolo	6113	17	C	Cropland to Herbaceous Cover	332	Contour Buffer Strips (CPS 332)
CA	Yolo	6113	17	C	Cropland to Herbaceous Cover	332	Contour Buffer Strips (CPS 332)
CA	Yolo	6113	17	C	Cropland to Herbaceous Cover	332	Contour Buffer Strips (CPS 332)
CA	Yolo	6113	17	C	Cropland to Herbaceous Cover	386	Field Border (CPS 386)
CA	Yolo	6113	17	C	Cropland to Herbaceous Cover	386	Field Border (CPS 386)
CA	Yolo	6113	17	C	Cropland to Herbaceous Cover	386	Field Border (CPS 386)
CA	Yolo	6113	17	C	Cropland to Herbaceous Cover	386	Field Border (CPS 386)
CA	Yolo	6113	17	C	Cropland to Herbaceous Cover	393	Filter Strip (CPS 393)
CA	Yolo	6113	17	C	Cropland to Herbaceous Cover	393	Filter Strip (CPS 393)
CA	Yolo	6113	17	C	Cropland to Herbaceous Cover	393	Filter Strip (CPS 393)
CA	Yolo	6113	17	C	Cropland to Herbaceous Cover	393	Filter Strip (CPS 393)
CA	Yolo	6113	17	C	Cropland to Herbaceous Cover	512	Forage and Biomass Planting (CPS 512)
CA	Yolo	6113	17	C	Cropland to Herbaceous Cover	512	Forage and Biomass Planting (CPS 512)
CA	Yolo	6113	17	C	Cropland to Herbaceous Cover	412	Grassed Waterway (CPS 412)
CA	Yolo	6113	17	C	Cropland to Herbaceous Cover	412	Grassed Waterway (CPS 412)
CA	Yolo	6113	17	C	Cropland to Herbaceous Cover	412	Grassed Waterway (CPS 412)
CA	Yolo	6113	17	C	Cropland to Herbaceous Cover	412	Grassed Waterway (CPS 412)
CA	Yolo	6113	17	C	Cropland to Herbaceous Cover	603	Herbaceous Wind Barriers (CPS 603)
CA	Yolo	6113	17	C	Cropland to Herbaceous Cover	603	Herbaceous Wind Barriers (CPS 603)
CA	Yolo	6113	17	C	Cropland to Herbaceous Cover	603	Herbaceous Wind Barriers (CPS 603)
CA	Yolo	6113	17	C	Cropland to Herbaceous Cover	603	Herbaceous Wind Barriers (CPS 603)
CA	Yolo	6113	17	C	Cropland to Herbaceous Cover	390	Riparian Herbaceous Cover (CPS 390)

Yolo County COMET-Planner Data

state	county	fipsint	mlra	lrr	class	cpsnum	cps_name
CA	Yolo	6113	17	C	Cropland to Herbaceous Cover	390	Riparian Herbaceous Cover (CPS 390)
CA	Yolo	6113	17	C	Cropland to Herbaceous Cover	390	Riparian Herbaceous Cover (CPS 390)
CA	Yolo	6113	17	C	Cropland to Herbaceous Cover	390	Riparian Herbaceous Cover (CPS 390)
CA	Yolo	6113	17	C	Cropland to Herbaceous Cover	601	Vegetative Barriers (CPS 601)
CA	Yolo	6113	17	C	Cropland to Herbaceous Cover	601	Vegetative Barriers (CPS 601)
CA	Yolo	6113	17	C	Cropland to Herbaceous Cover	601	Vegetative Barriers (CPS 601)
CA	Yolo	6113	17	C	Cropland to Herbaceous Cover	601	Vegetative Barriers (CPS 601)
CA	Yolo	6113	17	C	Grazing Lands	888	Multiple Conservation Practices
CA	Yolo	6113	17	C	Grazing Lands	888	Multiple Conservation Practices
CA	Yolo	6113	17	C	Grazing Lands	888	Multiple Conservation Practices
CA	Yolo	6113	17	C	Grazing Lands	888	Multiple Conservation Practices
CA	Yolo	6113	17	C	Grazing Lands	888	Multiple Conservation Practices
CA	Yolo	6113	17	C	Grazing Lands	888	Multiple Conservation Practices
CA	Yolo	6113	17	C	Grazing Lands	888	Multiple Conservation Practices
CA	Yolo	6113	17	C	Grazing Lands	888	Multiple Conservation Practices
CA	Yolo	6113	17	C	Grazing Lands	888	Multiple Conservation Practices
CA	Yolo	6113	17	C	Grazing Lands	888	Multiple Conservation Practices
CA	Yolo	6113	17	C	Grazing Lands	888	Multiple Conservation Practices
CA	Yolo	6113	17	C	Grazing Lands	888	Multiple Conservation Practices
CA	Yolo	6113	17	C	Grazing Lands	888	Multiple Conservation Practices
CA	Yolo	6113	17	C	Grazing Lands	888	Multiple Conservation Practices
CA	Yolo	6113	17	C	Grazing Lands	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Grazing Lands	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Grazing Lands	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Grazing Lands	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Grazing Lands	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Grazing Lands	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Grazing Lands	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Grazing Lands	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Grazing Lands	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Grazing Lands	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Grazing Lands	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Grazing Lands	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Grazing Lands	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Grazing Lands	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Grazing Lands	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Grazing Lands	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Grazing Lands	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Grazing Lands	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Grazing Lands	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Grazing Lands	590	Nutrient Management (CPS 590)
CA	Yolo	6113	17	C	Grazing Lands	528	Prescribed Grazing (CPS 528)
CA	Yolo	6113	17	C	Grazing Lands	528	Prescribed Grazing (CPS 528)
CA	Yolo	6113	17	C	Grazing Lands	550	Range Planting (CPS 550)
CA	Yolo	6113	17	C	Restoration of Disturbed Lands	342	Critical Area Planting (CPS 342)
CA	Yolo	6113	17	C	Restoration of Disturbed Lands	555	Riparian Restoration
CA	Yolo	6113	17	C	Woody Plantings	422	Hedgerow Planting (CPS 422)
CA	Yolo	6113	17	C	Woody Plantings	422	Hedgerow Planting (CPS 422)
CA	Yolo	6113	17	C	Woody Plantings	391	Riparian Forest Buffer (CPS 391)
CA	Yolo	6113	17	C	Woody Plantings	391	Riparian Forest Buffer (CPS 391)
CA	Yolo	6113	17	C	Woody Plantings	612	Tree/Shrub Establishment (CPS 612)
CA	Yolo	6113	17	C	Woody Plantings	612	Tree/Shrub Establishment (CPS 612)
CA	Yolo	6113	17	C	Woody Plantings	380	Windbreak/Shelterbelt Establishment (CPS 380)
CA	Yolo	6113	17	C	Woody Plantings	380	Windbreak/Shelterbelt Establishment (CPS 380)
CA	Yolo	6113	17	C	Woody Plantings	380	Windbreak/Shelterbelt Establishment (CPS 380)
CA	Yolo	6113	17	C	Woody Plantings	380	Windbreak/Shelterbelt Establishment (CPS 380)

Yolo County COMET-Plan

state	county	planner_implementation	n	lrr_fill	co2_mean	co2_sterr
CA	Yolo	Improved Farm Equipment Fuel Efficiency			0.01214575	-999
CA	Yolo	Decrease Fallow Frequency or Add Perennial Crops to Rotations			0.2639676	-999
CA	Yolo	Add Legume Seasonal Cover Crop (with 50% Fertilizer N Reduction) to Irrigated Cropland	263		0.59964092	0.04514536
CA	Yolo	Add Legume Seasonal Cover Crop (with 50% Fertilizer N Reduction) to No-Till Irrigated Cropland	263		0.40887631	0.0356552
CA	Yolo	Add Legume Seasonal Cover Crop (with 50% Fertilizer N Reduction) to No-Till Non-Irrigated Cropland	135		0.37683656	0.01915192
CA	Yolo	Add Legume Seasonal Cover Crop (with 50% Fertilizer N Reduction) to Non-Irrigated Cropland	135		0.51946534	0.02479061
CA	Yolo	Add Non-Legume Seasonal Cover Crop (with 25% Fertilizer N Reduction) to Irrigated Cropland	263		0.1460882	0.01021049
CA	Yolo	Add Non-Legume Seasonal Cover Crop (with 25% Fertilizer N Reduction) to No-Till Irrigated Cropland	263		0.04002622	0.00730319
CA	Yolo	Add Non-Legume Seasonal Cover Crop (with 25% Fertilizer N Reduction) to No-Till Non-Irrigated Cropland	135		0.1258901	0.00835828
CA	Yolo	Add Non-Legume Seasonal Cover Crop (with 25% Fertilizer N Reduction) to Non-Irrigated Cropland	135		0.206206	0.01207132
CA	Yolo	Add Mulch to Croplands			0.20566802	-999
CA	Yolo	Intensive Till to No Till or Strip Till (CPS 329) + Add Legume Seasonal Cover Crop (CPS 340) (with 50% Fertilizer N Reduction) on Irrigated Croplands	263		0.6477149	0.03962337
CA	Yolo	Intensive Till to No Till or Strip Till (CPS 329) + Add Legume Seasonal Cover Crop (CPS 340) (with 50% Fertilizer N Reduction) on Non-Irrigated Croplands	135		0.45360643	0.01882995
CA	Yolo	Intensive Till to No Till or Strip Till (CPS 329) + Add Legume Seasonal Cover Crop (CPS 340) + Replace Synthetic N Fertilizer with Compost (CN ratio 10) (CPS 590) on Irrigated Croplands	263		1.01537797	0.04796092
CA	Yolo	Intensive Till to No Till or Strip Till (CPS 329) + Add Legume Seasonal Cover Crop (CPS 340) + Replace Synthetic N Fertilizer with Compost (CN ratio 10) (CPS 590) on Non-Irrigated Croplands	135		0.48752587	0.0178411
CA	Yolo	Intensive Till to No Till or Strip Till (CPS 329) + Add Legume Seasonal Cover Crop (CPS 340) + Replace Synthetic N Fertilizer with Compost (CN ratio 15) (CPS 590) on Irrigated Croplands	263		1.08712803	0.05040205
CA	Yolo	Intensive Till to No Till or Strip Till (CPS 329) + Add Legume Seasonal Cover Crop (CPS 340) + Replace Synthetic N Fertilizer with Compost (CN ratio 15) (CPS 590) on Non-Irrigated Croplands	135		0.49313198	0.01782599
CA	Yolo	Intensive Till to No Till or Strip Till (CPS 329) + Add Legume Seasonal Cover Crop (CPS 340) + Replace Synthetic N Fertilizer with Compost (CN ratio 20) (CPS 590) on Irrigated Croplands	263		1.15717566	0.05288924
CA	Yolo	Intensive Till to No Till or Strip Till (CPS 329) + Add Legume Seasonal Cover Crop (CPS 340) + Replace Synthetic N Fertilizer with Compost (CN ratio 20) (CPS 590) on Non-Irrigated Croplands	135		0.50482445	0.01776372
CA	Yolo	Intensive Till to No Till or Strip Till (CPS 329) + Add Legume Seasonal Cover Crop (CPS 340) + Replace Synthetic N Fertilizer with Compost (CN ratio 25) (CPS 590) on Irrigated Croplands	263		1.22568513	0.0554477
CA	Yolo	Intensive Till to No Till or Strip Till (CPS 329) + Add Legume Seasonal Cover Crop (CPS 340) + Replace Synthetic N Fertilizer with Compost (CN ratio 25) (CPS 590) on Non-Irrigated Croplands	135		0.51129153	0.01780703
CA	Yolo	Intensive Till to No Till or Strip Till (CPS 329) + Add Non-Legume Seasonal Cover Crop (CPS 340) (with 25% Fertilizer N Reduction) on Irrigated Croplands	263		0.26439772	0.01058316
CA	Yolo	Intensive Till to No Till or Strip Till (CPS 329) + Add Non-Legume Seasonal Cover Crop (CPS 340) (with 25% Fertilizer N Reduction) on Non-Irrigated Croplands	135		0.19626053	0.00898309
CA	Yolo	Intensive Till to No Till or Strip Till (CPS 329) + Add Non-Legume Seasonal Cover Crop (CPS 340) + Replace Synthetic N Fertilizer with Compost (CN ratio 10) (CPS 590) on Irrigated Croplands	263		0.70334274	0.028964
CA	Yolo	Intensive Till to No Till or Strip Till (CPS 329) + Add Non-Legume Seasonal Cover Crop (CPS 340) + Replace Synthetic N Fertilizer with Compost (CN ratio 10) (CPS 590) on Non-Irrigated Croplands	135		0.24234098	0.01051999
CA	Yolo	Intensive Till to No Till or Strip Till (CPS 329) + Add Non-Legume Seasonal Cover Crop (CPS 340) + Replace Synthetic N Fertilizer with Compost (CN ratio 15) (CPS 590) on Irrigated Croplands	263		0.78193872	0.03201371
CA	Yolo	Intensive Till to No Till or Strip Till (CPS 329) + Add Non-Legume Seasonal Cover Crop (CPS 340) + Replace Synthetic N Fertilizer with Compost (CN ratio 15) (CPS 590) on Non-Irrigated Croplands	135		0.24580188	0.01081535
CA	Yolo	Intensive Till to No Till or Strip Till (CPS 329) + Add Non-Legume Seasonal Cover Crop (CPS 340) + Replace Synthetic N Fertilizer with Compost (CN ratio 20) (CPS 590) on Irrigated Croplands	263		0.85701144	0.03501519
CA	Yolo	Intensive Till to No Till or Strip Till (CPS 329) + Add Non-Legume Seasonal Cover Crop (CPS 340) + Replace Synthetic N Fertilizer with Compost (CN ratio 20) (CPS 590) on Non-Irrigated Croplands	135		0.2574248	0.01150411
CA	Yolo	Intensive Till to No Till or Strip Till (CPS 329) + Add Non-Legume Seasonal Cover Crop (CPS 340) + Replace Synthetic N Fertilizer with Compost (CN ratio 25) (CPS 590) on Irrigated Croplands	263		0.9289563	0.03800845
CA	Yolo	Intensive Till to No Till or Strip Till (CPS 329) + Add Non-Legume Seasonal Cover Crop (CPS 340) + Replace Synthetic N Fertilizer with Compost (CN ratio 25) (CPS 590) on Non-Irrigated Croplands	135		0.26236747	0.01191635
CA	Yolo	Intensive Till to No Till or Strip Till (CPS 329) + Synthetic N Fertilizer Reductions of 15% (CPS 590) on Irrigated Croplands	263		0.19844113	0.00861051
CA	Yolo	Intensive Till to No Till or Strip Till (CPS 329) + Synthetic N Fertilizer Reductions of 15% (CPS 590) on Non-Irrigated Croplands	135		0.08051508	0.00451328
CA	Yolo	Improved N Fertilizer Management on Irrigated Croplands - Reduce Fertilizer Application Rate by 15%	263		-999	-999
CA	Yolo	Improved N Fertilizer Management on Non-Irrigated Croplands - Reduce Fertilizer Application Rate by 15%	135		-999	-999
CA	Yolo	Replace Synthetic N Fertilizer with Beef Feedlot Manure on Irrigated Croplands	263		0.49965803	0.02237664
CA	Yolo	Replace Synthetic N Fertilizer with Beef Feedlot Manure on Non-Irrigated Croplands	135		0.03980527	0.00430792
CA	Yolo	Replace Synthetic N Fertilizer with Chicken Broiler Manure on Irrigated Croplands	263		0.39762855	0.01805005
CA	Yolo	Replace Synthetic N Fertilizer with Chicken Broiler Manure on Non-Irrigated Croplands	135		0.02957789	0.00329163
CA	Yolo	Replace Synthetic N Fertilizer with Chicken Layer Manure on Irrigated Croplands	263		0.39762855	0.01805005
CA	Yolo	Replace Synthetic N Fertilizer with Chicken Layer Manure on Non-Irrigated Croplands	135		0.02957789	0.00329163
CA	Yolo	Replace Synthetic N Fertilizer with Compost (CN ratio 10) on Irrigated Croplands	263		0.45626629	0.02075377
CA	Yolo	Replace Synthetic N Fertilizer with Compost (CN ratio 10) on Non-Irrigated Croplands	135		0.03590073	0.00387067
CA	Yolo	Replace Synthetic N Fertilizer with Compost (CN ratio 15) on Irrigated Croplands	263		0.56267895	0.02515777
CA	Yolo	Replace Synthetic N Fertilizer with Compost (CN ratio 15) on Non-Irrigated Croplands	135		0.04559784	0.00485973
CA	Yolo	Replace Synthetic N Fertilizer with Compost (CN ratio 20) on Irrigated Croplands	263		0.66717625	0.02944173
CA	Yolo	Replace Synthetic N Fertilizer with Compost (CN ratio 20) on Non-Irrigated Croplands	135		0.06230306	0.00653227
CA	Yolo	Replace Synthetic N Fertilizer with Compost (CN ratio 25) on Irrigated Croplands	263		0.76880792	0.03368498
CA	Yolo	Replace Synthetic N Fertilizer with Compost (CN ratio 25) on Non-Irrigated Croplands	135		0.07277108	0.00768064
CA	Yolo	Replace Synthetic N Fertilizer with Dairy Manure on Irrigated Croplands	263		0.49965803	0.02237664
CA	Yolo	Replace Synthetic N Fertilizer with Dairy Manure on Non-Irrigated Croplands	135		0.03995917	0.00435021
CA	Yolo	Replace Synthetic N Fertilizer with Other Manure on Irrigated Croplands	263		0.49965803	0.02237664
CA	Yolo	Replace Synthetic N Fertilizer with Other Manure on Non-Irrigated Croplands	135		0.03995917	0.00435021
CA	Yolo	Replace Synthetic N Fertilizer with Sheep Manure on Irrigated Croplands	263		0.49965803	0.02237664
CA	Yolo	Replace Synthetic N Fertilizer with Sheep Manure on Non-Irrigated Croplands	135		0.03995917	0.00435021
CA	Yolo	Replace Synthetic N Fertilizer with Swine Manure on Irrigated Croplands	263		0.46492095	0.02062903

Yolo County COMET-Plan

state	county	planner_implementation	n	lrr_fill	co2_mean	co2_sterr
CA	Yolo	Replace Synthetic N Fertilizer with Swine Manure on Non-Irrigated Croplands	135		0.03611447	0.00411713
CA	Yolo	Intensive Till to No Till or Strip Till on Irrigated Cropland	263		0.23972556	0.01047839
CA	Yolo	Intensive Till to No Till or Strip Till on Non-Irrigated Cropland	135		0.08513015	0.00477967
CA	Yolo	Reduced Till to No Till or Strip Till on Irrigated Cropland	263		0.15087954	0.00839032
CA	Yolo	Reduced Till to No Till or Strip Till on Non-Irrigated Cropland	135		0.05072627	0.00305395
CA	Yolo	Intensive Till to Reduced Till on Irrigated Cropland	263		0.11541818	0.00424132
CA	Yolo	Intensive Till to Reduced Till on Non-Irrigated Cropland	135		0.0467406	0.00291449
CA	Yolo	Add Perennial Cover Grown in Strips with Irrigated Annual Crops			0.10526316	-999
CA	Yolo	Add Perennial Cover Grown in Strips with Non-Irrigated Annual Crops			0.10526316	-999
CA	Yolo	Convert Irrigated Cropland to Permanent Unfertilized Grass Cover	263		-0.08149157	0.01627304
CA	Yolo	Convert Irrigated Cropland to Permanent Unfertilized Grass/Legume Cover	263		0.10636695	0.01420028
CA	Yolo	Convert Non-Irrigated Cropland to Permanent Unfertilized Grass Cover	135		0.09153411	0.0099367
CA	Yolo	Convert Non-Irrigated Cropland to Permanent Unfertilized Grass/Legume Cover	135		0.29038561	0.01343487
CA	Yolo	Convert Strips of Irrigated Cropland to Permanent Unfertilized Grass Cover	263		-0.08149157	0.01627304
CA	Yolo	Convert Strips of Irrigated Cropland to Permanent Unfertilized Grass/Legume Cover	263		0.10636695	0.01420028
CA	Yolo	Convert Strips of Non-Irrigated Cropland to Permanent Unfertilized Grass Cover	135		0.09153411	0.0099367
CA	Yolo	Convert Strips of Non-Irrigated Cropland to Permanent Unfertilized Grass/Legume Cover	135		0.29038561	0.01343487
CA	Yolo	Convert Strips of Irrigated Cropland to Permanent Unfertilized Grass Cover	263		-0.08149157	0.01627304
CA	Yolo	Convert Strips of Irrigated Cropland to Permanent Unfertilized Grass/Legume Cover	263		0.10636695	0.01420028
CA	Yolo	Convert Strips of Non-Irrigated Cropland to Permanent Unfertilized Grass Cover	135		0.09153411	0.0099367
CA	Yolo	Convert Strips of Non-Irrigated Cropland to Permanent Unfertilized Grass/Legume Cover	135		0.29038561	0.01343487
CA	Yolo	Conversion of Annual Cropland to Irrigated Grass/Legume Forage/Biomass Crops	264		1.31161798	0.02087459
CA	Yolo	Conversion of Annual Cropland to Non-Irrigated Grass/Legume Forage/Biomass Crops	135		0.31912464	0.01377339
CA	Yolo	Convert Strips of Irrigated Cropland to Permanent Unfertilized Grass Cover	263		-0.08149157	0.01627304
CA	Yolo	Convert Strips of Irrigated Cropland to Permanent Unfertilized Grass/Legume Cover	263		0.10636695	0.01420028
CA	Yolo	Convert Strips of Non-Irrigated Cropland to Permanent Unfertilized Grass Cover	135		0.09153411	0.0099367
CA	Yolo	Convert Strips of Non-Irrigated Cropland to Permanent Unfertilized Grass/Legume Cover	135		0.29038561	0.01343487
CA	Yolo	Convert Strips of Irrigated Cropland to Permanent Unfertilized Grass Cover	263		-0.08149157	0.01627304
CA	Yolo	Convert Strips of Irrigated Cropland to Permanent Unfertilized Grass/Legume Cover	263		0.10636695	0.01420028
CA	Yolo	Convert Strips of Non-Irrigated Cropland to Permanent Unfertilized Grass Cover	135		0.09153411	0.0099367
CA	Yolo	Convert Strips of Non-Irrigated Cropland to Permanent Unfertilized Grass/Legume Cover	135		0.29038561	0.01343487
CA	Yolo	Convert Irrigated Cropland to Permanent Unfertilized Grass Cover Near Aquatic Habitats	263		-0.08149157	0.01627304

Yolo County COMET-Plan

state	county	planner_implementation	n	lrr_fill	co2_mean	co2_sterr
CA	Yolo	Convert Irrigated Cropland to Permanent Unfertilized Grass/Legume Cover Near Aquatic Habitats	263		0.10636695	0.01420028
CA	Yolo	Convert Non-Irrigated Cropland to Permanent Unfertilized Grass Cover Near Aquatic Habitats	135		0.09153411	0.0099367
CA	Yolo	Convert Non-Irrigated Cropland to Permanent Unfertilized Grass/Legume Cover Near Aquatic Habitats	135		0.29038561	0.01343487
CA	Yolo	Convert Strips of Irrigated Cropland to Permanent Unfertilized Grass Cover	263		-0.08149157	0.01627304
CA	Yolo	Convert Strips of Irrigated Cropland to Permanent Unfertilized Grass/Legume Cover	263		0.10636695	0.01420028
CA	Yolo	Convert Strips of Non-Irrigated Cropland to Permanent Unfertilized Grass Cover	135		0.09153411	0.0099367
CA	Yolo	Convert Strips of Non-Irrigated Cropland to Permanent Unfertilized Grass/Legume Cover	135		0.29038561	0.01343487
CA	Yolo	Prescribed Grazing (CPS 528) + Replace Synthetic N Fertilizer with Beef Feedlot Manure (CPS 590) on Managed Irrigated Pasture	301		0.3422289	0.00374001
CA	Yolo	Prescribed Grazing (CPS 528) + Replace Synthetic N Fertilizer with Beef Feedlot Manure (CPS 590) on Managed Non-Irrigated Pasture	302		0.0399535	0.00135631
CA	Yolo	Prescribed Grazing (CPS 528) + Replace Synthetic N Fertilizer with Compost (CN ratio 10) (CPS 590) on Managed Irrigated Pasture	301		0.30639729	0.00354747
CA	Yolo	Prescribed Grazing (CPS 528) + Replace Synthetic N Fertilizer with Compost (CN ratio 10) (CPS 590) on Managed Non-Irrigated Pasture	302		0.03824443	0.00132995
CA	Yolo	Prescribed Grazing (CPS 528) + Replace Synthetic N Fertilizer with Compost (CN ratio 15) (CPS 590) on Managed Irrigated Pasture	301		0.38932497	0.0040069
CA	Yolo	Prescribed Grazing (CPS 528) + Replace Synthetic N Fertilizer with Compost (CN ratio 15) (CPS 590) on Managed Non-Irrigated Pasture	302		0.04057364	0.00135896
CA	Yolo	Prescribed Grazing (CPS 528) + Replace Synthetic N Fertilizer with Compost (CN ratio 20) (CPS 590) on Managed Irrigated Pasture	301		0.47198695	0.00453928
CA	Yolo	Prescribed Grazing (CPS 528) + Replace Synthetic N Fertilizer with Compost (CN ratio 20) (CPS 590) on Managed Non-Irrigated Pasture	302		0.04639635	0.00148149
CA	Yolo	Prescribed Grazing (CPS 528) + Replace Synthetic N Fertilizer with Compost (CN ratio 25) (CPS 590) on Managed Irrigated Pasture	301		0.55544631	0.00513559
CA	Yolo	Prescribed Grazing (CPS 528) + Replace Synthetic N Fertilizer with Compost (CN ratio 25) (CPS 590) on Managed Non-Irrigated Pasture	302		0.04872812	0.00154145
CA	Yolo	Prescribed Grazing (CPS 528) + Replace Synthetic N Fertilizer with Dairy Manure (CPS 590) on Managed Irrigated Pasture	301		0.3422289	0.00374001
CA	Yolo	Prescribed Grazing (CPS 528) + Replace Synthetic N Fertilizer with Dairy Manure (CPS 590) on Managed Non-Irrigated Pasture	302		0.03995348	0.00135631
CA	Yolo	Prescribed Grazing (CPS 528) + Replace Synthetic N Fertilizer with Swine Manure (CPS 590) on Managed Irrigated Pasture	301		0.38932497	0.0040069
CA	Yolo	Prescribed Grazing (CPS 528) + Replace Synthetic N Fertilizer with Swine Manure (CPS 590) on Managed Non-Irrigated Pasture	302		0.04057364	0.00135896
CA	Yolo	Replace Synthetic N Fertilizer with Beef Feedlot Manure on Managed Irrigated Pasture	301		0.29667502	0.00316478
CA	Yolo	Replace Synthetic N Fertilizer with Beef Feedlot Manure on Managed Non-Irrigated Pasture	302		0.02594193	0.00134567
CA	Yolo	Replace Synthetic N Fertilizer with Chicken Broiler Manure on Managed Irrigated Pasture	301		0.22481763	0.00290488
CA	Yolo	Replace Synthetic N Fertilizer with Chicken Broiler Manure on Managed Non-Irrigated Pasture	302		0.02255544	0.00134115
CA	Yolo	Replace Synthetic N Fertilizer with Chicken Layer Manure on Managed Irrigated Pasture	301		0.22481763	0.00290488
CA	Yolo	Replace Synthetic N Fertilizer with Chicken Layer Manure on Managed Non-Irrigated Pasture	302		0.02255544	0.00134115
CA	Yolo	Replace Synthetic N Fertilizer with Compost (CN ratio 10) on Managed Irrigated Pasture	301		0.26068761	0.00301462
CA	Yolo	Replace Synthetic N Fertilizer with Compost (CN ratio 10) on Managed Non-Irrigated Pasture	302		0.02428146	0.00134112
CA	Yolo	Replace Synthetic N Fertilizer with Compost (CN ratio 15) on Managed Irrigated Pasture	301		0.34367041	0.00338
CA	Yolo	Replace Synthetic N Fertilizer with Compost (CN ratio 15) on Managed Non-Irrigated Pasture	302		0.02653819	0.00128262
CA	Yolo	Replace Synthetic N Fertilizer with Compost (CN ratio 20) on Managed Irrigated Pasture	301		0.42568953	0.00386225
CA	Yolo	Replace Synthetic N Fertilizer with Compost (CN ratio 20) on Managed Non-Irrigated Pasture	302		0.03204978	0.00140044
CA	Yolo	Replace Synthetic N Fertilizer with Compost (CN ratio 25) on Managed Irrigated Pasture	301		0.50789879	0.00444841
CA	Yolo	Replace Synthetic N Fertilizer with Compost (CN ratio 25) on Managed Non-Irrigated Pasture	302		0.03415153	0.00140661
CA	Yolo	Replace Synthetic N Fertilizer with Other Manure on Managed Irrigated Pasture	301		0.29667502	0.00316478
CA	Yolo	Replace Synthetic N Fertilizer with Other Manure on Managed Non-Irrigated Pasture	302		0.02594286	0.00134567
CA	Yolo	Replace Synthetic N Fertilizer with Sheep Manure on Managed Irrigated Pasture	301		0.29667502	0.00316478
CA	Yolo	Replace Synthetic N Fertilizer with Sheep Manure on Managed Non-Irrigated Pasture	302		0.02594286	0.00134567
CA	Yolo	Replace Synthetic N Fertilizer with Swine Manure on Managed Irrigated Pasture	301		0.34367041	0.00338
CA	Yolo	Replace Synthetic N Fertilizer with Swine Manure on Managed Non-Irrigated Pasture	302		0.02653665	0.00128261
CA	Yolo	Grazing Management to Improve Irrigated Pasture Condition	301		0.05471442	0.00183182
CA	Yolo	Grazing Management to Improve Rangeland or Non-Irrigated Pasture Condition	301		0.01332341	0.00110382
CA	Yolo	Seeding Forages to Improve Rangeland Condition			0.33927125	-999
CA	Yolo	Restore Highly Disturbed Areas by Planting Permanent Vegetative Cover			1.04858303	-999
CA	Yolo	Restore Degraded Riparian Areas by Planting Woody Plants			0.99595141	-999
CA	Yolo	Replace a Strip of Cropland with 1 Row of Woody Plants (Conifer)			13.8390229	-999
CA	Yolo	Replace a Strip of Grassland with 1 Row of Woody Plants (Conifer)			13.7474888	-999
CA	Yolo	Replace a Strip of Cropland Near Watercourses or Water Bodies with Woody Plants (Mixed Hardwoods/Conifer)			4.53616167	-999
CA	Yolo	Replace a Strip of Grassland Near Watercourses or Water Bodies with Woody Plants (Mixed Hardwoods/Conifer)			4.44462756	-999
CA	Yolo	Conversion of Annual Cropland to a Farm Woodlot (Conifer)			9.46482194	-999
CA	Yolo	Conversion of Annual Grassland to a Farm Woodlot (Conifer)			9.37328782	-999
CA	Yolo	Replace a Strip of Cropland with 1 Row of Woody Plants (Conifer)			13.8390229	-999
CA	Yolo	Replace a Strip of Cropland with 2 Rows of Woody Plants (Conifer)			11.3394795	-999
CA	Yolo	Replace a Strip of Grassland with 1 Row of Woody Plants (Conifer)			13.7474888	-999
CA	Yolo	Replace a Strip of Grassland with 2 Rows of Woody Plants (Conifer)			11.2479454	-999

Yolo County COMET-Plan

state	county	n2o_mean	n2o_sterr	ch4_mean	ch4_sterr	soil_carbon_co2	soil_carbon_co2_sterr	biomass_co2	fossil_co2	drainedorganicsoils_co2	biomass_burning_co2	biomassburning_n2o	biomassburning_ch4	liming_co2	direct_soil_n2o
CA	Yolo	-999	-999	-999	-999	0	-999	0	0.01214575	0	0	0	0	0	0
CA	Yolo	0	-999	-999	-999	0.263967603	-999	0	0	0	0	0	0	0	0
CA	Yolo	-0.12401827	0.01111713	0	-999	0.599640917	0.045145363	0	0	0	0	0	0	0	-0.116112291
CA	Yolo	0.02932968	0.0045661	0	-999	0.40887631	0.035655197	0	0	0	0	0	0	0	0.001241246
CA	Yolo	-0.04197417	0.00387881	0	-999	0.376836558	0.019151919	0	0	0	0	0	0	0	-0.045755798
CA	Yolo	-0.10489668	0.00531852	0	-999	0.51946534	0.024790612	0	0	0	0	0	0	0	-0.106192666
CA	Yolo	-0.00856175	0.00264059	0	-999	0.146088203	0.010210485	0	0	0	0	0	0	0	-0.015715964
CA	Yolo	0.06806343	0.00351269	0	-999	0.040026215	0.007303186	0	0	0	0	0	0	0	0.041444747
CA	Yolo	0.0244668	0.00126407	0	-999	0.125890104	0.008358282	0	0	0	0	0	0	0	0.016303036
CA	Yolo	0.00267837	0.00152222	0	-999	0.206205996	0.012071317	0	0	0	0	0	0	0	-0.006011544
CA	Yolo	0	-999	-999	-999	0.205668017	-999	0	0	0	0	0	0	0	0
CA	Yolo	0.03381734	0.00479514	0	-999	0.647714901	0.039623367	0	0	0	0	0	0	0	0.007067662
CA	Yolo	-0.0392548	0.00393392	0	-999	0.453606434	0.018829952	0	0	0	0	0	0	0	-0.044558078
CA	Yolo	-0.0469906	0.00665559	0	-999	1.015377973	0.047960919	0	0	0	0	0	0	0	-0.056795455
CA	Yolo	-0.04628383	0.00359963	0	-999	0.487525865	0.017841095	0	0	0	0	0	0	0	-0.05113687
CA	Yolo	-0.03329332	0.00620432	0	-999	1.08712803	0.050402052	0	0	0	0	0	0	0	-0.047642238
CA	Yolo	-0.04473256	0.00365903	0	-999	0.493131984	0.017825986	0	0	0	0	0	0	0	-0.049654734
CA	Yolo	-0.0224864	0.00583924	0	-999	1.157175656	0.05288924	0	0	0	0	0	0	0	-0.040725881
CA	Yolo	-0.04441006	0.003666	0	-999	0.504824452	0.017763725	0	0	0	0	0	0	0	-0.049348685
CA	Yolo	-0.01373963	0.00558155	0	-999	1.225685129	0.055447697	0	0	0	0	0	0	0	-0.035141023
CA	Yolo	-0.04349821	0.00370147	0	-999	0.511291528	0.017807032	0	0	0	0	0	0	0	-0.048511816
CA	Yolo	0.07231274	0.00376055	0	-999	0.264397716	0.010583159	0	0	0	0	0	0	0	0.047866653
CA	Yolo	0.0281192	0.00153858	0	-999	0.196260535	0.00898309	0	0	0	0	0	0	0	0.018398568
CA	Yolo	0.01005634	0.00222489	0	-999	0.703342739	0.028964005	0	0	0	0	0	0	0	-0.003769777
CA	Yolo	0.02201449	0.001527	0	-999	0.242340984	0.010519985	0	0	0	0	0	0	0	0.012712138
CA	Yolo	0.02353219	0.00241074	0	-999	0.78193872	0.032013711	0	0	0	0	0	0	0	0.00368985
CA	Yolo	0.02323341	0.00152712	0	-999	0.245801882	0.01081535	0	0	0	0	0	0	0	0.013873002
CA	Yolo	0.03368806	0.00268521	0	-999	0.857011441	0.035015192	0	0	0	0	0	0	0	0.008992313
CA	Yolo	0.02324867	0.00154312	0	-999	0.257424802	0.011504112	0	0	0	0	0	0	0	0.01388224
CA	Yolo	0.04160466	0.0030328	0	-999	0.928956305	0.038008453	0	0	0	0	0	0	0	0.01313073
CA	Yolo	0.02392058	0.00154817	0	-999	0.262367472	0.011916349	0	0	0	0	0	0	0	0.01448588
CA	Yolo	0.04023627	0.00263174	0	-999	0.198441131	0.008610508	0	0	0	0	0	0	0	0.030007732
CA	Yolo	0.01672722	0.00135502	0	-999	0.08051508	0.00451328	0	0	0	0	0	0	0	0.012405036
CA	Yolo	0.00071986	0.00258732	0	-999	-999	-999	0	0	0	0	0	0	0	-0.004390408
CA	Yolo	-0.00083144	0.00135833	0	-999	-999	-999	0	0	0	0	0	0	0	-0.00219784
CA	Yolo	-0.10281142	0.00680706	0	-999	0.499658031	0.022376645	0	0	0	0	0	0	0	-0.093664973
CA	Yolo	-0.01264229	0.00205741	0	-999	0.03980527	0.004307921	0	0	0	0	0	0	0	-0.012636543
CA	Yolo	-0.11528038	0.0070568	0	-999	0.397628548	0.018050046	0	0	0	0	0	0	0	-0.100020697
CA	Yolo	-0.01378155	0.00214029	0	-999	0.029577891	0.003291635	0	0	0	0	0	0	0	-0.013602006
CA	Yolo	-0.11528038	0.0070568	0	-999	0.397628548	0.018050046	0	0	0	0	0	0	0	-0.100020697
CA	Yolo	-0.01378155	0.00214029	0	-999	0.029577891	0.003291635	0	0	0	0	0	0	0	-0.013602006
CA	Yolo	-0.11106937	0.00709331	0	-999	0.456266293	0.020753771	0	0	0	0	0	0	0	-0.098541253
CA	Yolo	-0.01377554	0.00212403	0	-999	0.035900731	0.003870667	0	0	0	0	0	0	0	-0.013622658
CA	Yolo	-0.09200787	0.00655181	0	-999	0.562678947	0.025157771	0	0	0	0	0	0	0	-0.087356555
CA	Yolo	-0.01155602	0.00196779	0	-999	0.045597844	0.004859733	0	0	0	0	0	0	0	-0.011739966
CA	Yolo	-0.07711551	0.0064577	0	-999	0.667176251	0.029441734	0	0	0	0	0	0	0	-0.078948619
CA	Yolo	-0.01176315	0.00200685	0	-999	0.062303056	0.006532269	0	0	0	0	0	0	0	-0.012141415
CA	Yolo	-0.06629397	0.00668587	0	-999	0.768807924	0.033684981	0	0	0	0	0	0	0	-0.073266372
CA	Yolo	-0.01093724	0.00198061	0	-999	0.072771076	0.007680642	0	0	0	0	0	0	0	-0.011601625
CA	Yolo	-0.10281142	0.00680706	0	-999	0.499658031	0.022376645	0	0	0	0	0	0	0	-0.093664973
CA	Yolo	-0.0126813	0.00206224	0	-999	0.039959171	0.004350212	0	0	0	0	0	0	0	-0.012669468
CA	Yolo	-0.10281142	0.00680706	0	-999	0.499658031	0.022376645	0	0	0	0	0	0	0	-0.093664973
CA	Yolo	-0.0126813	0.00206224	0	-999	0.039959171	0.004350212	0	0	0	0	0	0	0	-0.012669468
CA	Yolo	-0.10281142	0.00680706	0	-999	0.499658031	0.022376645	0	0	0	0	0	0	0	-0.093664973
CA	Yolo	-0.0126813	0.00206224	0	-999	0.039959171	0.004350212	0	0	0	0	0	0	0	-0.012669468
CA	Yolo	0.00430296	0.00380903	0	-999	0.464920948	0.020629034	0	0	0	0	0	0	0	-0.015896

Yolo County COMET-Plan

state	county	n2o_mean	n2o_sterr	ch4_mean	ch4_sterr	soil_carbon_co2	soil_carbon_co2_sterr	biomass_co2	fossil_co2	drainedorganicsoils_co2	biomass_burning_co2	biomassburning_n2o	biomassburning_ch4	liming_co2	direct_soil_n2o
CA	Yolo	-0.00178651	0.00136268	0	-999	0.036114466	0.00411713	0	0	0	0	0	0	0	-0.003071031
CA	Yolo	0.01542635	0.00198467	0	-999	0.239725562	0.010478389	0	0	0	0	0	0	0	0.013800022
CA	Yolo	0.01418868	0.00129061	0	-999	0.085130155	0.004779666	0	0	0	0	0	0	0	0.010108641
CA	Yolo	0.01189772	0.00191574	0	-999	0.150879543	0.008390323	0	0	0	0	0	0	0	0.009595126
CA	Yolo	0.0096451	0.00067782	0	-999	0.050726267	0.003053948	0	0	0	0	0	0	0	0.008553317
CA	Yolo	-0.00220205	0.00177584	0	-999	0.115418183	0.004241322	0	0	0	0	0	0	0	-0.003030069
CA	Yolo	0.00559725	0.00126439	0	-999	0.0467406	0.00291449	0	0	0	0	0	0	0	0.002666913
CA	Yolo	0.048583	-999	-999	-999	0.105263159	-999	0	0	0	0	0	0	0	0.048582997
CA	Yolo	0.048583	-999	-999	-999	0.105263159	-999	0	0	0	0	0	0	0	0.048582997
CA	Yolo	0.28478506	0.00926547	0	-999	-0.081491571	0.016273037	0	0	0	0	0	0	0	0.200769923
CA	Yolo	0.26143041	0.00917699	0	-999	0.10636695	0.014200277	0	0	0	0	0	0	0	0.185338327
CA	Yolo	0.05318635	0.00238818	0	-999	0.091534114	0.009936698	0	0	0	0	0	0	0	0.040606962
CA	Yolo	0.03113932	0.00252706	0	-999	0.290385606	0.013434875	0	0	0	0	0	0	0	0.02339435
CA	Yolo	0.28478506	0.00926547	0	-999	-0.081491571	0.016273037	0	0	0	0	0	0	0	0.200769923
CA	Yolo	0.26143041	0.00917699	0	-999	0.10636695	0.014200277	0	0	0	0	0	0	0	0.185338327
CA	Yolo	0.05318635	0.00238818	0	-999	0.091534114	0.009936698	0	0	0	0	0	0	0	0.040606962
CA	Yolo	0.03113932	0.00252706	0	-999	0.290385606	0.013434875	0	0	0	0	0	0	0	0.02339435
CA	Yolo	0.28478506	0.00926547	0	-999	-0.081491571	0.016273037	0	0	0	0	0	0	0	0.200769923
CA	Yolo	0.26143041	0.00917699	0	-999	0.10636695	0.014200277	0	0	0	0	0	0	0	0.185338327
CA	Yolo	0.05318635	0.00238818	0	-999	0.091534114	0.009936698	0	0	0	0	0	0	0	0.040606962
CA	Yolo	0.03113932	0.00252706	0	-999	0.290385606	0.013434875	0	0	0	0	0	0	0	0.02339435
CA	Yolo	0.28478506	0.00926547	0	-999	-0.081491571	0.016273037	0	0	0	0	0	0	0	0.200769923
CA	Yolo	0.26143041	0.00917699	0	-999	0.10636695	0.014200277	0	0	0	0	0	0	0	0.185338327
CA	Yolo	0.05318635	0.00238818	0	-999	0.091534114	0.009936698	0	0	0	0	0	0	0	0.040606962
CA	Yolo	0.03113932	0.00252706	0	-999	0.290385606	0.013434875	0	0	0	0	0	0	0	0.02339435
CA	Yolo	0.14287003	0.0084613	0	-999	1.31161798	0.020874586	0	0	0	0	0	0	0	0.067727574
CA	Yolo	0.04023798	0.00246189	0	-999	0.319124641	0.013773388	0	0	0	0	0	0	0	0.031460086
CA	Yolo	0.28478506	0.00926547	0	-999	-0.081491571	0.016273037	0	0	0	0	0	0	0	0.200769923
CA	Yolo	0.26143041	0.00917699	0	-999	0.10636695	0.014200277	0	0	0	0	0	0	0	0.185338327
CA	Yolo	0.05318635	0.00238818	0	-999	0.091534114	0.009936698	0	0	0	0	0	0	0	0.040606962
CA	Yolo	0.03113932	0.00252706	0	-999	0.290385606	0.013434875	0	0	0	0	0	0	0	0.02339435
CA	Yolo	0.28478506	0.00926547	0	-999	-0.081491571	0.016273037	0	0	0	0	0	0	0	0.200769923
CA	Yolo	0.26143041	0.00917699	0	-999	0.10636695	0.014200277	0	0	0	0	0	0	0	0.185338327
CA	Yolo	0.05318635	0.00238818	0	-999	0.091534114	0.009936698	0	0	0	0	0	0	0	0.040606962
CA	Yolo	0.03113932	0.00252706	0	-999	0.290385606	0.013434875	0	0	0	0	0	0	0	0.02339435
CA	Yolo	0.28478506	0.00926547	0	-999	-0.081491571	0.016273037	0	0	0	0	0	0	0	0.200769923

Yolo County COMET-Plan

state	county	n2o_mean	n2o_sterr	ch4_mean	ch4_sterr	soil_carbon_co2	soil_carbon_co2_sterr	biomass_co2	fossil_co2	drainedorganicsoils_co2	biomass_burning_co2	biomassburning_n2o	biomassburning_ch4	liming_co2	direct_soil_n2o
CA	Yolo	0.26143041	0.00917699	0	-999	0.10636695	0.014200277	0	0	0	0	0	0	0	0.185338327
CA	Yolo	0.05318635	0.00238818	0	-999	0.091534114	0.009936698	0	0	0	0	0	0	0	0.040606962
CA	Yolo	0.03113932	0.00252706	0	-999	0.290385606	0.013434875	0	0	0	0	0	0	0	0.02339435
CA	Yolo	0.28478506	0.00926547	0	-999	-0.081491571	0.016273037	0	0	0	0	0	0	0	0.200769923
CA	Yolo	0.26143041	0.00917699	0	-999	0.10636695	0.014200277	0	0	0	0	0	0	0	0.185338327
CA	Yolo	0.05318635	0.00238818	0	-999	0.091534114	0.009936698	0	0	0	0	0	0	0	0.040606962
CA	Yolo	0.03113932	0.00252706	0	-999	0.290385606	0.013434875	0	0	0	0	0	0	0	0.02339435
CA	Yolo	-0.11677185	0.00372347	0	-999	0.342228895	0.003740007	0	0	0	0	0	0	0	-0.081669114
CA	Yolo	-0.00897217	0.00032938	0	-999	0.039953497	0.001356308	0	0	0	0	0	0	0	-0.008203662
CA	Yolo	-0.12192994	0.00388115	0	-999	0.306397291	0.003547475	0	0	0	0	0	0	0	-0.084445384
CA	Yolo	-0.01113082	0.00035859	0	-999	0.038244429	0.001329954	0	0	0	0	0	0	0	-0.00989979
CA	Yolo	-0.10392807	0.00340529	0	-999	0.38932497	0.004006904	0	0	0	0	0	0	0	-0.073889464
CA	Yolo	-0.00361463	0.00028804	0	-999	0.040573637	0.001358957	0	0	0	0	0	0	0	-0.003945787
CA	Yolo	-0.0820769	0.00294655	0	-999	0.471986954	0.004539279	0	0	0	0	0	0	0	-0.060571102
CA	Yolo	-0.00103188	0.00029751	0	-999	0.046396352	0.00148149	0	0	0	0	0	0	0	-0.001991819
CA	Yolo	-0.06309271	0.00263356	0	-999	0.555446311	0.005135591	0	0	0	0	0	0	0	-0.049008828
CA	Yolo	0.0042528	0.00033577	0	-999	0.048728125	0.00154145	0	0	0	0	0	0	0	0.002166607
CA	Yolo	-0.11677185	0.00372347	0	-999	0.342228895	0.003740007	0	0	0	0	0	0	0	-0.081669114
CA	Yolo	-0.00897212	0.00032938	0	-999	0.039953478	0.001356308	0	0	0	0	0	0	0	-0.008203621
CA	Yolo	-0.10392807	0.00340529	0	-999	0.38932497	0.004006904	0	0	0	0	0	0	0	-0.073889464
CA	Yolo	-0.00361457	0.00028804	0	-999	0.040573637	0.001358958	0	0	0	0	0	0	0	-0.003945744
CA	Yolo	-0.16671413	0.00422441	0	-999	0.296675024	0.003164778	0	0	0	0	0	0	0	-0.121834766
CA	Yolo	-0.02153736	0.00041932	0	-999	0.025941926	0.00134567	0	0	0	0	0	0	0	-0.018244233
CA	Yolo	-0.18182898	0.00474887	0	-999	0.224817629	0.00290488	0	0	0	0	0	0	0	-0.131183714
CA	Yolo	-0.02650963	0.00050823	0	-999	0.022555436	0.001341151	0	0	0	0	0	0	0	-0.022190999
CA	Yolo	-0.18182898	0.00474887	0	-999	0.224817629	0.00290488	0	0	0	0	0	0	0	-0.131183714
CA	Yolo	-0.02650963	0.00050823	0	-999	0.022555436	0.001341151	0	0	0	0	0	0	0	-0.022190999
CA	Yolo	-0.17327549	0.00445239	0	-999	0.260687607	0.00301462	0	0	0	0	0	0	0	-0.12579411
CA	Yolo	-0.02397396	0.00046137	0	-999	0.024281465	0.001341123	0	0	0	0	0	0	0	-0.020175483
CA	Yolo	-0.15190557	0.00376641	0	-999	0.343670407	0.003380004	0	0	0	0	0	0	0	-0.11239095
CA	Yolo	-0.01569675	0.00032589	0	-999	0.026538186	0.001282625	0	0	0	0	0	0	0	-0.013592268
CA	Yolo	-0.12684596	0.00307259	0	-999	0.425689533	0.003862249	0	0	0	0	0	0	0	-0.096343747
CA	Yolo	-0.01263894	0.00031036	0	-999	0.032049781	0.001400438	0	0	0	0	0	0	0	-0.011241468
CA	Yolo	-0.10511679	0.00255737	0	-999	0.507898788	0.004448406	0	0	0	0	0	0	0	-0.082435788
CA	Yolo	-0.00684644	0.00028422	0	-999	0.034151525	0.001406609	0	0	0	0	0	0	0	-0.00667916
CA	Yolo	-0.16671413	0.00422441	0	-999	0.296675024	0.003164778	0	0	0	0	0	0	0	-0.121834766
CA	Yolo	-0.02153749	0.00041932	0	-999	0.025942857	0.001345672	0	0	0	0	0	0	0	-0.018244349
CA	Yolo	-0.16671413	0.00422441	0	-999	0.296675024	0.003164778	0	0	0	0	0	0	0	-0.121834766
CA	Yolo	-0.02153749	0.00041932	0	-999	0.025942857	0.001345672	0	0	0	0	0	0	0	-0.018244349
CA	Yolo	-0.15190557	0.00376641	0	-999	0.343670407	0.003380004	0	0	0	0	0	0	0	-0.11239095
CA	Yolo	-0.01569692	0.0003259	0	-999	0.026536646	0.001282612	0	0	0	0	0	0	0	-0.01359236
CA	Yolo	0.04358504	0.00168181	0	-999	0.054714423	0.001831819	0	0	0	0	0	0	0	0.035445723
CA	Yolo	0.01183751	0.00030255	0	-999	0.01332341	0.001103821	0	0	0	0	0	0	0	0.00948373
CA	Yolo	0	-999	-999	-999	0.339271247	-999	0	0	0	0	0	0	0	0
CA	Yolo	0	-999	-999	-999	1.048583031	-999	0	0	0	0	0	0	0	0
CA	Yolo	0	-999	-999	-999	0.995951414	-999	0	0	0	0	0	0	0	0
CA	Yolo	0.05318635	0.00238818	-999	-999	0.091534114	0.009936698	13.7474888	0	0	0	0	0	0	0.040606962
CA	Yolo	-999	-999	-999	-999	0	-999	13.7474888	0	0	0	0	0	0	0
CA	Yolo	0.05318635	0.00238818	-999	-999	0.091534114	0.009936698	4.44462756	0	0	0	0	0	0	0.040606962
CA	Yolo	-999	-999	-999	-999	0	-999	4.44462756	0	0	0	0	0	0	0
CA	Yolo	0.05318635	0.00238818	-999	-999	0.091534114	0.009936698	9.37328782	0	0	0	0	0	0	0.040606962
CA	Yolo	-999	-999	-999	-999	0	-999	9.37328782	0	0	0	0	0	0	0
CA	Yolo	0.05318635	0.00238818	-999	-999	0.091534114	0.009936698	13.7474888	0	0	0	0	0	0	0.040606962
CA	Yolo	0.05318635	0.00238818	-999	-999	0.091534114	0.009936698	11.2479454	0	0	0	0	0	0	0.040606962
CA	Yolo	-999	-999	-999	-999	0	-999	13.7474888	0	0	0	0	0	0	0
CA	Yolo	-999	-999	-999	-999	0	-999	11.2479454	0	0	0	0	0	0	0

Yolo County COMET-Plan

state	county	direct_soil_n2o_sterr	indirect_soil_n2o	indirect_soil_n2o_sterr	drainedorganicsoils_n2o	soil_ch4	total_ghg_co2	total_ghg_co2_sterr	total_ghg_co2_min	total_ghg_co2_max
CA	Yolo	-999	0	-999	0	0	0.012145749		-999	-999
CA	Yolo	-999	0	-999	0	0	0.263967603		-999	-999
CA	Yolo	0.010620743	-0.007905981	0.001135264	0	0	0.475622645	0.036886634	-0.349788144	2.38412469
CA	Yolo	0.003693643	0.02808843	0.0014894	0	0	0.438205986	0.032872021	-0.295475777	1.931822228
CA	Yolo	0.003667536	0.003781633	0.001283236	0	0	0.334862392	0.016245646	-0.050347291	0.755069462
CA	Yolo	0.00468235	0.001295983	0.001943669	0	0	0.414568658	0.021884482	-0.048295271	0.994567585
CA	Yolo	0.00219484	0.007154211	0.000995819	0	0	0.13752645	0.011418369	-0.349788144	0.756335572
CA	Yolo	0.002682218	0.026618681	0.00135212	0	0	0.108089643	0.008353087	-0.184984228	0.577851873
CA	Yolo	0.001035017	0.00816376	0.00110377	0	0	0.150356899	0.0086107	-0.015482269	0.626008925
CA	Yolo	0.000640601	0.00868991	0.001345892	0	0	0.208884363	0.012400022	-0.048295271	0.954670653
CA	Yolo	-999	0	-999	0	0	0.205668017		-999	-999
CA	Yolo	0.00384067	0.026749677	0.001599458	0	0	0.681532239	0.037777422	-0.006907699	2.202780698
CA	Yolo	0.003663598	0.005303276	0.001556145	0	0	0.414351632	0.016483729	-0.021393498	0.842912635
CA	Yolo	0.00586617	0.009804853	0.001297482	0	0	0.968387371	0.043514041	-5.2601E-17	2.837840436
CA	Yolo	0.003266261	0.004853044	0.001583213	0	0	0.441242039	0.015928193	-0.001747441	0.842912635
CA	Yolo	0.005419089	0.014348918	0.001346424	0	0	1.053834711	0.046630473	-5.2601E-17	3.034230618
CA	Yolo	0.003345593	0.004922171	0.001592395	0	0	0.44839942	0.015970477	-0.001747441	0.842912635
CA	Yolo	0.005045529	0.018239485	0.001402914	0	0	1.13468926	0.049724909	-5.2601E-17	3.228872792
CA	Yolo	0.003354253	0.00493862	0.001605355	0	0	0.460414387	0.016046456	-0.001747441	0.849765883
CA	Yolo	0.00476349	0.021401394	0.001463965	0	0	1.2119455	0.052819622	-5.2601E-17	3.416657064
CA	Yolo	0.003392551	0.005013609	0.001610532	0	0	0.467793322	0.016176486	-0.001747441	0.882853855
CA	Yolo	0.002855463	0.024446091	0.001437068	0	0	0.33671046	0.013470929	-0.001210229	1.3837772
CA	Yolo	0.001053838	0.009720633	0.001385331	0	0	0.224379736	0.009648894	-0.012453475	0.727845662
CA	Yolo	0.001467499	0.013826119	0.00113832	0	0	0.713399081	0.029433115	-5.2601E-17	2.656828892
CA	Yolo	0.000732822	0.009302355	0.001416733	0	0	0.264355476	0.010953374	-0.001747441	0.751220202
CA	Yolo	0.001542856	0.019842339	0.001265201	0	0	0.805470909	0.033028195	-5.2601E-17	2.856897261
CA	Yolo	0.000802354	0.009360412	0.001426562	0	0	0.269035296	0.011299071	-0.001747441	0.760189609
CA	Yolo	0.001735931	0.024695744	0.001391118	0	0	0.890699497	0.036488206	-5.2601E-17	3.065601749
CA	Yolo	0.000813266	0.009366433	0.001439175	0	0	0.280673475	0.011962834	-0.001747441	0.774938392
CA	Yolo	0.002025016	0.028473934	0.001506294	0	0	0.970560968	0.039864548	-5.2601E-17	3.265948154
CA	Yolo	0.00084125	0.0094347	0.001440204	0	0	0.286288052	0.01240008	-0.001747441	0.784261982
CA	Yolo	0.002059182	0.010228536	0.001142895	0	0	0.238677399	0.010488486	-0.001264034	1.369949673
CA	Yolo	0.00084621	0.004322189	0.001279714	0	0	0.097242304	0.005175569	-0.009035434	0.301852086
CA	Yolo	0.002215276	0.005110266	0.000820241	0	0	0.000719858	0.002587321	-999	-999
CA	Yolo	0.000537375	0.001366399	0.001284315	0	0	-0.000831442	0.001358333	-999	-999
CA	Yolo	0.006497401	-0.009146447	0.001132711	0	0	0.396846611	0.019049996	-0.300288096	1.195300232
CA	Yolo	0.001404284	-5.75078E-06	0.001322524	0	0	0.027162976	0.003372194	-0.029320374	0.284607782
CA	Yolo	0.006563056	-0.015259684	0.001228149	0	0	0.282348168	0.01441558	-0.182379669	0.928971982
CA	Yolo	0.001485133	-0.000179547	0.00133	0	0	0.015796339	0.002592162	-0.029320374	0.208032884
CA	Yolo	0.006563056	-0.015259684	0.001228149	0	0	0.282348168	0.01441558	-0.182379669	0.928971982
CA	Yolo	0.001485133	-0.000179547	0.00133	0	0	0.015796339	0.002592162	-0.029320374	0.208032884
CA	Yolo	0.006677354	-0.012528114	0.001195089	0	0	0.345196926	0.01707027	-0.226536509	1.08847799
CA	Yolo	0.001472889	-0.000152885	0.001328312	0	0	0.022125189	0.002996254	-0.029320374	0.249816686
CA	Yolo	0.006369425	-0.004651317	0.001065567	0	0	0.470671076	0.022234196	-0.356618606	1.364407645
CA	Yolo	0.001311448	0.000183945	0.001315309	0	0	0.034041823	0.003911245	-0.029320374	0.327418734
CA	Yolo	0.006409508	0.001833106	0.001029037	0	0	0.590060738	0.02711521	-0.281638296	1.650427064
CA	Yolo	0.001374137	0.000378267	0.001308817	0	0	0.050539907	0.005450276	-0.029320374	0.430073201
CA	Yolo	0.006713637	0.006972405	0.001036731	0	0	0.702513956	0.031829728	-0.198287063	1.942850555
CA	Yolo	0.001347095	0.000664388	0.001300303	0	0	0.06183384	0.006627079	-0.029320374	0.518198744
CA	Yolo	0.006497401	-0.009146447	0.001132711	0	0	0.396846611	0.019049996	-0.300288096	1.195300232
CA	Yolo	0.001408839	-1.18357E-05	0.001322913	0	0	0.027277867	0.00341265	-0.029320374	0.293014063
CA	Yolo	0.006497401	-0.009146447	0.001132711	0	0	0.396846611	0.019049996	-0.300288096	1.195300232
CA	Yolo	0.001408839	-1.18357E-05	0.001322913	0	0	0.027277867	0.00341265	-0.029320374	0.293014063
CA	Yolo	0.006497401	-0.009146447	0.001132711	0	0	0.396846611	0.019049996	-0.300288096	1.195300232
CA	Yolo	0.001408839	-1.18357E-05	0.001322913	0	0	0.027277867	0.00341265	-0.029320374	0.293014063
CA	Yolo	0.003529097	0.020198959	0.001247531	0	0	0.469223908	0.021726507	-0.191228689	1.305095228

Yolo County COMET-Plan

state	county	direct_soil_n2o_sterr	indirect_soil_n2o	indirect_soil_n2o_sterr	drainedorganicsoils_n2o	soil_ch4	total_ghg_co2	total_ghg_co2_sterr	total_ghg_co2_min	total_ghg_co2_max
CA	Yolo	0.000598661	0.001284518	0.001286092	0	0	0.034327952	0.003903834	-0.029320374	0.292312837
CA	Yolo	0.001453408	0.001626324	0.001057355	0	0	0.255151908	0.011550961	-0.002268695	1.490014314
CA	Yolo	0.000658804	0.004080034	0.001279315	0	0	0.09931883	0.005272901	-0.004028894	0.303227035
CA	Yolo	0.001393451	0.00230259	0.000997414	0	0	0.162777259	0.009484084	-0.005465896	1.293742615
CA	Yolo	0.000645763	0.001091783	0.000340436	0	0	0.060371367	0.003608089	-0.040624383	0.20712309
CA	Yolo	0.001399318	0.000828024	0.000775288	0	0	0.113216137	0.004486263	-0.070203281	0.394854426
CA	Yolo	0.000201824	0.00293034	0.001255136	0	0	0.052337854	0.003307798	-0.015097086	0.169653795
CA	Yolo	-999	0	-999	0	0	0.153846156		-999	-999
CA	Yolo	-999	0	-999	0	0	0.153846156		-999	-999
CA	Yolo	0.007797306	0.08401514	0.002815853	0	0	0.203293492	0.014565708	-1.026337415	0.758546804
CA	Yolo	0.007635256	0.076092079	0.002896049	0	0	0.367797356	0.01326455	-0.756296721	0.87288608
CA	Yolo	0.002043617	0.012579392	0.001405017	0	0	0.144720469	0.010687382	-0.349208241	0.483254456
CA	Yolo	0.00229278	0.007744969	0.001636631	0	0	0.321524924	0.013529119	-0.014052206	1.08608443
CA	Yolo	0.007797306	0.08401514	0.002815853	0	0	0.203293492	0.014565708	-1.026337415	0.758546804
CA	Yolo	0.007635256	0.076092079	0.002896049	0	0	0.367797356	0.01326455	-0.756296721	0.87288608
CA	Yolo	0.002043617	0.012579392	0.001405017	0	0	0.144720469	0.010687382	-0.349208241	0.483254456
CA	Yolo	0.00229278	0.007744969	0.001636631	0	0	0.321524924	0.013529119	-0.014052206	1.08608443
CA	Yolo	0.007797306	0.08401514	0.002815853	0	0	0.203293492	0.014565708	-1.026337415	0.758546804
CA	Yolo	0.007635256	0.076092079	0.002896049	0	0	0.367797356	0.01326455	-0.756296721	0.87288608
CA	Yolo	0.002043617	0.012579392	0.001405017	0	0	0.144720469	0.010687382	-0.349208241	0.483254456
CA	Yolo	0.00229278	0.007744969	0.001636631	0	0	0.321524924	0.013529119	-0.014052206	1.08608443
CA	Yolo	0.007797306	0.08401514	0.002815853	0	0	0.203293492	0.014565708	-1.026337415	0.758546804
CA	Yolo	0.007635256	0.076092079	0.002896049	0	0	0.367797356	0.01326455	-0.756296721	0.87288608
CA	Yolo	0.002043617	0.012579392	0.001405017	0	0	0.144720469	0.010687382	-0.349208241	0.483254456
CA	Yolo	0.00229278	0.007744969	0.001636631	0	0	0.321524924	0.013529119	-0.014052206	1.08608443
CA	Yolo	0.006809357	0.075142451	0.002651341	0	0	1.454488006	0.019776899	0.057347477	2.07396783
CA	Yolo	0.002263149	0.008777895	0.001665818	0	0	0.359362621	0.014071936	-0.000471511	1.157961297
CA	Yolo	0.007797306	0.08401514	0.002815853	0	0	0.203293492	0.014565708	-1.026337415	0.758546804
CA	Yolo	0.007635256	0.076092079	0.002896049	0	0	0.367797356	0.01326455	-0.756296721	0.87288608
CA	Yolo	0.002043617	0.012579392	0.001405017	0	0	0.144720469	0.010687382	-0.349208241	0.483254456
CA	Yolo	0.00229278	0.007744969	0.001636631	0	0	0.321524924	0.013529119	-0.014052206	1.08608443
CA	Yolo	0.007797306	0.08401514	0.002815853	0	0	0.203293492	0.014565708	-1.026337415	0.758546804
CA	Yolo	0.007635256	0.076092079	0.002896049	0	0	0.367797356	0.01326455	-0.756296721	0.87288608
CA	Yolo	0.002043617	0.012579392	0.001405017	0	0	0.144720469	0.010687382	-0.349208241	0.483254456
CA	Yolo	0.00229278	0.007744969	0.001636631	0	0	0.321524924	0.013529119	-0.014052206	1.08608443
CA	Yolo	0.007797306	0.08401514	0.002815853	0	0	0.203293492	0.014565708	-1.026337415	0.758546804

Yolo County COMET-Plan

state	county	direct_soil_n2o_sterr	indirect_soil_n2o	indirect_soil_n2o_sterr	drainedorganicsoils_n2o	soil_ch4	total_ghg_co2	total_ghg_co2_sterr	total_ghg_co2_min	total_ghg_co2_max
CA	Yolo	0.007635256	0.076092079	0.002896049	0	0	0.367797356	0.01326455	-0.756296721	0.87288608
CA	Yolo	0.002043617	0.012579392	0.001405017	0	0	0.144720469	0.010687382	-0.349208241	0.483254456
CA	Yolo	0.00229278	0.007744969	0.001636631	0	0	0.321524924	0.013529119	-0.014052206	1.08608443
CA	Yolo	0.007797306	0.08401514	0.002815853	0	0	0.203293492	0.014565708	-1.026337415	0.758546804
CA	Yolo	0.007635256	0.076092079	0.002896049	0	0	0.367797356	0.01326455	-0.756296721	0.87288608
CA	Yolo	0.002043617	0.012579392	0.001405017	0	0	0.144720469	0.010687382	-0.349208241	0.483254456
CA	Yolo	0.00229278	0.007744969	0.001636631	0	0	0.321524924	0.013529119	-0.014052206	1.08608443
CA	Yolo	0.003592954	-0.035102737	0.00064379	0	0	0.225457044	0.004386308	-0.494564322	0.348106318
CA	Yolo	0.000312139	-0.000768511	7.17026E-05	0	0	0.030981323	0.001423477	-0.06197553	0.141143125
CA	Yolo	0.003765476	-0.037484552	0.000665621	0	0	0.184467356	0.004455992	-0.576664311	0.314733149
CA	Yolo	0.000344669	-0.001231028	8.25169E-05	0	0	0.027113611	0.001417781	-0.065784651	0.138776957
CA	Yolo	0.003249668	-0.030038606	0.000594119	0	0	0.2853969	0.004290174	-0.352848154	0.396180131
CA	Yolo	0.000269917	0.000331153	5.17194E-05	0	0	0.036959002	0.00141403	-0.055678573	0.144908073
CA	Yolo	0.002753337	-0.021505799	0.000510459	0	0	0.389910052	0.004414315	-0.114800734	0.511855424
CA	Yolo	0.000277567	0.00095994	5.40836E-05	0	0	0.045364473	0.001503261	-0.048830311	0.148673377
CA	Yolo	0.002415532	-0.014083887	0.000439299	0	0	0.492353596	0.004839498	0.015992171	0.629184415
CA	Yolo	0.000327565	0.00208619	6.74823E-05	0	0	0.052980922	0.001571025	-0.042185239	0.15193553
CA	Yolo	0.003592954	-0.035102737	0.00064379	0	0	0.225457044	0.004386308	-0.494564322	0.348106318
CA	Yolo	0.00031214	-0.000768501	7.17024E-05	0	0	0.030981355	0.001423478	-0.06197553	0.141143125
CA	Yolo	0.003249668	-0.030038606	0.000594119	0	0	0.2853969	0.004290174	-0.352848154	0.396180131
CA	Yolo	0.000269917	0.000331177	5.17193E-05	0	0	0.036959071	0.001414034	-0.055678573	0.144908073
CA	Yolo	0.004224069	-0.044879368	0.000727248	0	0	0.12996089	0.004708299	-0.491150018	0.271716302
CA	Yolo	0.000400997	-0.003293124	0.000116707	0	0	0.004404569	0.001367833	-0.075758709	0.133940707
CA	Yolo	0.004784624	-0.050645261	0.000776967	0	0	0.042988654	0.005349348	-0.68440162	0.204518181
CA	Yolo	0.000500749	-0.004318634	0.00014617	0	0	-0.003954198	0.001460392	-0.084648121	0.128662354
CA	Yolo	0.004784624	-0.050645261	0.000776967	0	0	0.042988654	0.005349348	-0.68440162	0.204518181
CA	Yolo	0.000500749	-0.004318634	0.00014617	0	0	-0.003954198	0.001460392	-0.084648121	0.128662354
CA	Yolo	0.004468693	-0.047481375	0.000749151	0	0	0.087412122	0.004975753	-0.580129378	0.238474665
CA	Yolo	0.000448741	-0.00379848	0.000131001	0	0	0.000307501	0.001409711	-0.079927875	0.131369734
CA	Yolo	0.003735587	-0.039514617	0.000676154	0	0	0.19176484	0.004268411	-0.336911816	0.318558113
CA	Yolo	0.000296824	-0.002104486	8.26574E-05	0	0	0.010841433	0.001235846	-0.069101574	0.137966588
CA	Yolo	0.002987386	-0.030502217	0.000588223	0	0	0.298843569	0.003860325	-0.082242554	0.399689017
CA	Yolo	0.000267686	-0.001397471	7.08981E-05	0	0	0.019410842	0.001285219	-0.061665383	0.141935439
CA	Yolo	0.002421667	-0.022680999	0.000510699	0	0	0.402782	0.003963738	0.042475126	0.484848004
CA	Yolo	0.000239444	-0.000167275	5.39287E-05	0	0	0.02730509	0.001249984	-0.05498188	0.145194835
CA	Yolo	0.004224069	-0.044879368	0.000727248	0	0	0.12996089	0.004708299	-0.491150018	0.271716302
CA	Yolo	0.000400997	-0.003293143	0.000116709	0	0	0.004405365	0.001367844	-0.075758709	0.133940707
CA	Yolo	0.004224069	-0.044879368	0.000727248	0	0	0.12996089	0.004708299	-0.491150018	0.271716302
CA	Yolo	0.000400997	-0.003293143	0.000116709	0	0	0.004405365	0.001367844	-0.075758709	0.133940707
CA	Yolo	0.003735587	-0.039514617	0.000676154	0	0	0.19176484	0.004268411	-0.336911816	0.318558113
CA	Yolo	0.000296826	-0.002104563	8.26598E-05	0	0	0.010839723	0.001235823	-0.069101574	0.137966588
CA	Yolo	0.001699201	0.008139316	0.000173931	0	0	0.098299462	0.003082555	-0.045549723	0.397801663
CA	Yolo	0.000302193	0.002353783	6.25028E-05	0	0	0.025160923	0.001296441	-0.060618391	0.118240245
CA	Yolo	-999	0	-999	0	0	0.339271247		-999	-999
CA	Yolo	-999	0	-999	0	0	1.048583031		-999	-999
CA	Yolo	-999	0	-999	0	0	0.995951414		-999	-999
CA	Yolo	0.002043617	0.012579392	0.001405017	0	0	13.89220928		-999	-999
CA	Yolo	-999	0	-999	0	0	13.74748881		-999	-999
CA	Yolo	0.002043617	0.012579392	0.001405017	0	0	4.589348029		-999	-999
CA	Yolo	-999	0	-999	0	0	4.44462756		-999	-999
CA	Yolo	0.002043617	0.012579392	0.001405017	0	0	9.518008292		-999	-999
CA	Yolo	-999	0	-999	0	0	9.373287824		-999	-999
CA	Yolo	0.002043617	0.012579392	0.001405017	0	0	13.89220928		-999	-999
CA	Yolo	0.002043617	0.012579392	0.001405017	0	0	11.39266586		-999	-999
CA	Yolo	-999	0	-999	0	0	13.74748881		-999	-999
CA	Yolo	-999	0	-999	0	0	11.24794539		-999	-999

Yolo County COMET-Planner/CDFA Healthy Soils Program Data

NRCS Conservation Practices	Total MT CO_2e/acre/year	acre	CO2e
Compost (C/N > 11) Application to Annual Crops, Purchased from a certified composting facility - 6 tons/acre	4.43	105,770	468,878
Compost (C/N > 11) Application to Orchards or Vineyards, Purchased from a certified composting facility - 6 tons/acre	4.50	102,164	459,329
Compost (C/N > 11) Application to Grazed Grassland, Purchased from a certified composting facility - 6 tons/acre	4.51	55,182	249,092
Compost (C/N > 11) Application to Grazed Irrigated Pasture, Purchased from a certified composting facility - 6 tons/acre	4.47	25,512	114,166
Whole Orchard Recycling Followed by Orchard Replant within 3 Years	0.04	79,563	3,016

Yolo County Sequestration Summary

NRCS Code	Sub Action	Available Acreage	GHG Reduction Rate (MT CO_2e/ac/year)[a]	GHG Reduction Total Potential (MT CO_2e)
NWL 1				
340	Cover Crops			
340	Cover Crops (acres) *irrigated average*	125,322	0.29	36,326
340	Cover Crops (acres) *non-irrigated average*	52,969	0.28	14,681
	Cover Crops Total	**178,291**		**51,007**
328	Conservation Crop Rotation (acres)	140,783	0.26	37,162
329	Residue and Tillage Management, No Till			
329	Residue and Tillage Management, No Till (acres) *irrigated average*	177,140	0.21	37,016
329	Residue and Tillage Management, No Till (acres) *non-irrigated average*	74,871	0.08	5,978
	Residue and Tillage Management, No Till Total	**252,011**		**42,994**
345	Residue and Tillage Management, Reduced Till			
345	Residue and Tillage Management, Reduced Till (acres) *irrigated average*	115,144	0.11	13,036
345	Residue and Tillage Management, Reduced Till (acres) *non-irrigated average*	48,667	0.05	2,547
	Residue and Tillage Management, Reduced Till Total	**163,812**		**15,583**
336	Soil Carbon Amendments, Compost Application			
	Compost (C/N > 11) *Annual Crops*	105,770	4.43	468,878
	Compost (C/N > 11) *Orchards or Vineyards*	102,164	4.50	459,329
	Compost (C/N > 11) *Grazed Grassland*	55,182	4.51	249,092
	Compost (C/N > 11) *Grazed Irrigated Pasture*	25,512	4.47	114,166
	Soil Carbon Amendments, Compost Application Total	**288,628**		**1,291,465**
808	Soil Carbon Amendments, Whole Orchard Recycling	79,563	0.04	3,016
393	Filter Strips (acres) *average*		0.26	0.26
412	Grassed Waterways (acres) *average*		0.26	0.26
484	Mulching[d]	98,728	0.21	20,305
585	Stripcropping			
585	Stripcropping *irrigated average*	49,479	0.15	7,612
585	Stripcropping *non-irrigated average*	20,913	0.15	3,217
	Stripcropping Total	**70,391**		**10,829**
590	Nutrient Management			
590	Nutrient Management: Cropland *irrigated average*	185,221	0.39	73,015
590	Nutrient Management: Cropland *non-irrigated average*	78,286	0.03	2,235
590	Nutrient Management: Pasture *irrigated average*	17,657	0.16	2,911
590	Nutrient Management: Pasture *non-irrigated average*	7,463	0.01	55
	Nutrient Management Total	**288,628**		**78,216**
338	Prescribed Burning (acres)		-	-
528	Prescribed Grazing			
528	Prescribed Grazing (acres) *irrigated average*	56,720	0.10	5,576
528	Prescribed Grazing (acres) *non-irrigated average*	23,974	0.03	603
	Prescribed Grazing Total	**80,694**		**6,179**
550	Range Planting (acres)	80,694	0.34	27,377
315	Herbaceous Weed Treatment (acres)		-	-
311	Alley Cropping (acres)		-	-
380	Windbreaks/Shelterbelt Establishment and Renovation (feet)	20,000	13.89	277,844
381	Silvopasture		-	-
390	Riparian Herbaceous Cover			
390	Riparian Herbaceous Cover *irrigated average*	4,217	0.29	1,204
390	Riparian Herbaceous Cover *non-irrigated average*	1,783	0.23	416
	Riparian Herbaceous Cover Total	**6,000**		**1,620**

391	Riparian Forest Buffer	6,000	4.52	27,102
422	Hedgerow Planting	20,000	13.89	277,844
888	Multiple Conservation Practices			
888	Multiple Conservation Practices: Cropland *irrigated average*	118,002	0.82	96,611
888	Multiple Conservation Practices: Cropland *non-irrigated average*	49,875	0.33	16,568
888	Multiple Conservation Practices: Grazing Lands *irrigated average*	17,657	0.30	5,268
888	Multiple Conservation Practices: Grazing Lands *non-irrigated average*	7,463	0.04	279
	Multiple Conservation Practices Total	**192,998**		**118,726**
NWL 2				
555	Riparian Restoration	100	0.996	99.60
342	Critical Area Planting	100	1.0486	104.86
612	Tree/Shrub Establishment	100	9.4456	944.56
N/A[b]	Wetland Restoration	100	318	31,835

Notes:

[a]Mean values for total greenhouse gas emission reductions in metric tonnes CO2 equivalent per acre per year (MT CO2e/ac/yr) from COMET-Planner were used.

[b]Wetland restoration GHG emissions reduction rate obtained from California Department of Fish and Wildlife Land Restoration 18-19 Tool for Delta wetland restoration.

Summary

NRCS	Action	Acres	Maximum GHG Reduction Potential (MT CO_2e/year)	Average GHG Reduction Rate (MT CO_2e/ac/year)	GHG Reduction Potential Under Specific Adoption Scenarios (MT CO_2e/year)			
					5%	20%	50%	70%
NWL 1								
340	Cover Crops[a,c]	178,291	51,007	0.29	2,550	10,201	25,504	35,705
328	Conservation Crop Rotation[a]	140,783	37,162	0.26	1,858	7,432	18,581	26,013
329	Residue and Tillage Management, No Till[b,c]	252,011	42,994	0.17	2,150	8,599	21,497	30,096
345	Residue and Tillage Management, Reduced Till[b,c]	163,812	15,583	0.10	779	3,117	7,792	10,908
336	Soil Carbon Amendments, Compost Application	288,628	1,291,465	4.47	64,573	258,293	645,733	904,026
808	Soil Carbon Amendments, Whole Orchard Recycling	79,563	3,016	0.04	151	603	1,508	2,111
484	Mulching	98,728	20,305	0.21	1,015	4,061	10,153	14,214
585	Stripcropping	70,391	10,829	0.15	541	2,166	5,415	7,581
590	Nutrient Management[c]	288,628	78,216	0.27	3,911	15,643	39,108	54,752
528	Prescribed Grazing	80,694	6,179	0.08	309	1,236	3,089	4,325
550	Range Planting	80,694	27,377	0.34	1,369	5,475	13,689	19,164
380	Windbreaks/Shelterbelt Establishment and Renovation	20,000	277,844	13.89	13,892	55,569	138,922	194,491
390	Riparian Herbaceous Cover	6,000	1,620	0.27	81	324	810	1,134
391	Riparian Forest Buffer	6,000	27,102	4.52	1,355	5,420	13,551	18,971
422	Hedgerow Planting	20,000	277,844	13.89	13,892	55,569	138,922	194,491
888	Multiple Conservation Practices[c]	192,998	118,726	0.62	5,936	23,745	59,363	83,108
	NWL 1 Sequestration Potential Total[d]		*2,062,307*	-	*103,115*	*412,461*	*1,031,154*	*1,443,615*
NWL 2								
N/A	Restore Wetlands	100	31,835	318.35	1,592	6,367	15,918	22,285
612	Repurpose Fallowed Cropland	100	945	9.45	47	189	472	661
342	Restore Native Grasslands	100	105	1.05	5	21	52	73
555	Restore Riparian Forests	100	100	1.00	5	20	50	70
	NWL 2 Sequestration Potential Total		*32,984*	-	*1,649*	*6,597*	*16,492*	*23,089*
	Total Strategy 8 Sequestration Potential		***2,095,291***		***104,765***	***419,058***	***1,047,646***	***1,466,704***

Notes:

[a] Cover Crops(CPS340) and Conservation Crop Rotation (CPS 328) are heavily overlapping practices, and thus their sequestration potentials should not be taken cumulatively.

[b] Residue and Tillage Management practices (CPS 328 and 329) are overlapping practices, and thus their sequestration potentials should not be taken cumulatively.

[c] Given the interacting effect of several practices, applying in combination is not necessarily additive. Therefore, maximum potential sequestration for lands implementing Cover Crops (CPS 340), Residue And Tillage Management (CPS 329 and 345), and Nutrient Management (CPS 590) concurrently is estimated within the Multiple Conservation Practices option within COMET-Planner.

[d] Total sequestration for NWL 1 excludes sequestration for mutually exclusive practices, taking the higher sequestration value where needed.

Co-Benefits of Conservation Practices

NRCS Code	Conservation Practice	Co-Benefits
NWL 1c. Encourage Climate-Smart Practices in Working Lands		
340	Cover Crops (acres)	Reduce erosion, increase pollination services, suppress weeds, improve water quality.
328	Conservation Crop Rotation (acres)	Wildlife habitat, pollination services, reduce erosion, improve soil moisture efficiency.
329	Residue and Tillage Management, No Till (acres)	Food and cover for wildlife, reduce erosion, reduce tillage-induced particulate emissions, increase plant-available moisture, reduce energy use.
345	Residue and Tillage Management, Reduced Till (acres)	Food and cover for wildlife, reduce erosion, reduce tillage-induced particulate emissions, increase plant-available moisture, reduce energy use.
336	Soil Carbon Amendments	Improve habitat for soil organisms, improve soil organic matter improve soil aggregate stability, improve soil moisture retention.
808	Whole Orchard Recycling (acres) (under evaluation)	maintain or improve habitat for soil organisms, improve irrigation efficiency, improve plant productivity and health.
393	Filter Strips (acres)	Reduce contaminants in runoff and sedimentation in surface waters.
412	Grassed Waterways (acres)	Protect or improve water quality, reduce erosion, prevent gully formation.
484	Mulching	Improve moisture management efficiency, reduce irrigation energy, reduce erosion, improve plant productivity and health.
585	Stripcropping	Reduce soil erosion, improve water quality, improve wildlife habitat.
590	Nutrient Management	Reduce GHG emissions, improve plant health and productivity, reduce excess nutrients in surface and ground water.
NWL 1d. Support Practices to Sequester Carbon on Grazing and Pastureland		
338	Prescribed Burning (acres)	Improve plant community structure and composition, manage pests, reduce wildfire hazards, improve habitat, improve plant and seed production.

528	Prescribed Grazing (acres)	Improve or maintain desired species composition, structure, and or vigor of plant communities, improve or maintain surface and/or subsurface water quality, reduce soil erosion, improve or maintain wildlife food and/or cover, manage fuel loads.
550	Range Planting (acres)	Provide or improve livestock forage, provide or improve wildlife food and/or cover, reduce erosion, improve water quality and quantity, restore hydrologic function.
NWL 1e. Support Implementation of Agroforestry Practices		
380	Windbreaks/Shelterbelt Establishment and Renovation (feet)	Reduce soil erosion, enhance plant health, improve moisture management, provide shelter from wind and excessive heat, improve air quality.
390	Riparian Herbaceous Cover	Provide or improve wildlife food and/or cover, improve or maintain water quality, establish or maintain wildlife corridors, increase water storage on floodplains, improve pollination services, enhance stream bank protection.
391	Riparian Forest Buffer	Reduce sediment transport, improve wildlife habitat, restore diversity, structure, and composition of riparian plant communities.
422	Hedgerow Planting	Improve pollination services, provide food and cover for wildlife, provide wildlife corridors, intercept airborne particulate matter, reduce chemical drift, boundary delineation.