CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

Fresno Office
1685 "E" St.
Fresno, CA 93706-2007

Sacramento Office (Main)
11020 Sun Center Dr. #200
Rancho Cordova, CA
95670-6114

Redding Office
364 Knollcrest Dr. #205
Redding, CA 96002

Regional Board Website (https://www.waterboards.ca.gov/centralvalley)

[TENTATIVE] GENERAL WASTE DISCHARGE REQUIREMENTS ORDER R5-2026-XXXX

ORDER INFORMATION

Order:	General Waste Discharge Requirements for Fruit and Vegetable Packing Facilities Within the Central Valley Region (Packing General Order)
Status:	Tentative
Program:	Groundwater Quality Protection Program
Region 5 Offices:	Sacramento (Rancho Cordova), Fresno, and Redding
Counties:	Modoc, Shasta, Lassen, Plumas, Butte, Glenn, Colusa, Lake, Sutter, Yuba, Sierra, Nevada, Placer, Yolo, Napa, Solano, Sacramento, El Dorado, Amador, Calaveras, San Joaquin, Contra Costa, Stanislaus, Tuolumne, Merced, Mariposa, Madera, Kings, Fresno, Tulare, Kern, Alameda, Alpine, Siskiyou

CERTIFICATION

I, PATRICK PULUPA, Executive Officer, hereby certify that the following is a full, true, and correct copy of the order adopted by the California Regional Water Quality Control Board, Central Valley Region, on _____ [Month] 2026.

_____

PATRICK PULUPA,
Executive Officer

TABLE OF CONTENTS

Table of Contents

TABLE INDEX

Acronyms and Abbreviations

ACP	Alternate Compliance Project
AGR	Agricultural Supply
Basin Plan(s)	Water Quality Control Plan(s)
bgs	Below Ground Surface
BOD	Biochemical Oxygen Demand (general term)
BOD_5	[Five-Day] Biochemical Oxygen Demand at 20°Celsius
BPTC	Best Practicable Treatment or Control
CEQA	California Environmental Quality Act, Public Resources Code section 21000 et seq.
CIMIS.	California Irrigation Management Information System
cm/s	Centimeters per second
COC[s]	Constituent[s] of Concern
CV-SALTS	Central Valley Salinity Alternatives for Long-Term Sustainability
DO	Dissolved Oxygen
DWR	California Department of Water Resources
EAP	Early Action Plan
EC	Electrical Conductivity
FDS	Fixed Dissolved Solids
FEMA	Federal Emergency Management Agency
gpy	Gallons per year
GWPTs	Groundwater Protection Targets
ILRP	Irrigated Lands Regulatory Program

Acronyms and Abbreviations

IND ..... Industrial Service Supply

LAA(s) ..... Land Application Area(s)

lbs/ac/day ..... Pounds per acre per day

lbs/ac/year ..... Pounds per acre per year

µg/L ..... Micrograms per Liter

µmhos/cm ..... Micromhos per Centimeter

mg/L ..... Milligrams per Liter

mgd ..... Million gallons per day

mgy ..... Million gallons per year

MCL(s) ..... Maximum Contaminant Level(s) per Title 22

MND ..... Mitigated Negative Declaration

MRP ..... Monitoring and Reporting Program

MUN ..... Municipal and Domestic Supply

MZIPs ..... Management Zone Implementation Plans

NCP ..... Nitrate Control Program

NO_3-N ..... Nitrate as Nitrogen

NOA ..... Notice of Applicability

NOI ..... Notice of Intent

NOT ..... Notice of Termination

NPDES ..... National Pollutant Discharge Elimination System

NWMP ..... Nutrient and Wastewater Management Plan

P&O Study ..... Priority and Optimization Study

PRO ..... Industrial Process Supply

Acronyms and Abbreviations

RO.....Reverse osmosis

R[O]WD.....Report of Waste Discharge

SAMP.....Surveillance and Monitoring Program

SCH.....State Clearinghouse

SCP.....Salt Control Program

SMRs .....Self-monitoring reports

SWRCB.....State Water Resources Control Board

TDS.....Total Dissolved Solids

Title 22 .....California Code of Regulations, Title 22

Title 23 .....California Code of Regulations, Title 23

Title 27 .....California Code of Regulations, Title 27

TKN.....Total Kjeldahl Nitrogen

TN .....Total Nitrogen

THMs.....Trihalomethanes

U.S. EPA.....United States Environmental Protection Agency

Water Code.....California Water Code

WDRs.....Waste Discharge Requirements

WQO[s] .....Water Quality Objective[s]

FINDINGS

The Central Valley Regional Water Quality Control Board (Central Valley Water Board or Board) hereby finds as follows:

Background

1. California's Central Valley region is a major agricultural production area, and as a result, there are numerous food processing facilities within the region. One of the major types of food processing facilities located within the Central Valley are fruit and vegetable packing facilities. These facilities range in size from small, seasonal facilities that may discharge only a few weeks out of the year to large-scale, year-round operations.

2. Discharge of food processing wastes (i.e., process wastewater and solids) to land, either for disposal or reuse, is a common practice in the Central Valley since many facilities that generate these wastes are often located in rural areas not served by municipal sewer systems, and discharge to land is often the most practical and cost-effective method for disposal. Reuse of process waste on agricultural land for irrigation of crops, dust control, or as a soil amendment provides additional benefits, including treatment of the organic portion of the waste, reduction of potable water use, and a low-cost organic fertilizer for crops.

3. The Board regulates the discharge of fruit and vegetable packing wastes to land under the Water Code by prescribing permits known as Waste Discharge Requirements (WDRs). Pursuant to Water Code section 13260, any person discharging waste or proposing to discharge waste that could affect the quality of any surface or ground water of the state must file a Report of Waste Discharge (ROWD) with the appropriate regional water quality control board to obtain WDRs or a waiver of WDRs.

4. Pursuant to Water Code section 13263, subdivision (i), the Central Valley Water Board may prescribe general WDRs for a category or type of discharge if all of the following apply:

    a. The discharges are produced by the same or similar operations;

    b. The discharges involve the same or similar types of waste;

    c. The discharges require the same or similar treatment and disposal standards; and

    d. The discharges are more appropriately regulated under general rather than individual requirements.

5. Fruit and vegetable packing facilities typically involve similar operations, including rinsing, sorting, cooling, and transporting the product. Discharges to land from these operations share certain characteristics, including similar constituents of concern, processes, and the same or similar levels of treatment and disposal standards. As such these types of discharges are appropriately regulated under general WDRs.

6. The following materials are attached and incorporated as part of this Order:

   a. ATTACHMENT A – Glossary of Terms

   b. ATTACHMENT B – Notice of Intent (NOI) Form

   c. ATTACHMENT C – Technical Requirements for a ROWD

   d. ATTACHMENT D – Monitoring and Reporting Program (MRP) Template

   e. ATTACHMENT E – Standard Requirements for Monitoring Well Installations

   f. ATTACHMENT F – Owner/Operator Transfer Form

Scope and Applicability

7. This Order serves as general WDRs for fruit and vegetable packing facilities that apply process wastewater and associated solids to land within the Central Valley region. Fruit and vegetable packing facilities (hereafter referred to as Facility or Facilities) include those that wash, sort, store, pack, and ship fruits and vegetables for export or sale including, but not limited to stone fruits, citrus, grapes, carrots, beans, onions, tomatoes, and raisins. Facilities not covered by this Order include:

   a. Facilities that discharge more than 180 million gallons of process wastewater per year.

   b. Facilities that direct all process wastewater to a community sewer system or that containerize all process wastewater for off-site disposal at a permitted facility (i.e., tank and haul).

   c. Facilities that concentrate and/or produce high strength waste from dicing, cooking, juicing, canning, crushing, or dehydrating. *Note: raisin packing facilities with an on-site dehydrator may be allowed under this Order if all dehydrating waste is segregated and handled separately (i.e., sent to a regional wastewater treatment plant or land applied separately under individual WDRs or a conditional waiver)*.

8. The owner(s) and/or operator(s) of Facilities enrolled under this Order are referred to as "**Discharger(s)**." Dischargers enrolled under this Order, as specified in their Notice of Applicability (NOA), issued by the Executive Officer, are legally responsible for compliance with this Order.

9. Discharges authorized under this Order will be classified into regulatory tiers based on annual wastewater design flow and nature of the discharge. The regulatory tiers are summarized in Table 1 below. Application requirements, fees, and monitoring and reporting requirements will correspond to the complexity of the discharge regulated under each tier.

Table 1. Tier Designations

Tier	Conditions
Tier 0 (Exempt)	Less than 10,000 gallons per year (gpy)
Tier 1	Between 10,000 gpy and 1 million gallons per year (mgy) with no ponds
Tier 2a	Between 10,000 gpy and 12 mgy with lined ponds and/or just land application areas
Tier 2b	Between 10,000 gpy and 12 mgy with unlined ponds
Tier 3	Between 12 and 30 mgy
Tier 4	Between 30 and 180 mgy

10. Tier 0 facilities, if managed appropriately, are unlikely to degrade water quality given the limited discharge volume (less than 10,000 gpy). As such, Tier 0 Facilities are exempt from this Order provided that they:

    a. Do not discharge waste:

        i. To surface water or surface water drainage courses;

        ii. That is classified as "hazardous," as defined in California Code of Regulations, title 23, section 2521, or "designated," as defined in Water Code section 13173; or

        iii. To land not owned, operated, controlled, or contracted by the Facility owner and/or operator.

b. Implement the following best management practices:

i. Manage processing and waste areas (e.g., storage, cleaning, loading, conveyance, treatment, and disposal areas) to prevent, mitigate, and promptly clean any spills;

ii. Maintain all process wastewater within property boundaries and appropriate use areas (e.g., loading, processing, storage, treatment, disposal, and reuse areas);

iii. Manage waste to minimize nuisance conditions (e.g., objectionable odors, mosquitoes, flies, weeds, etc.) in ponds, ditches, and other open storage, disposal, and reuse areas;

iv. Manage stormwater that comes in contact with waste material as process wastewater; and

v. Protect stored process solids and residuals from precipitation to minimize process wastewater generation (i.e., use of secondary containment, covers, etc.).

11. Exempt Facilities (Tier 0) are not required to enroll under this Order. However, an exempt Facility that violates General Order prohibitions, those discharge conditions stated in Finding 10, or is otherwise determined to pose a threat to water quality may be required to submit an application for coverage under this Order if directed to do so by the Central Valley Water Board. Additionally, if a Tier 0 Facility is determined to have caused or allowed a discharge of waste that creates, or threatens to create, a condition of pollution and/or nuisance, it may be required to remediate those conditions regardless of whether the Facility is required to obtain permit coverage under this or a separate WDRs Order (see Wat. Code, § 13304). A Facility's exempt status does not impact the Central Valley Water Board's permitting or enforcement authority related to discharges of waste.

12. Facilities that discharge less than 1.0 mgy of process wastewater and do not use a pond for storage or disposal of process wastewater have a lower potential to degrade water quality provided they comply with General Order requirements. Such Facilities may be regulated as Tier 1 dischargers under this Order. Facilities that meet the Tier 1 flow limitations and use a pond for storage and/or disposal of process wastewater may pose a greater threat to water quality and/or complexity and will be regulated as a Tier 2 Facility under this Order.

13. Facilities that land apply larger volumes of process wastewater or use ponds for storage or disposal of process wastewater inherently have a greater potential to cause groundwater degradation from excessive application and/or percolation of

process wastewater; therefore, Facilities in higher tiers (i.e., Tiers 2, 3, and 4) may be required to conduct groundwater monitoring pursuant to a site-specific MRP issued with their NOA. Where a Discharger can demonstrate a reduced potential for groundwater degradation, groundwater monitoring may not be required.

14. The Central Valley Water Board intends for this Order to be the primary permitting mechanism for fruit and vegetable packing facilities within the region. While issuance of this General Order will not rescind existing individual WDRs or conditional waivers, the Board may make a determination that coverage under this General Order provides regulatory coverage that is more consistent with existing regulatory requirements and may require Facilities currently regulated under individual WDRs to enroll under this Order.

15. If the Central Valley Water Board determines that coverage under this General Order will not be sufficient to protect water quality due to site-specific conditions at a particular Facility that would otherwise be eligible for coverage under this Order, the Central Valley Water Board may prescribe individual WDRs in lieu of coverage under this General Order.

16. Facilities seeking coverage under this Order shall submit a complete Notice of Intent (NOI; **Attachment B**), the appropriate filing fee (if required), and accompanying technical report, including but not limited to, the information requested in **Attachment C** to the appropriate Central Valley Water Board office. After Central Valley Water Board staff determines the submittal complete and that the General Order is the appropriate permitting mechanism to regulate the discharge from the Facility, a NOA will be issued. The NOA will, at a minimum, confirm the Discharger's tier and applicable flow limit (based on the requirements outlined in Attachment C), and provide a site-specific MRP.

17. For existing Facilities that cannot immediately comply with Order conditions, the application shall include a proposed time schedule for meeting all requirements of this Order, which must be as short as practicable. If any proposed completion dates exceed the compliance periods stipulated in this Order (i.e., lining ponds, etc.), the change must be supported with appropriate technical and/or economic justification.

18. A Discharger irrigating a commercial crop (e.g., a vineyard, orchard, or row crop) may be required to enroll its land application area (LAA) parcels under an Irrigated Lands Regulatory Program (ILRP) General Order. Dischargers may contact the Central Valley Water Board to determine ILRP applicability. All eligible Tier 1 to Tier 4 Facilities that discharge process wastewater to land must apply for coverage under this General Order regardless of whether the subject parcels are enrolled under an ILRP General Order

19. This Order does not serve as a National Pollutant Discharge Elimination System (NPDES) permit or water quality certification under the federal Clean Water Act (33 U.S.C. § 1251 et seq.) nor does it authorize any discharge of waste to surface waters. Any discharge of waste to surface waters or that are otherwise subject to these authorities must be authorized under a separate order(s).

Waste Characterization

20. For the purposes of this Order, process wastewater from fruit and vegetable Facilities includes but is not limited to rinse water, conveyance water, cooling water, equipment wash water, and comingled stormwater directed through the process wastewater collection and disposal system. Other sources of process wastewater may include water softener regeneration brine, reverse osmosis (RO) concentrate, filter backwash water, boiler blow down, and cooling water/refrigeration condensate. These wastes require similar types of treatment and/or control measures (i.e., screening, aeration, settling, filtration, etc.) prior to discharge to protect water quality resources. Operations at individual Facilities vary and can include one or more of these processes.

21. Process wastewater collection and storage may involve the use of floor drains and trenches, piping, pumps, tanks, and ancillary equipment. These Facilities will typically use ponds or LAAs to treat, store, reuse, and/or dispose of process wastewater.

22. Process wastewater quality varies based on the quality of the source water, Facility operations, and chemical use, and may also vary seasonally, along with volume, depending on the type and nature of the fruits and vegetables brought in for packing. Wastewater quality data was collected from self-monitoring reports (SMRs) and ROWDs for various fruit and vegetable packing Facilities regulated by the Central Valley Water Board. Table 2 provides a comparison of average wastewater quality based on data for three major types of packing facilities (i.e., vegetable packing, fruit packing [non-raisins], and fruit packing [raisins]) covered by this Order.

Table 2. Wastewater Quality Comparison (Average/[Range])

Constituent/ Parameter	Units	Vegetable Packing	Fruit Packing (non-raisins)	Fruit Packing (raisins)
pH	std. units	7.7 [5.3-8.7]	7.8 [6.6-9.8]	5.4 [4.2-7.3]
Biochemical Oxygen Demand (BOD)	mg/L	586 [8-2,200]	102 [7–380]	4,836 [3,600-6,000]
Electrical Conductivity (EC)	µmhos/cm	1,272 [600-1,600]	858 [231–2,100]	715 [500-980]

Constituent/ Parameter	Units	Vegetable Packing	Fruit Packing (non-raisins)	Fruit Packing (raisins)
Total Dissolved Solids (TDS)	mg/L	976 [590-2,100]	806 [140-2,100]	3,907 [800-9,800]
Fixed Dissolved Solids (FDS)	mg/L	764 [400-1,100]	620 [280-1,350]	507 [335-970]
Nitrate as N (NO_3-N)	mg/L	5.3 [<1-10]	8.4 [<1–34]	4.1 [3-5.7]
Total Nitrogen (TN)	mg/L	23 [5-50]	14 [3.1-35]	49 [30-68]
Sodium	mg/L	113 [62-300]	104 [26-480]	56 [32-79]
Chloride	mg/L	152 [57-273]	83 [17-200]	29 [18-39]

23. The primary constituents of concern in fruit and vegetable process wastewater include nitrogen, organics (i.e., measured as BOD_5), and salts. Spills, and chemicals used for disinfection, sanitation, and cleaning purposes can contribute to these constituents, and source water can be a significant source for salts and, in some cases, nitrates in the process wastewater.

24. Additionally, the use of chemicals in processing operations, including cleaning and sanitizing chemicals, can increase or decrease the pH of the process wastewater. Low or high pH in process wastewater discharged to land can deteriorate soil health, decrease biological processes, and mobilize metals that may degrade underlying groundwater. Process wastewater that is neutralized to a pH between 6.0 and 9.0 prior to discharge will minimize the potential for negative impacts to soil biological treatment, crop growth, and groundwater quality; however, neutralization may increase salinity in the discharge.

25. Process wastewater may also contain disinfection byproducts (e.g., trihalomethanes [THMs]) resulting from the interaction of chlorine, used as a disinfecting agent, and organic material present in process rinse water. Generally, disinfection byproducts are not a significant concern for land application due to attenuation in the soil column. However, shallow groundwater or high THM concentrations in process wastewater stored in unlined ponds with high residence times may increase the potential to impact groundwater.

26. Chemicals, such as fungicides or fruit waxes, may also be used in packing operations. However, these chemicals are generally used sparingly or captured for reuse and do not significantly contribute to the discharge.

Land Application

27. Land application of process wastewater for irrigation of crops or landscaping is a beneficial reuse of process wastewater. Because process wastewater contains organic matter and nutrients, land application can improve soil productivity and provide supplemental nutrients for plant growth while simultaneously providing treatment and disposal of process wastewater. Process wastewater also contains plant macronutrients (e.g., ammonium, nitrate, phosphorus, and potassium) that can be removed by land application systems that incorporate growing and harvesting crops.

28. LAAs, where wastewater and solids are land applied for reuse of nutrients, can be effectively managed to prevent nuisance conditions and protect water quality by ensuring even application of process wastewater, infiltration within 48 hours, and applying water and nutrients (from process wastewater, supplemental irrigation, and fertilizers) at agronomic rates. An agronomic rate is the rate of application of process wastewater and nutrients necessary to satisfy plant demand (crop uptake) while minimizing the movement of process wastewater and nutrients below the root zone.

29. Calculating the agronomic rate should consider crop type, soil characteristics, climate, irrigation method, and irrigation efficiency. Application at an agronomic rate must account for hydraulic and nutrient loading from all sources (e.g., process wastewater, supplemental water, process solids, fertilizers, compost, and/or soil amendments).

30. The soil profile removes biodegradable organics (measured as BOD_5) via filtration, adsorption, and biological activity. Because most microbial activity occurs near the surface, it is important to maintain an aerobic upper soil profile between irrigation cycles.

31. Excessive application of high organic strength wastewater can create objectionable odors, soil conditions that are harmful to crops, and degradation of underlying groundwater with nitrogen species and metals. Such degradation can be prevented or minimized through the implementation of best management practices, such as field rotation, alternating wet and dry periods, infiltration within 48 hours, and managing hydraulic and organic loading to maintain aerobic soil conditions.

32. The United States Environmental Protection Agency's (U.S. EPA) *Pollution Abatement in the Fruit and Vegetable Industry* (1977) considered BOD loading rates in the range of 36 to 600 pounds per acre per day (lbs/ac/day) and recommends an average loading rate of about 100 lbs/ac/day in soils with growing crops to prevent nuisance, but indicates loading rates can be higher under certain conditions. However, the studies that supported this report did not evaluate actual or potential groundwater degradation associated with these loading rates. There are few studies that evaluate maximum BOD loading rates

for protection of groundwater. Those that have are not readily applicable to varying soil, groundwater, and climate conditions prevalent throughout the Central Valley region.

33. The California League of Food Processors' *Manual of Good Practice for Land Application of Food Processing/Rinse Water* (Manual of Good Practice) proposes risk categories associated with particular BOD loading rates as follows:

    a. Risk Category 1: (less than 50 lbs/ac/day; depth to groundwater greater than 5 feet) Indistinguishable from good farming operations with good distribution important.

    b. Risk Category 2: (less than 100 lbs/ac/day; depth to groundwater greater than 5 feet) Minimal risk of unreasonable groundwater degradation with good distribution more important.

    c. Risk Category 3: (greater than 100 lbs/ac/day; depth to groundwater greater than 2 feet) Requires detailed planning and good operation with good distribution very important to prevent unreasonable degradation, as well as use of oxygen transfer design equations to establish site-specific application cycles.

    The Manual of Good Practice recommends allowing a 50 percent increase in BOD loading in cases where sprinkler irrigation is used and recommends additional safety factors be considered for sites with heavy and/or compacted soils. The Manual of Good Practice was revised in February 2024. As part of the 2024 update, the California League of Food Processors conducted a peer-review process by contracting with scientists, professors, and engineers from California Polytechnic State University, San Luis Obispo, and the University of California, Davis. The Manual of Good Practice provides science-based guidance for BOD loading that, if fully implemented, is considered a best management practice to minimize or prevent groundwater degradation.

Process Wastewater Ponds

34. Process wastewater ponds (ponds) provide storage, equalization, mixing, treatment, operational flexibility, and disposal via evaporation/percolation for some Facilities. Most ponds are used to settle suspended solids and can reduce BOD_5 with the addition of aeration. Ponds with alternating aerobic and anoxic zones can also remove or reduce nitrogen concentrations.

35. Pond size and land application acreage are interrelated; more available storage equates to less area needed for land application, and the converse is also true. In addition, Facilities that discharge primarily during the wet season (i.e., November through March) may need additional storage capacity to minimize discharges during wet weather when soils are saturated and irrigation needs are

lower. This balance is determined by site conditions and constraints, process wastewater volume and quality, treatment objectives, costs, and operational resources.

36. Ponds should be sized using normal year and 100-year return period wet year water balances (calculated monthly) that account for pond inputs (e.g., process wastewater, precipitation, return flow) and pond outputs (e.g., reuse, evaporation, and percolation). Water balances can also be used to identify limiting factors, such as storage capacity or water shortfalls (i.e., when supplemental water may be needed to augment process wastewater supplies to meet seasonal crop needs).

37. Ponds are generally emptied before the start of the harvest season to maximize available storage capacity when process wastewater generation is at its highest. Pond water levels tend to increase throughout the fall and winter, when crop hydraulic needs are lower and precipitation is high, and decline during the spring and summer growing season, when water use is higher to account for increased evaporation and crop demand.

38. Undersized ponds can lead to process wastewater spills, unauthorized discharges of waste, insufficient treatment, anaerobic conditions, and nuisance odors. Low dissolved oxygen (DO) levels are an early indicator of deteriorating pond performance and the need to evaluate operations and address identified performance issues (e.g., provide additional aeration).

39. Ponds that percolate process wastewater have the potential to degrade underlying groundwater. Ponds can be lined using an engineered lined surface (e.g., compacted clay, concrete, or synthetic liner) to mitigate a pond's potential impact on underlying groundwater.

40. Ponds at Tier 2 Facilities generally contain smaller amounts of process wastewater for shorter periods of the year and generally pose a lower threat to groundwater than those at Tier 3 or 4 Facilities, if the ponds are properly maintained. Therefore, Tier 2 Facilities may be allowed to continue operating unlined ponds. However, groundwater monitoring or lining the ponds may be required depending on site-specific conditions.

41. Facilities with higher flows inherently have a greater potential for groundwater degradation. Therefore, this Order requires all ponds at Tier 3 and Tier 4 facilities be lined to meet a hydraulic conductivity of 1×10^{-6} centimeters per second (cm/s) or less to prevent percolation-related degradation, unless a demonstration is provided to show that existing conditions are protective of groundwater quality and down-gradient users based on site-specific soil and hydrogeologic conditions. Immediate compliance with this condition may not be feasible for existing facilities.

Solids Management

42. Typical Facility operations include a pre-cleaning process to remove leaves, stems, branches, and damaged material (e.g., culls) prior to packing. This green material is often collected and segregated for composting, returned to the fields and land applied as a soil amendment, shipped off-site for use as livestock feed, or sent to a landfill for disposal.

43. Screens, filters, and settling tanks/ponds are often used in Facility operations for sorting or to remove fines and suspended solids from the process wastewater. Removing solids prior to directing the process wastewater to flowmeters, storage tanks, treatment systems, or irrigation systems minimizes the potential for clogging and extends the life of the equipment.

44. Process waste solids can release nitrogen and other constituents of concern as the organic material in the solids breaks down. Liquid (process wastewater) draining from solids during storage or following precipitation events may contain high concentrations of these constituents. Discharge or percolation of this high strength wastewater can potentially reach and degrade surface and/or groundwater. This Order requires process solids to be stored and managed to minimize potential for leachate or runoff from solids storage areas (e.g., storage on concrete pads, bins, covers, secondary containment, etc.).

45. Land application or composting of organic solids removed from the waste stream or during packing operations provides a beneficial reuse including recycling of nutrients back to the farming operation thus reducing the need for synthetic fertilizers. This can also reduce the amount of material sent to landfills thus extending the life of the landfill. This Order requires process solids applied to the LAAs be properly managed to minimize potential nuisance conditions and monitored to account for nutrient loading as part of the Discharger's MRP.

Basin Plan Implementation

46. Pursuant to Water Code section 13263, subdivision (a), WDRs shall implement any relevant water quality control plans and take into consideration the beneficial uses to be protected, water quality objectives (WQOs) reasonably required for that purpose, other waste discharges, the need to prevent nuisance, and the provisions of Water Code section 13241.

47. This Order implements the Central Valley Water Board's *Water Quality Control Plan for the Sacramento River Basin and the San Joaquin River Basin* (Sacramento/San Joaquin Basin Plan) and the *Water Quality Control Plan for the Tulare Lake Basin* (Tulare Lake Basin Plan) (collectively, the "Basin Plans"). The Basin Plans designate beneficial uses, establish WQOs, and contain implementation programs and policies to achieve those objectives for all waters (surface waters and groundwaters) within the corresponding basins.

48. The Basin Plans designate the beneficial uses of groundwater in the Central Valley region to include municipal and domestic supply (MUN), agricultural supply (AGR), industrial service supply (IND), and industrial process supply (PRO). Unless otherwise designated by the Central Valley Water Board in its Basin Plans, all groundwaters within the Central Valley region are considered suitable, or potentially suitable, for these beneficial uses.

Water Quality Objectives (WQOs)

49. As described below, the Basin Plans establish a numeric WQO for bacteria and narrative WQOs for chemical constituents, tastes and odors, and toxicity in groundwater.[1]

    a. The numeric WQO for bacteria requires that, for groundwaters designated for MUN, the most probable number (MPN) of coliform organisms over any seven-day period shall be less than 2.2 per 100 milliliters (mL).

    b. The narrative WQO for chemical constituents requires that groundwaters designated for MUN not contain chemical constituents in concentrations that adversely affect beneficial uses and, at a minimum, not contain concentrations of chemical constituents in excess of the Maximum Contaminant Levels (MCLs) specified in California Code of Regulations, title 22, sections 64431, 64444, and 64449.

    c. The narrative WQO for tastes and odors requires that groundwaters not contain taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses.

    d. The narrative WQO for toxicity requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life associated with designated beneficial uses.

50. Quantifying a narrative WQO requires a site-specific evaluation of those constituents that have the potential to impact water quality and beneficial uses. The Basin Plans state that when compliance with a narrative objective is required to protect specific beneficial uses, the Central Valley Water Board will, on a

[1] The Basins Plans also establish a narrative WQO for radioactivity in groundwater, and the Tulare Lake Basin Plan includes narrative WQOs for pesticides and salinity, but those WQOs are omitted because they are not relevant to this Order (i.e., radioactivity) or are subsumed by other WQOs (i.e., salinity and pesticides fall within scope of narrative WQO for chemical constituents).

case-by-case basis, adopt numerical limitations to implement the narrative objective. In the absence of specific numerical water quality limits, the Basin Plan methodology is to consider any relevant published criteria.

51. The Basin Plans recognize that the Central Valley Water Board may apply limits more stringent than MCLs to ensure waters do not contain chemical constituents in concentrations that adversely affect beneficial uses.

Salt and Nitrate Control Programs

52. On 31 May 2018, the Central Valley Water Board adopted Resolution R5-2018-0034, approving Basin Plan amendments incorporating the CV-SALTS Salt and Nitrate Control Programs. These Basin Plan amendments became effective on 17 January 2020, but were subsequently revised by the Central Valley Water Board in 2020 through the adoption of Resolution R5-2020-0057, to make targeted revisions required by the State Water Resources Control Board (State Water Board), these revisions became effective 10 November 2021.

(https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/resolutions/r5-2020-0057_res.pdf)

53. The overarching goals and priorities of the Salt and Nitrate Control Programs are to (1) ensure safe drinking water supplies; (2) reduce salt and nitrate loading so that ongoing discharges neither threaten to degrade high quality waters absent findings by the Central Valley Water Board, nor cause or contribute to exceedances of WQOs; and (3) implement long-term managed restoration of impaired water bodies.

54. To ensure compliance with the Salt and Nitrate Control Programs, this Order incorporates the Basin Plans' Conditional Prohibitions for these Programs.

    a. For the Salt Control Program (SCP), dischargers that received a Notice to Comply are prohibited from discharging salts in concentrations that exceed the salinity numeric values in the Phase 1 Conservative Permitting Approach (700 µmhos/cm as a monthly average or 900 µmhos/cm as an annual average) unless they have elected and are actively implementing the Alternative Salinity Permitting Approach Phase 1 requirements of the SCP.

    b. For the Nitrate Control Program (NCP), dischargers subject to the NCP are prohibited from discharging nitrate to groundwater unless they comply with the NCP requirements. A Discharger is subject to the NCP under any of the following circumstances:

        i. Notice to Comply – The Discharger received a Notice to Comply under the NCP.

ii. New or Expanded Discharge in a Groundwater Basin/Sub-basin (regardless of priority) – After the effective date of the NCP (17 January 2020), the Discharger either initiates a new discharge or makes a material change to its operation that increases the level of nitrate discharged to groundwater.

Salt Control Program (SCP)

55. The SCP provides a framework for controlling and permitting salt discharges to groundwater in the Central Valley Region. The SCP will be implemented in three ten-to-fifteen-year phases, wherein the findings from each phase will inform the next, allowing for adaptive management of salt discharges in the Central Valley region. The first phase (Phase 1) is underway.

56. During Phase 1, dischargers of salt, (i.e., electrical conductivity [EC], total dissolved solids [TDS], chloride, sulfate, and sodium) are required to select one of two permitting pathways: the Conservative Permitting Approach (Path 1) and the Alternative Permitting Approach (Path 2). Under Path 1, dischargers must meet conservative salt-loading limits and limited use of assimilative capacity and/or compliance time schedules. Under Path 2, dischargers must maintain current efforts to control salinity in their discharges and fully participate in the regionwide Prioritization and Optimization (P&O) Study. Dischargers enrolled in Path 2 of the SCP are required to maintain salinity levels in their discharge to meet an annual performance-based salinity action level based on the facility's maximum average salinity concentration over the last five years. Dischargers unable to comply with their respective salinity action level will be required to evaluate and implement additional salinity control measures. Dischargers that meet these requirements will be deemed in compliance with the salinity discharge requirements of this Order.

57. Based on the nature of the discharges permitted by this Order (i.e., fruit and vegetable packing process wastewater), the majority of eligible facilities for this General Order will likely not meet the thresholds set by the Conservative Permitting Approach. It is anticipated that most Facilities enrolled under this Order will participate in the regionwide P&O Study.

58. Dischargers in Tiers 1 through 4 are subject to the SCP. Dischargers may change their elected compliance pathway by submitting a written request to the Central Valley Water Board. This request must include documentation regarding how the permittee will comply with the requirements applicable to the compliance pathway elected and the basis for the change. If the Discharger requests to change from the Alternative to the Conservative Permitting Approach, the permittee must demonstrate to the Board that it has complied with all provisions associated with the Alternative Compliance Permitting Approach, including financial support to the P&O study, up through the time of permit revision to

incorporate requirements for the Conservative Permitting Approach. If the Discharger requests to change from the Conservative Permitting Approach to the Alternative Approach, the Discharger shall meet the financial commitment requirements of the P&O Study.

Nitrate Control Program (NCP)

59. Dischargers subject to the NCP are required to select one of two permitting approaches: the Individual Permitting Approach (Path A) or the Management Zone Approach (Path B). Path A requires dischargers to evaluate the impact of their discharge on nitrate concentrations in shallow groundwater underlying the area of discharge (i.e., Shallow Zone). Based on that evaluation, facility discharges will be identified as falling into one of five categories of nitrate discharges (see Basin Plan Amendment, Table N-3). Dischargers whose permitted discharge causes or may cause nitrate in the Shallow Zone to exceed 75 percent of the WQO for nitrate (i.e., Category 4 and 5 dischargers) may be required to develop and implement long-term Alternative Compliance Projects (ACPs) with identified milestones for addressing nitrate-related drinking water issues (see Basin Plan Amendment, Table N-5.A and Table N-5.B for detailed compliance schedule). Alternatively, under Path B, permitted dischargers of nitrate may elect to comply with the NCP by participating in basin- or sub-basin-specific Management Zones. Path B dischargers must collaborate with other dischargers within their respective Management Zones to ensure provision of safe drinking water to adversely affected residents within their areas and to develop and execute Management Zone Implementation Plans (MZIPs) for managing and reducing nitrate loading to groundwater.

60. The NCP is prioritized to first address public health risks associated with drinking water that exceeds the primary MCL for nitrate and, second, to achieve balanced nitrate loading to, and possibly restoration of, groundwater basins/sub-basins. To this end, in establishing the NCP, the Central Valley Water Board identified and categorized Groundwater Basins/Sub-basins (Priority 1, Priority 2, and Non-Prioritized Basins) and established timelines for phased implementation of the NCP in these prioritized areas. As of the date of the adoption of this Order, Priority 1 Management Zones have MZIPs that are either accepted or approved by the Central Valley Water Board. Priority 2 Management Zones have approved Early Action Plans and are in the process of developing MZIPs. Groundwater basins that are not currently prioritized may be designated as a high priority on a case-by-case basis when determined necessary by the Central Valley Water Board. In such cases, existing dischargers to those basins will receive Notices to Comply, including a time schedule for implementation of NCP requirements. Existing dischargers in Priority 1 and 2 basins/sub-basins, as well as some existing dischargers in non-prioritized basins/sub-basins, have already selected their respective pathways in response to previously issued Notices to Comply.

61. New dischargers or existing dischargers proposing to increase the level of nitrate discharged to any designated groundwater basin/sub-basin (regardless of priority)[2] must specify their chosen NCP permitting pathway and provide initial nitrate assessment information in their NOI for coverage under this Order. If a Management Zone does not exist at the time of application, the Central Valley Water Board may use its discretion to issue a time schedule to the discharger to comply with the Nitrate Control Program through a later-formed Management Zone. Dischargers of nitrate located in areas that are not part of a designated basin/sub-basin are not subject to the NCP unless they receive a Notice to Comply.

62. Dischargers seeking coverage under this Order are required to submit confirmation on their selected pathway as part of their NOI. For Dischargers at existing facilities that are already enrolled under the Nitrate Control Program and are proposing to expand their discharge of nitrate the NOI must include an updated nitrogen assessment including an evaluation on the estimated increase in nitrogen loading from the proposed expansion and compliance with existing path requirements. Submittal requirements are outlined in **Attachment C.**

63. If a discharger would like to elect a different permitting pathway under the NCP, they must notify the Central Valley Water Board in writing. The Central Valley Water Board will consider approval of the requested change on a case-by-case basis.

64. Tier 1 facilities that discharge to parcels enrolled in the ILRP and are compliant with their Third-Party Coalition's requirements for the NCP are not required to seek separate coverage under the NCP for enrollment under this Order, provided nitrogen loading from the discharge is incorporated into the discharger's annual Nutrient Management Plan.

65. **Exceptions from the Implementation of the WQO for Nitrate (Nitrate Exception).** As described in the Basin Plans' Exceptions Policy, exceptions are intended to facilitate long-term attainment of WQOs or to provide the time needed to revise an inappropriate WQO or beneficial use designation. Dischargers granted a nitrate exception may not be required to comply with effluent and/or groundwater limitations for nitrate. Exceptions shall generally not exceed a term of ten years; however, the Central Valley Water Board may adopt exceptions up to 35 years for nitrate if the applicant(s) can demonstrate that it is

---

[2] See Figure N-1 of Resolution R5-2020-0057 (https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/resolutions/r5-2020-0057_res.pdf).

necessary to further the management goals of the NCP. Any permitted discharger, or a recognized third party acting on behalf of multiple dischargers, may apply to the Central Valley Water Board for an exception from implementation of WQOs for nitrate for their wastewater discharges. For dischargers participating in a Management Zone, the MZIP may substitute for an exception application if it meets the criteria described in the Exceptions Policy. The Central Valley Water Board may rescind exceptions if the applicant(s) does not comply with the terms and conditions of their exception. The issuance, modification, or rescission of any exception must be approved by the Central Valley Water Board after public notice and hearing.

66. As these strategies are implemented, the Central Valley Water Board may find it necessary to modify the requirements of this Order to incorporate new or modified requirements to ensure that the goals of the Salt and Nitrate Control Programs are met. As the NCP progresses, the Central Valley Water Board may modify enrolled dischargers' NOAs to incorporate nitrate exceptions and requirements related to those exceptions and, as applicable, participation in respective Management Zones. Any new or different requirements prescribed in dischargers' NOAs for this purpose shall be valid requirements of this Order, and, to the extent that any new or different requirement conflicts with the provision of this Order, the new or different requirement prescribed in the NOA shall prevail. Any NOA modified for the purpose of granting, modifying, or terminating a nitrate exception will be subject to the notice and comment requirements of Water Code section 13167.5 prior to consideration by the Board.

Antidegradation Policy

67. State Water Board Resolution 68-16, Statement of Policy with Respect to Maintaining High Quality Waters in California (Antidegradation Policy), which is incorporated as part of the Basin Plan, requires existing "high quality waters" be maintained until it has been demonstrated to the State that any change will be consistent with the maximum benefit to the people of California; will not unreasonably affect present and anticipated future beneficial uses of such water; and will not result in water quality less than as prescribed in applicable policies. Resolution 68-16 further requires that any discharge to existing high-quality waters be required to meet WDRs that will result in the best practicable treatment or control (BPTC) of the discharge necessary to ensure that pollution and/or nuisance will not occur and that the highest quality consistent with the maximum benefit to the people of the state will be maintained.

68. The Antidegradation Policy applies when the Central Valley Water Board authorizes an activity that will result in discharges of waste to high-quality waters that will degrade the quality of those waters . "High-quality waters" are defined as those waters where the water quality is more than sufficient to support beneficial uses, as designated in the Basin Plans. Whether a water is a high-quality water

is established on a constituent-by-constituent basis, which means that an aquifer may be considered a high-quality water with respect to one constituent, but not for others (State Water Board Order WQ 91-10). If the activity will not result in the degradation of high-quality waters, the Antidegradation Policy does not apply, and the discharger need only demonstrate that it will use "best efforts" to control the discharge of waste..

69. This Order allows discharges to numerous groundwater aquifers throughout the Central Valley region, each with its own chemical characteristics. There is insufficient data to determine the quality of every potential receiving water for every potential constituent of concern (COC); however, it is likely that some of these receiving waters are high-quality and will be degraded by discharges authorized under this Order. Therefore, the Antidegradation Policy applies to the adoption of this Order.

70. The primary COCs in process wastewater from fruit and vegetable packing facilities are nitrogen, organics, salinity, and disinfection byproducts.

    a. Nitrogen – Process wastewater generally has low levels of nitrate with higher levels of ammonia and organic nitrogen, which can readily mineralize and convert to nitrate in soil. Excessive nitrogen application to land from process wastewater and other nitrogen-containing materials (i.e., residual solids, fertilizers, etc.) can result in nitrate leaching to groundwater. The federal and state drinking water MCL for nitrate as nitrogen is 10 mg/L. Some nitrogen in process wastewater will be lost to the atmosphere, stored in soil, or taken up by microorganisms or plants when applied to land. Compliance with the conditions in this Order, including the requirements of the NCP, application of wastewater at agronomic rates, and potentially lining process wastewater ponds are intended to protect water quality resources by minimizing overapplication of nitrogen and percolation of nitrate to groundwater. These requirements constitute BPTC with respect to nitrate discharges from Facilities covered under this Order and will minimize long-term degradation of receiving waters with respect to nitrate.

    b. Organics – Although organics or biodegradable organic matter (measured as BOD_5) increase soil productivity, fertility, and crop production, excessive application can result in nuisance odors and anaerobic conditions, which is not favorable to biological treatment and can mobilize metals (i.e., iron, manganese, and/or arsenic) in soil that may leach to groundwater. Similarly, excessive BOD loading to ponds can lead to anaerobic conditions, impact process wastewater treatment, and cause nuisance odors. Compliance with conditions in this Order, including but not limited to its requirements to maintain appropriate BOD loading limits to LAAs and dissolved oxygen levels in ponds, will minimize the potential

for nuisance odors and water quality degradation with regard to metal constituents. These requirements constitute BPTC with respect to BOD discharges from facilities covered under this Order and will minimize long-term degradation of receiving waters with respect to iron, manganese, and arsenic that could be mobilized by anoxic conditions in ponds and LAA soils.

c. Salinity – TDS is a measure of salinity, which consists of volatile (organic) and fixed (inorganic) fractions. A significant proportion of process wastewater can consist of volatile solids, which readily break down in the soil column. While the inorganic, or FDS, portion of the discharge may be taken up by plants, it does not readily break down in soil and is a primary COC. Excessive salt loading from process wastewater, supplemental water, fertilizers, and soil amendments can impact the beneficial uses of groundwater and soil hydraulic conductivity. Compliance with this Order, including its requirements to implement the SCP, will minimize the long-term degradation of receiving waters with respect to salts.

d. Disinfection Byproducts - Disinfection byproducts, specifically trihalomethanes (THMs) are produced by reactions between organic materials in process wastewater and chlorine used for sanitizing rinse water and processing equipment. Generally, THMs are attenuated in the soil column and are not a significant concern for land discharges except in areas with shallow groundwater or increased percolation (i.e., unlined ponds). To minimize potential degradation of receiving waters by THMs, this Order requires dischargers to apply process wastewater to land at agronomic rates, maintain DO levels in ponds, implement monitoring where appropriate, and in some cases line wastewater ponds. These requirements constitute BPTC with respect to THM discharges authorized by this Order.

71. This Order requires BPTC for the COCs described above to ensure that pollution and nuisance do not occur and that the highest water quality consistent with the maximum benefit of the people of the State will be maintained. Moreover, because higher tier discharges pose a greater threat to water quality than those in lower tiers, this Order imposes Tier-based requirements to assure an appropriate level of control corresponding to the volume and character of particular discharges. This Order does not preclude Dischargers from implementing more than the minimum measures required for each tier.

72. Limited degradation of high-quality groundwaters by some typical waste constituents discharged from Facilities, after effective source reduction and treatment and control measures are implemented as required by this Order, is consistent with the maximum benefit to the people of the State. The agricultural industry is a major component of the State’s economy. Fruit and vegetable packing facilities make up a large portion of the Central Valley’s agricultural

economy, which benefits many sectors by providing jobs and generating tax revenues. On a broader economic basis, Facility operations impact other industries such as banking, farming, manufacturing, packaging, transportation, advertising, and retail. The economic prosperity of communities and associated industry is of maximum benefit to the people of the State and provides sufficient justification for allowing the limited groundwater degradation that may occur.

73. Based on the foregoing, the adoption of this Order is consistent with the Antidegradation Policy.

California Environmental Quality Act (CEQA)

74. As the agency responsible for adoption and implementation of this Order, the Central Valley Water Board is the lead agency for purposes of CEQA (Pub. Res. Code, § 21000 et seq.). Accordingly, on [DATE], the Central Valley Water Board provided an Initial Study and notice of intent to adopt a [negative declaration (ND) or mitigated negative declaration (MND)] (SCH No. #XXXXXXXXXXXX) evaluating potential environmental impacts that may arise from adoption and implementation of this Order and corresponding mitigation measures (Cal. Code Regs., tit. 14, § 15072). In preparing the [ND or MND], the Central Valley Water Board provided a notice of opportunity for tribal cultural resource consultation (see Pub. Res. Code, § 21080.3.1). [Results]. After consideration of the [ND or MND] and comments received thereon during the public review process, the Central Valley Water Board adopted a Notice of Determination on [DATE]. This Order implements all mitigation measures identified in the [ND or MND] that are within the jurisdiction of the Central Valley Water Board.

75. For purposes of CEQA, this Order is intended to consolidate existing regulations for new and existing Facilities into a single, standardized regulatory order. To the extent that adoption and implementation of this Order will result in physical environmental changes at existing Facilities, such changes are exempt from CEQA evaluation pursuant to California Code of Regulations, title 14, section 15301. With respect to Facilities that are developed or expanded after the adoption of this Order, a subsequent CEQA evaluation may be a necessary prerequisite for enrollment under this Order if such enrollment could foreseeably result in potentially significant impacts."

Other Regulatory Considerations

Water Code section 13149.2

76. This Order regulates Facilities and activities that may impact disadvantaged communities and/or nearby tribal communities and includes alternative pathways for dischargers to come into compliance with applicable water quality objectives (i.e., salinity and nitrates). The Central Valley Water Board has satisfied the outreach requirements set forth in Water Code section 189.7 by conducting

outreach in potentially affected disadvantaged and tribal communities through its notice and comment procedures. Pursuant to Water Code section 13149.2, subdivision (c), and as discussed in the following findings, the Central Valley Water Board reviewed readily available information and information raised by interested persons concerning anticipated water quality impacts in disadvantaged and tribal communities resulting from adoption of this Order. The Board also considered environmental justice concerns within the Board's authority previously raised by interested persons with regard to such impacts.

77. The Central Valley Water Board anticipates that the issuance of this Order will result in water quality impacts within the scope of the Board's authority. Specifically, this Order will authorize the discharge of process wastewater with salinity concentrations potentially above applicable WQOs and total nitrogen concentrations at levels that could cause nitrate in groundwater to be above the WQO of 10 mg/L. While these concentrations exceed (or could result in groundwater exceeding) the applicable WQOs for groundwater designated for AGR (agricultural supply) and/or MUN (municipal and domestic supply), compliance with the following conditions in this Order will mitigate short-term and long-term impacts to underlying groundwater:

    a. Application of process wastewater and fertilizers at agronomic rates.

    b. Minimized use of unlined ponds.

    c. Active participation in the Salt and Nitrate Control Programs, and compliance with each Program's respective requirements.

Human Right to Water

78. Pursuant to Water Code section 106.3, subdivision (a), it is "the established policy of the State that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes." Although this Order is not subject to Water Code section 106.3, as it does not revise, adopt, or establish a policy, regulation, or grant criterion (see § 106.3, subd. (b)), it nevertheless promotes the policy by requiring discharges to meet MCLs for drinking water (excluding salinity and nitrate), which are designed to protect human health and ensure that water is safe for domestic use. For salinity and nitrate, this Order requires compliance with the Salt and Nitrate Control Programs, respectively. Although the Exceptions Policy allows participants in these Programs to obtain limited-term exceptions from WQOs for salinity and/or nitrate, these Programs are consistent with the Human Right to Water Policy because their over-arching management goals and priorities include short-term provision of safe drinking water to impacted users and long-term restoration of impacted groundwater basins and sub-basins where reasonable, feasible, and practicable.

Title 27

79. California Code of Regulations, title 27 (Title 27) contains regulatory requirements for the treatment, storage, processing, and disposal of wastes to land. This Order, which authorizes discharges of process wastewater and solids to land from fruit and vegetable packing facilities, is exempt from the prescriptive requirements of Title 27 (Title 27, § 20090, subd. (b), (f)).

Groundwater Wells

80. Existing California Department of Water Resources (DWR) standards for the construction and destruction of groundwater wells, as well as any more stringent standards that are subsequently adopted, shall apply to all monitoring wells used to monitor impacts of wastewater storage or disposal governed by this Order (see Cal. Well Stds. Bulletin 74-90 [DWR, June 1991]; Water Well Stds. Bulletin [DWR, Dec. 1981].)

81. Statistical data analysis methods outlined in the United States Environmental Protection Agency (US EPA's) *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance* (Unified Guidance) are appropriate for determining compliance with this Order. Depending on the circumstances, other methods may also be appropriate.

Procedural Matters

94. Pursuant to Water Code section 13263, subdivision (g), the discharge of waste into waters of the State is a privilege, not a right, and adoption of this Order does not create a vested right to continue discharging waste.

95. This Order is strictly limited in scope to those discharges, activities, and processes described and authorized herein.

96. All of the above information, as well as the information contained in the attached Information Sheet, was considered by the Central Valley Water Board in prescribing these WDRs.

97. Dischargers, interested agencies, stakeholders, tribes, environmental justice groups, and other interested persons were notified of the Central Valley Water Board's intent to prescribe General WDRs for fruit and vegetable packing facilities, and provided an opportunity to submit their written views and recommendations at a public hearing. (See Wat. Code, § 13167.5.)

98. At a public meeting, the Central Valley Water Board heard and considered all comments pertaining to the discharges regulated by this General Order.

REQUIREMENTS

It is Hereby Ordered, that pursuant to Water Code sections 13263 and 13267, the Discharger, its agents, successors, and assignees, in order to meeting the provisions contained in Division 7 of the Water Code and regulations and policies adopted thereunder, shall comply with the following:

Dischargers in all tiers shall comply with all prohibitions, specifications, provisions, and other requirements described below unless otherwise noted.

A. Discharge Prohibitions

1. Discharge of waste to surface waters or surface water drainage courses is prohibited.

2. Discharge of wastes other than those described in the NOI submitted for coverage under this Order and the resulting NOA issued by the Executive Officer is prohibited.

3. Discharge of waste in a manner or location other than that described in this Order or the Discharger's NOA is prohibited.

4. Discharge of waste classified as "hazardous" (see Cal. Code Regs., tit. 23, § 2521) or "designated" (Wat. Code, § 13173) is prohibited.

5. Discharge of toxic substances into any waste treatment system, process wastewater pond, or LAA such that biological treatment mechanisms are disrupted is prohibited.

6. Discharge of waste to land not owned, operated, or otherwise controlled by the Discharger is prohibited.

7. Discharge of domestic wastewater to the process wastewater treatment system, storage and/or disposal ponds, LAAs, or surface water is prohibited.

8. Discharge of process wastewater to a domestic wastewater treatment system (e.g., septic tank) is prohibited.

<u>Conditional Discharge Prohibitions</u>

9. During Phase I of the SCP, the Discharger is prohibited from discharging salts at concentrations exceeding the salinity numeric value of 700 µmhos/cm (as a monthly average) unless the Discharger is fully participating in the Phase I requirements of the SCP Alternative Permitting Approach (i.e., full participation in the P&O Study).

10. If subject to the NCP, the Discharger is prohibited from discharging nitrate and other forms of nitrogen speciation (e.g., total inorganic nitrogen and total Kjeldahl nitrogen) unless the Discharger is implementing the requirements of the NCP

B. Salinity Action Level

1. Dischargers who elect to participate in the SCP Conservative Permitting Approach (Path 1) shall comply with the following effluent limitations for EC:

    a. For Facilities discharging to groundwater with the AGR beneficial use, the Facility shall not exceed an electrical conductivity effluent limit of **700 µmhos/cm** (as a monthly average).

    b. For Facilities discharging to groundwater with the MUN beneficial use, but not the AGR beneficial use, the Facility shall not exceed an electrical conductivity effluent limit of **900 µmhos/cm** (as an annual average).

2. For Dischargers that have selected the Alternative Permitting Approach (Path 2) for the SCP, as part of the alternative compliance pathway, the average annual EC, TDS, or FDS concentration in the discharge at the point of discharge to the LAAs and/or an unlined pond shall not exceed a Facility-specific **Salinity Action Level.** This level shall be based on 125 percent of the maximum annual average EC, TDS, or FDS concentration in the discharge from the Facility based on the most recent five years of data prior to issuance of the NOA, or the estimated annual average if there is insufficient data to calculate the five-year maximum average. As part of the annual monitoring report requirements specified in the MRP, the Discharger shall calculate the Facility's annual average effluent EC, TDS, or FDS concentration monitored at the discharge point to the LAA and/or unlined pond and compare it to the Facility's performance-based Salinity Action Level. <u>If the Facility's discharge exceeds the Salinity Action Level specified in their NOA</u>, the Discharger shall submit a **Salinity Action Plan by April 1st** of the year following the exceedance of the Salinity Action Level. The Salinity Action Plan shall, at a minimum, include the following:

    a. An evaluation of the Facility's salinity effluent levels. This evaluation shall discuss any changes to the source water for the Facility, any increased water conservation efforts (with flow data demonstrating decreased flows), and any other changes to the Facility's collection or treatment system including wastewater reuse within the Facility that could contribute to salinity concentrations.

If additional time is needed to investigate the source(s) of the salinity in the Facility's discharge, the Salinity Action Plan shall include a detailed work plan with milestones describing what actions the Discharger will conduct to investigate the source(s) of salinity in the discharge and report the findings to the Central Valley Water Board. The findings from the investigation shall be submitted to the Central Valley Water Board **no later than October 1st** of the year following the exceedance of the Salinity Trigger Limit.

b. The Salinity Action Plan shall also evaluate the potential impact increased salinity concentrations in the discharge could have on underlying groundwater and down-gradient users and identify additional control measures to control the salinity in the discharge and provide an implementation schedule. If additional time is needed for this evaluation, the Salinity Action Plan shall propose a submittal date **no later than October 1st** of the year following exceedance of the Salinity Limit.

C. Nitrate Control Program Alternative Compliance Projects

1. Dischargers subject to the NCP, who elect to follow the Individual Permitting Approach (Path A) and are unable to meet the requirements of Category 1, 2, or 3 as outlined in Table N-3 (included in the Information Sheet), may be required to development and implement an alternative compliance project the complies with the requirements of the NCP.

D. Discharge Specifications

1. The Discharger shall ensure all processing, loading, storage, and handling areas are properly managed and controlled with spill prevention, mitigation, and cleanup measures.

2. The Discharger shall manage its facilities to ensure that all waste treatment, storage, disposal, and LAAs do not create or threaten to create a condition of pollution, contamination, or nuisance, as those terms are defined by Water Code section 13050.

3. The Discharger shall ensure all discharges shall remain within the permitted waste treatment and containment areas or structures including all ponds and LAAs in the manner specified in the NOI and/or technical report and outlined in their NOA.

4. The Discharger shall ensure that all stormwater that comes in contact with processing equipment, process waste, or waste storage areas will be managed as process wastewater in accordance with this Order.

5. All conveyance, treatment, storage, and disposal systems shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency. For design purposes, the most recent Federal Emergency Management Agency (FEMA) approved 100-year base flood elevations may be used.

6. Objectionable odors shall not be perceivable beyond the limits of the Facility (including any process wastewater storage and disposal ponds) or the LAAs at an intensity that creates or threatens to create nuisance conditions.

7. The dissolved oxygen (DO) content in the upper one foot of any wastewater treatment or storage/disposal pond shall not be less than 1.0 mg/L for three consecutive sampling events. Notwithstanding the DO monitoring frequency specified in the monitoring and reporting program, if the DO in the pond(s) is below 1.0 mg/L for any single sampling event, the Discharger shall implement daily DO monitoring of that pond until the minimum DO concentration is achieved for at least three consecutive days. If the DO in the pond is below 1.0 mg/L for three consecutive days, the Discharger shall provide written notification of the findings to the Central Valley Water Board including a specific plan to resolve the low DO results within 30 days from the first date of violation.

8. The pH of process wastewater discharged to an unlined pond shall not be less than 6.0 or greater than 9.0.

9. The Discharger shall maintain the following minimum setbacks (i.e., horizontal distances) unless a different setback is approved by the Central Valley Water Board based on site-specific conditions or except as otherwise required (e.g., California Plumbing Code, county, or local ordinance). Wastewater shall not be applied or stored:

    a. Within 50 feet of any domestic water supply well;

    b. Within 50 feet of a surface water or surface water drainage course, excluding manmade irrigation channels with protection berms; and

    c. Within 25 feet of a property line or public right-of-way, unless the irrigation system is managed to prevent runoff or overspray, in which case a minimum setback of 5 feet shall be maintained.

10. All ponds, ditches, and other open containment structures shall be managed to prevent breeding of mosquitoes. Specifically:

a. An erosion control program shall be implemented to ensure that small coves and irregularities are not created around the perimeter of the water surface.

b. Weeds shall be minimized through control of water depth, harvesting, or herbicides, as necessary.

c. Dead algae, vegetation, and debris shall not accumulate on the water surface.

d. The Discharger shall consult and coordinate with the local Mosquito Abatement District to minimize the potential for mosquito breeding as needed to supplement the above measures.

E. Land Application Area Specifications

1. Crops shall be grown within the LAAs. Crops shall be selected based on nutrient uptake, consumptive use of water, and irrigation requirements to maximize uptake of nutrients.

2. The perimeter of the LAAs shall be graded to prevent ponding along public roads or other public areas and prevent runoff or overspray onto adjacent properties not owned or controlled by the Discharger

3. Spray irrigation of process wastewater shall be managed to prevent sprayed wastewater from drifting outside the boundaries of the LAA. Spray application is prohibited when the wind speed (including gusts) exceeds 15 miles per hour. Wind speed may be measured with an onsite weather station or at a nearby weather station operated by a governmental organization.

4. Application of waste constituents (i.e., process wastewater and solids) shall be at reasonable agronomic rates as demonstrated with an annual nitrogen balance. The annual nitrogen load to the LAAs, including the nutritive value of process wastewater, supplemental irrigation water, solids, and organic and chemical fertilizers, shall not exceed crop uptake. Uptake values used to calculate crop agronomic rates shall be determined using, at a minimum, one of the following methods:

   a. Analytical results from representative tissue samples collected from the crop.

   b. Crop uptake values specified by one of the following sources:

      i. California League of Food Processors, *Manual of Good Practice for Land Application of Food Processing/Rinse Water*.

ii. Western Plant Health Association, *Western Fertilizer Handbook*, 9th edition.

iii. UC Davis Fruit and Nut Research and Information Center.

c. Discharger-proposed uptake value (e.g., from a published reference) that has been approved by the Central Valley Water Board).

5. Hydraulic loading of process wastewater and supplemental irrigation water shall be managed to:

a. Provide water only when it is needed and in amounts consistent with crop needs.

b. Maximize crop nutrient uptake.

c. Maximize breakdown of organic waste constituents in the root zone.

d. Minimize the percolation of waste constituents below the root zone (i.e., deep percolation).

The Central Valley Water Board recognizes that some leaching of salts is necessary to manage salt in the root zone of the crops. Leaching shall be managed to minimize degradation and maintain or reduce, to the extent practicable, concentrations of saline constituents and nitrate (including other forms of nitrogen speciation) in receiving waters.

6. Dischargers shall ensure that all water is applied and distributed with reasonable uniformity on adequate acreage to preclude the creation of nuisance conditions.

7. All LAAs shall be equipped with a functioning tailwater return system or equivalent measures to prevent runoff from leaving the site.

8. Any irrigation runoff (i.e., tailwater) shall be confined to the LAA or returned to the process wastewater system and shall not enter any surface water drainage course or storm water drainage system.

9. All applied irrigation water must infiltrate completely within 48 hours following application.

10. Process solids applied to the LAAs shall be uniformly distributed and incorporated into the soil within 72 hours and shall not cause or contribute to nuisance conditions (i.e., vector breeding or odors).

11. The cycle average BOD_5 loading to the LAA for Tiers 2, 3, and 4 facilities shall not exceed 100 lbs/ac/day over the course of any irrigation cycle (i.e., wetting and rest period). For Tier 1 facilities, BOD_5 loading shall not exceed 50 lbs/ac/day over the course of any irrigation cycle. BOD loading shall be evaluated on an irrigation cycle basis using the average BOD_5 concentration for the month as described in the MRP.

12. The resulting effect of the discharge on soil pH shall not exceed the buffering capacity of the soil profile.

13. Dischargers shall not discharge process wastewater or solids to the LAAs when soils are saturated (e.g., during or immediately following a significant precipitation event).

14. Process wastewater used for dust control shall be applied at the minimum hydraulic loading rates necessary to meet the intended purpose consistent with an approved management plan submitted as part of the NOI (see Attachment C). Applied process wastewater shall not cause ponding or runoff from the area intended for dust suppression.

F. Process Wastewater Pond Specifications

1. Process wastewater ponds shall be operated and maintained to prevent damage from burrowing animals that may compromise containment integrity. Damages to pond containment features shall be repaired as soon as possible.

2. New construction or rehabilitation of berms or levees (excluding internal berms that separate or control the flow of water in the pond) shall be designed and constructed under the supervision of a California Registered Civil Engineer or Certified Engineering Geologist.

3. A minimum five-foot separation between the base of any pond[3] and seasonal high groundwater shall be maintained at all times. A reduced separation distance (minimum of two feet) may be approved if compliance with the five-foot separation is infeasible and site-specific conditions indicate a reduced separation will not pose a threat to water quality. Technical justification in support of a reduced separation distance must be provided with the NOI.

---

[3] The lowest physical point within a pond where wastewater collects that is not impermeable (i.e., a hydraulic conductivity of less than 1×10^{-6} cm/s).

4. Ponds shall be designed, constructed, operated, and maintained to protect containment integrity and prevent overtopping and/or structural failures.

5. Operating freeboard in all ponds shall not be less than two feet (measured vertically from the surface of the water to the lowest point of containment) unless a California registered civil engineer certifies (based on design, construction, and condition of operation and maintenance) that less freeboard is adequate. A permanent staff gauge or other suitable measuring device with calibration marks that clearly shows the water level at design capacity and enables determination of available operational freeboard shall be installed in all ponds to monitor compliance with this specification.

6. All ponds shall have sufficient capacity to accommodate process wastewater, designed seasonal precipitation, and ancillary inflow and infiltration. Designed capacity shall be based on the total annual precipitation for the specified storm standard (as discussed below), distributed monthly in accordance with historical rainfall patterns. Prior to the beginning of the wet season (i.e., October 1st), the Discharger shall ensure that sufficient storage capacity is in place to manage wet season flows.

Tier 2 Pond Specifications

7. Capacity

   a. For new or expanding pond(s), the Discharger shall design the pond(s) to meet the 100-year annual return frequency rainfall, and the 25-year, 24-hour peak storm flow. The Discharger shall demonstrate sufficient pond capacity using a normal year and 100-year wet year water balance. The water balances shall include relevant information that serves as the basis for calculations, such as monthly rainfall and process wastewater flows, crop evapotranspiration, irrigation factors (e.g., percolation, leaching fraction, irrigation method, irrigation efficiency), and operational factors (e.g., freeboard).

   b. For existing pond(s), the Discharger may continue to operate an existing pond at its present size provided the existing pond can comply with Order conditions on operational freeboard, and groundwater separation. The existing pond capacity shall be provided in the NOI with accompanying relevant information used to determine capacity.

      The Central Valley Water Board may require existing ponds determined to have had or have the potential for frequent or

significant spills to comply with the pond capacity requirements detailed in section F.7.a. above.

8. Hydraulic Conductivity:

   a. Tier 2 facilities may operate an unlined pond provided:

      i. Depth-to-groundwater below the base of the pond (i.e., lowest point where wastewater collects) is greater than 25 feet.

      ii. The average annual BOD_5 concentration in the discharge does not exceed 300 mg/L; and

      iii. The average annual total nitrogen concentration in the discharge does not exceed 15 mg/L.

   If the discharge does not meet the conditions listed above the Discharger shall be required to line the ponds in order to meet a hydraulic conductivity less than $1x10^{-6}$ cm/s (see specification F.10.a) or install a groundwater monitoring well network to monitor groundwater conditions beneath the ponds, unless a demonstration can be made that the pond(s) will be sufficiently protective of groundwater quality and down-gradient users, based on wastewater characteristics and site-specific soil and hydrogeologic conditions (e.g., percolation, depth-to-groundwater, groundwater quality, etc.), and that the discharge to the pond will not cause or contribute to groundwater degradation.

Tier 3 and Tier 4 Pond Specifications

9. Capacity:

   a. New or Expanding Pond(s): Shall be designed to meet the 100-year annual return frequency rainfall, and the 25-year, 24-hour peak storm flow. The Discharger shall demonstrate sufficient pond capacity using a normal year and 100-year wet year water balance. The water balances shall include relevant information that serves as the basis for calculations, such as monthly rainfall and process wastewater flows, crop evapotranspiration, irrigation factors (e.g., percolation, leaching fraction, irrigation method, irrigation efficiency), and operational factors (e.g., freeboard).

   b. Existing Pond(s): The Discharger shall provide a demonstration that the present pond capacity is sufficient to meet a 100-year wet year and 25-year, 24-hour peak storm design. A smaller storm design

may be allowed if approved by the Central Valley Water Board based on a site-specific Pond Evaluation. The Pond Evaluation shall be submitted with the NOI and describe how the process wastewater system will be managed and operated to prevent overtopping or runoff of process wastewater considering: rainfall, pond water levels, facility operations, site drainage, and runoff controls.

10. Hydraulic Conductivity:

    a. Ponds at Tier 3 and Tier 4 Facilities will be required to meet a hydraulic conductivity less than $1x\ 10^{-6}$ cm/s using one of the following:

        i. A compacted clay liner, with a minimum clay thickness of two feet.

        ii. A Portland cement concrete liner, designed to minimize cracking and infiltration.

        iii. A synthetic liner, consisting of a 40-mil synthetic geomembrane or a 60-mil high-density polyethylene liner installed over a prepared base of a secondary clay, synthetic, or concrete liner.

        iv. An equivalent engineered alternative designed by a California Registered Civil Engineer or Certified Engineering Geologist and, to be specified in the NOI and/or technical report for consideration and approval by the Central Valley Water Board.

    b. For existing Facilities that cannot immediately comply with pond lining requirements, the NOI shall include a proposed time schedule for lining the pond(s) that shall not exceed 10 years.

    c. An exemption from the pond lining requirements specified in F.10.a above may be granted by the Central Valley Water Board, on a case-by-case basis, if it can be demonstrated that lining of a new or existing pond at a Tier 3 or Tier 4 Facility is not necessary to prevent degradation of underlying groundwater in a manner that is inconsistent with the requirements of this Order. The Discharger requesting the exemption must demonstrate that not lining the pond(s) is adequately protective of groundwater quality and down-gradient users based on wastewater characteristics and site-specific soil and hydrogeologic conditions.

11. Prior to the construction of a new or expanding lined pond per Requirement F.10.a above, the Discharger shall submit a Design Report prepared by an appropriately licensed professional to the Central Valley Water Board. The Design Report shall include the following:

    a. Design plans and specifications for the construction and lining of the pond(s) including a schedule for completion.

    b. A geotechnical investigation of the area around the proposed ponds, including boring logs, soil assessment, and analysis of depth to first-encountered groundwater.

    c. A Construction Quality Assurance (CQA) Plan that discusses how the subgrade and liner will be tested to ensure the liner is properly installed, The CQA Plan should also discuss any leak detection system for the liners integrity testing (e.g., action leak rate), and the ponds design life.

    d. An Operations and Maintenance (O&M) Plan for the pond(s). The O&M Plan must include:

        - Procedures for cleaning out the pond, including frequency and methods.

        - Procedures for monitoring liner integrity to ensure the pond liner remains in good condition.

        - Methods for detecting liner failure and establishing criteria for timely repairs. Where applicable, this should include developing an action leakage level for each pond equipped with a leachate detection system.

12. Five-Year Pond Performance Integrity Testing: Lined Ponds shall be tested for leaks in accordance with the specifications outlined in the separately issued MRP at least once every five years unless it is equipped with a leachate collection and recovery system (LCRS). A technical report of the evaluation shall be submitted to the Central Valley Water Board within 90 days of test completion. Periodic leak testing shall begin five years after issuance of the NOA, pond liner installation, or a previous performance test, whichever is the later. Performance integrity leak testing and associated liner modifications and/or repairs shall be completed by or under the supervision of an appropriately qualified professional in accordance with Business and Professions Code sections 6735, 7835, and 7835.1.

In lieu of conducting a pond performance integrity test, integrity testing may be satisfied using groundwater monitoring data from an active groundwater monitoring network and/or LCRS designed for the pond to demonstrate that the pond liner is functioning properly. This evaluation shall be provided as part of the regularly scheduled Annual Monitoring Reports.

G. Groundwater Limitations

Release of waste constituents from any treatment unit, storage, LAA, or disposal location associated with the Facility shall not cause or contribute to groundwater containing constituent concentrations in excess of the concentrations specified below or background quality, whichever is greater:

1. Constituents in concentrations that exceed either the Primary or Secondary MCLs established in California Code of Regulations title 22, excluding salinity for Dischargers participating in and in compliance with SCP Alternative Permitting Approach requirements, and/or excluding nitrate for Dischargers that have obtained an exception from implementation of the WQO for nitrate via the NCP. [4]

2. Taste or odor-producing constituents, toxic substances, or any other constituents in concentrations that cause nuisance or adversely affect beneficial uses (e.g., by creating off-tastes and/or odor, producing detrimental physiological responses in human, plant, animal, or aquatic life [i.e., toxicity]).

H. Solids Disposal Specifications

1. For the purpose of this Order, process solids include “green waste” (i.e., leaves, stems, culls, and branches removed during the pre-cleaning and sorting process) and “residual solids” (i.e., solid, semisolid, and liquid organic matter removed from the process wastewater during the packing or treatment process).

[4] Dischargers may obtain limited-term exemptions from the Groundwater Limitations for salt and/or nitrate pursuant to the Salt and Nitrate Control Programs, respectively. Any such exemption, and associated conditions and timelines, will be described in the Discharger’s NOA.

2. Residual solids shall be removed from screens, vaults, and ponds, as needed, to ensure optimal operation, prevent nuisance conditions, and maintain adequate storage/treatment capacity.

3. Collected process solids shall be controlled and contained in a manner that minimizes leachate formation and infiltration of waste constituents into soils in a mass or concentration that will violate the Groundwater Limitations of this General Order. At a minimum:

    a. Stored solids shall be protected from precipitation as needed (e.g., containerized, covered with tarps, stored under roofed areas) or in areas protected from stormwater (e.g., covered and/or bermed to direct stormwater away from stockpiles).

    b. Solids shall be stored and managed such that free draining liquid is contained (e.g., placed on a concrete or compacted pad) and bermed or sloped to direct runoff to a containment structure (e.g., process wastewater pond), or otherwise similarly controlled and contained to prevent leachate runoff and minimize infiltration.

    c. Solids shall be managed to prevent nuisance conditions (e.g., stored in covered containers, dried and moved offsite as soon as practicable, or land applied and incorporated into the soil in a timely manner). Onsite composting and reuse of process solids is encouraged.

4. Free draining liquid from process solids storage areas shall be captured and managed as process wastewater in accordance with this Order.

5. Solids shall be disposed of in a manner approved by the Executive Officer and consistent with California Code of Regulations, title 27, division 2, subdivision 1. Removal for off-site reuse as animal feed, biofuel feedstock, or offsite land disposal (i.e., landfills, composting facilities, soil amendment sites operated in accordance with valid WDRs issued by a regional water quality control board) will satisfy this specification.

I. Provisions

Technical Provisions

1. **For existing Facilities:** Within **90 days** of NOA issuance, the Discharger shall complete any Facility infrastructure upgrades, including installation of any flow meters and/or sampling ports, gages, etc., necessary to comply with all sampling and monitoring requirements as outlined in the separately issued MRP.

2. **Tiers 3 and 4**: Within **180 days** of NOA issuance, the Discharger shall prepare and submit a Nutrient and Wastewater Management Plan (NWMP). The NWMP shall identify each available LAA unit and demonstrate how nutrient and hydraulic loading will be managed to ensure application at reasonable agronomic rates. At a minimum, the NWMP must include:

    a. Procedures for monitoring Facility operations and discharge;

    b. Practicable measures to ensure reasonable even application of wastewater, including how the Discharger will evenly apply wastewater across the entire LAA;

    c. A detailed map identifying the various LAA units to facilitate tracking annual wastewater applications and nutrient loadings;

    d. An action plan to deal with objectionable odors and/or nuisance conditions (i.e., ponding, flies, etc.);

    e. Supporting data tables and calculations (include examples) that will be used to monitor monthly nitrogen and salt loading from process wastewater, supplemental irrigation water, solids applications, and organic and synthetic fertilizers; and

    f. Management practices including routine maintenance procedures, timing for planting and harvesting of crops, irrigation controls to prevent runoff, and forecasting wastewater applications based on constituent load data (e.g., soil available nutrients, tissue or petiole testing, etc.), where available.

3. **Tiers 2, 3, and 4:** If required to implement groundwater monitoring around its LAA or an unlined process wastewater pond, Dischargers shall comply with the following schedule for installation and development of a groundwater monitoring well network:

Table 3. Monitoring Well Compliance Schedule

Task	Description	Due Dates
1.	Submit a Work Plan for installation/development of a groundwater monitoring well network for Executive Officer concurrence consistent with the requirements in **Attachment E**. At a minimum the monitoring well network shall include at least one upgradient and two downgradient monitoring wells around the LAAs and/or process wastewater ponds (if required). The work plan shall include applicable site information, well locations and rationale, drilling and installation activities, and a proposed sampling plan.	Within **120 days** following issuance of the NOA
2.	Complete well installation.	Within **9 months** following approval of the Work Plan
3.	Monitoring Well Installation Report. The Report shall include boring logs, well construction details, well survey results (provided by a licensed well surveyor), field notes, and initial sampling results.	Within **90 days** following completion of well installation activities

4. The Discharger shall comply with the applicable provisions of the Salt and Nitrate Control Programs adopted in Resolution R5-2018-0034 (as revised per Resolution R5-2020-0057) to address ongoing salt and nitrate accumulation in the Central Valley developed as part of the CV-SALTS initiative. Specific requirements and deadlines for the Nitrate Control Program will be incorporated in the NOA based on the selected Path and applicable groundwater basin/sub-basin.

Monitoring and Reporting Provisions

5. The Discharger shall comply with the separately issued MRP and with any revisions thereto as approved by the Central Valley Water Board or Executive Officer. A MRP Template is provided in **Attachment D**, which is hereby attached and made a part of the Order. When issuing the NOA, the Central Valley Water Board may modify the Template as appropriate based on site-specific conditions and the nature of the discharge.

6. The technical and monitoring reports specified in this Order are requested pursuant to Water Code section 13267. Failure to furnish the reports by the specified deadlines and/or falsifying information in the reports are

misdemeanors that may result in assessment of civil liabilities against the Discharger.

7. The Discharger shall retain records of all monitoring data and information including calibration and maintenance records, original strip chart recordings or continuous monitoring instrumentation, copies of all reports, and records of all data used to complete the application for this Order. Records shall be maintained for a minimum of three years from the date of the sample, measurement, report or application. This period may be extended during any unresolved litigation regarding the discharge or when requested by the Central Valley Water Board. The Discharger shall furnish, upon request, to the Central Valley Water Board copies of any records required to be kept by this Order.

8. Discharger shall notify the Central Valley Water Board (via telephone or email) within **24 hours** from the time the Discharger has knowledge that a violation of this Order has occurred, or has reason to believe that a violation may occur, due to: 1) maintenance work, power failure, or equipment breakdown, 2) accidents caused by human error or negligence, or 3) other causes such as acts of nature. The Discharger shall also notify the Central Valley Water Board within 24 hours in the event of a process wastewater containment failure, major spill, or unauthorized discharge.

   The Discharger shall supply written notification to the Central Valley Water Board within **15 days** of the incident, unless otherwise directed by the Central Valley Water Board. The written notification shall include the date, time, pertinent information describing the nature and cause of the noncompliance, measures taken to correct the problem and to prevent recurrence, and a timeline for corrective actions.

9. In accordance with Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgements shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. All technical reports specified herein that contain workplans for investigations and studies, that describe the conduct of investigations and studies, or that contain technical conclusions and recommendations concerning engineering and geology shall be prepared by or under the direction of appropriately qualified professional(s), even if not explicitly stated. Each technical report submitted by the Discharger shall bear the professional's signature and stamp.

10. The Discharger shall comply with all conditions of this Order and the separately issued NOA and MRP, including timely submittal of technical and/or monitoring reports. On or before each report due date, the

Discharger shall submit the specified document to the Central Valley Water Board or, if appropriate, a written report detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is being reported, then the Discharger shall state the reasons for such noncompliance and provide an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Central Valley Water Board in writing when it returns to compliance with the time schedule. Violations may result in enforcement action, including Central Valley Water Board or court orders requiring corrective action, imposition of civil monetary liability, or revision or rescission of this Order.

11. Any person signing a NOI, monitoring report, or technical document/report shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Facility Closure

12. Dischargers seeking to close a Facility or portions of a Facility (i.e., wastewater pond, LAA, etc.) covered under this Order shall file a Facility Closure Workplan with the Central Valley Water Board in accordance with the requirements described below. The Facility Closure Workplan shall include:

    a. A certified statement of intent to close all or a portion of the Facility.

    b. A detailed discussion of the proposed closure, including:

        - Identification of all areas that have historically stored waste, both liquid and solid.
        - A discussion of actions completed, or planned, to remove any remaining sludge or waste from the identified areas. This should include proposed methods for data collection (e.g., confirmation soil sampling, photographic documentation, etc.) to demonstrate that all waste has been adequately removed and does not pose a risk to underlying groundwater.

- Groundwater monitoring well destruction, where applicable.
- Backfilling of ponds, where applicable.
- Timeline for implementing the proposed actions.
- A discussion of the intended use of the facilities or areas once the closure is complete.

Standard Provisions

13. The Discharger shall pay an annual fee to the State Water Board in accordance with the fee schedule for each fiscal year. Fees are based on the threat to water quality and complexity ratings, which will be determined based on the regulatory Tier that the Facility is assigned consistent with the annual discharge volume and nature of the discharge. Annual invoices are issued by the State Water Board for the fiscal year (1 July to 30 June).

14. The requirements prescribed herein do not authorize the commission of any act causing injury to the property of another, or protect the Discharger from liabilities under federal, state, or local laws. This Order does not convey any property rights or exclusive privileges.

15. The fact that it would be necessary to halt or reduce the permitted activity in order to maintain compliance with this Order shall not be a defense of the Discharger's violations of this Order.

16. A copy of this Order and its attachments, including the separately issued NOA and MRP, shall be kept at the discharge facility for reference by operating personnel. Key operating personnel shall be familiar with its contents.

17. The Discharger shall take all reasonable steps to minimize any adverse impacts to waters of the state resulting from noncompliance with this Order. Such steps shall include accelerated or additional monitoring as necessary to determine the nature of the impact.

18. The Discharger shall maintain in good working order, and operate as efficiently as possible, any facility, treatment and control system, or monitoring device installed to achieve compliance with this Order and the NOA. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality control procedures, as necessary. This provision requires the operation of backup or auxiliary equipment or similar systems installed by the Discharger when the operation is necessary to achieve compliance with the conditions of this Order.

19. All monitoring and analytical instruments and devices used to comply with this Order and fulfill the prescribed MRP shall be properly maintained and calibrated as recommended by the manufacturer to ensure continued accuracy. Calibration and maintenance records shall be kept for a period of up to three years and shall be furnished upon request.

20. The Discharger shall employ safeguards to prevent loss of control over wastes from any electrically operated equipment at the site, where the failure would cause loss of control or containment of waste materials or a violation of this Order. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means.

21. The Discharger shall permit representatives of the Central Valley Water Board and State Water Board, upon presentation of credentials, to:

    a. Enter premises where wastes are treated, stored, or disposed of and facilities in which any records are kept.

    b. Copy any records required to be kept under the terms and conditions of this Order.

    c. Inspect at reasonable hours, monitoring equipment required by this Order.

    d. Sample, photograph, and video tape any waste collection system, management unit, land application area, or monitoring device.

22. The Discharger shall promptly report to the Central Valley Water Board any material change or proposed change in the character, location, or volume of the discharge. After which, the Central Valley Water Board may require to the Discharger to submit a new NOI and/or technical report to address the change.

23. Bypass (the intentional diversion of waste streams from any portion of a treatment system) is prohibited. The Central Valley Water Board may take enforcement action against the Discharger for bypass unless:

    a. Unscheduled Bypass:

        i. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage. (Sever property damage means substantial physical damage to property, damage to the treatment systems that causes them to become inoperable or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass.

Severe property damage does not mean economic loss caused by delays in production); and

ii. There were no feasible alternatives to bypass, such as the use of auxiliary treatment systems or retention of untreated waste. This condition is not satisfied if adequate backup equipment or waste storage systems should have been installed in the exercise of reasonable engineering judgement to prevent a bypass that would otherwise occur during normal periods of equipment downtime or preventative maintenance; or

b. Scheduled Bypass:

i. Bypass is required for essential maintenance to ensure efficient operation;

ii. Groundwater limitations are not exceeded;

iii. The Discharger notifies the Central Valley Water at least 10 days in advance; and

iv. The prohibition against discharge to a surface water is not violated.

24. A Discharger that wishes to establish the affirmative defense of an upset in an action brought for noncompliance shall demonstrate, through properly signed, contemporaneous operating logs, or other evidence, that all the following is true:

a. An upset occurred and the cause(s) can be identified.

b. The process wastewater treatment system was being properly operated at the time the upset occurred.

c. The Discharger submitted a notice of the upset as required in the Reporting Provisions section.

d. The Discharger complied with any remedial measures required by this Order, the NOA, or direction from the Central Valley Water Board.

In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof.

25. To assume operation as a Discharger under this Order, the succeeding owner and/or operator shall complete and submit the ownership/operator transfer form included in **Attachment F** to the Central Valley Water Board

requesting transfer coverage at least **60 days** before commencing operation of the facility. The request shall contain the requesting entity's full legal name, the name, address, and telephone number of the person or persons responsible for contact with the Central Valley Water Board with the signatory paragraph from the Reporting Provisions section stating that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the required documentation shall be considered a discharge without requirements, which is a violation of the Water Code. Once approved, the Executive Officer will confirm coverage for the new owner/operator under the General Order.

ENFORCEMENT

If, in the opinion of the Executive Officer, a Discharger fails to comply with the provisions of this General Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions. Failure to comply with this General Order may result in the assessment of Administrative Civil Liability of up to $10,000 per violation per day, depending on the violation, pursuant to the Water Code, including sections 13261, 13265, 13268, 13350, and 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

ADMINISTRATIVE REVIEW

Any person aggrieved by this Central Valley Water Board action may petition the State Water Board for review in accordance with Water Code section 13320 and California Code of Regulations, title 23, section 2050 et seq. The State Water Board must receive the petition by 5:00 p.m. on the 30th day after the date of this General Order; if the 30th day falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions are available on the Internet (at the address below) and will be provided upon request.

(http://www.waterboards.ca.gov/public_notices/petitions/water_quality)

ATTACHMENTS

ATTACHMENT A – Glossary of Terms
ATTACHMENT B – Notice of Intent Form
ATTACHMENT C – Technical Requirements for ROWD
ATTACHMENT D – Monitoring and Reporting Program Template
ATTACHMENT E – Standard Requirements for Monitoring Well Installations
ATTACHMENT F – Owner/Operator Transfer Form

Information Sheet

ATTACHMENT A
GLOSSARY OF TERMS

Agronomic rate – The rate of application of nutrients in amounts necessary to satisfy the plants nutrient demand (uptake) while minimizing movement of nutrients below the root zone, considering the crop, soil, climate, irrigation method, and efficiency. The Agronomic rate should account for leaching fraction and factors that impact plant available nitrogen (e.g., nitrogen loss from denitrification, volatilization, and soil storage). Application at an agronomic rate must account for nutrient loading from all sources (e.g., process wastewater, irrigation water, fertilizers, process solids, and soil amendments).

Aquifer – Groundwater that occurs in a saturated geologic unit that contains sufficient permeability and thickness to yield a significant quantity of water.

Aquitard – A confining layer that minimizes or prevents the vertical migration of water or waste constituents to a lower aquifer.

Calendar quarter – One of four three-month periods during the calendar year. The calendar quarters are: 1st Quarter – 1 January to 31 March; 2nd Quarter – 1 April to 30 June; 3rd Quarter – 1 July to 30 September; and 4th Quarter – 1 October to 31 December.

Central Valley Water Board – California Regional Water Quality Control Board, Central Valley Region.

Degradation – A measurable adverse change in water quality.

Discharge – Application or release of waste to land, surface water, or groundwater.

Expansion – Any significant increase in production, storage capacity, or the acquisition of more acreage for reuse of process wastewater and solids. Expansion does not include installation or modification of facilities or equipment to achieve compliance with the requirements of this General Order so long as the modification or installation is sized to accommodate the existing capacity.

Facility – The structures and/or equipment used for packing and storage of fruits and vegetables subject to this General Order.

Field – The portion of the land application area broken into manageable units, which does not include non-farmable surfaces such as roads, perimeter ditches, and/or structures.

Fixed dissolved solids (FDS) – Residual inorganic portion of dissolved minerals, salts, and ions remaining in a particular volume of water after all organic dissolved solids have been removed.

Flow-weighted average – Average constituent concentration determined on a flow-proportioned basis. Calculated as the sum of the constituent concentrations (in mg/L) multiplied by the flow rate (in gallons per day) collected across multiple parameters (time, source, etc.), then divided by the total volume discharged across the entire period.

Freeboard – The elevation difference between process wastewater (liquid) level in a pond and the lowest point of the pond embankment which would allow overflow or an uncontrolled release.

Incorporate into soil – The disking or mixing of solids into soil, direct injection, and/or other equally effective methods of combining nutrients in soil.

Infiltration – Complete percolation of wastewater into soil such that no visible standing water is observed.

Irrigation cycle (or discharge cycle) – The sum of application days (wetting period) plus subsequent dry days between successive applications applied to a specific irrigation field or unit of the land application area.

Land application area (LAA) – Land under control of the Discharger, whether owned, rented, or leased to which process wastewater or solids may be applied for reuse of nutrients. This includes property owned by a third party where agreements with the Discharger require the third party to accept process wastewater at a time determined by the Discharger.

Loading rate – The loading rate in pounds per acre [lbs/ac] calculated as the constituent concentration (in mg/L) multiplied by the irrigated volume in one day (as million gallons [MG]) and multiplied by the conversion factor of 8.34, then divided by the irrigated area in acres.

Cycle average loading rate – The average loading rate across one irrigation cycle. Calculated as the sum of daily loading rates (in lbs/ac) in an irrigation cycle divided by the total duration of the irrigation cycle (in days).

Instantaneous loading rate – The loading rate on the day of application.

Normal precipitation – The long-term average precipitation based on monthly averages over the time that data has been collected from a particular weather station. Normal precipitation is usually taken from data averaged over a 30-year period.

Notice of Intent (NOI) – The form used to serve as notification of the intent of the entity identified on the form to adhere to the provisions of the General Order.

Nuisance - Defined in Water Code section 13050(m) as "…anything which meets all of the following requirements:

1. Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.

2. Affects at the same time an entire community or neighborhood, or a considerable number or persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.

3. Occurs during, or as a result of, the treatment or disposal or wastes.

Nutrient – Any element taken in by a plant which is essential to its growth and production.

Off-site discharge (or runoff) – The discharge or release of waste beyond the boundaries of the Facility, land application area, or to water bodies that run through these areas.

Overflow – Intentional or unintentional diversion of flow from the collection, treatment, storage, land application areas, or conveyance systems, including pumping facilities.

Pollution – Defined in Water Code section 13050(l)(1) as "…an alteration of the quality of waters of the State by waste to a degree which unreasonably affects either of the following: (A) the waters for beneficial uses. (B) Facilities which serve these beneficial uses.

Pond(s) – Retention pond, storage pond, settling basin, or any structure used for the treatment, storage, or disposal of process wastewater. Ponds are differentiated from sumps, which are structures in the conveyance system used for the installation and operation of a pump.

Salt – Products, other than water from the reaction of an acid with a base. Salts commonly differentiate into cations (sodium, calcium, etc.) and anions (chloride, sulfate, etc.) when dissolved in water. Total dissolved solids (TDS) concentration is generally measured as an indication of the amount of salts in a water or wastewater.

Setback – The minimum horizontal distance between two features.

Significant precipitation – Major storm event that results in a minimum of one inch of precipitation within a 24-hour period.

State Water Board – State Water Resources Control Board.

Surface water - Open water land features including, but not limited to, navigable rivers, tributaries, lakes, ephemeral streams, and wetlands. Surface waters does not include manmade ponds or ditches used to convey irrigation water to, or between, fields.

Total Dissolved Solids (TDS) – Measure of organic and inorganic material such as minerals, salts, and ions dissolved in a particular volume of water.

Tail water – Runoff of irrigation water or precipitation that has been collected at the end of a field.

Waste – Includes process solids, leachate, process wastewater, and any water (i.e., precipitation, rainfall, runoff) that comes in contact with raw materials, products, or byproducts.

Waters of the State – Defined in Water Code section 13050 as "…*any surface water or groundwater, including saline waters within the boundaries of the state*".

ATTACHMENT B
NOTICE OF INTENT FORM

ATTACHMENT C
TECHNICAL REPORT REQUIREMENTS
FOR A REPORT OF WASTE DISCHARGE

ATTACHMENT D
MONITORING AND REPORTING PROGRAM TEMPLATE

ATTACHMENT E
STANDARD REQUIREMENTS FOR MONITORING WELL INSTALLATIONS

ATTACHMENT F
OWNER/OPERATOR TRANSFER FORM

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

[TENTATIVE] ORDER R5-2026-####

General Waste Discharge Requirements for
Discharges to Land from Fruit and Vegetable Packing Facilities
Within the Central Valley Region

INFORMATION SHEET