

# CERTIFIED CALIFORNIA SUSTAINABLE WINEGROWING

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Alliance

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CALIFORNIA  
SUSTAINABLE WINEGROWING  
ALLIANCE

# GROWERS & VINTNERS WORKING TOGETHER

- An alliance of winery and winegrape grower organizations
- Built with extensive stakeholder input
- Oversees progress and program development



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CALIFORNIA  
ASSOCIATION  
of WINEGRAPE  
GROWERS



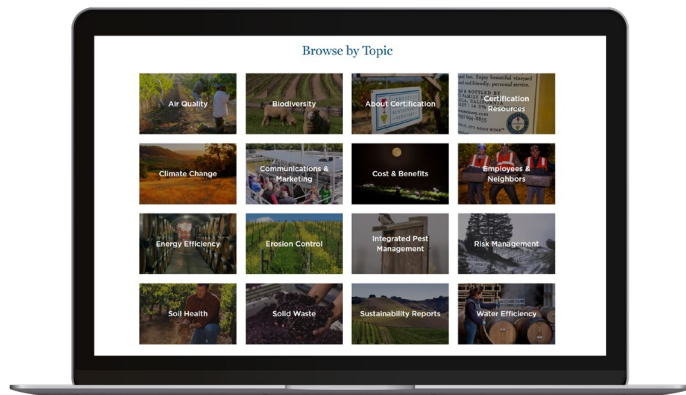
CALIFORNIA  
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# ROOTED IN EDUCATION

Over **660 workshops** for nearly **17,000 participants** since 2002

**Hundreds** of online tools and resources



# RESOURCES & TOOLS

## Water Resources:

- How to Conduct a Distribution Uniformity Test and Field Data Template
- Vineyard Sustainable Water Management Tool
- Integrated Winery Water Quality Tool
- Sustainable Management of Winery Water and Associated Energy
- Winery Hot Spots & Water Budgeting Tool
- Preparing the Vineyards for Winter & Erosion Prevention Resources
- A Winegrowers Guide to Navigating Risk
- Case studies, videos and more

Welcome to the Vineyard Sustainable Water Management Tool

This tool is designed to help you create an effective sustainable water management strategy that helps save both water and money, as detailed in Chapter 5 of the California Code of Sustainable Winegrowing Workbook. An efficient sustainable water management strategy contains many complex decisions and is highly variable across regions, varieties, and grape growing goals. This tool can be used to establish a baseline for tracking decisions over time to better understand the economic impact of different water management decisions. The tool includes sections on: vineyard layout, irrigation scheduling, monitoring (water quality, irrigation system, moisture), and other water uses (frost protection, dust control, cover crops, and summer cooling). You can choose to use the entire tool, or only sections that you are most interested in tracking.

For more information, or to provide feedback, please contact:  
California Sustainable Winegrowing Alliance  
info@sustainablewinegrowing.org

Thank you to the California Department of Food and Agriculture for the Specialty Crop Block Grant that supported this project and to the experts who participated on the Advisory Group that provided feedback on tool development. We would also like to thank Dr. Michael McCullough, Associate Professor in the Agribusiness Department at Cal Poly who led the development of the tool.

Enter your vineyard designated areas (blocks, ranches, etc.) below.  
The Custom Names you add below will automatically populate throughout the workbook.

Vineyard designated area	Custom Name	Location Description	Acres
Block 1	Smith		15
Block 2	Arnold		5
Block 3	Rolling Hills		7
Block 4	Santa Lucia		12
Block 5	Wilson 1		8
Block 6	Wilson 2		5
Block 7	Baker		5
Block 8	Ranch 1		7
Block 9	Ranch 2		9
Block 10	River Ranch		12

[library.sustainablewinegrowing.org](http://library.sustainablewinegrowing.org)



# DRY FARMING PROJECT

## OBJECTIVES

Build dry-farming and water conservation expertise and networks

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Provide outreach and education on dry farming and water conservation to coastal winegrowers

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Provide site specific technical assistance for winegrape growers converting or establishing dry-farmed vineyards

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Develop case studies and cost evaluations

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Evaluate the potential of soil health practices and groundwater recharge for improving the success of dry farming

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Develop other educational tools and resources

SCIENCE BASED

# A ROADMAP TO SUSTAINABILITY

California Code of Sustainable Winegrowing

4th Edition

15 Chapters

148 Vineyard Best Practices

108 Winery Best Practices

Learn more at: [sustainablewinegrowing.org](https://sustainablewinegrowing.org)



Business Strategy

Viticulture

Soil Management

Vineyard & Winery Water Management

Water Quality

Pest Management

Wine Quality

Ecosystem Management

Energy Efficiency

Material Handling

Solid Waste Management

Sustainable Purchasing

Human Resources

Neighbors & Community

Air Quality & Climate Protection

# CONTINUUM OF SUSTAINABILITY

The Code Workbook provides a step-by-step guide to increasingly sustainable practices

CATEGORY

4

The most sustainable practices

CATEGORY

3

Builds on Category 2 practices

CATEGORY

2

Best sustainability practice for the industry

CATEGORY

1

Meets existing standards or minimum regulation

The Code's annual self-assessment maps practices to create a benchmark

Practices have been identified by a broad set of experts and stakeholders



# VINEYARD WATER MANAGEMENT

1. Water Management Strategy
2. Monitoring and Amending Quality of Irrigation Water
3. Off-Site Water Movement
4. Irrigation System
5. Distribution Uniformity for Irrigation Systems
6. Filters and Lines
7. Water Budget
8. Measuring Water Use
9. Soil Water-Infiltration Rates and Water-Holding Capacity
10. Soil Moisture and Plant Water Status Monitoring Methods
11. Regulated Deficit Irrigation





# CERTIFICATION REQUIREMENTS

Annual independent verification that a vineyard and/or winery:

- Adopts sustainable practices in Code (including meeting 60 vineyard and 41 winery prerequisite practices)
- Meets minimum score threshold
- Measures & tracks resource use
- Adheres to restrictions on crop protection materials
- Improves year after year via Action Plan implementation



(Prerequisite Criteria listed in parenthesis)

## REQUIRED PRACTICES TO PROTECT/CONSERVE WATER

- Compliance strategy to address legal and regulatory requirements implemented (2-2)
- Results of plant tissue analysis used to guide nutrient applications (4-3)
- Nitrogen only applied when needed (4-4)
- Fertilization timing seasonally correct and based on soil and vine needs (4-5)
- Erosion controlled with temporary measures in winter (4-10) and 4-11)
- Soil erosion controlled (4-10 and 4-11)
- Water management strategy / efficient water use based on grape growing goals, soil type, slopes, etc. (5-1)
- Off-site water movement minimized (5-3)
- Irrigation distribution uniformity checked (5-5)
- Irrigation lines and filters cleaned and inspected (5-6)
- Irrigation water applied at the optimized amount (5-7)
- Vineyard water use measured (5-8)
- Water-holding capacity of soil estimated and used for estimating volume for irrigation applications (5-9)
- Soil moisture monitoring devices used to schedule irrigation (5-10)
- Pertinent watershed issues known and efforts made to minimize any negative impacts (8-2)
- Aquatic habitats considered in vineyard management (8-5)
- Dust from roadways minimized (16-3)



# REQUIRED SUSTAINABILITY METRICS

## Linking Practice with Performance

- Measuring to manage results in better decisions and greater impact
- Benchmarking leads to meaningful continuous improvement plans



Energy Use



Greenhouse Gas



Water Use



Applied Nitrogen

## 3<sup>rd</sup> PARTY AUDITING PROCESS

1. Twenty (20) current accredited auditors
2. Audits conducted on annual basis for all certified vineyards and wineries onsite every 3 years with interim years conducted as desk audits (larger operations annual onsite of subset)
3. Accreditation process includes in-depth in-person training, a competency test and mandatory annual webinar trainings
4. Auditors complete audit report, CSWA staff review full audit reports, CSWA Review Panel reviews blinded audit report executive summary
5. CSWA Review Panel serves as the final check that all certification requirements are met and enables the approval of the annual certification
6. CSWA staff conducts regular “witness audits” in the field with auditors to maintain the quality and integrity of the CCSW program



# UPHOLDING INTERNATIONAL STANDARDS

- Robust third-party oversight evaluation
- Measured against global sustainability standards
- Achieved Gold Level Equivalence to SAI-Farm Sustainability Assessment 3.0
- Assurance that CCSW adheres to recognized international standards



California Certified Sustainable  
Winegrowing program is the first to achieve  
Gold Level Equivalence to FSA 3.0



## Examples of Regulatory Collaboration

- Irrigation and Nitrogen Management Plan (INMP) Regulatory Reporting Tool (Region 5)
- Farm Plan Recognition for Ag Order 4.0 (Region 3)
- Vineyard Permit Compliance Option (Region 2)
- New Practices added to the Code Workbook (e.g., Non-point source pollution prevention within the vineyard block)

## Program Updates

- Code Workbook reviewed and updated regularly
- Certification Standards reviewed every five years, but updates made annually
  - Stakeholder review with public comment periods (NGOs, academic institutions, government agencies, etc.)
  - Joint Committee (50+ growers/vintners) provides technical oversight and CSWA Board approves changes



# TRANSPARENCY & IMPACT

## Annual Certification Reports

- By-the-numbers and examples of aggregate data for Vineyard, Winery and Community Practices
- Appendix detailing aggregate data for all prerequisites, often higher than required practices
- Certifications Standards are publicly available



Welcome to the 2022 Certification Report, an annual benchmark of the major accomplishments of Certified California Sustainable Winegrowing (CCSW) and certified vineyards and wineries.

### CALIFORNIA WINE'S SUSTAINABILITY MILESTONES

Certification builds on decades of sustainability work across California as demonstrated by CSWA's new interactive milestones timeline — [Three Decades and Growing: A Retrospective of Sustainability in the California Wine Community](#). The long list of milestones shows the unwavering commitment of growers and vintners to foster a healthy environment and vibrant communities. Certification is an integral part of this commitment — giving wine trade, consumers and policymakers transparency and confidence through third-party verification of a rigorous set of sustainability standards.

### CALIFORNIA'S SUSTAINABILITY: GLOBAL IMPACT

The global wine market and consumers are increasingly interested in California wines and knowing if they are grown and made sustainably. CSWA works with [Wine Institute's International Marketing](#) team on sustainability-themed promotions such as the California Wine Fair in Canada, Prowein in Germany and Eureka! in the UK. These well-attended events allow trade and consumers across the globe to learn more about CCSW vineyards and wineries' sustainable efforts. CSWA has also seen incredible growth in certified wines — over 16.6 million cases now bear the wine logo or certification claims.



# DATA SHARING

- Aggregate prerequisite scores shared in the Annual Certification Reports
- All practice data is aggregated and shared in the 5-Year Sustainability Reports
- Metrics data collected but not publicly shared (data collection and measurement verified by auditors)

CODE WORKBOOK CRITERIA	CATEGORY 4	CATEGORY 3	CATEGORY 2	CATEGORY 1	NON-APPLICABLE	YEAR TWO AND BEYOND MINIMUM REQUIREMENT:
2-1. Integrating Sustainability into Business Strategy	42%	50%	7%	1%	0%	Sustainability is integrated into the company business strategy.
2-2. Environmental Compliance Planning	29%	40%	27%	4%	0%	A compliance strategy to address legal and regulatory requirements is implemented.
3-12. Addressing Biological Problems	9%	52%	39%	1%	22%	Biological problems in soil verified by testing are addressed, if applicable.
3-16. Scion/Cultivar	31%	56%	13%	0%	15%	Scion was selected for appropriate climate, soil and rootstock.
3-18. Conservation of Habitat for Wildlife and Pest Predators	34%	40%	26%	0%	42%	Important habitat was protected during vineyard establishment.
4-3. Nutrient Management	67%	31%	2%	0%	0%	Results of plant tissue analysis and other factors are used to guide nutrient applications.
4-4. Nitrogen Management	28%	59%	12%	1%	0%	Nitrogen is only applied when needed and when vines can best utilize it.
4-5. Fertigation	66%	32%	1%	0%	6%	Fertilization timing is seasonally correct and based on soil and vine needs.
4-10. Surface Water Diversions for Erodible Sites	29%	57%	13%	0%	20%	Erosion is controlled with temporary measures in winter.
4-11. Management of Erosion from Roads, Ditches and Culverts	13%	35%	52%	0%	0%	Soil erosion is controlled.
5-1. Water Management Strategy	14%	39%	36%	11%	3%	A water management strategy is developed based on grape growing goals, soil types, slopes, etc.
5-2. Monitoring and Amending Quality of Irrigation Water	42%	55%	2%	0%	0%	Irrigation water is tested for quality.
5-3. Off-Site Water Movement	11%	38%	46%	5%	3%	Off-site water movement is minimized.
5-5. Distribution Uniformity for Irrigation Systems	44%	38%	18%	0%	3%	Irrigation distribution uniformity is checked.
5-6. Filters and Lines	17%	43%	41%	0%	1%	Irrigation lines and filters are cleaned and inspected.
5-7. Water Budget	14%	31%	49%	6%	4%	Irrigation water is applied at the optimized amount.
5-8. Measuring Water Use	10%	48%	41%	1%	3%	Vineyard water use is measured.
5-9. Soil Water-Infiltration Rates and Water-Holding Capacity	26%	66%	8%	0%	1%	Water-holding capacity of soil is estimated and used for estimating volume for irrigation applications.
5-10. Soil Moisture and Plant Water Status Monitoring Methods	51%	41%	8%	0%	0%	Soil moisture monitoring devices are used to schedule irrigation.



# CERTIFIED VINEYARDS & WINERIES



80%

255M Cases

171 Wineries



33%

204K Acres

2,247 Vineyards



20M

228M Bottles

Another 22% of California vineyard acreage is certified to other programs in the state





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# THANK YOU

TO LEARN MORE, VISIT:

[sustainablewinegrowing.org](https://sustainablewinegrowing.org) | [wineinstitute.org](https://wineinstitute.org) | [discovercaliforniawines.com](https://discovercaliforniawines.com)  
[californiasustainablewine.com](https://californiasustainablewine.com) | [sustainablewinegrowing.us](https://sustainablewinegrowing.us)