

# Sonoma County Carbon Sequestration through Compost

## Application: Case Study #1 - Vineyard

*Report prepared by Ava Faithe Castro of Daily Acts Organization*

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### Sonoma County - Vineyard Application

**Project Site:** J. Rickards Winery - Cloverdale, CA. - Alexander Valley Watershed

**Project Lead:** Sonoma RCD

### GRANT SUMMARY

The Carbon Sequestration through Compost Application Pilot Project, funded through Sonoma County's Climate Resiliency Fund, sought to maximize carbon drawdown within both agricultural and community settings. In 2023, through this project, a compost rebate was created which incentivized agriculturalists to spread compost at their sites, helping to meet the goals of the Short-Lived Climate Pollutants Act (SB1383). Compost was also spread at community sites and communities engaged through educational workshops and programming on the topics of compost, food waste reduction, and soil health.

### SITE CRITERIA

Eligibility for agricultural sites had to meet the following criteria:

- ❖ Legitimate agricultural enterprise
- ❖ Has the ability to implement the practice (spread rebated compost in the given time frame)
- ❖ Gave permission for the grant partners to enter project information into the project tracker.

Agricultural sites who applied were prioritized based upon:

- ❖ An in process or developed Carbon Farm Plan (or implementing carbon farming practices)
- ❖ If they are a part of, or serve, underserved communities
- ❖ Support community education, habitat, and/or water conservation activity on their site.
- ❖ A high carbon sequestration amount per cost of application (ROI)
- ❖ If they are a small farm
- ❖ If they have not previously received financial support from the RCD

### SITE BACKGROUND

J. Rickards Vineyards and Winery is a family-run operation focused on wine grape farming. The property was purchased by Jim Rickards in 1978 with existing Zinfandel Vines that had been established in 1908. Since then, the vineyard has grown to include several varieties that grow well on the biodiverse 60 acres. Rickards has been a pioneer for regenerative vineyard and land management through the implementation of sustainable practices including; rainwater retention ponds for irrigation; planting cover crop seed mixes in the tractor rows that improve soil health; incorporating eco-corridors (or unplanted, native areas); reduced tillage management; composting on site; and applying compost annually.

## PROJECT SUMMARY

Jim Rickards usually spreads 100 tons per year on a ¼ of the vineyard. The area for spreading is rotated every year. This is done so that every 4 years the entire site has had a layer of compost applied. Rickards strongly believes in this practice for the well being of the soil, ecosystem, and environment. Because of financial burdens on the vineyards and winery, it was not possible to spread compost in 2021 and 2022.

Rickards applied to receive the compost rebate through the Sonoma RCD and was awarded just under the maximum of \$25k. This provided the opportunity to purchase nearly 500 tons of compost. Compost was applied across the whole vineyard using a compost spreader. The amount of compost received made it possible to make up for the previous years lack of compost application.

The compost application was coupled with other practices that aid in carbon sequestration including reduced till, planting cover crop seed mixes (mix of wild radish, mustard, rye grass, legumes, native fescues, and clovers), and cultivating every other row per year instead of the entire site.

## PROJECT METRICS

Total Size of Farm/Landscape (acres)	60 acres
Area of Compost Applied (acres)	45.5 acres
Amount of Compost Applied (tons)	479.3
Spreading Method	Tractor with compost spreader attachment
Cost of Compost and Trucking	\$24,477.84
Amount Rebated	\$24,477.84
Years of Benefit	1
Total Sequestration Benefit	319.77 Mg CO <sub>2</sub> e

## RESULTS

The utilization of compost in this scenario significantly bolstered soil health, resulting in the sequestration of approximately 319.77 metric tons of CO<sub>2</sub> equivalent. To put this into perspective, this sequestration is equivalent to the emissions from consuming 36,000 gallons of gasoline or burning 352,000 pounds of coal. Another impactful comparison is that this amount of CO<sub>2</sub> sequestration equals that achieved by over 5,000 tree seedlings grown over a period of 10 years.



