



## A Sustainable Portfolio

The Duckhorn Portfolio of wineries is committed to being conscientious environmental citizens and good stewards across all of our Estate vineyards and wineries. To this end, we have adopted numerous sustainable and green practices that shape our approach to winegrowing and winemaking, with the goal of continually improving our relationship with our environment. From field to glass, our environmental program focuses on both small and large initiatives, with an emphasis on recognized sustainable farming methods, conservation and rigorous third-party certifications.

### Key Certifications

- **LEED® Gold Certification:** Goldeneye Winery
- **California Certified Organic Farmers (CCOF):** All 85 acres of Calera's Estate vineyards on Mt. Harlan have been CCOF certified organic since 2008.
- **Certified California Sustainable Winegrowing (CCSW):** In 2010, Goldeneye became one of the first wineries to earn certification from the **Certified California Sustainable Winegrowing (CCSW)** program—helping to pioneer this important certification in California.
- **Fish Friendly Farming Certification:** All of our North Coast Estate vineyards are certified through Fish Friendly Farming.
- **Grower Partner Certifications:** The majority of the vineyards farmed by our partner growers hold one, or more, of the following certifications: Napa Green, Fish Friendly Farming, SIP, Lodi Rules and Certified Sustainable (CSWG).

### Sustainability in Our Vineyards

- **Zero Roundup/glyphosate:** We do not use glyphosate in any of our Estate vineyards.
- **Irrigation:** Beginning in our Napa Valley Estate vineyards in 2009, we adopted stringent new irrigation methods that increase grape quality, while also realizing massive savings in water usage. In the years since, we have expanded these practices throughout our Estate program. As a result, we have achieved a **60% reduction in our Napa and Anderson Valley water usage, and a 50% reduction across our Estate program**. In a single year, this represents a savings of approximately 12 million gallons of water in Napa Valley alone!
- **Key Irrigation Practices:** All of our vineyards are watered using drip irrigation. Weather stations, neutron probes, sap flows sensors, and other technologies, such as high re-visit aerial imagery, are used to maximize water conservation.
- **Additional Water Conservation: Practices include preservation** of native growth around reservoirs to minimize sedimentation, preserving natural springs and waterways for wildlife and methods for capturing rainwater for reservoirs and other water usage needs.
- **Cover Crops:** We use cover crops in all of our Estate vineyards to enhance life in the soil, prevent erosion, improve water-holding capacity, suppress weeds, reduce excessive vine vigor, decrease pesticides, and encourage beneficial insects. Nitrogen-fixing cover crops such as legumes are incorporated into the soil to increase soil nitrogen and organic matter.
- **Organic Fertilizers:** We use organic fertilizers to increase our soil health and fertility. We also use annual plow down cover crops that add “green” manure back to our fields, and

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apply compost every other year at a rate of 5 tons per acre.

- Certified Organic Compost: We use certified organic compost in our Estate vineyards.
- **Minimal Herbicide/Insecticide Use:** By applying hands-on sustainable techniques such as under-vine cultivation and hand shoveling, we have succeeded in **eliminating herbicide use in multiple Estate vineyards**, while reducing it significantly in the rest. The majority of our Anderson Valley acreage is herbicide free. We monitor all of our vineyards for insects on a weekly basis, through field scouting and trapping. This allows us to employ better pest management methods, while reducing the use of insecticides.
- **Natural Pest Management:** We employ Integrated Pest Management practices (IPM) in our Estate vineyards including mildew spore trapping and aerial imagery to identify high-pressure areas within vineyards. This allows us to specifically target small areas within a vineyard, significantly reducing the amount of material applied, fuel burned, etc.
- Natural Resource Preservation: Key practices include maintaining untouched riparian areas and undisturbed habitat refuges, preserving native flora diversity and wildlife corridors.
- Our landscaping crews **use only organic fungicide, herbicides and pesticides.**
- **Nature's Lawnmower:** We use sheep and livestock in select vineyards to reduce weed pressure.
- **Education and Training:** Our vineyard team regularly attends sustainably focused conferences and symposiums to learn state-of-the-art best practices.
- **Future Certifications:** We are working towards achieving CCSW certification for all of our California Estate vineyards and researching comparable certifications for our Canvasback Estate vineyard in Washington State.

### Sustainability in Winemaking

- **LEED® Gold Winery:** In 2009, we built a winery for Goldeneye in the Anderson Valley that became California's second **Leadership in Energy and Environmental Design LEED® Gold certified winery**. The U.S. Green Building Council's® (USGBC) LEED certification provides independent, third-party verification that a building project meets the highest green building and performance measures.
- **Water Reduction:** By transitioning to a steam-based barrel cleaning system in all of our wineries we have achieved a **47% reduction in water usage** during barrel cleaning. We also employ water-saving devices and use ozone to further reduce water usage.
- **Active Composting:** We compost all green waste, which includes 100% of the pomace (grape skins, pulp and seeds) that is a byproduct of our winemaking. This yields **100-200 tons of organic compost annually**.
- **Recycling:** We have an extensive recycling program at all winery estates.
- **Natural Cleaning Agents:** We emphasize natural cleaning agents such as citric acid.
- **Energy Efficiency:** To further increase our energy efficiency we underwent a PG&E energy audit.