Board Item 6 relates to the consideration for a Resolution to adopt a California Environmental Quality Act Mitigated Negative Declaration and the associated Waste Discharge Requirements for winery process water (proposed final MND and Order).
This change sheet is for revisions to the December 2, 2020 versions of the proposed final MND and Order. These revisions are dated January 19, 2021 and being considered for this item as shown below as underline additions, ~~strikeout~~ deletions, and moves (underline and ~~strikeout~~).

Proposed Final Order Change Sheet

Findings

1. Global change in the document date from ~~December 2, 2020~~ to January 20, 2021
2. Global change to the order number from ~~DRAFT FINAL~~ to ORDER WQ-2021-XXXX
3. Revised Applicability Findings Section, Finding 11 Table 1 as follows:

Table 1. Tier Determination

Tier	Facility process water ~~design~~ flow [1] (gal/yr)
Exempt	<10,000
Tier 1	10,000 – 30,000
Tier 2	30,001 – 300,000
Tier 3	300,001 – 1,000,000
Tier 4	1,000,001 – 15,000,000

4. Revised Applicability Findings Section, Finding 13 as follows:

   Exempt facilities are not required to enroll under this General Order. However, exempt facilities that violate General Order prohibitions or exempt status conditions, or are otherwise determined to pose a threat to water quality, including a large concentration in an area, may no longer qualify for exempt status and may be required to submit an application for General Order coverage as a Tier 1 facility if directed to do so by the State Water Board or a regional water board. A facility's exempt status does not diminish the State Water Board or regional water board permitting or enforcement authority related to waste discharges.

5. Revised Applicability Findings Section, Finding 14 as follows:

   Facilities that discharge small volumes (10,000 – 30,000 gal/yr) of process water are considered to have a low potential for degrading water quality provided they comply with General Order requirements. Such wineries are required to apply for General Order coverage as a Tier 1 facility. A large concentration of Tier 1 facilities in an area, however, may pose a higher threat to water quality and result in groundwater degradation. Therefore, such ~~high density~~ Tier 1 facilities in high density areas, or Tier 1 facilities that are determined to pose a threat to water quality, may be required to apply for General Order coverage as a Tier 2 facility if directed to do so by the State Water Board or regional water board.

6. Revised Process Water Ponds Findings Section, Finding 25 as follows:

   Process water ponds (hereafter ~~also~~ referred to as ponds) provide process water storage, mixing, equalization, treatment, disposal, and operational flexibility for wineries. Most ponds settle suspended solids, ponds with aeration reduce BOD, and ponds with alternating aerobic and anoxic zones remove nitrogen. Constructed wetlands (engineered vegetated ponds) reduce BOD and nitrates and are effective as a polishing step prior to land application.

7. Revised Land Application Findings Section, Finding 32 as follows:

   Land application is a strategy to beneficially reuse process water to grow crops (or plants, including landscape irrigation). Because winery process water contains organic matter and nitrogen, land applying it improves soil productivity and provides supplemental plant nutrients while simultaneously treating and disposing of the process water. The FDS in process water includes plant macronutrients (e.g., ammonium, nitrate, phosphorous, potassium) that are removed by land application systems that incorporate growing and removing crops.[14]

8. Revised Land Application Findings Section, Finding 37 as follows:

   Irrigation systems are typically designed to irrigate slightly above a plant's evapotranspiration needs by incorporating a reasonable leaching fraction (e.g., 15 percent) to ensure that salts are not accumulating in the soil profile. Irrigation volumes are also based on the irrigation method efficiency (e.g., for drip, sprinkler, furrow, or flood irrigation). The land application area must be properly managed to prevent over irrigation, which can result in runoff or ponding.

9. Revised Subsurface Disposal System Findings Section, Finding 43.a as follows:

   Simple SDSs with only solids settling provide minimal treatment. In the settling tank, process solids settle out and the anaerobic conditions provide some BOD reduction but ~~insignificant~~ nitrogen removal varies depending on the system design and operation. Once discharged, the effluent BOD can biodegrade further in the aerobic conditions of the subsurface disposal area and the nitrogen can be converted to nitrate.

10. Revised Subsurface Disposal System Findings Section, Finding 56.b as follows:

    Alternative commingled process water and domestic wastewater treatment systems ~~that include treatment of process water~~ may be permitted by a local agency, a regional water board, or other appropriate entity~~local authorities~~. Regulatory limits for these systems vary in stringency and are out of scope for coverage under this General Order.

11. Revised Subsurface Disposal System Findings Section, Finding 56.g as follows:

    Wineries that treat process water separately from domestic wastewater but discharge the individually-treated waste streams to the same subsurface disposal area may be eligible for coverage under this General Order if such a use is approved by the regional water board. The Discharger must submit technical justification that demonstrates the subsurface disposal area is appropriately sized, designed, and operated to receive and treat the process water and domestic wastewater and the domestic wastewater system and

subsurface disposal area ~~are~~ may also be regulated under a separate domestic wastewater permit through the regional water board or appropriate local agency. ~~The subsurface disposal area must have dual coverage under an appropriate domestic wastewater permit and under this General Order.~~

12. Revised Local Agency Oversight Findings Section, Finding 68 as follows:

    Local agencies are required to adhere to the Local Agency Oversight Program requirements in Attachment E, which is hereby attached and made a part of this General Order. The primary role of the local agency is to oversee implementation of the technical requirements of this General Order after the Discharger enrolls in the General Order and related enrollment in the local oversight program. The regional water board or State Water Board may coordinate with the local agency on the Discharger General Order enrollment, Notice of Applicability issuance, and Notice of Termination approvals to support the requirements of this General Order.

13. Revised Other Salts and Nitrogen Considerations Findings Section, Finding 81.a as follows:

    Sustainability programs that address salt and nitrogen control for winery waste to protect groundwater quality can greatly assist statewide General Order ~~efforts to assure~~ compliance efforts~~with this General Order~~. Sustainability program efforts to provide technical assistance can help winery operators gain a greater understanding of the need for water quality protection.

14. Revised Other Salts and Nitrogen Considerations Findings Section, Finding 81.b.i and ii as follows:

    i. Additionally, Dischargers required to prepare a Salt Control Plan may refer to the sustainability program measures to control and reduce salt rather than generate a site-specific plan, provided the Discharger certifies that the appropriate salt control measures have been implemented (as described in the Technical Provisions section). However, because of the higher salt loading potential at larger facilities, the regional water board may direct Tier 3 and Tier 4 facilities to prepare a Salt Control Plan that evaluates site-specific measures that may be more protective than the general sustainability program measures. Such facilities are required to implement the Salt Control Plan measures in addition to the sustainability program measures.

    ii. Dischargers with land application area operations required to prepare a Nitrogen Control Plan may refer to the sustainability program measures to control and reduce nitrogen rather than generate a site-specific plan, provided the Discharger certifies (as described in the Technical Provisions section) that the appropriate nitrogen control measures have been implemented. However, because of the higher nitrogen loading potential at larger facilities, the regional water board may direct Tier 3 and Tier 4 facilities to prepare a Nitrogen Control Plan that evaluates site-specific measures that may be more protective than the sustainability program measures. Such facilities are required to implement the Nitrogen Control Plan measures in addition to the sustainability program measures.

15. Revised Other Salts and Nitrogen Considerations Findings Section, Finding 81.c.iii as follows:

    A certification and inspection process to verify ongoing Discharger participation and compliance with the sustainability program ~~and General Order requirements~~.

16. Revised Other Salts and Nitrogen Considerations Findings Section, Finding 83.a as follows:

    To the extent consistent with CV-SALTS, Dischargers determined by the Central Valley Regional Water Board to be participants in good standing in the CV-SALTS Alternative Permitting Approach for Salinity are exempt from compliance with Discharge Specifications C.1.a and C.1.c, Section D.1.b and D.1.d, and Groundwater Limitations F.1 and F.2, as they apply to water quality objectives for salinity. All other provisions of this General Order remain in effect.

17. Revised Other Water Code Considerations Findings Section, Finding 95.a as follows:

    Estimated Monitoring and Reporting Program Cost Ranges: Staff have reviewed regional water board orders and industry data to develop the General Order monitoring and reporting requirements. This General Order is designed to ensure winery waste discharged to land does not impact the beneficial uses of groundwater and balances the cost to industry. This General Order provides a model MRP that provides Dischargers and regional water boards some alternatives to address site-specific conditions to achieve General Order compliance. The below MRP cost estimates are general ranges and actual costs will depend on many factors, including but not limited to, winery processing period, discharge volume and water quality, design, size, age, number and type of winery features (e.g., ponds), winery waste treatment, reuse, and disposal methods, additional monitoring needed to address site-specific considerations, and staff resources. The one-time monitoring cost for Tier 1 (assuming 45 days of discharge) is $500 to purchase a flow meter (no ongoing monitoring costs) and for Tiers 2 to 4 is $500 – $750 for purchasing a pH and electrical conductivity (EC) meter. The estimated annual ongoing monitoring costs by tier are: Tier 2 (assuming 61 days of discharge) of $1,500 – $5,000, Tier 3 (assuming 75 days of discharge) of $3,000 – $10,000, Tier 4 (assuming 100 days of discharge) of $25,000 – $45,000. These estimated ongoing annual monitoring costs do not include labor costs for in-house staff or consultants, which are estimated to range from 80 – 900 hours with an estimated wage range of $35 - $150 an hour depending on the specific facility.

Order (after the It Is Hereby Ordered)

18. Revised Effluent Limitations (Tier 2, 3, and 4) Section B.6 as follows:

    The Discharger~~s~~ shall monitor the treated SDS effluent. The treated SDS effluent shall be measured prior to discharge to the subsurface disposal area and shall not exceed total nitrogen of 10 mg/L, BOD of 300 mg/L, and TSS of 330 mg/L as a rolling average of the three most recent samples.

19. Revised Discharge Specifications (Tier 1) Section C.2) as follows:

    Process Water Pond Specifications

20. Revised Discharge Specifications (Tier 1) Section C.2).a as follows:

    Process water ~~P~~ponds (hereafter referred to as ponds) shall be managed, operated, and maintained to protect containment integrity, prevent overtopping or structural failure, and prevent damage from burrowing animals. Pond containment damage shall be repaired as soon as possible.

21. Revised Discharge Specifications (Tier 1) Section, C.3).d as follows:

    Process water and process solids shall not be applied to the LAA ~~when rainfall is expected~~ within 24 hours of forecasted precipitation with a greater than 50-percent probability of occurring, during precipitation events, or when the ground is saturated.

22. Revised Discharge Specifications (Tier 1) by adding Section D.4).f as follows:

    The discharge of treated wastewater from separate process water and domestic wastewater systems may be directed to the same subsurface disposal area if approved by the regional water board and provided the required Tier 2-4 conditions specified in Section D.4.b Discharge Specifications (Tiers 2, 3, and 4), Subsurface Disposal Specifications are met.

23. Revised Discharge Specifications (Tier 2, 3, and 4) Section D.1).a.i-ii as follows:

    i. The Discharger shall ~~take all reasonable steps to~~ reduce the salinity loading to the process water treatment and disposal systems and the underlying groundwater by implementing good housekeeping practices, source control and waste minimization measures (e.g., solids screening, pressure washing, washwater and chemical reuse), and by minimizing the use of salt-containing and non-biodegradable chemicals.

    ii. The flow-weighted annual average FDS concentration of the process water discharge from the winery, including process water from outdoor processing areas, measured prior to treatment in a pond, LAA, or SDS ~~shall not exceed the~~ is used to determine if the facility is meeting the FDS threshold. The FDS threshold (in mg/L) is equal to the annual average flow-weighted FDS concentration (in mg/L) of the facility source water plus 320 mg/L.

24. Revised Discharge Specifications (Tier 2, 3, and 4) Section D.2).a.i-ii and v as follows:

    2) Process Water Pond Specifications

    a. General Process Water Pond Specifications

        i. The new construction or rehabilitation of berms or levees (excluding internal berms that separate ponds or control the flow of water within a process water pond) shall be designed and constructed under the supervision of a California Registered Civil Engineer or Certified Engineering Geologist.

ii. The base of the process water ponds (hereafter referred to as ponds) shall be at least five feet above the seasonal high water table. ~~unless~~A~~a~~ smaller separation (minimum two feet) ~~is~~ may be approved by the regional water board if compliance with the five foot separation is infeasible and site-specific conditions indicate the smaller separation will not pose a threat to water quality; technical justification shall be provided by the Discharger.

v. The upper one foot of ~~process water~~ ponds shall have a DO concentration of at least 1.0 mg/L to minimize the potential for objectionable odors.

25. Revised Discharge Specifications (Tier 2, 3, and 4) Section D.2).b.i.b) as follows:

The pond shall be sized to meet a 25-year, 24-hour peak storm design standard, at a minimum, if approved by the regional water board based on~~. The Discharger shall submit~~ a technical report submitted by the Discharger ~~to the regional water board~~ that describes how the process water system will be operated and managed under 100-year, 24-hour peak storm conditions (e.g., considering rainfall, pond water levels, site drainage, and site run on and runoff) to prevent process water spills.

26. Revised Discharge Specifications (Tier 2, 3, and 4) Section D.2).c.ii.b).(2) as follows:

Demonstrate using a performance test (e.g., seepage/leak test, water balance, liner leak detection testing, or geologic evaluation) that the existing pond is operating with minimal leaking and meets the hydraulic conductivity standard. The Discharger shall describe the performance test methodology, pond liner characteristics and conditions, visual observations, test results and conclusions, and if liner modifications or repairs are needed to continue pond operations. The performance test, technical report of results, and liner modifications may be required to be completed by or under the supervision of an appropriately qualified professional in accordance with the California Business and Professions Code (BPC, sections 6735, 7835, and 7835.1).

27. Revised Discharge Specifications (Tier 2, 3, and 4) Section D.2).e.i as follows:

Tiers 3 and 4: ~~Process water p~~Ponds shall be tested for leaks at least once every **5 years** using the performance test described in this section. A technical report of the evaluation shall be submitted to the regional water board within **90 days** of test completion. This periodic leak testing shall begin **5 years** after NOA issuance, pond liner installation, a previous performance test, or decommissioning of a groundwater monitoring well network at the pond, whichever is later. The performance test, technical report of results, and associated liner modifications or repairs may be required to be completed by or under the supervision of an appropriately qualified professional in accordance with the California Business and Professions Code (BPC, sections 6735, 7835, and 7835.1).

28. Revised Discharge Specifications (Tier 2, 3, and 4) Section D.2).f.i and f.i.a).(1) as follows:

f. Pond Groundwater Monitoring

i. **Tier 4**: Dischargers shall conduct groundwater monitoring using an onsite monitoring well network designed to assess the potential impact of operating the ~~process water~~ pond unless the Discharger qualifies for a groundwater monitoring exemption. The installation of any new groundwater monitoring well shall comply with the requirements in the Technical Provisions section.

a) Facilities may qualify for a groundwater monitoring exemption provided all of the following criteria are met:

(1) The facility pond system total volume is less than 1,000,000 ~~million~~ gallons. The pond system total volume is the sum of the design capacities of all onsite process water ponds.

(2) The ponds are well managed and operate within the available pond capacities without process water spills (e.g., overtopping the pond, berm failures, flood inundation) and all other requirements of this General Order are met.

29. Revised Discharge Specifications (Tier 2, 3, and 4) Section D.3).b as follows:

Process water and process solids shall not be applied to the LAA ~~when rainfall is expected~~ within **24 hours** of forecasted precipitation with a greater than 50-percent probability of occurring, during precipitation events, or when the ground is saturated.

30. Revised Discharge Specifications (Tier 2, 3, and 4) Section D.3).g.i as follows:

i. Facilities may qualify for a groundwater monitoring exemption provided ~~one~~all of the following criteria are met for the siting or area-wide groundwater monitoring option:

a) Siting
(1) The LAA meets all of the following site conditions:

i) The first encountered groundwater underlying the LAA is at least 25 feet below ground surface.

ii) The nearest drinking water well is located 0.5 mile or more from the LAA.

iii) The nearest surface water body is located 0.5 mile or more from the LAA.

~~(1)~~(2) The LAA is well managed and operations comply with the loading limits and all other requirements of this General Order.

b) Area-wide groundwater monitoring
(1) In lieu of using an approved onsite monitoring well network, the Discharger may elect to:

i) Participate in an existing area-wide monitoring well network approved by the regional water board. The Discharger shall ensure their participating LAAs are well managed and operations comply with the loading limits and all other requirements of this General Order; or

ii) Participate in the development of an area-wide monitoring well network to be approved by the regional water board. The Discharger shall ensure their participating LAAs are well managed and operations comply with the loading limits and all other requirements of this General Order.

(2) The Discharger shall submit the initial request to participate in an existing, or to develop an area-wide monitoring well network per the schedule in this Tier 2, 3, and 4 Land Application Specifications Section. The Discharger shall maintain its participation, including payment of any costs associated with developing or funding of the area-wide network, which may be offset by the incorporation of preexisting wells or monitoring networks as described in this area-wide groundwater monitoring subsection.

(3) All area-wide monitoring well networks shall meet the Monitoring and Reporting Provisions of this General Order and specifically include the General Order groundwater monitoring constituents and frequency requirements within the MRP and schedule approved by the regional water board upon issuing the Notice of Applicability.

(4) The Discharger shall ensure the area-wide monitoring well network plan and network(s) adhere to the following specifications:

i) Implement the Technical Specification Section requirements for well installation and reporting of this General Order unless substantially similar specifications are approved by the regional water board.

ii) Include appropriate monitoring locations and well screen design to construct a network that effectively evaluates water quality consistent with this General Order and associated MRP. Upgradient and downgradient monitoring wells shall not be more than 0.25 miles away from the winery land application areas to properly characterize any winery impacts to groundwater.

iii) Number, type, and density of monitoring locations to be sampled and other aspects of the monitoring well network shall be dependent upon basin-specific conditions, particularly critical areas of a basin, and input from the regional water board.

iv) Water quality data incorporated from preexisting monitoring well networks or the use of preexisting networks meet the General Specifications of this Section and the groundwater monitoring constituents and frequency within the MRP.

(5) An area-wide monitoring well network may result in identification of winery constituent impacts to groundwater, which may lead to the review of the monitoring network or Discharger practices. The regional water board retains discretion to review a monitoring network for effectiveness or use.

ii. The Discharger shall submit the relevant information (e.g., groundwater elevation data, sampling method and locations, sample dates, site map, drinking water well and surface water body locations, loading rate compliance record, LAA characteristics and operational procedures to demonstrate the LAA complies with discharge specifications and is unlikely to discharge offsite) needed to demonstrate that the LAA complies with the exemption criteria in an NOI and/or technical report to the regional water board for approval.

a) For existing LAAs, the intent to request a groundwater monitoring exemption must be clearly stated in the application for General Order coverage and the Discharger must request a temporary postponement of the groundwater monitoring requirements in the MRP for regional water board approval. ~~t~~The Discharger shall submit~~tal~~ to the regional water board the technical justification demonstrating why an exemption should be granted ~~shall be provided~~ within 180 days of NOA issuance. ~~However, the intent to request a groundwater monitoring exemption must be clearly stated in the application for General Order coverage and the Discharger must request a temporary postponement of the groundwater monitoring requirements in the MRP for regional water board approval.~~ The temporary postponement can be for no more than 1 year from NOA issuance unless otherwise stated by the regional water board.

b) For new or expanding LAAs, the submittal requesting a groundwater monitoring exemption, temporary postponement of the groundwater monitoring requirements in the MRP, and the technical justification demonstrating why an exemption should be granted shall be provided at the time of application for General Order coverage.

c) For new, expanding, or existing sites that may not have sufficient LAA operational data to determine loading rates and a compliance record, the intent to request a groundwater monitoring exemption must be clearly stated in the application for General Order coverage and the Discharger must request a temporary postponement of the groundwater monitoring requirements in the MRP for regional water board approval. The Discharger shall submit~~tal shall~~ to the regional water board the technical justification demonstrating why an exemption should be granted ~~be provided~~ within 1 year of NOA issuance. ~~However, the intent to request a groundwater monitoring exemption must be clearly stated in the application for General Order coverage and the Discharger must request a temporary postponement of the groundwater monitoring requirements in the MRP for regional water board approval.~~ The temporary postponement can be for no more than 18 months from NOA issuance unless otherwise stated by the regional water board.

31. Revised Discharge Specifications (Tier 2, 3, and 4) Section D.3).h.i-ii as follows:

h. Dischargers with groundwater monitoring data demonstrating impacts to water quality ~~may~~shall be required, at a minimum, by the regional water board to develop and implement a site-specific Nitrogen Control Plan to assess winery, treatment, and disposal operations and address and mitigate groundwater quality impacts. The Discharger shall certify that the required nitrogen control measures have been implemented.

i In lieu of submitting a Nitrogen Control Plan, Dischargers may elect to participate in a regional SNMP and implement the regional SNMP instead. The regional SNMP must contain nitrogen control measures designed to address discharges in this General Order and must also be accepted by the regional water board. The Discharger shall certify that the required nitrogen control measures have been implemented.

ii **Tiers 3 and 4**: The regional water board ~~may~~shall direct Dischargers to submit a Nitrogen Control Plan in addition to complying with a regional SNMP and/or sustainability program measures if site-specific conditions indicate a threat to water quality that will not be adequately addressed by those programs.

32. Revised Discharge Specifications (Tier 2, 3, and 4) Section D.4).a.iii.a) as follows:

iii In lieu of submitting a Nitrogen Control Plan, Dischargers may elect to participate in a regional SNMP and implement the regional SNMP instead. The regional SNMP must contain nitrogen control measures designed to address discharges in this General Order and must also be accepted by the regional water board. The Discharger shall certify that the required nitrogen control measures have been implemented.

a) **Tiers 3 and 4**: The regional water board ~~may~~shall direct Dischargers to submit a Nitrogen Control Plan in addition to complying with a regional SNMP program if site-specific conditions indicate a threat to water quality that will not be adequately addressed by the SNMP program.

33. Revised Discharge Specifications (Tier 2, 3, and 4) Section D.4).b.i.c) as follows:

b. Discharge of treated wastewater from separate process water and domestic wastewater systems may be directed to the same subsurface disposal area if approved by the regional water board and provided the required conditions are met.

i. The Discharger shall comply with all of the following conditions:

a) The process water is treated separately from domestic wastewater. Untreated process water and domestic wastewater are not commingled or discharged to the subsurface disposal area.

b) The process water system and subsurface disposal area comply with all requirements of this General Order.

c) The domestic wastewater system is regulated under a separate permit through the regional water board or appropriate local agency. ~~The subsurface disposal area shall have dual coverage under a domestic wastewater permit and under this General Order~~.

34. Revised Discharge Specifications (Tier 2, 3, and 4) Section D.4).e as follows:

    e. The lowest points of the SDS ~~treatment,~~ distribution~~,~~ and disposal systems, and their appurtenances shall be sited at least five feet above the seasonal high water table, as measured in wet weather conditions during disposal field site evaluation activities. A smaller separation (minimum two feet) may be allowed with regional water board approval if compliance with the five foot separation is infeasible and site-specific conditions indicate the smaller separation will not pose a threat to water quality; technical justification shall be provided by the Discharger. ~~If the subsurface disposal area receives domestic wastewater, separation of SDS components from the high water table shall be at least five feet and a smaller separation is not permitted.~~

35. Revised Discharge Specifications (Tier 2, 3, and 4) Section D.5).b.iv and v as follows:

    iv. Sodium substitution – Within **180 days** of NOA issuance, replace sodium-based chemicals with potassium-based or other non-sodium- based chemicals ~~as practicable~~unless technologically or economically infeasible.

    v. Chemical reduction – Within **180 days** of NOA issuance, implement ~~reasonable~~ measures to minimize chemical use, such as recovering and reusing chemical solutions.

36. Revised Discharge Specifications (Tier 2, 3, and 4) Section D.5).d as follows:

    d. **Tiers 2, 3, and 4**: Within ~~2~~ **3 years** of NOA issuance, a Discharger operating an existing SDS shall have completed the necessary system changes to comply with the daily discharge flow limit stated in the Effluent Limitations section.

37. Revised Discharge Specifications (Tier 2, 3, and 4) Section D.5).g.i as follows:

    i. The Nitrogen Control Plan is an evaluation of the winery and land treatment and disposal operations. The plan shall identify sources of nitrogen in the process water, evaluate existing nitrogen treatment measures and their effectiveness, and identify facility, treatment, and/or disposal improvements and an implementation schedule.

Attachments

38. Revised Attachment C, Facility Tier and Winery Effluent Flow Section 2 and 2.1 as follows:

    2. FACILITY TIER AND WINERY EFFLUENT FLOW

    Dischargers authorized under this General Order are classified into regulatory tiers based on the permitted annual facility process water design flow, which is the total volume of process water that may be discharged from the winery, including process water generated from outdoor processing areas, and measured prior to treatment, e.g., before discharged to a pond, land application area (LAA), or subsurface disposal system (General Order Table 1). The annual total process water discharge flow (i.e., winery effluent flow) shall not exceed the permitted design flow stated in the facility Notice of Applicability (NOA).

2.1 Provide a table with at least **5 years** of historical annual winery effluent (process water) flow (in gallons per year), including the current year, and the design flow (in gallons per year). Describe how flows were determined (e.g., flowmeter, storage tank water balance, etc.). Provide an accurate alternative calculation and a complete description of how the flow was determined if 5 years of historical annual winery effluent flow data is not available.

39. Revised Attachment E, Local Agency Oversight Conditions, General Provisions Section C.2 and 5 as follows:

1. All wineries shall be enrolled under this General Order.
2. Dischargers shall submit all technical and monitoring reports, monitoring data, notifications of General Order violations (e.g., spills, containment failures, surface water discharges), and other such correspondence related to General Order requirements concurrently to the local agency and regional water board. At the direction of the Local Agency, Dischargers shall change this concurrent submittal process if a centralized State Water Board electronic submittal process becomes available.
3. The State Water Board and regional water boards retain enforcement authority related to this General Order regardless of Discharger participation in a local agency oversight program.
4. The regional water board may limit this General Order tiers covered by a Local Agency Oversight Program.
5. The local agency acts as an administrator in implementing the requirements of this General Order. The regional water board and the local agency may establish a memorandum of understanding defining specific roles and responsibilities necessary to ensure the efficient implementation of the local program.

40. Revised Attachment E, Local Agency Oversight Conditions, Monitoring, Inspection, and Compliance Reporting Section 4 as follows:

Spill or Illicit Discharge Reporting – The local agency is required to notify (e.g., via telephone or email) ~~to~~ the regional water board within **24 hours** of any spill or illicit discharge incidents from a facility in the Local Agency Oversight Program ~~within **24 hours**~~ and provide a written follow-up of the incident within **20 days** of the occurrence.

41. Revised Attachment G, Monitoring and Reporting Program, Quality Assurance and Controls Section, paragraph 5 as follow:

~~Monitoring information shall include the analytical laboratory reports, method detection limit (MDL), and the reporting limit (RL) or practical quantification limit (PQL). If the regulatory limit for a given constituent is less than the RL or PQL, then any analytical result for that constituent that are below the RL or PQL but above the MDL shall be reported and flagged as estimated.~~

42. Revised Attachment G, Monitoring and Reporting Program, Source Water Monitoring Table and footnotes (2) and (4) as follows:

SOURCE WATER MONITORING

The Discharger shall monitor each source of water supply used for winery processing activities (water supply well, surface water, municipal source, etc.) and for supplemental irrigation (e.g., agricultural well, irrigation canal, etc.). For each source of water supply used for winery processing activities, the Discharger shall also calculate the flow-weighted annual average FDS concentration using monthly flow data and the most recent chemical analysis conducted.

			Frequency (2)		
Parameter	**Units**	**Sample Type**	**Tier 2**	**Tier 3**	**Tier 4**
Flow	gpd	Metered or calculated (1)	Continuous, ~~or~~ daily, or average daily flow	Continuous or daily	Continuous or daily
TDS	mg/L	Grab	Annually	Annually	Semi-annually
FDS	mg/L	Grab	Annually	Annually	Semi-annually
Flow-weighted FDS	mg/L	Computed average	Annually	Annually	Annually
Total Kjeldahl nitrogen (3)	mg/L	Grab	Annually	Annually	Annually
Ammonia as nitrogen (3)	mg/L	Grab	Annually	Annually	Annually
Nitrate + nitrite as nitrogen (3)	mg/L	Grab	Annually	Annually	Annually
Total nitrogen (3)	mg/L	Calculated	Annually	Annually	Annually
General minerals (4)	mg/L	Grab	--	--	Annually

(1) Source water flowrate may be measured directly via a flowmeter or determined from customer billing information. Supplemental irrigation water flow from a canal or similar source may be determined using an accurate alternative method.

(2) Source water monitoring for water supply sources used for winery processing activities shall be collected when the facility is in operation and discharging process water. Average daily flow method means as measured or estimated during the first seven days of the discharge occurring each month.

(3) Monitoring for supplemental irrigation water sources only.

(4) ~~Samples shall be filtered. If field filtering is not feasible, samples shall be collected in unpreserved containers and submitted to the laboratory within **24 hours** with a request (on the chain-of-custody form) to immediately filter then~~

~~preserve the sample.~~ The minimum constituents are listed in Attachment A.

43. Revised Attachment G, Monitoring and Reporting Program, Winery Effluent Monitoring Table and footnotes (2) and new (3) as follows:

WINERY EFFLUENT MONITORING

Winery effluent measurements and samples are required when process water is generated. The Discharger shall collect winery effluent flow measurements and samples after screening and at a point in the system where process water, including any process water generated from outdoor processing areas, discharges from the winery but before treatment in a pond, land application area, or subsurface disposal system. The Discharger shall calculate the flow-weighted annual average FDS concentration using monthly flow data and the most recent chemical analysis conducted.

Parameter	Units	Sample Type	Frequency (2)			
			Tier 1	Tier 2	Tier 3	Tier 4
Flow	gpd	Metered or calculated (1)	Continuous, ~~or~~ daily, or average daily flow	Continuous, ~~or~~ daily, or average daily flow	Continuous or daily	Continuous or daily
Days of operation (generating process water) (3)	day	Observation	Daily	Daily	Daily	Daily
TDS	mg/L	Grab	--	Quarterly	Monthly	Monthly
FDS	mg/L	Grab	--	Quarterly	Monthly	Monthly
Flow-weighted FDS	mg/L	Computed average	--	Quarterly	Monthly	Monthly

(1) Winery effluent flowrate shall be measured directly via a flowmeter or, for Tier 1 and Tier 2 facilities only, may be calculated using an accurate alternative method
(e.g., assume effluent flow is equal to facility source water use, calculate effluent flow from a daily water balance of all effluent storage tank levels). The regional water board may specify a required flow measurement method.

(2) Winery effluent monitoring shall be conducted when process water is generated. Average daily flow method means as measured or estimated during the first seven days of the discharge occurring each month.

(3) Winery effluent observations for operating days only required when process water is being generated.

44. Revised Attachment G, Monitoring and Reporting Program, Pond Monitoring Table as follows:

POND MONITORING

In addition to pond samples, the Discharger shall inspect the pond and note the pond berm and liner conditions in field logs, a summary of which shall be included in the monitoring reports. Process water ponds shall be monitored until dry as follows:

			Frequency		
Parameter	**Units**	**Sample Type**	**Tier 2**	**Tier 3**	**Tier 4**
Freeboard	0.1 foot (1)	Observation	Weekly	Weekly	Weekly
Berm condition (2)	NA	Observation	Weekly	Weekly	Weekly
Liner condition (3)	NA	Observation	When visible	When visible	When visible
DO (4)	mg/L	Field	Crush: ~~W~~weekly Off-season: monthly	Crush: ~~W~~weekly Off-season: monthly	Weekly
pH	pH units	Field	Crush: ~~W~~weekly Off-season: monthly	Crush: ~~W~~weekly Off-season: monthly	Weekly
EC	µmho/cm	Field	Crush: ~~W~~weekly Off-season: monthly	Crush: ~~W~~weekly Off-season: monthly	Weekly

(1) Freeboard shall be monitored to the nearest tenth of a foot.

(2) Inspect the pond berm for evidence of burrowing animals, erosion, cracks, and other conditions that may impact berm integrity.

(3) Inspect the pond liner for evidence of damage (e.g., cracks, tears, punctures) and other conditions that may impact liner integrity.

(4) Collect dissolved oxygen (DO) samples at a depth of one foot below the surface opposite the pond inlet between the hours of 0600 and 0900.

45. Revised Attachment G, Monitoring and Reporting Program, Effluent to Land Application Area Monitoring Table and footnotes (1), (8), and new (9) as follows:

EFFLUENT TO LAND APPLICATION AREA MONITORING

Effluent to land application area monitoring shall be conducted when there is discharge to land. The Discharger shall collect effluent samples following screening and before it is discharged to the land application area, or, if treatment is provided (e.g., in a pond), at a point in the system following treatment and before process water is discharged to the land application area. Time of collection of the sample shall be recorded. Effluent monitoring shall include the following:

			Frequency (1)		
Parameter	**Units**	**Sample Type**	**Tier 2**	**Tier 3**	**Tier 4**
Flow	Gpd	Metered or calculated (2)	Continuous, ~~or~~ daily, or average daily flow	Continuous or daily	Continuous or daily
pH (3)	pH units	Field	Bi-weekly	Bi-weekly	Weekly
EC (3)	µmho/cm	Field	Bi-weekly	Bi-weekly	Weekly
BOD	mg/L	Grab or 24-hr composite (4)	Crush: bi-weekly Off-season: one-time (5)	Crush: bi-weekly Off-season: monthly (7)	Crush: weekly Off-season: bi-weekly or monthly (8)
~~TSS~~	~~mg/L~~	~~Grab or 24-hr composite (4)~~	~~Crush: bi-weekly~~ ~~Off-season: one-time (5)~~	~~Crush: bi-weekly~~ ~~Off-season: monthly (7)~~	~~Crush: weekly~~ ~~Off-season: bi-weekly or monthly (8)~~
FDS	mg/L	Grab or 24-hr composite (4)	Crush: monthly Off-season: one-time (6)	Monthly	Monthly
TDS	mg/L	Grab or 24-hr composite (4)	Crush: monthly Off-season: one-time (6)	Monthly	Monthly
Total Kjeldahl nitrogen	mg/L	Grab or 24-hr composite (4)	Monthly	Monthly	Monthly

			Frequency (1)		
Parameter	**Units**	**Sample Type**	**Tier 2**	**Tier 3**	**Tier 4**
Ammonia as nitrogen	mg/L	Grab or 24-hr composite (4)	Monthly	Monthly	Monthly
Nitrate + nitrite as nitrogen	mg/L	Grab or 24-hr composite (4)	Monthly	Monthly	Monthly
Total nitrogen	mg/L	Calculated	Monthly	Monthly	Monthly
General minerals (9)	mg/L	Grab or 24-hr composite (4)	--	--	Annually

(1) Effluent to land application area monitoring shall be conducted when there is discharge to land. Average daily flow method means as measured or estimated during the first seven days of the discharge occurring each month.

(2) Effluent flowrate shall be measured directly via a flowmeter or, for Tier 2 facilities only, may be calculated using an accurate alternative method. The flow measurement method must be capable of determining the discharge flow to each individual management unit. The regional water board may specify a required flow measurement method.

(3) The pH and EC monitoring may be satisfied using pond monitoring results if the discharge to the land application area is entirely from the pond.

(4) **Tiers 2 and 3**: Collect grab samples.
Tier 4: Collect 24-hour composite samples. Grab samples can be collected in lieu of 24-hour composite samples if collected near the outlet of a pond with at least 24-hour residence time and the discharge to the land application area is entirely from the pond.

(5) Collect samples bi-weekly during the crush period. Collect one representative sample during the off-season.

(6) Collect samples monthly during the crush period. Collect one representative sample during the off-season.

(7) Collect samples bi-weekly during the crush period. Collect samples monthly during the off-season.

(8) Collect samples weekly during the crush period; collect samples bi-weekly during the off-season. The off-season samples may be collected monthly instead of bi-weekly if the samples are collected near the outlet of a pond with at least 72-hour residence time and the discharge to the land application area is entirely from the pond.

~~(8)~~(9) The minimum constituents are listed in Attachment A

46. Revised Attachment G, Monitoring and Reporting Program, Land Application Area Monitoring Table and footnotes (1), (3), (4), and (10) as follows:

LAND APPLICATION AREA MONITORING

Land application area monitoring shall be conducted when there is discharge to land. The Discharger shall perform the following routine monitoring and loading calculations for the land application area. In addition, the Discharger shall inspect the land application area and note the field conditions in field logs, a summary of which shall be included in the monitoring reports. Data shall be collected and presented in tabular format for each individual management unit and shall include the following:

			Frequency (1)		
Parameter	**Units**	**Sample Type**	**Tier 2**	**Tier 3**	**Tier 4**
Field conditions (2)	NA	Observation	Weekly	Weekly	Weekly
Cropping activities (3,4)	NA	Observation	When it occurs	When it occurs	When it occurs
Application field number (4)	NA	Observation	Daily	Daily	Daily
Application area (4)	acres	Measurement	Daily	Daily	Daily
Days in irrigation cycle (4,5)	day	Observation	Daily	Daily	Daily
Process water flow (4)	gpd	Metered or calculated (6)	Continuous, ~~or~~ daily, or average daily flow	Continuous or daily	Continuous or daily
Process water loading (4)	in/ac/d (7)	Calculated	--	Daily	Daily
Supplemental water flow (4)	gpd	Metered or estimated	Daily or average daily flow	Daily	Daily
Supplemental water loading (4)	in/ac/d (7)	Calculated	--	Daily	Daily
Precipitation	0.01 inch	Rain gauge (8)	Daily	Daily	Daily
Total hydraulic loading (4,9)	in/ac/mo (7)	Calculated	--	Daily	Daily
BOD loading (10)					
Day of application	lb/ac	Calculated or estimated	Daily	Daily	Daily
Cycle average	lb/ac/d	Calculated	Daily	Daily	Daily

Parameter	Units	Sample Type	Frequency (1)		
			Tier 2	Tier 3	Tier 4
Nitrogen loading (11)					
Nitrogen loading by source (12)	lb/ac/mo	Calculated	Monthly	Monthly	Monthly
Cumulative nitrogen loading (13)	lb/ac/yr	Calculated	Annually	Annually	Annually
Salt loading (14)					
From process water	lb/ac/mo	Calculated	--	Monthly	Monthly
Cumulative salt loading	lb/ac/yr	Calculated	--	Annually	Annually

(1) Land application area monitoring shall be conducted when there is discharge to land. Average daily flow method means as measured or estimated during the first seven days of the discharge occurring each month.

(2) Inspect the land application area for evidence of erosion, field saturation, runoff, or presence of nuisance conditions (e.g., flies, ponding, etc.).

(3) Record the cropping activities (e.g., fertilizer applied [total pounds and pounds per acre], fertilizer nitrogen content, type of crop planted or landscape irrigated, planting and harvest dates, crop harvest yield [total wet tons and wet tons per acre], and crop tissue sampling dates~~, and crop tissue~~/analytical results (if applicable) by land application area field or individual management unit number, as appropriate.

(4) For land application fields divided into smaller management units (e.g., subfields, subareas, checks), identify the individual management unit number, its acreage, the amounts of process water and of supplemental water applied, and the cropping or planting activities at each individual management unit.

(5) Identify the number of wet days (i.e., days with process water irrigation) and dry days (i.e., non-irrigation days following wet days) in each irrigation cycle by individual management unit.

(6) Process water flowrate shall be measured directly using a flowmeter or, for Tier 2 facilities only, may be calculated using an accurate alternative method. The flow measurement method must be capable of determining the discharge flow to each individual management unit. The regional water board may specify a required flow measurement method.

(7) Report to the nearest 0.1 inches per acre per day (in/ac/d) or 0.1 inches per acre per month (in/ac/mo).

(8) National Weather Service or California Irrigation Management Information System (CIMIS) data from the nearest weather station are acceptable.

(9) Combined loading from process water, supplemental irrigation water, and precipitation.

(10) The ~~D~~daily calculation or estimate is necessary to calculate the ~~and~~ cycle average BOD loading rates for each individual management unit which shall be calculated using the applied volume of process water, applied acreage, and the moving average of the three most recent BOD process water results.

(11) Nitrogen loading for each individual management unit shall be calculated using the applied volume of process water, applied acreage, and the average process water concentration for total nitrogen for that month.

(12) Loading from each source of nitrogen applied to each individual management unit shall be shown as applicable, e.g., from process water, supplemental water, fertilizers, process solids, soil amendments, etc.

(13) Cumulative nitrogen loading shall be shown for each individual management unit.

(14) Salt loading for each individual management unit shall be calculated using the applied volume of process water, applied acreage, and the average process water concentration for FDS for that month.

47. Revised Attachment G, Monitoring and Reporting Program, Effluent to Subsurface Disposal Area Monitoring Table and footnotes (1) and (8) as follows:

EFFLUENT TO SUBSURFACE DISPOSAL AREA MONITORING

Effluent to subsurface disposal area monitoring shall be conducted when there is discharge to land. The Discharger shall collect effluent samples at a point in the system following subsurface disposal system treatment and before process water is discharged to the subsurface disposal area. Time of collection of the sample shall be recorded. Effluent monitoring shall include the following:

			Frequency (1)		
Parameter	**Units**	**Sample Type**	**Tier 2**	**Tier 3**	**Tier 4**
Flow	gpd	Metered or calculated (2)	Continuous, ~~or~~ daily, or average daily flow	Continuous or daily	Continuous or daily
pH	pH units	Field	Bi-weekly	Bi-weekly	Weekly
EC	µmho/cm	Field	Bi-weekly	Bi-weekly	Weekly
BOD	mg/L	Grab or 24-hr composite (3)	Crush: bi-weekly Off-season: one-time (4)	Crush: bi-weekly Off-season: monthly (6)	Crush: bi-weekly Off-season: bi-weekly or monthly (7)

			Frequency (1)		
Parameter	**Units**	**Sample Type**	**Tier 2**	**Tier 3**	**Tier 4**
TSS	mg/L	Grab or 24-hr composite (3)	Crush: bi-weekly Off-season: one-time (4)	Crush: bi-weekly Off-season: monthly (6)	Crush: bi-weekly Off-season: bi-weekly or monthly (7)
FDS	mg/L	Grab or 24-hr composite (3)	Crush: monthly Off-season: one-time (5)	Crush: bi-weekly Off-season: monthly (6)	Crush: bi-weekly Off-season: bi-weekly or monthly (7)
TDS	mg/L	Grab or 24-hr composite (3)	Crush: monthly Off-season: one-time (5)	Crush: bi-weekly Off-season: monthly (6)	Crush: bi-weekly Off-season: bi-weekly or monthly (7)
Total Kjeldahl nitrogen	mg/L	Grab or 24-hr composite (3)	Crush: bi-weekly Off-season: monthly (6)	Crush: bi-weekly Off-season: monthly (6)	Crush: bi-weekly Off-season: bi-weekly or monthly (7)
Ammonia as nitrogen	mg/L	Grab or 24-hr composite (3)	Crush: bi-weekly Off-season: monthly (6)	Crush: bi-weekly Off-season: monthly (6)	Crush: bi-weekly Off-season: bi-weekly or monthly (7)
Nitrate + nitrite as nitrogen	mg/L	Grab or 24-hr composite (3)	Crush: bi-weekly Off-season: monthly (6)	Crush: bi-weekly Off-season: monthly (6)	Crush: bi-weekly Off-season: bi-weekly or monthly (7)
Total nitrogen	mg/L	Calculated	Crush: bi-weekly Off-season: monthly (6)	Crush: bi-weekly Off-season: monthly (6)	Crush: bi-weekly Off-season: bi-weekly or monthly (7)
General minerals(8)	mg/L	Grab or 24-hr composite (3)	--	--	Annually

(1) Effluent to subsurface disposal area monitoring shall be conducted when there is discharge to land. Average daily flow method means as measured or estimated during the first seven days of the discharge occurring each month.

(2) Effluent flowrate shall be measured directly via a flowmeter or, for Tier 2 facilities only, may be calculated using an accurate alternative method. The flow measurement method must be capable of determining the discharge flow to each individual management unit. The regional water board may specify a required flow measurement method.

(3) **Tiers 2 and 3**: Collect grab samples.

Tier 4: Collect 24-hour composite samples. Grab samples can be collected in lieu of 24-hour composite samples if collected near the outlet of a subsurface disposal system tank (e.g., storage or settling tank) with at least 24-hour residence time and the discharge to the subsurface disposal area is entirely from the tank.

(4) Collect samples bi-weekly during the crush period. Collect one representative sample during the off-season.

(5) Collect samples monthly during the crush period. Collect one representative sample during the off-season.

(6) Collect samples bi-weekly during the crush period. Collect samples monthly during the off-season.

(7) Collect samples bi-weekly during the crush period. Collect samples bi-weekly during the off-season. The off-season samples may be collected monthly instead of bi-weekly if the samples are collected near the outlet of a subsurface disposal system tank (e.g., storage or settling tank) with at least 72-hour residence time and the discharge to the subsurface disposal area is entirely from the tank.

(8) The minimum constituents are listed in Attachment A.

48. Revised Attachment G, Monitoring and Reporting Program, Subsurface Disposal Area Monitoring Table and footnotes (1) and (3) as follows:

SUBSURFACE DISPOSAL AREA MONITORING

Subsurface disposal area monitoring shall be conducted when there is discharge to land. The Discharger shall perform the following routine monitoring and loading calculations for the subsurface disposal area. In addition, the Discharger shall inspect the subsurface disposal area and note the field conditions in field logs, a summary of which shall be included in the monitoring reports. Data shall be collected and presented in tabular format for each individual management unit and shall include the following:

			Frequency (1)		
Parameter	**Units**	**Sample Type**	**Tier 2**	**Tier 3**	**Tier 4**
Disposal area conditions (2)	NA	Observation	Weekly	Weekly	Weekly
Cropping activities (3,4)	NA	Observation	When it occurs	When it occurs	When it occurs
Disposal area field number (4)	NA	Observation	Daily	Daily	Daily
Disposal area acreage (4)	Acres	Measurement	Daily	Daily	Daily

			Frequency (1)		
Parameter	**Units**	**Sample Type**	**Tier 2**	**Tier 3**	**Tier 4**
Days in discharge cycle (4,5)	Day	Observation	Daily	Daily	Daily
Process water flow (4)	gpd	Metered or calculated (6)	Continuous, ~~or~~ daily, or average daily flow	Continuous or daily	Continuous or daily
Hydraulic loading (4)	gal/sqft/d (7)	Calculated	Daily	Daily	Daily
Hydraulic loading (4)	gal/sqft/mo (7)	Calculated	Monthly	Monthly	Monthly
Precipitation	0.01 inch	Rain gauge (8)	Daily	Daily	Daily

(1) Subsurface disposal area monitoring shall be conducted when there is discharge to land. Average daily flow method means as measured or estimated during the first seven days of the discharge occurring each month.

(2) Inspect the dosing system (e.g., pump controllers, valves, distribution piping) and identify maintenance and repair needs. Inspect the subsurface disposal area for evidence of erosion, deep-rooted plants, burrowing animals, field saturation, water surfacing, runoff, or presence of nuisance conditions (e.g., odors, flies, ponding, etc.).

(3) Record the cropping activities (e.g., fertilizer applied [total pounds and pounds per acre], fertilizer nitrogen content, type of crop planted or landscape irrigated, and planting and harvest dates) by subsurface disposal area field or individual management unit number, as appropriate.

(4) For subsurface disposal area fields divided into smaller management units (e.g., subfields, subareas), identify the individual management unit number, its acreage, and the amount of process water discharged to each individual management unit.

(5) Identify the number of wet days (i.e., days with process water discharge) and dry days (i.e., non-discharge days following wet days) in each discharge cycle by individual management unit.

(6) Process water flowrate shall be measured directly via a flowmeter or, for Tier 2 facilities only, may be calculated using an accurate alternative method. The flow measurement method must be capable of determining the discharge flow to each individual management unit. The regional water board may specify a required flow measurement method.

(7) Measure hydraulic loading for the individual management units in gallons per square foot of discharge trench per day (gal/sqft/d) and gallons per square foot of discharge trench per month (gal/sqft/mo). Report to the nearest 0.1 gal/sqft/d or 0.1 gal/sqft/mo.

(8) National Weather Service or CIMIS data from the nearest weather station are acceptable.

49. Revised Attachment G, Monitoring and Reporting Program, Groundwater Monitoring footnote (3) as follows:

GROUNDWATER MONITORING

Tier 4: Facilities required to conduct groundwater monitoring shall conduct field monitoring and groundwater characterization. After measuring water levels and prior to collecting samples, each monitoring well shall be adequately purged until pH, temperature, and EC have stabilized. Water that has been standing within the well screen, casing, and filter pack may not be chemically representative of formation water. Depending on the hydraulic conductivity of the geologic setting, the volume of water removed during purging is typically a minimum of 3 volumes of water within the well casing and screen, or additionally the filter pack pore volume. Alternatively, low flow purging and sampling techniques may be utilized. Samples shall be collected and analyzed for the following:

Parameter	Units	Sample Type	Frequency (Tier 4 only)
Depth to groundwater	0.1 foot (1)	Measured	Quarterly
Groundwater elevation	0.1 foot (2)	Calculated	Quarterly
Groundwater gradient	feet/feet	Calculated	Quarterly
Groundwater flow direction	Degrees	Calculated	Quarterly
pH	pH units	Field	Quarterly
EC	µmho/cm	Field	Quarterly
FDS	mg/L	Grab	Quarterly
TDS	mg/L	Grab	Quarterly
Total Kjeldahl nitrogen	mg/L	Grab	Quarterly
Ammonia as nitrogen	mg/L	Grab	Quarterly
Nitrate + nitrite as nitrogen	mg/L	Grab	Quarterly
Total nitrogen	mg/L	Calculated	Quarterly
Iron, dissolved	mg/L	Grab	Annually
Manganese, dissolved	mg/L	Grab	Annually
General minerals (3)	mg/L	Grab	Annually

(1) Measure to the nearest tenth of a foot.

(2) Calculate to the nearest tenth of a foot above mean sea level.

(3) ~~Samples shall be filtered. If field filtering is not feasible, samples shall be collected in unpreserved containers and submitted to the laboratory within **24 hours** with a request (on the chain-of-custody form) to immediately filter then preserve the sample.~~ The minimum constituents are listed in Attachment A.

50. Revised Attachment G, Monitoring and Reporting Program, Reporting Section Table G-1 as follows:

Table G-1. Reporting Schedule (All Tiers)

Report	Reporting Period	Due Date	Tier 1	Tier 2	Tier 3	Tier 4
Compliance Letter (1)	Jan – Dec	First day of second month after reporting period	X	X	X	X
Semi-annual Report						X
First semi-annual	Jan – Jun	Aug 1				
Second semi-annual	Jul – Dec	~~Feb~~ Mar 1 (2)				
Annual Report	Jan – Dec	Mar 1	X (3)	X	X	X

(1) Submit for any month in which a violation or exceedance occurs. Also submit as the transmittal letter for each monitoring report.

(2) The second semi-annual monitoring results may be incorporated into the Annual Report instead of submitted as standalone Semi-annual Report.

(3) An abbreviated Annual Report format is provided for Tier 1 Dischargers.

51. Revised Attachment G, Monitoring and Reporting Program, Reporting Section Land Application Area Reporting Items 15 and 17.a and c as follows:

Land Application Area Reporting

12. Results of the monitoring and loading calculations specified in the Effluent to Land Application Area Monitoring and Land Application Area Monitoring sections of the MRP.
13. Monthly and annual process water and supplemental water volumes applied to each individual management unit expressed in gallons.
14. Calculation of the monthly and total hydraulic loading from process water and supplemental water applied to each individual management unit by month.
15. Calculation of the ~~instantaneous (day of application) and~~ cycle average BOD loading rates for each individual management unit. Include the number of days in each irrigation cycle.
16. A summary of land application area monitoring log notations. Copies of the field logs do not need to be submitted unless requested by the regional water board.

17. An annual nitrogen balance showing the total annual nitrogen loading (in pounds per acre per year [lb/ac/yr]) to each land application field or individual management unit, as appropriate, as calculated from the sum of the monthly loading from all sources of nitrogen applied to the land. The nitrogen balance shall include:
    a. Types of crops grown or landscape irrigated, planting and harvest dates, and crop harvest yield.
    b. Nitrogen loading by source (e.g., fertilizer, process water, process solids, compost, etc.). Indicate any estimated nitrogen losses that reduced plant available nitrogen used in the nitrogen balance calculations.
    c. Crop uptake rates for each crop grown or landscape irrigated. Provide results of representative plant tissue analysis or technical reference source of the crop uptake rate values.
    d. A comparison of the total nitrogen applied to the nitrogen taken up by the crop harvested or removed.
18. Total annual FDS loading (in lb/ac/yr) to each land application area field or individual management unit, as appropriate, as calculated from the sum of the monthly loading.

52. Revised Attachment G, Monitoring and Reporting Program, Reporting Section Subsurface Disposal Area Reporting Item 23 as follows:

23. Types of crops grown or landscape irrigated, planting and harvesting dates, amount of fertilizer applied, and nitrogen content of fertilizer.