



Zero Foodprint

Building a Regenerative
Economy to Scale Carbon
Sequestration

And Optimizing the Climate Benefit
from CA's new Compost Regulations

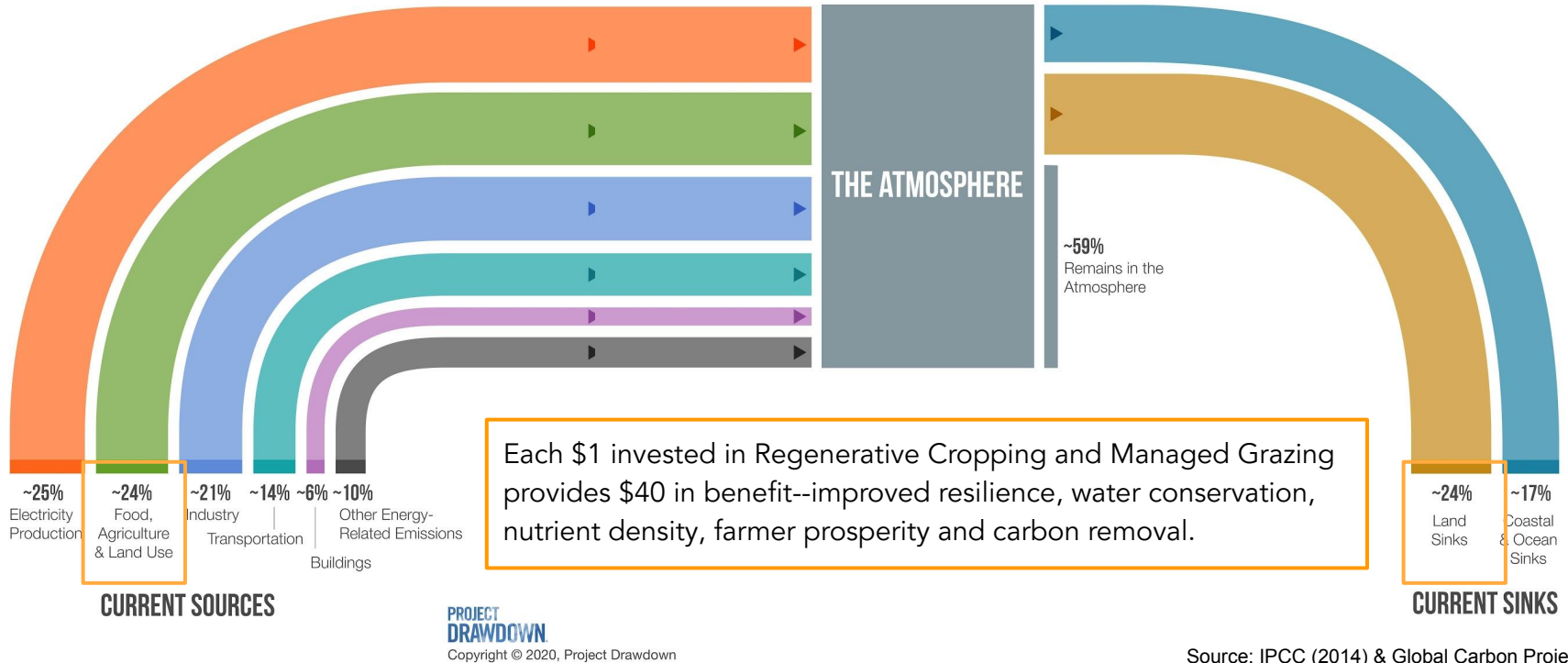
4/11/23



The Opportunity: Just 1% of GDP Each Year Could Lower Global Temperatures

Project Drawdown estimates that we can solve the climate crisis by reducing and removing ~1 trillion tons of GHG from the atmosphere by 2050. This global effort will cost \$29 Trillion dollars--just 1% of GDP.

Zero Foodprint is establishing a circular economy in the food system to scale regenerative agriculture, a.k.a. carbon farming.



Improving the Grid of Food: Choice Architecture and Collective Action

- Zero Foodprint and policy makers across CA and CO are inspired by the shift to renewable energy in over 100 cities & countries. We are applying the CCA model to food and farming to enable structural change.
- Just as a utilities company improves the grid by giving citizens a way to to fund a solar/wind farm, businesses can add 1% to purchases or waste haulers can add \$5 to each month's bill to fund local carbon farming.

A few cents per purchase
or \$5 per month on waste
hauling bills

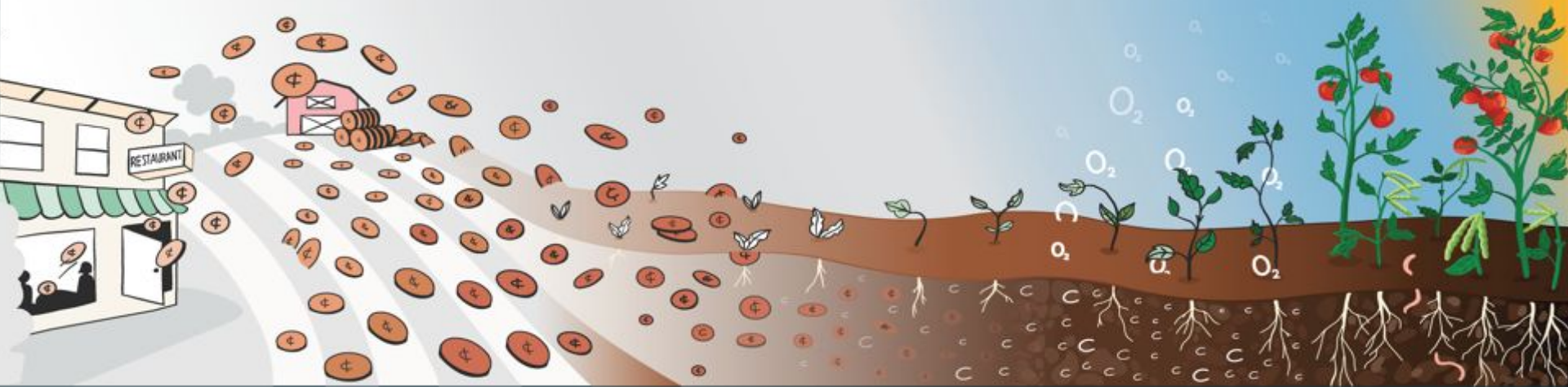
adds up to big investments
In soil and more acres of
regenerative farming.

We can restore
underground
ecosystems

by restoring
carbon
in the soil,

which removes it
from the
atmosphere.

This improves our
food and restores
our climate.



Strategy 9. Scale Up the Infrastructure for Sequestration

Goal: Build the physical, social, and economic capacity for successful carbon sequestration.

Objectives:

- 9.1 Create a “sequester local” program to help Sonoma County businesses reinvest carbon-offset dollars within the community.
- 9.2 Secure permanent Resource Conservation District funding for scaling carbon farming, starting with \$2 million and increasing to \$20 million per year within the next ten years.
- 9.3 Scale up the infrastructure necessary to fully implement Carbon Farm Plans.
- 9.4 Develop a comprehensive residential carbon gardening education campaign.
- 9.5 Develop a carbon sequestration training for landscape professionals, and County and municipal parks and recreation staff.
- 9.6 Use policies, civic incentives, and educational efforts to take action and build civic engagement toward achieving Sonoma County’s ambitious climate action goals.

Co-benefits:

- Increased community support for carbon sequestration
- Increased soil water holding capacity
- Increased soil water infiltration rates
- Increased groundwater recharge
- Reduced fertilizer and pesticide use
- Increased agricultural productivity
- Increased biodiversity
- Increased resilience to extreme weather events
- Job creation

Potential implementation partners:

- Sequester local program: REcology, Zero Foodprint, Zero Waste Sonoma, and local businesses
- Secure permanent RCD funding: Resource Conservation Districts, Zero Foodprint, REcology, and State of California
- Scale up the infrastructure for carbon farming: The Center for Social and Environmental Stewardship, Nursery at Sonoma County Jail Industries.



**SONOMA CLIMATE
MOBILIZATION**
RESILIENT · EQUITABLE · TRANSFORMATIVE



STRATEGY
Adopted March 2021



rcpa

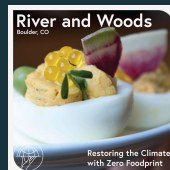
Example: Sonoma County Healthy Soils Program

- Experiencing severe drought and wildfire challenges; Home to the 2nd CCA program; many aligned stakeholders: Carbon Cycle Institute (CCI), Regional Climate Protection Authority, Straus Creamery, 99% of wine acreage certified as “sustainable.”
- Climate Mobilization Strategy includes Carbon Sequestration. Scoping Plan from CCI targets 250,000 acres of carbon farming which could sequester 18M tons of CO₂e.
- Example Funding Mechanisms: \$45M every year for Ag transition financing
 - 1% from the restaurant industry: \$8M/year
 - 1% from the wine industry: \$12M/year
 - 1% from the dairy Industry: \$11M/year
 - 1% from Hotels: \$4M/year (transient occupancy tax is already 14%)
 - \$5/month opt-out on trash bills (90%): \$10M/year

Example

Businesses Opt-In to Make Every Purchase Part of the Climate Solution

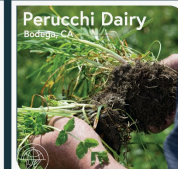
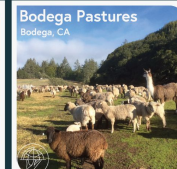
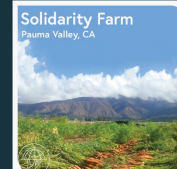
- ZFP businesses send 1% of sales. For most, this costs \$0 through a simple opt-out fee.
- Customers Feel Great!
- 1% from the CA restaurant industry would generate \$970M per year (2019 estimate).



Since 2020, ZFP has worked with local experts to use over \$1 million toward 54 carbon farming projects on 5000 acres, expected to remove 38,000 tons of CO₂e from the atmosphere.

Equivalent to not burning 4M gallons of gas!

1%





Direct Impact, Social Media Assets ++

Subway#11652-0 Phone 303-494-7827

2480 Baseline Rd.

Boulder, Colorado, 80305

Served by: 0429 3/11/2022 11:58:40 am

Term ID-Trans# 1/A-567964

Qty	Size	Item	Price
1	12"	Steak & Chse Sub	9.59
1		Chips	1.39
Sub Total			10.98
State of Colorado Sales Tax & RTD (4.985			
City of Boulder Sales Tax (4.01%)			0.44
Restore Colorado (1%)			0.11
Total (Take Out)			12.08
Tips			2.41
Total (With Tips)			14.49
Credit Card			14.49
Change			0.00

Approval No: 05208G

Reference No: 61Dv001647025113031

Card Issuer: Visa

Account No: *****2136

Acquired: ICC

Amount: \$14.49

Application: CHASE VISA

AID: A0000000031010

MID: 420429002146855

TID: 75481647

Date/Time: 03/11/2022 11:58:33

APPROVED

CUSTOMER COPY

A lot goes into making the perfect cup of coffee.

Linea sources, roasts and serves the world's finest coffees. When they make a cappuccino, they reach for milk from Straus Family Creamery, and then they add an extra shot of climate action. 1% of each sale benefits farmers working to restore our climate—including Tresch Family Dairy, a part of the Straus network.



At Bernal Cutlery we're all about the food and the atmosphere.

That's why we add \$1 to each transaction to draw down carbon with Zero Foodprint.



- 100 businesses and partner orgs around the world and a combined social media presence of over 1M followers.
- 60+ earned media 2019-2021.

Step 3: Select a NRCS Conservation Practice Standard, Conservation Practice Implementation, and Payment Scenario associated with conservation planning objectives that best describe your project. You may add multiple practices, including from different agricultural systems, by returning to Step 2

Conservation Practice Standard (CPS)

Compost Application (CPS 808)

Hedgerow Planting (CPS 422)

Prescribed Grazing (CPS 528)

Range Planting (CPS 550)

Riparian Forest Buffer (CPS 391)

Silvopasture (CPS 381)

Tree/Shrub Establishment (CPS 612)

Windbreak/Shelterbelt Establishment (CPS 380)

Conservation Practice Implementation

Compost (C/N > 11) Application to Grazed Grassland

Compost (C/N > 11) Application to Grazed, Irrigated Pasture

Payment Scenario

(Note: Payment Scenarios may have different payment rates but do not affect GHG reductions)

Compost from certified composting facility

On-farm produced compost



Restore CA's actual compost application project at Tresch Dairy in Sonoma.

New Science

Using USDA Soil Databases experts can estimate how many tons of carbon certain farming practices will remove from the atmosphere.

Approximate Carbon Sequestration and Greenhouse Gas Emission Reductions and Payments Associated with Selected Conservation Practices*

(Metric Tonnes CO₂ equivalent per year) [Info]

NRCS Conservation Practices (Click Practice Name for Documentation)	Enter Unit Value (acres or feet)	Carbon Dioxide	Nitrous Oxide	Methane	Total CO ₂ - Equivalent	Estimated HSP payment dollars for the Project Term
[Info] Sonoma, CA Compost Application (CPS 808) - Compost (C/N > 11) Application to Grazed Grassland - Compost from certified composting facility [delete]	23 Acre(s)	100	-1	0.1	N.E.**	\$27,600.00
Total		100.00	-1.00	0.10	99.10	\$27,600.00

*Negative values indicate a loss of carbon or increased emissions of greenhouse gases

**Values were not estimated due to limited data on reductions of greenhouse gas emissions from this practice

***Final payment may be different than estimated payment, pending application review and approval

Download Results

Tresch Dairy requested only \$20,000 for this project, saving \$7600, relative to the CDFA grant program.

Instead of a set price, Restore CA uses a competitive bid to optimize ROI.

Restore: A System to Optimize Climate Benefit Per Dollar

Farmers and Trusted Conservation Experts submit a Grant Request/Competitive Bid.

ZFP divides the **THE TOTAL COST** by the **TOTAL CARBON BENEFIT** to find **THE BEST CLIMATE ROI**.

$\$$ Total Cost	÷	# Total CO2e	=	$\$$ Climate ROI
\$16,000.00		118.0		\$13.39
\$19,900.00		931.24		\$21.37

Name	Practices	$\$$ Total Cost	$\$$ Practice Cost	# Total Acres	# Total CO2e	TAP	$\$$ TAP cost	$\$$ Climate ROI
delante S...	Compost Application Mulching Tree/Shrub Establishment	\$16,000.00	\$14,000.00	18.0	1195.00	UCANR	\$2,000.00	\$13.39
Mundi Farm	Compost Application	\$19,900.00	\$19,900.00	63.0	931.24	UCANR	\$0.00	\$21.37
ickert Ra...	Range Planting	\$24,500.00	\$24,500.00	200.0	500.00	Point Blue Conservation	\$0.00	\$49.00
vergreen	Compost Application Cover Crop Hedgerow Planting	\$25,000.00	\$22,000.00	50.0	435.63	San Diego RCD	\$3,000.00	\$57.39
erucchi R...	Compost Application Range Planting	\$28,600.00	\$24,500.00	200.0	431.63	Gold Ridge RCD	\$4,100.00	\$66.26
asbar Far...	Compost Application Cover Crop No-Till	\$29,065.70	\$24,500.00	255.8	369.00	Dixon RCD	\$500.00	\$67.91
Vindrose ...	Compost Application Compost Application	\$29,065.70	\$24,500.00	255.8	196.09	Upper Salinas-Las Tablas	\$2,000.00	\$72.42
Vindrose ...	Compost Application Compost Application	\$29,065.70	\$24,500.00	255.8	216.32	Upper Salinas-Las Tablas	\$2,000.00	\$74.89
ilacci Dai...	Riparian Forest Buffer* Compost Application	\$29,065.70	\$24,500.00	255.8	253.31	Sonoma RCD	\$3,000.00	\$78.95
onoma C...	Hedgerow Planting	\$29,065.70	\$24,500.00	255.8	315.00	California Land Trust Inc.	\$0.00	\$79.37
Varnecke ...	Conservation Cover Compost Application	\$29,065.70	\$24,500.00	255.8	260.23	Sonoma RCD	\$5,000.00	\$90.47
White Buff...	Compost Application Cover Crop	\$29,065.70	\$24,500.00	255.8	47.40	UCANR	\$0.00	\$105.06
odega Pa...	Compost Application Hedgerow Planting	\$29,065.70	\$24,500.00	255.8	244.64	Gold Ridge RCD	\$4,100.00	\$118.81
un Track...	Cover Crop Hedgerow Planting Mulching Conservation Cover	\$4,400.00	\$4,400.00	32.2	37.00	Point Blue Conservation	\$0.00	\$118.92
olorio's F...	Compost Application Cover Crop	\$2,301.00	\$2,301.00	6.0	18.80	Monterey RCD	\$0.00	\$122.39

EXCERPT FROM
GRANT
DATABASE

(SORRY TO GET IN THE WEEDS!)

A New California Law Will Create a Lot More Compost—but Will it Make it to Farmland?

A lack of uniform rules and the state's past missteps could keep farmers from getting access to 'brown gold'—and the many climate and farm benefits it offers.

BY GOSIA WOZNIAKA • MARCH 2, 2022



A pile of compost in the farm field at Shone Farm, a teaching farm at Sonoma State University in California. (Photo by Emma K. Morris)

Compost: A Primary Solution

- Organic Matter Diversion: ~10% --> 75%
- Estimated ~90 New facilities across CA
- Increase in supply of ~5M tons per year
- Jurisdictions must purchase ~1.8M tons to help support statewide demand.
- "If compost were applied to a 25% of CA's rangeland, the soil could absorb 75% of CA's yearly GHG emissions" - Whendee Silver

ZFP Optimizing Climate Outcomes

- Carbon Farming Contracts underway or pending with San Mateo, Alameda County, San Francisco, Contra Costa County, Santa Clara County, Rancho Cordova, Yuba/Sutter County and more.



Thank you!

Appendix



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