Sustainable WA Winegrape Standard

Requirements for Winegrape Vineyards

Revised: February 25, 2026 v.2.1

Standard owned by the Washington Winegrowers Association

Version	Changes
December 22, 2021	Revisions made to the standard based on the Sustainable WA Winegrape Standard meeting held on December 17, 2021. In addition, reference to the program name (Sustainable WA program) was inserted in this final draft version. Updates based on stakeholder feedback include: • Added clarification that Chapter 1 will be included in the certification program but certification process will only confirm completion. Question details for Chapter 1 will not be evaluated. • Removed continuous improvement question for growers (question 10-1) and clarified that the program is committed to continuous improvement through overall revisions to the Standard. • Removed numeric metrics related to fuel use, electricity use, and soil organic matter (questions 4-10, 4-11, 4-12, 4-13, 6-9) • Revised question 3-8 in response to comments. • Revised question 2-10 in response to comments. Removed reference to written policy on child labor and forced labor and reduced to categories 1 and 4. • Removed weed management plan requirement from “under the vine weed management is restricted to 30% or less of the total vineyard floor” until further discussion and review • Question 7-4 revised to broaden reference to flagging to mark locations (e.g., flag, GPS mapping) with note to review this question after the pilot in consideration of large, mechanized operations
December 15, 2023	Revisions made to the standard based on the Sustainable WA Winegrape Standard technical committee, governance council, and Washington Winegrowers Association Board input and meetings. Updates based on stakeholder feedback include: • Harmonization with Salmon-Safe certification program for certification under both Sustainable WA Standard and Salmon-Safe. • Revisions to Chapter 3 to provide for new plantings/replanting and redevelopment, not just vineyard establishment. Revisions throughout the chapters for clarification and in response to comments.

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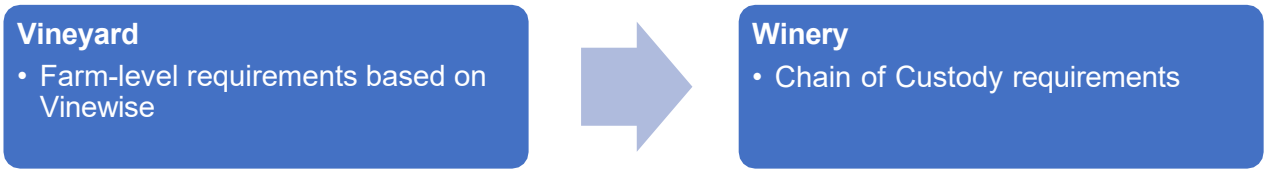
Introduction

This document represents a final draft of the Sustainable WA Winegrape Standard created in consultation with a multi-stakeholder WA Wine Industry working group in support of the development process for the Sustainable WA program.

The Sustainable WA Winegrape Standard includes requirements for vineyards and chain of custody. The focus of the Sustainable WA program is on farm-level requirements for certification of winegrapes with allowance of on-product labelling through the chain of custody system. The Sustainable WA Winegrape Standard is applicable for vineyards and winegrapes only, and does not provide certification to a participant's other crops. The vineyard requirements have been adapted from the Vinewise® online guide to sustainable winegrape growing[1] to include new content and for relevance in the context of certification and auditing. The Chain of Custody requirements are new and applicable to wineries to allow for use of on-product claims and certification logo.



Scope of the Sustainable WA program and Sustainable WA Winegrape Standard.
The program includes requirements for vineyards based on the Vinewise® Self-Assessment and associated Chain of Custody requirements for wineries.

Sustainable WA certified vineyards meet the requirements for Salmon-Safe certification. Farms including other crops beyond winegrapes are eligible for Salmon-Safe certification based on an additional overlay certification administered by Salmon-Safe for those additional crops.

[1] More information is available here: https://www.sustainablewineandgrape.org/Splash/About/tabid/186/Default.aspx

Vineyard Requirements

The Sustainable WA Winegrape Standard is adapted from Vinewise® and consists of 9 chapters and 82 requirements. Of the total, 78 are requirements with response categories scaling from 1 (lowest ranking) to 4 (highest ranking), and 4 requirements are quantitative metrics. Chapters and requirements are listed below.

Chapter 1. Business Practices & Risk Management (8 Requirements)

1-1. Business Plan
1-2. Risk Management Plan
1-3. Contracts
1-4. Crop Insurance
1-5. Lending: Market Research
1-6. Lending: Lender Qualities
1-7. Financial Management
1-8. Marketing Plan

Chapter 2. Human Resources (12 Requirements)

2-1. Workplace Policies Documentation
2-2. Employee Orientation and Training
2-3. Recruitment and Hiring
2-4. Farm Labor Contractors
2-5. Compensation and Benefits
2-6. Accident Prevention
2-7. First Aid and Emergency Response
2-8. Working Conditions
2-9. Personal Protective Equipment (PPE)
2-10. Child Labor and Forced Labor
2-11. Professional Training and Development
2-12. Industry Participation

Chapter 3. Vineyard Establishment and Redevelopment (11 Requirements)

3-1. Winery Contract Pre-planting
3-2. Vineyard Site Selection: History
3-3. Variety Selection
3-4. Soil Testing and Preparation: New Plantings and Replanting
3-5. Planting Material: New Plantings and Replanting
3-6. Nematodes
3-7. Vineyard Layout
3-8. Cold protection
3-9. Irrigation System
3-10. Irrigation Source
3-11. Vineyard Removal and Redevelopment

Chapter 4. Viticulture (9 Requirements)

4-1. Pruning
4-2. Canopy Management
4-3. Field Grafting for Variety Change
4-4. Vintage Records
4-5. Fruit Sampling and Deciding When to Harvest
4-6. Fruit Appearance and Composition at Harvest
4-7. Harvest and Delivery
4-8. Vineyard Productivity and Wine Quality
4-9. Viticulture Research

Chapter 5. Water Management (8 Requirements)

5-1. Water Quality
5-2. Water Management Strategy
5-3. Irrigation System Maintenance
5-4. Irrigation System Distribution Uniformity
5-5. Irrigation Scheduling
5-6. Preparing Vines for Winter
5-7. Pumping Plant Efficiency and Energy Savings
5-8. Water Use*

Chapter 6. Soil and Nutrient Management (8 Requirements)

6-1. Soil Management Plan
6-2. Vineyard Floor Management and Erosion Control
6-3. Plant Tissue Analysis
6-4. Nutrient Management
6-5. Soil Erosion from Roads, Ditches and Culverts
6-6. Nitrogen Application*
6-7. Phosphorus Application*
6-8. Potassium Application*

Chapter 7. Pest Management (11 Requirements)

7-1. Pest Management Plan
7-2. Monitoring for Insect and Mite Pests
7-3. Use of Economic Thresholds for Insects and Mites
7-4. Mealybug Management
7-5. Powdery Mildew Management
7-6. Managing Esca, Botryosphaeria, and Eutypa
7-7. Management of Botrytis Bunch Rot and Sour Rot
7-8. Virus Management
7-9. Weed Management Plan
7-10. Vertebrate Pest Management Plan
7-11. Bird Pest Management Plan

Chapter 8. Materials (9 Requirements)

8-1. Pesticide Use: Material Selection
8-2: Pesticide Use: Prohibited Materials and Watch Lists
8-3. Pesticide Use: Mixing and Loading
8-4. Pesticide Use: Sprayer Maintenance and Calibration
8-5. Pesticide Use: Application
8-6. Pesticide Use: Employee Safety
8-7. Pesticide Use: Offsite Movement
8-8. Pesticide Use: Equipment Cleaning
8-9. Pesticide and Hazardous Materials Storage

Chapter 9. Whole Farm Ecosystem and Community (6 Requirements)

9-1. Land Conversion
9-2. Farmscape Map
9-3. Whole Farm Ecosystem Plan and Goals
9-4. Regional Ecosystem Management
9-5. Neighbor Relations
9-6. Community Involvement

**Metric requirement with numeric input.*

Minimum Requirements for Certification

The Sustainable WA Winegrape Standard requires that program participants meet a set of mandatory requirements AND achieve at least 70% for chapters 2 through 9, representing an average category score of 2.8 out of 4. Chapter 1 is required for completion as part of the Sustainable WA program but is **not** to be evaluated by auditors. Failure to meet any mandatory requirement results in certification failure for that certification year, regardless of overall chapter score.

Certification Minimum Requirements

20 mandatory requirements
+
4 metric requirements
+
70% for chapters 2 through 9
(average category score of 2.8)

Pre-Certification Checklist of Mandatory Legal Requirements

Program participants shall be in compliance with all applicable state, federal, and local laws and regulations. The mandatory legal requirements relevant to certification under the Sustainable WA program are listed in the table below. Participants are encouraged to confirm compliance with these mandatory legal requirements as a pre-certification checklist before proceeding onto evaluating further requirements for the Sustainable WA Winegrape Standard.

Checklist of Requirements for Salmon-Safe certification

In addition to the checklist of mandatory Sustainable WA legal requirements, the table below lists the category score for meeting Salmon-Safe certification requirements related to water quality protection and habitat conservation.

There are a total of 20 mandatory requirements for Sustainable WA certification (and 25 mandatory requirements for Salmon-Safe certification), as listed in the table below.

Requirement No.	Topic	Category Level for Sustainable WA certification	Category Level for Sustainable WA certification AND Salmon-Safe certification
2-1	Workplace policies	2 or higher	2 or higher
2-2	Employee orientation and training	2 or higher	3 or higher
2-3	Recruitment and hiring	3 or higher	3 or higher
2-4	Farm labor contractors	2 or higher	2 or higher
2-5	Compensation and benefits	2 or higher	2 or higher
2-6	Accident prevention	2 or higher	2 or higher
2-7	First aid and emergency response	3 or higher	3 or higher
2-8	Working conditions	3 or higher	3 or higher
2-9	Personal Protective Equipment (PPE)	3 or higher	3 or higher
2-10	Child labor and forced labor	4	4
3-10	Irrigation source	2 or higher	3 or higher
5-2	Water Management Strategy	*no mandatory level, this requirement is part of overall scoring	3 or higher
5-5	Irrigation Scheduling	*no mandatory level, this requirement is part of overall scoring	3 or higher

6-2	Vineyard Floor Management and Erosion Control	*no mandatory level, this requirement is part of overall scoring	3 or higher
7-1	Pest Management Plan	*no mandatory level, this	3 or higher
		requirement is part of overall scoring	
8-1	Pesticide use	2 or higher	3 or higher
8-2	Prohibited Materials and Watch Lists	2 or higher	3 or higher
8-3	Pesticide mixing/loading	2 or higher	3 or higher
8-5	Pesticide application	3 or higher	3 or higher
8-6	Pesticide employee safety	4	4
8-7	Pesticide Use: Offsite Movement	2 or higher	3 or higher
8-8	Pesticide Use: Equipment Cleaning	2 or higher	3 or higher
8-9	Hazardous materials storage	3 or higher	3 or higher
9-1	Land Conversion	2 or higher	3 or higher
9-3	Whole Farm Ecosystem Plan and Goals	*no mandatory level, this requirement is part of overall scoring	2 or higher

The percent threshold for each chapter is calculated based on the category score response with a minimum of 1 point and maximum of 4 points per requirement. The percent score for a participant is based on taking a sum of the participant's points per chapter divided by the total possible points and multiplying by 100. Requirements that are evaluated as "Not Applicable" are not factored into the chapter score.

Metrics

The vineyard requirements include four quantitative metrics as listed below. Program participants are required to complete all four requirements to be eligible for certification. There are no specific values or thresholds required for the metrics. However, participants are required to ensure that data has been entered and are available for review during the audit.

- *Requirement 5-8 Water use*
- *Requirement 6-6 Nitrogen applied per acre during the past growing season*
- *Requirement 6-7 Phosphorus applied per acre during the past growing season*
- *Requirement 6-8 Potassium applied per acre during the past growing season*

Chain of Custody Threshold

The Sustainable WA Winegrape Standard includes chain of custody requirements for wineries. In order to qualify for use of an on-product label, wines must be made of at least 75% certified winegrapes. The 75% threshold of winegrapes was created as a starting point to allow for program growth and will be reviewed and potentially increased to a higher threshold as the program expands.

Salmon-Safe requires a 95% chain of custody threshold for wineries. In order to use the Salmon-Safe logo, wines must be made from at least 95% Sustainable WA certified winegrapes from vineyards meeting mandatory requirements for Salmon-Safe certification (see checklist above).

Continuous Improvement

The Sustainable WA program is committed to the principle of continuous improvement. As part of the commitment, the Sustainable WA program will be reviewed on a regular basis to identify areas and requirements that can be revised and improved based on updates in scientific research, growing techniques, as well as market and consumer expectations.

The following chapters include detailed requirements of the Sustainable WA Winegrape Standard.

1. Business Practices and Risk Management

**Note:* Chapter 1 is required for completion for the certification program, but specific details of the practices in Chapter 1 will not be evaluated as part of the certification process. The requirements in Chapter 1 are based on the participant's confirmation of the applicable category level. The audit will only include confirmation that the Chapter 1 questions have been answered. The audit will not include a requirement to provide copies, nor a review of any materials.

Practice	Ans.	Category Description
1-1. Business Plan *Plan details in Appendix A.*	4	The company has a documented business plan that satisfies the business plan details in Appendix A, Requirement 1-1. Implementation of the plan includes regular management team meetings, periodic plan review, and modification as the agriculture business climate and wine markets change over time.
	3	The company has a documented business plan.
	2	The company is in the process of developing a business plan.
	1	The company does not have a business plan.
1-2. Risk Management Plan *Plan details in Appendix A.*	4	The company has a documented risk management plan that satisfies the risk management plan details in Appendix A, Requirement 1-2. Implementation of the plan includes periodic plan review and modification as the agriculture business climate and wine markets change over time.
	3	The company has a documented risk management plan.
	2	The company is in the process of developing a risk management plan.
	1	The company does not have a risk management plan.
1-3. Contracts	4	A written contract is used for all winegrape sales to a winery, is comprehensively reviewed by a lawyer, and the winery's business practices, - and reputation are evaluated before signing.
	3	A written contract is used when selling winegrapes to a winery and a cursory evaluation of the winery's reputation is made before signing.
	2	A written contract is sometimes used when selling winegrapes to a winery.
	1	A written contract is never used when selling winegrapes to a winery.
1-4. Crop Insurance	4	Crop insurance is purchased annually, insurance needs and requirements are clearly defined, and the insurance agent has all the information needed to determine the proper coverage required.
	3	Crop insurance is not purchased on an annual basis. The decision to purchase it is based on a pre-season estimate of risk. When purchased, insurance needs and requirements are clearly defined, and the insurance agent has all the information needed to determine the proper coverage required.
	2	The decision on whether to purchase crop insurance is based on budgetary constraints.
	1	Crop insurance is not used.
1-5. Lending: Market Research	4	Before contacting a lender and/or seeking capital investment, a current market analysis is done by researching local, state, and global wine and winegrape trend data and markets, and the financial risks of the wine industry at each level are understood.
	3	Before contacting a lender and/or seeking capital investment, a current market analysis is done by researching local and state wine and winegrape trend data and markets, and the financial risk of the regional wine industry is understood.
	2	Before contacting a lender and/or seeking capital investment, an analysis is done of the local winegrape market.
	1	No wine industry research or market analysis is done before contacting a lender and/or seeking capital investment.
1-6. Lending: Lender Qualities	4	Due diligence was conducted to determine lender's and/or capital investor's experience in agriculture. The lender and/or capital investor has significant experience in winegrape lending and understands the wine industry and the business of the vineyard. A professional relationship is developed with the lender and/or capital investor.

1. Business Practices and Risk Management

**Note:* Chapter 1 is required for completion for the certification program, but specific details of the practices in Chapter 1 will not be evaluated as part of the certification process. The requirements in Chapter 1 are based on the participant's confirmation of the applicable category level. The audit will only include confirmation that the Chapter 1 questions have been answered. The audit will not include a requirement to provide copies, nor a review of any materials.

Practice	Ans.	Category Description
	3	Due diligence was conducted to determine lender's and/or capital investor's experience in agriculture. The lender and/or capital investor has limited experience in winegrape lending and some understanding of the wine industry and the business of the vineyard. The lender's and/or capital investor's understanding is actively increased through the development of a professional relationship.
	2	Due diligence was conducted to determine lender's and/or capital investor's experience in agriculture. The lender and/or capital investor has no experience in agriculture lending or understanding of the wine industry.
	1	No attempt is made to determine the lender's and/or capital investor's experience in agriculture lending or in developing a professional relationship with the lender and/or capital investor.
1-7.Financial Management	4	An annual company budget is established and updated on a regular basis (such as monthly or quarterly) for each management unit (block). Input costs and productivity measures are calculated and tracked for all key practices. Financial management reports (profit and loss statements) are generated, and an independent tax and/or financial advisor is consulted to optimize financial performance.
	3	A company budget is established for the whole farm and updated at the end of each year. Input costs are calculated and tracked for some key practices. Financial management reports (profit and loss statements) are generated, and an independent tax and/or financial advisor is consulted to optimize financial performance.
	2	A company budget is established and updated at the end of each year, and financial management reports (profit and loss statements) are generated annually.
	1	Company budget and financial management reports are updated less frequently than once per year.
1-8.Marketing Plan	4	A documented marketing plan has been developed that includes overall objectives, strategies for achieving them, a work plan, and a way to measure progress. A marketing line item is in the company's budget. Implementation of the plan includes periodic meetings to review and update as needed.
	3	A documented marketing plan has been developed that includes objectives and a work plan. A marketing line item is in the company's budget.
	2	A marketing plan is in the process of being developed that includes objectives and a work plan.
	1	The company does not have a marketing plan.

2. Human Resources

Practice	Ans.	Category Description
2-1. Workplace Policies Documentation	4	The company has developed an employee handbook and associated workplace policies and procedures governing staffing and recruiting; orientation and training; employee relations and safety; performance review; and compensation and benefits. The employee handbook is reviewed annually and updated as necessary. Employees have access to the employee handbook upon hire.
	3	The company has developed an employee handbook and associated workplace policies and procedures governing staffing and recruiting; orientation and training; employee relations and safety; performance review; and compensation and benefits. Employees have access to the employee handbook upon hire.
	2 ***Mandatory Req.**	The company is developing an employee handbook and associated workplace policies and procedures governing staffing and recruiting; orientation and training; employee relations and safety; performance review; and compensation and benefits.
2-2. Employee Orientation and Training	4	A designated employee is responsible for orienting new employees, including providing an employee handbook in the appropriate language, training on worker health and safety, and is knowledgeable about relevant laws. Employees are trained by a qualified trainer in the use of applicable personal protective equipment (PPE) and in the farm's accident prevention and emergency plans and procedures. Prior to operation with dangerous and complex equipment, employees receive formal training on the equipment's safe use.
	3	A designated employee is responsible for orienting new employees, training on worker health and safety, and they are knowledgeable about relevant laws. Employees are trained by a qualified trainer in the use of applicable personal protective equipment (PPE) and in the farm's accident prevention and emergency plans and procedures. Prior to operation with dangerous and complex equipment, employees receive formal training on the equipment's safe use.
	2 ***Mandatory Req.**	Employees are trained by a qualified trainer in the use of applicable personal protective equipment (PPE) and in the farm's accident prevention and emergency plans and procedures based on relevant legal and regulatory requirements. Employees have received minimal training prior to using equipment.
2-3. Recruitment and Hiring – Employees	4	The company confirms compliance with all state and federal laws and regulations related to recruitment and hiring of employees, and discrimination due to age, gender, sexual orientation, religion, race, and country of origin. A written policy and process are in place to ensure owners, managers, and supervisors have current knowledge of these laws and regulations.
	3 ***Mandatory Req.**	The company confirms compliance with all state and federal laws and regulations related to recruitment and hiring of employees, and discrimination due to age, gender, sexual orientation, religion, race, and country of origin.
2.4. Farm Labor Contractors – Indirectly Contracted Workers	N/A	*If the company does not use farm labor contractor(s) nor H2A guest worker programs, answer N/A.*
	4	The company is knowledgeable of all applicable state and federal laws and regulations related to use of farm labor contractors and/or H2A guest worker programs. The company checks that their farm labor contractor(s) has a valid state license and has a system in place to manage compliance with all state and federal laws,

2. Human Resources

Practice	Ans.	Category Description
		including the Washington Farm Labor Contractor Act and/or H2A guest worker programs (if applicable), and that their farm labor contractor(s) has provided workers with written notice about pay, housing, and health and safety requirements.
	3	The company is knowledgeable of all applicable state and federal laws and regulations related to use of farm labor contractors and/or H2A guest worker programs. The company checks that their farm labor contractor(s) has a valid state license and is aware of all state and federal laws, including the Washington Farm Labor Contractor Act and/or H2A guest worker programs (if applicable).
	2 ***Mandatory Req.**	The company is knowledgeable of all applicable state and federal laws and regulations related to use of farm labor contractors and/or H2A guest worker programs. The company checks that their farm labor contractor(s) has a valid state license.
2-5. Compensation and Benefits	4	The company confirms compliance with all state and federal laws and regulations related to minimum wage, working hours, overtime pay, and benefits, including paid sick leave, on an ongoing basis. A written policy and process are in place to ensure that managers and supervisors have current knowledge of these laws and regulations. Employees are provided paid time off for vacation and assistance is provided for health insurance beyond what is required by law. The company provides a financial contribution to a retirement plan for full time employees.
	3	The company confirms compliance with all state and federal laws and regulations related to minimum wage, working hours, overtime pay, and benefits, including paid sick leave, on an ongoing basis. Employees are provided paid time off for vacation and assistance for health insurance beyond what is required by law.
	2 ***Mandatory Req.**	The company confirms compliance with all state and federal laws and regulations related to minimum wage, working hours, overtime pay and benefits.
2-6. Accident Prevention	4	The company has established an Accident Prevention Program (APP) in accordance with legal requirements that includes an emergency response plan, and it is reviewed/updated on an annual basis. Annual training on the APP is offered to all employees is conducted during normal working hours. In cases where a Farm Labor Contractor (FLC) is used, the company checks that the FLC has an APP that has been communicated to all FLC employees.
	3	The company has established Accident Prevention Program (APP) in accordance with legal requirements that includes an emergency response plan. Annual training on the APP is offered for all employees during normal working hours. In cases where a Farm Labor Contractor (FLC) is used, the company checks that the FLC has an APP that has been communicated to all FLC employees.
	2 ***Mandatory Req.**	The company has established Accident Prevention Program (APP) in accordance with legal requirements that includes an emergency response plan. The APP has been communicated to all employees. In cases where a Farm Labor Contractor (FLC) is used, the company checks that the FLC has an APP that has been communicated to all FLC employees.
	4	Adequately stocked first aid kits are provided and accessible at key locations throughout the operation.

2. Human Resources

Practice	Ans.	Category Description
2-7. First Aid and Emergency Response		Supervisor employee(s) are trained in first aid.
	3 ***Mandatory Req.**	Adequately stocked first aid kits are provided and accessible at key locations throughout the operation.
2-8. Working Conditions	4	The company complies with all applicable state, federal, and local laws and regulations related to provision of sanitary facilities, ready access to potable water, adequate work breaks, and shade. A process is in place to ensure that managers and supervisors remain current in these laws and regulations. The company provides the opportunity for employee suggestions and Feedback/Comments in relation to sanitary facilities and other working condition aspects, as applicable.
	3 ***Mandatory Req.**	The company complies with all applicable state, federal, and local laws and regulations related to provision of sanitary facilities, ready access to potable water, adequate work breaks, and shade.
2-9. Personal Protective Equipment (PPE)	4	Employees are made aware of, have immediate access to, and utilize all required personal protective equipment (PPE) and they are trained to use it on at least an annual basis. PPE is inspected and maintained in good working order according to manufacturer and legal requirements.
	3 ***Mandatory Req.**	Employees have immediate access to personal protective equipment (PPE), and they are trained to use it. PPE is inspected and maintained in good working order according to manufacturer and legal requirements.
2-10. Child Labor and Forced Labor	4 ***Mandatory Req.**	The company complies with all applicable state, federal, and local laws and regulations related to child labor and forced labor.
2-11. Professional Training and Development	4	Management and supervisory employees have established personal and business development goals, which are reviewed annually. The development program is documented in company policies. Employees keep~~s~~ up with industry developments by attending in-house and/or out-side trainings and educational classes and/or field days on work time. Any attendance fees are paid for by the company. Trade magazines and/or journals are made available for employees to read.
	3	Management and supervisory employees are encouraged to establish personal and business development goals and to keep up with industry developments by attending trainings and educational classes and/or field days on work time. Any attendance fees are paid for by the company.
	2	Management and supervisory employees are allowed to attend trainings and educational classes or field days on work time.
	1	Management and supervisory employees are not allowed to attend trainings and educational classes or field days on work time.
2-12. Industry Participation	4	Employees take leadership roles in local, state and/or federal industry trade associations, including support by speaking on panels, writing articles, and/or volunteering in association activities. The company pays for any costs associated with such participation.
	3	Employees are encouraged to participate in local, state, or federal trade associations and are allowed to do so during work time. Any membership fees are paid for by the company.
	2	Employees are allowed to participate in industry trade associations.
	1	Employees do not participate in industry trade associations.

3. Vineyard Establishment and Redevelopment

Practice	Ans.	Category Description
3-1. Winery Contract Pre-planting	N/A	*If the vineyard was established when purchased and this information about pre-planting considerations is not known, answer N/A.*
	4	The vineyard site was evaluated for suitability for specific varieties and/or wine style to be produced. Potential winery clients were contacted before site selection is/was finalized. A contract with a winery was signed before planting stipulating variety(ies), acreage, and tier.
	3	Potential winery clients were contacted after the vineyard site was selected. A contract was signed with a winery before planting stipulating variety(ies), acreage, and tier.
	2	A contract with the winery to purchase the winegrapes was signed after the vineyard was planted.
	1	The vineyard was planted without a signed contract with a winery or an interested buyer.
3-2. Vineyard Site Selection: History	4	Historic weather data was obtained for the site and taken into account before purchase or planting, including growing degree-days, mean growing season, extreme temperatures (such as previous cold winter events), and wind. Information about past cropping history, pesticide usage, and potential site risks was obtained for the site and taken into account before purchase or planting. Information was obtained about access to water and any restrictions on water use that might be relevant.
	3	Regional weather data was obtained after the site was purchased and taken into account prior to development and planting. Information was obtained about past cropping history, pesticide usage, and potential site risks. Information was obtained about access to water and any restrictions on water use that might be relevant.
	2	Historic or regional weather data, past cropping data, and water use information was obtained for the vineyard site after purchase, development, and planting.
	1	No historic or regional weather data, past cropping data, and water use information was obtained for the vineyard site.
3-3. Variety Selection	N/A	*If the vineyard was established when purchased and this information about variety selection is not known, answer N/A.*
	4	Varieties were chosen that are appropriate for the site's average heat units and cold temperatures. Varieties were selected with consideration of future climate scenarios. If available, knowledge gained from experimental plantings in the same or similar area is considered.
	3	Varieties were chosen that are appropriate for the site's average heat units and cold temperatures.
	2	Varieties chosen for planting reflect the region's general climate of being a cool or warm area.
	1	Determination of varieties to plant was done without reference to the site history or future climate scenarios.
3-4. Soil Testing and Preparation: New Plantings and Replanting	N/A	*If the vineyard has not had new plantings nor replanting within the past three years, answer N/A.* *If the vineyard has had new plantings or replanting within the past three years and such information is not known to the new owner, answer N/A.*
	4	Prior to any new planting or replanting, soil sampling was done to determine nutrient content and soil physical and chemical features such as texture, percolation rate, water holding capacity, cation

3. Vineyard Establishment and Redevelopment

Practice	Ans.	Category Description
		exchange capacity, pH, and salts, field capacity and permanent wilting point. Soil pits were dug to assess the soil profile. Based on soil pits and tests, site physical features were modified (such as ripping, terraforming) if necessary, as were chemical features (such as pH adjustment). If appropriate, soil amendments are applied using variable rate technology. Previous land use is known and its impact on vineyard establishment is considered (such as nematode presence or livestock use).
	3	Prior to any new planting or replanting, soil sampling was done to determine nutrient content and soil physical features such as texture, percolation rate, and water holding capacity. Site physical features were modified (such as ripping, terraforming) if necessary. Previous land use is known and its impact on vineyard establishment was considered (such as nematode presence or livestock use).
	2	Prior to any new planting or replanting, soil sampling was done to determine soil physical features. Site physical features were modified (such as ripping, terraforming), if necessary. If soil amendments were added, amounts were based on local experience or fertilizer sales representative recommendations.
	1	No soil sampling and testing was done prior to any new planting or replanting.
3-5. Planting Material: New Plantings and Replanting	N/A	*If the vineyard has not had new plantings nor replanting within the past three years, answer N/A.* *If the vineyard has had new plantings or replanting within the past three years and such information is not known to the new owner, answer N/A.*
	4	For new plantings and replanting, the vineyard was planted with certified virus-tested plant material. The nursery's standard operating procedures for virus testing of source materials were reviewed for efficacy. The nursery's mother block source plants were from Foundation-level plant material. Proper documentation for certified material was provided. If planting stock was from outside of Washington State, compliance with plant quarantine laws was ensured.
	3	For new plantings and replanting, the vineyard was planted with certified virus-tested plant material, or if certified material was not available, the planting stock was indexed for viruses and other diseases. If the material was from outside of Washington State, compliance with plant quarantine laws was ensured.
	2	In-state or on-farm self-propagated planting stock was used. The propagation block was visually inspected for virus symptoms but not tested.
	1	In-state or on-farm self-propagated planting stock was used for new plantings and/or replanting, and the propagation block was not inspected or tested.
3-6. Nematodes and Phylloxera	N/A	*If the vineyard was established when purchased and information about nematodes at the site prior to planting is not known, answer N/A.*
	4	The soil at the vineyard site was sampled for plant-parasitic nematodes. If nematodes were detected, University Extension experts were consulted for implications and management strategies, and the site was prepared and managed for plant-parasitic nematodes accordingly before planting. Soil fumigation was done only if necessary.

3. Vineyard Establishment and Redevelopment

Practice	Ans.	Category Description
		A nematode-resistant rootstock was considered when choosing planting stock.
	3	The soil at the vineyard site was sampled for plant-parasitic nematodes. If they were detected, the soil was fumigated. A nematode-resistant rootstock was considered when choosing planting stock.
	2	The vineyard site was fumigated without testing the soil for plant parasitic nematodes.
	1	No soil sampling was done for plant-parasitic nematodes prior to planting and no nematode control actions were taken.
3-7. Vineyard Layout: Redevelopment	N/A	*If the vineyard has not had any redevelopment within the past three years, answer N/A.* *If the vineyard has had any redevelopment within the past three years and such information is not known to the new owner, answer N/A*
	4	For redevelopment of all or a portion of the vineyard, the redeveloped vineyard site was surveyed, mapped, and assessed for accessibility and staging areas. The trellis system was chosen to match the vigor of the site and/or management approach, the variety(ies) and rootstock (if one was used) planted, and yield and quality goals in the company's business plan. Adequate space was left at the end of rows and field borders to turn equipment. Row orientation was selected based on slope, prevailing wind, sun exposure, and air drainage. The vineyard was divided into blocks based on soil type and depth to enhance uniformity.
	3	For redevelopment of all or a portion of the vineyard, the trellis system was chosen to match the vigor of the site and/or management approach, and the clone and rootstock (if one was used) planted. Adequate space was left at end of rows and field borders for room to turn equipment. Row orientation was selected based on slope, sun exposure, and air drainage.
	2	For redevelopment of all or a portion of the vineyard, the redeveloped trellis system was chosen based on budget or winery constraints. Adequate space was left at end of rows and field borders for room to turn equipment.
	1	For redevelopment of all or a portion of the vineyard, the redeveloped vineyard layout was determined by budgetary or winery constraints and to maximize planted acres.
3-8. Cold protection	4	Cold protection tools, such as wind machines, are not needed due to the appropriate matching of vineyard site, layout, and variety/clone chosen at planting. Cold hardiness Extension information (AgWeatherNet Cold Hardiness Model) is used to estimate potential cold damage risk.
	3	Cold protection tools, such as wind machines, are not needed due to the appropriate matching of vineyard site, layout, and variety/clone chosen at planting.

3. Vineyard Establishment and Redevelopment

Practice	Ans.	Category Description
	2	Crop protection practices such as wind machines are necessary for frost damage prevention, but their use is minimized due to use of damage thresholds. If necessary and efficacious, mowing is done in a timely manner to enhance cold air drainage.
	1	Cold events limit vineyard productivity and/or cold protection practices other than above (e.g., fossil fuel burning heaters) are used to minimize cold damage.
3-9. Irrigation System	4	Irrigation system is designed by a certified irrigation designer (CID). The system is designed to exceed seasonal water quantity and frequency requirements. A low volume (drip) system is used and designed to ensure uniform water delivery. The system allows for fertigation and chemigation as well as drainage for winterizing.
	3	Irrigation system is designed by a CID. A low volume (drip) system is used and designed to ensure uniform water delivery. The system allows for fertigation and chemigation as well as drainage for winterizing.
	2	A low volume irrigation (drip) or sprinkler system is used, and uniform water delivery is ensured.
	1	Irrigation infrastructure is unable to meet seasonal water quantity and/or frequency requirements.
3-10. Irrigation Source	4	The water source can supply enough irrigation for adequate production. If water is from wells, information is obtained on the strength of the aquifer (is it recharging or depleting), depth of the water table and pumping depth, and acreage stipulations or limitations of the well permit or certificate. If surface water is used, the limitations of the water provider are known, such as information on any pumping restrictions during a drought. If there is a choice of irrigation water sources, the selected source of irrigation water results in the least potential impact to instream flows both on vineyard property and downstream. If irrigation water is from a stream, fish losses are avoided by installing fish screens and fish screens are maintained on a regular basis. The company has water rights to withdraw water, and reports water usage to the applicable state, federal, and/or local agency as required.
	3	The water source can supply enough irrigation for adequate production. Information is obtained on the source of water (wells, surface) to ensure limitations and restrictions are known. If there is a choice of irrigation water sources, the selected source of irrigation water results in the least potential impact to instream flows both on vineyard property and downstream. If irrigation water is from a stream, fish losses are avoided by installing fish screens and fish screens are maintained on a regular basis. The company has water rights to withdraw water, and reports water usage to the applicable state, federal, and/or local agency as required.
	2 ***Mandatory Req.**	The water source can supply enough irrigation for adequate production. The company has water rights to withdraw water, and reports water usage to the applicable state, federal, and/or local agency as required.
3-11. Vineyard Removal and Redevelopment	N/A	*If the vineyard has not been removed or redeveloped within the past three years, answer N/A.*

3. Vineyard Establishment and Redevelopment		
Practice	**Ans.**	**Category Description**
		If the vineyard was removed or redeveloped within the past three years and such information is not known to the new owner, answer N/A.
	4	Vines are removed along with as much crown and as many roots as possible. Holes and depressions are filled. Weed populations are assessed and any problems eliminated using mechanical methods or spot-spraying. The site is sampled for plant-parasitic nematodes and pylloxera. If nematodes or phylloxera are detected, University Extension experts were consulted for implications and management strategies, and the site was prepared and managed for plant-parasitic nematodes and phylloxera accordingly before replanting. Soil fumigation is done only if necessary. Vineyard roads are refurbished, or new ones created if needed using engineering that minimizes erosion. A redevelopment plan is executed based on production goals and experience from the previous vineyard and management modified accordingly, for example historic nutrient deficiencies and/or poor water infiltration that are addressed before planting the new vines. It also includes planning for new technologies (e.g., mechanization).
	3	Vines are removed. Depressions are filled. Existing weed problems are eliminated. The soil is tested for plant-parasitic nematodes and fumigated if a problem exists. Vineyard roads are refurbished, or new ones created if needed using engineering that minimizes erosion. A redevelopment plan is executed based on production goals and experience from the previous vineyard and management modified accordingly, for example historic nutrient deficiencies and/or poor water infiltration that are addressed before planting the new vines. It also includes planning for new technologies (e.g., mechanization).
	2	Vines are removed, and the site is treated with herbicide and fumigated. Vineyard roads are refurbished, or new ones created if needed. Historic problems are not researched or, if known, are not addressed before planting the new vines.
	1	Vines are removed, and the site is treated with herbicide and fumigated. Vines are planted with no additional site preparation.

4. Viticulture		
Practice	**Ans.**	**Category Description**
4-1. Pruning	4	A pruning strategy is used to achieve vine balance and is based on historical information to achieve the coming year's yield and quality targets. This results in minimal cluster and/or shoot thinning needed to meet the target. Where size of the vineyard permits, pruning is delayed until there is low risk of damaging cold temperatures. If damaging cold temperatures occurred, bud damage is assessed, and pruning levels are adjusted accordingly. If trunk diseases are a risk, pruning time is adjusted based on University recommendations (see Pest Management Chapter).
	3	Pruning is delayed as long as possible to have a better understanding of the extent of winter freeze damage. A pruning strategy is used to achieve vine balance and is based on historical pruning strategies and yield to achieve the coming year's yield target. This results in minimal cluster and/or shoot thinning needed to meet the target.
	2	Pruning is done throughout the dormant season and extra buds are left for later touch up as insurance against cold temperature damage. The pruning strategy is based on historical yields to achieve the current year's yield target. Crop load adjustment is often needed to meet target yield.
	1	Pruning is done throughout the dormant season without regard to cold temperature risk. Significant crop load adjustment is necessary each year.
4-2. Canopy Management	4	Canopy density and vigor are recorded annually through objective measurements. Records are kept and used to refine strategies for future canopy manipulation. Canopy manipulations (such as shoot thinning, leaf removal, hedging) are discussed with the winery and applied in accordance with pre-planned yield and quality goals. Canopy management results are recorded annually with winery or grape buyer and refined ~~if~~ as necessary.
	3	Canopy density and vigor are visually assessed annually. Canopy manipulations (such as shoot thinning, leaf removal, hedging) are discussed with the winery and applied in accordance with pre-planned yield and quality goals. Canopy management results are evaluated annually with winery or grape buyer and refined ~~if~~ as necessary.
	2	Canopy management practices (such as shoot thinning, leaf removal, hedging) are done.
	1	Canopy is not purposefully manipulated with irrigation or canopy management practices.
4-3. Vineyard Renovation	NA	*If field grafting was not done on the vineyard, answer NA.*
	4	Advantages and disadvantages, including pest or disease resistance in the rootstock, were reviewed in the decision to carry out field grafting (vs. replanting). The disease status of rootstock and scion wood were tested prior to field grafting. Rootstock and scion wood were sampled following best practices (e.g., University Extension guidelines) for sample size and timing. Grafting was carried out in spring after threat of frost and about a month after bud break. Future training or trellis system was considered in determining graft height. A skilled grafting crew was used for the grafting work. Irrigation was managed following grafting to avoid extreme sap pressure and excessive vine vigor. Post-grafting applied nitrogen was adjusted to manage vigor.

4. Viticulture		
Practice	**Ans.**	**Category Description**
	3	Advantages and disadvantages, including pest or disease resistance in the rootstock, were reviewed in the decision to carry out field grafting (vs. replanting). The disease status of rootstock and scion wood were tested prior to field grafting. Grafting was carried out in spring after threat of frost and about a month after bud break. Irrigation was managed following grafting to avoid extreme sap pressure and excessive vine vigor.
	2	Advantages and disadvantages, including pest or disease resistance in the rootstock, were reviewed in the decision to carry out field grafting (vs. replanting). The disease status of rootstock and scion wood were tested prior to field grafting.
	1	Decisions on field grafting were made without regard to disease status. Irrigation, nutrient management, and yield management after field grafting did not fully account for managing sap pressure or vigor.
4-4. Vintage Records	4	Records of past vintages are kept and reviewed to help determine optimum yield and maturity for the current crop. Data includes information on all of the following: grape condition; crop phenology dates as determined by a standard scale (such as bud break, bloom, veraison, harvest); weather prior to and during harvest; summary of growing season (weather trends and/or natural events); sensory and chemical analyses of grapes; and comparison of actual harvest yields to crop estimate.
	3	Records of past vintages are kept and reviewed to help determine optimum maturity of the current crop. Data includes information on some of the following: grape condition; crop phenology dates such as bud break and harvest; harvest yield; weather; and sensory and chemical analyses.
	2	Harvest date is the only information recorded from past vintages.
	1	No records of past vintages are kept.
4-5. Fruit Sampling and Deciding When to Harvest	4	Grapes are sampled regularly between veraison and harvest for soluble solids (Brix), titratable acid (TA) and pH. The lab equipment is calibrated before sampling. Physical and sensory fruit characteristics are noted and recorded. Data is also compared to sample results from other blocks, and past vintages. The data is used to decide when to harvest.
	3	Grapes are occasionally sampled between veraison and harvest for soluble solids (Brix), titratable acid (TA) and pH. The lab equipment is calibrated before sampling. Physical and sensory fruit characteristics are noted and recorded. The data is used to decide when to harvest.
	2	Grapes are occasionally sampled from veraison through harvest for soluble solids (Brix), titratable acid (TA) and pH. The winery determines the harvest date with no grower input.
	1	No sampling of fruit is done, or if the winery samples the grapes, data is not obtained from them.
4-6. Fruit Appearance and Composition at Harvest	4	Before harvest, defective fruit (such as bunch rot, sour rot, or sunburn) is identified in the vineyard and removed before fermentation, the amount of damage is estimated, and the results are discussed with the winery. Changing environmental conditions in the field that may affect fruit quality are identified and communicated to the winery. Appearance and composition of fruit being harvested is evaluated in-field or in delivery bins, and adjustments are made to the harvest of remaining unpicked fruit if necessary (such as picking grapes after rain or frost). Digital photos and/or written records are used to document harvest quality.
	3	Before harvest, defective fruit (such as bunch rot, sour rot, or sun burn) is identified in the vineyard and the results are discussed with the winery.

4. Viticulture		
Practice	**Ans.**	**Category Description**
		Appearance and composition of fruit being harvested is evaluated in-field or in delivery bins, and adjustments are made to the harvest of remaining unpicked fruit if necessary (such as picking grapes after rain or frost).
	2	Defective fruit is identified during harvest, and potential quality issues are shared/discussed with winery as loads are delivered.
	1	Defective fruit is not identified before or during harvest, and no evaluation is made of harvested fruit appearance and composition other than by the winery.
4-7. Harvest and Delivery	4	Arrangements for harvest and delivery to the winery are made before estimated picking dates. Vineyard harvest matches winery schedule and capacity. If yield exceeds contract specifications, approval for delivery is received from winery prior to shipment. Loads are weighed at a certified scale, with harvest tickets matched to loads. Harvest records are kept and cross-checked with winery records.
	3	Arrangements for harvest and delivery to the winery are made before estimated picking dates. Vineyard harvest matches winery schedule and capacity. Loads are weighed at a certified scale. Harvest records are kept on the farm but are not cross-checked with harvest tickets or winery records.
	2	Arrangements for harvest and delivery to the winery are made before estimated picking dates. Harvest records are not kept on the farm.
	1	Little or no advanced planning is made for harvest or delivery to the winery. There is little communication with the winery during harvest. Harvest records are not kept on the farm.
4-8. Vineyard Productivity and Wine Quality	4	Vineyard productivity is assessed annually by calculating production costs and comparing them to revenue. Productivity data from past vintages is reviewed for trends and to assess vineyard life span. A vineyard productivity plan is developed and used to guide management to keep production levels optimum. Vines needing replanting or retraining are tagged during growing season, and replacement vines are ordered and planted in a timely manner. Wine is made from the vineyard, tasted with the winemaker, and results are discussed in relation to possible management changes for next season.
	3	Vineyard productivity is assessed every few years by visual/qualitative means only, the only quantitative measure being yield. Vines needing replanting or retraining are tagged during the growing season, and replacement vines are ordered and planted in a timely manner.
	2	Vineyard productivity is assessed every few years based only on tonnage. Retraining and/or replanting is done occasionally, with vines being replaced or layered only if a significant number are damaged or if tonnage has noticeably declined.
	1	No assessment of vineyard productivity is made. Vines not replaced or retrained.
4-9. Viticulture Research	4	Company representatives participate in continuing education related to on-farm research and have attended either viticulture research field days or demonstration trials relevant to their vineyard. Trials, results, and/or research are being conducted by University Extension, industry member, and/or in-house on farm.

4. Viticulture		
Practice	**Ans.**	**Category Description**
	3	Representatives from the company participate in continuing education related to on-farm research and have attended either viticulture research field days or demonstration trials relevant to their vineyard. No experimentation is currently being done on the farm.
	2	Company representatives participate in continuing education related to on-farm research and have attended either viticulture research field days or demonstration trials relevant to their vineyard. No experimentation has ever been conducted on the farm.
	1	No experimentation is done on the farm. Company representatives do not participate in continuing education related to viticulture research.

5. Water Management

Practice	Ans.	Category Description
5-1. Water Quality	4	Irrigation water quality is tested at least every three years by a reputable laboratory for the following: pH, total salts, magnesium, calcium, sodium, chloride, boron, manganese, nitrate, bicarbonate, suspended solids, and biological problems. If problems are detected, the water is treated, and effectiveness of treatment is checked with follow-up testing.
	3	Irrigation water quality is tested at least every five years by a reputable laboratory for pH and some, but not all, of the following: total salts, magnesium, calcium, sodium, chloride, boron, manganese, nitrate, bicarbonate, suspended solids, and biological problems. If problems are detected, the water is treated.
	2	Irrigation water was previously tested for quality, but has not been tested in the past five years.
	1	Irrigation water is never tested.
5-2. Water Management Strategy	4	A water management strategy to guide irrigation scheduling is planned before the growing season that includes: • identifying goals for canopy vigor, yield and quality; • vineyard floor management (such as planted cover crops vs. resident vegetation vs. tillage); and • nutrient requirements. The strategy is adjusted relative to current season's weather conditions. If the irrigation water source is a stream, the water management strategy shall further include: • documenting irrigation withdrawal volumes and rates used during the growing season with the aim of showing a reduction in relative water use over time to demonstrate that no additional water efficiencies are feasible; • monitoring and tracking soil moisture and rainfall amounts for comparison to irrigation records as part of the water management strategy; • provisions to protect salmon and aquatic wildlife species from instream withdrawals, such as installing and maintaining fish screens; and • provisions around the timing of water removal, such as avoiding withdrawals during drought periods. Vineyard site characteristics (such as soil moisture- holding capacity, slope, irrigation system performance) are considered when developing the strategy. The water management strategy is discussed with the winery.
	3	A water management strategy to guide irrigation scheduling is developed as the growing season progresses that takes into account: • goals for canopy vigor, yield and quality; • vineyard floor management (such as planted cover crops vs. resident vegetation vs. tillage); and • nutrient requirements. If the irrigation water source is a stream, the water management strategy shall further include: • documenting irrigation withdrawal volumes and rates used during the growing season with the aim of showing a reduction in relative water use over time to demonstrate that no additional water efficiencies are feasible; • monitoring and tracking soil moisture and rainfall amounts for comparison to irrigation records as part of the water management strategy; • provisions to protect salmon and aquatic wildlife species from instream withdrawals, such as installing and maintaining fish screens; and • provisions around the timing of water removal, such as avoiding withdrawals during drought periods.

5. Water Management		
Practice	**Ans.**	**Category Description**
		Vineyard site characteristics (such as soil moisture-holding capacity, slope, irrigation system performance) are also considered when implementing the strategy.
	2	A water management strategy is developed to guide irrigation scheduling, but it is not implemented consistently.
	1	No water management strategy is used to guide irrigation management.
5-3. Irrigation System Maintenance	4	The irrigation system is checked for breaks, leaks, and clogs every irrigation. Flow meters are monitored for significant changes in water use. Filters are monitored and cleaned on a regular basis. Irrigation lines are flushed as needed to remove sediment. An automated system is in place to control biological growth (such as algae) in lines, and growth in ponds (if used) is managed if necessary. A preventive maintenance program is in place to ensure regular maintenance is performed and documented on the system. If the irrigation water source is a stream, the irrigation system maintenance program shall further include: • provisions that guide the timing and conditions under which maintenance may occur (such as work on diversions, including installing and servicing pumps and intakes, is only done when salmon are not present instream and in accordance with applicable state, federal, and local laws and regulations; and • guidelines around the timing and conditions when water is withdrawn (such as scheduling timing of water application in specific consideration of crop requirements, daily rainfall amounts, soil types and evapotranspiration rates for the area).
	3	The irrigation system is checked for breaks, leaks, and clogs every other irrigation. Flow meters are monitored for significant changes in water use. Filters are cleaned at least once a year. Irrigation lines are flushed as needed to remove sediment but more than once a year. The lines are cleaned for biological growth as needed (such as algae), and growth in ponds (if used) is managed if necessary. If the irrigation water source is a stream, the irrigation system maintenance program shall further include: • provisions that guide the timing and conditions under which maintenance may occur (such as work on diversions, including installing and servicing pumps and intakes, is only done when salmon are not present instream and in accordance with applicable state, federal, and local laws and regulations; and • guidelines around the timing and conditions when water is withdrawn (such as scheduling timing of water application in specific consideration of crop requirements, daily rainfall amounts, soil types and evapotranspiration rates for the area).
	2	The irrigation system is checked for breaks, leaks, and clogs at least once a month during use. Irrigation lines are flushed annually and cleaned for biological growth.
	1	The irrigation system is checked for breaks, leaks, and clogs once a year or less. Irrigation lines are flushed less than annually and not cleaned for biological growth.

5. Water Management		
Practice	**Ans.**	**Category Description**
5-4. Irrigation System Distribution Uniformity	4	The distribution uniformity (DU) of the irrigation system is checked after installation and at least once every five years. DU is checked appropriately to ensure proper uniformity. Visual inspection of drip lines (for sagging) is done, and corrections are made if necessary. A flow meter is installed, calibrated, and monitored, and water use rate is recorded at least monthly. If needed, actions are taken to improve uniformity through maintenance and/or modifications to the system.
	3	The distribution uniformity of the irrigation system was checked within the last five years by measuring emitter outflows or line pressure differences across the block. A flow meter is installed, calibrated, and monitored. If needed, actions are taken to improve uniformity through maintenance and/or modifications to the system.
	2	The distribution uniformity of the irrigation system was previously checked, but not within the past five years, by measuring emitter outflows or line pressure differences across the block. If needed, actions are taken to improve uniformity through maintenance and/or modifications to the system.
	1	The distribution uniformity of the irrigation system has never been tested.
5-5. Irrigation Scheduling	4	Irrigation scheduling is based on vine water demand and soil moisture availability. Deficit irrigation is practiced as appropriate. Vine water demand is determined by either real time evapotranspiration (ET) measurements on at least a weekly basis (such as surface renewal technology), vine sap flow, vine moisture stress (such as pressure bomb), or ET is calculated using in-field weather station data. Soil moisture availability is determined from knowledge of soil type's soil moisture holding capacity and soil moisture measurement (such as soil moisture probe), and visual canopy assessments. An irrigation schedule is then based on a combination of the above measurements and observations. Soil moisture is monitored in the spring and adjusted to desired level. If the irrigation water source is a stream where salmon occur, irrigation is not conducted during salmon migratory periods. Irrigation should take place during periods of drought or when water withdraw will adversely impact salmon habitat through reduced stream flows or elevated temperatures.
	3	Irrigation scheduling is based on vine water demand determined by calculating ET from weather data from AgWeatherNet or a similar regional weather station, soil moisture measurement, and the soil water holding capacity on at least a weekly basis. The amount of water from precipitation is used to estimate overwintering soil water status, guiding when to initiate irrigation. If the irrigation water source is a stream where salmon occur, irrigation is not conducted during salmon migratory periods. Irrigation should not take place during periods of drought or when water withdraw will adversely impact salmon habitat through reduced stream flows or elevated temperatures.
	2	Irrigation scheduling is determined by qualitative water status measurements (such as vine appearance) only.
	1	Irrigation scheduling is calendar-based, applying the same amount of water at the same time each year.
5-6. Preparing Vines for Winter	4	Irrigation is reduced in a timely manner in early autumn, based on the water management strategy (*Requirement 5-2 Water Management Strategy*), to avoid new growth and induce hardening off, but without overstressing vines. Vine water stress is monitored during the process. The rooting zone is brought to field capacity prior to winterizing the irrigation system if possible.
	3	Irrigation is reduced in a timely manner in early autumn, based on the water management strategy (*Requirement 5-2 Water Management Strategy*), to

5. Water Management		
Practice	**Ans.**	**Category Description**
		avoid new growth and induce hardening off, but without overstressing vines. Vine water stress is monitored qualitatively (such as vine appearance). The soil profile is replenished with water, but it is not known to what depth or if field capacity has been achieved.
	2	Irrigation is reduced near harvest. The soil profile is not recharged.
	1	Vines receive ample water only at end of the season without regard to the vine's need to harden off.
5-7. Pumping Plant Efficiency and Energy Savings	4	The irrigation pump is equipped with a variable speed drive if analysis by pumping experts (such as power company staff) determine installation is economical. Pumping efficiency has been measured within the last three years. Adjustments to improve efficiency were made if necessary. If adjustments are made to pumps in streams where salmon occur, the work is done when salmon are not present and in accordance with applicable state, federal, and local laws and regulations.
	3	Efficiency of the irrigation pump was measured within the last five years and adjustments to improve efficiency were made if necessary. If adjustments are made to pumps in streams where salmon occur, the work is done when salmon are not present and in accordance with applicable state, federal, and local laws and regulations.
	2	Efficiency of the irrigation pump was measured more than five years ago.
	1	The irrigation pump has never been measured for pumping efficiency.
5-8. Water Use	**Metric requirement with numeric input*	Enter the total inches of water applied during the current growing season.

6. Soil and Nutrient Management

Practice	Ans.	Category Description
6-1. Soil Management Plan *Plan details in Appendix A.*	4	A written soil management plan has been developed that satisfies the soil management plan details in Appendix A, Requirement 6-1. The plan is reviewed regularly and modified as needed. The field crew is trained to implement the soil management plan.
	3	A written soil management plan has been developed that satisfies the soil management plan details in Appendix A, Requirement 6-1.
	2	A soil management plan is being developed.
	1	There is no soil management plan for the vineyard.
6-2. Vineyard Floor Management and Erosion Control	4	To enhance water infiltration, reduce soil compaction, add organic matter, and reduce dust, vegetation is allowed to grow between the vine rows or cover crops are planted in every row middle, and vegetation is allowed to grow on vineyard edges and headlands. Tillage is only done if soil surface becomes too uneven for comfortable equipment operation (such as every few years). A vegetation filter strip is maintained between the vineyard and sensitive sites that would be adversely affected by water runoff (such as sediment from erosion, nutrient and pesticide contamination). In regions with sufficient rainfall to cause erosion, water diversions are installed in steep-sloped vineyards.
	3	To enhance water infiltration, reduce soil compaction, add organic matter, and reduce dust, vegetation is allowed to grow between the vine rows, or cover crops are planted, in every other row middle. Tillage is done in the other row middles. In regions with sufficient rainfall to cause erosion, water diversions are installed in steep-sloped vineyards.
	2	The soil surface is clean-tilled between the vine rows once a year.
	1	The soil surface is clean-tilled between the vine rows more than once a year.
6-3. Plant Tissue Analysis	4	Whole leaves (including petiole) sampled at veraison each year, are analyzed for macro- and micronutrients, with trends tracked by comparing sampling records of past years. The vine canopy is visually observed for color and vigor, and the results documented. The results of the tissue analyses and visual assessments are used to determine the vine nutrition program.
	3	Whole leaves (including petiole) sampled at veraison every two to three years, are analyzed for macro- and micronutrients, with trends tracked by comparing sampling records of past years. The vine canopy is visually observed for color and vigor. The results of the tissue analyses and visual assessments are used to determine the vine nutrition program.
	2	Whole leaves (including petiole) are only sampled and analyzed when a problem is suspected. The vine canopy is visually inspected for vigor and color.
	1	Plant tissue analysis is never done.
6-4. Nutrient Management	4	Macronutrients (such as N, P, K) are applied using fertigation or incorporating into the soil. Amounts applied are based on soil tests, tissue samples, yield estimation, quality goals, and vine demand using a 'spoon feeding' approach for nursing small applications during the growing season. Timing is based on vine phenology, evaluation of soil saturation to minimize nutrient runoff, and applications are never made when the vines are dormant. Soil tests and tissue samples are used to determine micronutrient needs (such as Zn and B), and deficiencies are being addressed.

6. Soil and Nutrient Management

Practice	Ans.	Category Description
	3	Macronutrient (such as N, P, K) application rates are based on soil tests, tissue samples, yield estimation, quality goals, and vine demand using split applications (2-3) during the season. Timing is based on vine phenology, evaluation of soil saturation to minimize nutrient runoff, and applications are never made when the vines are dormant. Soil tests and tissue samples are used to determine micronutrient needs (such as Zn and B), and deficiencies are being addressed.
	2	Macronutrient (such as N, P, K) application rates are based on tissue samples and yield estimation, and they are applied in one application.
	1	Vineyard fertilization is based on what was done in the past, and no soil or tissue testing is done to determine nutrient status.
6-5. Soil Erosion from Roads, Ditches and Culverts	N/A	*If region does not have sufficient rainfall to cause erosion concerns, answer N/A.*
	4	In regions with rainfall sufficient to cause erosion, steep roads have been paved or graveled and out-sloped. If graveled, water bars have been installed. Ditches have been grassed or hardened to prevent down-cutting, and culverts are properly sized to accommodate high flows. Outlets have been hardened or energy dissipaters have been installed. In areas where sloped vineyard is near a stream or wetland area where salmon occur, sediment runoff is prevented.
	3	In regions with rainfall sufficient to cause erosion, steep roads have been out- sloped with water bars installed. Ditches have been hardened to prevent down-cutting, and culverts are properly sized to accommodate high flows. In areas where sloped vineyard is near a stream or wetland area where salmon occur, sediment runoff is prevented.
	2	In regions with rainfall sufficient to cause erosion, water bars are installed on steep roads.
	1	Erosion occurs on roads, ditches, and/or at culverts, and no action has been taken to reduce it.
6-6. Nitrogen Application	**Metric requirement with numeric input*	Enter the lbs N/acre for nitrogen applied during the current growing season.
6-7. Phosphorus Application	**Metric requirement with numeric input*	Enter the lbs P/acre for phosphorous applied during the current growing season.
6-8. Potassium Application	**Metric requirement with numeric input*	Enter the lbs K/acre for potassium applied during the current growing season.

7. Pest Management

Practice	Ans.	Category Description
7-1. Pest Management Plan *Plan details in Appendix A.*	4	A pest management plan has been developed and documented that satisfies the integrated pest management plan details in Appendix A, Requirement 7-1. The plan is reviewed regularly and modified as needed. Employees are trained to follow the plan.
	3	A pest management plan has been developed and documented that satisfies the integrated pest management plan details in Appendix A, Requirement 7-1.
	2	A pest management plan based on the concepts of the Integrated Pest Management plan details in Appendix A, Requirement 7-1 is being developed.
	1	No pest management plan has been established for the vineyard other than managing pests based on historical actions.
7-2. Monitoring for Insect and Mite Pests	4	Monitoring for insect and mite pests is done at least once a week using quantitative measures by a hired pest management consultant and/or company employee with training and/or experience in IPM in Washington vineyards and in recognizing new and/or invasive pests (such as Phylloxera and Vine Mealybug). Monitoring for pest natural enemies is done for pests where natural enemies are important control factors. Monitoring records are kept.
	3	Monitoring for insect and mite pests is done at least once every two weeks using quantitative or qualitative measures by a hired pest management consultant and/or company employee. Monitoring records are kept.
	2	Monitoring for insect and mite pests is done at least every three weeks by a chemical company representative.
	1	No structured monitoring program is followed for insect and mite pests.
7-3. Use of Economic Thresholds for Insects and Mites	4	If developed, economic thresholds verified by University research are used to make control decisions for insect and mite pests where they have been established (such as for leafhoppers and spider mites). For other important pests where research-based thresholds do not exist, in-house thresholds have been established (such as for bud and rust mites). For each pest, records are kept of monitoring, any control actions taken, and damage at the end of the season to evaluate the efficacy of the threshold value and control actions.
	3	If developed, economic thresholds verified by University research are used to make control decisions for insect and mite pests where they have been established (such as for leafhoppers and spider mites). Control actions for other important pests are based on visual estimation of pest population levels (such as light, moderate, heavy). For each pest, records are kept of monitoring, any control actions taken, and damage at the end of the season to evaluate the efficacy of the threshold value and control actions.
	2	Control decisions for all insect and mite pests are based on visual estimation of pest population levels (such as light, moderate, heavy).
	1	No thresholds are used to make insect and mite pest control decisions; control actions are based on calendar spraying and/or past history.
7-4. Mealybug Management	4	Employees are trained to recognize and mark locations (e.g., flag, GPS mapping) of grape mealybug (GMB) infestations during pruning, shoot thinning, and harvest. GMB populations are treated with a single insecticide spray at the bud swell stage (delayed dormant period). High populations are treated aggressively with early season drip applied materials and in-season foliar insecticide treatments or through other effective, research proven, management options. Movement of GMB from an infested vineyard to non-infested vineyards is minimized by only working in infested vineyards at the end of the day.

7. Pest Management

Practice	Ans.	Category Description
		Employees are trained to use practices to reduce the likelihood of spread between vineyards such as washing their hands and footwear before leaving and washing down equipment. Grape pomace from an infested vineyard is composted away from vineyards and is not spread in vineyards.
	3	Employees are trained to recognize and mark locations (e.g., flag, GPS mapping) of GMB infestations during pruning, shoot thinning, and harvest. GMB populations are treated with a single pesticide spray at the bud-swell stage (delayed dormant period). High populations are treated aggressively with early season drip-applied materials and in-season foliar pesticide treatments. Movement of GMB from an infested vineyard to non-infested vineyards is minimized by only working in infested vineyards at the end of the day. Grape pomace from an infested vineyard is composted away from vineyards and is not spread in vineyards.
	2	Any GMB infestation found is treated aggressively with pesticide sprays at bud-swell and in-season.
	1	The company has no GMB management program despite having one or more vineyards infested with GMB.
7-5. Powdery Mildew Management	4	Conditions conducive for powdery mildew development are reduced by increasing air flow in the vine canopy through shoot thinning, shoot positioning, sucker removal, and well-timed leaf removal. Good fungicide coverage of susceptible (actively growing) vine tissue and fruit is ensured by canopy vigor management, regular sprayer calibration and timely spray intervals to keep newly expanded tissue protected. Fungicide stewardship is practiced by rotating fungicide active ingredients with different FRAC codes between sprays throughout the season.
	3	Conditions conducive for powdery mildew development are reduced by increasing air flow in the vine canopy through shoot thinning, shoot positioning, and sucker removal. Good fungicide coverage of susceptible (actively growing) vine tissue and fruit is ensured by canopy vigor management, regular sprayer calibration, and timely spray intervals to keep newly expanded tissue protected. Fungicide stewardship is practiced by rotating fungicide active ingredients with different FRAC codes between sprays throughout the season.
	2	Good fungicide coverage of susceptible (actively growing) vine tissue and fruit is ensured by timely spray intervals to keep newly expanded tissue protected. Fungicide stewardship is practiced by rotating fungicide active ingredients with different FRAC codes between seasons.
	1	Powdery mildew management consists of regular fungicide spraying with no consideration given to fungicide stewardship, canopy management, AND sprayer calibration.
7-6. Managing Esca, Botryosphaeria, and Eutypa	4	Cordon and trunk disease inoculum sources (such as dying and dead cordons) are pruned out and removed from the vineyard or destroyed on site (for instance by burning). The size and extent of pruning wounds is minimized, and large wounds are avoided. Pruning is done as late in the dormant season as possible to maximize wound healing. For vineyards with a canker disease problem, pre-pruning and then final follow-up pruning is practiced. A comprehensive vine replacement or cordon retraining program is done to minimize the long-term impact of canker diseases on production.

7. Pest Management

Practice	Ans.	Category Description
	3	Cordon and trunk disease inoculum sources (such as dying and dead cordons) are pruned out and removed from the vineyard or destroyed on site (for instance by burning). Pruning is done as late in the dormant season as possible to maximize wound healing, and large wounds are avoided. A comprehensive vine replacement or cordon retraining program is done to minimize the long-term impact of canker diseases on production.
	2	Pruning is done as late in the dormant season as possible to maximize wound healing. Vine replacement or cordon retraining program is done when time and budget allow to minimize the long-term impact of cordon and trunk diseases on production.
	1	The company does not have a program for managing cordon and trunk diseases or their impact on vineyard production.
7-7. Management of Botrytis Bunch Rot and Sour Rot	4	An integrated disease management program is implemented to manage bunch rots by increasing air circulation in the canopy through shoot thinning, sucker removal and leaf removal. Berry size and splitting are minimized through proper irrigation and nitrogen management. During pruning, if mummy fruit are still present on the vines after harvest it is dropped to the ground and destroyed following best practices (e.g., University Extension guidelines).
	3	Air circulation is increased in the canopy to reduce conditions conducive to bunch rots through shoot thinning, sucker removal or leaf removal. Berry size and splitting are minimized through proper irrigation and nitrogen management.
	2	Air circulation is increased in the canopy to reduce conditions conducive to bunch rots through shoot thinning, sucker removal or leaf removal.
	1	The vineyard is sprayed for bunch rot or sour rot as part of annual disease management. No attempt is made to increase air circulation in the canopy.
7-8. Virus Management	4	The vineyard is comprehensively monitored for virus symptoms after veraison in red varieties and tissue from vines showing symptoms are lab tested. White varieties are randomly tested for virus. Populations of grape mealybug and scale insects, which can vector some viruses, are monitored for and if present controlled as described above (*Requirement 7-4 Mealybug Management*, Rating 4). There is a management plan for removal of virus infected vines from the vineyard.
	3	Tissue from vines showing virus symptoms is lab tested. Populations of grape mealybug and scale insects, which can vector some viruses, are monitored for and controlled if present.
	2	The vineyard is assessed visually for symptomatic vines and the visual assessments are recorded. The vineyard does not treat for grape mealybug GMB or remove virus infected vines.
	1	The vineyard does not have a virus management program.
7-9. Weed Management Plan *Plan details in Appendix A.*	4	An integrated weed management plan has been developed and documented that satisfies the integrated weed management plan details in Appendix A, Requirement 7-9. The plan is reviewed regularly and modified as needed. Employees are trained to carry out the plan.
	3	An integrated weed management plan has been developed and documented that satisfies the integrated weed management plan details in Appendix A, Requirement 7-9.
	2	An integrated weed management plan is being developed that satisfies the integrated weed management plan details in Appendix A, Requirement 7-9.
	1	Vineyard weed management consists of herbicide treatments designed to keep the soil under the vine completely weed-free.

7. Pest Management

Practice	Ans.	Category Description
7-10. Vertebrate Pest Management Plan *Plan details in Appendix A.*	4	A vertebrate pest management plan has been developed and documented that satisfies the vertebrate pest management plan details in Appendix A, Requirement 7-10. The plan is reviewed regularly and modified as needed. Employees are trained to implement it.
	3	A vertebrate pest management plan has been developed and documented that satisfies the vertebrate pest management plan details in Appendix A, Requirement 7-10.
	2	A vertebrate pest management plan is being developed that satisfies the vertebrate pest management plan details in Appendix A, Requirement 7-10.
	1	The company does not have a vertebrate pest management plan.
7-11. Bird Pest Management Plan *Plan details in Appendix A.*	4	A bird pest management plan has been developed and documented that satisfies the bird pest management plan details in Appendix A, Requirement 7-11. The plan is reviewed regularly and modified as needed. Employees are trained to implement the plan.
	3	A bird pest management plan has been developed and documented that satisfies the bird pest management plan details in Appendix A, Requirement 7-11.
	2	A bird pest management plan is being developed that satisfies the concepts of the bird pest management plan details in Appendix A, Requirement 7-11.
	1	The company does not have a bird pest management plan.

8. Materials

Practice	Ans.	Category Description
8-1. Pesticide Use: Material Selection – Regulatory Requirements	4	Category I (signal word DANGER) or Category II (signal word WARNING) pesticides are not used unless required to protect the crop from imminent, severe threat. Pesticide use complies with applicable state, federal, and local laws and regulations, including best practices on labeling. Pesticide selection is based on thorough knowledge of material choices, including registration for use on winegrapes, worker safety, severity of the pest problem, susceptibility of the pest to the pesticide, resistance management by rotating different IRAC, HRAC, or FRAC numbers between sprays or seasons, and any adverse effects on pest natural enemies, if relevant. Practices in the Bee Advisory Box on the pesticide label are followed.
	3	Category I (signal word DANGER) pesticides are not used unless required to protect the crop from imminent, severe threat. Pesticide use complies with applicable state, federal, and local laws and regulations. Pesticide selection is based on thorough knowledge of material choices, including registration for use on winegrapes, worker safety, severity of the pest problem, susceptibility of the pest to the pesticide, and resistance management by rotating different IRAC, HRAC, or FRAC numbers between sprays or seasons. Practices in the Bee Advisory Box on the pesticide label are followed.
	2 ***Mandatory Req.**	Pesticide use complies with applicable state, federal, and local laws and regulations. Pesticide selection is based on registration for use on winegrapes, worker safety, severity of the pest problem, and susceptibility of the pest to the pesticide. Practices in the Bee Advisory Box on the pesticide label are followed.

8. Materials

Practice	Ans.	Category Description
8-2. Pesticide Use: Prohibited Materials and Watch Lists *Details of Prohibited Materials List are located in Appendix B.* *Details of the variance process and variance form are provided in Appendix D.*	4	The company, including individuals responsible for pesticide recommendations, application, mixing and handling, has reviewed all pesticides in use, identified associated risks, and taken steps to mitigate risks. The company has identified pesticides on the Watch List (Appendix B) and taken steps mitigate the risk of listed pesticides. Watch List justification is documentation and must be completed and retained for each certification year in which a Watch List material is used. **To qualify for Level 4, the company documents the basis for use (including monitoring/thresholds or decision triggers), risk mitigation actions, and the alternatives evaluated or attempted to reduce reliance on Watch List materials.** Pesticides on the Prohibited Materials List (Appendix B) are not used. Materials on the Watch List (Appendix B) are not used unless the company is able to justify their use and take necessary actions to mitigate risk. Justification for Watch List materials is documented. **Note:** Use of any Prohibited Materials List active ingredient during the certification year results in failure to meet this mandatory requirement and therefore certification failure for that year. Under extenuating circumstances a variance form may be requested from the Program Manager; approval of any variance is at the sole discretion of the Governance Council and must be given before application. Variance eligibility, process, and documentation requirements are outlined in Appendix D.
	3	The company, including individuals responsible for pesticide recommendations, application, mixing and handling, has reviewed all pesticides in use, identified associated risks, and taken steps to mitigate risks. The company has identified pesticides on the Watch List (Appendix B) and taken steps mitigate the risk of listed pesticides. Watch List justification is documentation and must be completed and retained for each certification year in which a Watch List material is used. **To qualify for Level 3, the company identifies Watch List materials in use and documents justification and risk mitigation actions for each Watch List material used.** Pesticides on Prohibited Materials List (Appendix B) are not used. **Note:** Use of any Prohibited Materials List active ingredient during the certification year results in failure to meet this mandatory requirement and therefore certification failure for that year. Under extenuating circumstances a variance form may be requested from the Program Manager; approval of any variance is at the sole discretion of the Governance Council and must be given before application. Variance eligibility, process, and documentation requirements are outlined in Appendix D.

8. Materials

Practice	Ans.	Category Description
	2 ***Mandatory Req.**	The company, including individuals responsible for pesticide recommendations, application, mixing and handling, exhibits some awareness of specific risk types associated with pesticides used and has reviewed the Watch List (Appendix B). Pesticides on Prohibited Materials List (Appendix B) are not used. **Note:** Use of any Prohibited Materials List active ingredient during the certification year results in failure to meet this mandatory requirement and therefore certification failure for that year. Under extenuating circumstances, a variance form may be requested from the Program Manager; approval of any variance is at the sole discretion of the Governance Council and must be given before application. Variance eligibility, process, and documentation requirements are outlined in Appendix D.

8. Materials

Practice	Ans.	Category Description
8-3. Pesticide Use: Mixing and Loading	4	Mixing and loading complies with applicable state, federal and local laws and regulations. Mixing and loading is done at a designated mixing station designed to limit runoff to surrounding areas. Appropriate tank mixing of different chemicals (such as pesticide and fertilizer) is performed when possible to reduce the number of spray trips and tractor usage. The pesticide label has been read, understood, and all label-specified PPE is used. If tank mixing is done, compatibility is known. A pesticide spill response plan has been developed and workers are trained to implement it. A pesticide spill kit is located near the mixing and loading station.
	3	Mixing and loading complies with applicable state, federal, and local laws and regulations. Mixing and loading is done at a designated mixing station designed to limit runoff to surrounding areas. Appropriate tank mixing of different chemicals (such as pesticide and fertilizer) is performed when possible to reduce number of spray trips and tractor usage. A pesticide spill response plan has been developed. A pesticide spill kit is located near the mixing and loading station.
	2 ***Mandatory Req.**	Mixing and loading complies with applicable state, federal, and local laws and regulations. Mixing and loading is done at a designated mixing station that attempts to limit runoff to surrounding areas. A pesticide spill kit is located near the mixing station.
8-4. Pesticide Use: Sprayer Maintenance and Calibration	4	Sprayers are recalibrated and optimized when conditions change (such as different tractor or tires, canopy size and density, volume delivery, row spacing, slope or soil changes). Nozzles are monitored regularly for clogging and changed when worn, or at least annually on machines with exchangeable nozzles. Sprayer components are checked for adequate performance during annual scheduled maintenance.
	3	Sprayers are recalibrated and optimized at least every 5 sprays. Nozzles are replaced annually on machines with exchangeable nozzles. Sprayer components are checked for adequate performance during annual scheduled maintenance.
	2	Sprayers are recalibrated and optimized annually, and nozzles are replaced at least every two years on sprayers with changeable nozzles.
	1	Sprayer recalibration and optimization is done on a less than annual basis and nozzles are only occasionally checked or not at all.
No 8-5. Pesticide Use: Application	4	Pesticide application complies with applicable state, federal, and local laws and regulations, including mandatory pesticide label requirements. All pesticides are applied by a licensed private pesticide applicator or licensed commercial pesticide applicator who is knowledgeable of the pesticide(s) applied, including details of the label and Safety Data Sheet (SDS). Tractors have closed cabs equipped with appropriate filters.

8. Materials

Practice	Ans.	Category Description
		All pesticide applications are documented, including date, time, weather, and reason for application based on Washington State Department of Agriculture criteria. Pesticides are applied at the correct ground speed to ensure optimum coverage. Water sensitive spray cards are used to assess spray coverage whenever the sprayer is recalibrated and optimized.
	3 ***Mandatory Req.**	Pesticide application complies with applicable state, federal, and local laws and regulations, including mandatory pesticide label requirements. A licensed private pesticide applicator or licensed commercial pesticide applicator is on premises and actively supervises all applications. All pesticide applications are documented, including date, time, weather and reason for application based on Washington State Department of Agriculture criteria.
8-6. Pesticide Use: Employee Safety	**4** ***Mandatory Req.**	The company complies with applicable state, federal, and local laws and regulations pertaining to worker pesticide handling.
8-7. Pesticide Use: Offsite Movement *Plan details in Appendix A.*	4	A pesticide drift management plan has been written that satisfies the pesticide drift management plan details in Appendix A, Requirement 8-7. The sprayer operator is trained to execute the plan. Pesticide applications comply with applicable state, federal, and local laws and regulations, including labeling best practices related to drift and wind speeds.
	3	Sensitive areas have been identified and buffer zones established. Pesticides have been identified that are prone to leaching and/or drift. Practices that minimize drift are used, including nozzle management at vineyard borders and, for reduced canopy sizes, use of drift-reducing nozzles and adjuvants, and wind speed limits for spraying. Pesticide applications comply with applicable state, federal, and local laws and regulations, including labeling best practices related to drift and wind speeds.
	2 ***Mandatory Req.**	Pesticide applications comply with applicable state, federal, and local laws and regulations, and do not exceed wind velocity stated on the label. No consideration is given for drift-sensitive areas, riparian areas, or end rows.
8-8. Pesticide Use: Equipment Cleaning	4	The company complies with all applicable state, federal, and local laws and regulations for equipment cleaning, including labeling best practices. When in use, sprayers are cleaned at the end of each day or in between product changes, whichever is more frequent; the internal system is rinsed in the field with clean water or rinsed with a neutralizing agent, and rinsate is properly used or disposed of. The exterior of the sprayer and tractor is cleaned at a location designed for sprayer cleaning - for example, a pad that is impervious to water and an apron with a sump to capture the rinsate and prevent runoff.

8. Materials		
Practice	**Ans.**	**Category Description**
	3	The company complies with all applicable state, federal, and local laws and regulations for equipment cleaning, including labeling best practices. When in use, sprayers are cleaned at least once a week or in between product changes, whichever is more frequent; the internal system is rinsed in the field with clean water, and rinsate is properly disposed of. The exterior of the sprayer is cleaned at a location designed for sprayer cleaning - for example, a pad that is impervious to water and an apron with a sump to capture the rinsate and prevent runoff.
	2 ***Mandatory Req.**	The company complies with all applicable state, federal, and local laws and regulations for equipment cleaning.
8-9. Pesticide and Hazardous Materials Storage	4	The company complies with all applicable state, federal, and local laws and regulations related to chemical storage, including labeling best practices. Pesticides are stored in a separate, secure, and ventilated building with an impermeable floor and sump to contain leaks and spills, or in storage as otherwise in compliance with applicable state, federal, and local laws and regulations. Warning signs are posted on each exterior wall and at all entrances and exits. The pesticide inventory is documented. Dry pesticides are stored above liquids in their original undamaged containers. When empty, pesticide containers are triple-rinsed and recycled. A pesticide emergency response plan is posted in an appropriate place. Employees are trained to execute the plan, and a spill kit is present.
	3 ***Mandatory Req.**	The company complies with all applicable state, federal, and local laws and regulations related to chemical storage. Pesticides are stored in a separate, secure building with an impermeable floor to contain leaks and spills, or in storage as otherwise in compliance with applicable state, federal, and local laws and regulations. Warning signs are posted on each exterior wall and at all entrances and exits. Dry pesticides are stored above liquids in their original undamaged containers. A pesticide spill kit is present.

9. Whole Farm Ecosystem and Community		
Practice	**Ans.**	**Category Description**
9-1. Land Conversion *Details on HCV Areas in Appendix C.*	N/A	*If there has been no land converted during your ownership or management of the vineyard, answer N/A.*
	4	Land conversion from forest, grassland, or other ecosystem types has been done according to all applicable state, federal, and local laws and regulations. A documented assessment has been done to confirm if property owned by the farm includes areas of High Conservation Value (HCV) (Appendix C). Areas of High Conservation Value (HCV) have not been converted since January 1, 2022. Steps have been taken to conserve areas with similar ecological characteristics to offset at least some of the land converted to agriculture. Wetlands not currently in production remain set aside and protected to the greatest extent operationally feasible. Existing streams and wetlands are protected from new impacts such as filling and excavation, straightening, unnecessary stream crossings, excessive stormwater runoff from agricultural operations and disturbed areas, unnecessary removal of wood or disconnection of off-channel wetlands.
	3	Land conversion from forest, grassland, or other ecosystem types has been done according to all applicable state, federal, and local laws and regulations. Prior to converting sensitive habitat to farmland, consultation is done with the natural resource agency and assessment has been conducted to determine presence of rare, endangered, or threatened species.
	2 ***Mandatory Req.**	Land conversion from forest, grassland, or other ecosystem types has been done according to all applicable state, federal, and local laws and regulations.
9-2. Farmscape Map	4	A farmscape map has been developed that indicates vineyards, major access points, staging areas, roads, wells, in-stream structures, irrigation structures, ponds, and canals, mixing-loading sites, decontamination sites, chemical storage facilities, buildings, non-vineyard habitat (such as waterways, wetlands, trees, hedgerows, swales), environmentally sensitive sites (such as steep slopes, bare soils or other highly erodible land), notable environmental features, and neighboring properties. The map is reviewed annually and updated as needed. Any riparian zones or buffer zones that border a salmon stream must be a minimum width of 35 ft. Any wetland areas are protected by a minimum 25 ft uncultivated buffer zone.
	3	A farmscape map has been developed that indicates vineyards, roads, wells, mixing-loading sites, buildings, non-vineyard habitat (such as waterways, wetlands, trees, hedgerows, swales), and environmentally sensitive sites. Any riparian zones or buffer zones that border a salmon stream must be a minimum width of 35 ft. Any wetland areas are protected by a minimum 25 ft uncultivated buffer zone.
	2	A farmscape map has been developed that indicates vineyards, roads, wells, mixing-loading sites, and buildings.
	1	A farmscape map has not been developed.
9-3. Whole Farm Ecosystem Plan and Goals	4	A documented Whole Farm ecosystem plan and goals have been developed that satisfies the whole farm ecosystem plan details in Appendix A, Requirement 9-3. The plan includes a timeline and priorities. Practices

9. Whole Farm Ecosystem and Community

Practice	Ans.	Category Description
Plan details in Appendix A.		are carefully considered to minimize the need for off-farm inputs. The plan is reviewed regularly and updated as needed.
	3	A documented Whole Farm ecosystem plan and goals has been developed that satisfies the whole farm ecosystem plan details in Appendix A, Requirement 9-3. Practices are carefully considered to minimize the need for off-farm inputs.
	2	A Whole Farm ecosystem plan and goals are being developed that satisfies that will satisfy the whole farm ecosystem plan details in Appendix A, Requirement 9-3. Practices are carefully considered to minimize the need for off-farm inputs.
	1	Whole Farm ecosystem plan has not been developed.
9-4. Regional Ecosystem Management	4	The company has worked internally or with neighboring landowners to develop shared ecosystem goals (such as restoration of degraded wetlands, riparian restoration, watershed protection and management, protect and enhance environmentally sensitive areas, enhance natural corridors), and is implementing practices to meet the goals.
	3	The company has worked internally or with neighboring landowners to develop shared ecosystem goals (such as restoration of degraded wetlands, riparian restoration, watershed protection and management, protect and enhance environmentally sensitive areas, enhance natural corridors), and is in the process of developing practices to meet the goals.
	2	The company is in the process of working internally or with neighboring landowners to develop shared ecosystem goals (such as restoration of degraded wetlands, riparian restoration, watershed protection and management, protect and enhance environmentally sensitive areas, enhance natural corridors).
	1	The company has not considered cooperating with neighbors on any natural resource planning or projects.
9-5. Neighbor Relations	4	The company has a process to build and maintain good neighbor relations that includes: identifying farming practices that may produce a community conflict (such as pesticide applications, timing of machine use, road traffic during harvest) and modifying them where practical to avoid conflict; awareness of and adherence to zoning and right-to-farm ordinances and land use regulations that specifically affect vineyard management practices; exchanging information with neighbors about vineyard management practices; and notification of important vineyard activities. The company is implementing practices to achieve good neighbor relations.
	3	The company has a process to build and maintain good neighbor relations that includes: identifying farming practices that may produce a community conflict (such as pesticide applications, timing of machine use, road traffic during harvest), and modifying them where practical to avoid conflict, and awareness of and adherence to zoning and right-to-farm ordinances and land use regulations that specifically affect vineyard management practices. The company is in the process of developing practices to achieve good neighbor relations.
	2	Company management is familiar with zoning and right-to-farm ordinances and land use regulations that specifically affect vineyard management practices.
	1	Company management is not up to date on zoning and right-to-farm ordinances and land use regulations that specifically affect vineyard management practices.
9-6. Community Involvement	4	The company is involved, through leadership, participation, and financial donations, with community initiatives and organizations such as provision of affordable housing, schools and education programs, public health, Chamber of Commerce, and/or churches.
	3	The company is involved through participation with community initiatives and organizations such as provision of affordable housing, schools and education programs, public health, Chamber of Commerce, and/or churches.

9. Whole Farm Ecosystem and Community		
Practice	**Ans.**	**Category Description**
	2	The company is in the process of becoming aware of community initiatives and organizations in which to become involved in, such as provision of affordable housing, schools and education programs, public health, Chamber of Commerce, and/or churches.
	1	The company is not aware of or involved in community initiatives or organizations.

Chain of Custody Requirements

The requirements in this section are applicable to wineries to allow use of on-product claims or certification logo related to the Sustainable WA program. On-product claims and logo are currently in development. There are a total of 10 requirements that are evaluated through third-party audit of a winery.

Internal Management System and Training		
Practice		**Answer**
CC-1	The Company has a designated person responsible for ensuring compliance with the Sustainable WA program chain of custody requirements.	Yes No N/A
CC-2	Internal training on Sustainable WA program chain of custody requirements is regularly conducted for relevant employees (e.g., those involved in handling incoming shipments, those engaged in wine processing etc.).	Yes No N/A
CC-3	Documents related to chain of custody are maintained for 3 years.	Yes No N/A
Physical Traceability		
Practice		**Answer**
CC-4	There is a process for tracking Sustainable WA program certified grapes upon receipt at the company.	Yes No N/A
CC-5	The company keeps Sustainable WA program certified and non-certified grapes segregated throughout all stages of wine processing.	Yes No N/A
Documentation		
Practice		**Answer**
CC-6	Chain of custody procedures are documented, including a procedure for segregating Sustainable WA program certified and non-certified grapes.	Yes No N/A
CC-7	The company has confirmed the Sustainable WA program certification status of its vineyard suppliers.	Yes No N/A
CC-8	The company maintains records of all sales and purchases of Sustainable WA program certified grapes and wine. Receipts and invoices include date, name of buyer and seller, volume of certified grapes, and reference to the Sustainable WA program.	Yes No N/A
Minimum Threshold		
Practice		**Answer**
CC-9	The company has a process to ensure the minimum threshold of 75% grapes from Sustainable WA program certified vineyards is met before wine is bottled.	Yes No N/A
Claims and Logo Use		
Practice		**Answer**
CC-10	The company complies with the Sustainable WA program's claims and logo use guidelines.	Yes No N/A

Appendix A: Guidance on Documented Plans

The guidance includes information about required plans for the Sustainable WA program. Program requirements include plans needing to be documented and templates will be developed to support program participants in meeting higher category scores for requirements that reference documented plans.

Requirement	Guidance
1-1. Business Plan	A business plan must include the following seven components: • a sustainable vision/mission statement; • company goals, including how to achieve a sustainable profit margin; • tier(s) of grapes to be produced; • milestones; • staffing needed to achieve goals and milestones; • operating budget and market analysis; and • succession plan.
1-2. Risk Management Plan	A risk management plan must include the following four components: • financial risk assessment (such as lending/access to capital); • crop loss risk (such as crop insurance, contingency planning); • winery contract; and • market risk (such as diversification of varieties grown).
6-1. Soil Management Plan	A soil management plan must include the following six components: • a soil map; • identification of sensitive zones and soil types prone to leaching or water runoff; • vineyard floor management practices that enhance soil health, promote water infiltration (such as minimum tillage, encouraging vegetation in row middles, adding compost), and minimize compaction; • monitoring of water infiltration; • soil sampling for nutrients and soil chemistry every 3 to 5 years unless soil conditions (such as extremely low nitrogen) warrant more frequent sampling; and • a vine nutrition program based on nutrient demand, yield, and fruit quality goals.
7-1. Pest Management Plan	A pest management plan must include the following nine components: • use of cultural controls where efficacious (such as fruit zone leaf removal for Botrytis, shoot thinning for leafhoppers, mechanical weed management, habitat management for vertebrate pests); • monitoring protocols for pests and their natural enemies (if relevant); • use of economic thresholds for insect and mite pests (if available); • weather monitoring and use of pest and disease forecast models when available; • use of reduced-risk pesticides; • pesticide resistance management by rotating active ingredients with different FRAC/HRAC/IRAC numbers between applications or seasons; • spot insecticide or herbicide treatments where efficacious; • post-harvest assessment of pest impacts on vine health (e.g., canopy condition); and • strategy for attracting and supporting beneficial insects and other arthropods (e.g., spiders).
7-9. Weed Management Plan	A weed management plan must include the following five components: • no herbicide treatments and/or mechanical weed management between vine rows unless noxious weeds are present; • tolerance of a limited amount of non-invasive weeds under the vine; • herbicide resistance management is practiced by alternating between sprays active ingredients with different HRAC numbers and/or rotating chemical weeding with mechanical weeding; • herbicide selection and/or mechanical weeding is based on efficacy and knowledge of soil interactions (such as leaching characteristics); and • spot spraying and/or mechanical weeding of problem weed areas.
7-10. Vertebrate Pest Management Plan	A vertebrate pest management plan must include the following five components: • managing problems using habitat modification (such as brush minimization, under the vine sanitation); • exclusion (such as fencing); • trapping using non-body piercing traps that do not affect non-target animals; • use of nesting boxes and/or raptor perches to enhance vertebrate predator populations; and • no use of toxic baits or fumigants.

Requirement	Guidance
7-11. Bird Pest Management Plan	A bird pest management plan must include the following four components: • making weekly bird counts to determine when populations increase; • monitoring for bird damage; • netting vines in vineyard locations experiencing significant bird pressure in the past; and • an integrated set of control measures including visual devices (such as balloons, scare crows or reflective tape), attracting raptors that are bird predators, and noise makers (such as propane cannons) in areas where neighbors will not be affected.
8-6. Pesticide Use: Employee Safety	Relevant laws and regulations that are relevant to this requirement on worker pesticide handling include, at minimum the following six aspects: • all worker pesticide handlers have received within the last twelve months the required pesticide handling training from a qualified trainer in a language understood by the worker; • pesticide SDSs are posted at an accessible location frequented by workers; • no-entry signs are posted at all vineyards where the re-entry interval (REI) of the pesticide applied is greater than 48 hours; • 10 or more gallons of decontamination water is provided for one worker and 20 or more gallons for two or more employees. • Handlers are aware of the pesticide application exclusion zone (100 feet for most sprayer types) and ensure all people remain outside the zone; • if anyone enters the zone the application is suspended until they leave the zone.
8-7. Pesticide Use: Offsite Movement	A pesticide drift management plan must include the following five components: • identification and mapping of sensitive areas; • good neighbor policies; • established buffer zones; • identification of pesticides prone to leaching and/or drift; and • use of practices and technologies that minimize offsite movement of pesticides, including nozzle management at vineyard borders and, for reduced canopy sizes, use of drift-reducing nozzles, hooded sprayers, drift- reducing adjuvants, and wind speed limits for spraying.
9-3. Whole Farm Ecosystem Plan and Goals	A whole farm ecosystem plan must include the following six components: • natural corridors that include flowering plants that provide nutrient sources for vineyard pest natural enemies; • enhancement of biodiversity, including a strategy for increasing biodiversity in buffer zones by rotating cover crops and plantings for beneficial insects; • management of invasive species; • riparian areas; • threatened/endangered species; and • practices that support whole farm ecosystem goals, such as improvement of the ecological acreage and subsequent increase and diversification of beneficial animals. If livestock is present at the vineyard (permanent or seasonal, such as grazing livestock), the whole farm ecosystem plan shall further include the following components: • Livestock are managed to avoid excessive soil compaction, erosion and loss of vegetation cover; and • Animal waste management activities to limit fecal contamination of streams and waterways.

Appendix B: Prohibited Materials and Watch Lists (Requirement 8-2)

Requirement 8-2 references the Prohibited Materials and Watch lists. The initial versions of the lists were derived and modified from lists included by the Pesticide Action Network (PAN) List of Highly Hazardous Pesticides (HHP)2, most recently published in March 2024. These versions of the Prohibited Materials and Watch lists are considered a starting point. The Sustainable WA program will evaluate the Prohibited Materials and Watch lists for further updates and development over time.

Watch List Materials: The Sustainable WA program provides a Watch List Pesticide Use Justification Form to document Watch List material use under Requirement 8-2. The form documents the material, the justification for use, and the risk mitigation actions taken, and may be provided by the auditor or the Program Manager upon request. A completed form must be prepared and retained for each year in which a Watch List material is used and made available during audit.

Prohibited Materials List: Prohibited Materials List active ingredients are not permitted for use under certification. Use results in certification failure for that year. In extenuating circumstances, a variance may be requested using the program's variance form and must be approved in writing by the Governance Council prior to application (see Appendix D). The Prohibited Materials and Watch List includes products not legal for application to grapes, but which may be legal for other sites and/or uses that are part of an operation.

Prohibited Materials List

The Sustainable WA program Prohibited Materials List is derived from active ingredients that are listed in international conventions of the Montreal Protocol, Rotterdam Convention on Prior Informed Consent (PIC), and the Stockholm Convention on Persistent Organic Pollutants (POP). Participants should review updates to the applicable state, federal, and international conventions related to Prohibited Materials for the most current lists, categories and thresholds.

Active Ingredient	International Convention
Alachlor	PIC
Aldicarb	PIC
alpha-BHC; alpha-HCH	POP
Azinphos-methyl	PIC
Benomyl	PIC
beta-HCH; beta-BCH	POP
Captafol	PIC
Carbofuran	PIC
Carbosulfan	PIC* (Meets conditions but not formally listed)
Chlordane	PIC, POP
DDT	PIC, POP
Dicofol	POP* (Meets conditions but not formally listed)
DNOC and its salts	PIC
Endosulfan	PIC, POP
Ethylene dibromide; 1,2dibromoethane	PIC
Ethylene dichloride; 1,2Dichloroethane	PIC
Ethylene oxide	PIC
Fenthion / Fenthion > 640g/L	PIC* (Formulations meet conditions but not formally listed)
Fluoroacetamide	PIC
hexachlorobenzene / benzene hexachloride (HCB/BHC)	PIC, POP
Hexchlorocyclohexane; mix of isomers (beta-HCH & alpha-HCH)	PIC
Isoxaben	Salmon-Safe High Hazard Materials List
Lindane	PIC, POP
Mercury and its compounds	PIC
Methamidophos	PIC
Methoxychlor	POP
Methyl bromide	Montreal Protocol
Monocrotophos	PIC
Norflurazon	Salmon-Safe High Hazard Materials List
Paraquat dichloride / Paraquat dichloride >276g/L	PIC* (Meets conditions but not formally listed)
Parathion	PIC

Parathion-methyl	PIC
PCP; Pentachlorphenol	PIC
Phosphamidon	PIC
Sulfluramid	PIC, POP* (Meets conditions but not formally listed)
Thiram in formulations with benomyl and carbofuran	PIC
Tributyltin compounds	PIC
Trichlorfon	PIC

[2] https://pan-international.org/wp-content/uploads/PAN_HHP_List.pdf

Watch List

The Sustainable WA program Pesticide Watch List is based on general categories of materials that have risks of acute toxicity, long term effects, and environmental toxicity. Active ingredients on the Watch List are permitted for use in the Sustainable WA program but the higher category scores for *Requirement 8-2 Pesticide Use: Prohibited Materials and Watch Lists* require participants to provide justification for use of Watch List materials and information on actions taken to mitigate risk. The Sustainable WA can provide a template to support participants in meeting the higher category scores (i.e., category 4) of *Requirement 8-2 Pesticide Use: Prohibited Materials and Watch Lists*. The template indicates which Watch List materials are in use, their justification (e.g., only used after monitoring and pest pressure exceeded thresholds, necessary part of rotation program to prevent pesticide resistance) and risk mitigation actions. To receive a form reach out to your auditor or the Sustainable WA Program Manager.

Details about risk categories included in the Watch List are provided in the table below (as adapted from the PAN List of Highly Hazardous Pesticides (HHP), March 2021). Participants should review updates to the applicable state, federal, and international conventions related to the Pesticide Watch List for the most current lists, categories and thresholds.

Category	List	Description
Acute Toxicity	WHO Ia	'Extremely hazardous' (Class Ia) according to WHO Recommended Classification of Pesticides by Hazard or
	WHO Ib	'Highly hazardous' (Class Ib) according to WHO Recommended Classification of Pesticides by Hazard or
	H330	'Fatal if inhaled' (H330) according to the EU or the Japan Globally Harmonized System (GHS) or
Long Term Effects	EPA carc	Carcinogenic to humans according to US EPA
	IARC carc	Carcinogenic to humans according to IARC
	GHS* carc (1A, 1B)	'Known or presumed human carcinogens' (Category I) according to the EU or the Japan Globally Harmonized System (GHS) or
	IARC prob carc	Probable/likely carcinogenic to humans according to IARC, US EPA or
	EPA prob likel carc	Likely to be Carcinogenic to Humans: At High Doses according to EPA or
	GHS* muta (1A, 1B)	'Substances known to induce heritable mutations or to be regarded as if they induce heritable mutations in the germ cells of humans', 'Substances known to induce heritable mutations in the germ cells of humans' (Category I) according to the EU or the Japan Globally Harmonized System (GHS) or
	GHS* repro (1A, 1B)	'Known or Presumed human reproductive toxicant' (Category I) according to the EU or the Japan Globally Harmonized System (GHS) or
	EU EDC	Pesticides identified as endocrine disrupters in the EU according to Reg. (EU) 2018/605
	GHS* C2 & R2	EU interim criteria as laid down in Reg. (EC) No 1107/2009 'Suspected human reproductive toxicant' (Category 2) AND 'Suspected human carcinogen' (Category 2) according to the EU or the Japan Globally Harmonized System (GHS) or
Environmental Toxicity	very bio acc	'Very bioaccumulative' (BCF >5000) or Kow logP > 5 (existing BCF data supersede Kow log P data) (Indicators and thresholds according to the Stockholm Convention) AND/OR
	very pers water, soil or sediment	'Very persistent' half-life > 60 days in marine- or freshwater or half-life > 180 days in soil ('typical' half-life), marine or freshwater sediment) (Indicators and thresholds according to the Stockholm Convention) AND/OR
	very toxic to aq. Organism	Very toxic to aquatic organisms (LC/EC 50 [48h] for Daphnia spp. < 0,1 mg/l)
	highly toxic bees	'Highly toxic for bees' according to U.S. EPA (LD50, µg/bee < 2) or

Active Ingredient	Risk Category	Acute Toxicity			Long Term Effects									Environmental Toxicity			
		WHO Ia	WHO Ib	H330	EPA carc	IARC carc	GHS* carc (1A, 1B)	IARC prob carc	EPA prob likel carc	GHS* muta (1A, 1B)	GHS* repro (1A, 1B)	EU EDC	GHS* C2 & R2	very bio acc	very pers water, soil or sediment	very toxic to aq. Organism	highly toxic bees
1,3-dichloropropene	Long Term								1								
2,4-D	Long Term												1				
Abamectin	Acute, Environment		1	1													1
Acephate	Environment																1
Acetochlor	Long Term												1				
Acifluorfen, sodium	Long Term								*1*								
Acrinathrin	Environment																1
Acrolein	Acute		1	1													
Alanycarb	Environment																1
Alpha-chlorohydrin	Acute		1														
Aluminum phosphide	Acute, Environment			1													1
Amisulbrom	Environment														1	1	
Amitrole	Long Term												1				
Anthracene oil	Long Term						1										
Anthraquinone	Long Term								1		1						
Arsen and its compounds	Long Term				1	1	1										
Azafenidin	Long Term										1						
Azamethiphos	Environment																1
Azinphos-ethyl	Acute, Environment		1														1
Azocyclotin	Acute, Environment			1										1		1	
Bendiocarb	Environment																1
Benfuracarb	Environment																1
Bensulide	Environment																1
Benthiavalicarb-isopropyl	Long Term								1								
Beta-cyfluthrin	Acute, Environment		1	1													1
Bifenthrin	Long Term, Environment												1				1
Bioresmethrin	Long Term, Environment										1						1
Biphenyl; Diphenyl	Long Term						1										
Blasticidin-S	Acute		1														
Borax; Borate salts ***	Long Term										1						
Boric acid ***	Long Term										1		1				
Brodifacoum	Acute, Long Term	1		1							1						
Bromadiolone	Acute, Long Term	1		1							1						
Bromethalin	Acute, Environment	1												1		1	
Bromophos-ethyl	Acute		1														
Bromoxynil	Acute, Long Term			1							1						
Bromoxynil heptanoate	Long Term, Environment										1			1		1	
Bromoxynil octanoate	Long Term, Environment										1			1		1	
Butachlor	Long Term								1								
Butocarboxim	Acute, Environment		1														1
Butoxycarboxim	Acute		1														
Cadusafos	Acute, Environment		1												1	1	1
Calcium cyanide	Acute	1															
Captan	Long Term								*1*				1				
Carbaryl	Long Term, Environment								1				1				1
Carbendazim	Long Term									1	1						
Carbetamide	Long Term										1						
Chinomethionat; Oxythioquinox	Long Term								1								
Chlorantraniliprole	Environment														1	1	
Chlorethoxyphos	Acute, Environment	1															1
Chlorfenapyr	Environment																1
Chlorfenvinphos	Acute, Environment		1														1
Chlorfluazuron	Environment													1		1	

*****In regards to Boric Acid and Borax; Borate Sal - If used strictly as a foliar boron nutrition (not pesticidal purpose), a Watch List Justification form is not required.**

Active Ingredient	Risk Category	Acute Toxicity			Long Term Effects									Environmental Toxicity			
		WHO Ia	WHO Ib	H330	EPA carc	IARC carc	GHS* carc (1A, 1B)	IARC prob carc	EPA prob likel carc	GHS* muta (1A, 1B)	GHS* repro (1A, 1B)	EU EDC	GHS* C2 & R2	very bio acc	very pers water, soil or sediment	very toxic to aq. Organism	highly toxic bees
Chlormephos	Acute	1															
Chloroform	Long Term								1								
Chlorophacinone	Acute	1															
Chlorophene; 2-benzyl-4chlorophenol	Long Term												1				
Chloropicrin	Acute			1													
Chlorothalonil	Acute, Long Term			1					1								
Chlorotoluron	Long Term												1				
Chlorpropham	Long Term												1				
Chlorpyrifos	Long Term, Environment										1						1
Chlorpyrifos-methyl	Long Term, Environment										1						1
Cholecalciferol	Long Term										1						
Climbazole	Environment																1
Clothianidin	Environment																1
Copper (II) hydroxide	Acute, Environment			1											1	1	
Coumaphos	Acute, Long Term		1	1							1						
Coumatetralyl	Acute		1	1							1						
Creosote	Long Term						1	1	1								
Cyanamide	Long Term												1				
Cyanazine	Long Term												1				
Cyfluthrin	Acute, Environment		1	1													1
Cyhalothrin	Environment																1
Cyhalothrin, gamma	Environment																1
Cyhexatin	Environment													1		1	
Cypermethrin	Environment																1
Cypermethrin, alpha	Environment																1
Cypermethrin, beta	Environment																1
Cyproconazole	Long Term										1						
Daminozide	Long Term								1								
Deltamethrin	Long Term, Environment												1				1
Demeton-methyl (isomere mix of O-methyl and Smethyl)	Acute			1													
Demeton-S-methyl	Acute, Environment		1														1
Diafenthiuron	Environment																1
Diazinon	Long Term, Environment							1									1
Dichlobenil	Long Term												1				
Dichlorprop	Long Term										1						
Dichlorvos; DDVP	Acute, Environment		1	1													1
Diclofop-methyl	Long Term								1								
Dicrotophos	Acute, Environment		1														1
Difenacoum	Acute, Environment	1												1			
Difethialone	Acute, Long Term	1		1							1						
Dimethoate	Environment																1
Dimoxystrobin	Long Term, Environment												1		1	1	
Dinocap	Long Term										1						
Dinotefuran	Environment																1
Dinoterb	Acute, Long Term		1								1						
Diphacinone	Acute	1															
Diquat dibromide	Acute			1													
Diquat dichloride	Acute			1													
Disulfoton	Acute	1															
Diuron	Long Term								1								
Dodine	Acute			1													
Edifenphos	Acute		1														
Emamectin benzoate	Environment														1	1	1

Active Ingredient	Risk Category	Acute Toxicity			Long Term Effects									Environmental Toxicity			
		WHO Ia	WHO Ib	H330	EPA carc	IARC carc	GHS* carc (1A, 1B)	IARC prob carc	EPA prob likel carc	GHS* muta (1A, 1B)	GHS* repro (1A, 1B)	EU EDC	GHS* C2 & R2	very bio acc	very pers water, soil or sediment	very toxic to aq. Organism	highly toxic bees
E-Phosphamidon	Acute	1															
Epichlorohydrin	Long Term						1	1	1				1				
EPN	Acute, Environment	1															1
Epoxiconazole	Long Term								1		1		1				
Esfenvalerate	Environment																1
Ethiofencarb	Acute		1														
Ethion	Acute			1													
Ethirimol	Environment																1
Ethoprophos; Ethoprop	Acute, Long Term	1		1					1								
Ethylene thiourea	Long Term								1		1		1				
Etofenprox; Ethofenprox	Environment														1	1	1
Famphur	Acute		1														
Fenamiphos	Acute, Environment		1	1													1
Fenazaquin	Environment																1
Fenbuconazole	Long Term												1				
Fenbutatin-oxide	Acute, Environment			1											1	1	
Fenchlorazole-ethyl	Long Term						1										
Fenhexamid	Acute			1													
Fenitrothion	Long Term, Environment												1				1
Fenoxycarb	Long Term, Environment								1								1
Fenpropathrin	Acute, Environment			1													1
Fenpyroximate	Acute			1													
Fentin acetate; Triphenyltin acetate	Acute, Long Term			1									1				
Fentin hydroxide; Triphenyltin hydroxide	Acute, Long Term			1					1				1				
Fenvalerate	Environment																1
Ferbam	Acute			1													
Fipronil	Environment																1
Flocoumafen	Acute, Long Term	1		1							1						
Fluazifop-butyl	Long Term										1						
Fluazinam	Acute			1													
Fluazolate	Environment													1		1	
Flubendiamide	Environment														1	1	
Flucythrinate	Acute, Environment		1														1
Flufenoxuron	Environment													1		1	
Flumetralin	Environment													1		1	
Flumioxazin	Long Term										1						
Flupyradifurone	Environment																1
Flusilazole	Long Term										1						
Flusulfamide	Acute			1													
Fluthiacet-methyl	Long Term								1								
Fluvalinate	Acute			1													
Folpet	Acute, Long Term			1									1				
Forchlorfenuron	Long Term												1				
Formaldehyde	Long Term					1			1								
Formetanate	Acute, Environment		1	1													1
Fosthiazate	Environment																1
Furathiocarb	Acute		1	1													
Furfural	Long Term								*1*								
Furilazole	Long Term								1								
Glufosinate-ammonium	Long Term										1						
Glyphosate	Long Term							1									
Halfenprox	Environment													1		1	
Halosulfuron-methyl	Long Term									1							

Active Ingredient	Risk Category	Acute Toxicity			Long Term Effects									Environmental Toxicity			
		WHO Ia	WHO Ib	H330	EPA carc	IARC carc	GHS* carc (1A, 1B)	IARC prob carc	EPA prob likel carc	GHS* muta (1A, 1B)	GHS* repro (1A, 1B)	EU EDC	GHS* C2 & R2	very bio acc	very pers water, soil or sediment	very toxic to aq. Organism	highly toxic bees
Haloxyfop-methyl (unstated stereochemistry)	Long Term								1								
Heptenophos	Acute, Environment		1														1
Hexaflumuron	Environment																1
Hexythiazox	Long Term								1								
Hydrogen cyanide**	Acute	1		1													
Imazalil	Long Term								1								
Imazalil sulfate	Long Term								1								
Imidacloprid	Environment																1
Imiprothrin	Environment																1
Indoxacarb	Environment																1
Iprodione	Long Term								1								
Iprovalicarb	Long Term								1								
Isopyrazam	Long Term, Environment								1						1	1	
Isoxaflutole	Long Term								1								
Isoxathion	Acute, Environment		1														1
Kresoxim-methyl	Long Term								1								
Lactofen	Long Term								*1*								
Lambda-cyhalothrin	Acute, Long TermEnvironment			1									1				1
Linuron	Long Term										1		1				
Lufenuron	Environment													1	1	1	
Magnesium phosphide	Acute			1													
Malathion	Long Term, Environment							1									1
Mancozeb	Long Term								1		1	1	1				
Maneb	Long Term								1				1				
Mecarbam	Acute		1														
Mecoprop; MCPP	Long Term												1				
Mepanipyrim	Long Term								1								
Meptyldinocap	Long Term										1						
Metaflumizone	Environment													1	1		1
Metam-potassium	Long Term								1								
Metam-sodium	Long Term								1				1				
Methabenzthiazuron	Environment																1
Methidathion	Acute, Environment		1														1
Methiocarb	Acute, Environment		1														1
Methomyl	Acute, Environment		1														1
Metiram	Long Term								1				1				
Metribuzin	Long Term												1				
Mevinphos	Acute, Environment	1															1
Milbemectin	Environment																1
Molinate	Long Term												1				
MON 4660; AD 67	Long Term								1								
Naled	Environment																1
Nicotine	Acute		1	1													
Nitenpyram	Environment																1
Nitrobenzene	Long Term										1		1				
Noviflumuron	Long Term								1								
Omethoate	Acute, Long TermEnvironment		1										1				1
Oryzalin	Long Term								1								
Oxadiazon	Long Term								1								
Oxamyl	Acute, Environment	1		1													1
Oxydemeton-methyl	Acute, Environment		1														1
Oxyfluorfen	Long Term								1								
Paraffin oils; mineral oils	Long Term						1										
Pendimethalin	Environment													1	1		

Active Ingredient	Risk Category	Acute Toxicity			Long Term Effects									Environmental Toxicity			
		WHO Ia	WHO Ib	H330	EPA carc	IARC carc	GHS* carc (1A, 1B)	IARC prob carc	EPA prob likel carc	GHS* muta (1A, 1B)	GHS* repro (1A, 1B)	EU EDC	GHS* C2 & R2	very bio acc	very pers water, soil or sediment	very toxic to aq. Organism	highly toxic bees
Permethrin	Long Term, Environment								1								1
Phenthoate	Environment																1
Phorate	Acute, Environment	1															1
Phosmet	Environment																1
Phosphine	Acute			1													
Pirimicarb	Long Term, Environment								1						1	1	
Pirimiphos-methyl	Environment																1
Potasan	Acute			1													
Prallethrin	Environment																1
Procymidone	Long Term								1				1				
Profenofos	Environment																1
Profoxydim	Long Term												1				
Propachlor	Long Term								1								
Propargite	Long Term, Environment								1					1		1	
Propetamphos	Acute		1														
Propiconazole	Long Term										1						
Propineb	Long Term								1								
Propoxur	Long Term, Environment								1								1
Propylene oxide, Oxirane	Long Term						1		1	1							
Prothiofos	Environment													1		1	
Pymetrozine	Long Term								1								
Pyraclofos	Environment																1
Pyraflufen-ethyl	Long Term								1								
Pyrazachlor	Long Term								1								
Pyrazophos	Environment																1
Pyrazoxon	Acute			1													
Pyrethrins, Pyrethrum extract	Environment																1
Pyridaben	Environment																1
Pyridalyl	Environment													1	1	1	
Pyridiphenthion	Environment																1
Pyrimidifen	Acute			1													
Quinalphos	Long Term, Environment												1				1
Quinoclamine	Environment																1
Quinolin-8-ol; 8hydroxyquinoline	Long Term										1						
Quinoxyfen	Environment													1		1	
Quizalofop-p-tefuryl	Long Term												1				
Resmethrin	Long Term, Environment								1				1				1
Rotenone	Environment																1
Silafluofen	Long Term, Environment										1						1
Simazine	Long Term												1				
Sodium cyanide	Acute		1														
Sodium fluoroacetate (1080)	Acute	1		1													
Spinetoram	Environment																1
Spinosad	Environment																1
Spirodiclofen	Long Term						1		1								
Strychnine	Acute		1														
Sulfotep	Acute	1															
Sulfoxaflor	Environment																1
Tau-fluvalinate	Acute			1													
TCMTB	Acute			1													
Tebuconazole	Acute, Long Term			1									1				

Active Ingredient	Risk Category	Acute Toxicity			Long Term Effects									Environmental Toxicity			
		WHO Ia	WHO Ib	H330	EPA carc	IARC carc	GHS* carc (1A, 1B)	IARC prob carc	EPA prob likel carc	GHS* muta (1A, 1B)	GHS* repro (1A, 1B)	EU EDC	GHS* C2 & R2	very bio acc	very pers water, soil or sediment	very toxic to aq. Organism	highly toxic bees
Tebupirimifos	Acute, Environment	1													1	1	
Tefluthrin	Acute, Environment		1	1													1
Temephos	Environment																1
Tepraloxydim	Long Term												1				
Terbufos	Acute	1															
Terrazole; Etridiazole	Long Term								1								
Tetrachlorvinphos	Long Term, Environment								1								1
Tetraconazole	Long Term												1				
Tetramethrin	Environment																1
Thiabendazole	Long Term								*1*		1						
Thiacloprid	Long Term								1		1						
Thiamethoxam	Environment																1
Thiodicarb	Long Term, Environment								1								1
Thiofanox	Acute, Environment		1														1
Thiometon	Acute, Environment		1														1
Thiophanate-methyl	Long Term								1								
Thiourea	Long Term												1				
Tioxazafen	Long Term								1								
Tolfenpyrad	Environment													1		1	
Tolylfluanid	Acute, Long Term			1					1								
Tralomethrin	Environment																1
Triadimenol	Long Term										1						
Tri-allate	Environment														1	1	
Triazophos	Acute		1														
Tribufos, Tribuphos	Long Term								*1*								
Trichloroacetic acid	Long Term												1				
Tridemorph	Long Term										1						
Triflumizole	Long Term										1						
Trifluralin	Long Term, Environment												1	1			
Validamycin	Environment																1
Vamidothion	Acute, Environment		1														1
Vinclozolin	Long Term										1		1				
Warfarin	Acute, Long Term		1	1							1						
XMC	Environment																1
zeta-Cypermethrin	Acute, Environment		1														1
Zinc phosphide	Acute		1														
Ziram	Acute			1													
Z-Phosphamidon	Acute	1															

Appendix C: Areas of High Conservation Value (Requirement 9-1)

Requirement 9-1 Land Conversion for the Sustainable WA Winegrape Standard references sensitive habitat as well as areas of High Conservation Value (HCV). For an initial approach to the certification program, the HCV concept could be used to help define farm and farm areas that require assessment or that are not converted as part of the sustainability *for Requirement 9-1 Land Conversion*. Further explanation is provided below on a proposed approach leveraging the HCV concept that will be refined through stakeholder feedback and the certification pilot project.

International sustainability certification programs, including Forest Stewardship Council, have developed an approach for defining areas of High Conservation Value (HCV). The original definitions of HCV applied only to forests but is proposed to apply to any ecosystem type for the purposes of the Sustainable WA Winegrape Standard.

The Six Categories of High Conservation Value (HCV) Areas3

HCV1. Species Diversity
Concentrations of biological diversity including endemic species, and rare, threatened or endangered species, that are significant at global, regional or national levels.

HCV2. Landscape Level Ecosystems
Large landscape-level ecosystems, ecosystem mosaics and Intact Forest Landscapes that are significant at global, regional or national levels, and that contain viable populations of the great majority of the naturally occurring species in natural patterns of distribution and abundance.

HCV3. Ecosystems and Habitats
Rare, threatened, or endangered ecosystems, habitats or refugia.

HCV4. Ecosystem Services
Basic ecosystem services in critical situations, including protection of water catchments and control of erosion of vulnerable soils and slopes.

HCV5. Community Needs
Sites and resources fundamental for satisfying the basic necessities of local communities or indigenous peoples (for livelihoods, health, nutrition, water, etc...), identified through engagement with these communities or indigenous peoples.

HCV6. Cultural Values
Sites, resources, habitats and landscapes of global or national cultural, archaeological or historical significance, and/or of critical cultural, ecological, economic or religious/sacred importance for the traditional cultures of local communities or indigenous peoples, identified through engagement with these local communities or indigenous peoples.

[3] Modified from HCV Network guidance "Common Guidance for the Identification of High Conservation Values" https://hcvnetwork.org/wp-content/uploads/2018/03/HCVCommonGuide_English.pdf

Appendix D: Variance Process (Requirement 8-2. Pesticide Use: Prohibited Materials and Watch Lists)

Requirement 8-2 (Pesticide Use: Prohibited Materials and Watch Lists) references a Prohibited Materials List, use of any Prohibited Materials List active ingredient during the certification year results in failure to meet this mandatory requirement and therefore certification failure for that year. In limited, extenuating circumstances, a variance may be requested before application and considered through the process described below. This appendix defines what a variance is, when it may be requested, and the approval process and documentation expectations.

Variance Definition

A variance is a case-by-case, pre-approved exception to the Prohibited Materials requirement under Requirement 8-2. A variance is not retroactive and is not intended to allow routine use of prohibited materials. If granted, a variance applies only to the specific situation, vineyard/block(s), product/active ingredient(s), and timeframe approved by the Governance Council.

When a Variance May Be Requested

A variance may be requested only when all of the following apply:

- The circumstance is extenuating and not routine.
- Reasonable alternatives have been evaluated and are not feasible for the situation.
- The request is submitted prior to application.

When a Variance May Not Be Used

A variance may not be used in the following situations:

- After-the-fact requests (no retroactive variances).
- Routine rotations or convenience
- As a substitute for planning or standard practice.

Variance Request and Approval Process

To request a variance, the applicant requests the variance form from the Program Manager and submits a completed form with supporting documentation prior to application.

Complete requests are forwarded to the Governance Council for review and decision. The Governance Council may approve, deny, or approve with conditions. The Program Manager will provide a response within 48–72 hours of receiving a complete request, excluding weekends and holidays. Any approval must be documented in writing and retained in program records and by the applicant for audit purposes.

Outcomes and Recordkeeping

Approved variances apply only as documented in the Governance Council decision, including any conditions. Any use outside the approved scope voids the variance approval and is treated as prohibited use. Denied variance requests mean that any use of the prohibited material during the certification year results in certification failure for that year.

All variance requests, supporting documentation, and decisions must be retained by the program. Applicants must retain the written approval (if granted) and provide it during audit.