

## START OF VINEYARD EVALUATION SHEETS

### SUMMARY EVALUATION SHEETS – VINEYARD

<b>3. VITICULTURE</b>		<b>V/W</b>	<b>Pg #</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>N/A</b>
3-1	Balanced Vines	V	3-3					
3-2	Shoot Density	V	3-5					
3-3	Fruit Exposure	V	3-6					
3-4	Crop-to-Pruning Weight Ratio	V	3-8					
3-5	Vineyard Design and Trellis	V	3-9					
3-6	Vineyard Uniformity	V	3-10					
3-7	Monitoring Canopy Microclimate	V	3-11					
3-8	Environmental Due Diligence for a New Vineyard Site or a Replanting	V	3-12					
3-9	Soil Profile Inspection and Modification	V	3-14					
3-10	Soil Tested for Physical and Chemical Properties and Amended Pre-Planting	V	3-16					
3-11	Soil Sampled for Biol. Problems Pre-Planting	V	3-17					
3-12	Addressing Biological Problems	V	3-19					
3-13	Rootstocks	V	3-20					
3-14	Vineyard Layout	V	3-22					
3-15	Row and Vine Spacing	V	3-23					
3-16	Scion/Cultivar	V	3-23					
3-17	Clone	V	3-24					
3-18	Trellis and Vigor	V	3-25					
3-19	Conserv. Habitat for Wildlife and Natl Enemies	V	3-26					
3-20	Creation of Habitat for Wildlife and Pest Natural Enemies	V	3-26					

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<b>4. SOIL MANAGEMENT</b>		<b>V/W</b>	<b>Pg #</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>N/A</b>
4-1	Petiole Analysis	V	4-3					
4-2	Soil Analysis	V	4-4					
4-3	Interpreting Results of Petiole and Soil Analyses	V	4-5					
4-4	Nutrient Management	V	4-8					
4-5	Nitrogen Management	V	4-9					
4-6	Amendments for Water Penetration	V	4-11					
4-7	Amendments for pH	V	4-12					
4-8	Organic Matter	V	4-13					
4-9	Soil Compaction	V	4-15					
4-10	Knowledge of Soil Series, Water-Holding Capacity, and Erosion Potential	V	4-16					
4-11	Surface Water Diversions for Erodible Sites	V	4-16					
4-12	Non-Point Source Pollution Prevention	V	4-17					
4-13	Air Quality	V	4-18					
4-14	Cover Crops and Soil Quality	V	4-20					
4-15	Choice of Cover Crop	V	4-21					
4-16	Erosion from Roads, Ditches, and Culverts	V	4-24					

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<b>5. VINEYARD WATER MANAGEMENT</b>		<b>V/W</b>	<b>Pg #</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>N/A</b>
5-1	Water Management Strategy	V	5-3					
5-2	Monitoring and Amending Quality of Irrigation Water	V	5-4					
5-3	Off-Site Water Movement	V	5-6					
5-4	Irrigation System	V	5-8					
5-5	Distribution Uniformity for Micro-Irrigation Systems	V	5-8					
5-6	Filters and Lines	V	5-10					
5-7	Flow Meters	V	5-10					
5-8	Soil Water-Holding Capacity	V	5-11					
5-9	Soil Moisture and Plant Water Status Monitoring Methods	V	5-12					
5-10	Evapotranspiration	V	5-14					
5-11	Water Budget	V	5-14					
5-12	Planned Deficit Irrigation through Regulated Deficit Irrigation or Partial Root Zone Drying	V	5-17					
5-13	Fertigation	V	5-20					

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<b>6. PEST MANAGEMENT</b>	<b>V/W</b>	<b>Pg #</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>N/A</b>
6-1 Vineyard Monitoring for Insect and Mite Pests	V	6-15					
6-2 Economic Thresholds and Pest-Natural Enemy Ratios for Leafhoppers, Mites, and Thrips	V	6-16					
6-3 Use of Broad-Spectrum/Long-Residual Insecticides and Miticides	V	6-21					
6-4 Use of Reduced-Risk Insecticides and Miticides	V	6-21					
6-5 Cultural Practices for Insect and Mite Management	V	6-25					
6-6 Dust Abatement in and around Vineyards for Mite Management	V	6-25					
6-7 Use of Weather Data and Degree-Days for Managing Moth Pests	V	6-26					
6-8 Portion of Vineyard Treated for Mites or Leafhoppers	V	6-29					
6-9 Training of Employees	V	6-29					
6-10 Releasing Predatory Mites	V	6-30					
6-11 Pseudococcus Mealybugs	V	6-31					
6-12 Vineyard Monitoring for Disease	V	6-39					
6-13 Powdery Mildew Management	V	6-40					
6-14 Use of Reduced-Risk Fungicides for Powdery Mildew and Botrytis Control	V	6-43					
6-15 Canker Management: A. Eutypa Dieback B. Bot Canker	V	6-44					
6-16 Botrytis Management	V	6-45					
6-17 Identification of Causal Agent of Bunch Rot	V	6-46					
6-18 Pierce's Disease Management where Blue-Green Sharpshooter is Primary Vector	V	6-48					
6-19 Glassy-Winged Sharpshooter Monitoring	V	6-49					

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<b>6. PEST MANAGEMENT – CONT.</b>	<b>V/W</b>	<b>Pg #</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>N/A</b>
6-20 Vineyard Monitoring for Weeds	V	6-51					
6-21 Weed Knowledge	V	6-52					
6-22 Herbicide Choice and Rate in Relation to Environmental Impacts	V	6-53					
6-23 Herbicide Leaching Potential and Movement in Surface Water	V	6-53					
6-24 Timing of Herbicide Treatment for Perennials	V	6-54					
6-25 Area Treated with Herbicides	V	6-55					
6-26 Vineyard Monitoring for Vertebrate Pests	V	6-61					
6-27 Vertebrate Pest Management	V	6-62					
6-28 Area of Vineyard Treated for Vertebrate Pests	V	6-62					
6-29 Predation by Vertebrates	V	6-63					
6-30 Low-Volume Vine Canopy Sprayers	V	6-66					
6-31 Sprayer Calibration and Maintenance	V	6-67					
6-32 Spray Coverage	V	6-68					
6-33 Buffer Zone	V	6-71					
6-34 Drift	V	6-72					
6-35 Pesticide Storage	V	6-74					
6-36 Pesticide Mixing and Loading	V	6-75					
6-37 Pesticide Emergency Response Plan	V	6-77					
6-38 Restricted-Use Materials	V	6-77					

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<b>7. WINE QUALITY</b>		<b>V/W</b>	<b>Pg #</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>N/A</b>
7-1	Field Fruit Maturity	<b>V</b>	7-3					
7-2	Taste Grapes with Winery Representative or Winemaker	<b>V</b>	7-3					
7-3	Juice Chemistry	<b>V</b>	7-4					
7-4	Taste Wine Made from Your Grapes	<b>V</b>	7-4					
7-5	Knowledge of Wine Quality	<b>V</b>	7-5					
7-6	Knowledge of Wine Industry	<b>V&amp;W</b>	7-6					
7-7	Viticultural Improvement	<b>V</b>	7-7					
7-8	Planning, Monitoring, Goals, and Results	<b>V&amp;W</b>	7-8					

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<b>8. ECOSYSTEM MANAGEMENT</b>		<b>V/W</b>	<b>Pg #</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>N/A</b>
8-1	Defining the Resource Base to be Managed	<b>V&amp;W</b>	8-7					
8-2	Developing a Sustainability Strategy in the Context of Ecosystem Management	<b>V&amp;W</b>	8-9					
8-3	Ecosystem Processes – Water Cycle	<b>V&amp;W</b>	8-11					
8-4	Ecosystem Processes – Nutrient or Mineral Cycles	<b>V&amp;W</b>	8-13					
8-5	Ecosystem Processes – Energy Flow	<b>V</b>	8-15					
8-6	Ecosystem Processes – Community Dynamics	<b>V</b>	8-17					
8-7	Bioregions	<b>V&amp;W</b>	8-18					
8-8	Watershed Management	<b>V&amp;W</b>	8-21					
8-9	Enhancing Habitat through Vegetation Management in and around the Vineyard	<b>V</b>	8-23					
8-10	Enhancement – Nest Boxes for Wildlife that Prey on Vineyard Pests	<b>V</b>	8-26					
8-11	Enhancement – Nest Boxes for Birds other than Raptors and Plants for Food & Shelter	<b>V&amp;W</b>	8-27					
8-12	Ecosystem Management – Vernal Pools	<b>V</b>	8-30					
8-13	Ecosystem Management – Oak Woodlands	<b>V</b>	8-32					
8-14	Ecosystem Management – Riparian Habitat	<b>V</b>	8-34					
8-15	Ecosystem Management – Aquatic Habitats: Streams, Rivers, and Wetlands	<b>V</b>	8-37					
8-16	Natural Resources Conservation Easements	<b>V&amp;W</b>	8-43					
8-17	Agricultural Conservation Easements	<b>V&amp;W</b>	8-44					
8-18	Use of Pesticides Toxic to Terrestrial and Aquatic Wildlife	<b>V</b>	8-45					
8-19	Sensitive Species	<b>V&amp;W</b>	8-46					
8-20	Sensitive Species and Collaboration with Agencies	<b>V&amp;W</b>	8-46					

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<b>9. ENERGY EFFICIENCY</b>	<b>V/W</b>	<b>Pg #</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>N/A</b>
9-1 Planning, Monitoring, Goals, and Results	<b>V&amp;W</b>	9-3					
9-4 Motors, Drives, and Pumps	<b>V&amp;W</b>	9-8					
9-6 Lighting – Offices and Labs	<b>V&amp;W</b>	9-11					
9-7 Lighting – Shops and Facilities	<b>V&amp;W</b>	9-12					
9-8 Lighting – Outdoor and Security	<b>V&amp;W</b>	9-14					
9-9 Office Equipment	<b>V&amp;W</b>	9-15					
9-11 Alternative Vineyard Fuels	<b>V</b>	9-17					

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<b>11. MATERIAL HANDLING</b>	<b>V/W</b>	<b>Pg #</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>N/A</b>
11-1 Planning, Monitoring, Goals, and Results	V&W	11-3					
11-2 Good Housekeeping – Dumpster Area	V&W	11-6					
11-3 Hazardous Materials – Hazardous Material Storage	V&W	11-7					
11-4 Hazardous Materials – Hazardous Waste Disposal	V&W	11-8					
11-5 Tires	V&W	11-10					
11-6 Batteries	V&W	11-11					
11-7 Lubricants, Oils, Coolants, and Solvents	V&W	11-12					
11-8 Paint and Paint Thinners	V&W	11-15					
11-9 Aerosol Cans	V&W	11-17					
11-10 Lighting	V&W	11-19					
11-11 Storm Water and Process Wastewater Protection	V&W	11-20					
11-12 Fuel Storage – Underground Storage Tanks	V&W	11-22					
11-13 Fuel Storage – Aboveground Storage Tanks	V&W	11-23					
11-14 Janitorial Supplies	V&W	11-24					

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<b>13. ENVIRONMENTALLY PREFERRED PURCHASING</b>	<b>V/W</b>	<b>Pg #</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>N/A</b>
13-1 Planning, Monitoring, Goals, and Results	<b>V&amp;W</b>	13-4					
13-12 Office Equipment	<b>V&amp;W</b>	13-19					
13-13 Vehicle Maintenance Products	<b>V&amp;W</b>	13-20					
13-14 Vehicles	<b>V&amp;W</b>	13-21					
13-15 Vineyard Supplies	<b>V</b>	13-23					

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<b>14. HUMAN RESOURCES</b>		<b>V/W</b>	<b>Pg #</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>N/A</b>
14-1	Sustainability Mission, Vision, and Values	<b>V&amp;W</b>	14-3					
14-2	Planning, Monitoring, Goals, and Results	<b>V&amp;W</b>	14-4					
14-3	Staffing and Recruiting Strategy	<b>V&amp;W</b>	14-5					
14-4	Standard Interviewing Format	<b>V&amp;W</b>	14-10					
14-5	Standard Job Descriptions	<b>V&amp;W</b>	14-12					
14-6	Employee Orientation	<b>V&amp;W</b>	14-13					
14-7	Safety Training	<b>V&amp;W</b>	14-15					
14-8	Professional Training and Development	<b>V&amp;W</b>	14-19					
14-9	Staying Informed with Industry	<b>V&amp;W</b>	14-21					
14-10	Industry Participation	<b>V&amp;W</b>	14-22					
14-11	Teambuilding for Sustainability	<b>V&amp;W</b>	14-24					
14-12	Employee Handbook	<b>V&amp;W</b>	14-27					
14-13	Employee Meetings	<b>V&amp;W</b>	14-30					
14-14	Sustainability in Employee Performance, Grievance, Satisfaction, and Recognition Practices	<b>V&amp;W</b>	14-31					
14-15	Salary Survey Participation	<b>V&amp;W</b>	14-33					
14-16	Sustainability Bonus System	<b>V&amp;W</b>	14-34					

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<b>15. NEIGHBORS AND COMMUNITY</b>		<b>V/W</b>	<b>Pg #</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>N/A</b>
15-1	Planning, Monitoring, Goals, and Results	<b>V&amp;W</b>	15-4					
15-2	Sustainability Values Statement	<b>V&amp;W</b>	15-6					
15-3	Community Housing	<b>V&amp;W</b>	15-8					
15-4	Transportation and Traffic	<b>V&amp;W</b>	15-11					
15-5	Community Educational Issues	<b>V&amp;W</b>	15-12					
15-6	Community Health Care Issues	<b>V&amp;W</b>	15-13					
15-7	Community Water Quality and Supply	<b>V&amp;W</b>	15-14					
15-8	Smart Growth	<b>V&amp;W</b>	15-15					
15-9	Agriculture and Winery Chemicals	<b>V&amp;W</b>	15-17					
15-10	Community Noise Concerns	<b>V&amp;W</b>	15-19					
15-11	Erosion Control	<b>V&amp;W</b>	15-20					
15-12	Air Quality	<b>V&amp;W</b>	15-21					
15-13	Visual Impacts	<b>V&amp;W</b>	15-23					
15-14	Outreach and Communication with Neighbors, Community Members, and Other Stakeholders	<b>V&amp;W</b>	15-25					

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<b>16. AIR QUALITY</b>	<b>V/W</b>	<b>Pg #</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>N/A</b>
16-1 Planning, Monitoring, Goals, and Results	<b>V&amp;W</b>	16-3					
16-2 Vineyard Floors	<b>V</b>	16-10					
16-3 Unpaved Surfaces – Roadways and Traffic and Equipment Staging Areas	<b>V&amp;W</b>	16-12					
16-4 Irrigation	<b>V&amp;W</b>	16-14					
16-5 Pest Management Strategy	<b>V</b>	16-17					
16-6 Pesticide Stewardship	<b>V</b>	16-18					
16-7 Agricultural and Winery Chemicals and Materials	<b>V&amp;W</b>	16-20					
16-8 Energy Sources and Efficiency	<b>V&amp;W</b>	16-21					
16-9 Transportation	<b>V&amp;W</b>	16-23					
16-10 Agricultural Burning	<b>V</b>	16-24					