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

Questions & Comments
• *9 to raise hand
• We will ask you to unmute
  • *6 to mute / unmute
Agricultural Order 4.0

Introduction

Irrigated Lands Program
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

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

- 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)
Groundwater Protection Requirements

- 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

<table>
<thead>
<tr>
<th>Crop</th>
<th>2023 Limits OR 2024 Targets 3P-ACP</th>
<th>2025 Limits OR 2026 Targets 3P-ACP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lettuce</td>
<td>275</td>
<td>255</td>
</tr>
<tr>
<td>Broccoli</td>
<td>295</td>
<td>280</td>
</tr>
<tr>
<td>Spinach</td>
<td>245</td>
<td>230</td>
</tr>
<tr>
<td>Cauliflower</td>
<td>310</td>
<td>285</td>
</tr>
<tr>
<td>Celery</td>
<td>360</td>
<td>330</td>
</tr>
<tr>
<td>Strawberry</td>
<td>320</td>
<td>295</td>
</tr>
<tr>
<td>All Other Crops</td>
<td>500</td>
<td>480</td>
</tr>
</tbody>
</table>

(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

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>A – R = N Discharge (A includes $A_{IRR}$)</td>
<td>500</td>
<td>400</td>
<td>300</td>
<td>50</td>
</tr>
<tr>
<td>A = R (A does not include $A_{IRR}$)</td>
<td>A=R</td>
<td>A=R</td>
<td>A=R</td>
<td>A=R</td>
</tr>
<tr>
<td>A – R = N Discharge (A does not include $A_{IRR}$)</td>
<td>300</td>
<td>200</td>
<td>100</td>
<td>-150</td>
</tr>
</tbody>
</table>

Pounds Nitrogen/Ranch-Acre
<table>
<thead>
<tr>
<th>Compliance Pathway</th>
<th>3P-ACP: 2024 Targets</th>
<th>3P-ACP: 2026 Targets</th>
<th>3P-ACP: 2028 Targets</th>
<th>3P-ACP: 2051 Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>A – R = N Discharge</td>
<td>500</td>
<td>400</td>
<td>300</td>
<td>Groundwater Protection Area Targets</td>
</tr>
<tr>
<td>(A includes $A_{\text{IRR}}$)</td>
<td>A=R</td>
<td>A=R</td>
<td>A=R</td>
<td>(To be developed by 3P-ACP, approved by EO)</td>
</tr>
<tr>
<td>A = R</td>
<td>A=R</td>
<td>A=R</td>
<td>A=R</td>
<td></td>
</tr>
<tr>
<td>(A does not include $A_{\text{IRR}}$)</td>
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</table>
Incentives for Reducing Nitrogen Discharge to Groundwater

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

- 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
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

<table>
<thead>
<tr>
<th>GW Phase 1 Areas</th>
<th>GW Phase 2 Areas</th>
<th>GW Phase 3 Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2023</strong>: Collect information for <strong>INMP</strong></td>
<td><strong>2023</strong>: Collect information for <strong>TNA</strong></td>
<td><strong>2023</strong>: Collect information for <strong>TNA</strong></td>
</tr>
<tr>
<td><strong>2024</strong>: Submit <strong>INMP Summary Report</strong></td>
<td><strong>2024</strong>: Submit <strong>TNA Report</strong></td>
<td><strong>2024</strong>: Submit <strong>TNA Report</strong></td>
</tr>
<tr>
<td>[REPEAT ANNUALLY]</td>
<td><strong>2024</strong>: Collect information for <strong>TNA</strong></td>
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<td><strong>2025</strong>: Submit <strong>TNA Report</strong></td>
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<tr>
<td></td>
<td><strong>2026</strong>: Submit <strong>INMP Summary Report</strong></td>
<td><strong>2026</strong>: Submit <strong>TNA Report</strong></td>
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<td></td>
<td>[REPEAT ANNUALLY]</td>
<td><strong>2026</strong>: Collect information for <strong>TNA</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>2027</strong>: Submit <strong>TNA Report</strong></td>
</tr>
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<td></td>
<td></td>
<td><strong>2027</strong>: Collect information for <strong>INMP</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>2028</strong>: Submit <strong>INMP Summary Report</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>[REPEAT ANNUALLY]</td>
</tr>
</tbody>
</table>
On-Farm Domestic Wells Monitoring and Reporting

- 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
Break
10 Minutes

After the break, surface water protection requirements.
Surface Water Protection: Requirements

- 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

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

- Third-Party Program or Individual
  - Submit Work Plan
  - Conduct monitoring
  - Perform data analysis
  - Submit Annual Report
Surface Water Protection: Follow-Up Implementation

- 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
Surface Water Protection: Ranch-Level Surface Discharge

- 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

- 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
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
Year 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

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
Year 2024

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

ILP website:
https://www.waterboards.ca.gov/centralcoast/water_issues/programs/ag_waivers/
  • Compliance Calendar
  • Frequently Asked Questions
  • Technical Assistance Providers and Consultants
  • Staff contacts:
    https://www.waterboards.ca.gov/centralcoast/water_issues/programs/ag_waivers/docs/ilp_contacts.pdf
  • Approved Third-Party Program Administrator:
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    support@ccwqp.org
    831-240-9533

General Inquiries:
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805-549-3148
Resources In Development

- 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
Quick Survey
AGNOI@WATERBOARDS.CA.GOV
We look forward to hearing from you!

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

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

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