ALAMEDA COUNTY RESOURCE CONSERVATION DISTRICT

SPREADING COMPOST ON RANGELANDS

For farmers, ranchers, conservation planners, and practitioners

Join the **Alameda County Resource Conservation District** and its partners for a discussion about spreading compost on rangelands. We will look at costs, compost quality, and lessons learned from demonstration carbon farming projects. We will hear from ranchers about their experiences applying compost through CDFA's Healthy Soils Program Demonstration and Incentives projects.

RSVP:

Click here to register.

Link: https://www.eventbrite.com/e/spreading-compost-on-rangelands-registration-136041308215

This event will be held on Zoom. Details will be sent upon registration.

Questions?
stephanie.lew@acrcd.org | 925-453-3859

FEBRUARY 9, 2021
3PM-5PM PST

Virtual event

ORGANIZER

CONSERVATION PARTNERSHIP
ACRCD•NRCS

PRESENTERS

ALAMEDA COUNTY RESOURCE CONSERVATION DISTRICT

STOPWASTE at home • at work • at school

Paulo Farms

Calhoun Ranch

Carbon Cycle Institute

COLLABORATORS

UNIVERSITY OF CALIFORNIA MERCED

USDA NRCS

CONSERVATION PARTNERSHIP
ACRCD•NRCS

CARBON FARMING

Alameda County
Resource Conservation District

What is Carbon Farming?

Carbon Farming is the use of farming, ranching and ecological practices to capture and **retain carbon dioxide** in vegetation and soils. Carbon Farming is not new; it is simply a different way of planning and prioritizing on-farm management.

Compost addition, cover cropping, riparian planting, and prescribed grazing are a few practices that effectively improve soils and capture carbon.

Compost application

Why is Carbon Farming important?

There are environmental and economic benefits. Certain practices **improve production while enhancing soil health**. For example, compost addition increases soil organic matter, which allows soils to absorb and hold more water, nourish plants, extend the green season, and reduce erosion, all of which provide economic benefits.

Riparian plantings

ACRCD

Be a Carbon Farmer

Alameda County
Resource Conservation District

Funding for Carbon Farming

The USDA Natural Resources Conservation Service (NRCS), the California Department of Food and Agriculture (CDFA), and Alameda County Resource Conservation District (ACRCD) (via grants) provide **funding for most of the practices** identified in Carbon Farm Plans. Examples of practices include:

- Cover cropping
- Compost application
- Hedgerow
- No-till or reduced till
- Mulching
- Riparian planting

For more information, visit

https://www.cdfa.ca.gov/oefi/healthysoils/

Carbon Farm Plan

ACRCD can assist in developing a Carbon Farm Plan, which outlines opportunities to capture carbon and reduce on-farm carbon emissions on your property.

Get started or learn more.

Ian Howell
Email: ian.howell 'at' acrcd.org
925-371-0154

3585 Greenville Rd.
Livermore, CA 94550
www.acrcd.org

CONSERVATION PARTNERSHIP
ACRCD • NRCS

PROP 1
GOVERNOR EDMUND G. BROWN, JR.
WATER BOND 2014

DEPARTMENT OF WATER RESOURCES
STATE OF CALIFORNIA

FIRST HOUR

Soil, Carbon, Water, Climate: The Carbon Cycle as an Organizing Principle in Agriculture

A Carbon Farming Partnership & HSP Demonstration

Q&A

SECOND HOUR

Compost for Carbon Farming

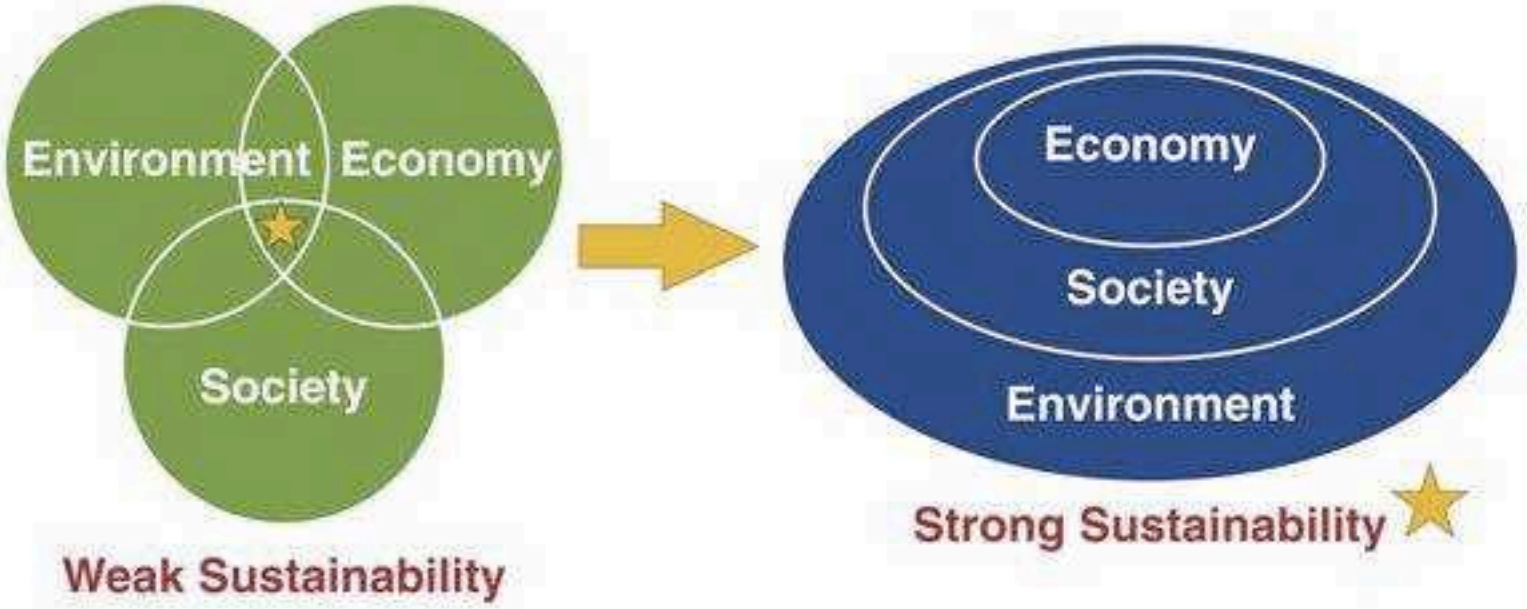
Calhoun Ranch & HSP Incentives

Q&A

Funding Resources & Evaluation

Triple Bottom Line

Interconnected and Interdependent Benefits



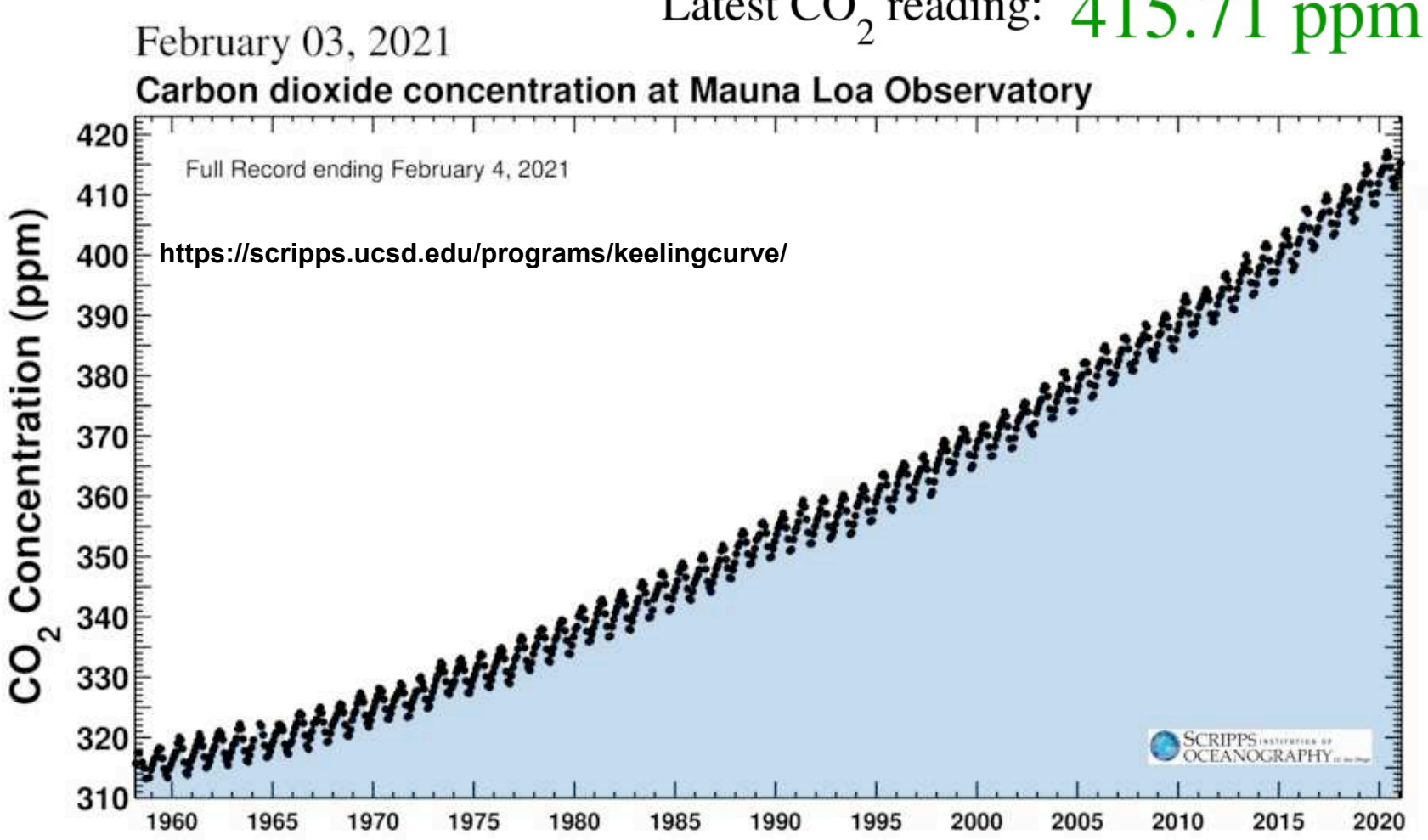
Source: Maureen Hart - Sustainable Measures

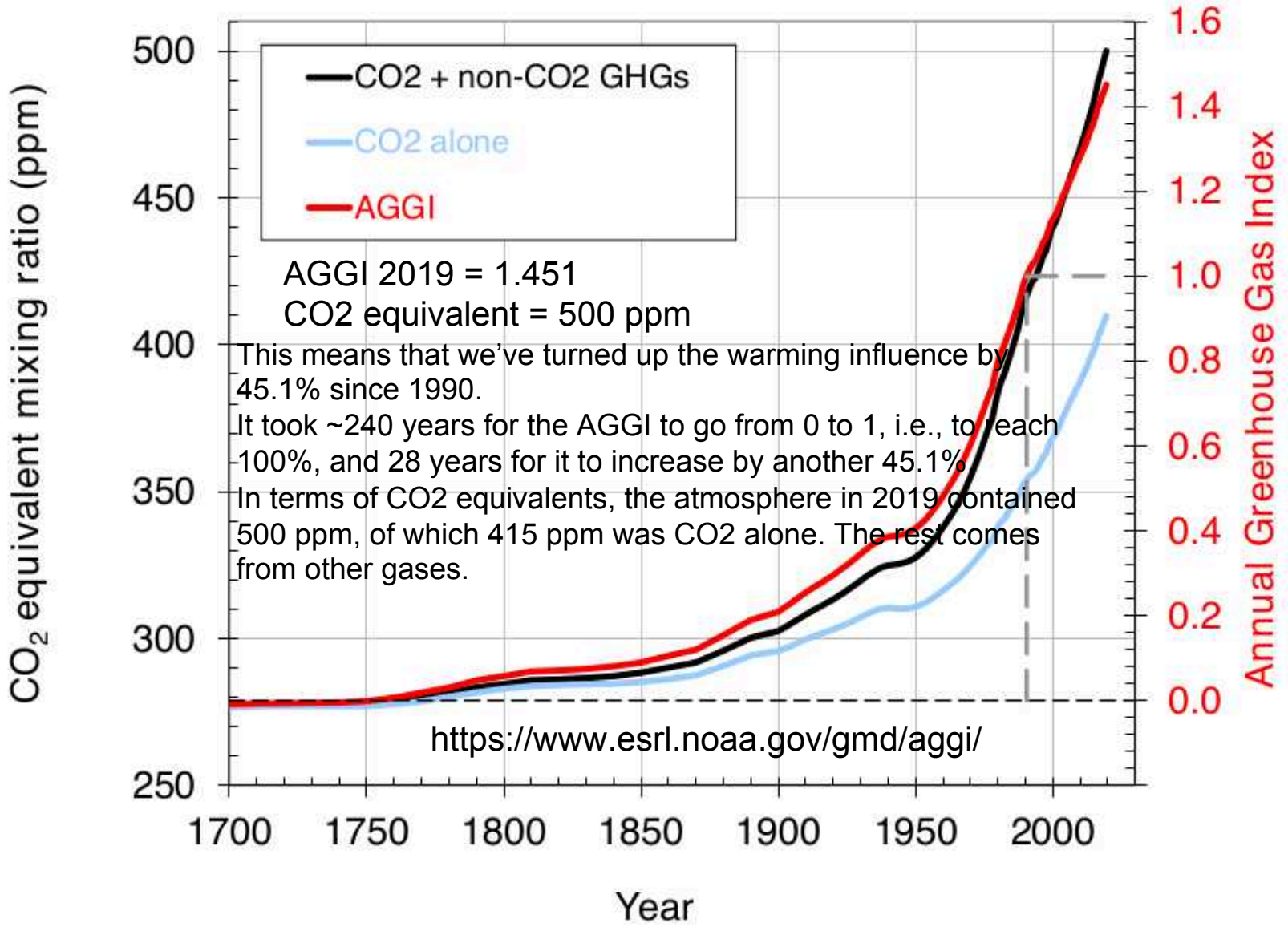
Carbon Farming
Soil, Carbon, Water, Climate

The Carbon Cycle as an Organizing Principle in Land Stewardship

ARCD
2/9/21
Jeffrey Creque, Ph.D.
jcreque@carboncycle.org
Carbon Cycle Institute
www.carboncycle.org

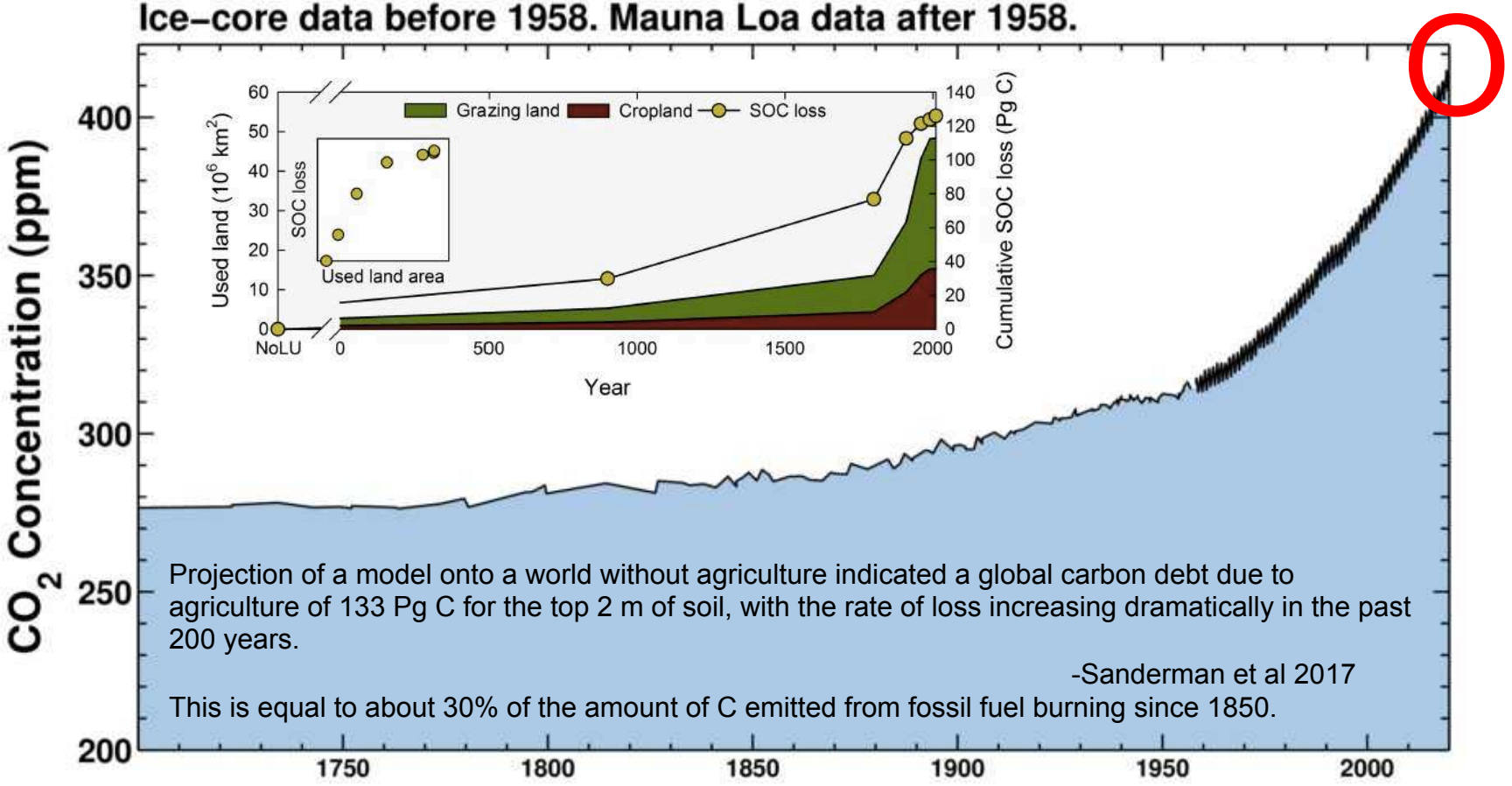
Latest CO_2 reading: 415.71 ppm




CO2 + non-CO2 GHGs
CO2 alone
AGGI
AGGI 2019 = 1.451
CO2 equivalent = 500 ppm
This means that we've turned up the warming influence by 45.1% since 1990.
It took ~240 years for the AGGI to go from 0 to 1, i.e., to reach 100%, and 28 years for it to increase by another 45.1%.
In terms of CO2 equivalents, the atmosphere in 2019 contained 500 ppm, of which 415 ppm was CO2 alone. The rest comes from other gases.
https://www.esrl.noaa.gov/gmd/aggi/
CO2 equivalent mixing ratio (ppm)
Annual Greenhouse Gas Index
Year
500
450
400
350
300
250
1700
1750
1800
1850
1900
1950
2000
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0

Latest CO_2 reading: 415.71 ppm

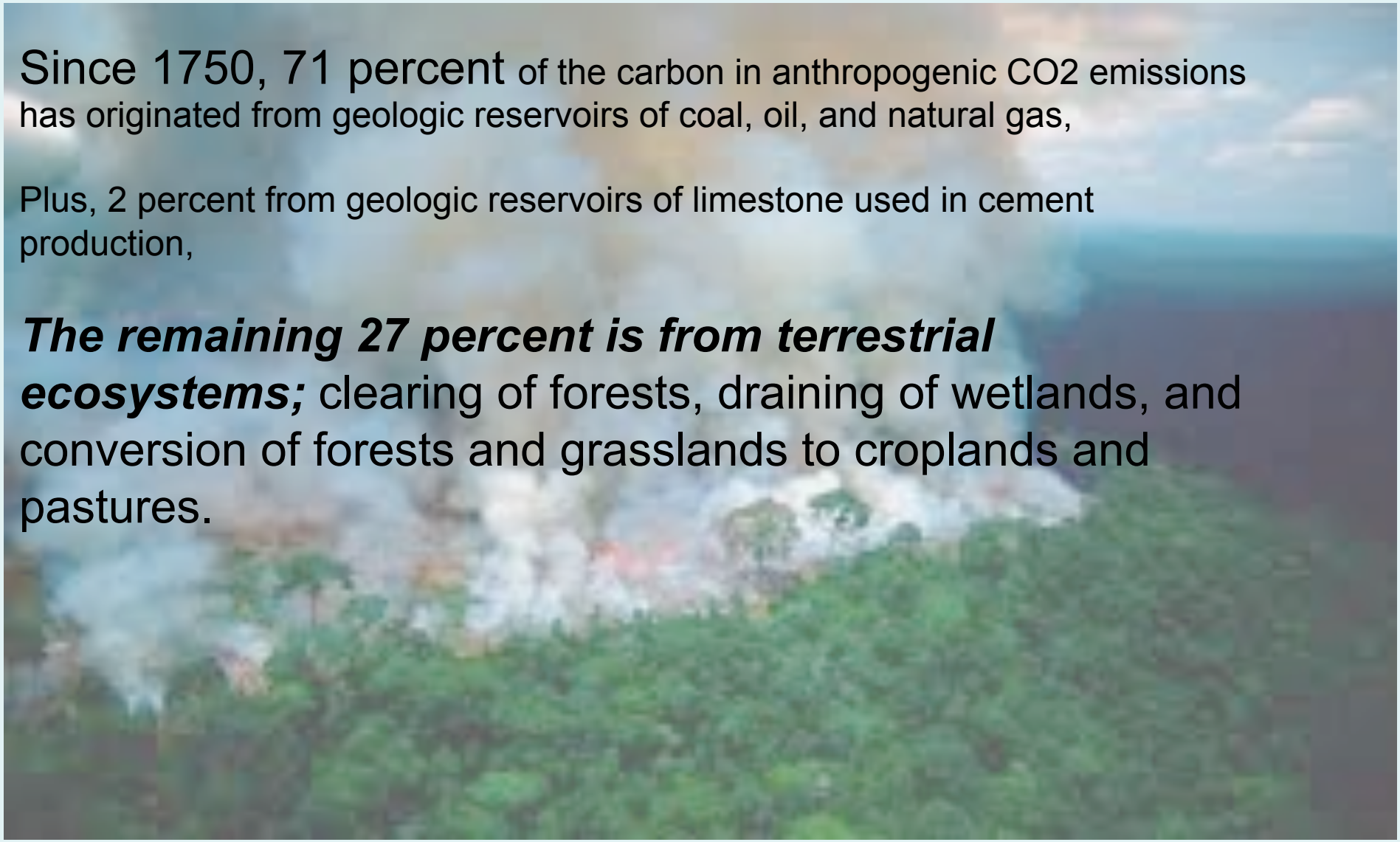
February 03, 2021



Projection of a model onto a world without agriculture indicated a global carbon debt due to agriculture of 133 Pg C for the top 2 m of soil, with the rate of loss increasing dramatically in the past 200 years.

-Sanderman et al 2017

This is equal to about 30% of the amount of C emitted from fossil fuel burning since 1850.



Since 1750, 71 percent of the carbon in anthropogenic CO2 emissions has originated from geologic reservoirs of coal, oil, and natural gas,

Plus, 2 percent from geologic reservoirs of limestone used in cement production,

The remaining 27 percent is from terrestrial ecosystems; clearing of forests, draining of wetlands, and conversion of forests and grasslands to croplands and pastures.

https://www.google.com/search?q=photos+of+amazon+agriculture&client=firefox-b-1-d&tbm=isch&source=iu&ictx=1&fir=ZJJTtLxkKD-ifM%253A%252CYcppXkbSCVBGFM%252C_&vet=1&usg=AI4_-kRU0j7DlPK2CydEENMnH9sjWtMp8g&sa=X&ved=2ahUKEwjyw9T_iv_kAhVMs54KHUdTCigQ9QEwAXoECAUQCQ#imgrc=ZJJTtLxkKD-ifM:

… gricu lt re is u more exposed t clim at chan ge impact t an sa hy ot er sec t r. o

-COP 23, Bonn, Germany, 12 November 2017

http://enb.iisd.org/climate/cop23/agriculture-action-day/

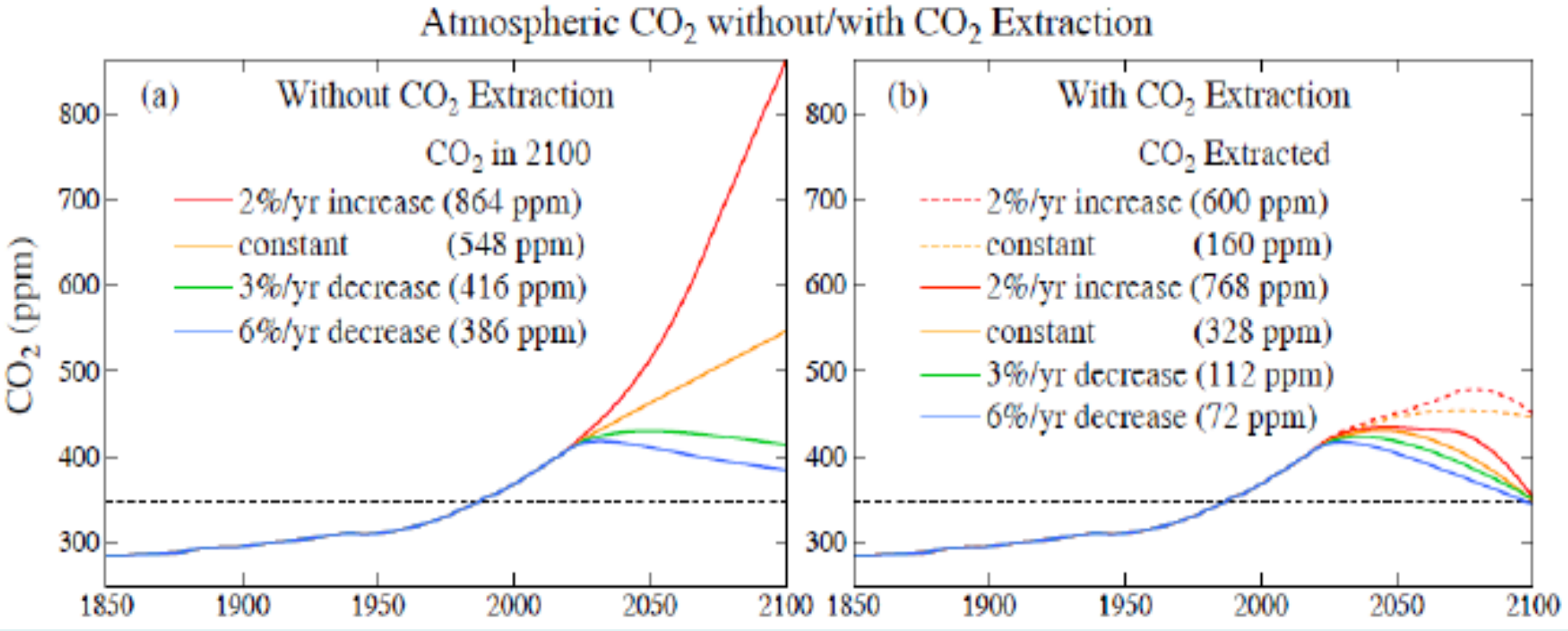
*"A large fraction of the anthropogenic climate change resulting from CO2 emissions is **irreversible** on a multi-century to millennial time scale, **except in the case of a large net removal of CO2 from the atmosphere over a sustained period**."*

IP C S C 2.4 P(014) 2

"…enhancing soil carbon is the only viable option to achieve negative emissions."

Celine Charveriat, Executive Director, Institute for European Environmental Policy, 2017

We cannot stop global warming without increasing the carbon content of our working landscapes



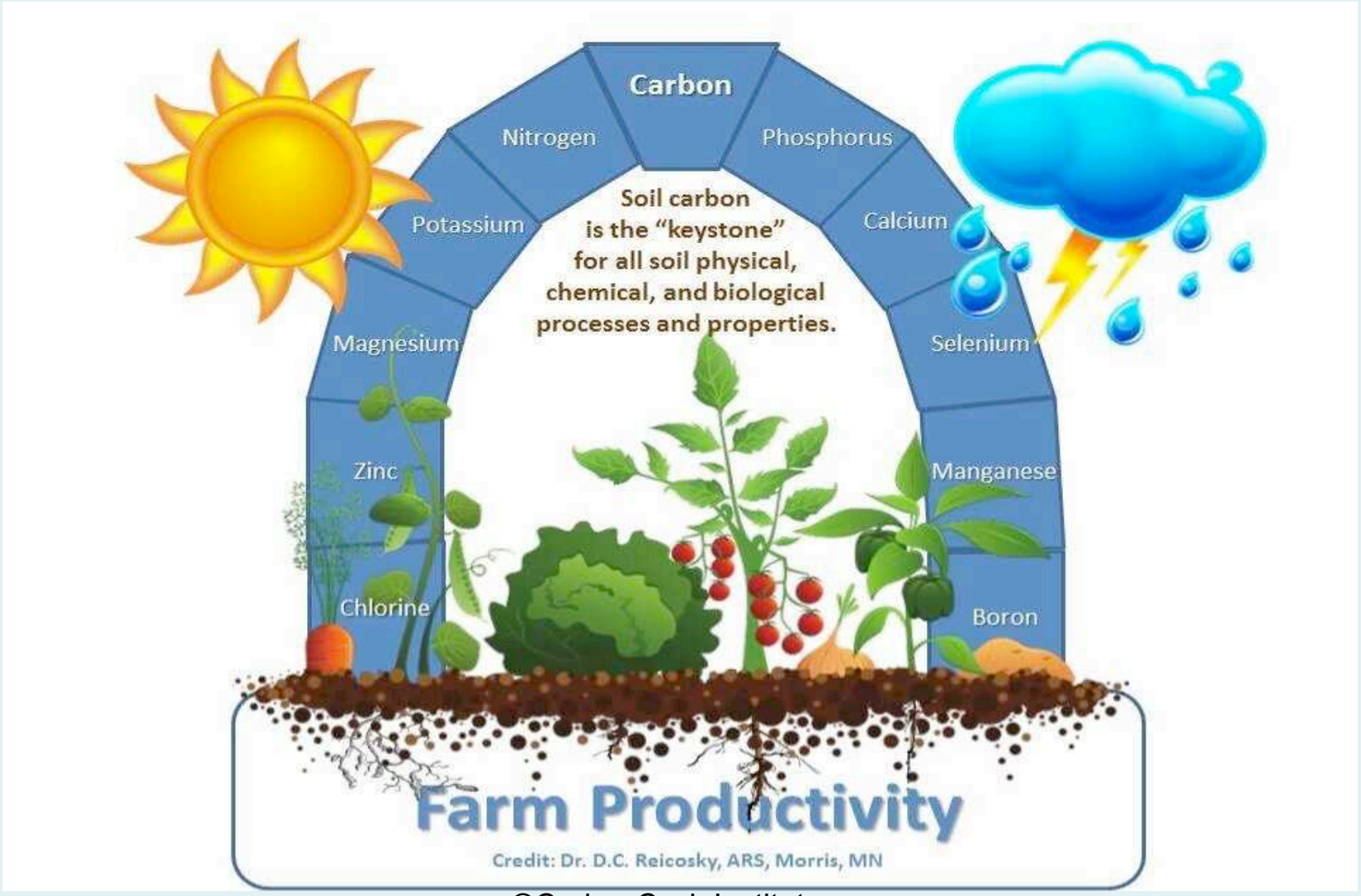
(a) Atmospheric CO2 emission reduction scenarios

(b) Atmospheric CO2 including effect of CO2 extraction that increases linearly after 2020 (after 2015 in +2%/year case). (1 ppm is ~2.12 GtC).

Hansen et al 2017. Earth Syst. Dynam., 8, 577–616, https://doi.org/10.5194/esd-8-577-2017

CARBON

Key to Agricultural Productivity and Resilience



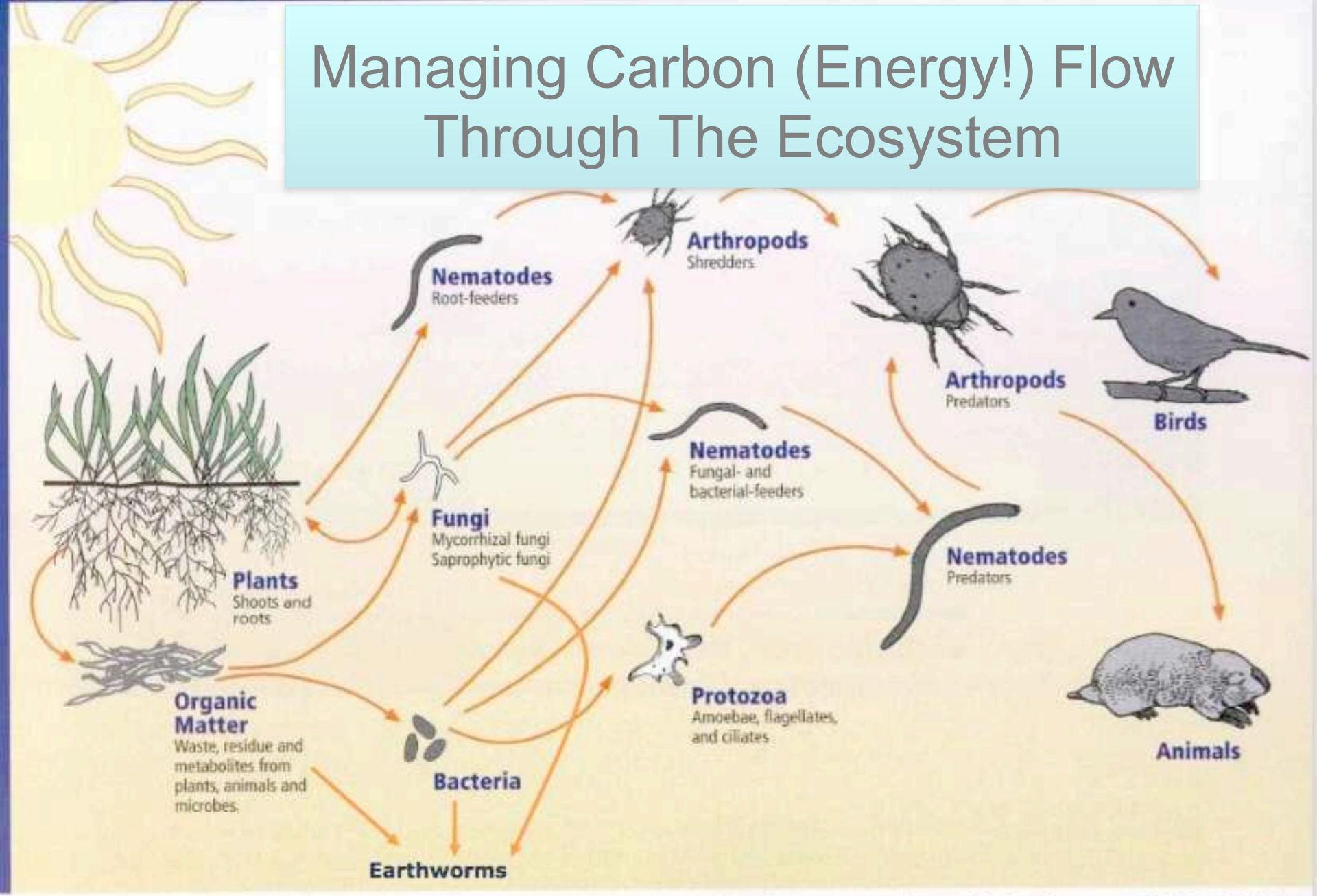
“Healthy” Soil

Well aggregated; biologically active, carbon rich

Photo: Ron Nichols, USDA

“Fertility is the ability of soil to receive, store, and release energy.” -Leopold 1949

Managing Carbon (Energy!) Flow Through The Ecosystem



First trophic level:
Photosynthesizers

Second trophic level:
Decomposers Mutualists
Pathogens, Parasites
Root-feeders

Third trophic level:
Predators
Grazers

Fourth trophic level:
Higher level predators

Fifth and higher trophic levels:
Higher level predators

Carbon Farm Planning:

Toward a
Climate Beneficial Agriculture

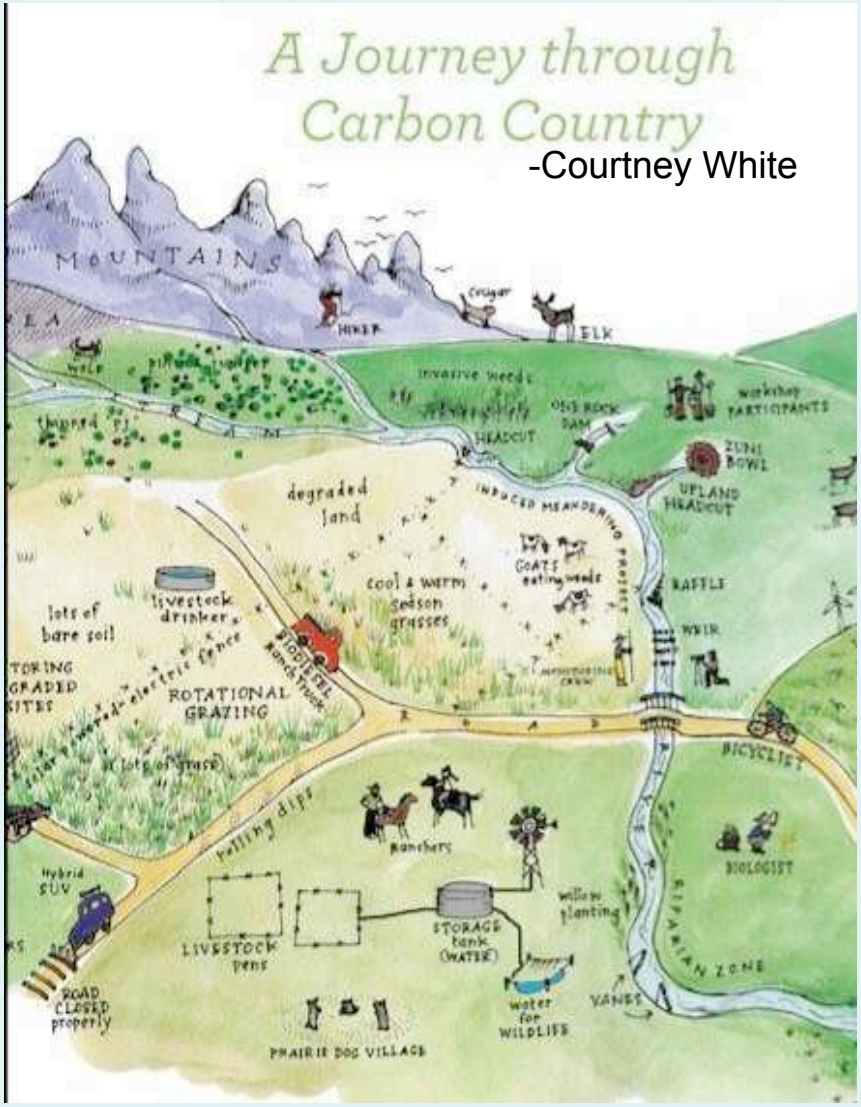
Paige Green Photo

Carbon Farm Planning

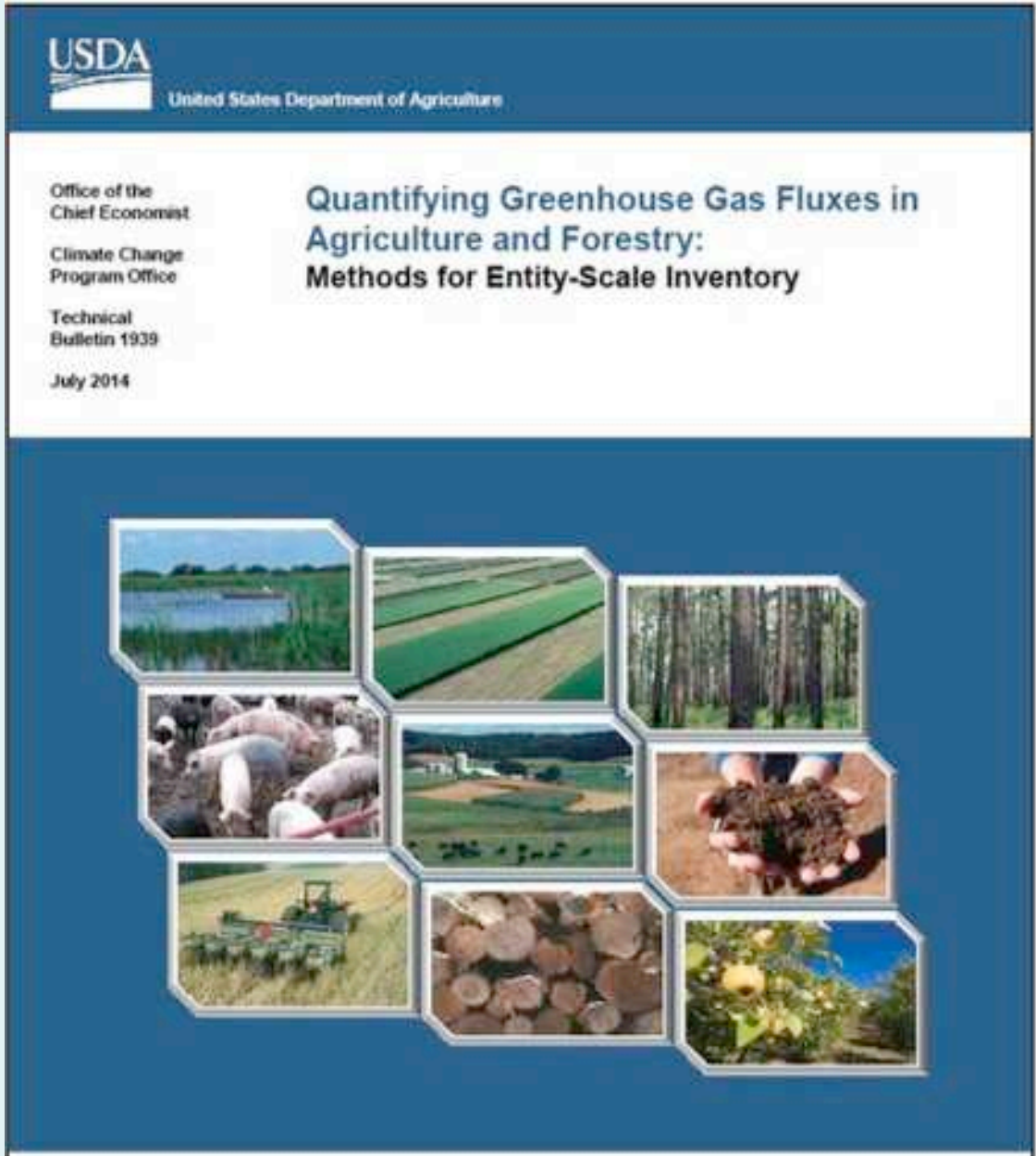
WHOLE FARM CONSERVATION PLANNING ***Through a Carbon Lens:***

- *Increase terrestrial carbon*
- *Reduce GHG emissions*
- *Quantify carbon benefits of conservation practices*

- *Recognize the co-benefits of increasing on-farm carbon:*
  - *Production*
  - *Soil 'Health'*
  - *Water Quantity*
  - *Water Quality*

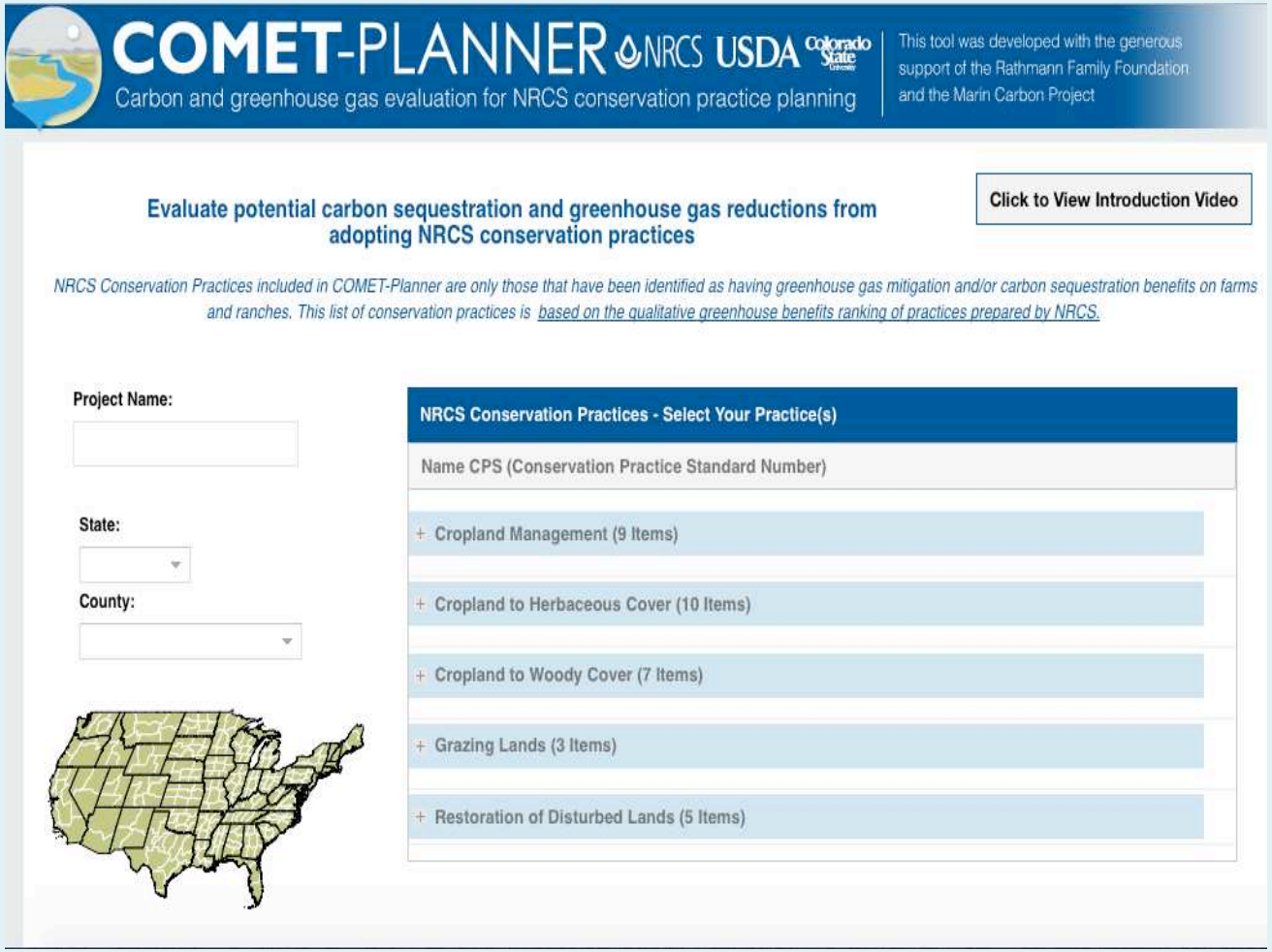


The USDA Entity-Scale GHG Methods Report is a transparent, scientifically rigorous set of standardized methods that can be used to quantify changes in GHG emissions and carbon storage following a change in management or adoption of a new practice or technology.



Eve, M., D. Pape, M. Flugge, R. Steele, D. Man, M. Riley–Gilbert, and S. Biggar, (Eds), 2014. *Quantifying Greenhouse Gas Fluxes in Agriculture and Forestry: Methods for Entity–Scale Inventory*. Technical Bulletin Number 1939. Office of the Chief Economist, U.S. Department of Agriculture, Washington, DC. 606 pages.

Carbon Farming:
Quantifying On-farm Carbon Capture Potential



And/or LOCAL DATA, where available…
COMPOST: Ryals et al 2013; DeLonge et al 2013
CREEK CARBON: Lewis et al 2015

CALIFORNIA CLIMATE STRATEGY

An Integrated Plan for Addressing Climate Change

VISION

Reducing Greenhouse Gas Emissions to 40% Below 1990 Levels by 2030

Carbon Neutrality by 2045
Agriculture: 36 MMT CO2e/year

GOALS

50% renewable electricity

50% reduction in petroleum use in vehicles

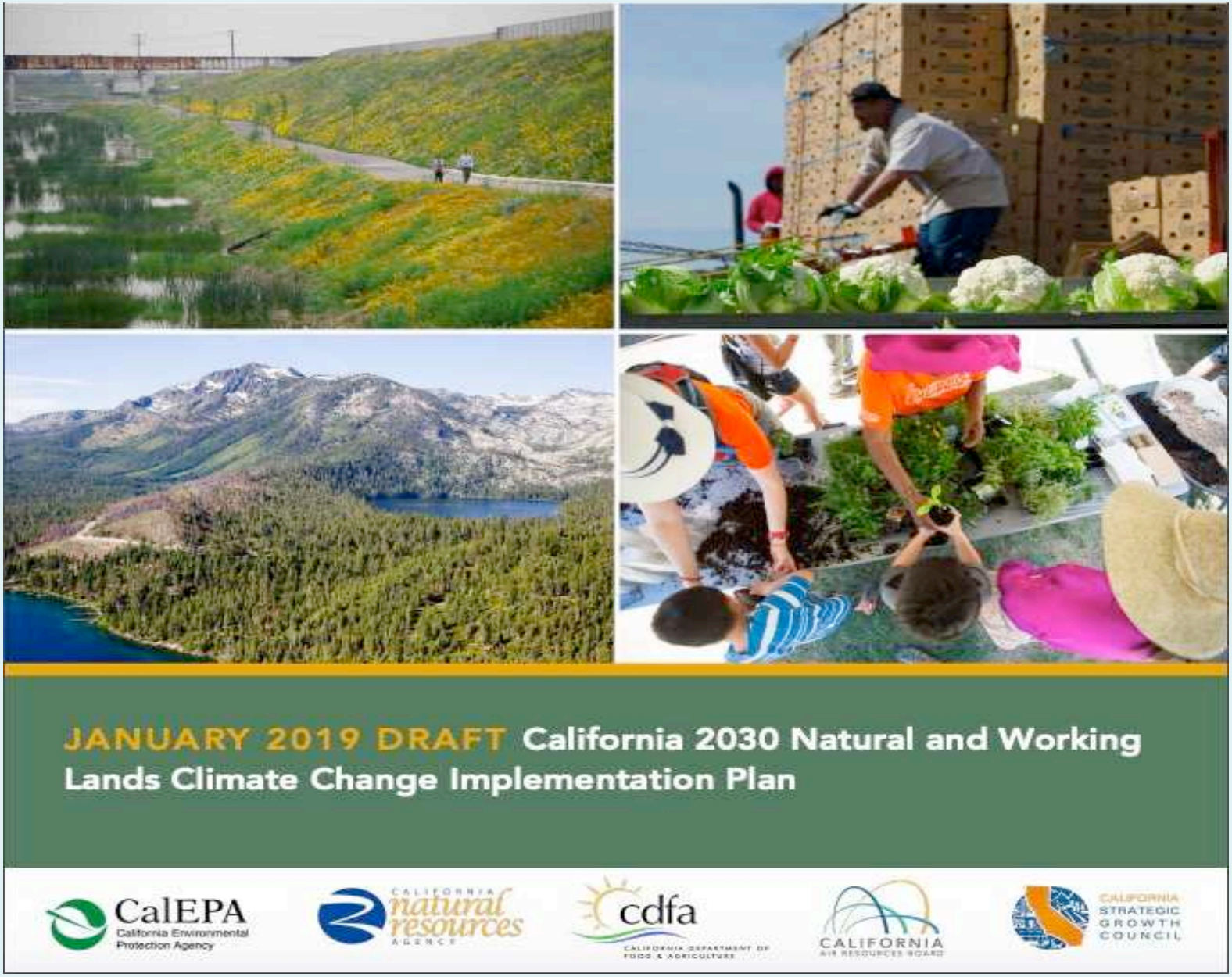
Double energy efficiency savings at existing buildings

Carbon sequestration in the land base

Reduce short-lived climate pollutants

Safeguard California

*



*

Carbon Farming and Compost

Compost is particularly effective as a C-farming strategy because of its multifaceted impacts. Decomposition within the compost environment maximizes carbon conservation as compost biomass, while minimizing emissions of short-lived climate pollutants, including black carbon associated with burning of biomass that might otherwise have been composted, and CH4 emissions from anaerobic disposal alternatives.

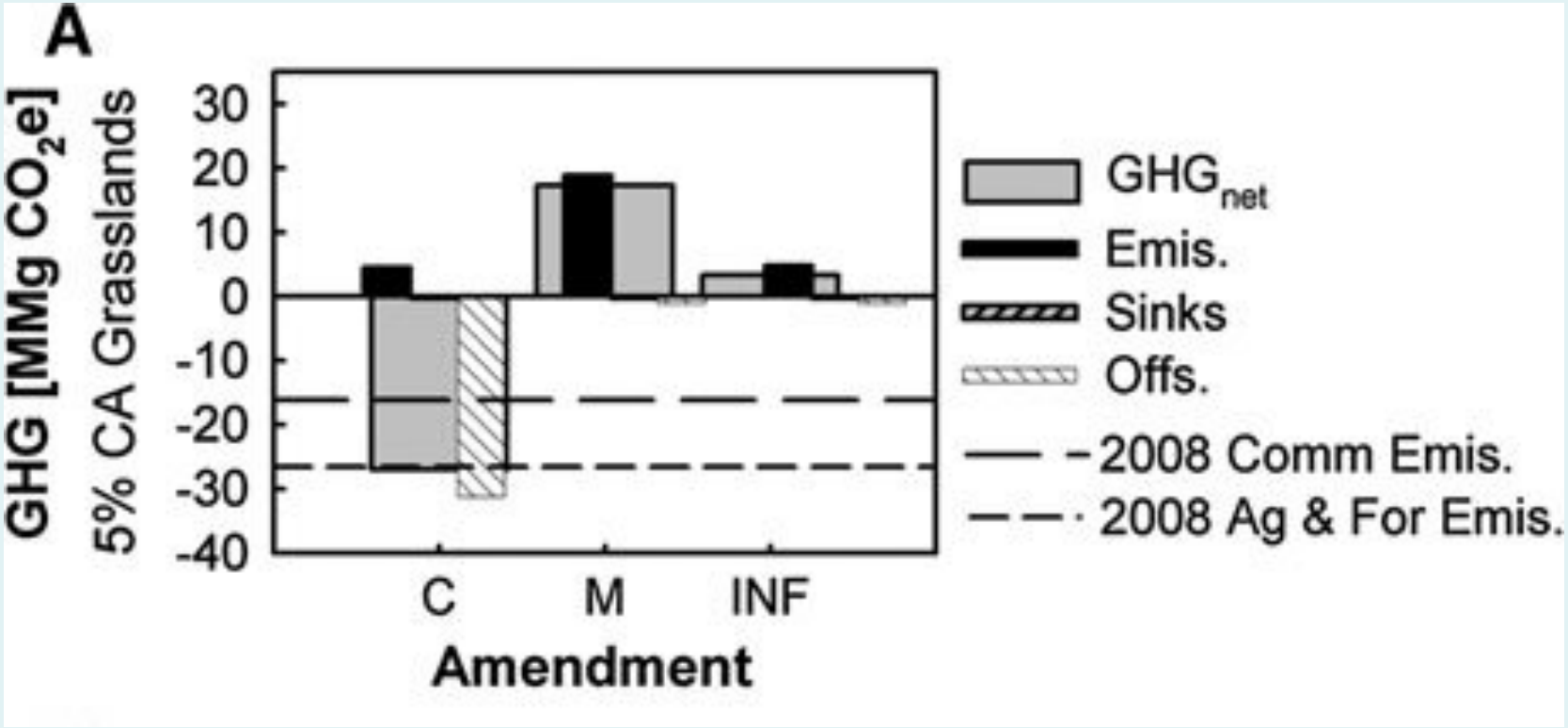
Compost offers the simplest and fastest way to safely increase SOM on working lands. The compost environment effectively pre-processes and stabilizes organic materials for safe and beneficial application to working land soils, eliminating or radically reducing pathogens, weed propagules and soluble nutrients.

COMET-Planner estimates assumed partial substitution of compost (eg, C:N ratio of 20; N%= 1.8) for synthetic N fertilizer. The scenario assumes that synthetic N amounts are gradually reduced by 4% per year for 5 years, achieving a 20% reduction in N fertilizer use after year 5 and remaining constant at that level. Compost is added at a rate that supplies 20% of the total N applied to the system.

Estimates are not meant to apply to any specific site conditions but rather represent the range of expected values to be found over the multi-county region and reflect the assumptions above. Multiple alternative scenarios are clearly possible.

	CO2	N2O	CH4	GHG
Annual Crops	4.535	-0.190	0.003	4.347
Per/Orch/Vin	4.610	-0.184	0.002	4.428
Grazed Irr. Pasture	4.580	-0.215	0.001	4.366
Grazed Grassland	4.541	-0.092	0.003	4.451

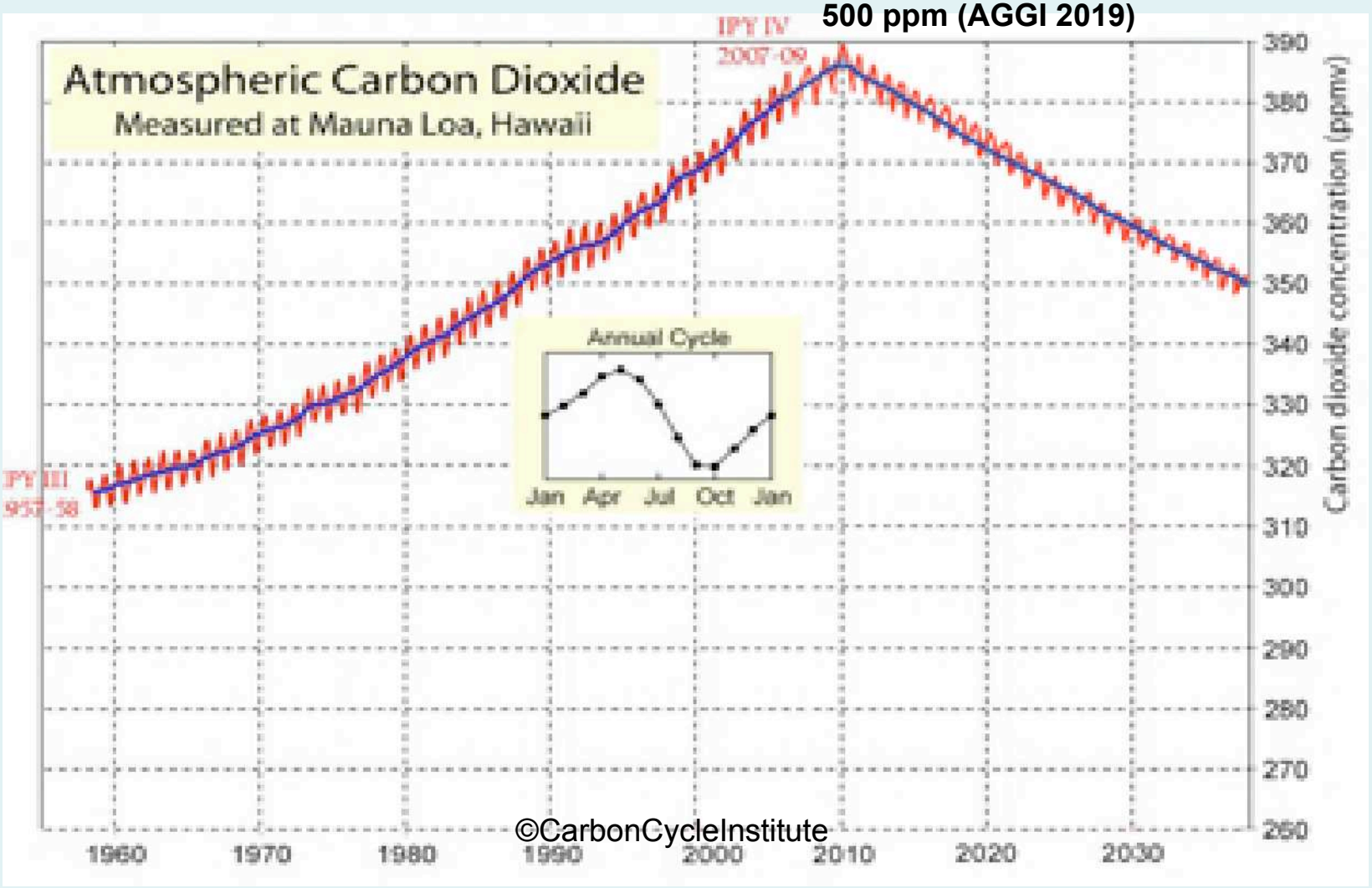
Potential impacts of soil amendments on net greenhouse gas fluxes when applied to 5% of California grasslands.

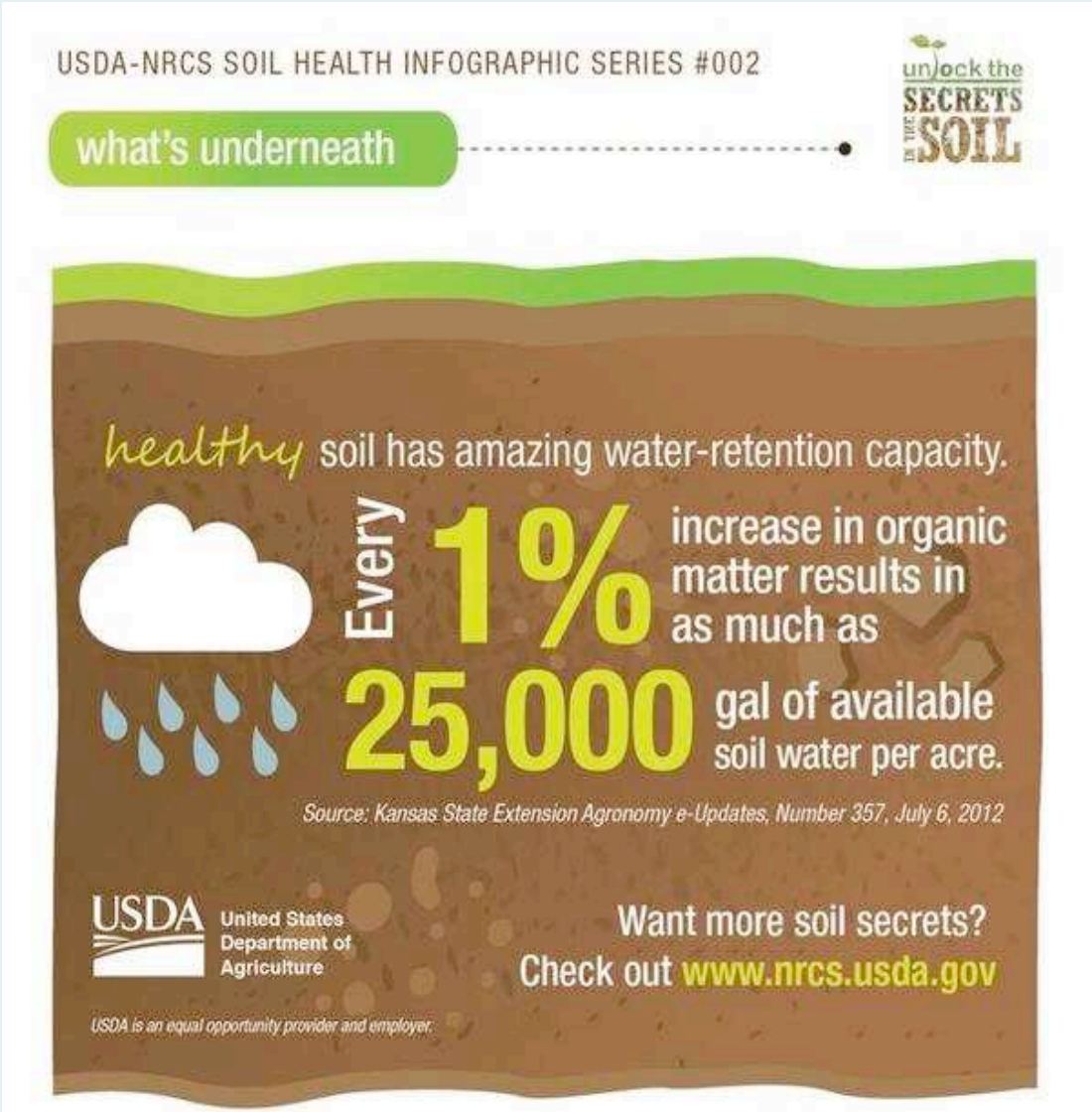


Emissions from the California Agriculture and Forestry and Commercial Sectors (CARB 2011) shown for comparison.

DeLonge et al 2013

Measured effect of ***unintentional*** anthropogenic forcing of atmospheric C, with ***intentional*** anthropogenic forcing of soil organic C at global scale



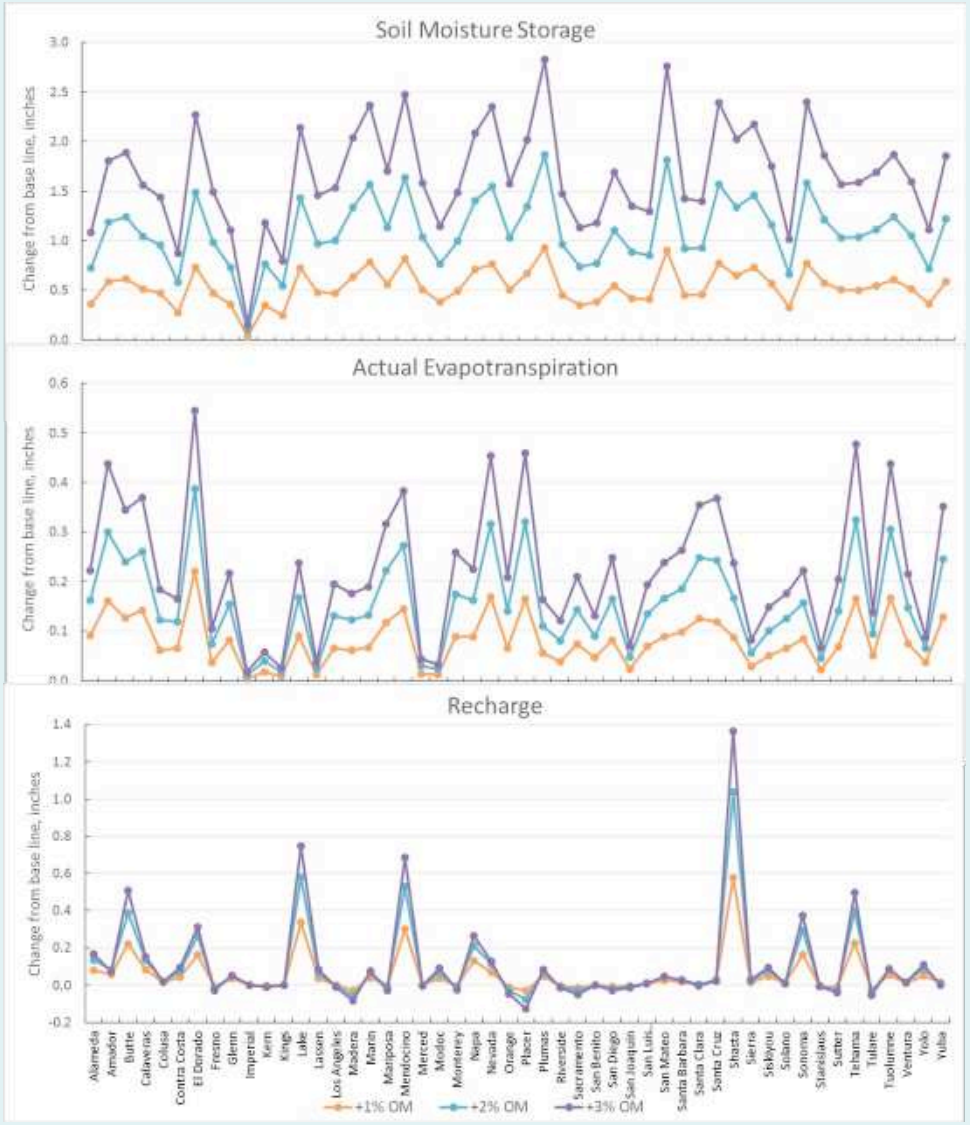


https://www.agronomy.k-state.edu/documents/eupdates/eupdate070612.pdf; Emerson, W.W. 1995. Water retention, organic carbon and soil texture.

Farmland after rain (right): waterlogging due to poor structure resulting from cultivation, compaction and lack of soil cover (and roots!). Different management, including denser groundcover, on the adjacent paddock (left) results in higher soil carbon, leading to better structure and improved water absorbing and holding capacity.

Patrick Francis, Australian Farm Journal

Models suggest Increasing Soil Organic Matter Concentration by 3% on 44 Million acres of CA Working Lands would Yield roughly 6 Million acre feet of Hydrologic Benefit
The state is currently considering spending $1.3 Billion to increase storage in Shasta Reservoir by 634,000 acre feet: this suggests 6 M AF has a value of at least $10 B.



County averaged results for 1981-2010 as a change from baseline soil organic matter to an increase of 1, 2 and 3% for soil water holding capacity, actual evapotranspiration, and recharge. Ellis et al 2018

Scaling Up:
Carbon Farming with Resource Conservation Districts and other partners

Over 100 CFPs; **1.5 MMT CO2e (20 yrs)**

58 CFPs in development

Additional 49 producers in line for CFPs

Good News: Excess Carbon Dioxide in the Atmosphere Can Be Transformed to Food, Fuel, Flora, Fiber,

and Soil Fertility,

Yielding Production, Biodiversity and other Ecosystem Benefits

and New Opportunities for Agriculture

NB: Climate science and all empirical evidence suggest we must act NOW, at scale, to avoid a 3^{o}C rise in global temperature by 2100.

Photo: Abe Collins, CarbonFarmersofAmerica.org

https://carbonfarmersofaustralia.com.au/carbon-farming/

Spreading Compost on Rangelands
February 9, 2021

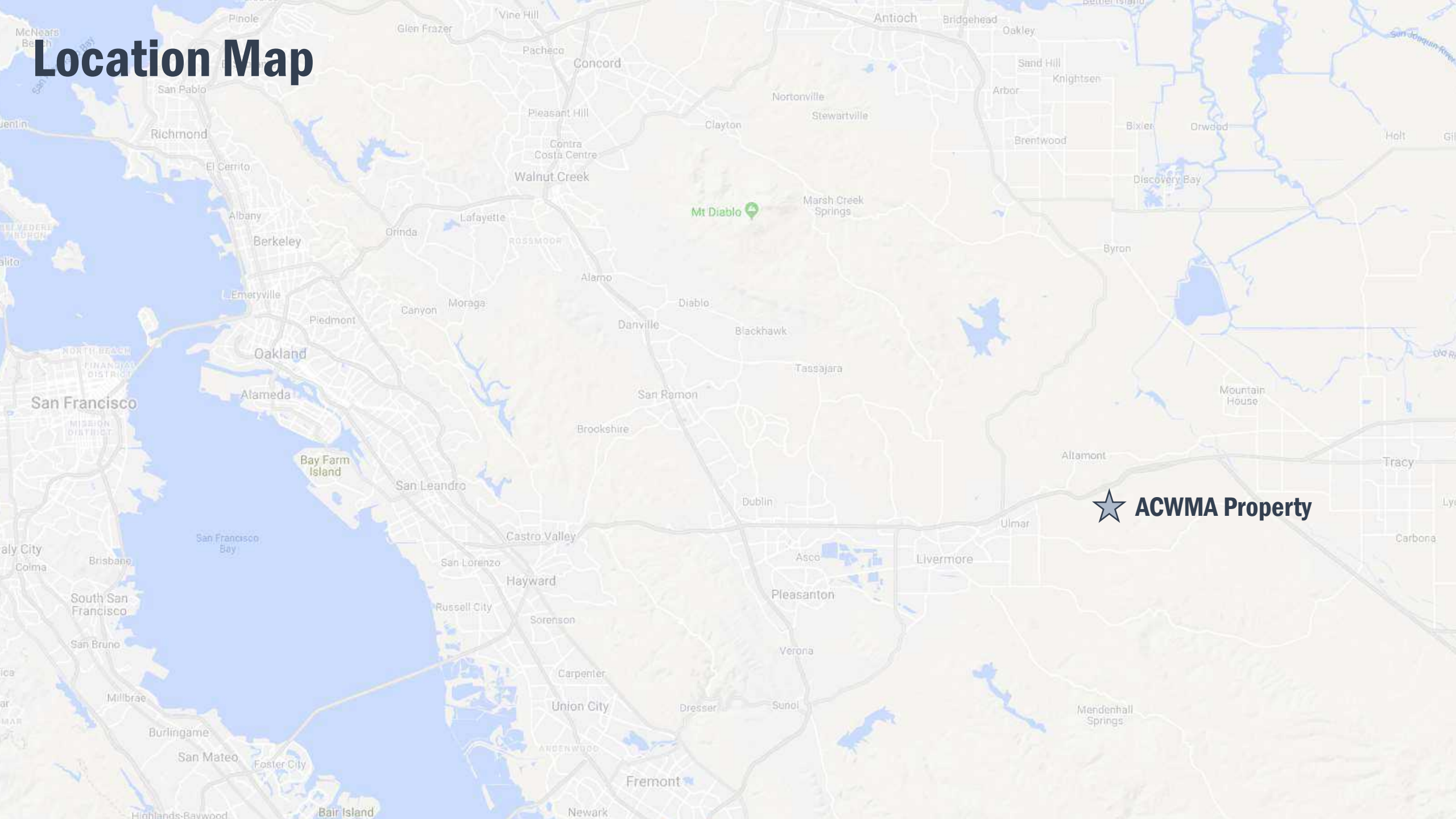
Partners in a Healthy Soils Program Compost Demonstration Project

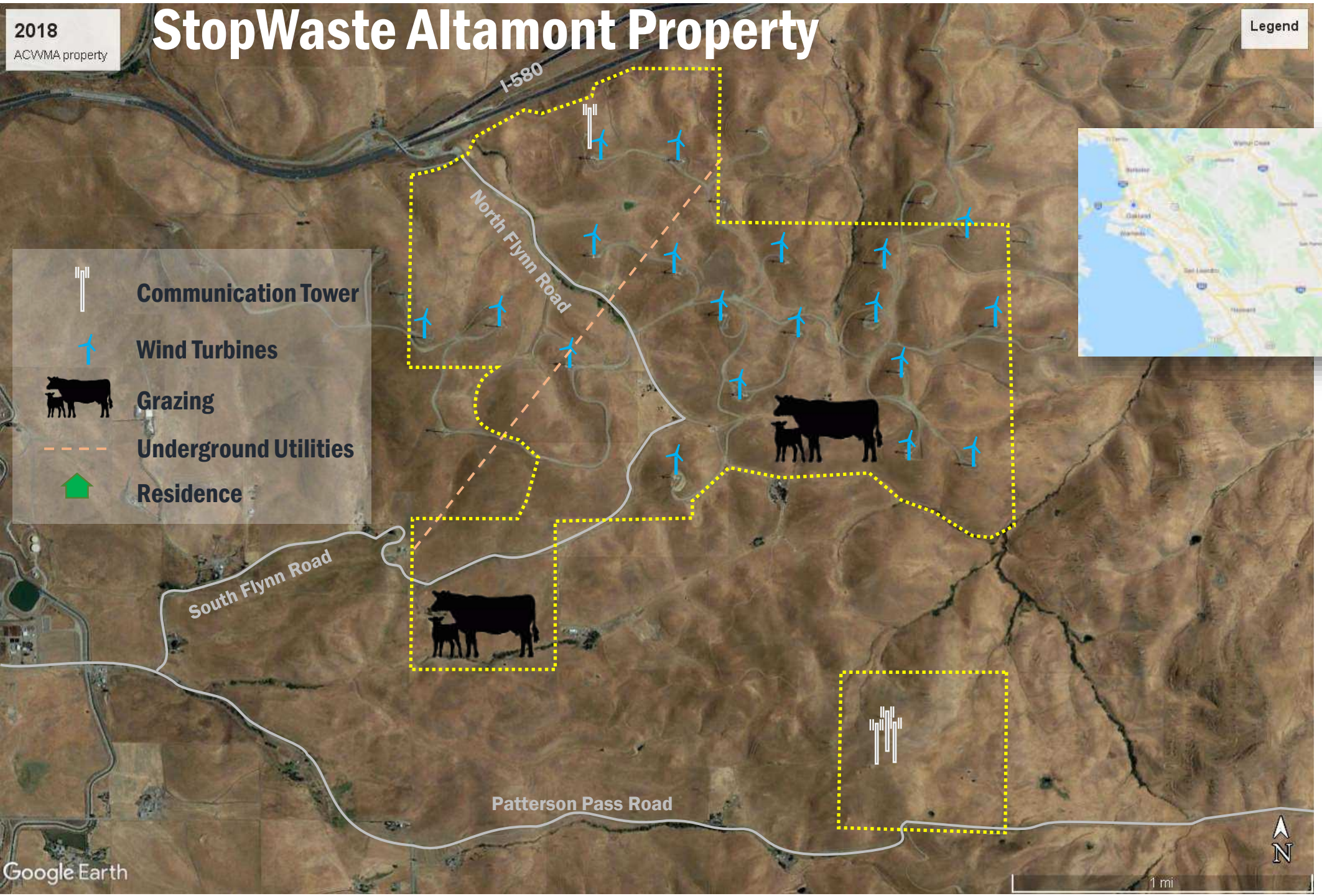
Ian Howell, Resource Conservationist, Alameda County RCD
Kelly Schoonmaker, Property Manager, StopWaste

CONSERVATION PARTNERSHIP
ACRCD • NRCS

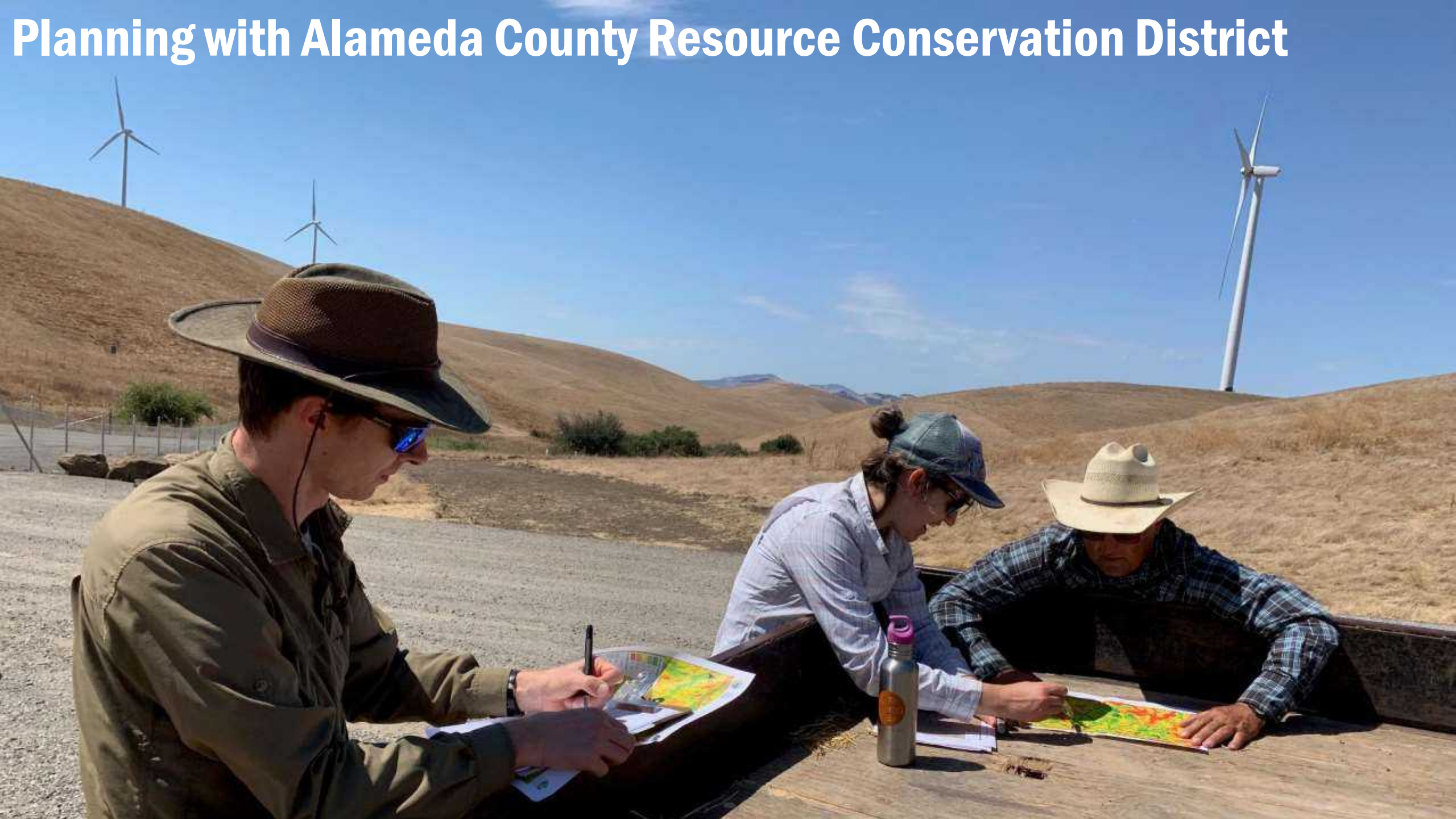
STOPWASTE
at home • at work • at school

Location Map

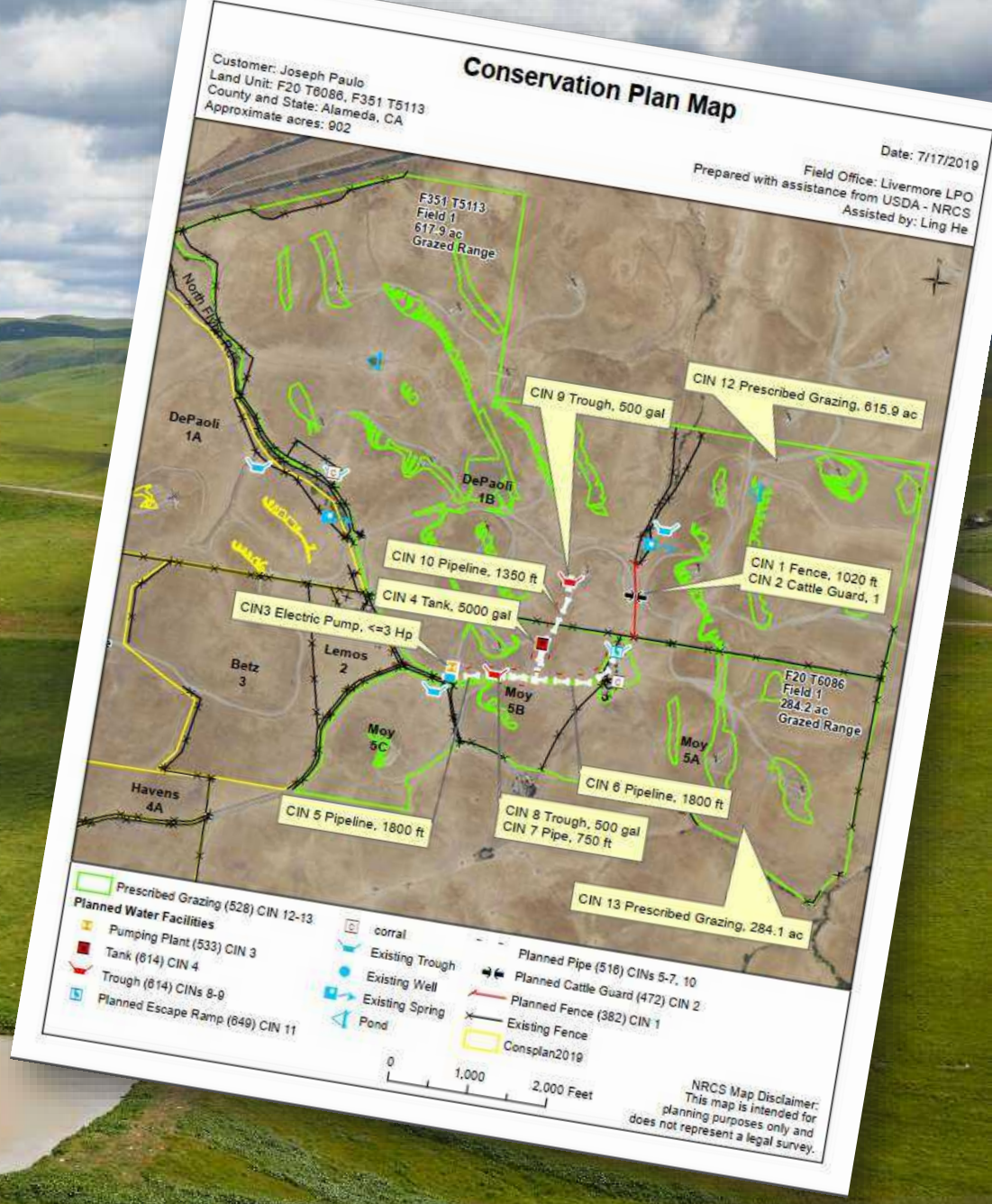


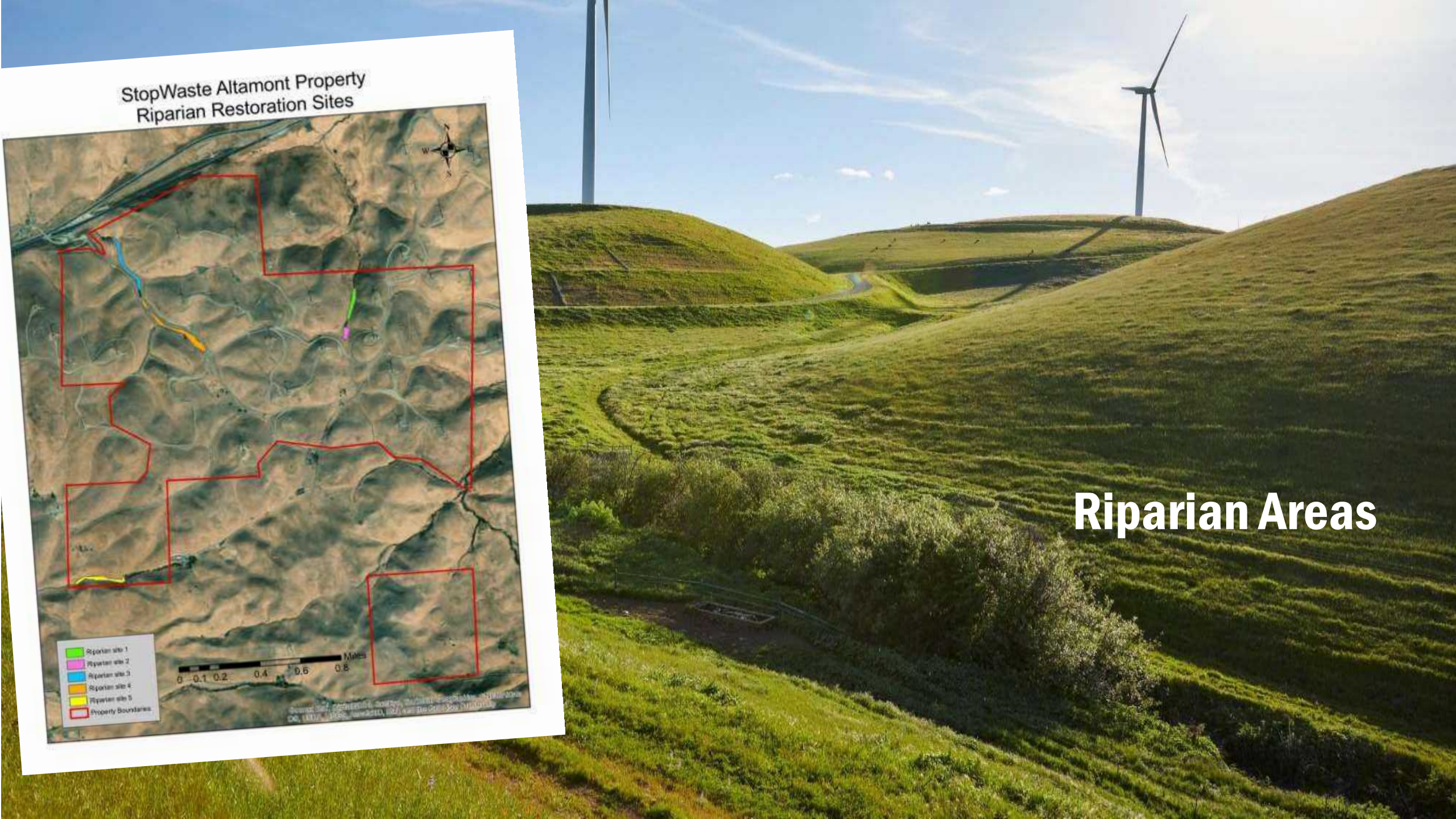

2018
ACWMA property
StopWaste Altamont Property
Legend
I-580
North Flynn Road
South Flynn Road
Patterson Pass Road
Communication Tower
Wind Turbines
Grazing
Underground Utilities
Residence
Google Earth
1 mi
N

Planning with Alameda County Resource Conservation District



Stockwater & Aquatic Habitat





Riparian Areas

Common and Sensitive Wildlife

Davor Desancic

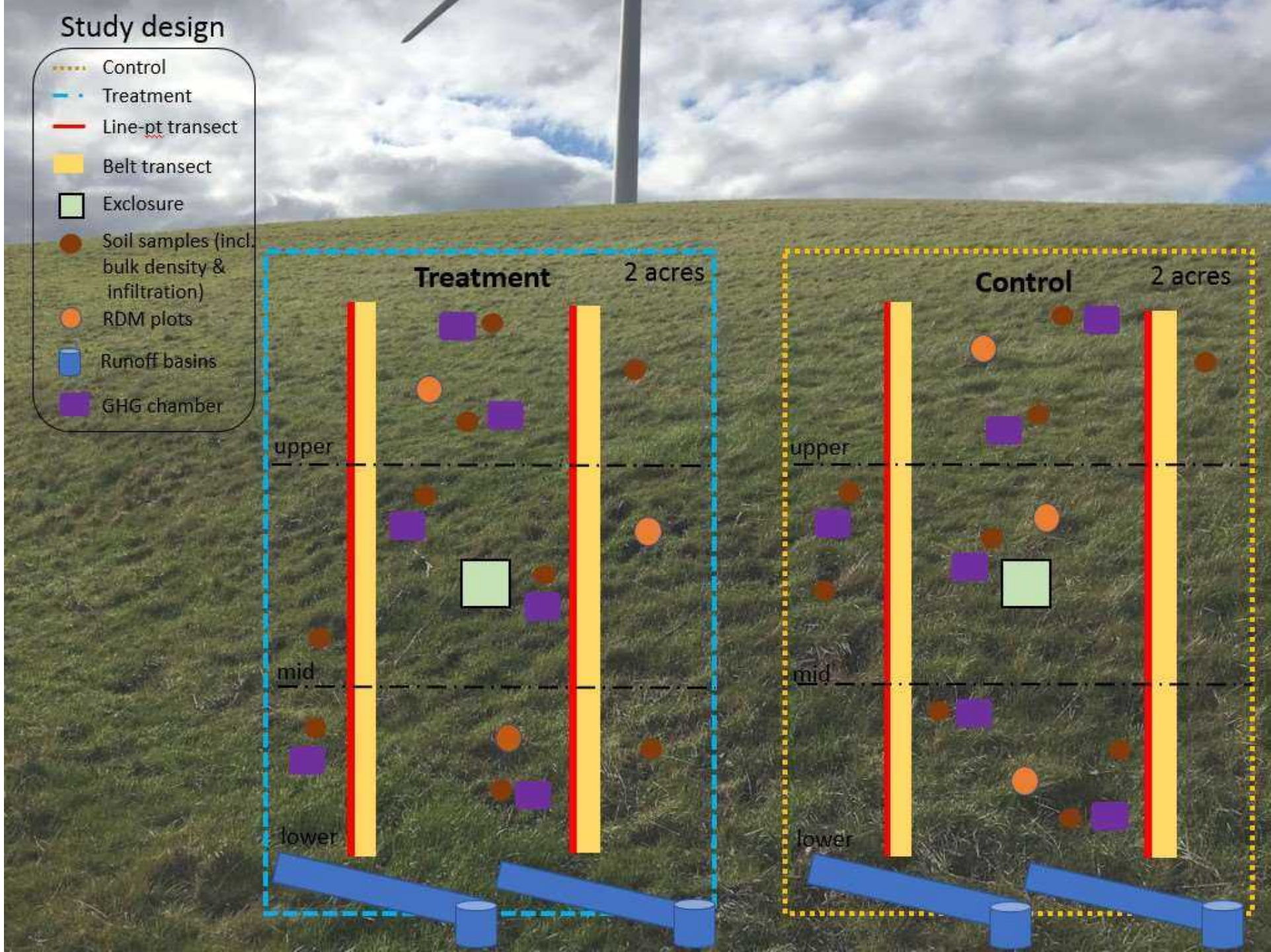
December 2019

CDFA Healthy Soils Program

Demonstration grant


Control Plot
Test Plot
15-30%
slope

HSP Demo grant



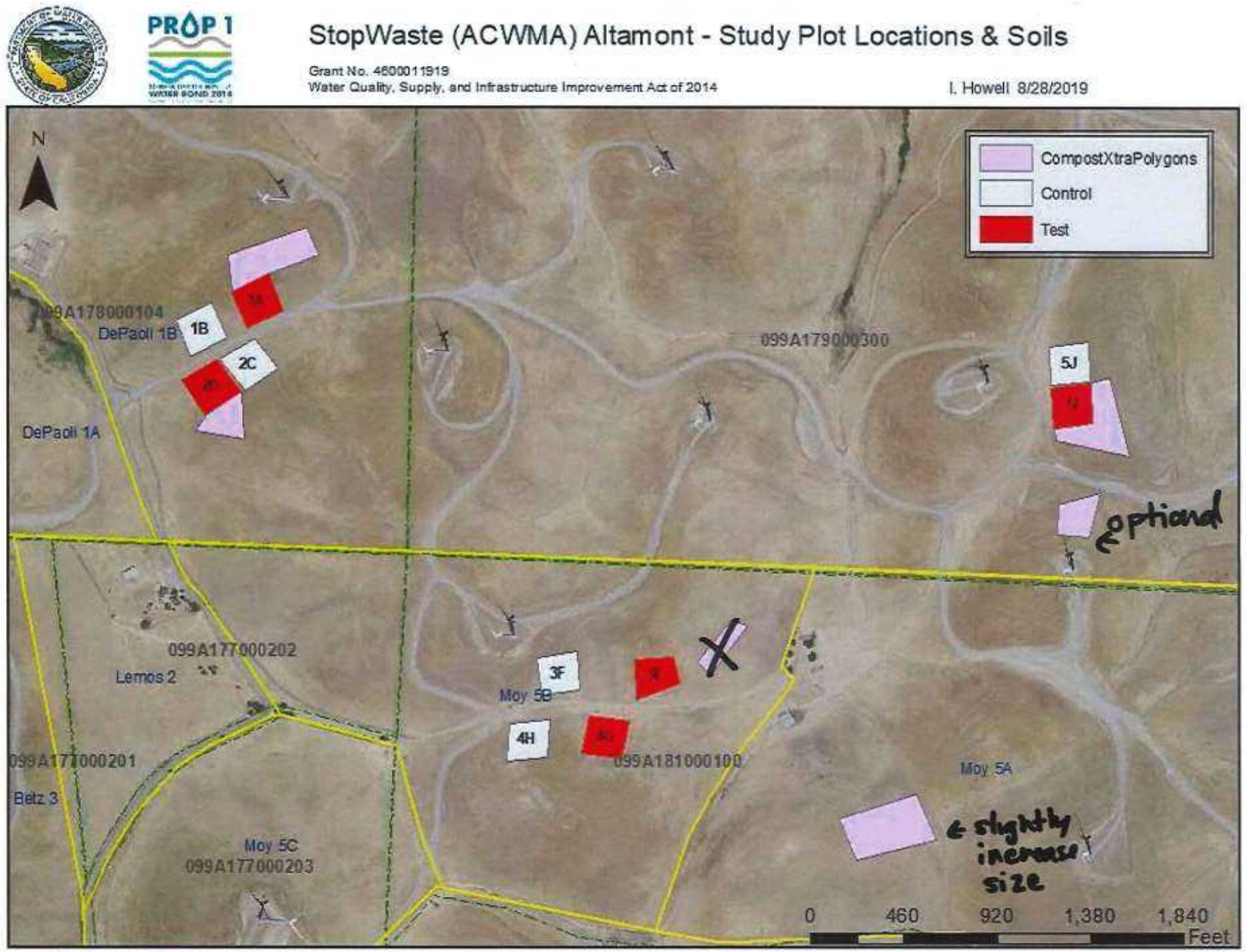
Contractors & Logistics

Preparing

© Dave Fenton, courtesy of StopWaste

© Dave Fenton, courtesy of StopWaste


12.5 acres
420 cubic yards
372.5 MTCO2e sequestered – 20 years
(Ryals and Silver, 2013)
$27,000 direct costs
© Dave Fenton, c


StopWaste (ACWMA) Altamont - Study Plot Locations & Soils
Grant No. 4600011919
Water Quality, Supply, and Infrastructure Improvement Act of 2014
I. Howell 8/28/2019
PROP 1
N
CompostXtraPolygons
Control
Test
099A178000104
DePaoli 1B
1B
2C
DePaoli 1A
099A179000300
5J
099A177000202
Lemos 2
3F
Moy 5B
4H
099A177000201
Betz 3
099A181000100
Moy 5A
Moy 5C
099A177000203
0
460
920
1,380
1,840
Feet


Vegetation


Soils


Infiltration

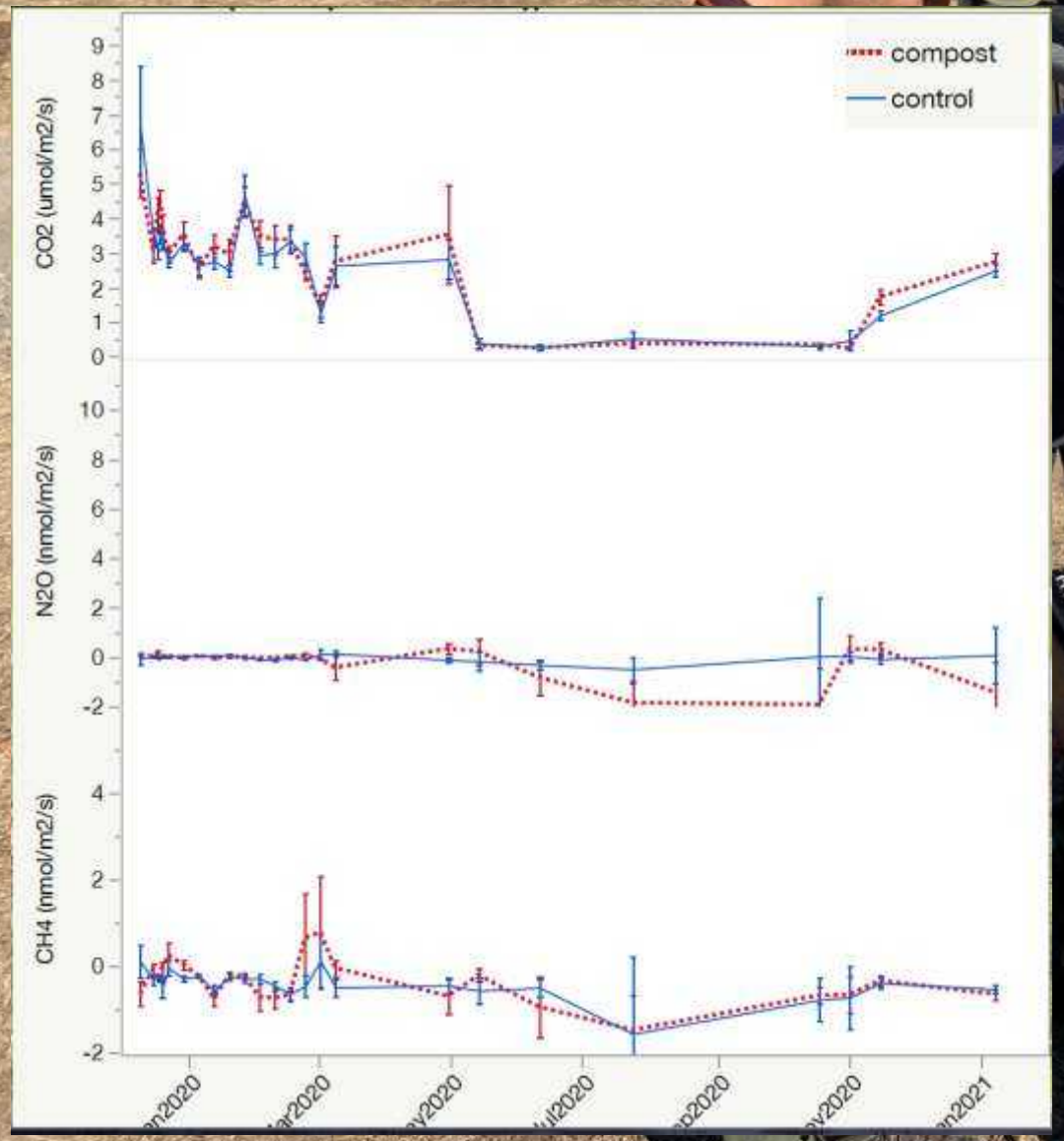

1B
LP

Vegetation Productivity


Testing Runoff

Measuring Soil Greenhouse Gas Fluxes

Measuring Soil Greenhouse Gas Fluxes



Workshops

StopWaste Compost

Approximate area planned for compost spreading.

ess gates to top flat elevat

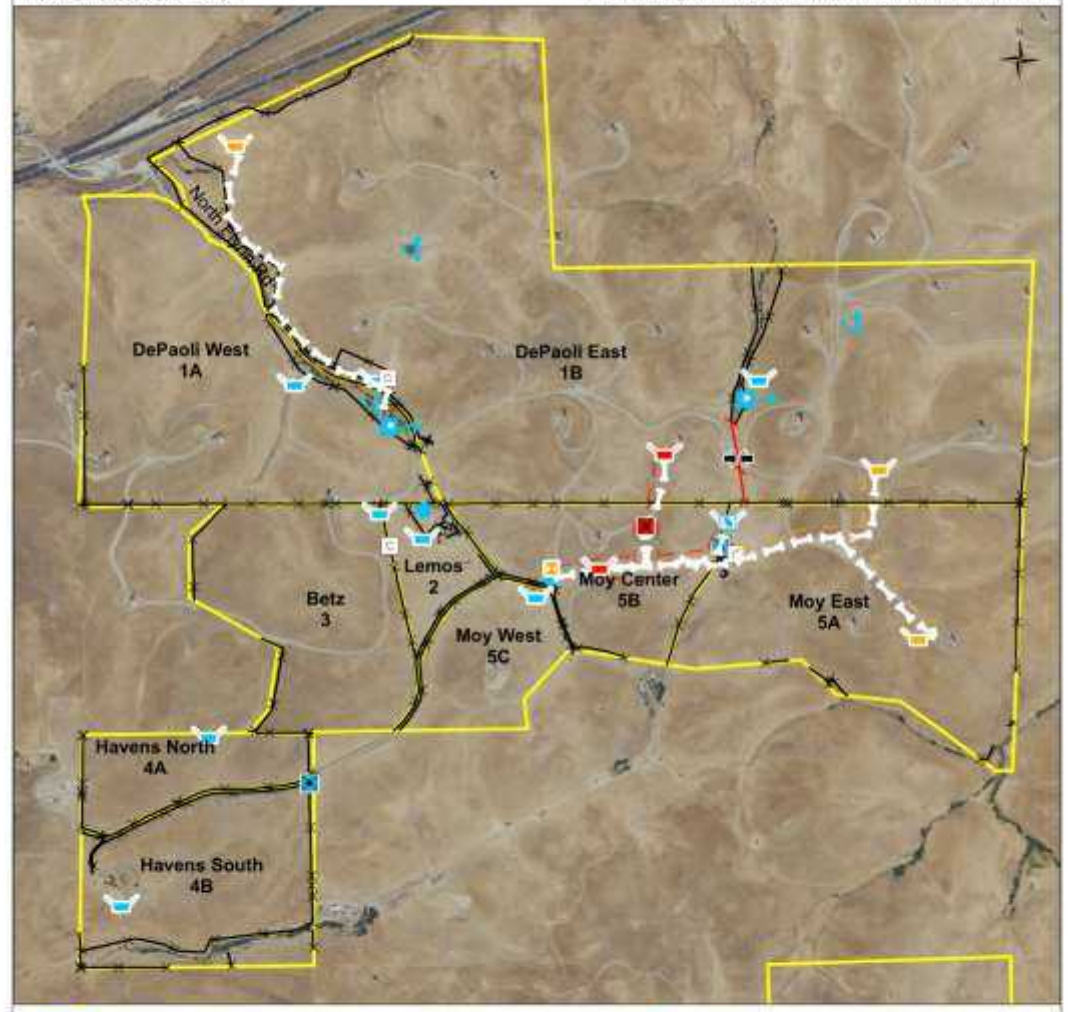
Google Earth

Planned Conservation Practices for Grazing Management

Date: 8/20/2019

Customer: ACWMA
Property Name: ACWMA Altamont Property
Approximate acres: 1650

County and State: Alameda, CA
Assisted by: Alameda County Conservation Partnership



Grazing Fields

Planned Water Facilities (Phase 1)

- Pumping Plant (533)
- Tank (614)
- Trough (614)
- Planned Escape Ramp (649)
- Planned Pipe (Phase 1)
- Planned Cattle Guard (Phase 1)
- Planned Fence (Phase 1)
- Planned Trough (Phase 2)
- Planned Pipe (Phase 2)
- Existing Fence
- Corral
- Existing Tank
- Existing Trough
- Existing Well
- Existing Spring
- Pond

0 1,200 2,400 Feet

Project Partners

Paulo Farms

USDA NRCS
Natural Resources Conservation Service

ALAMEDA COUNTY
RESOURCE CONSERVATION DISTRICT

Point Blue
Conservation
Science

STOPWASTE
at home • at work • at school

UNIVERSITY OF CALIFORNIA
MERCED

Carbon Cycle Institute

MARIN CARBON PROJECT


Thank you!
PROP 1
GOVERNOR EDMUND G. BROWN, JR.
WATER BOND 2014
RELIABILITY | RESTORATION | RESILIENCE
CALIFORNIA CLIMATE INVESTMENTS
Cap and Trade Dollars at Work
Coastal Conservancy
STATE of CALIFORNIA
cdfa
CALIFORNIA DEPARTMENT OF FOOD & AGRICULTURE
DEPARTMENT OF WATER RESOURCES
STATE OF CALIFORNIA
PROP 68
State of California Parks & Water Bond 2018


Questions for Jeff, Joe, Kelly, or Ian?

February 9, 2021

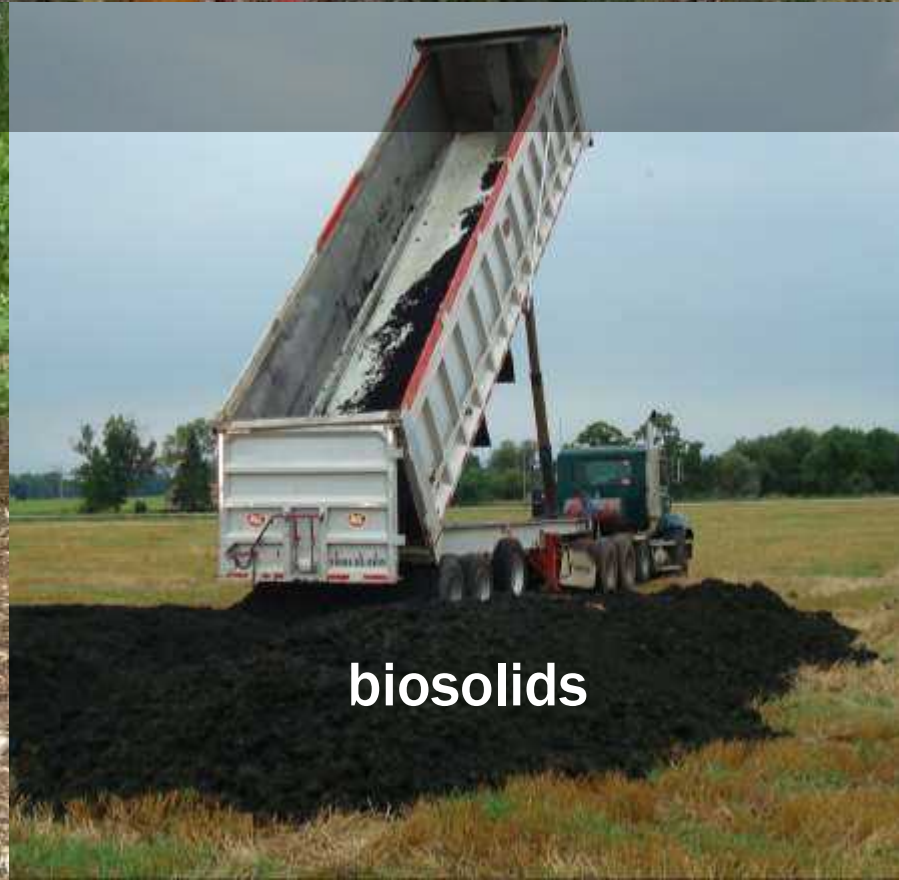
Compost for Carbon Farming

Ian Howell, Resource Conservationist, Alameda County RCD
Kelly Schoonmaker, Property Manager, StopWaste

What compost is NOT:

soil

What is NOT compost:

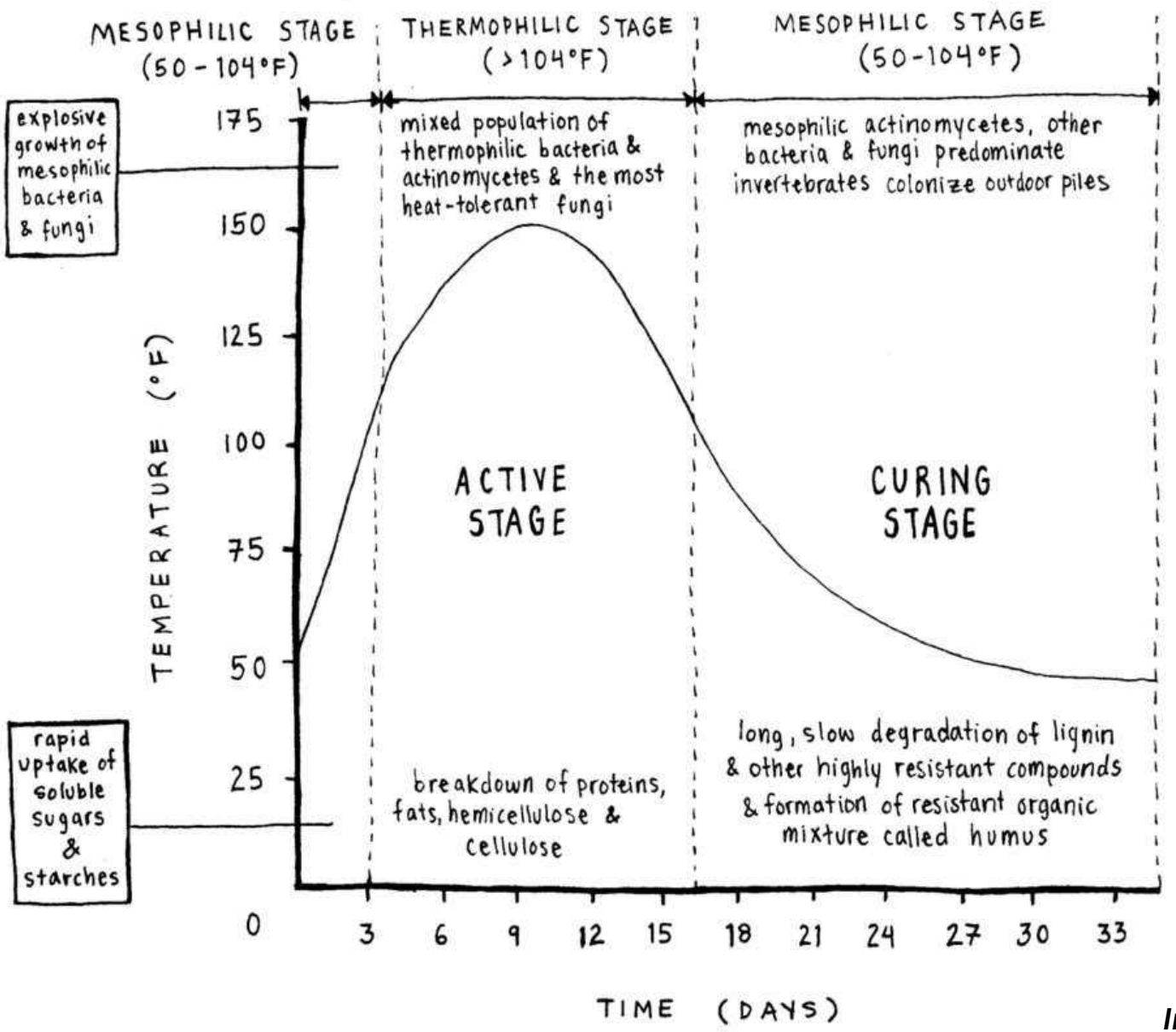


What IS compost?

Compost is the product of managed aerobic decomposition.


BROWNS
GREENS
AIR
WATER

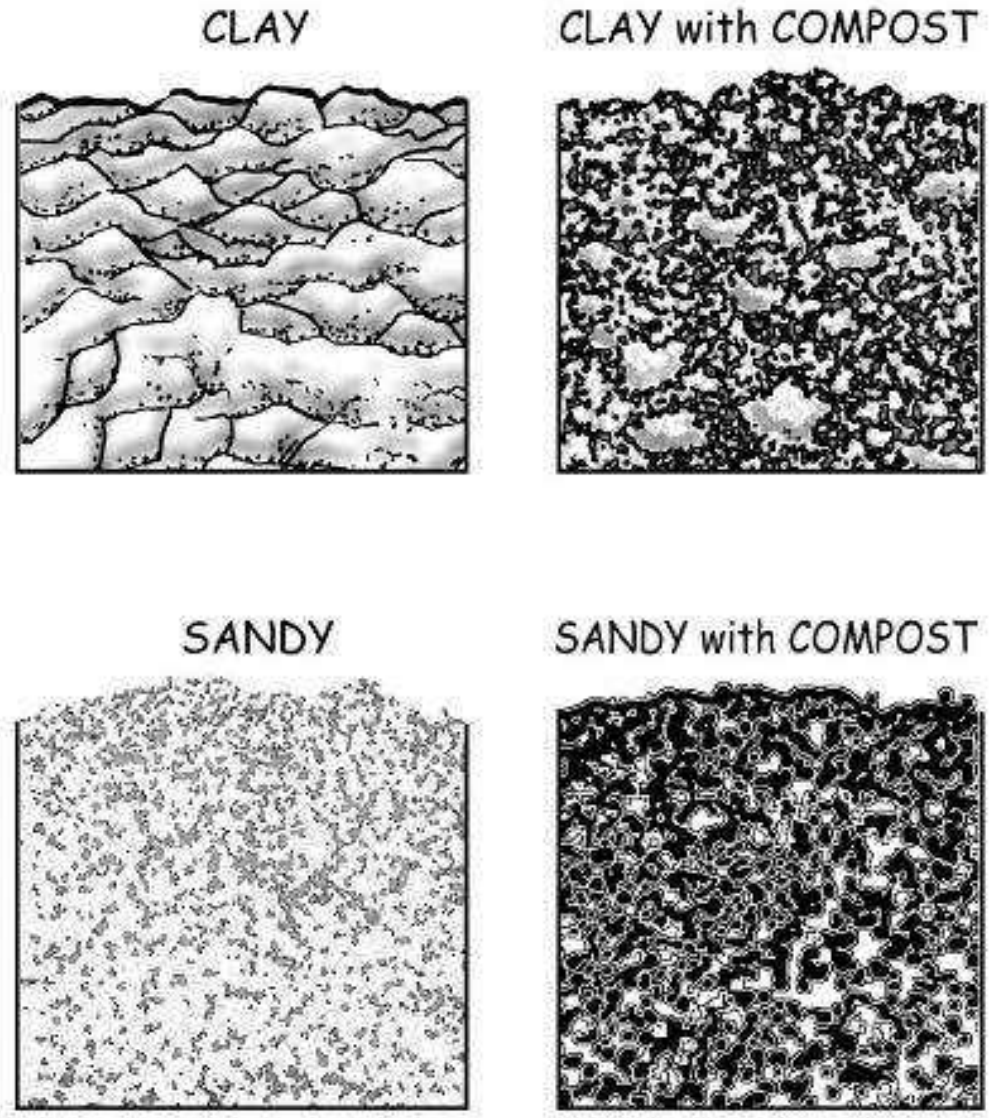
Composting process



Institute for Local Self-Reliance

Benefits of compost

- Improved soil structure
- Water holding capacity
- Drainage
- Improved nutrient exchange
- Healthier plants
- Carbon sequestration



Top-dressing

Incorporation

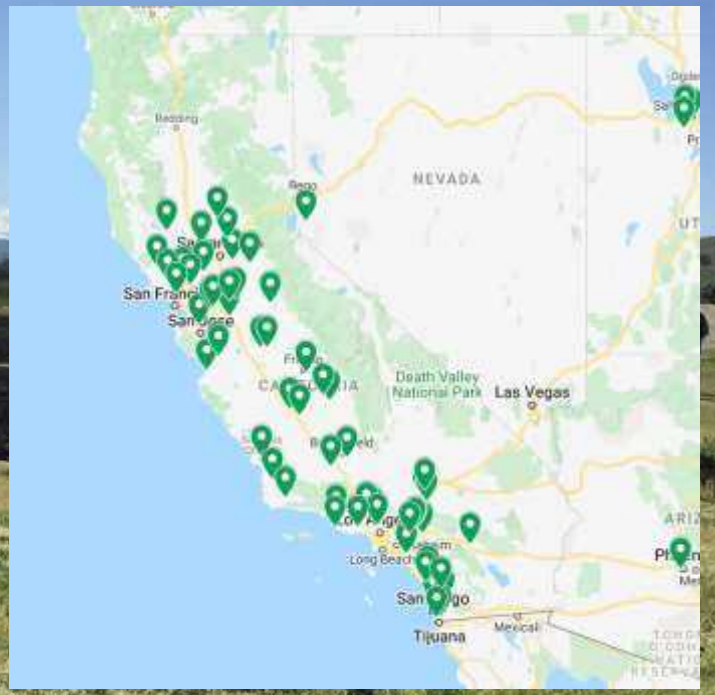
Photo: John Holland


Erosion control
Blown-on straw
Compost
Photo: Scott Dowlan, Caltrans

compostingcouncil.org

calrecycle.ca.gov

lawntogarden.org



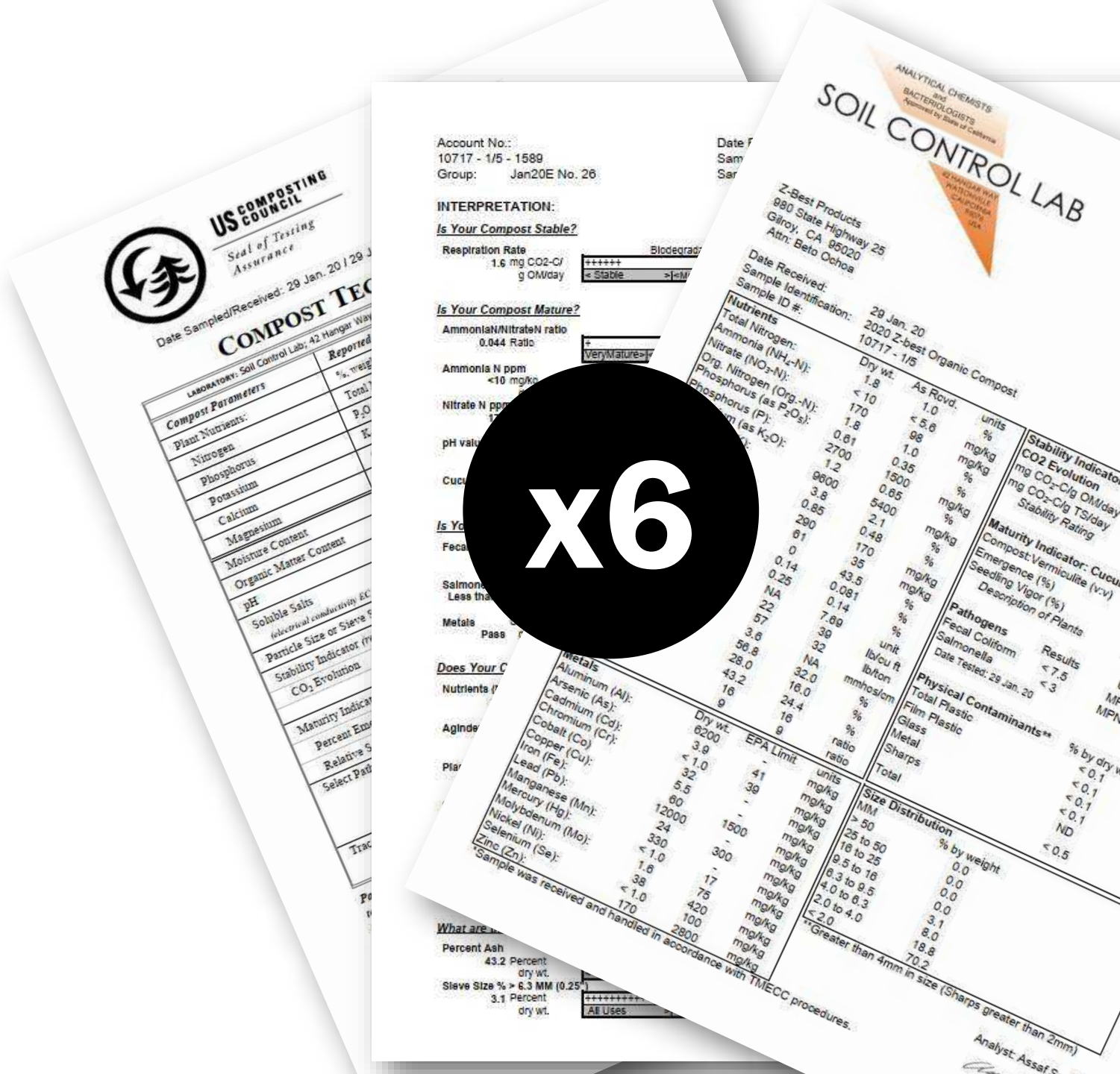
Where to get compost?

How to get good compost - standards

- Permitted facility
- Standards

Testing data

- Depends on application
- Consistency
- Physical (inert) contaminants



Visit the composting facility


Load check

Our priorities

Minimal inerts
Available N
Distance

Compost Facility Survey

- Within 70 miles of Sunol, Alameda County
- US Compost Council's Seal of Testing Assurance
- Organic Materials Review Institute-listed / CDFA Organic Registration

Compost Facility	Location	Feedstock Material	Distance from Sunol, CA (miles)
*California Soils, Inc.	Vernalis	Self-haul green waste	45
Harvest Power	Lathrop	Curbside yard and food waste	47
Napa Recycling	Napa	Curbside yard and food waste	59
Recology – Blossom Valley Organics	Modesto	Curbside yard and food waste	48
Recology – Jepson Prairie Organics	Vacaville	Curbside yard and food waste	63
*Recology – South Valley Organics	Gilroy	Curbside and self-haul yard waste	52
Republic Services – Newby Island Resource Recovery Park	San Jose	Curbside yard and food waste	18
Vision Recycling	Livermore	Self-haul yard waste	17
West Marin Compost	Nicasio	Self-haul yard waste, dairy manure	69
WM Earth Care	Livermore	Curbside yard and food waste	21
Z-Best Composting	Gilroy	Curbside and self-haul yard waste	53

Compost Cost & Freight Estimates

- Assume delivery to Sunol, Alameda County
- Assume 680 cubic yards / approximately 300 tons of compost
- Contacted in winter 2019

Compost Facility	Cost per Ton	Cost per Cubic Yard	680 Cubic Yards	Delivery Fee	Total Cost
Harvest Power	**$13.00**	$5.85	$3,978	$4,896	$8,874
Napa Recycling		$10.00	$6,800	-	-
Recology – Blossom Valley Organics	**$10.00**	$4.50	$3,060	$5,200	$8,260
Recology – Jepson Prairie Organics		$12.00	$8,160	$8,296	$16,456
Republic Services – Newby Island Resource Recovery Park		$9.00	$6,120	$4,060	$10,180
Vision Recycling					$14,606
West Marin Compost		$20.00	$13,600	$12,240	$25,840
WM Earth Care		$18.00	$12,240	$7,684	$19,924
Z-Best Composting		$12.00	$8,160	$7,000	$15,160

Compost Spreading Estimates

- Assume work in Sunol, Alameda County
- Assume 680 cubic yards compost over 20 acres
  - 1/4-inch application
- No real-world site factors

Application Method	Company	Location	Cost per Acre	Cost per Cubic Yard	Total Cost for 680 cubic yards
Mechanical	Dores Ag Services	Stevinson	$136.00	**$4.00**	$2,720
	Holsapple's Fertilizer Spreading Inc.	Turlock	$238.00	**$7.00**	$4,760
	Santucci General Engineering	Livermore	$400.00	$11.76	**$8,000**
Blowing	Applied Landscape Materials Inc.	Rocklin	$1,184.30	$34.83	**$23,686**
	JetMulch Inc.	Capitola	$1,216.20	$35.77	$24,324

Real Projects!

- Two Alameda County projects implemented December 2019
- Compost: Vision Recycling, Livermore
- Different spreading methods

Project	Compost in Cubic Yards	Cost per Yard	Compost Cost	Delivery Cost	Miles	Tax	Compost & Delivery
StopWaste - Altamont	420	$14	$5,880	$700	4.5	$608.65	**$7,188.65**
Calhoun Ranch	134	$14	$1,876	$720	14	$240.13	**$2,836.13**

Project	Spreading Type	Service	Acres	Cost per Yard	Extra Equipment	Spreading
StopWaste - Altamont	Blown-on	JetMulch, Inc	12.5	$44.95	$1,200	**$20,079.00**
Calhoun Ranch	Mechanical	Santucci General Engineering	5.9	$19.10	-	**$2,560.00**

Project	Cost per Acre	Cost per Yard	TOTAL COST
StopWaste - Altamont	$2,181.41	$64.92	**$27,267.65**
Calhoun Ranch	$914.60	$40.27	**$5,396.13**

Final Thoughts

Freight

- Distance
- Truck size
  - Trips
  - Site access

Contingency

Equipment bottlenecks

Calhoun Ranch

Conservation and carbon farming with Nancy Mueller, Susie Calhoun, and Merry Carter – 3 Calhoun Sisters

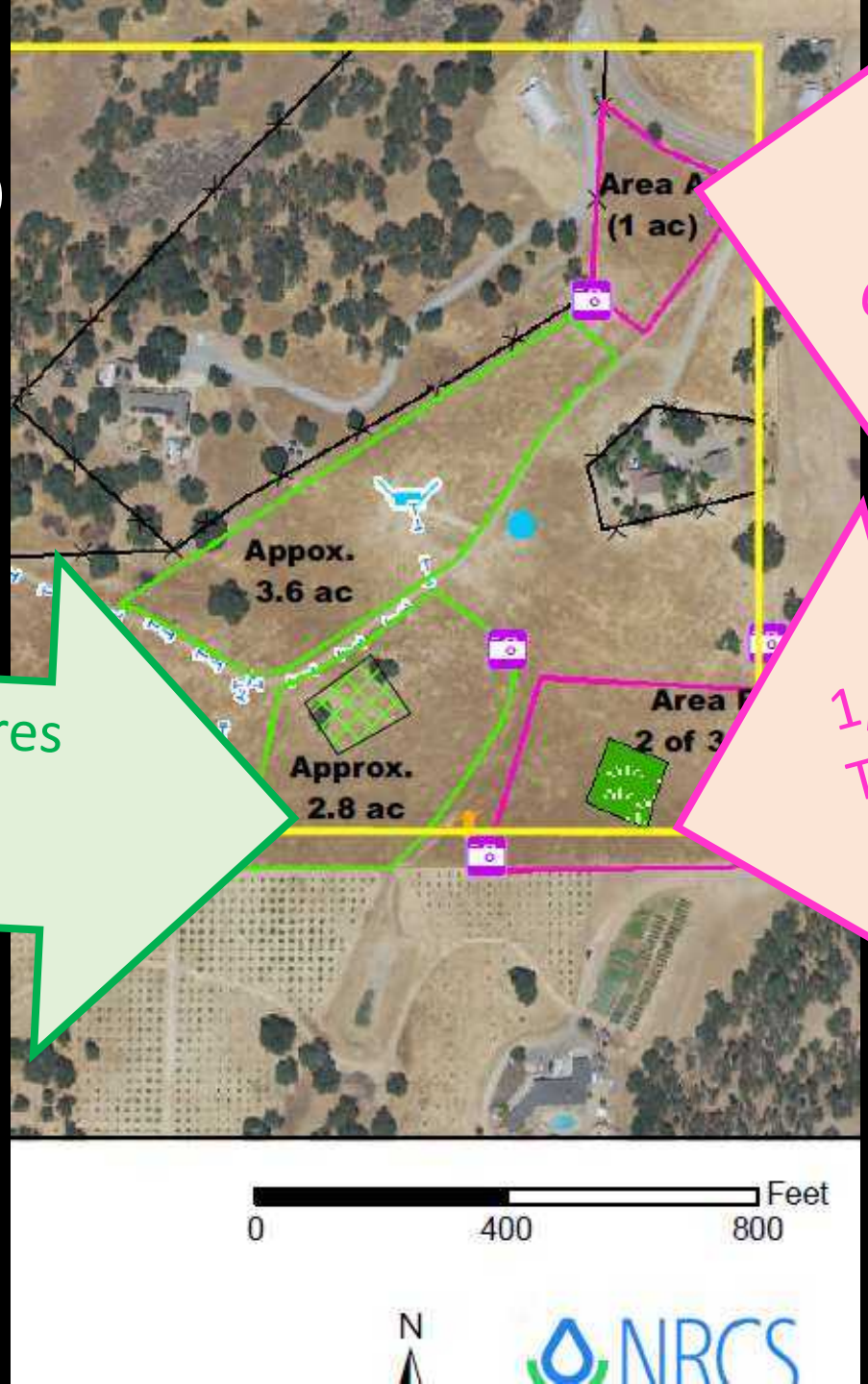
Compost Set Up

- Same compost
- Same spreading

1/4-inch compost on 2 acres
One time
DWR grant funding

59.6 MTCO2e sequestered over 20 years

- Ryals & Silver 2013



1/10-inch compost on 3 acres
Three consecutive years
CDFA Healthy Soils *Incentives*

1/10-inch compost on 3 acres
Three consecutive years
CDFA Healthy Soils Incentives

42 MTCO2e avoided / sequestered over three years of CDFA HSP *Incentives*

- COMET-Planner

Compost Spreading

Compost Spreading

Compost Spreading

Compost Spreading

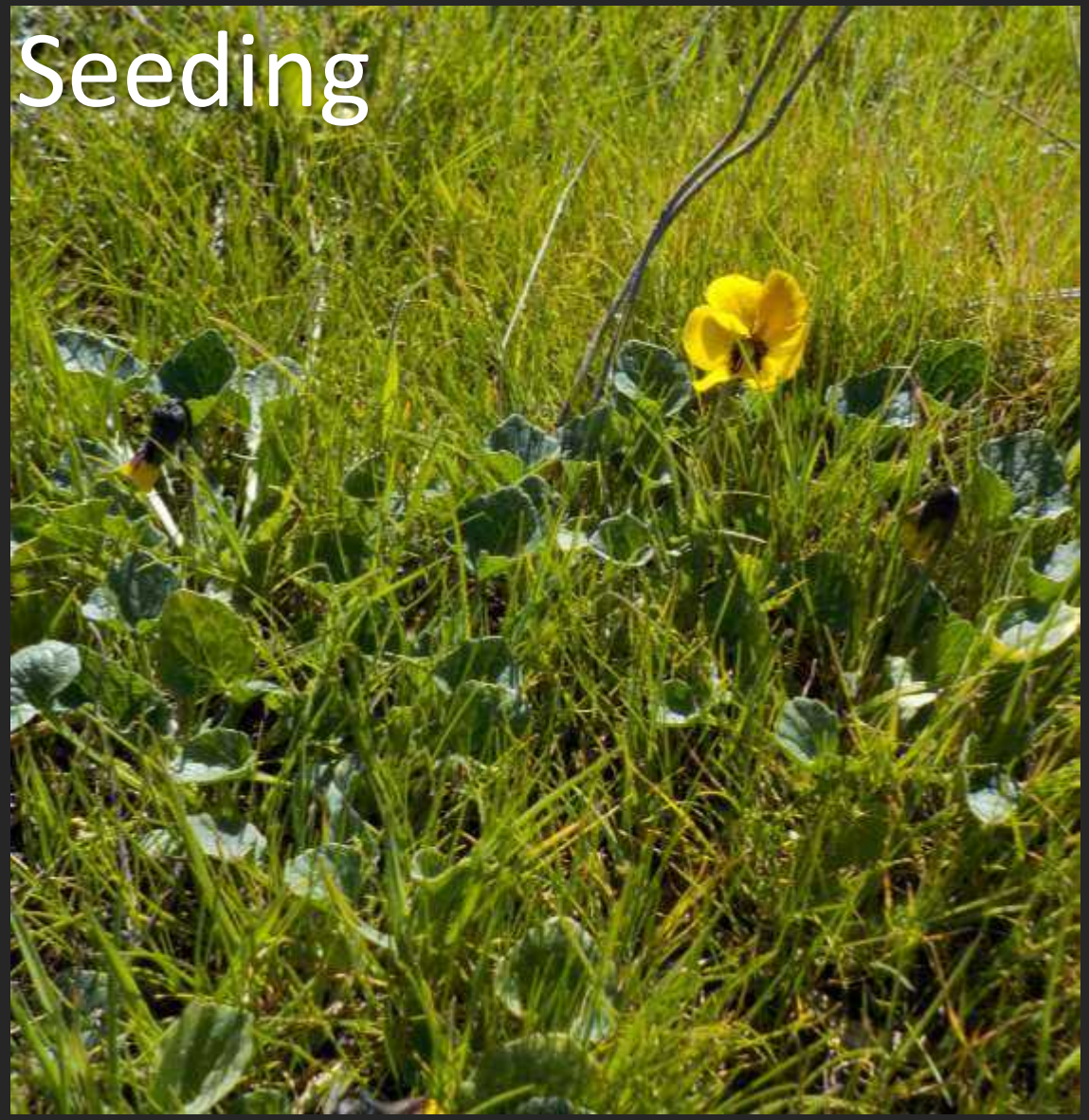
Compost Spreading

Compost Spreading

Compost Spreading

Compost Spreading


Range


Seeding

Range Seeding

Range Seeding

Range Seeding


Pollinator &
Milkweed Plantings

Pollinator & Milkweed Plantings

Pollinator & Milkweed Plantings

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Milkweed Plantings

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Healthy Soils Program (HSP) Incentives Program

Program by California Department of Food and Agriculture

Spreading Compost on Rangelands

February 9. 2021

Stephanie Lew, Alameda County Resource Conservation District

Healthy Soils Program (HSP) Incentives Program

Financial incentives

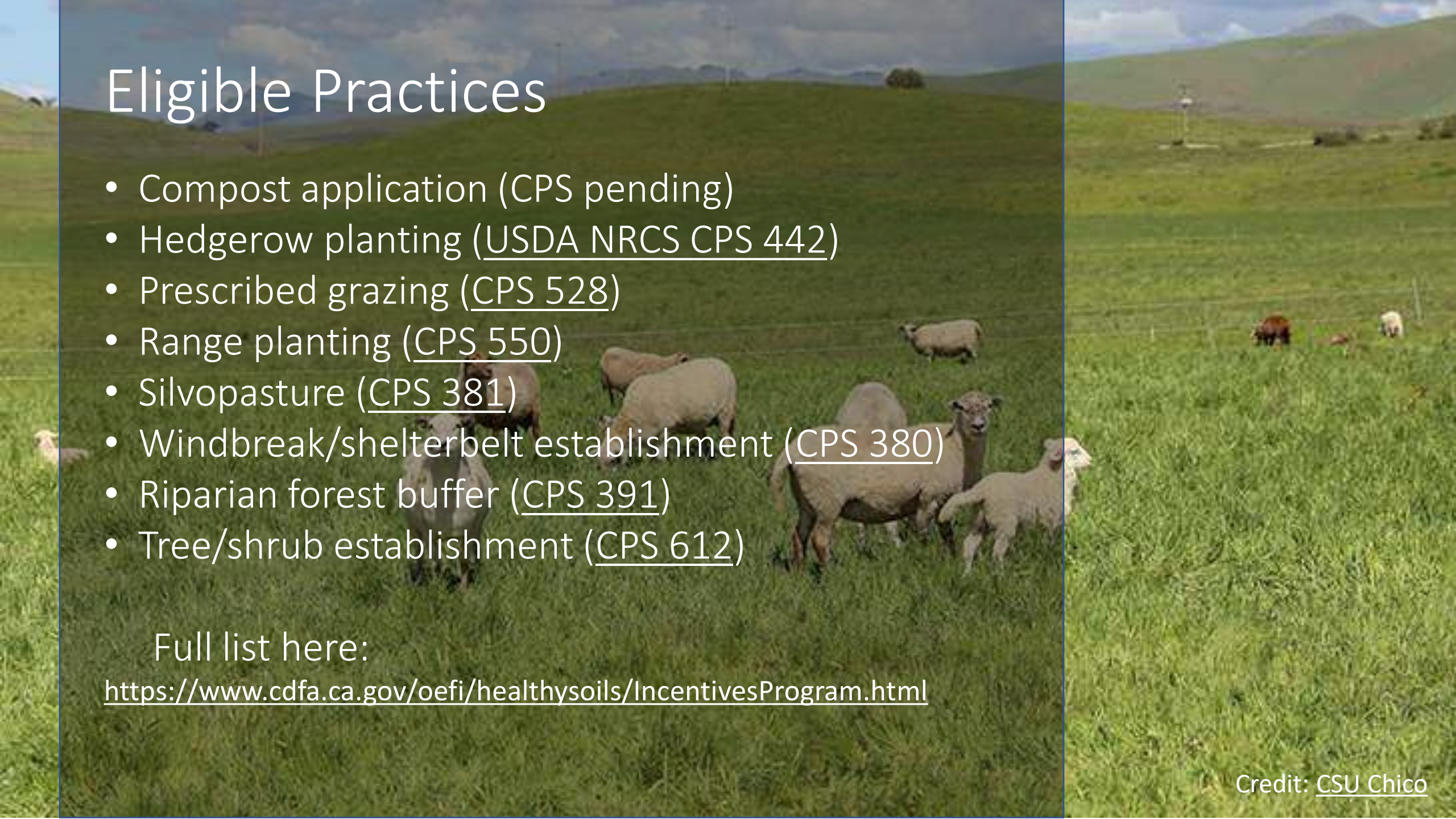
to implement conservation management practices that:

- Improve soil health
- Capture carbon in soil
- Reduce GHG emissions

Eligible Practices

- Compost application (CPS pending)
- Hedgerow planting (USDA NRCS CPS 442)
- Prescribed grazing (CPS 528)
- Range planting (CPS 550)
- Silvopasture (CPS 381)
- Windbreak/shelterbelt establishment (CPS 380)
- Riparian forest buffer (CPS 391)
- Tree/shrub establishment (CPS 612)

Full list here:
https://www.cdfa.ca.gov/oefi/healthysoils/IncentivesProgram.html



Credit: CSU Chico

Eligibility

- CA farmer, rancher, or federal/CA recognized Native American Indian Tribe
- Located in California
- Agricultural operation: row, vineyard, field & tree crops, commercial nurseries, nursery stock production, livestock and livestock product operations
- Must have GHG benefits
- Must own or lease the land
- New practice
- Practices on land that qualify by NRCS

Application Contents

I. Project Overview
II. Project Logistics
III. Project Design
IV. Project Work Plan
V. Project Budget and GHG Reduction
VI. Conservation Plan (Optional)
VII. Benefits to (Optional, Prioritized)
    I. Socially Disadvantage Farmers/Ranchers
    II. Priority Populations (AB 1550/SB 535)

Get started!

Free assistance from:

- resource conservation districts
- University of California cooperative extension

+ other resource organizations

For a full list of providers:
https://www.cdfa.ca.gov/oefi/healthysoils/IncentivesProgram.html

Get help with:

- Online grant application
- Gathering information and preparing program requirements
- Consultation
- Project planning and implementation