CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

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

WASTE DISCHARGE REQUIREMENTS ORDER R5-2026-0024

ORDER INFORMATION

Order Type(s):	Waste Discharge Requirements (WDRs)
Status:	Adopted
Program:	Groundwater Quality Protection Program
Region 5 Office:	Sacramento (Rancho Cordova)
Discharger(s):	Boundary Bend Olives, Inc., Boundary Bend Assets, Inc., Sue Schwarzgruber, Suzanne Horsley, C Mondavi and Family, and the Defty Fam Trust
Facility:	Pomace Land Application sites
Address:	Multiple locations
County:	Yolo County
Parcel Nos.:	See Finding 21 of the WDRs
WDID:	5A57NC00052
CIWQS Place ID:	848457
Prior Order(s):	R5-2020-0002

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 4 June 2026.

Digitally signed by Patrick Pulupa
Date: 2026.06.29 18:09:08 -07'00'

PATRICK PULUPA, Executive Officer

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GLOSSARY

Antidegradation Policy	Statement of Policy with Respect to Maintaining High Quality Waters in California, State Water Board Resolution 68-16
APN	Assessor's Parcel Number
Basin Plan	Water Quality Control Plan for Sacramento and San Joaquin River Basins
bgs	below ground surface
BOD_5	[5-day] biochemical oxygen demand at 20 degrees Celsius
BMPs	best management practices
BPTC	best practical treatment or control
CEQA	California Environmental Quality Act, Public Resources Code section 21000 et seq
C.F.R.	Code of Federal Regulations
CG	cross-gradient
COD	chemical oxygen demand
Conc	concentration
CV-SALTS	Central Valley Salinity Alternatives for Long-Term Sustainability
DG	downgradient
DO	dissolved oxygen
EC	electrical conductivity
EIR	environmental impact report
FDS	fixed dissolved solids
FE	iron
FEIR	final environmental impact report
FEMA	Federal Emergency Management Agency
ft	feet
gal	gallons
gpd	gallons per day
gpy	gallons per year
LAAs	land application areas
MCL	maximum contaminant level

GLOSSARY

Mn	manganese
MPN	most probable number
MRP	Monitoring and Reporting Program
msl	mean sea level
µg/L	micrograms per liter
µmhos/cm	micromhos per centimeter
mgal	million gallons
MG[D]	million gallons [per day]
mg/L	milligrams per liter
MUN	municipal
MW	monitoring well
N	nitrogen
NA	not applicable or not available
ND	not detected or non-detect
NPDES	National Pollutant Discharge Elimination System
NE	northeast
NW	northwest
OAL	Office of Administrative Law
lb	pounds
lb/ac/day	pounds per acre per day
P&O Study	Prioritization and Optimization Study of the Salt Control Program of CV-SALTS
RL	reporting limit
ROWD	Report of Waste Discharge
SE	southeast
SERC	State of Emergency Response Commission
sMCL	secondary maximum contaminant level
SPRRs	Standard Provisions and Reporting Requirements
SW	southwest
TDS	total dissolved solids
Title 22	California Code of Regulations, Title 22
Title 23	California Code of Regulations, Title 23

GLOSSARY

Title 27	California Code of Regulations, Title 27
T&O	Taste & Odor Threshold
TKN	total Kjeldahl nitrogen
UG	upgradient
U.S. EPA	United States Environmental Protection Agency
WDRs	Waste Discharge Requirements
WQOs	Water Quality Objectives

FINDINGS

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

Introduction

1. Boundary Bend Olives, Inc. (Boundary Bend) owns and operates an olive oil production facility (Facility) located at 455 Harter Avenue in Woodland, Yolo County. The facility has been operating since 2015. Process and domestic wastewater generated onsite is discharged to the City of Woodland's Water Pollution Control Facility (WPCF). Raw olive pomace generated during processing is land applied to agricultural fields for reuse or shipped offsite for disposal and/or reuse.

2. The land application areas (LAAs) encompass approximately 8,279 acres of agricultural land across 49 parcels, organized into nine discrete areas: Boundary Bend 1, Boundary Bend 2, Boundary Bend 3, Boundary Bend 4, Defty, Mondavi, Northwest 1, Northwest 2, and Southwest. The parcels are under separate ownership. Parcel owners include Boundary Bend, Boundary Bend Assets, Inc. (Boundary Bend Assets), Sue Schwarzgruber, Suzanne Horsley, C Mondavi and Family, and the Defty Fam Trust, through its trustee Spencer Defty (Trust). These parties (collectively referred to as "Discharger") are responsible for compliance with the waste discharge requirements (WDRs) prescribed in this Order.

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

   a. Attachment A – Vicinity Map
   b. Attachment B – Location Map, Land Application Area Boundary Bend 1
   c. Attachment C – Location Map, Land Application Area Boundary Bend 2
   d. Attachment D - Location Map, Land Application Area Boundary Bend 3
   e. Attachment E – Location Map, Land Application Area Boundary Bend 4
   f. Attachment F – Location Map, Land Application Area Defty
   g. Attachment G – Location Map, Land Application Area Mondavi
   h. Attachment H – Location Map, Land Application Area Northwest 1
   i. Attachment I – Location Map, Land Application Area Northwest 2
   j. Attachment J – Location Map, Land Application Area Southwest
   k. Attachment K - Monitoring Well Installation Workplan and Monitoring Well Installation Report.
   l. Information Sheet
   m. Standard Provisions & Reporting Requirements dated 1 March 1991 (1 March 1991 SPRRs)

[https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/std_provisions/wdr-mar1991.pdf]

4. Also attached is **Monitoring and Reporting Program Order (MRP) R5-2026-0024**, which requires monitoring and reporting for discharges regulated under these WDRs.

5. WDRs are needed for this Facility to ensure the discharge will comply with applicable water quality plans and policies and reflect current treatment and disposal operations.

Regulatory and Compliance History

6. On 21 June 2018, Boundary Bend submitted an application for regulatory coverage under the 2015 Waiver of Waste Discharge Requirements for Small Food Processors, Wineries and Related Agricultural Processors within the Central Valley Region, Resolution R5-2015-0005 (2015 Waiver), to authorize the discharge of olive pomace on a 25-acre site (APN 027-220-012-000) owned by Joe Heidrick Enterprises, Inc. At the time, coverage under the 2015 Waiver was not required because the property was already regulated under the Irrigated Lands Regulatory Program (ILRP), specifically Order R5-2014-0030-R1, Waste Discharge Requirements General Order for Growers within the Sacramento Rivier Watershed that are Members of a Third-Party Group, issued to the Sacramento Water Quality Coalition. Order R5-2014-0030-R1 regulates both landowner and operator of irrigated lands from which there are discharges of waste that could affect the quality of any waters of the state. Based on the information available at the time, Order R5-2014-0030-R1 was considered to provide the appropriate regulatory coverage for the discharge.

7. On 22 October 2020, the Central Valley Water Board received a complaint alleging unpermitted discharge of pomace to land. On 4 December 2020, the Central Valley Water Board requested a Report of Waste Discharge/Notice of Intent for regulatory coverage under the *2020 Conditional Waiver of Waste Discharge Requirements for Small Food Processors, Wineries and Related Agricultural Processors within the Central Valley Regions*, R5-2020-0002 (2020 Waiver).

8. On 9 December 2021, following site inspections conducted by the Central Valley Water Board on 19 November and 3 December 2021, the Central Valley Water Board issued a Notice of Violation (NOV) to Boundary Bend for unauthorized and uncontrolled discharge of waste to parcels 054-220-002, 054-220-001, and 054-190-012. The NOV required submittal of a plan, no later than 10 January 2022, that provided the following:

   a. A report of the tonnage placed onto the fields located on those parcels.

   b. A report identifying all disposal fields used during the 2021 Processing Season, including a map depicting each field, a table of parcel numbers, the tonnage placed on the field, and the property owner of those parcels.

c. The operations plan that Boundary Bend had followed to assure that 2021 land application was carried out using best management practices to avoid creating or threatened creation of pollution and/or nuisance conditions.

d. A soil investigation work plan that outlined how Boundary Bend would demonstrate that the fields has been returned to pre-discharge conditions.

e. The receipts that show that the material was off hauled to a permitted facility for proper disposal.

9. On 15 February 2022, Boundary Bend submitted an application for enrollment under the 2020 Waiver. On 10 October 2022, the Central Valley Water Board authorized the proposed land application of olive pomace under the 2020 Waiver via issuance of six separate Notices of Applicability (NOAs), each with an associated MRP. Enrollment under the 2020 Waiver was intended to be an interim regulatory mechanism while individual WDRs regulating Boundary Bend's discharges could be developed. The 2020 Waiver expired in February 2025.

10. On 15 April 2025, the Yolo County Environmental Health Department notified Central Valley Water Board staff of a complaint alleging discharges of semi-solid food processing waste near County Roads 14 and 89, approximately six miles north of the Town of Madison.

11. On 23 April 2025, the Central Valley Water Board issued an NOV to Boundary Bend for unauthorized discharge of waste to APNs 054-220-002, 054-220-001, and 054-190-012, which were the same parcels to which Boundary Bend discharged without authorization in 2021, the basis for the December 2021 NOV. The April 2025 NOV required submittal of a plan and schedule to remove and dispose of all illegally placed waste and restore land to pre-discharge conditions by 15 June 2025.

12. On 30 April 2025, Boundary Bend submitted a Notice of Intent for enrollment under the 2025 Waiver of Waste Discharge Requirements for Small Food Processors and Related Agricultural Processors within the Central Valley Region, R5-2025-0002 (2025 Waiver). On 2 May 2025, the Central Valley Water Board responded in a letter that enrollment under the 2025 Waiver would not be considered due to the unresolved nature of the unpermitted discharge cited in the April 2025 NOV and the inadequacy of the 2025 Waiver to regulate the discharge. The 2025 Waiver is intended to regulate only discharges derived from food-processing waste that are small in volume, low risk, low-strength, and land-applied in a manner that is protective of groundwater and surface water quality. Due to the large volume and high strength nature of olive pomace generated from the Facility, the 2025 Waiver is not sufficient to mitigate the potential water quality impacts that may result from Boundary Bend's discharges to land.

13. Boundary Bend submitted a Report of Waste Discharge (ROWD), dated 31 May 2023, requesting site-specific WDRs. On 26 February 2025, the Central Valley Water Board issued a letter stating that the ROWD as incomplete and requested

supplemental information. Boundary Bend subsequently submitted a Final ROWD, dated 30 September 2025, to address the deficiencies identified in the February 2025 letter. On 20 November 2025, the 2025 ROWD was deemed conditionally complete, with the understanding that the following items be addressed during the development of the WDRs and prior to their adoption.

a. Evaluating potential impacts via groundwater monitoring and soil sampling prior to pomace application.

b. Clarification on pomace application rates and site-specific loading rates.

c. Compliance with the Nitrate Control Program, specifically confirmation of selection with the appropriate documentation.

d. CEQA compliance.

14. On 17 November 2025, the Central Valley Water Board received a complaint alleging unauthorized discharges to parcels located south of County Road 15B. On 24 November 2025, Central Valley Water Board staff conducted a site inspection in response to the complaint and identified that parcel 054-230-027 was receiving pomace application at the time of the inspection.

15. On 3 December 2025, the Central Valley Water Board received a complaint alleging the discharge of olive oil waste solids to parcels near County Road 89, between Roads 14 and 16 and Roads 14 and 13. On 5 December 2025, Central Valley Water Board compliance and enforcement staff conducted a site inspection in response to the complaint.

16. On 6 March 2026, Boundary Bend submitted updated information regarding the LAAs, including additional parcels proposed for pomace application, along with a completed Form 200 for each respective parcel owner.

Facility and Discharge

17. The olive harvest season typically spans from September through November, with some early harvests beginning in late August and extending into early December. Peak harvesting typically occurs in October and November.

18. Boundary Bend produces olive oil using a two-phase extraction process, which separates olive paste into two components: the oil and a wet, semi-solid byproduct known as raw pomace (crushed skins, pulp, and fragments of olive pits). This two-phase process eliminates the need for large amounts of dilution water, resulting in reduced and more manageable liquid waste streams. However, this process yields pomace with a relatively high moisture content, typically ranging from 60 to 80 percent.

19. The production of olive oil generates two waste products: wastewater and raw pomace. Wastewater generated from olive oil processing, including wastewater associated with routine maintenance activities but excluding pomace waste, is discharged to the City of Woodland’s WPCF, which is regulated under WDRs

Order R5-2026-0004 (NPDES Permit CA0077950). **Table 1** summarizes the annual volume of olive oil process wastewater sent to the WPCF. For context, the table also presents the corresponding annual quantities of pomace generated, land applied and hauled offsite. Olive production is cyclical, in which trees produce a heavy crop one year ("on-year") and a lighter crop the next ("off-year"). This cyclical pattern is reflected in the variation in pomace volumes observed between 2022 and 2025.

Table 1. Process Wastewater Summary

Description	2022	2023	2024	2025
Harvest (start - end dates)	10/10 – 11/23	10/10 – 12/7	10/10 – 12/10	10/15 – 12/14
No. of Days	44	58	61	61
August, gallons	0	0	0	0
September, gallons	6,600	0	0	35,063
October, gallons	77,500	250,690	147,004	130,140
November, gallons	139,400	341,820	380,455	258,865
December, gallons	0	185,000	173,634	264,392
Total Wastewater Generated and sent to WPCF, gallons:	223,500	777,510	701,093	688,460
Total Pomace Generated, tons:	11,762	25,235	19,963	2,074
Total Pomace Land Applied, tons:	0	0	15,073	1,270
Total Pomace Hauled Off-site, tons:	11,762	25,235	4,890	804

20. Raw pomace is managed through short-term handling by temporarily loading the material into elevated hoppers, transferred directly into tanker trucks, and transported either to the LAAs or for offsite disposal. There are two hoppers, each with a total capacity of 10,000 gallons. Boundary Bend does not conduct any pre-treatment process of the pomace and no additional onsite storage or drying areas are designated. The hoppers are situated on concrete pavement graded towards a central floor drain, which conveys drainage back to the sump and screen system.

21. The LAAs and corresponding APNs and ownership details are summarized in **Table 2**. Their locations are shown in **Attachments A through G**. Parcels not

owned by Boundary Bend or Boundary Bend Assets are leased to Boundary Bend, and contractual agreements with the respective landowners are in place.

Table 2. Land Application Summary

Land Application Area	APN	Acres	Ownership
Boundary Bend 1	054-020-014	350	Boundary Bend Assets
	BB1 Subtotal:	**350**	
Boundary Bend 2	054-230-009	80	Boundary Bend Assets
	054-230-021	75	Boundary Bend Assets
	054-230-022	112	Boundary Bend Assets
	054-230-024	9	Boundary Bend Assets
	055-210-012	185	Boundary Bend Assets
	055-210-009	157	Boundary Bend Assets
	049-010-005	240	Boundary Bend Assets
	049-010-014	48	Boundary Bend Assets
	049-010-015	9	Boundary Bend Assets
	049-010-017	124	Boundary Bend Assets
	049-010-018	162	Boundary Bend Assets
	049-010-019	300	Boundary Bend Assets
	049-010-020	23	Boundary Bend Assets
	049-010-021	122	Boundary Bend Assets
	025-010-043	169	Boundary Bend Assets
	025-010-044	175	Boundary Bend Assets
	BB2 Subtotal:	**1,990**	
Boundary Bend 3	061-170-005	320	Boundary Bend Assets
	061-170-004	240	Boundary Bend Assets
	061-180-008	160	Boundary Bend Assets
	048-150-007	433	Boundary Bend Assets
	048-160-002	624	Boundary Bend Assets

Land Application Area	APN	Acres	Ownership
	BB3 Subtotal:	**1,777**	
Boundary Bend 4	061-060-003	600	Boundary Bend Assets
	054-050-010	300	Boundary Bend Assets
	BB4 Subtotal:	**900**	
Defty	025-450-019	43	Defty Fam Trust
	025-450-020	44	Defty Fam Trust
	025-450-021	43	Defty Fam Trust
	025-450-022	40	Defty Fam Trust
	Defty Subtotal:	**170**	
Mondavi	054-130-007	160	C Mondavi and Family
	054-130-008	80	C Mondavi and Family
	054-140-006	200	C Mondavi and Family
	054-190-016	80	C Mondavi and Family
	054-190-017	70	C Mondavi and Family
	054-200-003	150	C Mondavi and Family
	054-200-012	80	C Mondavi and Family
	054-200-013	80	C Mondavi and Family
	Mondavi Subtotal:	**900**	
Northwest 1 (NW1)	061-120-006	320	S. Horsley
	061-120-008	159	Boundary Bend Assets
	NW1 Subtotal:	**479**	
Northwest 2 (NW2)	054-190-011	80	S. Schwarzgruber
	054-220-003	160	S. Schwarzgruber
	054-220-004	160	S. Schwarzgruber
	054-220-013	197	Boundary Bend
	054-220-014	117	Boundary Bend Assets

Land Application Area	APN	Acres	Ownership
	054-230-015	22	S. Schwarzgruber
	054-220-016	125	Boundary Bend
	054-220-017	198	Boundary Bend Assets
	054-020-014	350	Boundary Bend Assets
	NW2 Subtotal:	**1,309**	
Southwest (SW)	047-140-047	141	Boundary Bend Assets
	049-220-006	263	Boundary Bend Assets
	SW Subtotal	**404**	
	Total Acres:	**8,279**	

22. Boundary Bend owns multiple agricultural properties within Yolo County not included in the above table. These properties or other properties secured by Boundary Bend under contract may be used as additional application areas in the future. Prior to such use, Boundary Bend must submit a ROWD.

23. Crops grown on the LAAs vary and may include but are not limited to alfalfa, corn, olives, sunflowers, tomatoes, and forage crops.

24. Pomace characterization data provided in the 2025 ROWD are summarized in **Table 3,** including minimum and maximum constituent concentrations, along with calculated average values shown in parentheses. The dataset incorporates samples collected on 28 January 2022, 17 and 23 November 2022, 2 and 21 November 2023, 25 October 2024, and the analytical results obtained on 11 and 25 November and 11 December 2025, as reported in the 2025 Annual Report All samples were analyzed using the wet extraction test (WET) method with de-ionized water.

Table 3. Pomace Characterization

Constituent, mg/L unless specified	2022	2023	2024	2025	WQO (reference)
% Moisture	74.4-76.6 (75.5)	68.2-71.8 (70)	78.2	68.6-78.1 (73.1)	none
pH, std units	4.45-4.60 (4.5)	4.88-4.92 (4.9)	4.63	4.71-4.89 (4.8)	none
BOD_5	3,800-3,900 (3,850)	1,900-2,100 (2,000)	1,500	57-1,900 (732)	none

Constituent, mg/L unless specified	2022	2023	2024	2025	WQO (reference)
EC, µmhos/cm	1,780-1,810 (1,795)	1,370–1,570 (1,470)	1,050	1,290-1,460 (1,383)	700 (Ag), 900 (sMCL)
TDS	4,560-4,880 (4,720)	3,600-3,620 (3,610)	2,960	N/A	500
FDS	1,200-2,270 (1,735)	860-1,540 (1,200)	938	902-1,330 (1,117)	none
Nitrate as N	ND <0.2	ND <0.2	ND <1.0	ND <0.2	10 (MCL)
Nitrate as NO_3	ND<0.88	ND<0.88	ND<4.4	N/A	none
TKN	5.9-42 (24)	21-31 (26)	20	12-22 (16)	none
Total Nitrogen	34-43 (39)	24-36 (30)	20	19-28 (23)	none
Chloride	73-81 (77)	63-78 (70.5)	48	56	250 (sMCL)
Sodium	15-17 (16)	1-0 (10.5)	19	14	69 (Ag)
Sulfate	12-15 (13.5)	9.1-9.7 (9.4)	6.8	ND<10	250 (sMCL)

25. A land application of pomace occurred in 2021; however, detailed application records were not maintained for that year. During the 2022 and 2023 harvest seasons, all pomace generated at the facility was hauled offsite to Gilton Resource Recovery in Modesto, resulting in no land application within the LAAs during those periods. As a result, the 2025 ROWD provided applied pomace volumes and mass loading rates only for the 2024 season. **Table 4**, below, presents the reported 2024 pomace application volumes from the 2025 ROWD, as well as the 2025 pomace application volumes reported in the 2025 Annual Report.

Table 4. 2024 and 2025 Pomace Application Rates

APN	LAA	Acres	Pomace Applied (lb)	Pomace Applied (tons)
2024				
054-220-017	NW2	198	8,350,000	4,175
054-220-004	NW2	160	6,736,000	3,368
054-220-001	see note 1 below	20	842,000	421

APN	LAA	Acres	Pomace Applied (lb)	Pomace Applied (tons)
2024				
054-220-002	see note 1 below	80	3,642,000	1,821
054-220-003	NW2	60	2,526,000	1,263
054-230-015	NW2	23	1,044,000	522
054-190-012	see note 1 below	80	3,642,000	1,821
054-190-011	NW2	80	3,368,000	1,684
2025				
047-140-047	SW	141	180,000	90
049-220-006	SW	263	80,000	40
054-220-013	NW2	197	60,000	30
054-220-014	NW2	117	320,000	160
054-220-016	NW2	125	60,000	30
054-220-017	NW2	198	680,000	340
061-120-006	NW1	320	340,000	170
061-120-008	NW1	160	460,000	230
054-230-027	see note 2 below	200	360,000	180

Table 4 Note:

1. Unauthorized parcels as identified in the Notice of Violation (see Findings 8 and 11).
2. Parcel not previously regulated, see Findings 14.

26. Loading rates for BOD, FDS, and total nitrogen for the 2024 season, as reported in the 2025 ROWD, are summarized in **Table 5** as well as the 2025 mass loading rates reported in the 2025 Annual Report. Mass loading values were calculated using average WET-soluble constituent concentrations, converted to mg/kg of the solid waste portion, and applied across the total available acreage within each parcel rather than the actual acreage receiving material. Consequently, the resulting calculated loading rates represent generalized estimates.

Table 5. 2024 and 2025 Mass Loading Rates

APN	LAA	Acres	BOD Applied (lb/ac)	FDS Applied (lb/ac)	Total N Applied (lb/ac)
2024					
054-220-017	NW2	198	633	396	8.43
054-220-004	NW2	160	632	395	8.42
054-220-001	see note 1 below	20	632	395	8.42
054-220-002	see note 1 below	80	683	427	9.11
054-220-003	NW2	60	632	395	8.42
054-230-015	NW2	23	681	426	9.08
054-190-012	see note 1 below	80	683	427	9.11
054-190-011	NW2	80	632	395	8.42
2025					
047-140-047	SW	141	9.35	14.26	0.29
049-220-006	SW	263	2.23	3.4	0.069
054-220-013	NW2	197	2.23	3.4	0.069
054-220-014	NW2	117	20.03	30.6	0.62
054-220-016	NW2	125	3.52	5.36	0.109
054-220-017	NW2	198	25.2	38.4	0.78
061-120-006	NW1	320	7.78	11.87	0.24
061-120-008	NW1	160	21.1	32.1	0.65
054-230-027	see note 2 below	200	13.18	20.11	0.41

Table 5 Note:

1. Unauthorized parcels as identified in the Notice of Violation (see Findings 8 and 11).
2. Parcel not previously regulated, see Findings 14.

27. For reference, the generalized loading rates in **Table 5** above do not exceed the limits referenced in the 2025 Waiver: 1,700 lb/ac/yr for BOD, 830 lb/ac/yr for FDS, and 1,700 lb/ac/yr for total nitrogen. Additionally, the generalized total nitrogen loading rates do not exceed the potential nitrogen uptake values for crops grown in the LAAs as shown in the table below.

Table 6. Potential Nitrogen Crop Uptake

Crop	Nitrogen Uptake, lb/ac/yr
Tomato	180
Sunflower	90 – 140
Alfalfa	480
olive orchards	40 – 100

28. To provide a more representative assessment of the 2024 daily loading rates, Boundary Bend submitted estimates based on the number of pomace truck loads applied, using these counts to calculate the daily quantity of pomace applied and distributing evenly across the reported parcels. These values remain estimates because they were calculated using the total available acreage for each parcel rather than the actual acreage to which pomace was applied. The 2024 daily loading rates, submitted on 12 February 2026, are presented in the table below, as well as the daily mass loading rates reported in the 2025 Annual Report.

Table 7. Assessment of 2024 and 2025 Daily Mass Loading Rates

Mass Loading Rates (lb/ac/day)	November 2024	December 2024	2025
Min / Max BOD	1.95 / 51.2	3.02 / 19.06	1.56 / 4.01
Ave BOD	17.8	11.92	2.66
Min / Max FDS	2.5 / 65.61	3.87 / 24.42	2.37 / 6.11
Ave FDS	22.80	15.28	4.06
Min / Max Total N	0.05 / 1.40	0.08 / 0.52	0.048 / 0.124
Ave Total N	0.49	0.33	0.082

Application and Management Practices

29. Pomace application to the LAAs occurs daily during the harvest season when pomace is generated. Based on the 2025 ROWD, Boundary Bend will rely on lower mass loading and application rates referenced in the 2025 Waiver and prioritizing application sites with the least potential risk to groundwater, based on depth to shallow groundwater and soil permeability. Information on regional groundwater conditions and soil permeability included in the 2025 ROWD is summarized in Findings 37 through 40. Areas characterized with shallower groundwater or higher infiltration rates will receive lower priority for application and will be restricted to a reduced fraction of the allowable pomace application rate.

30. Due to year-to-year variability in pomace volume and characteristics, Boundary Bend proposed determining an annual pomace application rate based on constituent concentrations (moisture content, BOD, FDS, and total nitrogen) measured during each reporting year and interpolating an allowable application rate using the mass loading rates referenced in the 2025 Waiver. The constituent that yields the lowest allowable application rate per acre would establish the maximum amount of pomace that may be land applied for the reporting year. Under this approach, the allowable loading rate would fluctuate annually based on the quality of the pomace produced.

    Sampling at the start of the harvest season will be critical because pomace management involves short-term handling and limited storage capacity, making timely characterization essential for determining appropriate application rates. Additionally, due to the nature of waste, including large volume, high moisture content, and high-strength characteristics, the hydraulic loading and constituent mass loading identified in the 2025 Waiver are not applicable to this discharge, particularly with respect for BOD. Therefore, relying on the Waiver's mass loading values to determine application rates would not be an appropriate compliance point.

31. Although sufficient land application areas appear to be available for the management and beneficial reuse of pomace, actual application activities may be restricted during periods of adverse weather. The harvest season aligns with the wet-weather months, increasing the likelihood that extended precipitation events will result in saturated soil conditions that preclude compliant land application. Adequate on-site storage capacity and/or approved alternative storage and handling practices must be established and maintained to prevent unauthorized discharges and ensure compliance with the requirements of the WDRs.

32. Additionally, for the protection of groundwater and surface water, Boundary Bend proposed the following will be implemented:

    a. Application will not exceed a total thickness of two inches.

    b. Application will not occur within 50 feet of a water supply well.

    c. Application will not occur within 50 feet of surface waters, except where runoff is not expected (i.e., surface water is protected by levees, berms, vegetated swales, etc.).

    d. Application will not occur within 100 feet of unprotected (i.e., levees, berms, vegetated swales, etc.) surface waters.

    e. Application will not occur during rainfall, when the ground is saturated, or if rain is predicted within 48 hours of application.

33. This Order establishes the following mass loading rates:

    a. A maximum daily BOD mass loading rate derived from estimated loading rates from the 2024 harvest season, which represented a high-yield year.

b. An FDS mass loading rate based on generalized estimates from the 2024 harvest season.

c. A total nitrogen mass loading rate based on nutrient uptake capacity of the crops grown within the designated LAAs. This Order requires Boundary Bend to submit a *Cropping Plan* each year, prior to the start of the harvest season, identifying the LAAs proposed to receive pomace, the crops to be grown, and the management practices that will be implemented to maximize available cropland and ensure compliance with the requirements of this Order. Actual pomace application rates and corresponding crop nitrogen uptake must be verified annually to demonstrate compliance.

Site-Specific Conditions

Topography, Climate, and Land Use

34. Based on a nearby California Management Information Systems (CIMIS) station, the annual average precipitation is 56.71 inches. The annual reference evapotranspiration is 57.0 inches based on Zone 14.

35. The majority of the LAAs are located within FEMA Flood Zone A but no base flood elevations have been determined. The LAAs near Interstate Highway 505, referred to as Northwest 2, are located within FEMA Flood Zone X. This zone includes areas with a 0.2 percent annual chance of flooding, areas with a 1 percent annual chance of flooding (less than one foot deep), areas within small drainage basins less than 1 square mile, and areas protected by levees from 1 percent annual chance of flooding.

36. Surrounding land use near the LAAs is primarily agriculture.

a. LAA Boundary Bend 1 is located west of Interstate 505.

b. LAA Boundary Bend 2 is located east of Interstate 505 and south along County Road 15B.

c. LAA Boundary Bend 3 is located west of County Road 85.

d. LAA Boundary Bend 4 is located in the northeast corner of intersection County Road 85 and Road 12. North Fork Oat Creek bisects the two parcels.

e. Mondavi LAAs is located east of County Road 87 and along County Road 14.

f. Defty LAAs is located north of State Highway 16, west of the Wild Wings Residential Community. Cache Creek bisects the northern portion of the parcels.

g. LAA Northwest 1 is located north of County Road 14 and west of County Highway 85 in Brooks.

h. LAA Northwest 2 is located north of County Road 16 and west of Interstate 505 in Esparto. A winery, hunting preserve, and paintball park are nearby.

i. LAA Southwest is located south of County Road 23, west of Interstate 505 in Esparto. Winters Canal, an irrigation canal for the Yolo County Flood Control and Water Conservation District, borders the eastern boundary of one of the parcels.

Soil Characterization

37. Based on information provided in the 2025 ROWD, soil characteristics in the vicinity of the LAAs are summarized in **Table 8**.

Table 8. Land Application Area Site Characteristics

LAA	Dominant Soil Types (percent coverage)	General Texture/Permeability
Northwest 1	Rincon silty clay loam (74.0 %), Hillgate loam (17.8 %)	Mostly fine-textured; slow permeability
Northwest 2	Corning gravelly loam (58.4 %), Sehorn-Balcom complex (25.0 %)	Mixed loam to clay loam; moderate permeability
Southwest	Hillgate loam (29.7 %), Corning gravelly loam (19.8 %)	Loam to clay load; moderate permeability

38. As required by the MRP issued with the NOAs under the 2020 Waiver, pre- and post-application soil samples at a depth between 1 to 2 feet below the interval of disturbed soil from ground surface were to be collected within the LAAs scheduled to receive pomace. In 2024, soil monitoring was conducted at LAA Northwest 2, which received pomace during that harvest season. Sampling and analysis were conducted in accordance with the MRP associated with NOA R5-2020-0002-0091. Soil analyses were conducted on extracts obtained using the WET method with distilled water as the extractant. A summary of analytical results as reported in the 2024 Annual Report, is presented in **Table 9**, and sampling locations are shown in the Information Sheet. This Order continues to require the collection of pre- and post-application soil samples within all LAAs proposed to receive pomace.

Table 9. Soil Monitoring, LAA Northwest 2

Constituent	units	Pre-app site 1	Post-app site 1	Pre-app site 2	Post-app site 2	Pre-app site 3	Post-app site 3
Soil Classification, USCS (see note 1 below)	NA	CL	CL	CL	CL	CL	CL

Constituent	units	Pre-app site 1	Post-app site 1	Pre-app site 2	Post-app site 2	Pre-app site 3	Post-app site 3
Soil Classification USDA (see note 1 below)	NA	CtD2	CtD2	CtD2	CtD2	CtD2	CtD3
pH	std units	6.32	6.81	6.3	6.22	8.04	8.22
Total Nitrogen	mg/L	ND	ND	ND	ND	ND	ND
Nitrate as nitrogen	mg/L	0.66	0.22	0.14	0.22	0.4	0.57
TDS	mg/L	268	1230	298	1200	200	384
Iron	mg/L	22	120	14	2.6	ND	87
Manganese	mg/L	0.12	ND	0.13	ND	ND	ND

Table 9 Notes:

1. CL refers to low plasticity clay; CtD2 refers to Corning gravelly loam; CtD3 refers to Crider silty clay loam.

Regional Groundwater Conditions

39. There is no dedicated groundwater monitoring network in the vicinity of the LAAs. According to the 2025 ROWD, groundwater conditions were evaluated at a regional level using irrigation and domestic well data available through the Department of Water Resources (DWR) Sustainable Groundwater Management Act (SGMA) Viewer. **Table 10** below summarizes average concentrations of select groundwater constituents at depths less than 200 ft bgs in Yolo County.

Table 10. Regional Groundwater Characterization

Constituents	Average Concentration	WQO (reference)
EC, µmhos/cm	623	700 (Ag) [see note 1 below]
TDS, mg/L	371	500 (sMCL)
Dissolved Bicarbonate as CaCO3, mg/L	1.73	none
Dissolved Chloride, mg/L	42	250 (sMCL)
Dissolved Calcium, mg/L	31	none
Dissolved Magnesium, mg/L	24	none

Constituents	Average Concentration	WQO (reference)
Dissolved Potassium, mg/L	2.4	none
Dissolved Sodium, mg/L	70	69 (Ag)
Dissolved Sulfate, mg/L	25	250 (sMCL)
Dissolved Ammonia, mg/L	0.08	30 (T&O)
Dissolved Nitrate, mg/L	12	10 (MCL)
TKN, mg/L	0.16	none
Total Arsenic, mg/L	4.64	0.01 (MCL)
Dissolved Arsenic, mg/L	0.272	0.01 (MCL)
Dissolved Boron, mg/L	0.853	0.7 (Ag)
Total Chromium, mg/L	16	0.1 (MCL, USEPA)
Dissolved Chromium, mg/L	0.049	none
Total Iron, mg/L	6,858	0.3 (sMCL)
Total Manganese, mg/L	105	0.05 (sMCL)
Dissolved Manganese, mg/L	3.164	0.05 (sMCL)

Table 10 Note:

1. Numeric value of 700 µmhos/cm is considered to be a conservative value that is protective of the agricultural beneficial use during Phase 1 of the Salt Control Program.

40. As reported in the 2025 ROWD, average depth to groundwater in the vicinity of LAAs Northwest 1, Northwest 2, and Southwest, based on available DWR monitoring data collected between Spring 2017 and Spring 2022, are summarized in **Table 11**.

    Subsequent to ROWD submittal, Boundary Bend proposed additional LAAs, including Boundary Bend 1, Boundary Bend 2, Boundary Bend 3, Boundary Bend 4, and the Defty and Mondavi properties. Groundwater elevations beneath these proposed LAAs were not characterized at the time these WDRs were being prepared.

    This Order requires Boundary Bend to investigate groundwater conditions within LAAs Boundary Bend 1, Boundary Bend 2, Boundary Bend 3, Boundary Bend 4, and the Defty and Mondavi properties, to confirm that first encountered groundwater occurs at depths greater than 25 feet bgs prior to initiating any land application activities. Where groundwater is determined to be less than 25 ft bgs, this Order requires Boundary Bend to establish an appropriate groundwater

monitoring well network within those LAAs.

Table 11. Regional Average Depth to Groundwater

LAA	Average Depth, ft bgs
Northwest 1	77
Northwest 2	74
Southwest	44

Legal Authorities

41. This Order is adopted pursuant to Water Code section 13263, subdivision (a), which provides as follows:

> *The regional board, after any necessary hearing, shall prescribe requirements as to the nature of any proposed discharge, existing discharge, or material change in an existing discharge…, with relation to the conditions existing in the disposal area … into which, the discharge is made or proposed. The requirements shall implement any relevant water quality control plans that have been adopted and shall take into consideration the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance, and the provisions of [Water Code] Section 13241.*

42. Compliance with section 13263, subdivision (a), including implementation of applicable water quality control plans, is discussed in the findings below.

43. The ability to discharge waste is a privilege, not a right, and adoption of this Order shall not be construed as creating a vested right to continue discharging waste. (Wat. Code, § 13263, subd. (g).)

44. This Order and its associated MRP are also adopted pursuant to Water Code section 13267, subdivision (b)(1), which provides as follows:

> *[T]he regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste … shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports and shall identify the evidence that supports requiring that person to provide the reports.*

45. The reports required under this Order and the separately issued MRP are necessary to verify and ensure compliance with WDRs. The burden associated with such reports is reasonable relative to the need for their submission.

Basin Plan Implementation

Beneficial Uses of Water

46. This Order implements the Central Valley Water Board's *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins* (Basin Plan), which designates beneficial uses for surface and groundwater and establishes WQOs necessary to preserve such beneficial uses. (See Water Code, section 13241 et. seq.).

47. Beneficial uses of underlying groundwater as set forth in the Basin Plan are municipal and domestic water supply (MUN), agricultural supply (AGR), industrial service supply (IND), and industrial process supply (PRO).

Water Quality Objectives

48. The Basin Plan establishes narrative WQOs for chemical constituents, taste and odors, and toxicity in groundwater. It also sets forth a numeric objective for total coliform organisms.

49. The Basin Plan's numeric WQO for bacteria requires that the most probable number (MPN) of coliform organisms over any seven-day period shall be less than 2.2 per 100 mL in MUN groundwater.

50. The Basin Plan's narrative WQOs for chemical constituents require MUN designated water to at least meet the MCLs specified in Title 22. The Basin Plan recognizes that the Central Valley Water Board may apply limits more stringent than MCLs to ensure that waters do not contain chemical constituents in concentrations that adversely affect beneficial uses.

51. 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 Plan states that when compliance with a narrative objective is required to protect specific beneficial uses, the Central Valley Water Board will, on a case-by-case basis, adopt numerical limitations to implement the narrative objective.

Salt and Nitrate Control Programs

52. On 31 May 2018, the Central Valley Water Board adopted Basin Plan amendments incorporating the Salt Control Program and Nitrate Control Program (Resolution R5-2018-0034). The Basin Plan amendments became effective on 17 January 2020. On 10 December 2020, the Central Valley Water Board adopted revision to the Basin Plan amendments with Resolution R5-2020-0057 (https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/resolutions/r5-2020-0057_res.pdf.). Those revisions became effective on

10 November 2021.

53. For the Salt Control Program, Boundary Bend maintained compliance while operating under the regulatory coverage provided by the 2020 Waiver and was issued **CV-SALTS ID 3016**. Boundary Bend elected to participate in the Prioritization and Optimization Study (P&O Study) under the Alternative Salinity Permitting Approach. To maintain existing salt discharges and minimize salinity impacts, this Order does the following:

    a. Requires Boundary Bend to continue efforts to control salinity in its discharge; and

    b. Sets a Performance-Based Salinity Mass Loading Trigger of **550 lb/ac/yr for FDS** on the discharge of pomace applied to the LAAs. The Performance-Based Salinity Mass Loading Trigger is derived from a 25 percent increase above the loading rates from the 2024 and 2025 harvest season. Development of this trigger considered available pomace quality data, application rates, and regional groundwater quality. This trigger is intended to ensure that salinity loading from the discharge does not increase over time. Exceedance of this trigger does not constitute a violation of this Order. However, if the discharge exceeds the trigger value, Boundary Bend shall submit a *Performance Based Salinity Mass Loading Evaluation Report*.

54. For the Nitrate Control Program, most of the LAAs are located in within the Yolo Subbasin, a Priority 2 basin. The LAAs located in the Southwest area, which includes APNs 049-220-006 and 047-140-047, are located in Groundwater Basin 5.21.67 (Sacramento Valley), also a Priority 2 basin. These two parcels are currently enrolled with the Sacramento Valley Water Quality Coalition, which meets compliance with the Nitrate Control Program through the Irrigated Lands Regulatory Program. Boundary Bend has not provided confirmation of Nitrate Control Program compliance for the remaining LAAs, including Boundary Bend 1, Boundary Bend 2, Boundary Bend 3, Boundary Bend 4, Northwest 1, Northwest 2, and the Defty and Mondavi properties.

55. As these strategies are implemented, the Central Valley Water Board may find it necessary to modify the requirements of these WDRs. As such, this Order may be amended or modified to incorporate any newly applicable requirements to ensure that the goals of the Salt and Nitrate Control Programs are met. More information regarding this regulatory planning process can be found on the Central Valley Water Board's CV-SALTS website. (https://www.waterboards.ca.gov/centralvalley/water_issues/salinity)

Special Consideration for High Strength Organic Waste

56. For the purpose of this Order, "high strength waste" is defined as waste that contains concentrations of readily degradable organic matter that exceed typical concentrations for domestic sewage. Such wastes contain greater than 500 mg/L

BOD. Typical high strength organic waste includes food processing byproducts (brewery, dairy, fruit processing waste) or restaurant scraps with high levels of BOD, COD, solids, or fats, oils, and greases (FOG).

57. Excessive application of high strength organic waste to land can create objectionable odors, soil conditions that are harmful to crops, and degradation of underlying groundwater with nitrogen species and certain metals, as discussed below. Such groundwater degradation can be prevented or minimized through implementation of best management practices (BMPs), which include planting crops to take up nutrients and maximizing oxidation of BOD to prevent nuisance conditions.

58. Regarding BOD, excessive application can deplete oxygen in the vadose zone and lead to anoxic conditions. At the ground surface, this can result in nuisance odors and fly breeding. When insufficient oxygen is present below the ground surface, anaerobic decay of the organic matter can create reducing conditions that convert metals that are naturally present in the soil as relatively insoluble (oxidized) forms to more soluble reduced forms. This condition can be exacerbated by acidic soil and/or acidic wastewater. If the reducing conditions persist as the percolate travels through the vadose zone, these dissolved metals (primarily iron, manganese, and arsenic) are mobilized and can degrade shallow groundwater quality. Some aquifers contain large vadose (unsaturated) zones with sufficient dissolved oxygen to significantly oxidize or attenuate dissolved metals prior to reaching groundwater, but excessive BOD loading over extended periods may cause adverse beneficial use impacts associated with these metals.

59. Application of high strength organic waste results in high loading on the day of application. It is reasonable to expect some oxidation of BOD at the ground surface, within the evapotranspiration zone, and below the root zone within the vadose (unsaturated) zone. The maximum BOD loading rate that can be applied to land without creating nuisance conditions or leaching of metals can vary significantly depending on soil conditions and operation of the land application system.

60. *Pollution Abatement in the Fruit and Vegetable Industry*, published by the U.S. EPA, cites BOD loading rates in the range of 36 to 600 lb/acre-day to prevent nuisance, but indicates the loading rates can be even higher under certain conditions. The studies that supported this report did not evaluate actual or potential groundwater degradation associated with those loading rates. There are few studies that have attempted to determine maximum BOD loading rates for protection of groundwater quality. Those that have been done are not readily adapted to the varying soil, groundwater, and climate conditions that are prevalent throughout the region.

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

Table 12. Organic Loading Rate Risk Categories

Risk Category	Average BOD_5 Loading Rate (lb/ac/day)	Depth to Groundwater (ft)	Notes
1	≤ 50	> 5	Indistinguishable from good farming operations with good distribution important
2	≤ 100	> 2	Minimal risk of unreasonable groundwater degradation with good distribution more important.
3	> 100	< 2	Requires detailed planning and good operation with good distribution very important to prevent unreasonable degradation, as well as use of oxygen transfer design equations that consider site specific application cycles and soil properties and special monitoring.

a. Both loading rate and depth to groundwater conditions should be met to qualify for a particular category.

b. Depth to groundwater is measured from the soil surface and should be calculated as the average during the application season.

62. The Manual of Good Practice was revised in November 2023. As part of the 2023 update, the California League of Food Processors conducted a peer-review process of the Manual of Good Practice 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 Practices provides science-based guidance for BOD loading rates that, if fully implemented, are considered a best management practice to prevent groundwater degradation due to reduced metals.

63. Raw olive pomace is acidic and rich in organic matter. The beneficial use of raw pomace within the LAAs is dependent on establishing application rates consistent with crop nutrient demand, site-specific soil conditions, and the specific crop species and rotations present within each LAAs. In addition, the moisture content of the raw pomace must be managed to ensure that application does not cause nuisance conditions or result in leaching that could adversely affect underlying groundwater or nearby surface waters.

64. Based on the 2025 ROWD, pomace land application can provide several agronomic benefits, including, but not limited to the following:

a. **Soil Organic Matter.** Raw pomace contains high levels of recalcitrant and labile organic carbon, which contribute to the buildup of soil organic matter. This improves soil structure through the formation of stable aggregates; cation exchange capacity, improving nutrient retention; and microbial biomass, supporting health nutrient cycling.

b. **Soil Water Retention and Infiltrations.** The high organic content and physical texture of olive pomace improve the soil's ability to retain moisture. Resulting benefits include increased plant-available water in the root zone; reduced surface runoff, improving infiltration; and lower irrigation requirements, especially in sandy or degraded soils.

c. **Soil Nutrient Replenishment.** Raw pomace contains essential plant nutrients, including:

   i. Nitrogen: 0.8 – 2.0 percent by dry weight.

   ii. Phosphorus: 0.2 – 0.5 percent by dry weight.

   iii. Potassium: 1.5 – 4.5 percent by dry weight.

   These nutrients become available over time, supporting slow-release fertilization and reducing the need for synthetic inputs. The potassium content is especially beneficial for fruit and nut crops.

d. **Soil Microbial Activity.** Decomposition of raw pomace stimulates microbial populations, including bacteria and fungi involved in organic matter decomposition; nutrient mineralization and release; and suppression of soil borne pathogens. Improved microbial activity leads to more efficient nutrient uptake and healthier root environments.

e. **Reduce soil erosion and Crusting.** When surface-applied or lightly incorporated, raw pomace reduces soil surface sealing, allowing for better water infiltration; limits wind and water erosion by adding surface mulch and binding fine particles; and improves soil condition, making soil easier to work and less prone to compaction. This is especially useful in erosion-prone or sloped areas.

65. As discussed in early Findings, the high moisture content of raw pomace presents the potential for nuisance conditions and generation of leachate capable of impacting underlying groundwater and adjacent surface waters. This Order includes requirements to mitigate these risks, including limits on application timing, application rates, and setback distances; provisions for managing pomace moisture content; and prohibitions against creating conditions of ponding, runoff, or percolation that could result in the discharge of waste to waters of the state.

    This Order requires a pre-application groundwater investigation to determine if groundwater within the LAAs occurs at depths less than 25 feet bgs and, where such conditions exist, the establishment of an appropriate groundwater monitoring network. In areas where groundwater is found to be greater than 25 ft bgs, this Order also requires pre-discharge soil monitoring within each of the

discrete LAAs as a means to evaluate potential impacts associated with pomace applications. Collectively, these requirements ensure that land application of raw pomace is conducted in a manner protective of water quality and consistent with the Basin Plan.

Compliance with Antidegradation Policy

66. State Water Resources Control Board (State Water Board) Resolution 68-16, *Policy with Respect to Maintaining High Quality Waters of the State* (Antidegradation Policy) prohibits degradation of high-quality groundwater unless it is shown that such degradation: (1) will be consistent with the maximum benefit to the people of California; (2) will not unreasonably affect beneficial uses, or otherwise result in water quality less than as prescribed in applicable policies; and (3) is minimized through WDRs requiring dischargers to implement the best practicable treatment or control (BPTC).

67. The Antidegradation Policy applies when an activity discharges to high quality waters and will result in some degradation of such high-quality waters. "High quality waters" are defined as those waters where water quality is more than sufficient to support beneficial uses designated in the Basin Plan. Whether a water is high-quality water is established on a constituent-by-constituent basis, which means that an aquifer can be considered a high-quality water with respect to one constituent, but not for others (SWRCB 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 dischargers need only demonstrate that it will use “best efforts” to control the discharge of waste.

68. There is no dedicated groundwater monitoring network located in the vicinity of the LAAs. Compliance with the Antidegradation Policy is therefore based on the available regional groundwater data as presented in the findings of this Order. This Order also requires a groundwater investigation to determine whether groundwater within the LAAs occurs at depths less than 25 ft bgs, and where such conditions exist, Boundary Bend must establish an appropriate groundwater monitoring network.

69. For the purposes of this Order, constituents of concern (COCs) in the pomace with the potential to degrade groundwater are salts (represented by EC, TDS, and FDS), total nitrogen (primarily TKN and nitrate), organics (BOD), and dissolved metals. **Table 13** provides a comparison of average concentrations of these COCs in the pomace, analyzed using the WET method, with regional groundwater quality obtained from DWR’s SGMA viewer for the vicinity of the LAAs. For each constituent, the minimum and maximum measured concentrations are reported, with the average concentration shown in parathesis. NA denotes data not available. ND denotes non-detect.

Table 13. Constituents with Potential for Degradation

Constituent (mg/L, unless specified)	Pomace (2020 – 2025)	Regional Groundwater Quality (DWR SGMA)	WQO (reference)
EC (µmhos/cm)	1,050–1,810 (1,466)	623	700 (Ag), [see Note 1 below]
TDS	2,960–4,880 (3,924)	371	500 (sMCL)
FDS	860-2,270 (1,270)	NA	NA
Nitrate as nitrogen	ND < 0.2	12	10 (MCL)
TKN	5.9-42 (21)	0.16	NA
BOD	57-3,900 (1,925)	NA	none
Total Iron	NA	6,858	0.30 (sMCL)
Dissolved Iron	ND	NA	0.30 (sMCL)
Total Manganese	NA	105	0.05 (sMCL)
Dissolved Manganese	ND	3.164	0.05 (sMCL)

Table 13 Note:

1. Numeric value of 700 µmhos/cm is considered to be a conservative value that is protective of the agricultural beneficial use during Phase 1 of the Salt Control Program.

a. **Salinity (EC, TDS, FDS).** The limited groundwater data shows that regional groundwater is high-quality with regard to salinity constituents. For evaluation purposes, TDS is representative of overall salinity and the best measure for total salinity in groundwater. FDS is the non-volatile fraction of TDS that has the potential to percolate or leach into shallow groundwater. EC is a measure of the capacity of water to conduct electrical current and is an indicator of salinity. Since pomace is a semi-solid, FDS expressed as an annual mass loading rate over a designated LAA provides the best measure for total salinity applied.

The concentrations of TDS and FDS measured in pomace exceed those

of the receiving water and therefore, the discharge has the potential to degrade receiving water quality with regard to salinity. As noted in the Findings above, pomace applications in 2024 (which was a high-yield year in comparison to 2025) resulted in annual FDS loading rates of approximately 395 to 430 lb/ac at parcels receiving pomace. This Order includes a performance-based FDS mass loading trigger that was derived from 2024 data to minimize salinity related groundwater degradation.

b. **Total nitrogen.** For nutrients such as TKN and nitrate as N, the potential for groundwater degradation depends on waste quality, plant uptake capacity, and application rates to the LAAs. Limited groundwater data shows groundwater is not high-quality with respect to nitrate. Nitrate in pomace was not detected. Nearly all total nitrogen in pomace is present as TKN, which is the organic fraction of total nitrogen and readily available for plant uptake.

As described in the Findings above, nitrogen loading rates are expected to remain below the agronomic nitrogen demand of the crops grown on the LAAs, based on the waste characteristics and the proposed loading application rates. This Order requires Boundary Bend to submit a *Cropping Plan* each year, prior to the start of the harvest season, identifying the LAAs proposed to receive pomace, the crops to be grown, and the management practices that will be implemented to maximize available cropland and ensure compliance with the requirements of this Order.

c. **Organics (BOD).** Pomace, the residual solid material remaining after the extraction of olive oil from crushed olives, is highly organic in composition. Measured BOD concentrations in pomace have ranged from approximately 1,500 – 3,900 mg/L. As documented in the 2025 ROWD, generalized annual BOD mass loading rates for 2024 were estimated at approximately 630 - 680 lb/ac of BOD. Estimates of daily loading rates were later calculated based on the number of pomace truck loads applied during the reporting period and distributed equally across the reported parcels. The 2024 daily loading rates, together with the reported 2025 rates, show substantially low daily BOD loading.

As described in earlier Findings, excessive BOD loading to the LAAs can create reducing soil conditions that mobilize metals and potentially degrade groundwater quality. When adequate LAA acreage is available to evenly distribute BOD loading, and when proper record-keeping, tracking, and management of pomace application are in place, such reducing conditions can be minimized or avoided. This Order prescribes a maximum daily BOD mass loading rate and includes requirements intended to prevent overloading of BOD to the LAAs and thereby minimizing degradation of receiving water with soluble metals.

d. **Metals (iron and manganese)**. Limited groundwater data shows groundwater is not high-quality with regard to metal constituents. Although iron and manganese concentrations in the pomace were not detected, the discharge has the potential to degrade groundwater due to the high BOD content of material. Excessive BOD loading rates can create reducing soil conditions that mobilize naturally occurring metals (particularly iron and manganese) from the soil, thereby increasing their concentrations in underlying groundwater. This Order prescribes a maximum daily BOD mass loading rate and includes requirements intended to minimize overloading of organic constituents to the LAAs.

70. Although this Order does not authorize degradation of high-quality water with respect to any of the constituents, this Order nevertheless requires Boundary Bend to implement the best practicable treatment and control (BPTC) and best management practices (BMP) for the constituents of concern, including:

a. Maintain compliance with the Salt Control Program, including participation in the P&O study and implementation of the performance-based salinity loading limit.

b. Maintain compliance with the Nitrate Control Program, including enrollment with the Sacramento Valley Water Quality Coalition under the Irrigated Lands Regulatory Program for all parcels located within the Priority 2 basin or enrollment in the Yolo Valley Water Collaborative Management Zone for all parcels located within the Priority 2 basin.

c. Application to cropped fields at agronomic rates for the purpose of nutrient recycling.

d. Application shall not exceed the max daily BOD loading as prescribed in this Order, to not have any impact on odor or a measurable change in organic loading and concentrations of constituent of concern in the leachate.

e. Application will be spread evenly and thinly, to provide even loading and avoid runoff.

f. Pomace will be disced into the top layer of soil within 24 hours of application, to ensure incorporation into the soil before vector attraction or odor nuisance conditions can occur and to accelerate microbial assimilation of organic compounds and minimize exposure to phenolics.

g. Disposal of excess material at an appropriate off-site location, which reduces organic loading to groundwater.

71. The discharge authorized by this Order is consistent with the maximum benefit to the people of the state. The Facility aids in the economic prosperity of the area through direct employment of approximately 50 employees year-round and 15 seasonal employees and provides a local market for suppliers including farmers and truckers and numerous aligned businesses as well as local and county governments.

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

California Environmental Quality Act

73. In accordance with the California Environmental Quality Act (CEQA), Public Resources Code section 21000 et seq., on 9 November 2009, Yolo County certified a Final Environmental Impact Report (Yolo County FEIR) with comments and responses for a new General Plan for the County of Yolo (2030 Countywide General Plan).

74. The issuance of this Order, which prescribes requirements for and monitoring of waste discharges on existing agricultural lands, with negligible or no expansion of their existing uses, is exempt from the procedural requirements of the CEQA pursuant to California Code of Regulations, title 14 (Title 14), section 15301. In addition, this Order's authorization of pomace discharge to LAAs is exempt from CEQA review pursuant to Title 14 section 15304, because the LAAs consists of land already designated for agricultural use and the application of pomace constitutes a soil amendment activity for which no significant environmental changes are anticipated therein as a result of this Order.

Other Regulatory Considerations

Water Code Section 13149.2

75. These WDRs regulate a facility that may impact a disadvantaged community and/or tribal community and include an alternative compliance path that allows the Discharger time to come into compliance with a water quality objective (i.e., salinity). Boundary Bend has selected the Alternative Salinity Permitting Approach for the Salt Control Program, which provides an alternative approach for compliance with salinity limits through implementation of specific requirements (i.e., support facilitation and completion of the Salinity P&O Study). The Central Valley Water Board has satisfied the outreach requirements set forth in Water Code section 189.7 by conducting outreach in affected disadvantaged and tribal communities. Pursuant to Water Code section 13149.2, the Central Valley Water Board reviewed readily available information and information raised to the Board by interested persons concerning anticipated water quality impacts in disadvantaged or tribal communities resulting from adoption of these WDRs. The Board also considered environmental justice concerns within the Board's authority and raised by interested persons with regard to those impacts.

76. The Central Valley Water Board anticipates that the issuance of these WDRs will result in water quality impacts within the scope of the Board's authority. Specifically, these WDRs authorize the continued discharge of waste solids with salinity concentrations above applicable water quality objectives. The Central Valley Water Board has identified the following measures available and within the scope of its authority to address the impacts of the Facility to the nearby disadvantage communities in Yolo County: 1) require Boundary Bend to maintain

active participation in the P&O Study and compliance with the Salt Control Program and performance-based salinity limitation, 2) require application of pomace to crops at agronomic rates, and 3) require implementation of other BPTC requirements of this Order, as described above (see Finding 70).

Human Right to Water

77. Pursuant to Water Code section 106.3, subdivision (a), it is "the policy of the State of California 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 section 106.3, subd. (b)), it nevertheless promotes the policy by requiring discharges to meet MCLs for drinking water (except for salinity), which are designed to protect human health and ensure that water is safe for domestic use. For salinity, this Order requires compliance with the SCP. Although the Basin Plans' Exceptions Policy for Salinity allows participants in this Program to obtain limited-term exceptions from MCLs for salinity, this Program is 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

Threat-Complexity Rating

78. For the purposes of the California Code of Regulations, title 23, section 2200, the Facility has a threat and complexity rating of **2-B** as defined below:

    a. Threat Category "2" – Those discharges of waste that could impair the designated beneficial uses of the receiving water, cause short-term violations of water quality objectives, cause secondary drinking water standards to be violated, or cause a nuisance.

    b. Complexity Category "B" - Any discharger not included in Category A that has physical, chemical, or biological treatment systems (except for septic systems with subsurface disposal), or any Class 2 or Class 3 waste management units.

Title 27 Exemption

79. This Order, which prescribes WDRs for discharges of waste solids from olive oil-making operations, is exempt from the prescriptive requirements of California Code of Regulations, title 27 (Title 27), section 20005 et seq. because this Order implements the applicable Basin Plan and the waste discharged does not need to be managed as hazardous waste. (See Title 27, § 20090, subd. (b).)

Storm Water

80. The State Water Board adopted Order 2014-0057-DWQ (NPDES General Permit

CAS000001) specifying WDRs for discharges of storm water associated with industrial activities and requiring submittal of a Notice of Intent by all affected industrial dischargers. The Facility is enrolled and has coverage under General Order 2014-0057-DWQ, which has been active since 25 February 2021.

Groundwater Well Standards

81. The DWR sets standards for the construction and destruction of groundwater wells (hereafter DWR 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). These standards, and any more stringent standards adopted by the state or county pursuant to Water Code section 13801, apply to all monitoring wells used to monitor the impacts of wastewater storage or disposal governed by this Order.

Statistical Data Analysis

82. Statistical data analysis methods outlined in the U.S. EPA's Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance (Unified Guidance) are appropriate for determining compliance with the Groundwater Limitations of this Order. Depending on the circumstances, other methods may also be appropriate.

Scope of Order

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

84. Pursuant to Water Code section 13264, subdivision (a), the Discharger is prohibited from initiating the discharge of new wastes (i.e., other than those described herein), or making material changes to the character, volume and timing of waste discharges authorized herein, without filing a new ROWD per Water Code section 13260.

85. Failure to file a new ROWD before initiating material changes to the character, volume, or timing of discharges authorized herein shall constitute an independent violation of these WDRs.

86. This Order is also strictly limited in applicability to those individuals and/or entities specifically designated herein as "Discharger," subject only to the discretion to designate or substitute new parties in accordance with this Order.

Procedural Matters

87. All of the above and the supplemental information and details in the attached Information Sheet were considered in establishing the following conditions of discharge.

88. The Discharger, interested agencies, and interested persons were notified of the

Central Valley Water Board's intent to prescribe the WDRs in this Order, and provided an opportunity to submit their written views and recommendations at a public hearing. (Wat. Code, § 13167.5)

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

90. The Central Valley Water Board will review and revise the WDRs in this Order as necessary.

REQUIREMENTS

IT IS HEREBY ORDERED, that pursuant to Water Code sections 13263 and 13267, Boundary Bend Olives, Inc., Boundary Bend Assets, Inc., Sue Schwarzgruber, Suzanne Horsley, C Mondavi and Family, and the Defty Fam Trust, through its trustee Spencer Defty, as well as their respective agents, successors, and employees, shall comply with the following:

A. Standard Provisions

1. Except as expressly provided herein, the Discharger shall comply with the Standard Provisions and Reporting Requirements dated 1 March 1991 (1 March 1991 SPRRs), which are incorporated herein.

   [https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/std_provisions/wdr-mar1991.pdf]

B. Discharge Prohibitions

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

2. Discharge of waste to the LAAs classified as "hazardous" (see Cal. Code Regs., tit. 22, section 66261.1 et seq.), is prohibited.

3. Discharge of waste classified as "designated", as defined in Water Code section 13173, in a manner that causes violation of Groundwater Limitations, is prohibited.

4. No waste constituent shall be released, discharged, or placed where it will cause a violation of the Groundwater Limitations of this Order.

5. Waste treatment, storage, and disposal shall not be carried out in a manner that results in conditions of "nuisance" or "pollution," as defined per Water Code section 13050.

6. Discharge of wastes other than pomace from Boundary Bend Olives, Inc., at a location and in a manner different from that described in Findings 19 and 20 and authorized herein, is prohibited.

7. Storage of pomace in areas not equipped with a means to prevent storm water infiltration or a paved leachate collection system is prohibited.

8. Application of pomace to the LAAs during precipitation events or when the LAA surface soils are saturated (e.g., during or after significant precipitation) is prohibited.

C. Performance-Based Salinity Loading Trigger Level

1. The annual FDS loading of the pomace applied to each LAA parcel shall not exceed **550 lb/ac/yr**. As noted in the Findings, this loading limit is a performance-based salinity trigger since the Discharger has elected to participate in the P&O Study.

D. Mass Loading Limitations

1. The annual nitrogen loading in the pomace applied to each LAA parcel, as determined by the methods described in the attached MRP, shall not exceed **crop demand**.

2. The maximum daily BOD loading in the pomace to each LAA parcel, as determined by the methods described in the attached MRP, shall not exceed **70 lb/ac/day**.

E. Discharge Specifications

1. All pomace shall remain within the LAAs and any authorized containment structures, as described in the Findings.

2. 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.

3. Objectionable odors shall not be perceivable beyond the limits of the Facility property where the waste is generated, treated, and/or beyond the limits of the LAAs where the waste is discharged at an intensity that creates or threatens to create nuisance conditions per Water Code section 13050.

F. Land Application Area Specifications

For the purposes of this Order, the terms “land application areas” or “LAAs” refer to the discharge areas described in the Findings and shown in **Attachments A through J**.

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

2. Application of pomace to the LAAs shall be at agronomic rates to preclude creation of a nuisance or degradation of groundwater, considering site-specific crop requirements, soil characteristics, climate conditions, and irrigation management practices. The total annual nutritive loading to each LAAs, including nutritive value of organic and chemical fertilizers and pomace, shall not exceed the annual crop demand.

3. Application of pomace to the LAAs shall incorporate measures to protect crop health and soil function by addressing the presence of phenolic compounds, recognized as potentially phytotoxic at elevated concentrations. Applications strategies shall ensure that phenolic loading does not impair plant growth or soil biological activity.

4. Application of pomace to the LAAs shall be applied at rates that prevent adverse salinity and acidity impacts to soil or groundwater. Application practices shall ensure that soil salinity, pH, and related chemical parameters remain with crop tolerance thresholds and do not compromise long-term soil productivity or groundwater quality

5. Application of pomace to the LAAs shall not occur during precipitation events and when the LAA surface soil is saturated (e.g., during or after significant precipitation).

6. Application of pomace to the LAAs shall be managed to minimize erosion.

7. Application of pomace to the LAAs shall not exceed a total applied thickness of two inches and shall be uniformly distributed across the application area to prevent localized overloading.

8. All pomace shall be disced into the upper layer of soil within 24 hours of application.

9. Each parcel that receives pomace shall be rested for up to one (1) year between application cycles to prevent nutrient over-loading, allow for soil recovery, and ensure continued protection of groundwater and surface water quality.

10. The perimeter of the LAAs shall be graded and maintained to prevent ponding along public roads or other public areas and to ensure that no runoff of pomace or associated leachate migrates onto adjacent properties not owned or controlled by the Dischargers. Grading and drainage controls shall be sufficient to contain all applied pomace and associated leachate within the designated areas and to prevent any discharge of waste to offsite locations or waters of the state.

11. Any leachate shall be confined to the LAAs and shall not enter any surface water drainage course or storm water drainage system or any domestic water supply well.

12. The LAAs shall be managed to prevent conditions that could promote the breeding of mosquitoes or other vectors. More specifically:

    a. Apply in thin, uniform layers to promote drying and prevent anaerobic, wet conditions.

    b. Any leachate from the applied pomace must completely infiltrate within 48 hours.

    c. Conduct routine inspections for mosquito larvae, standing water, or nuisance conditions.

    d. Ditches not serving as wildlife habitat should be maintained free of emergent, marginal, and floating vegetation.

    e. Coordinate with local mosquito and vector control districts when needed.

13. Application of pomace to the LAAs shall not exceed the following setbacks:

    a. within 50 feet of surface waters where runoff is not expected (i.e., surface water is protected by levees, berms, vegetated swales, etc.).

    b. within 100 feet of unprotected (i.e., surface water is protected by levees, berms, vegetated swales, etc.) surface waters.

    c. within 100 feet of any domestic water supply well.

    d. within 100 feet of any residence.

14. The LAAs shall be inspected at least once per day, both prior to and during pomace application events to determine compliance with the requirements of this Order. If an inspection reveals noncompliance or threat of noncompliance with this Order, the Discharger shall temporarily stop land application use immediately and implement corrective actions to ensure compliance with this Order.

G. Solids Disposal Specification

1. For the purpose of this Order, “process or residual solids” include organic matter removed by screens and filters and soil sediments during processing activities. Process or residual solids mean organic processing byproducts such as leaves, twigs, olive pomace (skins, pulp, and pits), that will not be subject to treatment prior to use reuse and/or disposal.

2. Process solids shall be removed from screens, vaults, sumps, and tanks as needed to ensure optimal operation, prevent nuisance conditions, and maintain adequate storage capacity.

3. Stored process solids shall be protected from precipitation as needed (e.g., containerized, covered with tarps, stored under roofed areas) or stored in areas protected from stormwater runon or runoff (e.g., bermed or graded to direct stormwater away from stockpiles) to minimize leachate formation.

4. Process solids shall be stored and managed at the Facility, in a manner that ensures all free draining liquid is fully contained (e.g., placed on a compacted, bermed outdoor pad; controlled with a leachate collection and return system); directed to a containment structure (e.g., process water pond or tank), or otherwise similarly controlled and contained to prevent leachate runoff and minimize infiltration.

5. Process solids shall be managed at the LAAs, in a manner that ensures all free draining liquid remains controlled and contained to prevent leachate runoff.

6. Process solids shall be managed to prevent nuisance conditions (e.g., stored in covered containers, dried and moved offsite as soon as practicable, or promptly land applied).

7. Any handling and storage of process solids shall be temporary and controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or concentration that will violate the groundwater limitations of this Order.

8. If removed from the Facility, process solids shall be disposed of in a manner consistent with Title 27, division 2. Removal for reuse as animal feed, biofuel feedstock, or land disposal at facilities (i.e., landfills, composting facilities, or soil amendment sites operated in accordance with valid WDRs issued by a Regional Water Board) will satisfy this specification.

9. Any proposed change in the use or disposal of process solids, including the addition of any LAAs not identified in the Findings, shall be reported to the Executive Officer **at least 90 days** in advance of the change.

H. Groundwater Limitations

Discharge of waste from any portion of the Facility or LAAs being used shall not cause or contribute to groundwater containing constituent concentrations in excess of the concentrations specified below or in excess of natural background groundwater quality, whichever is greater:

1. Constituents in concentrations that exceed either the Primary or Secondary MCLs established in Title 22 sections 64431, 64444, and 64449, excluding salinity provided the Discharger complies with Salt Control Program requirements.

2. Taste or odor-producing constituents, toxic substances, or any other constituents in concentrations that cause nuisance or adversely affect beneficial uses.

I. Provisions

1. The following reports shall be submitted pursuant to Water Code section 13267 and shall be prepared as described in Provision I.2:

   a. **By 15 August 2026,** the Discharger shall submit a *Groundwater Investigation Report.* The Report shall evaluate the depth to first encountered groundwater beneath each discrete LAA. The investigation shall determine whether groundwater occurs at depths less than 25 ft bgs and shall include, at a minimum, site-specific subsurface characterization, installation or use of appropriate borings or temporary wells, and documentation of groundwater elevations. Where groundwater is identified at depths less than 25 ft bgs, the Report shall also propose the design and implementation of a groundwater monitoring network sufficient to evaluate potential impacts associated with pomace land application activities. The Report shall be submitted prior to initiating pomace application within any affected LAA.

   b. **By 1 December 2026**, the Discharger shall submit a *Pomace Moisture Reduction Evaluation Report*. The Report shall evaluate feasible methods to reduce the moisture content of raw olive pomace prior to land application. The evaluation shall include, but not be limited to, best practicable industry drying methods such as solar drying, mechanical or equipment assisted drying, and any other applicable technologies. The report shall, at a minimum:

      i. Describe all moisture reduction methods evaluated, including operational feasibility, anticipated moisture reductions, and potential environmental impacts;

      ii. Provide a comparison of alternatives and identify the Discharger's preferred method(s);

      iii. Include supporting data such as current pomace moisture levels, evaporation potential, site constraints, and any pilot scale or vendor information; and

      iv. Provide a proposed implementation timeline for any facility, operational, or equipment modifications needed to reduce pomace moisture. Upon approval from the Central Valley Water Board, the Discharger shall implement the selected moisture reduction measures in accordance with the approved schedule. Modifications to the schedule shall be

submitted in writing and may only be implemented upon written authorization by the Executive Officer.

c. **At least 90 days** prior to use of any parcel for application of pomace, the Discharger shall submit a *Land Application Area Evaluation Report*. The evaluation shall demonstrate that the parcel(s) have or will have the necessary control measures to ensure offsite discharge (either to an adjacent property or surface water) does not occur. Each parcel evaluation shall, at a minimum, include the following elements:

i. Delineation of Surface Water: Identification and mapping of all surface waters within and adjacent to the LAAs, including streams, canals, drainage ditches, wetlands, and any other conveyances capable of transporting runoff offsite. Mapping shall clearly show distances from the field boundary and relevant topographic or hydrologic features. The delineation shall also note the necessary setback distances (i.e., to surface water, domestic water supply well(s), property boundaries, and residences) to ensure compliance with the WDRs.

ii. Existing Control Measures: Description of current control measures implemented at the field to prevent offsite discharge of pomace, runoff, or leachate. Examples include berms, buffer zones, storm water routing, and infiltration features. The Discharger shall discuss the effectiveness of these measures under expected field conditions.

iii. Required Modifications: Identification of any additional control measures or field modifications needed to ensure all drainage and discharge remain fully contained within the field and do not reach surface waters or migrate offsite. This analysis must consider field slope, soil characteristics, weather patterns, and anticipated application rates.

iv. Site Specific Compliance Measures: Evaluation of any additional site-specific restrictions or operational practices needed to comply with the WDRs, including but not limited to: (1) Weather based restrictions (e.g., minimum dry out period before precipitation, suspension of application during wet field conditions), (2) Operational timing constraints, and (3) Supplemental protective measures where sensitive features are present.

v. Temporary Pomace Storage: Evaluation of adequate on-site storage capacity and/or alternative storage and handling

practices during weather events that restrict pomace application activities.

The *Land Application Evaluation Report* shall clearly indicate what fields were included in the evaluation and shall be submitted at least 90 days prior to application to those fields. The Discharger shall implement all control measures and site-specific restrictions identified in the evaluation. Any proposed changes shall be submitted in writing.

d. **By 1 August each year**, the Discharger shall submit a *Cropping Plan*, prepared by an agronomist. The plan shall provide guidance to the management of the pomace application operations for the upcoming harvest; identify crops to be grown on the selected LAAs that will receive pomace for the upcoming reporting period; and describe how pomace will be managed to maximize the use of available cropland, meet agricultural objectives, and comply with the requirements of this Order. Updated survey maps should be included with the *Cropping Plans*.

Realistic yield goals for each crop in each LAAs shall be identified. For new crops or varieties, industry yield recommendations may be used until documented yield information is available. Initially, each crop's nutrient requirements for nitrogen may be determined based on recommendations from the University of California or Western Fertilizer Handbook. Once laboratory values are available, nutrient requirements shall be based on historical crop nutrient uptake determined from laboratory values.

The plan shall evaluate the effect of applying raw olive pomace to LAAs, and calculate allowable loading rates based on irrigation schedules, water usage of recommended crops, quality and moisture content of the pomace from previous year(s), evapotranspiration rates, infiltration rates, planting/harvesting schedules, and the long-term impacts to soil.

Supporting calculations for planned pomace mass loading shall include the following:

i. Mass loading (lb/ac/day, in/month) of raw pomace using actual acreage for each parcel and pomace volumes applied on each day of discharge.

ii. Maximum and average BOD_5 loadings (lb/ac/day) using actual acreage for each parcel and pomace volumes applied on each day of discharge;

iii. Nitrogen loading (lb/ac/yr) using actual acreage and pomace volumes applied on each day of discharge, assuming no denitrification and including the use of any commercial fertilizers.

iv. FDS loading (lb/ac/yr) using actual acreage and pomace volumes applied on each day of discharge.

e. If the Facility's annual discharge exceeds the Performance Based Salinity Trigger the Discharger shall submit a *Performance Based Salinity Mass Loading Evaluation Report* by **1 April of the following year**. The Report shall, at a minimum, include the following:

i. An evaluation of the Facility's pomace quality and pomace application management. This evaluation shall describe any changes to the processing operations, identify any conservation measures implemented, and discuss modifications to pomace application practices including drying of material, more restrictive mass loading rates, crop types, planting schedules, and harvesting schedules.

ii. If additional time is needed to investigate the source(s) of the salinity in the Facility's discharge, the Report shall include a detailed work plan describing what actions the Discharger will conduct (with completion dates) to investigate the source(s) of salinity and report its findings to the Central Valley Water Board.

f. Pre-discharge soil sampling shall be completed and documented **no later than 1 August** of the harvest season for any discrete LAAs proposed to receive pomace for the first time. All sampling procedures, analytical methods, and required parameters shall be conducted in accordance with Section II.2.D of the Monitoring and Reporting Program, and results shall be submitted in the Annual Report.

g. **Within 12 months** prior to initiating pomace applications to LAAs where groundwater is found at depths less than 25 ft bgs, the Discharger shall submit a *Groundwater Monitoring Well Installation Workplan* (Monitoring Well Workplan) that proposes the installation of a sufficient number of monitoring wells to ensure adequate monitoring upgradient and downgradient from the LAAs. The *Monitoring Well Workplan* shall be prepared in accordance with, and include the items listed in, the first section of **Attachment K**: Requirements for *Monitoring Well Installation Workplans and Monitoring Well Installation Reports*, which is attached hereto and made part of this Order by reference. The groundwater monitoring

wells shall be designed to yield samples representative of the uppermost portion of the first aquifer underlying the LAAs.

h. **By six months** following Central Water Board staff concurrence with the above *Monitoring Well Workplan*, the Discharger shall complete the proposed well installation(s) and within **60 days** of well installation(s) submit a *Groundwater Monitoring Well Installation Completion Report* for any new groundwater monitoring well(s) constructed to comply with Provision I.1.d. The report shall be prepared in accordance with, and including the items listed in, the second section of **Attachment K**: *Monitoring Well Workplan and monitoring Well Installation Report Guidance*. The report shall describe the installation and development of all new monitoring well(s) and explain any deviation from the approved Workplan.

2. In accordance with Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments 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.

3. The Discharger shall submit the technical reports and work plans required by this Order for consideration by the Executive Officer and incorporate comments the Executive Officer may have in a timely manner, as appropriate. 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 or imposing civil monetary liability, or in revision or rescission of this Order.

4. The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary

facilities or similar systems that are installed by the Discharger when the operation is necessary to achieve compliance with the conditions of this Order.

5. In the event that the Discharger reports toxic chemical release data to the State Emergency Response Commission (SERC) pursuant to section 313 of the Emergency Planning and Community Right to Know Act (42 U.S.C. § 11023), the Discharger shall also report the same information to the Central Valley Water Board within 15 days of the report to the SERC.

6. At least **90 days** prior to termination or expiration of any lease, contract, or agreement involving disposal or land application areas used for pomace applications, and relied upon to justify the capacity authorized herein and assure compliance with this Order, the Discharger shall notify the Central Valley Water Board in writing of the situation and of what measures have been taken or are being taken to assure full compliance with this Order.

7. In the event of any change in control or ownership of the facility or of any LAAs where pomace is applied, the Discharger must notify the succeeding owner or operator of the existence of this Order by letter, and a copy of the letter which shall be immediately forwarded to the Central Valley Water Board.

8. To assume operation as Discharger under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Central Valley Water Board, and a statement. The statement shall comply with the signatory paragraph of Standard Provision B.3 (1 March 1991 SPRRs) and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the Water Code. If approved by the Executive Officer, the transfer request will be submitted to the Central Valley Water Board for its consideration of transferring the ownership of this Order at one of its regularly scheduled meetings.

9. If the discharge to land permitted under this Order ceases, and/or these WDRs are no longer necessary, the Discharger must contact the Central Valley Water Board’s Compliance and Enforcement Unit to discuss waste discharge and land application closure requirements for each application area prior to rescission of this Order.

10. A copy of this Order, including the MRP, Information Sheet, Attachments, and SPRRs, shall be kept at the discharge facility for reference by operating personnel. Key operating personnel shall be familiar with its contents.

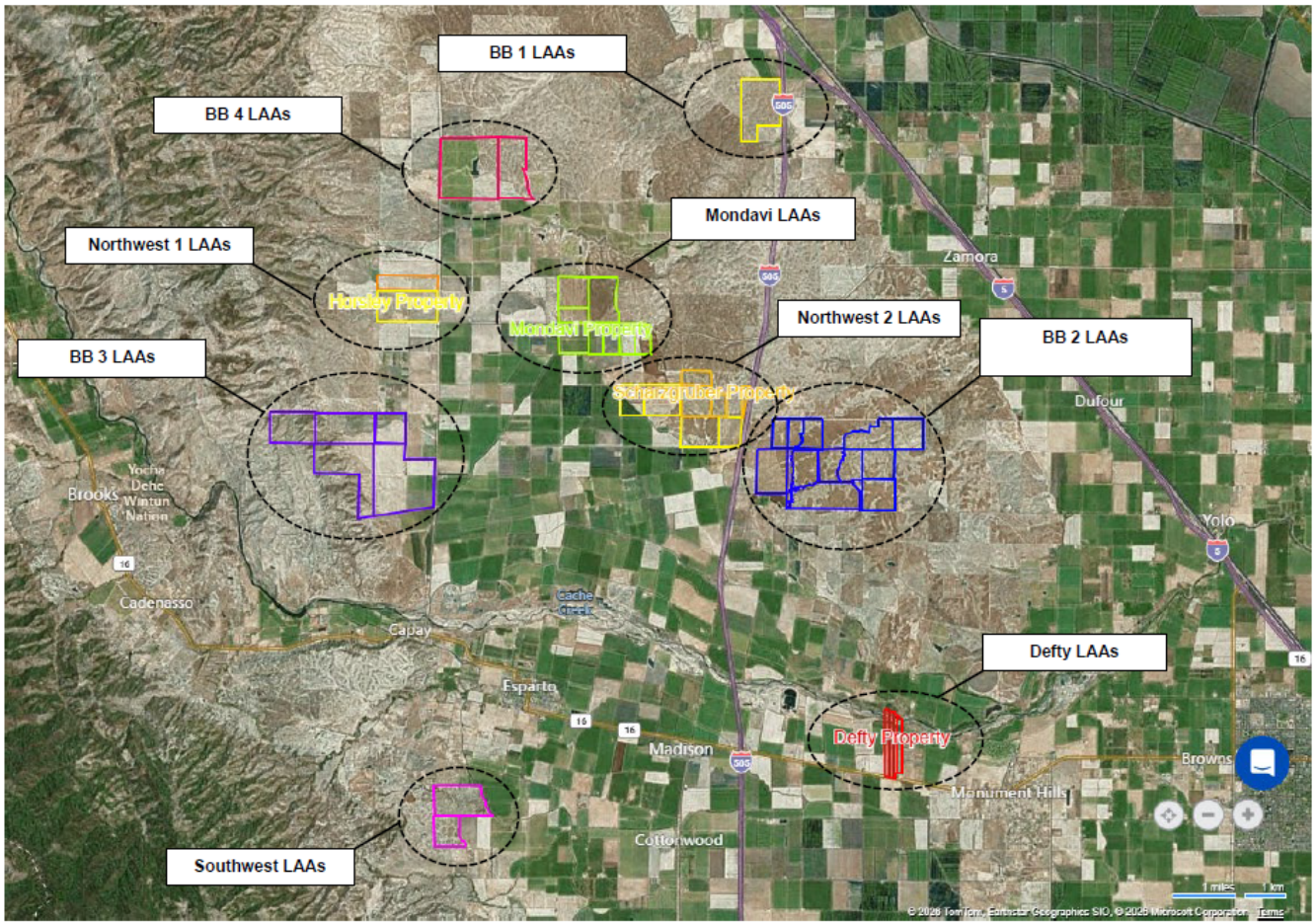
ENFORCEMENT

If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this 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 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 13268, 13350, and 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

ADMINISTRATIVE REVIEW

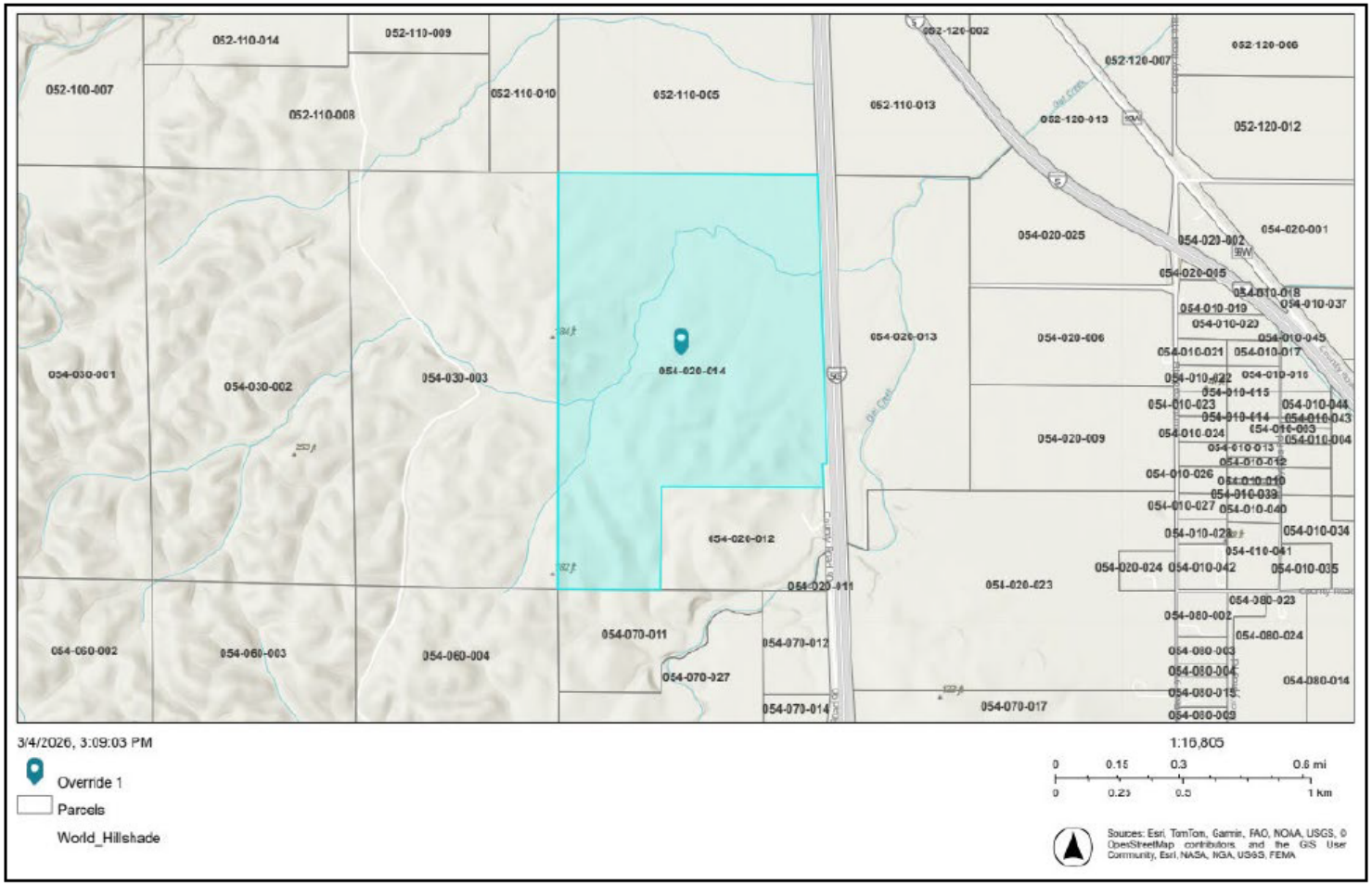
Any person aggrieved by this Central Valley Water Board action may petition the State Water Board for review in accordance with Water Code section 13320 and California Code of Regulations, title 23, section 2050 et seq. To be timely, the petition must be received by the State Water Board by 5:00 pm on the 30th day after the date of this 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 pm on the next business day. The law and regulations applicable to filing petitions are available on the State Water Board website (http://www.waterboards.ca.gov/public_notices/petitions/water_quality). Copies will also be provided upon request.

ATTACHMENT A – VICINITY MAP



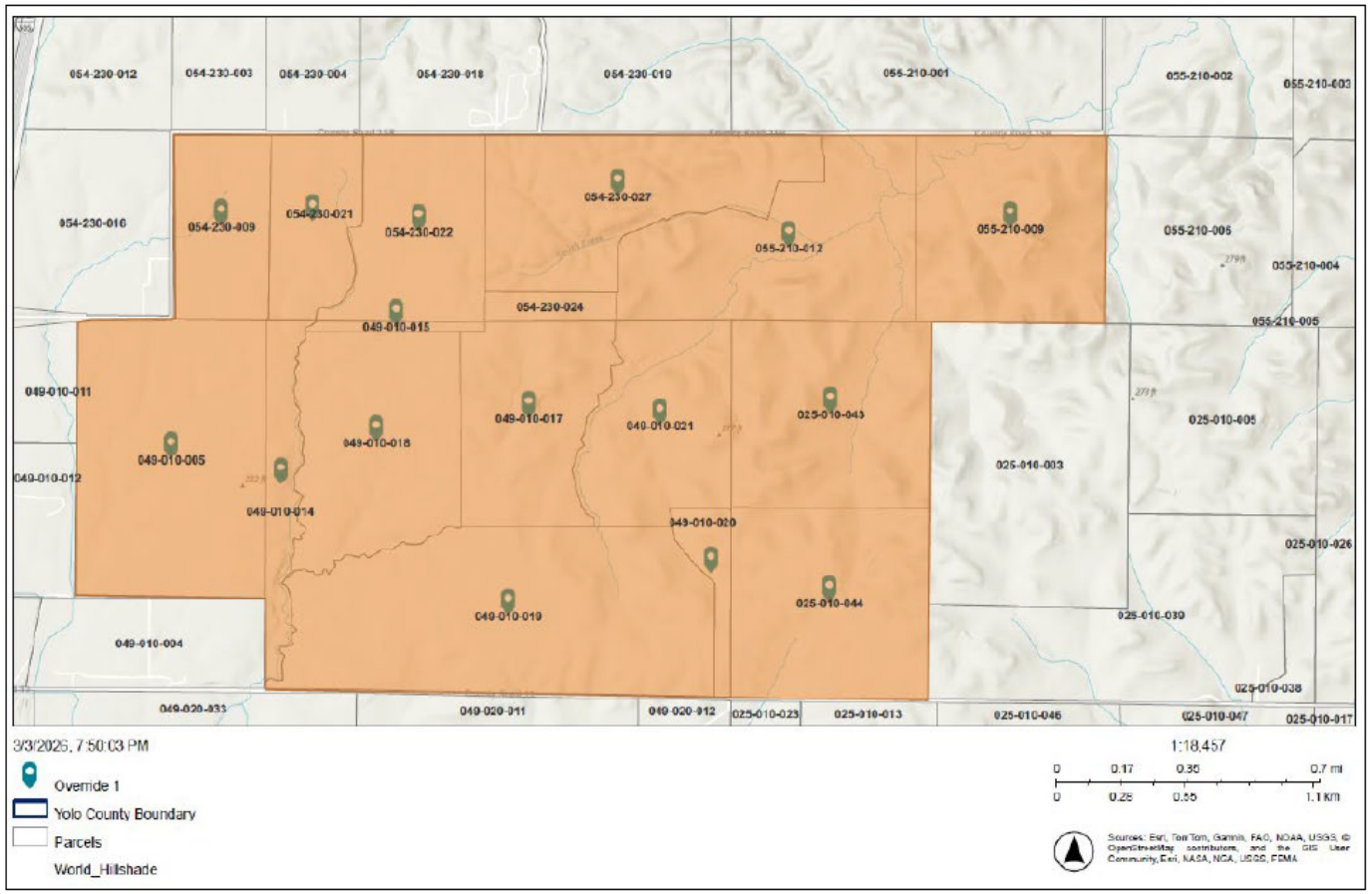
Approximate Scale: As Noted Above N W E S	Drawing Reference: Report of Waste Discharge September 2025	**VICINITY MAP** Boundary Bend Olives Pomace Application Areas Yolo County

ATTACHMENT B – LAND APPLICATION AREA BOUNDARY BEND 1



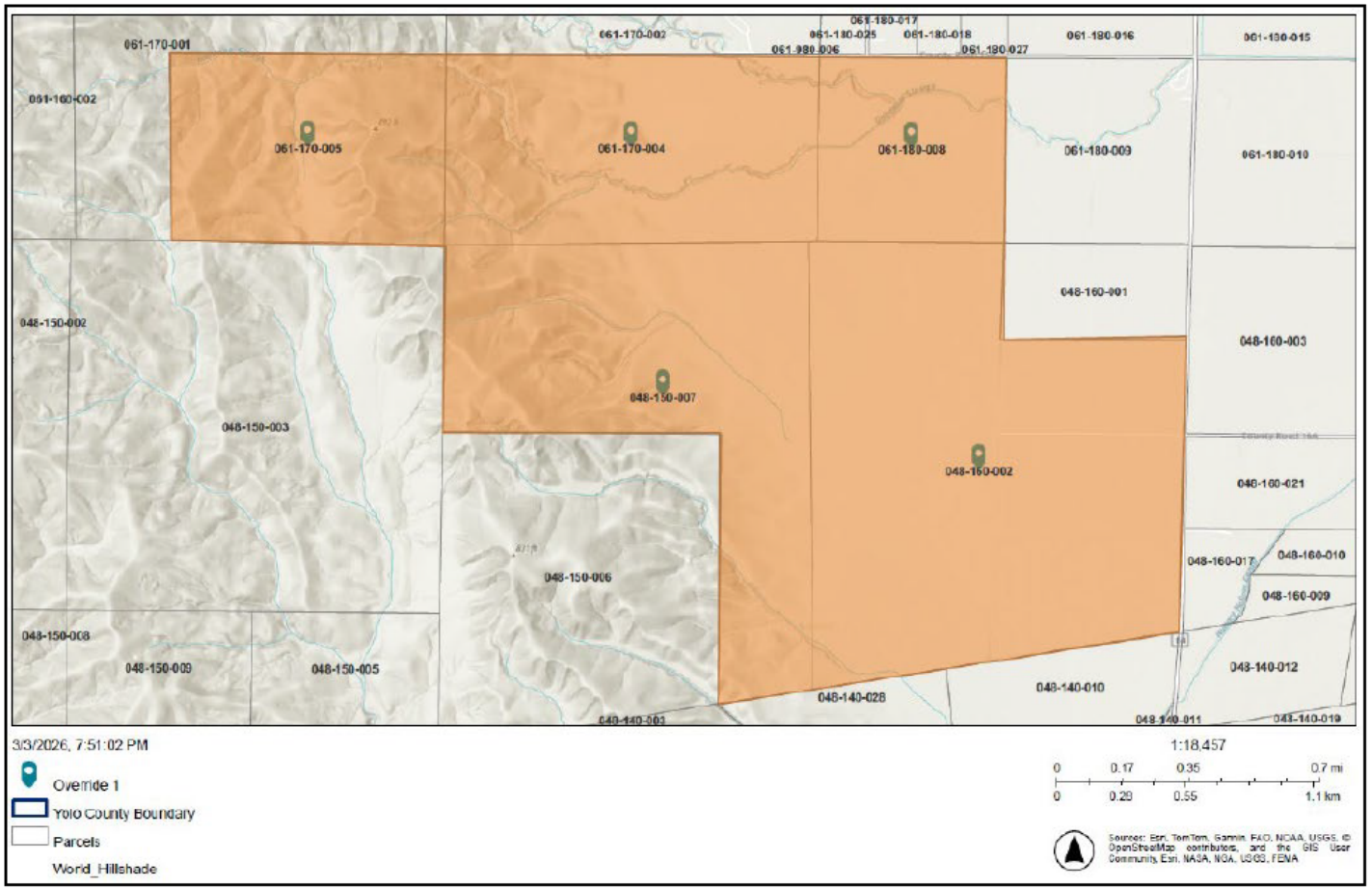
Approximate Scale: As Noted Above N W E S	Drawing Reference: Report of Waste Discharge September 2025	**LOCATION MAP** Boundary Bend Olives Land Application Area – BB 1 Yolo County

ATTACHMENT C – LAND APPLICATION AREA BOUNDARY BEND 2



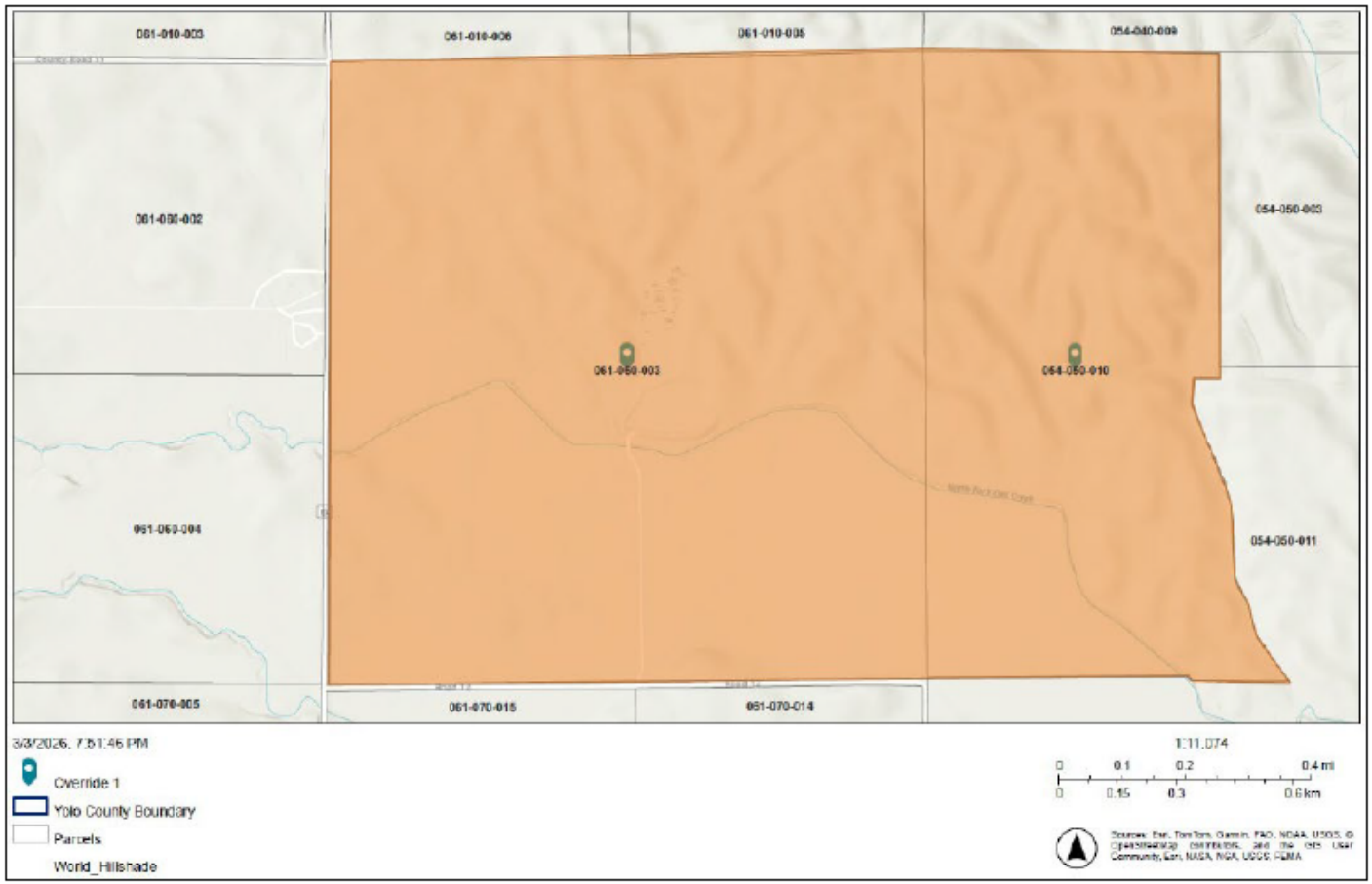
Approximate Scale: As Noted Above N W E S	Drawing Reference: Report of Waste Discharge September 2025	**LOCATION MAP** Boundary Bend Olives Land Application Area – BB 2 Yolo County

ATTACHMENT D – LAND APPLICATION AREA BOUNDARY BEND 3



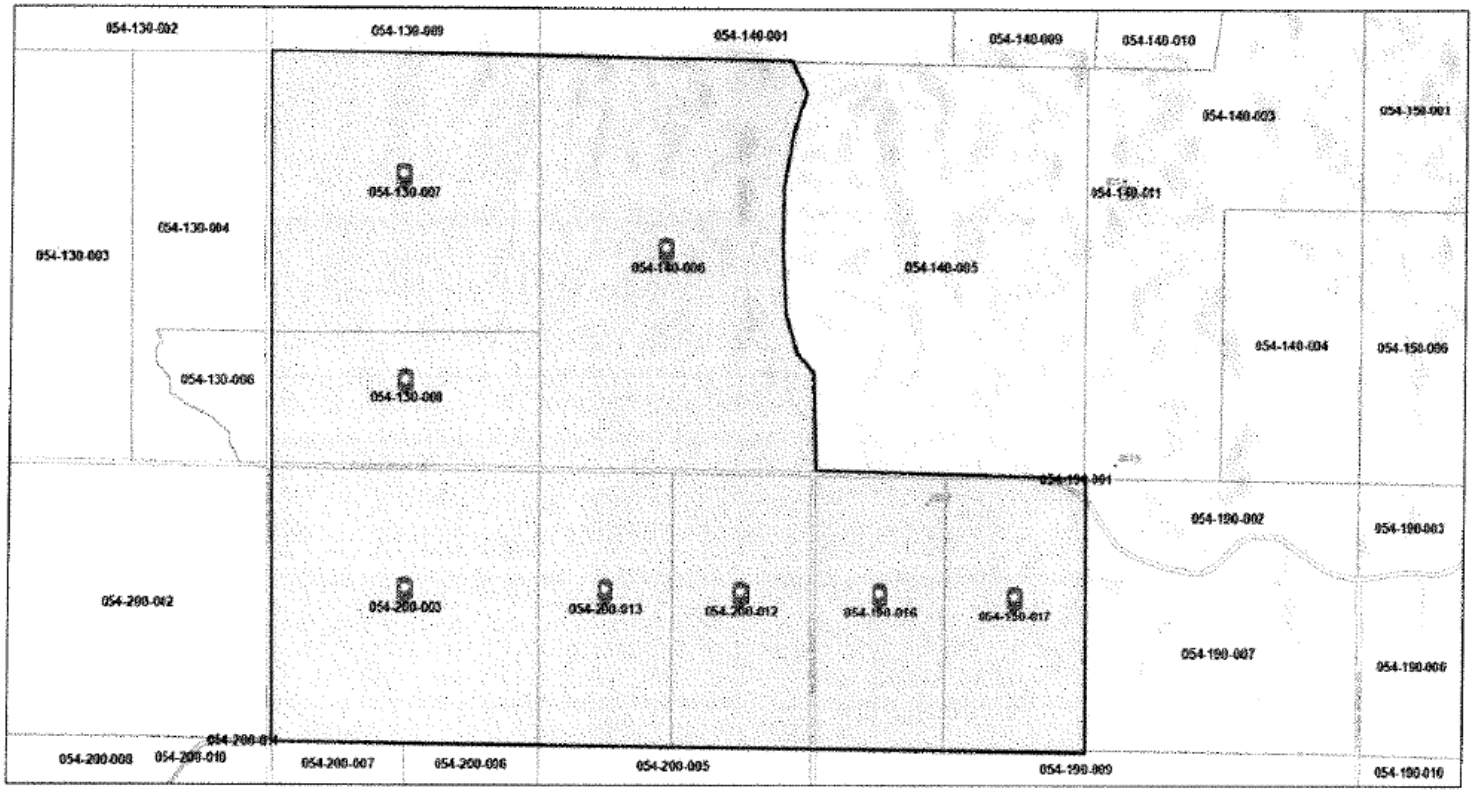
Approximate Scale: As Noted Above N W E S	Drawing Reference: Report of Waste Discharge September 2025	**LOCATION MAP** Boundary Bend Olives Land Application Area – BB 3 Yolo County

ATTACHMENT E – LAND APPLICATION AREA BOUNDARY BEND 4



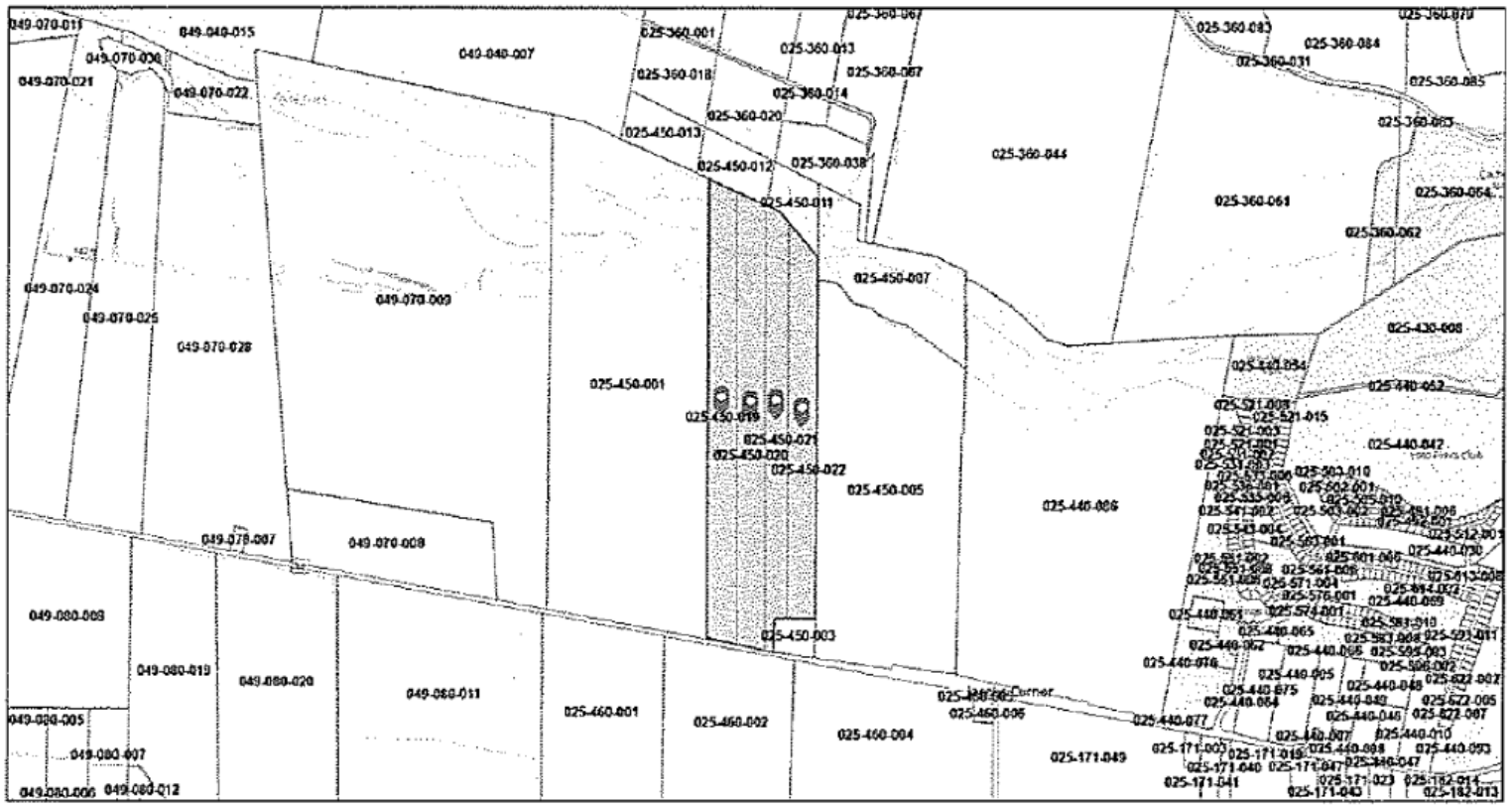
Approximate Scale: As Noted Above	Drawing Reference: Report of Waste Discharge September 2025	**LOCATION MAP** Boundary Bend Olives Land Application Area – BB 4 Yolo County

ATTACHMENT F – MONDAVI LAND APPLICATION AREA



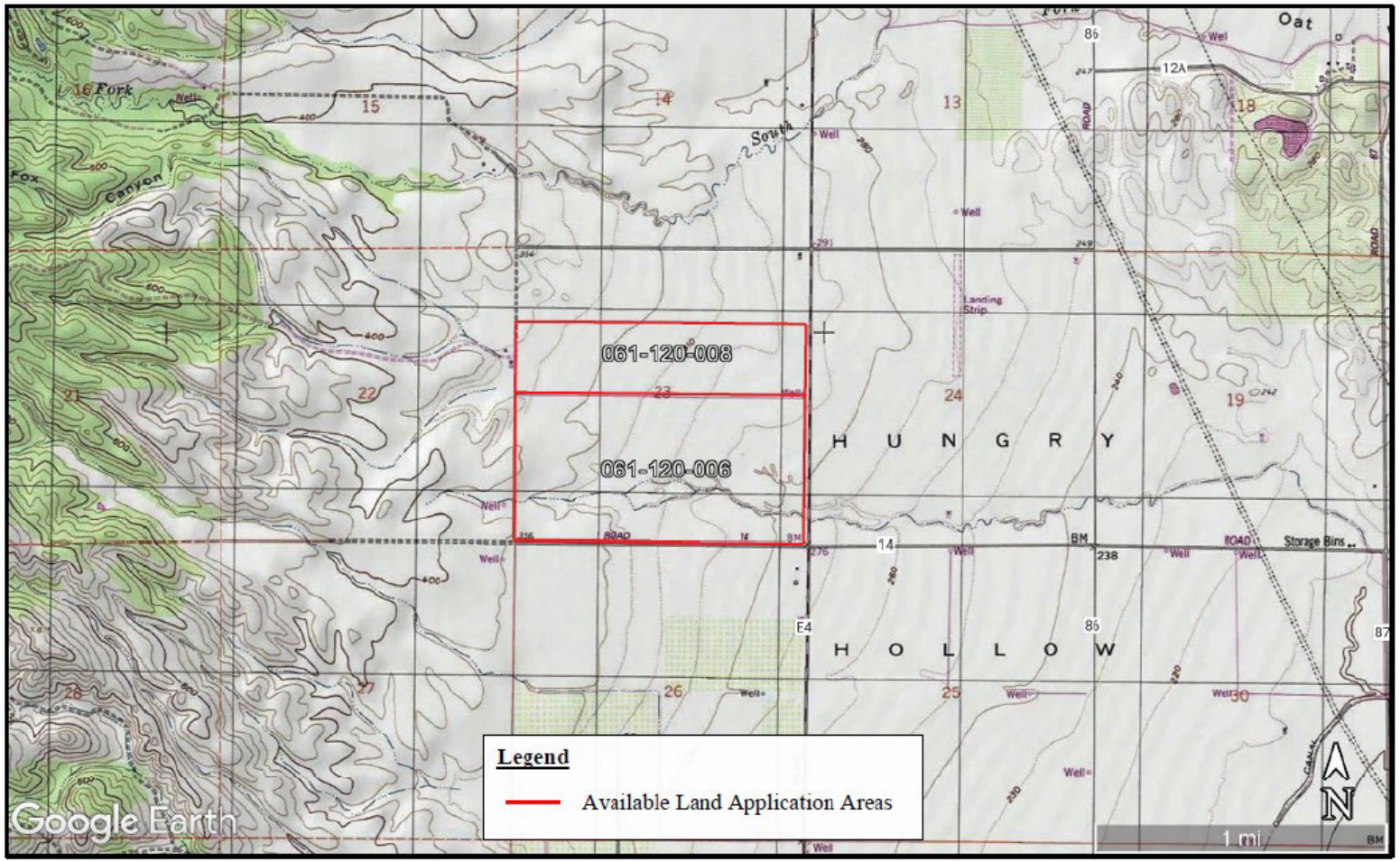
Approximate Scale: As Noted Above	Drawing Reference: Report of Waste Discharge September 2025	**LOCATION MAP** Boundary Bend Olives Land Application Area – C. Mondavi Property Yolo County

ATTACHMENT G – DEFTY LAND APPLICATION AREA



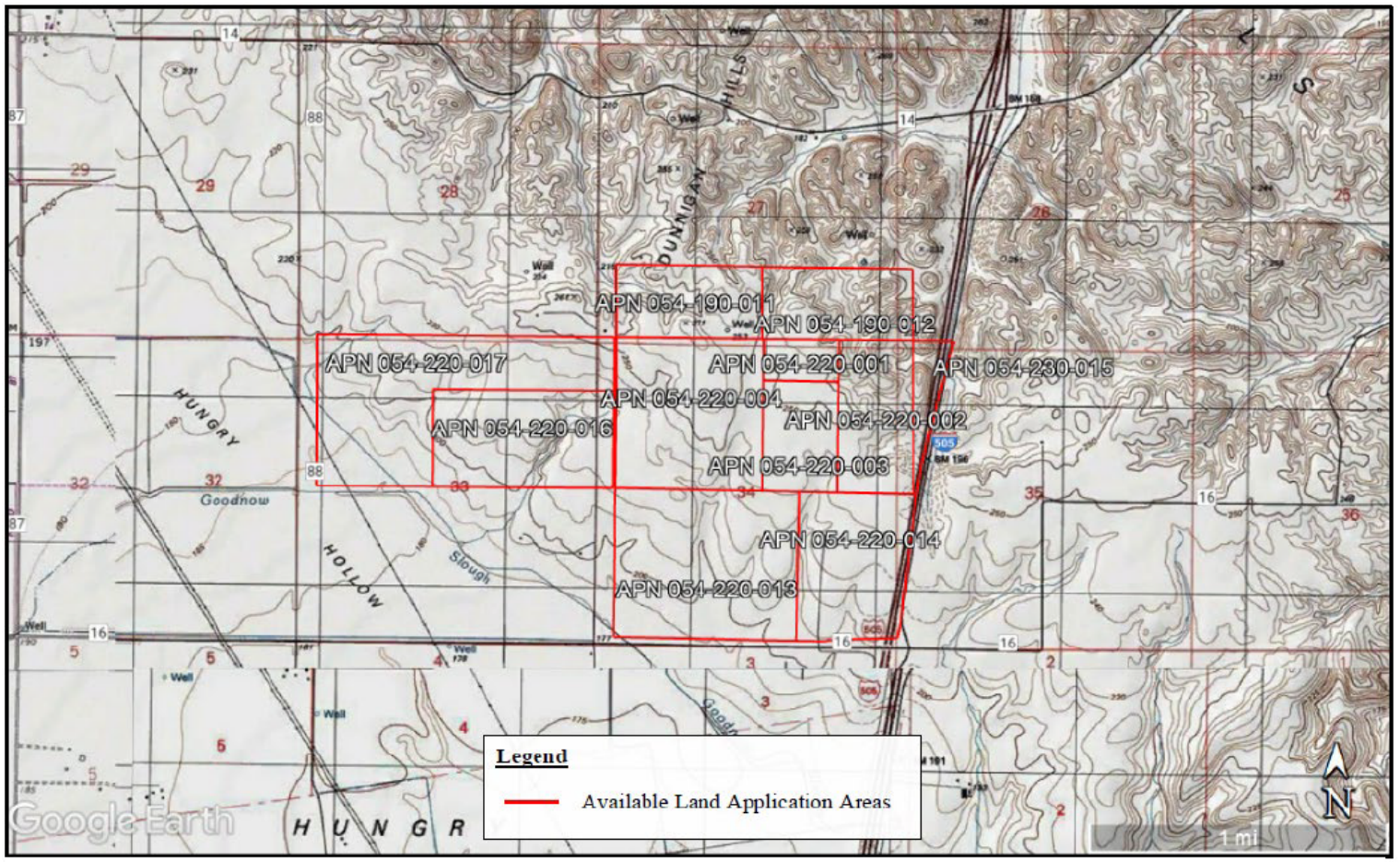
Approximate Scale: As Noted Above	Drawing Reference: Report of Waste Discharge September 2025	**LOCATION MAP** Boundary Bend Olives Land Application Area – Defty Property Yolo County

ATTACHMENT H – LAND APPLICATION AREA NORTHWEST 1



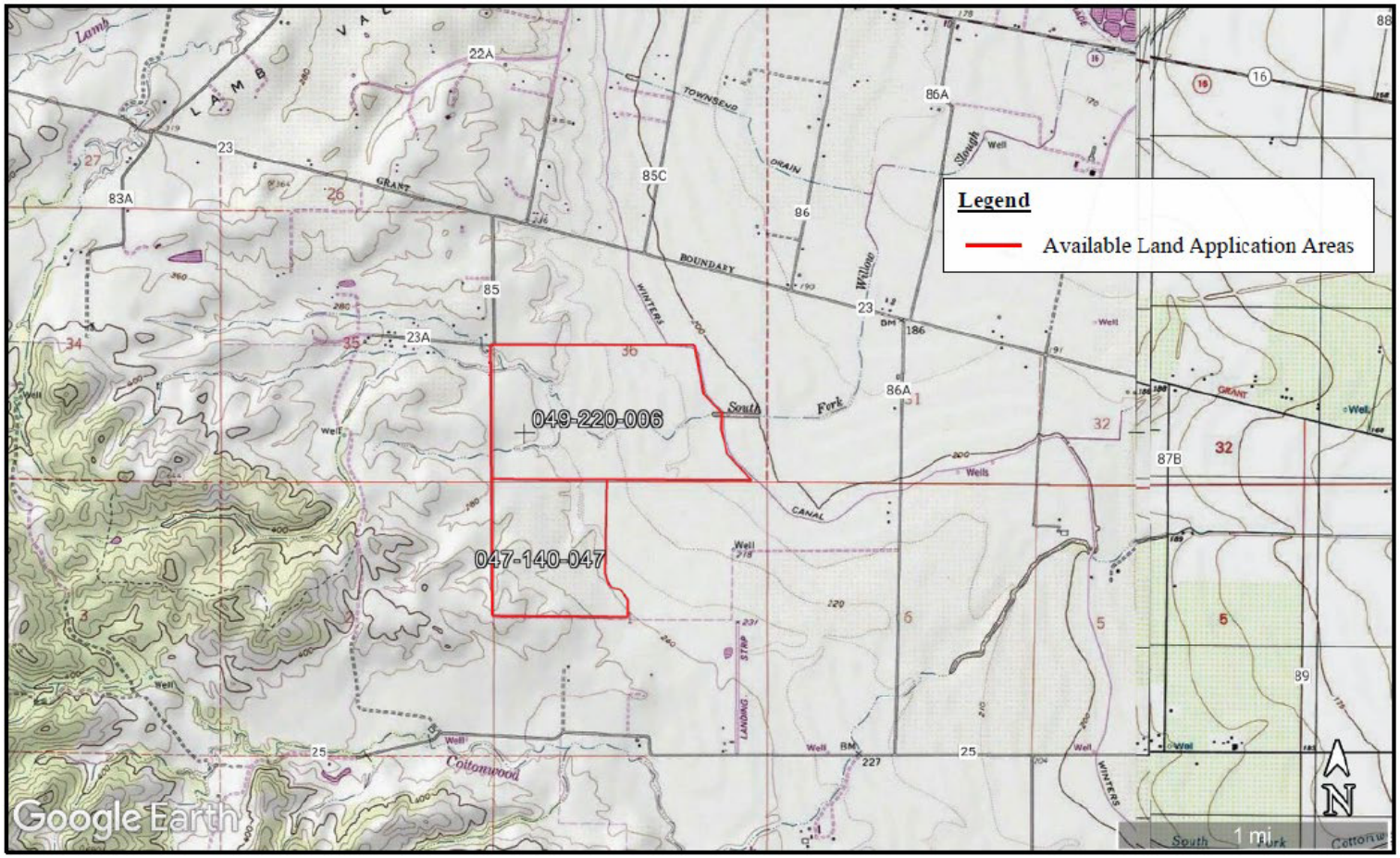
Approximate Scale: As Noted Above N W E S	Drawing Reference: Report of Waste Discharge September 2025	**LOCATION MAP** Boundary Bend Olives Land Application Area – Northwest 1 Yolo County

ATTACHMENT I – LAND APPLICATION AREA NORTHWEST 2



Approximate Scale: As Noted Above N W E S	Drawing Reference: Report of Waste Discharge September 2025	**LOCATION MAP** Boundary Bend Olives Land Application Area – Northwest 2 Yolo County

ATTACHMENT J – LAND APPLICATION AREA SOUTHWEST



Approximate Scale: As Noted Above N W E S	Drawing Reference: Report of Waste Discharge September 2025	**LOCATION MAP** Boundary Bend Olives Land Application Area – Southwest Yolo County

ATTACHMENT K – REQUIREMENTS FOR MONITORING WELL INSTALLATION WORKPLAN AND MONITORING WELL INSTALLATION REPORT

INFORMATION SHEET

Background

Boundary Bend Olives, Inc (Boundary Bend) owns and operates an olive oil production facility (facility) located at 455 Harter Avenue in Woodland, Yolo County. The facility has been in operation since 2015. Boundary Bend produces olive oil using a two-phase extraction process, which separates olive paste into two components: the oil and a wet, semi-solid byproduct known as pomace (crushed skins, pulp, and fragments of olive pits). The production of olive oil generates two waste products: wastewater and raw pomace.

Domestic wastewater and process wastewater generated onsite, excluding raw pomace, is discharged to the City of Woodland's Water Pollution Control Facility (WPCF). Raw olive pomace produced during processing is land applied to designated agricultural fields. The olive harvest season typically spans from September through November, with some early harvests beginning in late August and extending into early December. These Waste Discharge Requirements (WDRs) prescribe requirements for the land application of raw olive pomace.

Boundary Bend has an extensive and complex regulatory history as described in Findings 6 through 16.

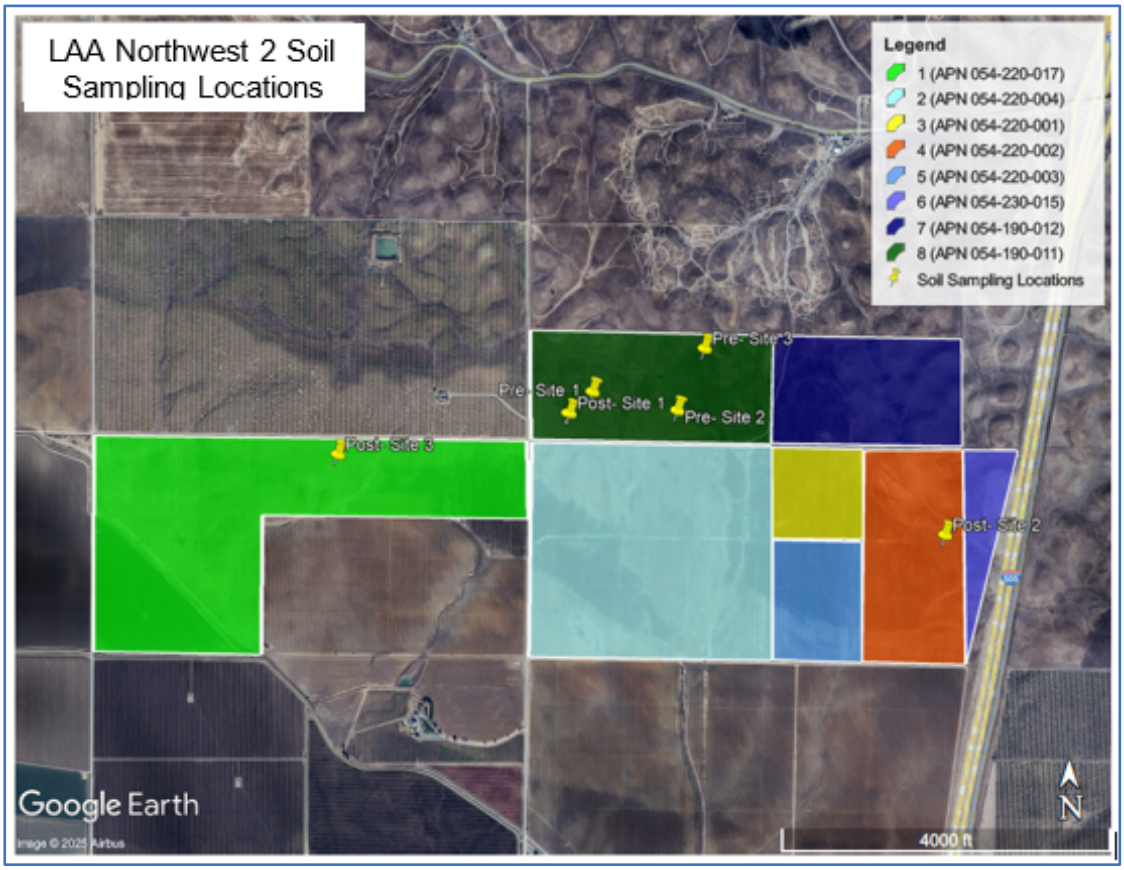
Olive Pomace Application

There is no pre-treatment process for raw pomace, and no designated onsite storage or drying areas. Pomace is collected in above-ground hoppers, loaded directly into tanker trucks, and transported either to the land application areas (LAAs) or for offsite disposal.

The LAAs encompass approximately 8,279 acres of agricultural land across 49 parcels, organized into nine discrete areas: Boundary Bend 1, Boundary Bend 2, Boundary Bend 3, Boundary Bend 4, Defty, Mondavi, Northwest 1, Northwest 2, and Southwest. The parcels are under separate ownership. Parcel owners include Boundary Bend, Boundary Bend Assets Inc, Sue Schwarzgruber, Suzanne Horsley, C Mondavi and Family, and the Defty Fam Trust, through its trustee Spencer Defty

Soil Conditions

As described in the WDRs, pre- and post-application soil monitoring at a depth between 1 to 2 feet below the interval of disturbed soil from ground surface was conducted at LAA Northwest 2 in 2024 and the sampling locations are shown below. The results of the soil analysis were reported in the 2024 Annual Report.



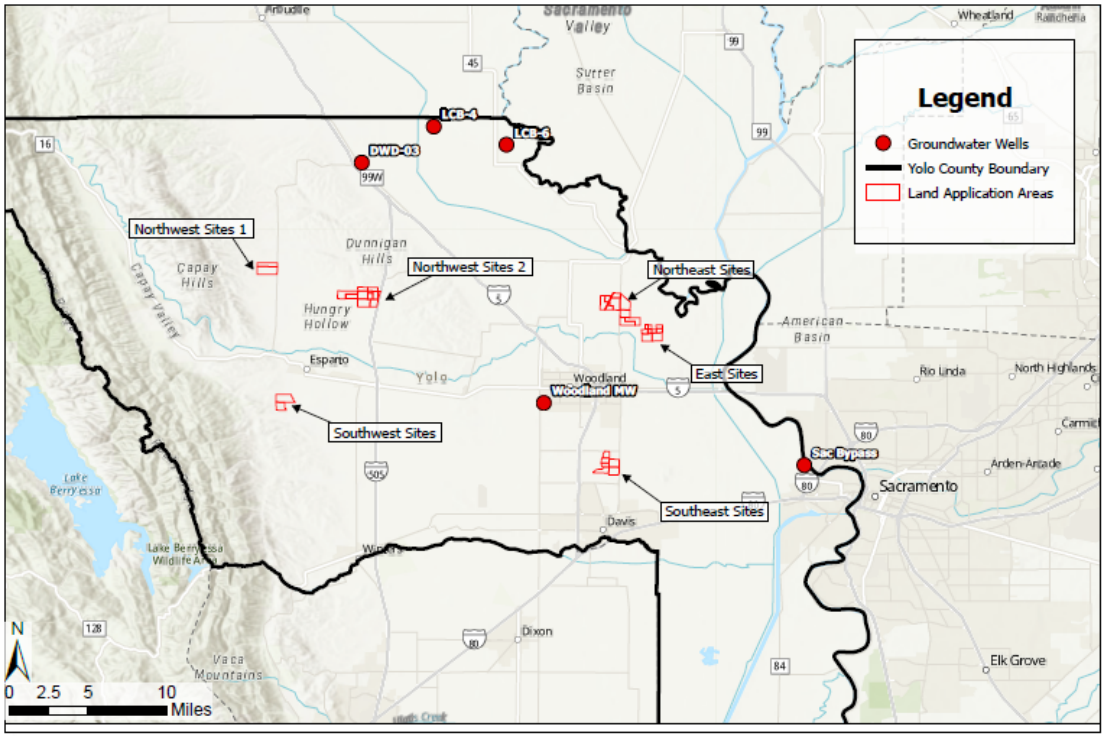
In the absence of accessible, shallow groundwater, this Order requires pre-discharge soil monitoring to be performed within each of the nine discrete LAAs as a means to evaluate potential impacts associated with pomace applications.

Regional Groundwater Conditions

There is no dedicated groundwater monitoring network within the LAAs. The groundwater conditions described in the ROWD and presented in the WDRs reflect regional-scale information and are addressed in Findings 39 and 40. Following the submission of the 2025 ROWD, Boundary Bend proposed additional LAAs including Boundary Bend 1, Boundary Bend 2, Boundary Bend 3, Boundary Bend 4, and the Mondavi and Defty properties, for which site-specific groundwater conditions were not known at the time these WDRs were being prepared.

This Order requires Boundary Bend to investigate groundwater conditions within LAAs Boundary Bend 1, Boundary Bend 2, Boundary Bend 3, Boundary Bend 4, and Mondavi and Defty properties to verify that groundwater occurs at depths greater than 25 feet bgs prior to initiating any land application activities. Where groundwater is encountered at depths less than 25 ft bgs, this Order requires Boundary Bend to establish an appropriate groundwater monitoring well network within those LAAs to evaluate potential impacts associated with pomace land application operations.

Groundwater data as discussed in Findings 39 and 40 were obtained from available well records from irrigation and domestic wells accessed through the Department of Water Resources (DWR) Sustainable Groundwater management Act (SGMA) Viewer. The locations of these wells are shown below in relation to the LAAs.



Average depth to groundwater conditions in the vicinity of the LAAs, based on DWR data collected between Spring 2017 and Spring 2022, ranged from approximately 40 to 80 ft bgs.

Antidegradation

Antidegradation analysis and conclusions are discussed in Findings 66 through 72.

For the purposes of this Order, constituents of concern (COCs) in the pomace with the potential to degrade groundwater are salts (represented by EC, TDS, and FDS), total nitrogen (TKN and nitrate), organics (BOD), and dissolved metals.

The Discharger will implement best practicable treatment and control (BPTC) for the constituents of concern, including:

- Maintain compliance with the Salt Control Program, including participation in the P&O study and implementation of the performance-based salinity loading limit.
- Maintain compliance with the Nitrate Control Program, including enrollment with the Sacramento Valley Water Quality Coalition under the

Irrigated Lands Regulatory Program for all parcels located within the Priority 2 basin and/or confirmation of participation with an established Priority 2 Management Zone.

- Application to cropped fields at agronomic rates for the purpose of nutrient recycling.
- Application shall not exceed a max daily BOD loading as prescribed in this Order, to not have any impact on odor or a measurable change in organic loading and concentrations of constituent of concern in the leachate.
- Application will be spread thinly, not to exceed the total thickness of two inches.
- Pomace will be disced into the top layer of soil within a few days of application, to ensure incorporation into the soil before vector attraction or odor nuisance conditions can be developed and accelerate microbial assimilation of organic compounds and minimize exposure to phenolics.
- Disposal at an appropriate off-site location, which reduces organic loading to groundwater.

Discharge Prohibitions, Effluent Limitations, Discharge Specification, and Provisions

This Order sets a performance-based salinity loading trigger of **550 mg/L for FDS**. This trigger was based on review of the mass loading data from the 2024 and 2025 harvest seasons and incorporates a 25-percent safety factor. By participating in the Prioritization and Optimization (P&O) Study, the Discharger may continue implementing reasonable, feasible, and practicable efforts to control salinity through performance-based measures.

In addition, these WDRs prescribe a total nitrogen loading limit not to exceed **crop agronomic demand** and a maximum daily BOD loading limit of **70 lb/ac/day**. The maximum daily BOD loading limit was based on review of the 2024 and 2025 data and includes a 25-percent safety factor.

Monitoring Requirements

Section 13267 of the California Water Code authorizes the Central Valley Water Board to require monitoring and technical reports as necessary to investigate the impact of waste discharges on waters of the State. Water Code Section 13268 authorizes assessment of civil administrative liability where appropriate. The Order includes pomace, LAAs, solids, soil, and groundwater monitoring requirements. This monitoring is necessary to characterize the discharge and evaluate any impacts to groundwater and compliance with the requirements and specifications in the Order.

Salt and Nitrate Control Programs Regulatory Considerations

As part of the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) initiative, the Central Valley Water Board adopted Basin Plan amendments (Resolution R5-2018-0034) incorporating new programs for addressing ongoing salt and nitrate accumulation in the waters and soils of the Central Valley at its 31 May 2018 Board Meeting. On 16 October 2019, the State Water Resources Control Board adopted Resolution No. 2019-0057 conditionally approving the Central Valley Water Board Basin Plan amendments and directing the Central Valley Water Board to make targeted revisions to the Basin Plan amendments within one year from the approval of the Basin Plan amendments by the Office of Administrative Law. The Office of Administrative Law (OAL) approved the Basin Plan amendments on 15 January 2020 (OAL Matter No. 2019-1203-03).

For the Salt Control Program (SCP), the Discharger maintained compliance while operating under the regulatory coverage provided by the 2020 Waiver and issued **CV-SALTS ID 3016**. The Discharger elected to participate in the Prioritization and Optimization Study (P&O Study) under the Alternative Salinity Permitting Approach. To maintain existing salt discharges and minimize salinity impacts, this Order sets a Performance-Based Salinity Mass Loading Trigger for FDS.

For the Nitrate Control Program, most of the LAAs are located in within the Yolo Subbasin, a Priority 2 basin. The LAAs located in the Southwest area, which includes APNs 049-220-006 and 047-140-047, are located in Groundwater Basin 5.21.67 (Sacramento Valley), a Priority 2 basin. These two parcels are currently enrolled with the Sacramento Valley Water Quality Coalition, which meets compliance with the Nitrate Control Program through the Irrigated Lands Regulatory Program. Boundary Bend has not provided confirmation of Nitrate Control Program compliance for the remaining LAAs, including Boundary Bend 1, Boundary Bend 2, Boundary Bend 3, Boundary Bend 4, Northwest 1, Northwest 2, Mondavi, and Defty. To maintain compliance with the Nitrate Control Program, Boundary Bend will need to continue enrollment with the Sacramento Valley Water Quality Coalition under the Irrigated Lands Regulatory Program for all parcels located within the Priority 2 basin and/or confirm of participation with an established Priority 2 Management Zone.

The CV-SALTS initiative will result in regulatory changes that will be implemented through conditional prohibitions and modifications to many WDRs regionwide, including the WDRs that regulate discharges from the Facility. More information regarding the CV-SALTS regulatory planning process can be found at the following link: (https://www.waterboards.ca.gov/centralvalley/water_issues/salinity/)

Reopener

The conditions of discharge in the Order were developed based on currently available technical information and applicable water quality laws, regulations, policies, and plans, and are intended to assure conformance with them. The Order sets limitations based on the information provided thus far. If applicable laws and regulations change, or once

new information is obtained that will change the overall discharge and its potential to impact groundwater, it may be appropriate to reopen the Order.