

Agricultural Order 4.0 Introduction

Irrigated Lands Program
Grower Workshops



Central Coast Water Board, July 2021

How to Ask Questions

Workshop

- Everyone's cameras will be off
- Everyone will be muted until Q&A sessions
- We will ask you to unmute yourself when called on for question

Zoom By Computer or App on Phone

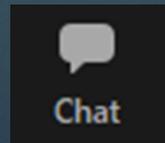
Ask Question Via Raising Hand

- Find the "Raise Hand" button on your screen
- Click on it and we will see it



Ask Question Via Chat

- Click on Chat button
- Type in question
- Press return
- Comments entered in Chat will be addressed during Q&A sessions.



By Phone Only

- Call 1-669-900-9128
- Enter meeting ID:
948 5172 7854 #
when prompted
- Please silence your phone



Questions & Comments

- *9 to raise hand
- We will ask you to unmute
 - *6 to mute / unmute

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Grower Workshops

AgNOI@waterboards.ca.gov
805-549-3148



Central Coast Water Board, July 2021

Logistics for Today

- 10-minute break midway
- Q&A at the end of each section
- Raise-hand feature
- Presentation will be posted on our website

Resources Available

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ILP website:

https://www.waterboards.ca.gov/centralcoast/water_issues/programs/ag_waivers/

- Compliance Calendar
- Frequently Asked Questions
- Technical Assistance Providers and Consultants
- Approved Third-Party Program Administrator:
Central Coast Water Quality Preservation, Inc. (Preservation, Inc.)
support@ccwqp.org
831-240-9533

General Inquiries:

AgNOI@waterboards.ca.gov

805-549-3148

Staff contacts:

https://www.waterboards.ca.gov/centralcoast/water_issues/programs/ag_waivers/docs/ilp_contacts.pdf



Summary of Today's Workshop

- Workshop Objectives
- Agricultural Water Quality Concerns
- Agricultural Order 4.0 Requirements Overview
- Tools and Resources
- Q&A
- Survey

Workshop Objectives

- Overview of Order Requirements
 - Individual
 - Third-Party
- Identify specific requirements due in the next three years



Agricultural Water Quality Concerns

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- Irrigation runoff and stormwater runoff
 - Infiltration to groundwater
 - Runoff to surface water bodies
- Groundwater impacts
 - Nitrate
 - 1,2,3-TCP
- Surface water impacts
 - Pesticides and toxicity
 - Nitrogen and other nutrients
 - Sediment

General Requirements

- Enroll
- Update eNOI
- Pay annual permit fees
- Continue water quality education
- Implement and assess effectiveness of management practices
 - Maintain and implement Farm Water Quality Management Plan (Farm Plan)
 - Submit Annual Compliance Form (ACF)



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Groundwater Protection Requirements

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- Third Party Alternative Compliance Pathway Program
- Fertilizer Nitrogen Application Targets and Limits
- Nitrogen Discharge to Groundwater Targets and Limits
- Monitoring and Reporting

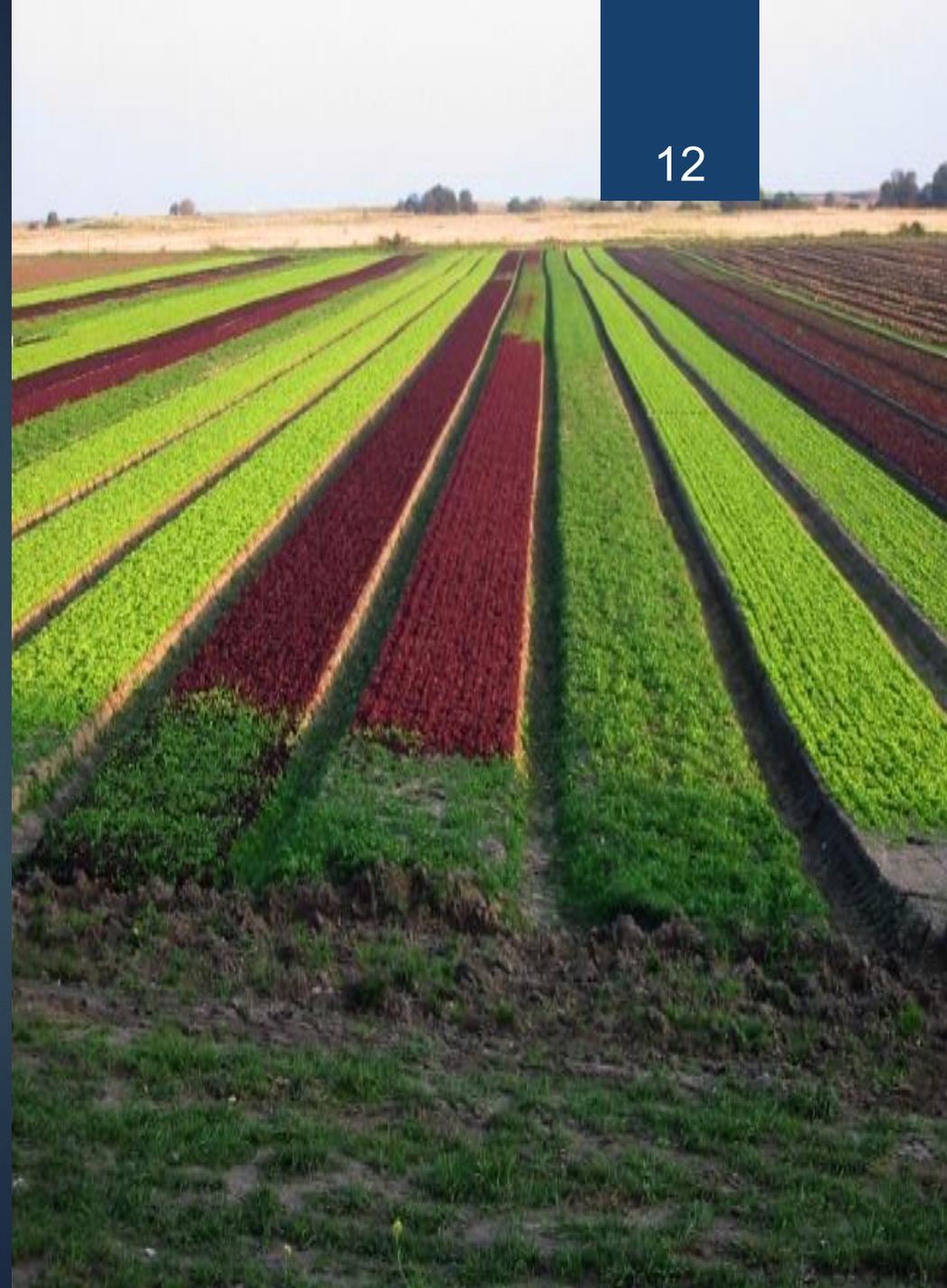
Third-Party Alternative Compliance Pathway Program

- 3P-ACP Program
- Targets instead of Limits
 - Fertilizer Nitrogen Application Targets
 - Nitrogen Discharge to Groundwater Targets
 - Groundwater Protection Area Targets
- More time to comply
- No ranch-level groundwater discharge monitoring



Fertilizer Nitrogen Application Targets and Limits

- 3P-ACP Program members have targets
- All other growers have limits
- Fertilizer Nitrogen Applied to Each Crop
 - Pounds Nitrogen/Crop Acre



Fertilizer Nitrogen Application Targets and Limits

Crop	2023 Limits	2025 Limits
	OR 2024 Targets 3P-ACP	OR 2026 Targets 3P-ACP
Lettuce	275	255
Broccoli	295	280
Spinach	245	230
Cauliflower	310	285
Celery	360	330
Strawberry	320	295
All Other Crops	500	480

(Pounds of Nitrogen/Crop-Acre)

Nitrogen Discharge to Groundwater Targets and Limits

- 3P-ACP Program members have targets
- All other growers have targets and limits
- Total of Nitrogen Discharge From All Crops Grown On Ranch Per Year (Pounds of Nitrogen/ Ranch-Acre)
- **(Nitrogen Applied) – (Nitrogen Removed) = Nitrogen Discharge**
 - Nitrogen Removal Coefficients
- Formulas



Nitrogen Discharge to Groundwater Targets and Limits

Compliance Pathway	Individual: 2023 Targets	Individual: 2025 Targets	Individual: 2027 Limits	Individual: 2051 Limits
A – R = N Discharge (A includes A_{IRR})	500	400	300	50
A = R (A does not include A_{IRR})	A=R	A=R	A=R	A=R
A – R = N Discharge (A does not include A_{IRR})	300	200	100	-150

Pounds Nitrogen/Ranch-Acre

Nitrogen Discharge to Groundwater Targets and Limits (continued)

Compliance Pathway	3P-ACP: 2024 Targets	3P-ACP: 2026 Targets	3P-ACP: 2028 Targets	3P-ACP: 2051 Targets
A – R = N Discharge (A includes A_{IRR})	500	400	300	Groundwater Protection Area Targets (To be developed by 3P-ACP, approved by EO)
A = R (A does not include A_{IRR})	A=R	A=R	A=R	
A – R = N Discharge (A does not include A_{IRR})	300	200	100	

Pounds Nitrogen/Ranch-Acre



Incentives for Reducing Nitrogen Discharge to Groundwater

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$$(\text{Nitrogen Applied}) - (\text{Nitrogen Removed}) = \text{Nitrogen Discharge}$$

- Nitrogen in irrigation water
- “Discounts” for reducing Nitrogen Applied
 - Organic Fertilizers
 - Compost
- “Credits” for increasing Nitrogen Removed
 - Cover Crops, High Carbon Amendments, Woody Mulch

Groundwater Protection Monitoring and Reporting

- Irrigation & Nutrient Management
- On-Farm Domestic Wells
- Irrigation Wells
- Groundwater Quality Trends
- Ranch-Level Groundwater Discharge



Groundwater Phase Areas

- Phasing In of Requirements using Groundwater Phase Areas
- Eventually, all growers must comply with all requirements
- Displayed on ranch eNOI

[RE-PRINT THIS FORM](#) [GROWER REQUIREMENTS](#) | [HELP / INSTRUCTIONS](#)

IRRIGATED LANDS REGULATORY PROGRAM - NOTICE OF INTENT - GENERAL RANCH INFO

NOTE: NAVIGATING AWAY FROM THIS FORM BEFORE CLICKING THE [ADD THIS RANCH](#) BUTTON MAY CAUSE YOU TO LOSE ALL ENTERED DATA

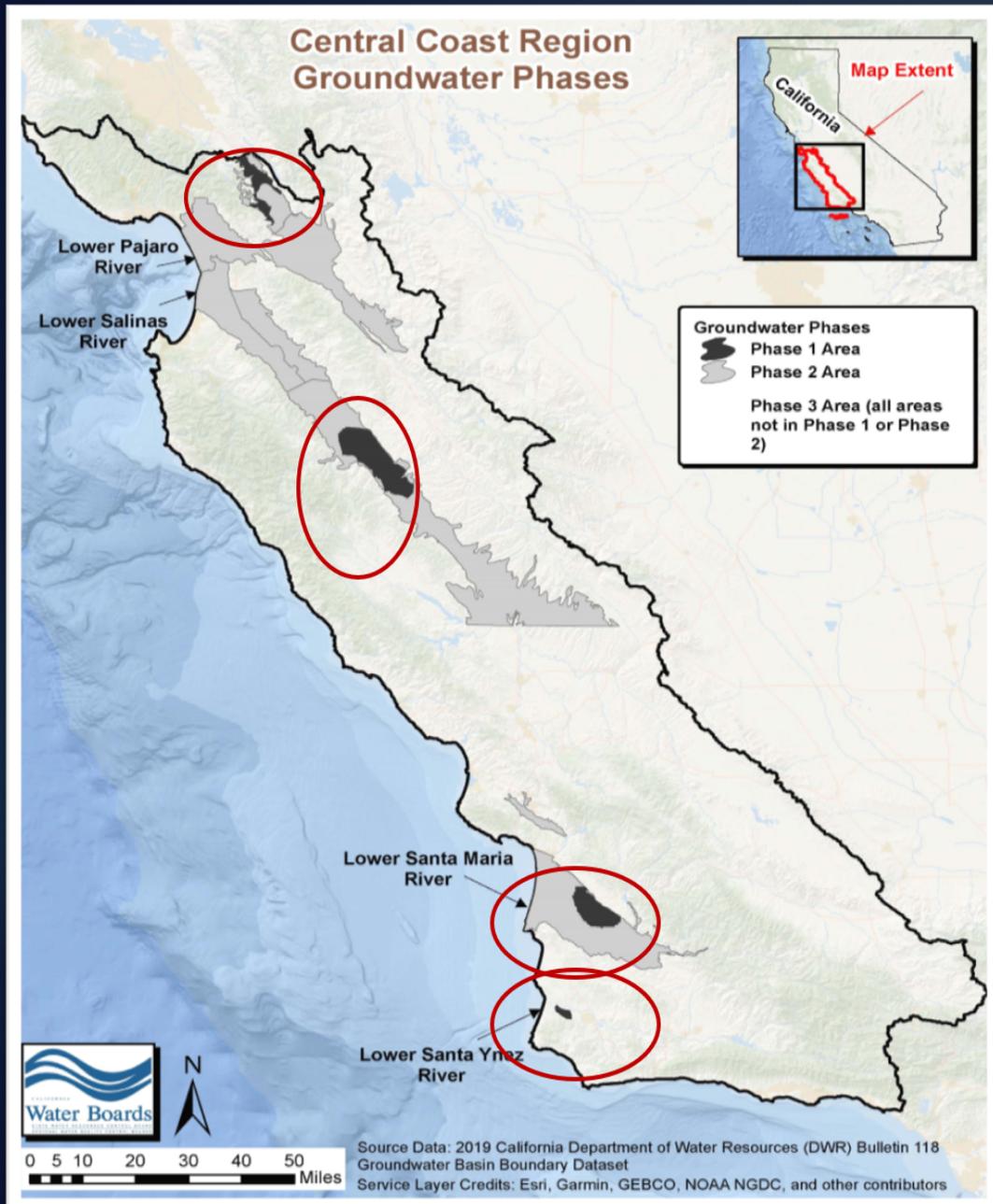
Name of Operation: **Test Operation (AW9999)** - [VIEW OPERATION FORM](#)

Ranch Name: (Global ID: AGL020027811)

GW Phase Area: 1
SW Priority Area: 1

Section VII: Ranch Status

Groundwater Phase Areas



Phase 1 Areas

- Portions of:
 - Llagas Subbasin of Gilroy-Hollister Valley Basin
 - Forebay and Upper Valley Subbasin
 - Santa Maria River Valley Subbasin
 - Santa Ynez River Valley Basin

Phase 2 Areas

- Basins/Subbasins in Phase 1 Areas (different portions)
- Corralitos – Pajaro Valley Subbasin
- Salinas Valley – 180/400 Foot Aquifer Subbasin
- Salinas Valley - East Side Aquifer Subbasin
- San Luis Obispo Valley Basin

Phase 3 Areas

- Remaining non-shaded areas

Irrigation and Nutrient Management Plan (INMP)

TNA Report

- Collect:
 - Nitrogen Applied to Each Crop
 - Fertilizers, Nitrogen in Irrigation Water
 - Irrigation Information (estimated)



INMP Summary Report

- Collect:
 - Nitrogen Applied to Each Crop
 - Fertilizers, Nitrogen in Irrigation Water
 - Irrigation Information (measured)
 - **Nitrogen Removed**

- ✓ This data is **reported** in the TNA Report and/or the INMP Summary Report
- ✓ This data is used to assess nutrient and irrigation management practices with the goal of achieving discharge targets and limits

Irrigation and Nutrient Management Plan – Phasing Timeline

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GW Phase 1 Areas

2023: Collect information for **INMP**
2024: Submit **INMP Summary Report**
[REPEAT ANNUALLY]

GW Phase 2 Areas

2023: Collect information for **TNA**
2024: Submit **TNA Report**
2024: Collect information for **TNA**
2025: Submit **TNA Report**
2025: Collect information for **INMP**
2026: Submit **INMP Summary Report**
[REPEAT ANNUALLY]

GW Phase 3 Areas

2023: Collect information for **TNA**
2024: Submit **TNA Report**
2024: Collect information for **TNA**
2025: Submit **TNA Report**
2025: Collect information for **TNA**
2026: Submit **TNA Report**
2026: Collect information for **TNA**
2027: Submit **TNA Report**
2027: Collect information for **INMP**
2028: Submit **INMP Summary Report**
[REPEAT ANNUALLY]



On-Farm Domestic Wells Monitoring and Reporting

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- Required of all ranches beginning 2022
- Annual sampling
 - March 1 - May 31
- Annual Reporting
 - By July 31
- Nitrate & 1,2,3-TCP
- Drinking water notifications

Primary Irrigation Well Monitoring and Reporting

- Required of all ranches beginning 2022
- Continue until groundwater quality trend monitoring begins
- Annual sampling
 - March 1 - May 31
- Annual Reporting
 - By July 31
- Nitrate & TDS





Groundwater Quality Trend Monitoring and Reporting

- Individual or Third-Party Option
- Develop Trend Monitoring Work Plan
 - Timeline per Groundwater Phase Area
 - Define Well Network
- Well Sampling & Reporting
 - Individual: Semi-annual basis
 - Third-Party Program: Per approved work plan
- Trend Evaluation Report

Groundwater Protection: Ranch-Level Groundwater Discharge

- May be required as a consequence
 - Significant and repeated exceedance of nitrogen discharge targets or limits
- Improve management practices
- May be discontinued after targets or limits are met
- Not required for members of the 3P-ACP

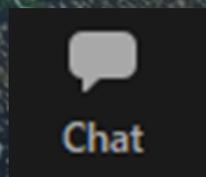


Groundwater Protection: Important Takeaways

- Third-Party Program assistance
- Phasing in of some requirements
- Fertilizer nitrogen application targets/limits
- Total nitrogen applied and removed
- Nitrogen discharge targets/limits
- On-farm well sampling
 - Domestic wells
 - Primary irrigation well
- Groundwater quality trend monitoring
- Ranch-level groundwater discharge monitoring

Q&A

Groundwater Protection



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Break 10 Minutes

After the break, surface water protection requirements.

Surface Water Protection: Requirements

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- Surface Receiving Water Limits
- Monitoring and Reporting



Surface Water Protection: Surface Receiving Water Quality Limits

- Nutrients, pesticides and toxicity, turbidity and sediment
- Timeline
 - First due 2032





Surface Water Protection: Monitoring and Reporting

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- Surface Receiving Water Quality Trends
- Follow-Up Surface Receiving Water Implementation
 - Priority Areas
- Ranch-Level Surface Discharge



Surface Water Protection: Receiving Water Quality Trends

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- Third-Party Program or Individual
 - Submit Work Plan
 - Conduct monitoring
 - Perform data analysis
 - Submit Annual Report

Surface Water Protection: Follow-Up Implementation

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- Third-Party Program or Individual
 - Submit Work Plan by Priority Area
 - Displayed on ranch eNOI
 - Conduct follow-up monitoring
 - Implement management practices and assess effectiveness
 - Achieve limits
 - Submit Annual Report

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[GROWER REQUIREMENTS](#) | [HELP / INSTRUCTIONS](#)

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Name of Operation: **Test Operation (AW9999) - [VIEW OPERATION FORM](#)**

Ranch Name:

Example 1

(Global ID: AGL020027811)

GW Phase Area: 1
SW Priority Area: 1

Section VII: Ranch Status



Surface Water Protection: Ranch-Level Surface Discharge

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- Third-Party Program or Individual
 - Edge-of-field monitoring
 - May be required as consequence
 - Submit Work Plan
 - May be discontinued after limits are met



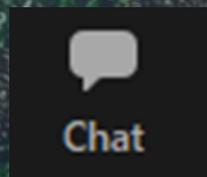
Surface Water Protection: Important Takeaways

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- Third-Party Program assistance
- Surface Receiving Water Quality Limits
- Surface Receiving Water Quality Trends
- Follow-up Surface Receiving Water Implementation
- Ranch-Level Surface Discharge

Q&A

Surface Water Protection



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Upcoming Requirements: The Next Three Years

Year 2021

Requirements

All ranches

- Update eNOI by September 13, 2021
- Pay permit fees

Ranches required to submit TNA under Ag Order 3.0

- Maintain records to submit TNA Report on March 1, 2022

Annual Requirements

All Ranches

- Pay permit fees
- Submit ACF: by March 1
- Sample on-farm domestic wells
 - Sample: March 1 - May 31
 - Report: by July 31

New Requirements

All Ranches

- Sample primary irrigation well (*until trend monitoring starts*)
 - Sample: March 1 - May 31
 - Report: by July 31
- Submit Surface Receiving Water Quality Trends Work Plan: by July 1

Ranches required to submit TNA under Ag Order 3.0

- Submit TNA Report for 2021: by March 1
- Maintain records to submit TNA Report on March 1, 2023

Year 2023

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New Requirements

All Ranches

- Sample primary irrigation well (*until trend monitoring starts*)
 - Sample: March 1 - May 31
 - Report: by July 31
- Comply with Fertilizer Nitrogen Application Limits (not a 3P-ACP member)
- Comply with Nitrogen Discharge Target (not a 3P-ACP member)

Ranches required to submit TNA under Ag Order 3.0

- Submit TNA Report for 2022: by March 1

Ranches in Groundwater Phase 2 and 3 Areas

- Maintain records to submit TNA Report on March 1, 2024

Ranches in Groundwater Phase 1 Areas

- Maintain records to submit INMP Summary Report on March 1, 2024
- Submit Groundwater Trend Monitoring Work Plan: by September 1

Ranches in Surface Water Priority Area 1

- Submit Follow-Up Implementation Work Plan: by March 1

New Requirements

All Ranches

- Sample primary irrigation well (*until trend monitoring starts*)
 - Sample: March 1 - May 31
 - Report: by July 31
- Comply with Fertilizer Nitrogen Application Limits (not a 3P-ACP member)
- Comply with Fertilizer Nitrogen Application Targets (a 3P-ACP member)
- Comply with Nitrogen Discharge Target

Ranches in Groundwater Phase 1 Areas

- Submit INMP Summary Report: by March 1
- Maintain records to submit INMP Summary Report on March 1, 2025

Ranches in Groundwater Phases 2 and 3 Areas

- Submit TNA Report for 2023: by March 1
- Maintain records to submit TNA Report on March 1, 2025

Ranches in Surface Water Priority Area 2 and High Priority Areas

- Submit Follow-Up Implementation Work Plan: by March 1

Resources

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General Inquiries:

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Resources In Development

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- Drinking Water Notification template
- Individual groundwater trend monitoring work plan template and instructions
- Reporting instructions: ACF, TNA, INMP Summary
- Nitrogen Removal Coefficients
 - Crop Specific (CDFA)
 - Protocols for growers to develop their own (CDFA/UCCE)

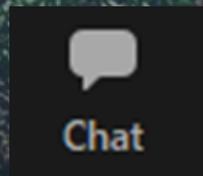
Future Workshops

- Third-Party Program Information
- TNA Report
- INMP Summary Report
- Information for Technical Assistance Providers
- Based on grower input



Q&A

Upcoming Requirements



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Quick Survey

AGNOI@WATERBOARDS.CA.GOV

We look forward to hearing from you!

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(805) 549-3148

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- Monica Barricarte, Sarah Bragg-Flavan, Jillian Flavin, Lauren Gordon, Jamie Pratt, Jacqueline Tkac

Thank you

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