January 18, 2019

Dear Region 3 Water Quality Control Staff:

The Vineyard Team and our Sustainability in Practice (SIP) Certified program appreciate the opportunity to comment on the Ag Order 4.0 Conceptual Regulatory Requirement Options. We acknowledge your efforts to create a transparent and deliberative process to improve water quality on the Central Coast for years to come.

Consistent with our 20-year history of collaboration and regulatory relief with Region 3, we are pleased to offer our suggestions to continue with this standing in Ag Order 4.0. We are honored by the Regional Board’s recognition of our Positive Point System as a Farm Plan in Ag Order 1.0 and Regulatory Relief for Sustainability in Practice (SIP) Certified Vineyard Operators in Ag Order 2.0 and 3.0.

Our comment letter is submitted in four parts:

1. Summary of Key Points
2. SIP Certified Program and Process Background (www.sipcertified.org)
3. Options Tables Questions and the SIP Certified Program
4. SIP Certified Alignment with Water Quality Objectives in Ag Order 4.0

1. Summary of Key Points

- Vineyard Team and its SIP Certified program support the protection of water quality and are committed to continued collaboration with Regional Board (RB) staff throughout the development of Ag Order 4.0 to seek incentives, create efficiencies, and avoid duplicative efforts.
- SIP Certified warrants continued Regulatory Incentives for its growers because it is a robust, science-based program that offers adaptability and verification of implemented practices that protect water quality.
- SIP Certified Standards and rules are responsive to emerging issues, improving with advances in science and research through annual updates and peer review by over 30 environmental, regulatory, and academic representatives every five years.
- SIP Certified can provide meaningful reporting of data already required through certification to meet statutory requirements.
- We support the maximum recognition of SIP Certified. For example, where individual reporting is required based on ESJ or NPS, the timeline for SIP Certified operators should be the maximum phase/delay.
- After phase delay, SIP Certified could coordinate a batch upload of individual data to RB staff to eliminate duplicative effort by growers.
- As an incentive, SIP Certified growers could receive a reduced fee structure since data coordination offered through SIP Certified reduces time and oversight expenses incurred by RB staff.
- Eliminating duplicative reporting and providing incentives has been confirmed as priorities by the Regional Board and Staff.
- Vineyards overall are a low risk to water quality due to general growing techniques and practices in vineyard cultivation.
• Vineyard Team generally supports phasing based on risk to water quality tied to farming practices, inputs, and proximity to impaired waterbodies.
• Vineyard Team supports numeric limits being applied to receiving water, but disagree with numeric limits applied to edge of field monitoring due to a great amount of variability in field samples.
• Vineyard Team strongly disagrees with the proposal language in its prohibition of any discharge from a storm event. This is unreasonable and unachievable. Even in the most “natural” of landscapes, there is discharge.
• Vineyards are a permanent crop and could be exempted from nitrogen reporting based on exemption criteria in ESJ.
• Vineyard Team supports all growers enrollment in the Cooperative Monitoring Program.

2. SIP Certified Program and Process Background

SIP Certified is a robust, science-based, independently verified program that warrants continued Regulatory Incentive for SIP Certified growers. SIP Certified was developed through multiple California Department of Food and Agriculture grants. Most notably a CDFA grant partnering growers, wineries, and technical advisors to assist growers in eliminating the use of high risk pesticides, increase water use efficiency, and protect soil and water quality through agricultural outreach, self-assessment, and implementation of SIP Certified (2009-2012). Additionally, the program has been used to facilitate compliance in vineyards with the Conditional Ag Waiver for Irrigated Lands through grants from the State Water Board.

SIP Certified is different than other programs in that it certifies implemented practices and offers adaptability. The Standards and rules are considered to be part of a living document. They evolve and are responsive to emerging issues and improvements in science and technological advances. SIP Certified has received multiple awards in the last three years from accredited organizations including John Muir Association, Environmental Leader, Department of Pesticide Regulation, Association of Environmental Professionals, and International Green Industry Hall of Fame.

As background, we think it’s helpful to outline the key elements of the SIP Certified vineyard program and how it relates to on farm implementation that protects water quality. Below are key elements of the SIP Certified program that warrant its continued inclusion in a regulatory framework that rewards grower investment in certification.

1. SIP Certified Standards and rules contain 14 chapters relating to farming operations. Of these, several relate to water quality: conservation and enhancement of biological diversity; vineyard acquisition, establishment and management; soil conservation and water quality; water resources and conservation; pest management.
2. The Standards include both Requirements and Management Enhancements that require implementation of integrated practices, planning, and record keeping.
3. SIP Certified REQUIRES that certified vineyards meet ALL of the Requirements. If a grower cannot implement or is not able to prove implementation of a single Requirement, they are not eligible for certification.
4. SIP Certified growers are required to implement and document a number of “Management Enhancement” practices to achieve an overall point value of 75%. Practices are weighted by importance and impacts on resources.
5. SIP Certified growers are required to comply with regulatory agencies.
6. SIP Certified growers must complete a records and site inspection verification of each response to a Standard (Requirement and Management Enhancement) question.
7. The applicant’s annual inspection report is blinded, reviewed, and if eligible, approved by the Certification Advisory Committee (comprised of regulatory, academic and industry experts, where the regulatory and academic representatives comprise the majority of the committee).
8. Only after all of the above are completed, applicants pay licensing fees to finalize their annual certification.

The program is clearly robust in terms of content, verification, transparency and decision making.

The remaining content of this letter addresses the Options Tables Questions as they relate to the SIP Certified Program and Attachment A for the conceptual framework of SIP Certified and the statutory alignment with the ESJ/NPS policies in addressing the five water quality objectives of Ag Order 4.0.

### 3. Options Tables Questions and the SIP Certified Program

**Prioritizing and Phasing:**

- It is important to note SIP Certified was designed to be a differentiating program with challenging Standards and criteria. It was never intended to be achievable by everyone. This sets us apart from general practices and other certification programs that promote sustainable practices overall. There are currently 36,000 SIP Certified acres on the Central Coast, representing approximately 32% of the total vineyard acreage.
- SIP Certified growers should have the **maximum regulatory advantage** through phasing that reduces reporting based on a) their low risk to water quality and b) existing reporting required to become certified. SIP Certified provides a superior alternative to self-reporting because their reports are verified through independent inspections.
- SIP Certified is a rigorous certification process with strict, non-negotiable requirements, committed to standards based on science and expert input, independent verification, transparency, and absent of conflict of interest. SIP Certified provides assurance that practices are implemented beyond a self-reported plan through independent onsite and records inspections. The program’s award-winning rigor and integrity have earned it the reputation of being the gold standard for sustainable certifications. As such, vineyards enrolled in SIP Certified are justified to receive a regulatory advantage.
- The integrity of the program is maintained through its exclusion to only those who are willing to undergo the strictest adherence to scientifically-driven practices and inspection. The integrity of our program is sustained by setting the bar high enough that it is only achievable by a subset of growers.
- Recognizing SIP Certified as an incentive in the Ag Order 4.0 regulatory framework protects water quality and provides tangible benefits to Regional Board staff. SIP Certified staff can report meaningful metrics that bring value to RB staff. Regional Board staff has consistently supported this model over the years as one way to de-prioritize enrollees based on their lower risk to water quality.
- In general, we support deprioritization based on proximity to waters with chronic problems (ex. surface water monitoring sites). We believe that 303d lists as a basis for prioritization are too broad, and that using these designations as a criteria do not offer any prioritization at all. That said, we believe that SIP Certified vineyards should see regulatory benefit regardless of location. If geographic phasing, designations and maps should be clear and user friendly.

We are available to work with RB staff to address issues on this matter.
Numeric Limits:

- We support numeric limits being applied to receiving water, but disagree with numeric limits applied to edge of field monitoring due to a great amount of variability in field samples. Variability in data makes drawing conclusions unreliable. We have a lot of experience with field sampling, and even in the best circumstances, with replications, scientific design, and trained collectors, variability can be significant.
- We are open and available to work with staff to develop appropriate nitrogen metrics for vineyards as a permanent crop, although vineyards could be exempted from nitrogen reporting based on exemption criteria in ESJ. It is important to remember that N removed from harvested fruit does not represent all the N used and sequestered by the vine, cover crop, and soil organic matter. As such, the proposed A-R and A/R approach does not accurately capture the intent of the metric, rather an Applied vs Used could be appropriate and meet the intention.
- We strongly disagree with the proposal language in its prohibition of any discharge from a storm event. This is unreasonable and unachievable. Even in the most “natural” of landscapes, there is discharge.
- Just like N removed is an estimate (based on yield as a surrogate), erosion can be estimated based on percent cover as a surrogate. We are offering this as a concept, but stress that this metric should only be required if warranted for non-SIP Certified vineyards based on water quality data from specific locations.

Time Schedule(s) to Achieve Numeric Limits:

- We support the maximum regulatory advantage for SIP Certified. For example, where individual reporting is required based on ESJ or NPS, the timeline for SIP Certified operators should be the maximum phase/delay.
- We suggest during the phase of the order, SIP Certified staff analyzes and reports data that is collected through the program and delivers it to the RB staff. To facilitate individual reporting after phase delay, SIP Certified could facilitate/coordinate with RB staff a batch upload of individual data to eliminate duplicative effort by growers. This would require planning and coordination in terms of the mechanics, but we are willing and available to work with RB staff on this. This would benefit both growers and staff with the coordination accomplished through SIP Certified.
- This approach is reasonable, efficient, meets statutory requirements, and is appropriate based on the actual risk to water quality. Likewise, it allows SIP Certified staff to work directly with RB staff to develop adaptive measures that are realistic and tied to the actual risk versus developing arbitrary limits or standards absent of the science and analysis that SIP Certified can provide.

Monitoring and Reporting:

- Again, we support delayed individual reporting and interim aggregate reporting for SIP Certified operators. Examples of aggregate reporting could include the following:
  1. Characterization and scale of SIP Certified enrollment.
  2. Accounting for nitrogen balance and irrigation budgets.
  4. Characterization, scale, acres of implemented practices of the sediment and erosion plan.
  5. Characterization, scale, acres of implemented elements of the pesticide management plan.
  6. Characterization, scale, acres of implemented elements relating to riparian management.
- SIP Certified staff welcomes the opportunity to identify and develop a reporting program that is meaningful, helpful and meets statutory requirements of the new Order.
Incentives:

- Offering regulatory relief for SIP Certified operators through delayed and facilitated individual reporting, leveraging existing reporting already required through certification, reduces duplicative reporting. This creates a true incentive for the growers and provides RB staff with the information they require. Eliminating duplicative reporting has been confirmed as a priority by RB staff and Board.
- SIP Certified is able to provide this level of reporting and collaboration with RB staff for timely analysis through our uniquely independent verification program that benefits both growers and RB staff.
- Recognizing the SIP Certified program as an incentive and offering regulatory relief by way of aggregate data and individual reporting after a phased delay (e.g. 5 years) to those licensed under the program will maintain a spirit of collaboration and adaptability to help achieve the objectives of Ag Order 4.0.
- Data reporting offered through SIP Certified benefits RB staff in less time and oversight required to ensure water quality issues are being addressed. Those cost reductions can be offered through a reduced fee structure for SIP Certified growers as a tangible incentive.

Consequences:

- If a grower does not implement or cannot document a specific requirement, they will not be certified, losing the regulatory relief of deprioritization, duplicative reporting, fee reduction, and phasing granted under Ag Order 4.0.

CEQA:

- The SIP Certified program was piloted in 2008 and is peer reviewed by over 30 environmental, regulatory, and academic representatives every five years.
- Additionally, a dedicated Technical Advisory Committee annually reviews two to three chapters in full plus any suggestions from stakeholders to implement timely changes to the program.
- CEQA allows programs developed by other entities to be referred to as mitigation for environmental impacts. No other program has had the level of input, oversight, and continual monitoring from the environmental community and academia as SIP Certified.

Costs:

- SIP Certified operators pay a premium for licensing under the program. This effectively motivates growers to stick with the program to achieve the cost/benefits the program offers and, in turn, cost/benefits to water quality.
- Since the grower is paying licensing fees for certification, and reporting data through SIP Certified reduces RB staff time to follow up with growers to collect meaningful data, SIP Certified growers could receive a reduced fee structure.
4. SIP Certified Alignment with Water Quality Objectives in Ag Order 4.0

Overarching Concepts

Ag Order 4.0 should avoid duplicate reporting for growers while meeting the needs of RB staff. To meet the individual reporting requirement after a certain period, SIP Certified could facilitate/coordinate with RB staff a batch upload of individual data to the RB database. In the interim, SIP Certified staff could provide data, analysis, and updates of the elements of the plan captured through existing SIP Certified data and reports. Details, logistics and consent would need to be refined, but this would benefit both growers and RB staff.

This approach is reasonable, efficient, meets statutory requirements, and is appropriate based on the actual risk to water quality.

1. Irrigation and Nutrient Management for Groundwater Protection

The elements required for SIP Certified for Irrigation and Nutrient Management for Groundwater Protection are consistent with the elements required by ESJ and NPS policy.

Vineyards in general are low risk based on their low nitrogen and irrigation inputs.

A typical nitrogen application on Central Coast vineyards ranges from 0-40 lbs N/acre according to Mark Battany, the local farm advisor (https://apps1.cdfa.ca.gov/fertilizerresearch/docs/Grapevines.html). While applied irrigation amounts in the region vary based on climate and rainfall, average applied irrigation water in the Paso Robles groundwater basin was 11.46 in/year based on a 3-year study (http://calag.ucanr.edu/Archive/?article=ca.2018a0003). This information is provided to help ground truth a sampling of inputs for vineyards, not as a benchmark for metrics because inputs will vary throughout the region.

The low inputs of nitrogen and water can justify an exemption for vineyards from the nitrogen requirements based on the ESJ exemption criteria.

SIP Certified requires several elements required in an Irrigation and Nutrient Management Plan (N applied from various sources, estimates of N removed, irrigation well concentration, irrigation volume applied, characterization of irrigation, nutrient and salinity management practices, etc.). In addition to the INMP, SIP Certified requires testing of drinking water supply wells.

SIP Certified Requirements of an Irrigation and Nutrient Management Plan

- Nutrient budget developed annually based on the vineyard’s nutrient application plan.
- Water budget generated annually to track total water the vineyard receives during the season from rainfall, frost protection, and irrigation.
- Wellhead and backflow protection to prevent contamination.
- Well water quality analysis and soil sampling for nutrient content, pH, Electrical Conductivity (EC), and toxicities every five years plus annual tissue sampling.
- Low-volume irrigation system (drip or micro-sprinkler) for irrigating.
- Irrigation system evaluations for distribution uniformity.
- Irrigation scheduling tools to inform in-season scheduling decisions, including soil based monitoring devices to track soil moisture depletion, or plant based monitoring devices to monitor the moisture status of the vineyard, and evapotranspiration (ET).

This list is not exhaustive of implemented practices for SIP Certified because the program requires implementing a combination of Management Enhancements related to nutrient and irrigation management.
(ex. tissue resampling for nutrient content, nitrogen fixing cover crops, timed fertilizer applications to maximize uptake, pH adjustment, inspect and clean water filters, off-peak irrigations, use of aerial imagery to schedule irrigation, flow meters, etc.).

2. Irrigation and Nutrient Management for Surface Water Protection

The elements required for SIP Certified for Irrigation and Nutrient Management for Surface Water Protection are consistent with the elements required by ESJ and NPS policy.

Vineyards in general are low risk contributors of nutrients to surface water (i.e. low N input, no irrigation water runoff).

- **SIP Certified Requirements of Irrigation and Nutrient Management for Surface Water Protection**
  - The INMP from above applies to this.

3. Pesticide Management for Surface Water and Groundwater Protection

The elements required for SIP Certified for Pesticide Management are consistent with the elements required by ESJ and NPS policy.

Vineyards have unique circumstances relating to water quality impacts from pesticides:

1. They are a perennial crop. Most of the pesticides are applied during the growing (dry) season.
2. There is no irrigation runoff, so pesticides applied in the dry season cannot be transported by irrigation surface water runoff.
3. When there is possibility of off-site movement with storm water, rainfall occurs several months after pesticides were applied, allowing time for pesticides to break down prior to storm water events.
4. When winter rains do happen, typical use of winter cover crops mitigate and reduce the off-site movement of pesticides.
5. Vineyards are not typically located in cooperative monitoring areas with chronic toxicity.


SIP Certified requires reporting and documentation of pesticide management practice as required in a Pesticide Management Plan and Report.

We recognize the growing concern regarding neonicotinoids’ impact on water quality. Vineyard operations are seeing increasing cases of virus and vineyard demise. Neonicotinoids are used in vineyard systems as a tool for mealybug control because mealybugs are a vector to damaging viruses (which have no control). Viruses are an immediate threat to the short and medium term viability of vineyards.

In vineyard systems, imidacloprid can be applied in spring through the irrigation or in summer as a spray. Both of these precede the rainy season by 5-7 months, therefore reducing the likelihood of transport via storm water. Thiomethoxam, another neonicotinoid of concern, has very low use in grapes on the Central Coast.

Mealybug management also involves additional integrated practices (pheromones, trapping, etc.).
It is important to note that practices related to irrigation and erosion management implemented by SIP Certified operators affect the transport of these materials to water. Nevertheless, we are interested in better understanding potential transport and are interested in working with potential cooperators to better understand these relationships to water quality.

**SIP Certified Requirements of a Pesticide Management Plan and Report**

- Prohibits Use of High Risk Pesticides including California DPR Groundwater Contaminants; Toxic Air Contaminants; Cholinesterase Inhibitors (ex. chlorpyrifos and diazinon); California Restricted and EPA Federally Restricted Materials. These materials are reviewed and updated annually based on the state and federal designations.
- Monitoring and recording of pests, disease, and weed pressure at regular intervals throughout the growing season.
- Wellhead and backflow protection to prevent contamination.

This list is not exhaustive of implemented practices for SIP Certified because the program requires implementing of a number of Management Enhancements related to pest management (ex. canopy management to reduce pest pressure, target sensing pesticide applications, spot spraying to minimize use of material, monitoring and habitat for beneficial insects, noxious weed prevention, non-chemical pest control, etc.).

Please remember that practices related to irrigation, soil management, erosion management (specified in other sections) also relate to the potential off-site movement of pesticides and related toxicity issues.

**4. Sediment and Erosion Management for Surface Water Protection**

*The elements required for SIP Certified for Sediment and Erosion Management are consistent with the elements required by ESJ and NPS policy.*

Vineyards have unique circumstances regarding sediment and erosion management:

1. Vineyards maintain winter cover which has been shown to reduce sediment runoff:
   a. Cover crops increase infiltration, therefore decreasing water runoff
   b. Cover crop roots stabilize soils, therefore decreasing erosion
   c. Cover crops filter sediment from storm water runoff, decreasing sediment movement
2. Vineyards maintain vegetative cover in non-cropped areas.
3. Vineyards do not have co-management conflict with maintaining vegetative cover.

There is significant research demonstrating the importance of vegetative cover in reducing erosion. Several Vineyard Team research and demonstration projects have studied these relationships and outreached findings to a broad vineyard audience.

In one study, Battany and Grismer found that vegetative cover was the most important factor in reducing runoff and erosion, even more than soil and slope: [http://www.academia.edu/22065765/Rainfall_runoff_and_erosion_in_Napa_Valley_vineyards_effects_of_slope_cover_and_surface_roughness](http://www.academia.edu/22065765/Rainfall_runoff_and_erosion_in_Napa_Valley_vineyards_effects_of_slope_cover_and_surface_roughness).

In one Vineyard Team project, estimated average soil loss ranged from 16.91 tons/acre/year prior to the implementation of vegetative cover to 1.67 tons/acre/year after Best Management Practice (BMP) implementation ([http://www.vineyardteam.org/files/resources/CWP_Demo_Summary.pdf](http://www.vineyardteam.org/files/resources/CWP_Demo_Summary.pdf)).

SIP Certified requires several elements required in a **Sediment and Erosion Management Plan** (sediment and erosion practices, irrigation practices, stormwater practices, etc.).
SIP Certified Requirements of a Sediment & Erosion Management Plan

- Documentation and knowledge of soil series, permeability, and runoff rates of vineyards soils.
- Winter cover crop maintained annually during the winter.
- Additional BMPs to prevent off site movement of soil and water including cover crop, filter strip, mulching, hay bales/straw, jute netting, silt pond, waddles, and vegetated ditches.

This list is not exhaustive of implemented practices for SIP Certified because the program requires implementing of a number of Management Enhancements related to erosion control (ex. work with NRCS or RCD to develop conservation plan, comprehensive erosion plan, prevent runoff to roads, etc).

5. Riparian Habitat Management for Water Quality Protection

The elements required for SIP Certified for Riparian Habitat Management are consistent with the elements required by ESJ and NPS policy.

In general, vineyards present a low risk regarding riparian habitat. There is minimal cultivation in non-farmed areas because there are no co-management issues.

SIP Certified Requirements for Riparian Habitat Management for Water Quality Protection

- In addition SIP Certified requires that Vegetated Perimeter Buffers no less than 25 feet from the edge of perennial streams and wetland areas be maintained.
- Numerous practices from above apply to this.

We promote continued coordination between SIP Certified staff and Regional Board staff. Regulatory advantages in Ag Order 4.0 that incentivize SIP Certified will inherently result in water quality improvements and a sustainable water system on the Central Coast for years to come.

We appreciate the opportunity to provide our comments, thoughts, and suggestions during this conceptualization stage of Ag Order 4.0. Please feel free to reach out to Beth Vukmanic Lopez (beth@sipcertified.org) with any questions or comments between now and April 1st, 2019 while I will be away on sabbatical.

We look forward to continued collaboration with Regional Board Staff throughout the development of Ag Order 4.0.

Sincerely,

Kris Beal, M.S., Executive Director

Vineyard Team