Regional Water Quality Control Board
Central Valley Region
Board Meeting – 27 August 2026

Response to Written Comments for
General Waste Discharge Requirements for
Fruit and Vegetable Packing Facilities Within the Central Valley Region
(Packing General Order)

At a public hearing scheduled for 27 August 2026, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) will consider adoption of General Waste Discharge Requirements (WDRs) for the discharge of process wastewater and solids from fruit and vegetable packing facilities to land throughout the Central Valley Region. This document contains responses to written comments received from an interested person regarding the tentative WDRs (Tentative General Order) circulated on 19 June 2026. Written comments were required to be received by the Central Valley Water Board by 5:00 p.m. on 20 July 2026 to receive full consideration. Timely comments were received from Ms. Jo Anne Kipps.

Written comments are summarized below and consolidated where appropriate, followed by responses from Central Valley Water Board staff (Staff). Staff have also made minor changes to the Tentative General Order to improve clarity and correct typographical errors where necessary.

20 July 2026 JO ANNE KIPPS COMMENTS

COMMENT No. 1: "Best Efforts" vs. BPTC

Ms. Kipps requests clarification regarding the differentiation of "best efforts" and best practicable treatment or control (BPTC), contending that the Tentative General Order implies (in Finding 68) that the latter is less than the former. She further asserts that "best efforts" is not consistent with Basin Plan requirements related to controllable factors or the Groundwater Limitations in the General Order. Ms. Kipps stresses that in some cases "best efforts" may not be sufficient to prevent further degradation of groundwater where high-quality waters do not exist. Ms. Kipps requests that the last sentence in Finding 68 be modified as follows:

> *"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* ***to ensure it does not violate or threaten to violate this Order's Groundwater Limitations****."*

Response: Both BPTC and "best efforts" are applicable standards that must be met by permitted dischargers and are intended to ensure that dischargers are taking all reasonable and feasible actions to protect water quality and prevent further degradation.

BPTC is the relevant standard to be achieved where a discharge has the potential to degrade groundwater determined to be "high-quality" (i.e., when the Antidegradation Policy is applicable). Where the Antidegradation Policy does not apply, the relevant standard is referred to as "best efforts." The tentative General Order applies the requirements for BPTC and best efforts equally, as the State Water Board has not distinguished between the level of treatment and control required under each standard.

Staff made the following revisions to Finding 68 to remove the implication that BPTC and best efforts are applied unequally and provide further context for the "best efforts approach," in accordance with the precedent established under State Water Board Order No. WQ 81-5.

> *"If the activity will not result in the degradation of high-quality waters, the Antidegradation Policy does not apply, and the discharger need**s to** ~~only~~ demonstrate that it will use "best efforts" to control the discharge of waste. **A best efforts approach should consider the effluent quality achieved by other similarly situated dischargers, the good faith efforts of the discharger to limit the discharge of the constituent, and the measures necessary to achieve compliance (State Water Board Order WQ 81-5).**"*

COMMENT No. 2: Waste Characterization

Ms. Kipps requested revisions to the Information Sheet to identify the number of facilities used in staff's evaluation of wastewater characteristics based on facility type and sample size. Ms. Kipps also requested that the Information Sheet further elaborate on the statement in Finding 1 of the General Order which states that "...packing facilities range in size from small seasonal operations that discharge only a few weeks out of the year to large year-round operations."

Response: Staff made the following changes to the Information Sheet based on this comment:

Waste Characteristics (page IS.2, paragraph 5, last sentence): "This section describes…common to fruit and vegetable packing facilities. **Packing facility discharges may range from seasonal operations that last one to two months (i.e., cherries or grapes), to larger operations that can last several months (i.e. citrus), or near year-round operations, such as raisin packing facilities, or those that pack multiple crops, such as stone-fruits and citrus**."

Staff also repurposed Table 1 (page IS.3) in the Information Sheet to reflect the number of facilities Staff considered when determining average wastewater characteristics for primary constituents of concern based on Facility type. As mentioned in the Tentative General Order, the available data was somewhat limited due to the age of most existing Orders, which further underscores the need for a regionwide General Order that standardizes monitoring requirements and generates consistent, robust data for packing facilities.

COMMENT No. 3: BOD Loading and Calculations

Ms. Kipps provided BOD loading scenarios based on Facility type and tier designation to determine general requirements needed to meet the BOD loading limits specified in the General Order. Based on her assessment, she reiterates how difficult it will be for raisin packers to comply with the General Order's BOD loading limits given the elevated concentrations of BOD_5 in discharges from raisin facilities and considering application depth and necessary resting days between applications.

Ms. Kipps also expressed concerns with proposed effluent BOD_5 monitoring frequency in the Monitoring and Reporting Program (MRP) Template (i.e., Attachment D) and requirement for BOD_5 loading calculations to use the most recent four sampling events, noting that this might extend through multiple seasons depending on facility operations, particularly for Tier 1 Facilities.

Response: Ms. Kipps' assessment of BOD loading rates reflects only a few of many potential irrigation scenarios for a given facility and appears to assume the minimum acreage necessary to accommodate maximum tier-based flows. Staff agree that some raisin dischargers would have difficulty meeting the General Order's BOD loading limits. However, several raisin dischargers that would fall under Tiers 2 and 3 of the General Order are currently regulated by individual WDRs Orders that specify the same cycle average BOD loading limit as the General Order (WDRs Orders R5-2014-0140, R5-2015-0107, and R5-2018-0064), indicating the applicability for these types of facilities. Regardless, eligibility under the General Order will be based on facility-specific information such as wastewater flows, treatment capabilities, effluent quality, available LAA acreage, and irrigation practices. If a facility, raisin packer or otherwise, cannot meet the General Order's requirements, including BOD loading limits, Staff will instead pursue individual WDRs.

With regard to Ms. Kipps' comments concerning BOD_5 monitoring and load reporting, Staff revised the definition of the concentration (C) used for calculating the cycle average loading rate in section XI.C.15 (Land Application Area Reporting) of the MRP Template (Attachment D). Rather than calculating the loading rate using the rolling average of the four most recent sampling events, dischargers shall consider the monthly average, or quarterly average, where appropriate.

In addition, Staff added the footnote below to Table 5 of the MRP Template to increase the frequency of BOD monitoring for discharges of raisin packing wastewater or where the discharges show significant fluctuations in BOD_5 and/or EC.

5. **Samples shall be collected 1/Month unless otherwise specified. Most raisin packers or discharges that show elevated BOD_5 or significant fluctuations in BOD_5 or EC will be required to conduct 2/Month or 1/Week sampling for BOD_5 and/or EC.**

COMMENT No. 4: California Well Standards

Ms. Kipps contends that neither the Tentative General Order, nor its Attachment E (Standard Requirements for Monitoring Well Installation), requires that monitoring wells be installed in accordance with California Well Standards (Well Standards) as outlined in Finding 80 of the General Order. Ms. Kipps recommends that Provision I.3 be revised to include the following statement:

> *The monitoring wells shall comply with appropriate well standards as described in California Well Standards Bulletin 74-90 (June 1991) and Water Well Standards: State of California Bulletin 74-81 (December 1981), and any more stringent standards adopted by local agencies pursuant to Water Code section 13801*.

Ms. Kipps also contends that the Well Standards apply to well location with respect to contamination and pollution, identifying several potential pollution sources (e.g., sanitary, industrial , storm sewers, and sewage and industrial waste ponds), and sets minimum horizontal setbacks from water supply wells to prevent seepage into the well which can reach groundwater, including: 50 feet from any sewer, 100 feet from a watertight septic tank or leach field, and 150 feet from a cesspool or seepage pit. While acknowledging that wastewater from fruit and vegetable packing facilities does not contain pathogens of human origins, Ms. Kipps opines that the lack of human pathogens does not diminish the threat that organic loading from fruit and vegetable wastewater poses to groundwater. She contends that organic loading from process wastewater discharges can cause anaerobic conditions in groundwater and mobilize metals including arsenic, iron, and manganese. In her comparison of domestic sewage to fruit and vegetable facility wastewater, she likens lined wastewater ponds to watertight septic tanks, and unlined ponds and the land application areas similar to seepage pits and sewage leach fields.

Ms. Kipps requests clarification of the Boards legal authority and justification to impose minimum horizontal setbacks that are not consistent with the Well Standards. Ms. Kipps also contends that horizontal minimum setbacks should apply to all water supply wells not just wells used for domestic supply.

Response: The requested change to Provision I.3 was made.

With regard to well setbacks, staff disagrees with Ms. Kipps' comparisons of wastewater from fruit and vegetable packing facilities and untreated domestic wastewater as they pertain to the potential for human health impacts. Standards for the protection of groundwater from the storage and application of wastewater generated from washing fruit and vegetables grown for human consumption should not be considered consistent with the strict standards required to protect public health from the threat to groundwater posed by the storage and application of untreated domestic wastewater. While the Well Standards state that wells should be located an adequate horizontal distance from potential sources of pollution and contamination, they do not establish set separation

distances for process wastewater storage ponds or land application areas. They also rely on the determination of enforcing agencies to establish appropriate separation distances, which may be lesser or greater than those specified, based on site-specific conditions.

The General Order implements groundwater protection through constituent limits, design specifications, loading restrictions, and site-specific requirements appropriate to mitigate groundwater quality impacts from the application of fruit and vegetable processing wastewater to land. The General Order also includes setback distances for additional groundwater well protections, which may be adjusted based on site-specific conditions. If conditions indicate that a well may be vulnerable, additional setback distances or controls may be required in the Notice of Applicability.

No changes to the setback distances were made in response to this comment; however, to improve consistency with existing General Orders (i.e., Winery General Order), Staff revised Discharge Specifications D.10 to include reference to the Well Standards and reflect that setback distance for wells applies to all water supply wells.

COMMENT No. 5: Application of Process Wastewater for Landscape Irrigation

Ms. Kipps requests clarification regarding whether the General Order would authorize the potential use of process wastewater for irrigation of landscaped areas. If so, Ms. Kipps recommends including a dissolved oxygen (DO) effluent limitation of 1.0 mg/L due to the potential proximity of employees and public roads. Ms. Kipps also requests that the NOI include caffeine as a constituent of concern as part of the wastewater characterization to confirm that there are no cross-connections with the Facility's domestic wastewater collection system.

Response: The General Order does include landscape irrigation as a beneficial reuse of process wastewater. The following change has been made to Land Application Area Specification E.1 for clarification:

E.1 "Crops **or landscape plants (i.e., trees, shrubs, grasses)** shall be grown within the LAAs…"

Staff disagrees with the need to require a DO limit of 1.0 mg/L for discharges of process wastewater used for landscape irrigation. Water used for landscape irrigation is generally applied using drip, micro sprayers, or sprinklers rather than flood irrigation. These application methods introduce oxygen into the waste stream thus reducing the need to impose a DO limit. In addition, the General Order includes sufficient conditions to control odors and minimize potential impacts to employees and the public from the application of wastewater for landscape irrigation; including Discharge Specifications D.3 and D.7, and Land Application Area Specifications E.2, E.3, and E.6.

Lastly, Staff does not agree that caffeine should be added as a constituent of concern for demonstrating the absence of cross-connection between process wastewater and domestic wastewater. The General Order already prohibits any comingling or

cross-connection between these waste streams. Given this prohibition, and because caffeine monitoring would provide limited benefit relative to its cost, Staff finds that requiring caffeine analysis is not warranted. If a future enrollee presents site-specific factors that justify cross-connection verification, tailored monitoring may be required for determining applicability for coverage under the General Order, or requirements may be included in the enrollee's individual Monitoring and Reporting Program.

COMMENT No. 6: Application of Process Wastewater for Dust Control

Ms. Kipps contends that the reuse of process wastewater for dust control is not optimal for the microbial treatment in soil to break down organics and uptake nutrients. Therefore, the General Order should consider an effluent limit of 300 mg/L BOD to preclude the creation of nuisance conditions and reduce the level of soil treatment required to attenuate waste constituents.

Response: The General Order includes Land Application Area Specification E.14, which requires application of wastewater intended for dust control to be applied in accordance with an approved management plan as outlined in Attachment C to ensure that the application is managed to meet the intended purpose and protect beneficial uses.

Attachment C (section E.6.e) requires that the Management Plan demonstrate the proposed dust control applications will be consistent with the hydraulic needs for dust control (i.e., volume, timing, frequency, etc.) and that the discharge will be protective of water quality and beneficial uses. The requirement includes the following example:

> *"average annual wastewater BOD concentration of less than 300 mg/L; average total nitrogen concentration of less than 10 mg/L or 125 percent over source water, whichever is greater; and an average FDS concentration not to exceed 125 percent over source water."*

While not a specific requirement, the example sets the parameters of what is to be expected from the demonstration while allowing flexibility for Staff's evaluation to take into account other site-specific conditions. Dischargers that cannot provide a sufficient demonstration that the application of wastewater for dust control can be managed to protect water quality and prevent nuisance conditions will not be allowed under the General Order. Therefore, no change was made.

COMMENT No. 7: Process Wastewater Pond Specification F.3 (Footnote # 3)

Ms. Kipps contends that Footnote #3, associated with Process Wastewater Pond Specification F.3, is incorrect and that it should be modified to remove reference to a hydraulic conductivity of 1×10^{-6} cm/s as impermeable. She further asserts that, as written, the definition effectively exempts lined ponds from complying with the minimum separation requirement.

Response: The requested change was made. Staff notes that all ponds are subject to Specification F.3, regardless of whether the pond is lined.

COMMENT No. 8: Pond Liner Requirements

Ms. Kipps is concerned that the evaluation required to assess the potential threat to water quality posed by the discharge and the need to require lining ponds for Facilities in Tier 3 and Tier 4 is complicated and could overwhelm staff if there are too many applications, and lead to long resource-intensive disputes. Ms. Kipps recommends modifying the General Order to exempt pond lining requirements at Facilities in Tier 3 and Tier 4 if the Discharger conducts (a) groundwater monitoring up-gradient and down-gradient of the ponds, or (b) the pond invert separation distance between the pond and highest groundwater exceeds 25 feet, and the average annual BOD_5 and total nitrogen in impounded wastewater does not exceed 600 mg/L and 30 mg/L, respectively.

Response: The proposed change appears to be less restrictive than what the Tentative General Order already requires for Tier 2 Facilities. Therefore, the proposed change was not made. However, Staff added language to Process Wastewater Pond Specifications 10.c to allow for the possibility of groundwater monitoring in lieu of a demonstration. In addition, Staff has provided general directions in the technical information sheet (Attachment C) to consider when evaluating a request for an exemption from groundwater monitoring or pond lining requirements.

COMMENT No. 9: Process Solids Applications

Ms. Kipps requests confirmation that incorporating solids applied to the LAA within 72 hours to preclude causing or contributing to nuisance conditions as required per Land Application Area Specification E.10 would entail tilling the material into the soil, thus restricting solids applications to fallow fields.

Response: Staff concurs that the application of putrescible materials to the land application areas will need to be applied to fallow fields either prior to planting or post-harvest, or to open area between vineyard rows or orchards to allow the material to be incorporated into the soil within 72 hours as required by Land Application Area Specification E.10. No change was made.

COMMENT No. 10: Monitoring and Reporting Program Template (Attachment D)

Ms. Kipps contends that the frequency of monitoring should better reflect the quality of the wastewater and not just the volume, particularly when considering the higher concentrations for BOD in wastewater from raisin packing compared to other types of fruit and vegetable packing facilities. Ms. Kipps recommends establishing effluent monitoring frequencies for BOD and nitrogen compounds based on annual production rates as shown in the Table below. Ms. Kipps later recommends that EC also be monitored at these frequencies.

Monitoring frequency	1/Month	2/Month	1/Week
BOD_5, lbs/year	< 100,000	100,000 to 500,000	> 500,000
Nitrogen, lbs/year	< 10,000	10,000 to 50,000	> 50,000

Response: Table 5 was modified to provide Staff with the flexibility to increase the monitoring frequency for BOD_5 and EC, when needed due to elevated concentrations or significant fluctuations. See response to Comment No. 3.

COMMENT No. 11: Soil Monitoring

Ms. Kipps recommends that the MRP Template contain a section on soil monitoring, if only to require monitoring for buffer pH if the discharge is typically acidic (i.e., pH < 5) to evaluate compliance with Land Application Area Specification E.12.

Response: The MRP Template is intended to provide a general framework for Staff and Dischargers to anticipate what monitoring will be required in a site-specific MRP issued for a particular discharge under the General Order. A pH of less than 5 is not a concern at most fruit and vegetable packing facilities and Staff does not consider soil monitoring to be a typical requirement for most dischargers anticipated to be enrolled under this General Order. However, Staff will evaluate each discharge individually when developing the site-specific MRP, and due to site conditions, wastewater quality (i.e., pH < 5), or wastewater loading, Staff may include soil monitoring in the MRP, if needed, to ensure compliance with General Order conditions.

KIPPS ADDITIONAL COMMENTS: Suggested Clarifications and Corrections

Ms. Kipps provided additional comments with various recommended corrections, revisions, and clarifications to the Tentative General Order, MRP Template, and supporting documents.

Response: In response, staff made revisions to the Tentative General Order, MRP Template, and supporting documents to address many of these concerns where appropriate. However, not all suggested edits were incorporated, as some were determined to be either unnecessary or addressed in Staff's prior comments. Specifically, changes were made to:

Provision I.2.c to include the requested change to the Nutrient and Wastewater Management Plan.

Provision I.3 to include the requirement for monitoring wells to be installed in accordance with California Well Standards (Well Standards).

Process Wastewater Pond Specification F.6 to remove reference to "ancillary inflow and infiltration."

MRP Template: Source Water Monitoring Table 2 to create Tables 2a and 2b.

MRP Template: Pond Monitoring Table 4 to include solids depth monitoring and reference in the footnotes to include language related to LCRS operation.

MRP Template Reporting requirements to add annual solids tracking for Tier 1 Facilities.