

2023 INMP Reporting Central Coast Nursery Growers

Santa Cruz Fairgrounds
October 15, 2024

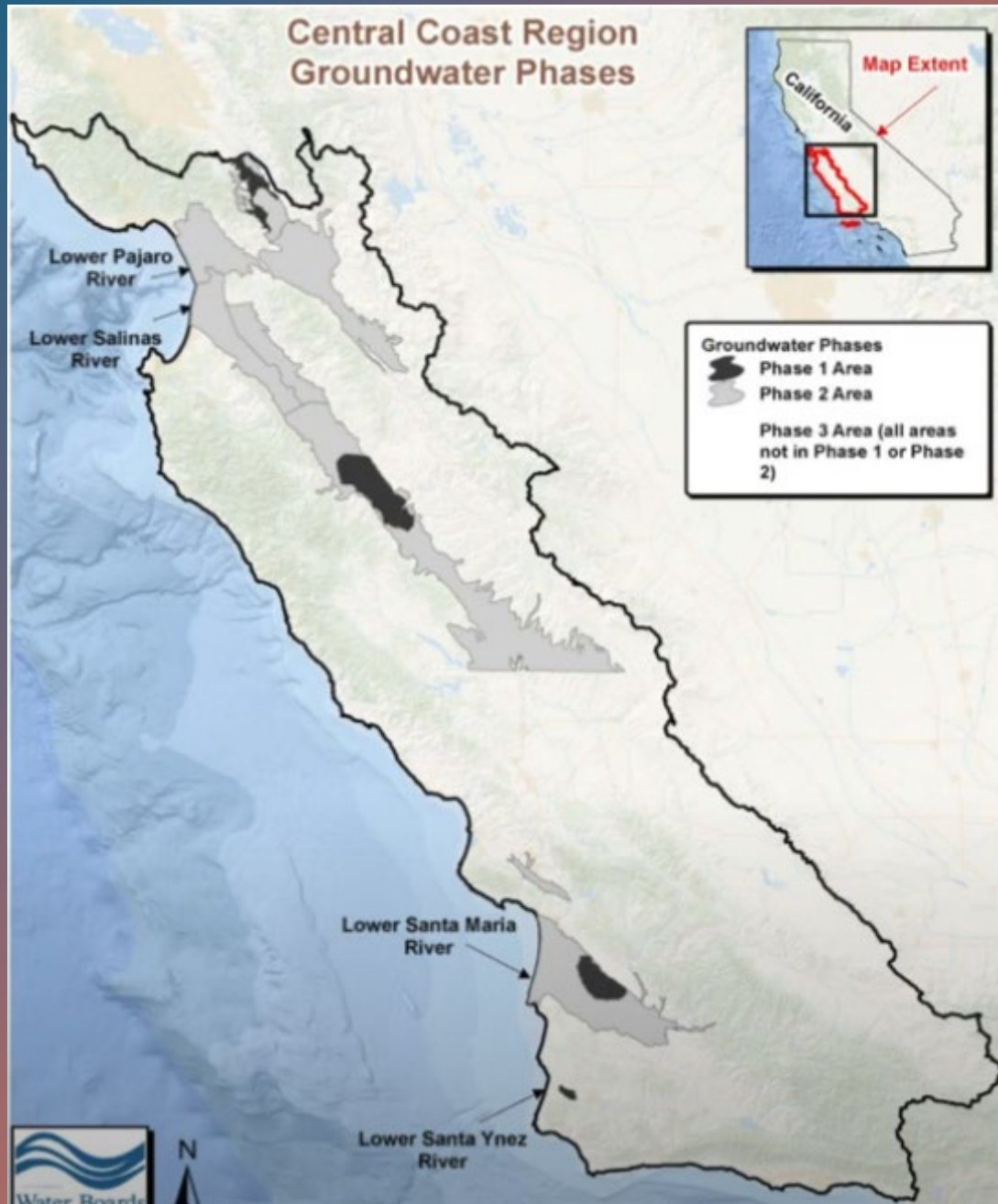
Overview

- Introduction and background
- “Phase 1” reporting areas
- N Discharge Targets – (Applied – Removed)
- 2023 INMP results – Nursery ranch summary
- A perspective of future INMP reporting – Phase 2 and beyond
- Questions



Central Coast Water
Quality Preservation, Inc.

www.ccwqp.org



Groundwater Phase 1 Areas

Phase 1 areas exhibit high recharge rates based on the occurrence of vulnerable soils and contain young groundwater of less than 20 yrs. (Also have close proximity to major recharge sources, which influences age.)

Phase 1 = Portions of Central Coast GW Basins:

- Llagas subbasin - Gilroy-Hollister Valley Basin
- Forebay and Upper Valley Basin – SV Basin
- Santa Maria River Valley Subbasin
- Santa Ynez River Valley Basin

Phase-In of Other GW Basins/Areas:

- Phase 2 Areas – Report INMP beginning 2025
- Phase 3 Areas – Report INMP beginning 2027

INMP Reporting for Preservation, Inc. Members

- More than 95% of Central Coast growers are Preservation, Inc. members
 - The other ~5% are not actively complying as individuals
- Phone, Zoom, and in-person support sessions to complete your report
- Fall workshops in Salinas and Santa Maria
 - Updates and tutorials on TNA and INMP reporting
 - Updates on surface water and well sampling programs
- January/February workshops held jointly with Water Board staff
- Web-based “EZ Forms” for both TNA and INMP
 - For ranches with only one or a few crops
- Excel-based form can interface with your database, and allows cut-and-paste of data for large numbers of crops and ranches on a single report
 - For next year’s report, just open up last year’s spreadsheet and update what has changed

Targets – Total Nitrogen Applied



Table C.2-1. Compliance Dates for Fertilizer Nitrogen Application Targets (Alternative Compliance Pathway)

Crop	90 th Percentile AFER =	Compliance Date	85 th Percentile AFER =	Compliance Date
Broccoli	295	12/31/2024	280	12/31/2026
Cauliflower	310		285	
Celery	360		330	
Lettuce	275		255	
Spinach	245		230	
Strawberry	320		295	
All Other Crops	500		480	

- State Water Board “Remand” of Ag Order 4.0 removes “Limits” (i.e. maximally enforceable numbers) until an Expert Panel can be convened, but “Targets” remain of-interest for education and management.
- *All Central Coast ranches* are now reporting at least TNA (and some INMP)

Targets for INMP Reports (“A-R”)



Table C.2-2. Compliance Dates for Nitrogen Discharge Targets (Alternative Compliance Pathway)

	Target	Compliance Date
Compliance Pathway 1	500	12/31/2024
$A_{FER} + (C \times A_{COMP}) + (O \times A_{ORG}) + A_{IRR} - R =$	400	12/31/2026
	300	12/31/2028

A_{fer} = Pounds of N applied in synthetic fertilizers

A_{irr} = Pounds of N applied in irrigation water

C x A_{comp} = Adjusted (reduced) pounds of N applied in composts

O x A_{org} = Adjusted (reduced) pounds of N applied in organic fertilizers

R = Pounds of N removed via all pathways (mainly at harvest/sale)

- State Water Board “Remand” of Ag Order 4.0 removes “Limits” (i.e. maximally enforceable numbers) until an Expert Panel can be convened, but “Targets” remain of-interest for education and management.
- Preservation, Inc. contacts all growers with reports over 400 and 500, and will begin reaching out to growers with reports over 300.

Multiple “Compliance Pathways” in Ag Order 4.0

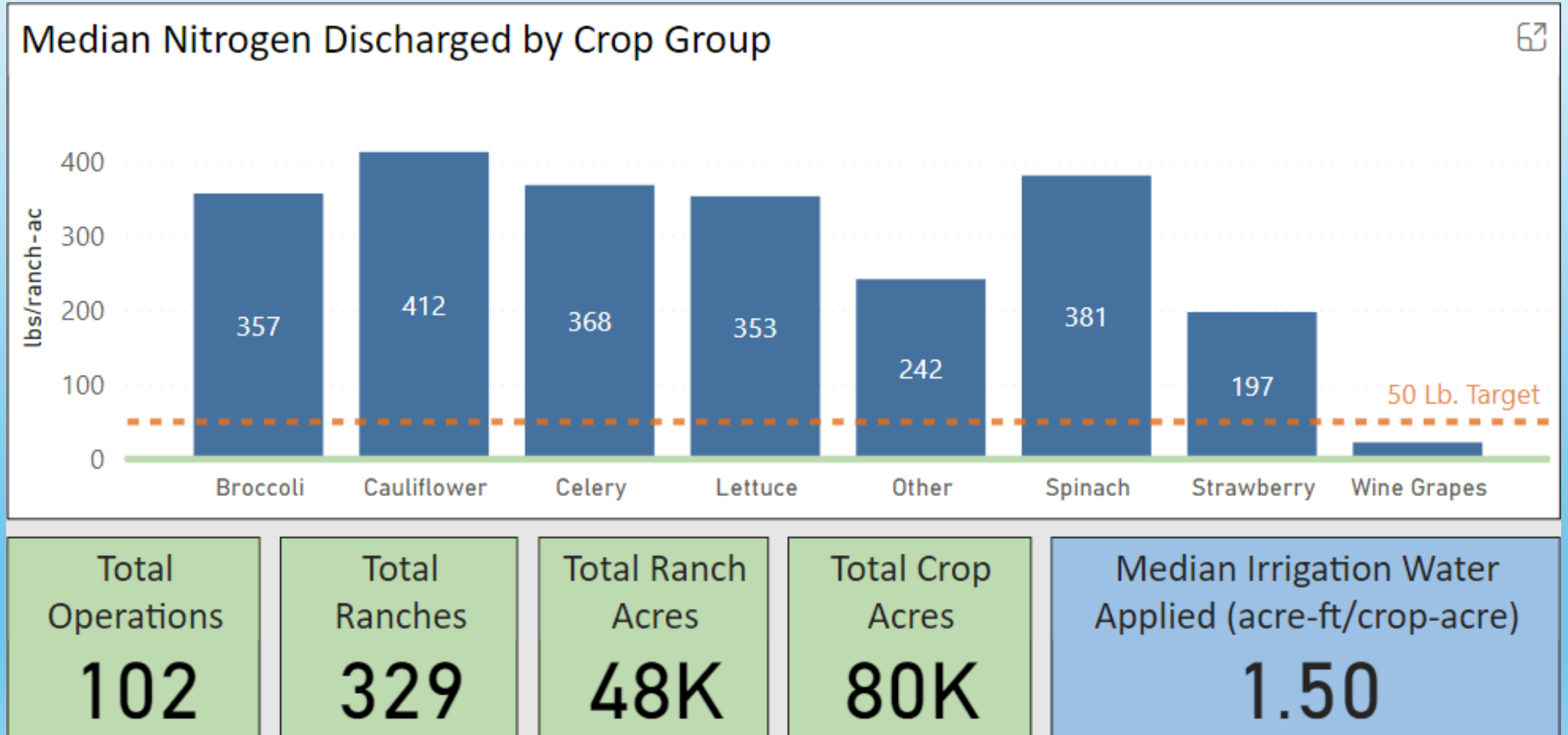


3P-ACP: 2024 Targets	Compliance Pathway	Individual: 2023 Targets
500	A – R = N Discharge (A includes A_{IRR})	500
A=R	A = R (A does not include A_{IRR})	A=R
300	A – R = N Discharge (A does not include A_{IRR})	300

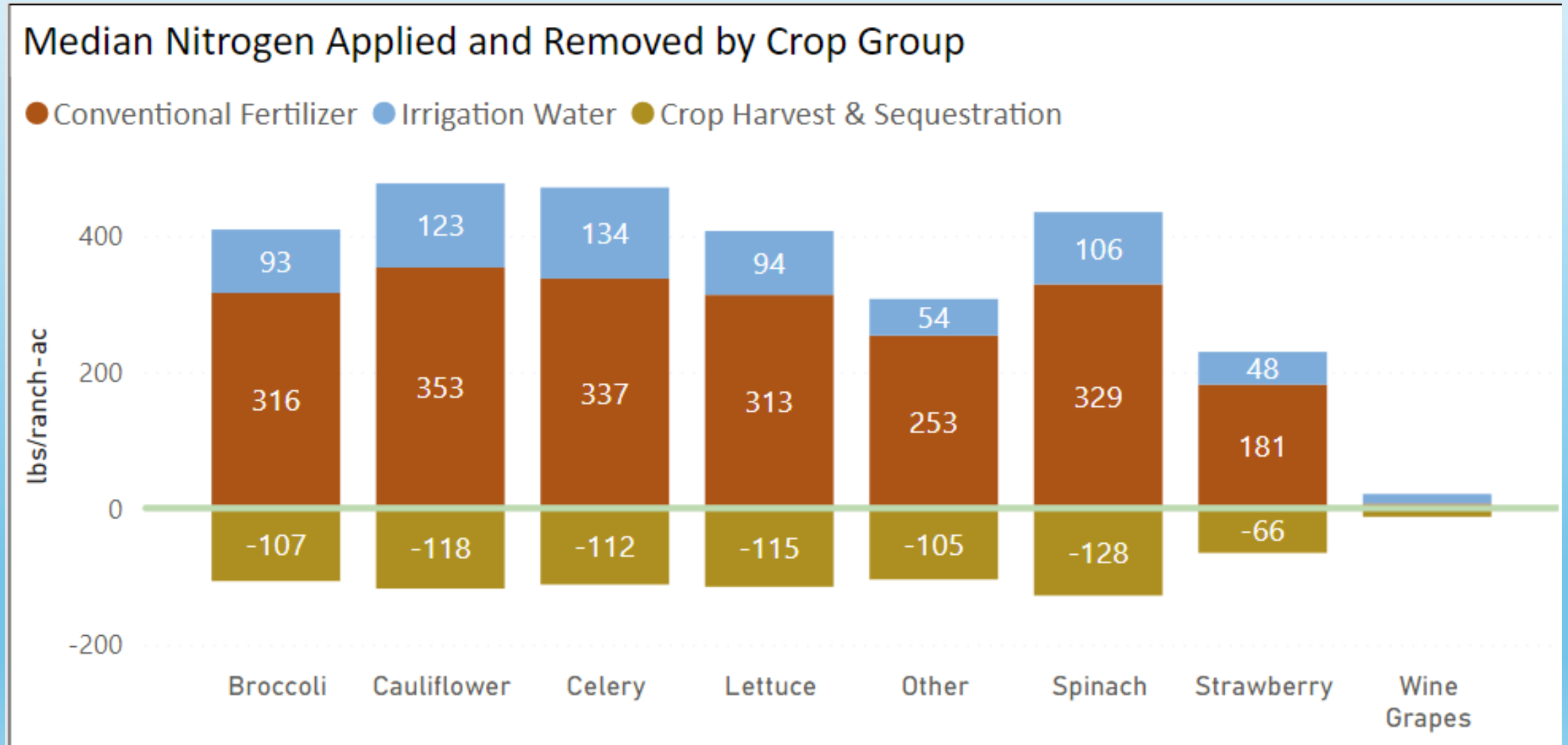
- State Water Board “Remand” of Ag Order 4.0 removes 2nd and 3rd pathways until an Expert Panel can be convened, but alternatives remain of-interest for management and discussion.

2023 INMP SUMMARY FOR ALL CROPS

(Phase 1 Area Reporting Ranches)

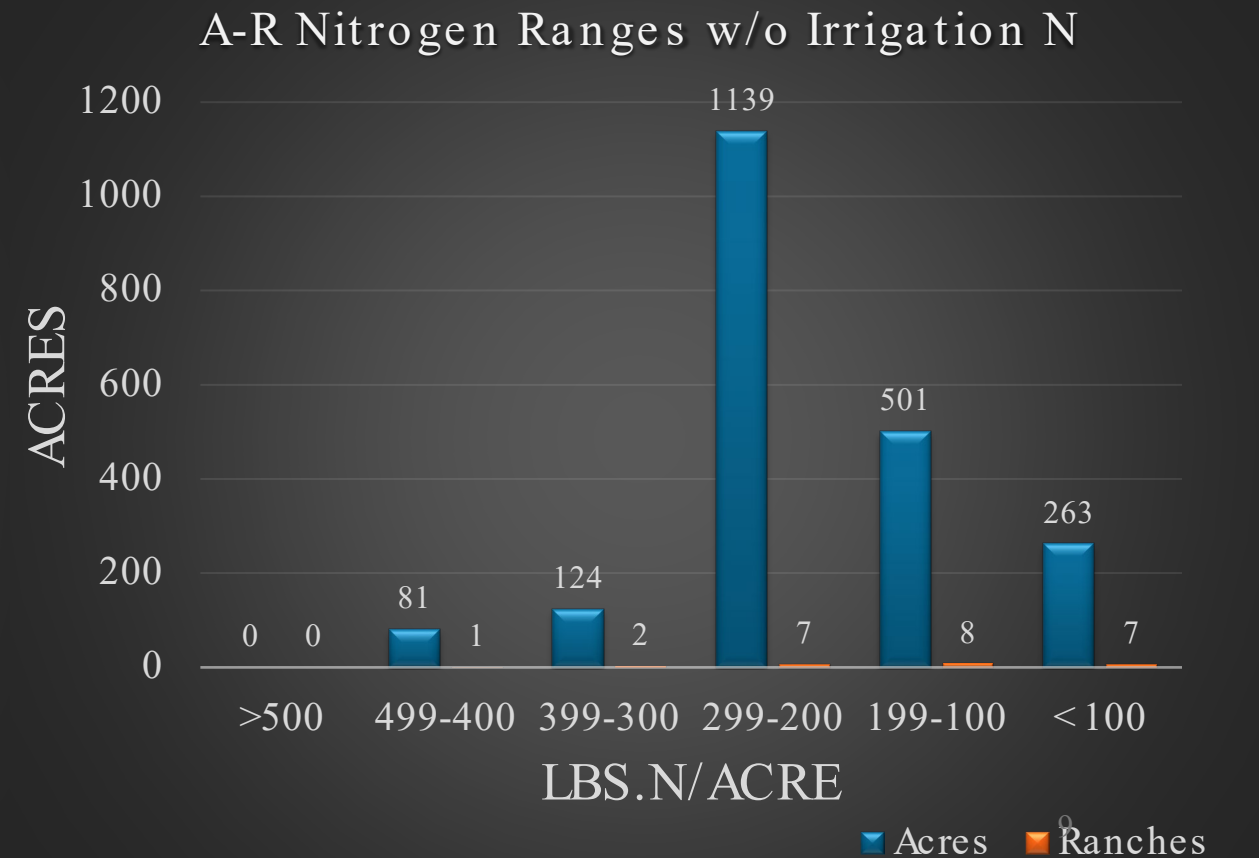
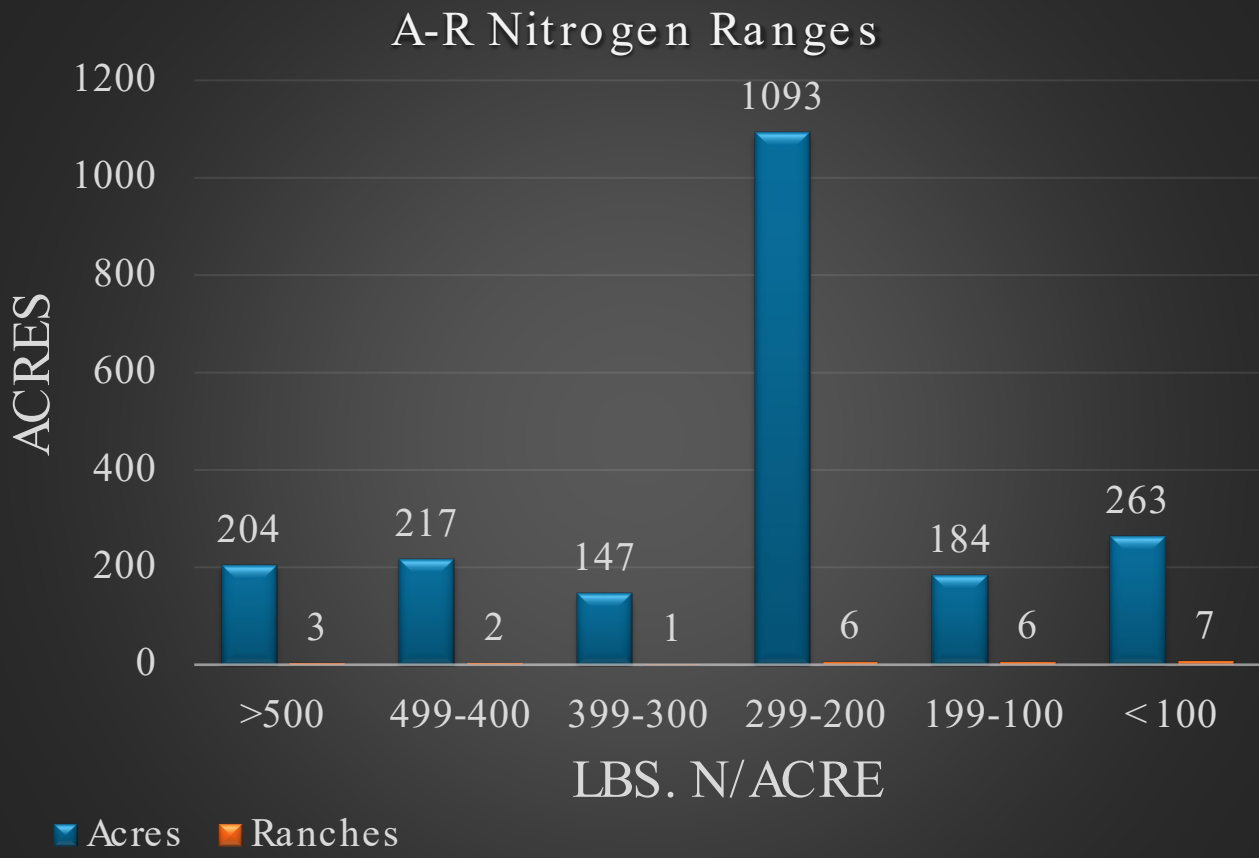


2023 INMP SUMMARY FOR ALL CROPS (Phase 1 Area Reporting Ranches)

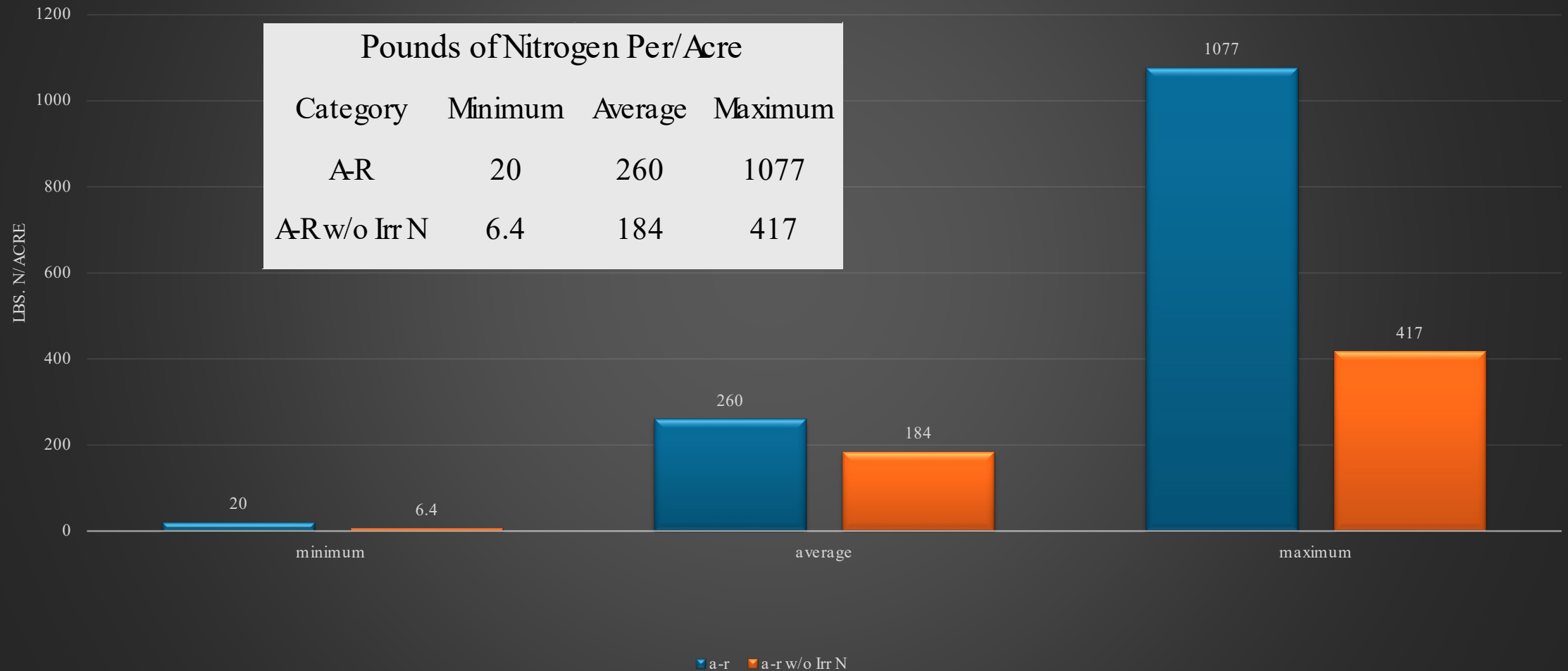


2023 INMP SUMMARY FOR NURSERY-CROP RANCHES

A-R Nitrogen Ranges			A-R Nitrogen Ranges w/o Irrigation N			Difference w/o Irrigation N		
Lbs. N/Acre	Acres	Ranches	Lbs. N/Acre	Acres	Ranches	Lbs. N/Acre	Acres	Ranches
>500	204	3	>500	0	0	>500	-204	-3
499-400	217	2	499-400	81	1	499-400	-136	-1
399-300	147	1	399-300	124	2	399-300	-23	1
299-200	1093	6	299-200	1139	7	299-200	46	1
199-100	184	6	199-100	501	8	199-100	317	2
< 100	263	7	< 100	263	7	< 100	0	0
	2108	25		2108	25			



“A-R” Summary Stats With & Without “A_{irr}” (N in Irrigation Water)



$$A-R = A_{fer} + A_{comp_adj} + A_{org_adj} + A_{irr} - R_{harv} - R_{seq} - R_{treat} - R_{other} \text{ (R}_{scavenge} \text{ not currently calculated)}$$

Perspectives on Future INMP Reporting

- CCWQP continues to engage, educate and provide tools and workshops for our membership to improve INMP reporting.
- CCWQP routinely interacts with the RWQCB to share knowledge, learnings and ideas to improve the content and instructions for the INMP process and forms.

2023 INMP Phase 1		Future INMP Phase 2 & 3		Future % Increase	
# Ranches	Crop Acres	# Ranches	Crop Acres	# Ranches	Crop Acres
25	4054	239	30322	89.5%	86.6%
Overall 2023 INMP reporting accuracy has room for improvement					

Nitrogen Discharge to Groundwater Targets			
Compliance Pathway	3P-ACP; 2026 Targets	3P-ACP; 2028 Targets	3P-ACP; 2051 Targets
A-R = N Discharge (A includes A _{irr})	400	300	Groundwater Protection Area Targets (To be developed by 3P-ACP, approved by RWQCB EO)
A = R (A does not include A _{irr})	A = R	A = R	
A-R = N Discharge (A does not include A _{irr})	300	200	





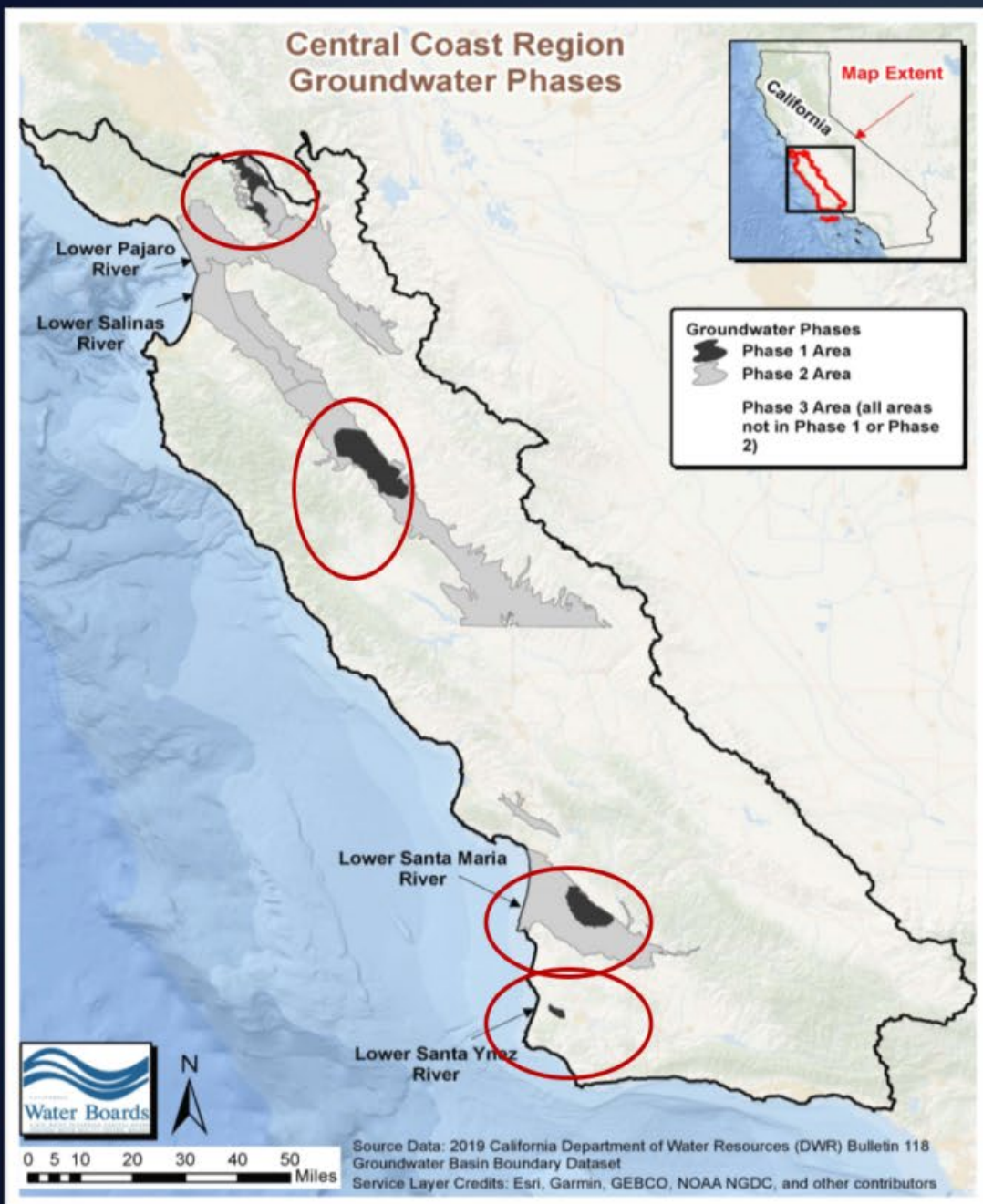
QUESTIONS ?



Central Coast Water
Quality Preservation, Inc.

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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