

| Year 0 Essential Criteria | | | | | |
|--|---|-----|----|-----|----------|
| ID | Criteria | yes | no | n/a | Comments |
| CHAPTER A: SETTING THE SUSTAINABILITY FOUNDATION | | | | | |
| Outcome A.1. Compliance with law and applicable regulations | | | | | |
| A.1 | Growers identify all applicable laws and regulations to their operations and their region and understand how they apply to production activities. | | | | |
| A.2 | Growers ensure that vineyard and farm operations are not in violation of national, provincial, regional or local environmental laws or associated administrative rules or requirements, as determined by any regulatory agency through an enforcement action. | | | | |
| A.3 | Growers demonstrate that surface water and groundwater use follow applicable law and regulations. Stored volumes, withdrawal rates, and annual water consumption are within the parameters specified in the use license/approval held. | | | | |
| Outcome A.2. Commitment to sustainability | | | | | |
| A.4 | Growers have formally integrated sustainability into the business strategy (e.g. company mission, vision, and values) and have included the sustainability commitment/policy in employee orientation and handbook (if applicable). | | | | |
| A.5 | Growers have one or more persons responsible for continuously maintaining certification management efforts. | | | | |
| Outcome A.3. Baseline information and record keeping | | | | | |

| | | | | | |
|---|--|--|--|--|--|
| A.7 | <p>Growers have a description of baseline information that includes:</p> <ul style="list-style-type: none"> a. Total area of the property, total production area, and total area of natural ecosystems. b. Crop variety, crop density, and crop management practices. c. Harvest and yield records for the last three years or since the vineyard was established if that was less than three years. d. Estimated production and yield volumes per production unit for the current or upcoming season. e. Input use per production unit or per product produced (Examples of inputs include synthetic and organic fertilizers and pesticides, water, energy (electrical and fuels for machinery), labour, and other materials). | | | | |
| Outcome A.4. Vineyard Management Plan | | | | | |
| A.10 | <p>Growers design and implement a vineyard management plan to organize all actions and measures designed to improve the sustainability of their farms and its compliance with the SWBC standards including general guidelines, expected results, deadlines and responsible parties, progress milestones for multiple-year implementation, policies, work calendars, and other specific plans as required by this standard. The vineyard management plan must include information for the following topics:</p> <ul style="list-style-type: none"> a. protection of natural ecosystems, biodiversity and natural resources (Conservation plan – Criterion B.33); b. soil management (Erosion control plan – Criterion B.4 and Soil management plan – Criterion C.3). c. nutrient management (Nutrient management plan – Criterion C.9). d. integrated pest management (IPM) and agrochemical management (IPM plan – Criterion D.1). e. occupational health and safety (Health and safety plan – Criterion F.13). f. succession issues (Succession plan – Criterion F.20). | | | | |
| CHAPTER B: WATERSHED MANAGEMENT AND CONSERVATION | | | | | |
| Outcome B.1. Protection of water sources | | | | | |

| | | | | | |
|--|--|--|--|--|--|
| B.1 | Growers identify all water sources used and all permanent and seasonal water courses, wetlands, and other aquatic ecosystems, and their related protection zones on property maps of conservation features (including surface and groundwater). | | | | |
| B.2 | Growers identify the water bodies affected by their activities either directly (within property boundaries) or indirectly (the next downstream waterbody that would receive any waters running off the vineyard). | | | | |
| B.3 | Growers ensure that productive activities do not contaminate, degrade or destroy water sources. | | | | |
| Outcome B.2. Control of erosion | | | | | |
| B.4 | Growers develop an erosion control plan to organize and implement all the actions and best practices to minimize soil erosion and control runoff water. The plan includes general guidelines, expected results, deadlines and responsible parties, and progress milestones for multiple-year implementation. This plan must be included as part of the Vineyard Management Plan (see criterion A.10). | | | | |
| B.5 | Growers implement measures to minimize erosion and runoff from roads, such as: - avoiding steep slopes and out-slope when necessary; - paving steep and/or heavy use roads; - grassing dirt roads when feasible; - posting speed limit signs on main vineyard access roads; and/or - implementing appropriate structures such as culverts, turnouts, drop boxes, etc. | | | | |

| | | | | | |
|--|--|--|--|--|--|
| B.6 | <p>Growers implement measures to minimize erosion and runoff from vineyard blocks and avenues, such as:</p> <ul style="list-style-type: none"> - inspecting vineyard blocks and avenues before and after major storm events; - re-vegetating steep areas; - terracing, contour farming, and strip-cropping; - installing runoff diversion ditches and canals, with drop boxes and other structures to control water velocity and capture sediment; - implementing sediment control basins; - filter strips; and/or - minimization of herbicide use. | | | | |
| B.7 | <p>Growers implement measures to minimize soil compaction, such as:</p> <ul style="list-style-type: none"> - avoiding the use of heavy farm machinery when soils are susceptible to erosion, compaction, or other damage; - planting deep-rooted crops or cover crops in high traffic area; - minimizing mechanical cultivation; and/or - preventing the entrance of heavy equipment into the vineyard during wet soil conditions. | | | | |
| Outcome B.3. Protection and restoration of Waterways, Wetlands and Riparian Buffers | | | | | |

| | | | | | |
|------|--|--|--|--|--|
| B.14 | <p>Growers avoid the following activities in water courses, wetlands, and other aquatic ecosystems, or within 30 meters of them:</p> <ul style="list-style-type: none"> a. Mining or soil removal. b. Deforestation and elimination of vegetative cover, and removal of snags and trunks that are habitat for fish and other aquatic life. c. Dumping solid waste or untreated wastewater, including water for washing agricultural facilities and stables. d. Dumping of hazardous waste (according to Annexes I and II of the 1992 Basel Convention) in soils and water bodies. e. Construction of impoundments. stream channelization. adding fill. extraction of aggregates for construction industry. or in any other way changing the depth or direction of flow of a water body. f. Draining or drying of water bodies or wetlands through filling, excessive water withdrawal or other means. g. Pollution of aquatic ecosystems that significantly alters their chemistry or species composition. h. Application of agrochemicals or fire, except for the control of invasive plant species or restoration purposes, and then only if governed by a plan developed by a competent professional. i. Installation of filling/washing stations. | | | | |
|------|--|--|--|--|--|

| | | | | | |
|--|--|--|--|--|--|
| B.15 | <p>Growers establish and maintain vegetated protection zones next to all permanent water bodies, springs, wetlands and other aquatic ecosystems. The buffer strips and protection zones have the following characteristics:</p> <p>a. They are 10 meters wide (measured from the edge of the water body or wetland to the outer edge of the strip or zone) on slopes less than eight percent, and 15 meters wide on slopes greater than or equal to eight percent, or around all naturally occurring springs.</p> <p>b. They are primarily native mix of herbaceous vegetation, shrubs, trees, at least as high as the nearby crop.</p> <p>c. Pesticides (including herbicides) and fertilizers are not applied within or on the buffer strips and protection areas.</p> <p>d. Vegetation in these areas are not cut, removed, or otherwise disturbed unless it proves to be a threat to human health, biodiversity, or the environment, or is proven to harbor a pest or disease that threatens grape production.</p> | | | | |
| B.16 | Growers keep roads, trails and other infrastructure that crosses or abuts water courses, wetlands, and other aquatic ecosystems and their protection zones to the minimum necessary for production activities. | | | | |
| B.17 | Growers obtain all the necessary legal permits for infrastructure, and it is designed to avoid impacts to aquatic life and water quality. | | | | |
| Outcome B.4. Conservation of landscape-level biodiversity | | | | | |
| B.25 | Growers identify all-natural ecosystems (map A.9.) and protected areas (as designated by local authorities) within or adjacent to the operation. | | | | |
| B.26 | Growers do not destroy any natural ecosystems as of the initial engagement date for certification with the SWBC Program. | | | | |
| B.27 | Where feasible, growers maintain and protect large non-crop trees, unless they pose a direct threat to human and infrastructure safety. | | | | |

CHAPTER C: SOIL AND NUTRIENT MANAGEMENT**Outcome C.1. Soil management**

| | | | | | |
|-----|--|--|--|--|--|
| C.1 | Growers send soil samples to a lab for analysis at least once every three years. Laboratory analysis should include at a minimum include organic matter content, soil organic carbon, bulk density, pH, cation exchange capacity, electrical conductivity, soil water holding capacity, chlorides, and macronutrients and principal micronutrients as recommended. | | | | |
| C.2 | Growers send irrigation water samples for laboratory analysis at least once every five years if they have their own water system (well water); otherwise they request the water analysis results to their local purveyor. Analysis include electrical conductivity (soluble salts), pH, alkalinity, and presence of heavy metals. | | | | |
| C.3 | Growers develop and implement a soil management plan to identify specific practices for conserving soils, preventing soil loss and degradation, and maintaining and enhancing soil fertility. Growers should seek the support of experts to help develop any of the elements of this plan. The plan includes: a. the identification of areas susceptible to erosion, compaction, or other types of soil degradation (see Criterion B.4); b. the identification of naturally low-fertility or other types soils that require special management to maintain or improve crop health; c. soil conservation actions to minimize soil degradation and restore soil health for the areas identified in points a and b, and for the vineyard in general; d. a soil sampling plan for laboratory analysis based on soil types and production goals, and the correct sampling techniques for the desired analysis; e. records of soil and water analysis within the last three years; This plan must be included as part of the Vineyard Management Plan (see criterion A.10). | | | | |

Outcome C.2. Nutrient management

| | | | | | |
|------|--|--|--|--|--|
| C.8 | <p>Growers minimize the environmental risks of fertilizer use by implementing best practices, such as:</p> <ul style="list-style-type: none"> - using optimum fertilizer rates and sources to reduce losses by leaching and volatilization; - selecting optimum fertilizer application equipment and application techniques; - calibrating equipment for mixing and applying fertilizers; - properly storing organic and/or synthetic fertilizers; and/or - using local fertilizer sources as much as possible. | | | | |
| C.9 | <p>Growers develop a nutrient management plan and incorporate it into their soil and fertility management plan, that:</p> <ul style="list-style-type: none"> a. identifies nutrient needs and fertilization timing; b. keep records of tissue and fruit quality analysis; c. includes actions to enhance fertilization management and nutrient availability for vines; d. documents for all nutrient applications and any changes and/or deviations from the plan; and e. is in accordance with the requirements of the Minister's Regulation – Code of Practice for Agricultural Environmental Management. <p>This plan must be included as part of the Vineyard Management Plan (see criterion A.10).</p> | | | | |
| C.10 | <p>Growers use tissue analysis as a tool at bloom-time and/or veraison to obtain a fuller-picture of the vine nutrient status, as necessary.</p> | | | | |

CHAPTER D: INTEGRATED PEST MANAGEMENT

Outcome D.1. Integrated pest management

| | | | | | |
|-----|---|--|--|--|--|
| D.1 | <p>Growers develop, implement, and document an integrated pest management plan as the first resource to manage weed and phytosanitary conditions of vineyards, to ensure optimal productivity and quality. The IPM plan includes:</p> <ul style="list-style-type: none"> a. The identification of the weeds, pests and diseases that occur in the vineyard based on observations, historical records, technical documents, and expert advice. Each pest and disease should be described in terms of their interaction with grapevines, life cycles, natural predators, preferred food and environment requirements; and any other information as considered relevant. b. A description of the physical, biological, chemical and other prevention and control mechanisms for each weed, pest and disease. c. The identification of intervention [pest] thresholds, those levels of pest and disease outbreaks that trigger different control mechanisms for each pest and disease. d. A weed, pest and disease monitoring plan, as described in criterion D.2. e. The mechanisms to be employed for capturing information about weed, pest and disease prevention and control and analyzing it to determine the results and future actions. f. A training plan that defines the training that vineyard management and workers will need to correctly implement the IPM program and sets out how and when training will be carried out. g. A system to track the beneficial effects of biodiversity—insects, plants, and animals—so that these can be protected and increased, and that the negative effects of production activities on them can be avoided. <p>This plan must be included as part of the Vineyard Management Plan (see criterion A.10).</p> | | | | |
|-----|---|--|--|--|--|

| | | | | | |
|-----|--|--|--|--|--|
| D.2 | <p>Growers implement a weed and pest monitoring system as part of their IPM plan that includes:</p> <ul style="list-style-type: none"> a. the different methods for observing and, where necessary, calculating the size of pest populations and disease outbreaks, and the damage they are causing in vineyards; b. the frequency of vineyard pest and disease monitoring activities; c. the tools and systems for recording monitoring data and later analyzing them to determine if pests and diseases are exceeding thresholds; d. mechanisms to carry out follow-up monitoring after pest prevention and control techniques are implemented to determine their effectiveness; e. include a field inspection to monitor insect, mite, weeds, disease and vertebrate pests during growing season and according to the stage of vine growth; and f. written records of IPM activities, results, and pest and disease incidents for at least three years. | | | | |
| D.3 | <p>When synthetic pesticides are used, growers ensure to:</p> <ul style="list-style-type: none"> a. use the substances with the lower toxicity and persistence as possible; b. apply the treatments to the smallest possible area to achieve control (localized applications); c. implement measures and/or physical barriers to avoid spray drift; and d. respect all buffer zones next to water bodies and ecosystems. | | | | |

| | | | | | |
|-----|--|--|--|--|--|
| D.4 | <p>Growers keep records of all pesticide applications (including natural and organic substances) that include at least the following information:</p> <ul style="list-style-type: none"> a. application place (vineyard blocks) and area (acres or ha); b. application date and time of day; c. commercial name and active ingredient; d. total quantity applied and amount of water or other mix ingredient, if applicable; e. application method, and equipment identification if available; f. target pest; g. crop stage and harvest date; h. weather conditions; and i. person that recommended the application. | | | | |
| D.5 | <p>Growers protect bees and other beneficial insects during pesticide applications by:</p> <ul style="list-style-type: none"> a. not spraying on or close to beehives and other potential forage and habitat resources for beneficial organisms. b. not applying pesticides harmful to pollinators when plants (including weeds) are in bloom; and c. applying pesticides at times when pollinators are not as active, for example, at dusk and dawn. | | | | |
| D.6 | <p>Growers have a system in place to manage or eliminate offsite spray drift from pesticide operations, or both. The system includes:</p> <ul style="list-style-type: none"> a. training of pesticide application teams on drift minimization or avoidance techniques; b. using the proper equipment, especially nozzles, for the types of substances applied; and c. monitoring conditions such as wind speed, humidity, radiation, and rainfall, and applying when these are optimum to avoid spray drift. | | | | |
| D.7 | <p>Growers comply with buffer zone and no-application zone requirements as indicated in pesticide labels, and in this standard.</p> | | | | |

| | | | | | |
|------|---|--|--|--|--|
| D.8 | Growers maintain and calibrate mixing and application equipment at the beginning of each season and where relevant whenever water output/ha changes based on height of canopy being sprayed. See Chapter 7 of the BCWGC Best Practices Guide for a guidance on how to calibrate sprayers. | | | | |
| D.9 | Growers ensure that mixing, loading, transporting, and cleaning pesticide and fertilizer application equipment do not contaminate the environment through spillage or the discharge of leftover pesticide mix, or equipment wash water to the environment. Vineyards have infrastructure in place to capture, and if necessary, treat all equipment wash water and retain and clean up chemical spills. | | | | |
| D.10 | Growers store pesticides safely in a locked building, with ready access to safety and fire protection equipment. Storage areas are constructed to prevent liquid products from flowing directly into streams or rivers in the case of spills, a fire or an explosion. Follow B.C. Min of Agriculture provincial rules. | | | | |
| D.11 | Growers store pesticides in their original containers. If containers are damaged, pesticides are stored in another suitable container and a replacement label is obtained from the supplier. Follow B.C. Min of Agriculture provincial rules. | | | | |
| D.12 | Growers triple wash all empty pesticide containers and use wash water as part of the pesticide mix to be applied. Empty pesticide containers are returned to vendors for recycling. If vendors do not accept empty containers for products they have sold, vineyards store containers in a locked area until such time they can be disposed of at authorized collection sites or according to legally sanctioned methods. | | | | |
| D.13 | Growers ensure that liquid and dry materials are stored separately, and that dry materials cannot be contaminated by spilled products. | | | | |
| D.14 | Growers ensure that a spill clean-up kit is available in each pesticide or hazardous substances storage. | | | | |

| | | | | | |
|------|---|--|--|--|--|
| D.15 | Growers ensure that emergency response numbers are readily available to all workers in the operation. | | | | |
| D.16 | Growers implement a safety training policy and program for field workers handling pesticides that: a. focuses on reducing the risks to farm worker safety; b. is designed and carried out by competent professionals in the field; c. includes information about applicable law and regulations, the substances being used and all applicable emergency procedures; and d. includes records of all training activities, their contents, and their participants. | | | | |
| D.17 | Growers and their staff participate in regular training activities to keep up to date about integrated pest management approaches and techniques. | | | | |
| D.18 | Growers demonstrate that they implement biological, mechanical and physical pest control measures based on pest monitoring results and [pest] thresholds before considering pesticides use. | | | | |
| D.19 | Growers rotate pesticide mode of action by target pest, excluding herbicides, sulfur, oil, and bio fungicides, to avoid increasing pest resistance to pesticides. | | | | |
| D.20 | Growers evaluate the results of the IPM program and pest control activities after every growing season. The evaluation includes a review and analysis of: a. Pest monitoring activities. b. Pest or disease damage. c. Weather conditions when the pest or disease outbreak occurred. d. Prevention and control measures applied, including pesticide application data. e. Crop yield and grapes quality. f. Any other relevant information as necessary. See the BCWGC Best Practices Guide for guidance on how to conduct evaluation activities for pest management. | | | | |

CHAPTER E: IRRIGATION OPTIMIZATION

| Outcome E.1. Optimized irrigation systems | | | | | |
|---|--|--|--|--|--|
| E.1 | Growers install backflow prevention devices in line before any injection equipment. | | | | |
| E.2 | Growers test the irrigation distribution uniformity and the overall application efficiency of the irrigation system at least once every three years, keep records of the test results, and analyze those records to implement changes in or adjustments to the irrigation systems. | | | | |
| E.3 | Growers identify and delineate irrigation management zones in the vineyard. | | | | |
| E.4 | Growers test irrigation water at least once annually or obtain data on water quality from their water purveyor. Vineyards send irrigation water samples for laboratory analysis at least once every five years if they have their own water system (well water); otherwise they request the water analysis results to their local purveyor (see criterion D.3. for water testing). | | | | |
| E.5 | Growers analyze the results of water testing to identify any potential problems and their respective management solutions and document any decisions as part of their management system. | | | | |
| E.6 | Growers implement mechanism to monitor and measure water use. Mechanisms may include but are not limited to installing flow meters on wells and/or other water sources and pumps, either directly or through their water purveyor; getting water use metrics directly from their water purveyor; and/or record keeping of water use within the vineyard. | | | | |
| E.7 | Growers use low-volume irrigation (e.g. drip irrigation, micro-sprinklers) or have plans to transition to low-volume irrigation within three growing seasons after the first assessment date for the SWBC standard. | | | | |

| | | | | | |
|--|---|--|--|--|--|
| E.8 | Growers perform and document maintenance activities for all irrigation and water distribution systems least once every irrigation season. This includes but is not limited to checking filters, gauges (flow meters and/or pressure gauges), pressure control meters, relief valves, submains, drip lines, and emitters, repairing line leaks and breaks, and fixing any head rotation or emitter problems. | | | | |
| CHAPTER F: SOCIAL EQUITY | | | | | |
| Outcome F.1. Employee training | | | | | |
| F.1 | <p>Growers create a written employee handbook and guarantee that all workers have free access to it. It must include at least the following elements:</p> <ul style="list-style-type: none"> a. company mission, vision, and values, including the commitment to sustainability and sustainable practices; b. job descriptions and company standards and regulations. c. training and development policies; d. employee evaluation processes, grievance policy, and disciplinary actions. e. harassment and discrimination policies; f. policies and processes for communicating concerns and suggestions about workplace or working conditions; g. salary, benefits and incentives; h. health and safety policies and practices; and i. a handbook review and update schedule. <p>The handbook is part of employee orientation content (see Criterion A.4).</p> | | | | |
| Outcome F.2. Worker health and safety | | | | | |
| F.11 | Growers place warning signs for potential hazards throughout their facilities, and make sure that the signs are in a language that is understood by workers and visitors. | | | | |

| | | | | | |
|---|---|--|--|--|--|
| F.12 | <p>Growers provide personal protection equipment (PPE) free of charge to workers according to the identified health and safety risks for the tasks. Workers are trained in the proper use of PPE and are required to use it while carrying out task with identified risks. Employees that handle hazardous substances and chemicals:</p> <p>a. receive, at no cost, personal protective equipment (EPP) as indicated by the label of the substances applied or handled or the material safety data sheet (MSDS), whichever is stricter.</p> <p>b. Have access to facilities to bathe and change their clothes after finishing working with these substances and before leaving the workplace at the end of the workday.</p> | | | | |
| Outcome F.3. Workers salaries and benefits | | | | | |
| F.16 | Growers ensure that all salaries are at or above the market value for the region according to each type of job and position. Under no circumstance, workers' salaries will be lower than the established minimum wage for the region. | | | | |
| Outcome F.5. Neighbors and community | | | | | |
| F.21 | Growers actively engage with neighbors and local communities, inform them about their operations and about the sustainable practices implemented, and identify and document relevant concerns about their operations. | | | | |
| F.22 | Growers manage workplace conditions to avoid noise and visual pollution of their surroundings. | | | | |