Central Coast Water Quality Preservation, Inc.

Ag Order & Third Party Monitoring Updates

CENTRAL COAST WATER QUALITY PRESERVATION, INC.

831-761-8644

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support@ccwqp.org

Salinas, CA

December 10, 2024

OUTLINE

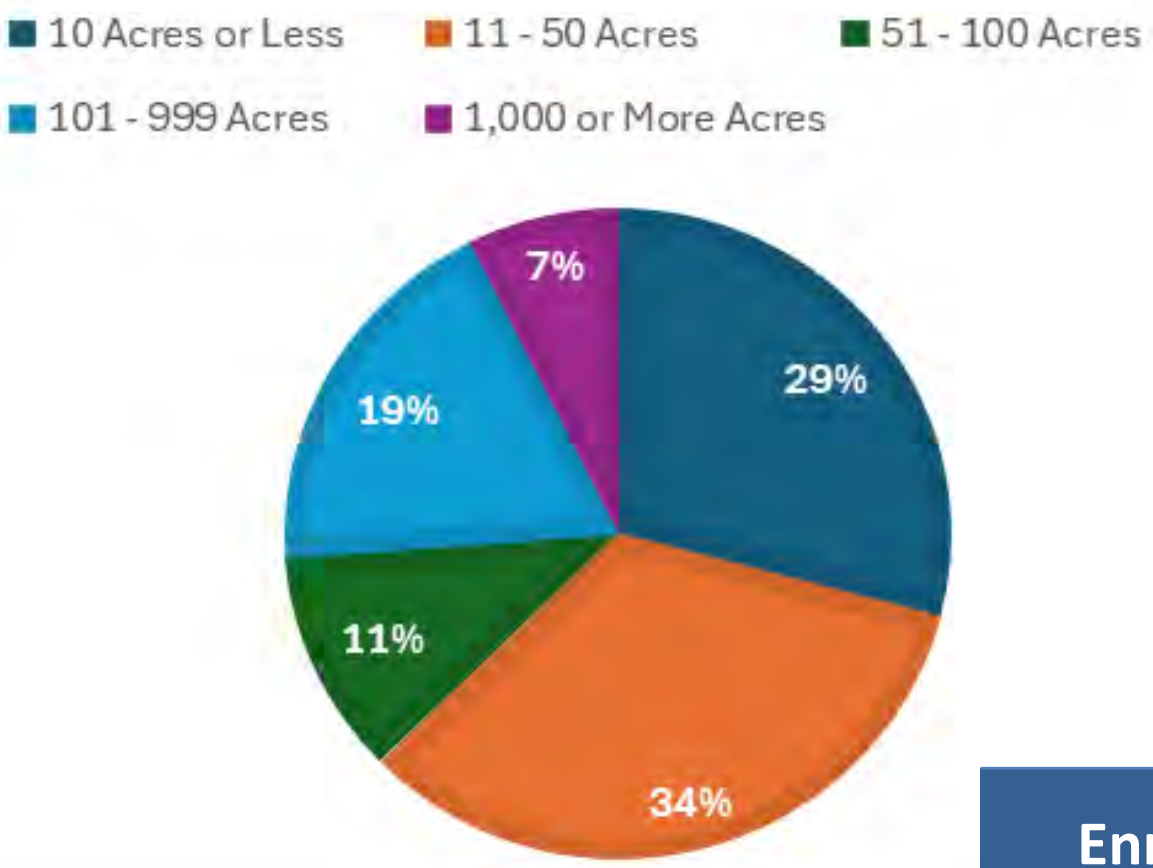
- Third Party Membership & Support
- 2025 Compliance Requirements
- Surface Water Status & Trends
- Surface Water Follow-Up
- Well Sampling/Groundwater Updates
- TNA/INMP Reporting Results

Third Party Membership

- Veg./Berry (76%)
- Orchard (4%)
- Vineyard (19%)
- Nursery/ Greenhouse (1%)

Third Party Membership – Current Enrollment

Enrollment by Operation Size



Enrollment Statistic	Current	2023
Number of Operations	1,469	1,484
Number of Ranches	3,990	4,062
Irrigated Acres	408,273	413,691
Acres with Tailwater	55,047	55,216

Third Party Membership Requirements

Pay annual Third-Party Participation & Group-Rate State Fee invoice

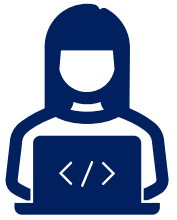
- All prior year invoices must be paid

Individually-applicable requirements must be met each year to be eligible for next-year membership

- TNA or INMP report
- Well sampling & domestic well notifications
- Surface Water Follow-Up – Third Party participant or Individual Work Plan

New/recent enrollments receive automatic membership until they've had a chance to comply

Member Support



- Notices around major reporting deadlines
  - “Heads up,” “Past due reminder,” and “Final Notice”
- Range of support options
  - Zoom, phone calls, in-person appointments, emails, CCWQP.org
  - Referrals to Water Board ILP staff when needed
- Keeping contact information current in GeoTracker
- Support in Spanish
- Collaboration with ILP staff & UC Cooperative Extension to support growers who speak only Chinese
- Website with Third Party content & links to ILP web content

Contact Info

ENGLISH

Phone: 831-761-8644
(Leave a message; the line is often busy!)
Support: Support@ccwqp.org
Invoices: Office@ccwqp.org
Web: www.ccwqp.org

ESPAÑOL

Telefono: 831-761-8644
(Deja un mensaje y te llamaremos)

Email: Support@ccwqp.org

Web: www.ccwqp.org

← haz clic para español

General Requirements That Always Apply

- All growers must enroll through and keep current their eNOI accounts on GeoTracker (Water Board and Pres, Inc. requirement)
- Requirements that apply at the Operation or Ranch level (e.g. well sampling, TNA, Annual Compliance Form, etc) must be met
- Every ranch needs a Farm Plan, and the management practices in that plan must be implemented to protect/improve water quality

Same Plan, New Name – The “SEMP”

- Farm Plan has always required a section on sediment/erosion mgmt
- Under Ag Order 4.0, this section is called a “SEMP”

  - Sediment & Erosion Management Plan

- If you have a Farm Plan with a sediment section, you have a SEMP!
- SEMP is a major focus of Complaint response
- SEMP is a major focus of Follow-Up related to stormwater

Increased Accountability under Ag Order 4.0

- Notices of Violation for TNA non-filers and failure to sample wells
- Formal enforcement (fines ~$40,000-$50,000) for operations that do not respond to NOV's or take corrective actions
- Individual State Water Board Fee invoices (for growers who do not maintain Third Party membership) can no longer be appealed
- Operations that do not show good-faith effort to comply with specific requirements lose Third Party eligibility ← *requested by growers*

2025 Compliance Dates

- December 15th (2024): Last day to pay 2025 Participation & State Fee invoice if you are not changing acreage/ranches
- January 9th: Last day to update acreage/ranches for fee purposes
- March 1st: Last day to submit TNA or INMP report on 2024 crops
- March 1st: Last day to submit Annual Compliance Form (ACF)
- March 1st – May 31st: Well sampling must be completed
    - Drinking Water notifications & eNOI update w/in 3 days of receiving results

Other 2025 Compliance Activities

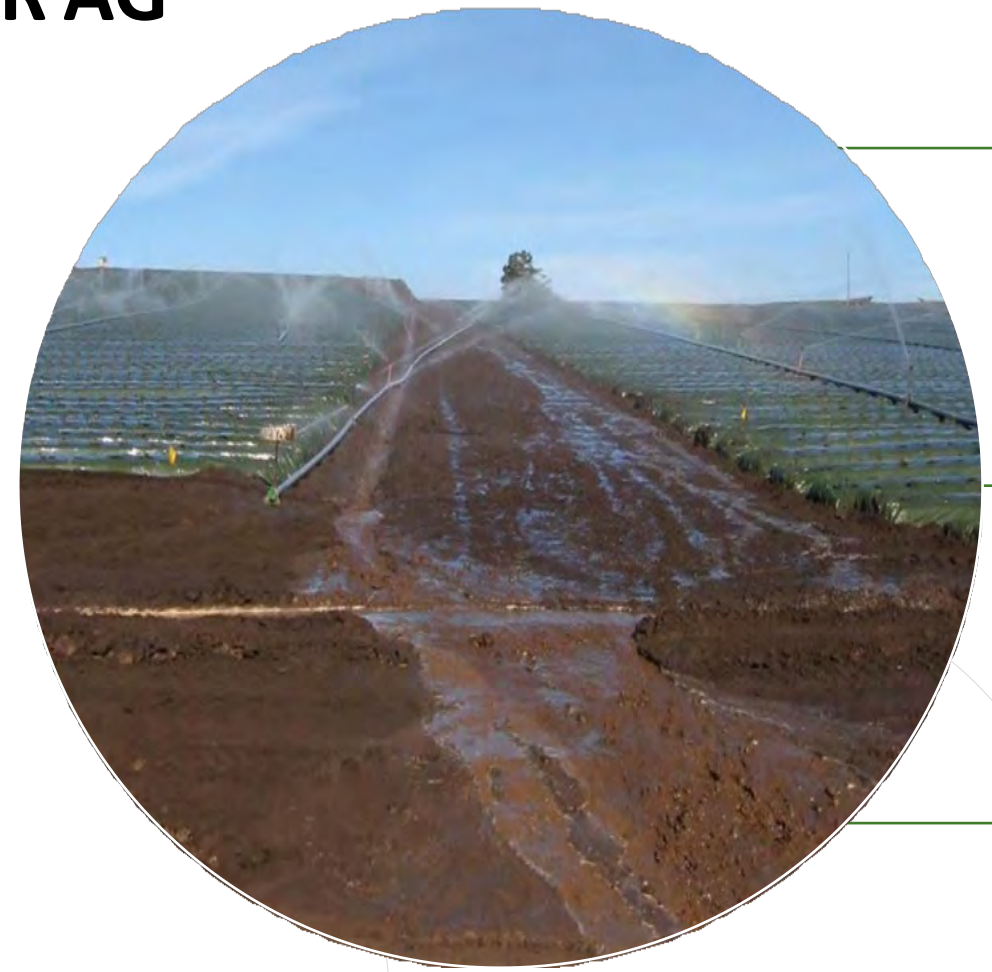
- Surface Water Follow-Up is now mandatory. Requirements:
    - Participate in ranch visit(s) if you haven't already
        - 100% cooperation thus far; over 300 ranch visits
    - Adjust (or implement new) management practices as needed to effectively address nitrate, sediment, or pesticides in runoff
- "High" TNA or INMP reporting results require follow-up
    - Participate in phone interview when contacted to validate calcs; discuss reasons for high-N; options to reduce

Surface Water Trend Monitoring

CMP MONITORING DESIGN

- 50 original sites, increased to 55 in 2012
- Monthly monitoring (all sites, every year) for:
  - Nutrients
  - Basic chem (pH, conductivity, D.O.)
  - Turbidity
  - Stream Flow
- Quarterly monitoring (all sites, every year) for:
  - Toxicity to Algae in Water
  - Toxicity to Invertebrates (*C. dubia* & *Chironomus*) in water
  - 3rd Invertebrate (*Hyalella*) assessed 1-2x annually in sediment
- Periodic monitoring (all sites, 4x in study years) for:
  - Insecticides (e.g. Pyrethroids, Neonicotinoids), Herbicides, Metals

DIRECT SURFACE WATER CONCERNS FOR AG



Eroded soils

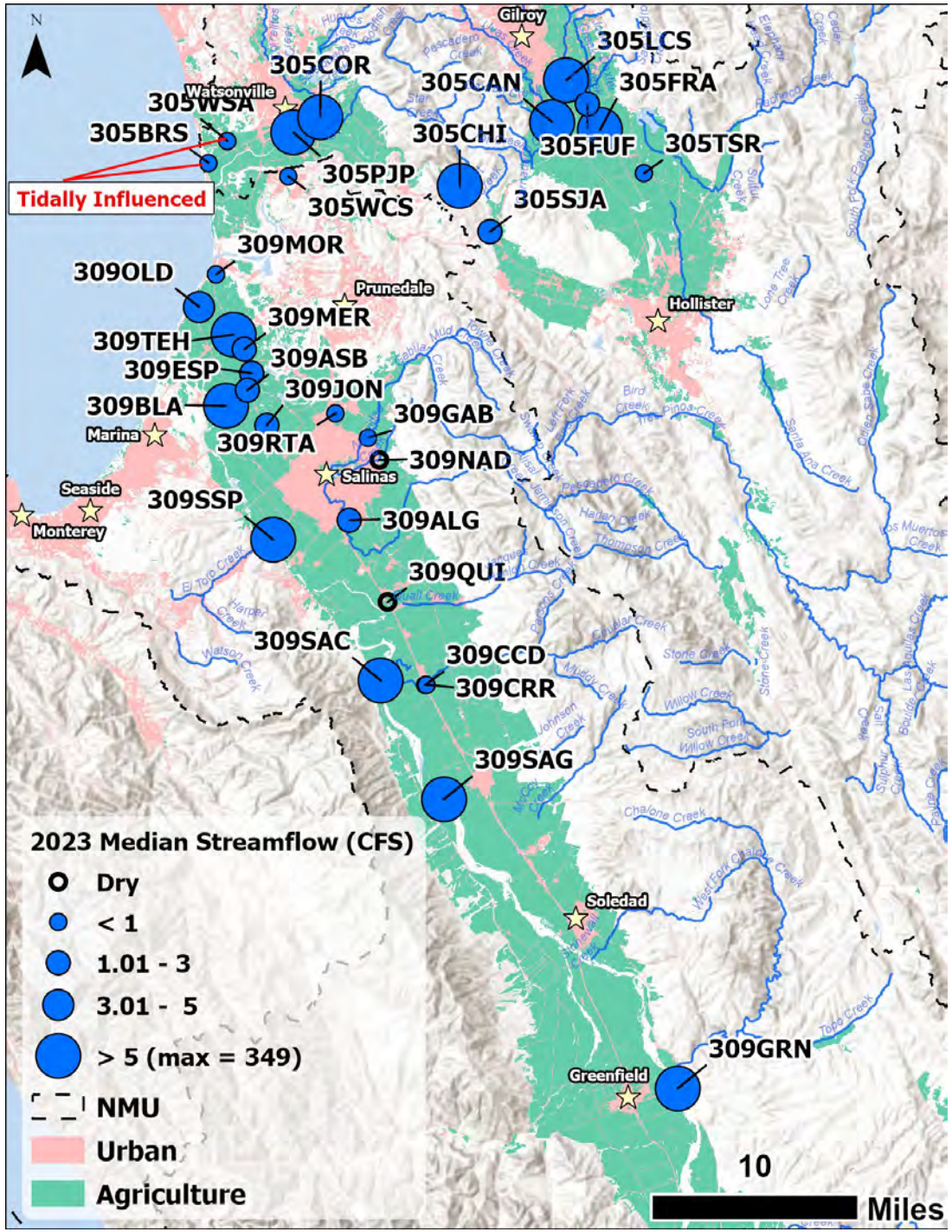
(Turbidity)

Fertilizers &
soil amendments

(Nitrate, Phosphate)

Pest control
products

(OP's, Pyrethroids, Neonics, Herbicides)



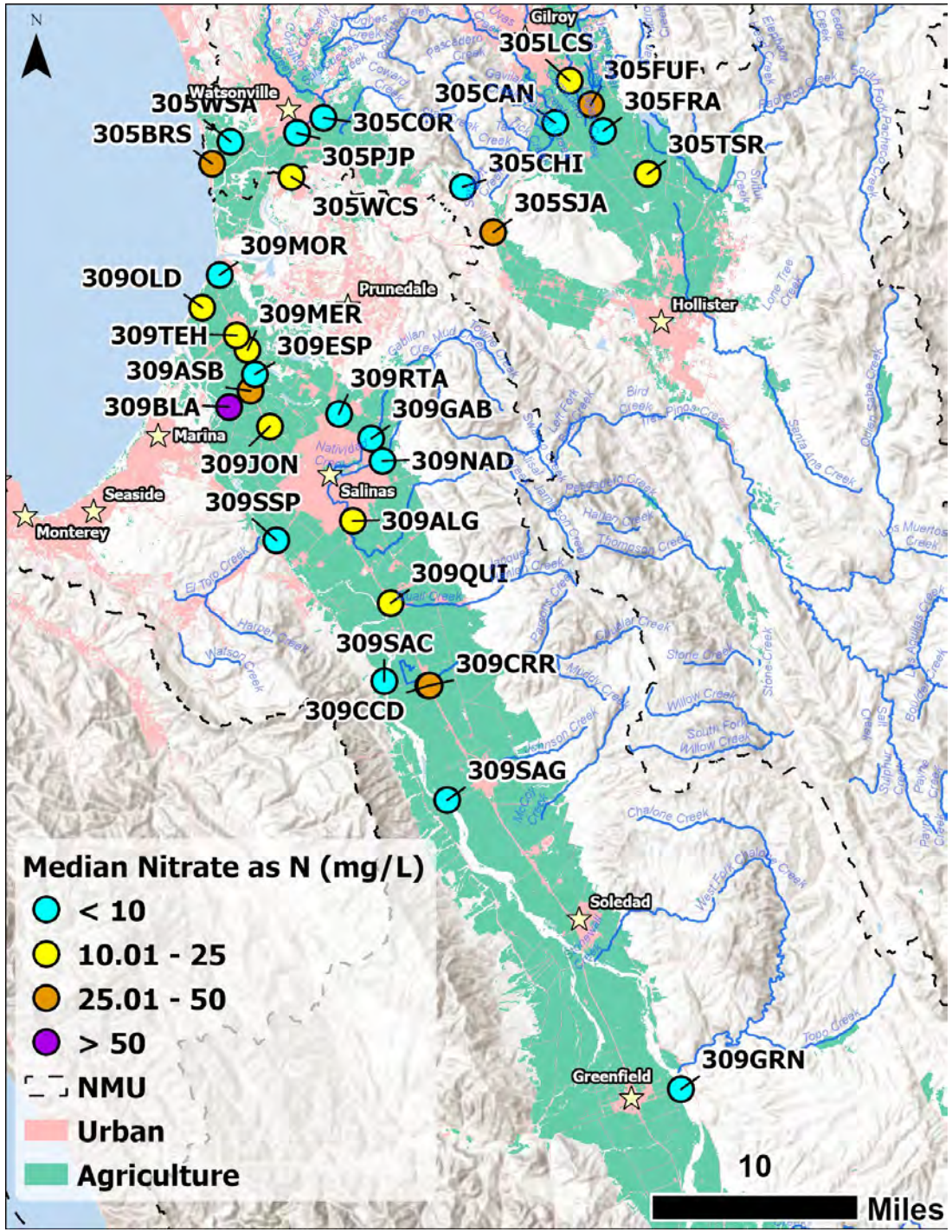
Stream Flow

Pajaro & Salinas

TRENDS

Pajaro HU Trends	Count
Increasing	4
Decreasing	4
No Trend	4

Salinas HU Trends	Count
Increasing	1
Decreasing	3
No Trend	15



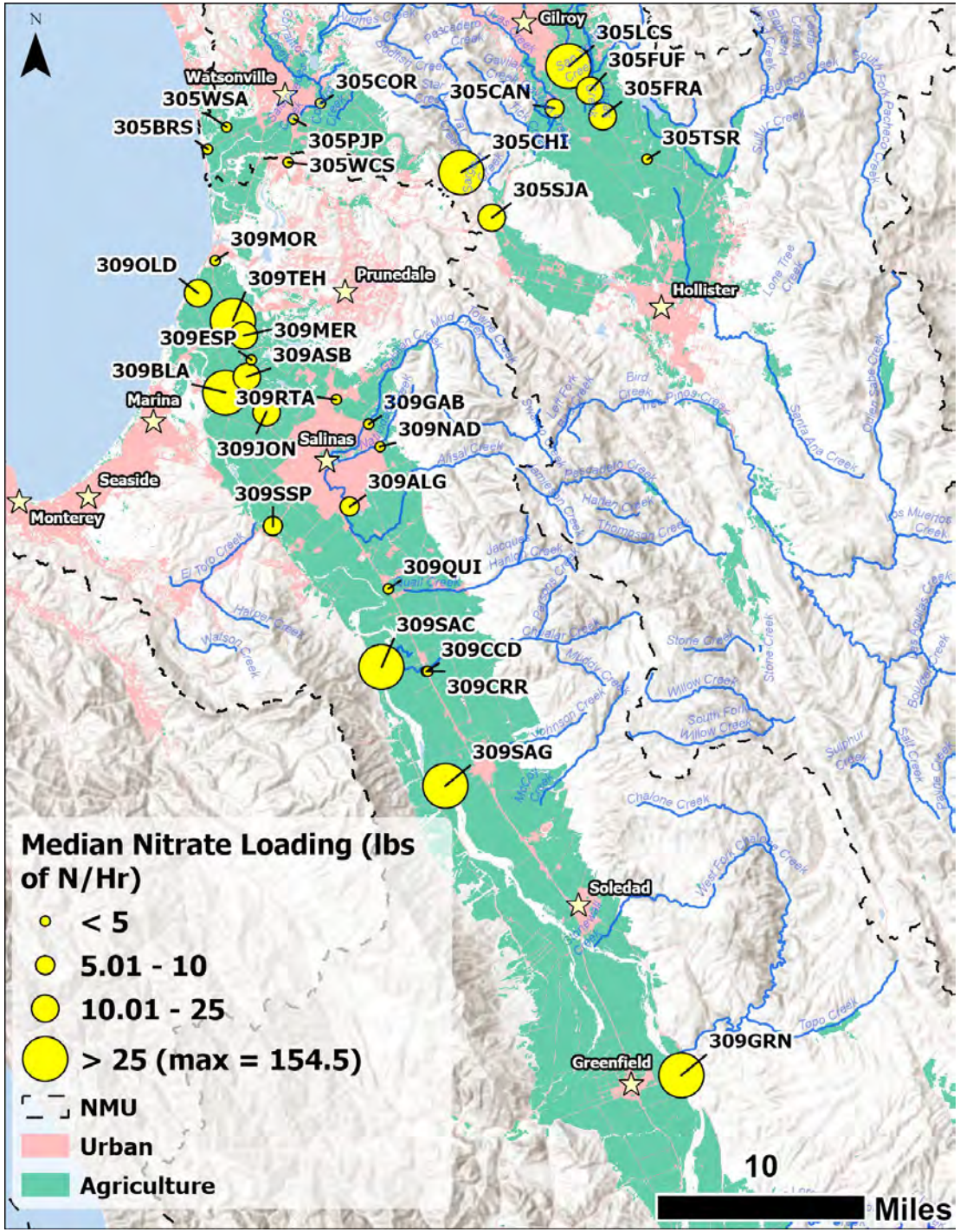
Nitrate (as N)

Pajaro & Salinas

TRENDS

Pajaro HU Trends	Count
Increasing	2
Decreasing	3
No Trend	7

Salinas HU Trends	Count
Increasing	5
Decreasing	3
No Trend	11



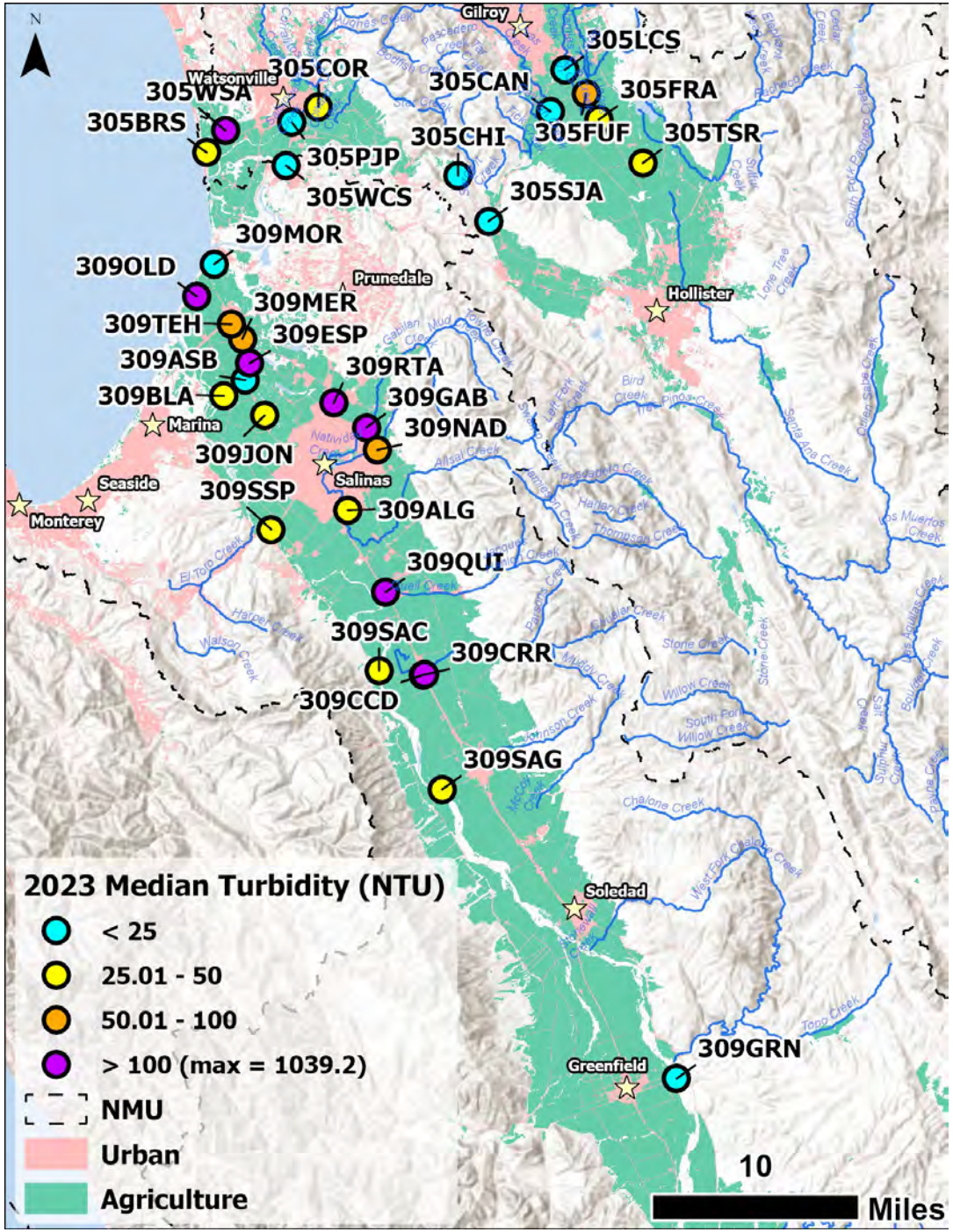
Nitrate Loading

Pajaro & Salinas

TRENDS

Pajaro HU Trends	Count
Increasing	5
Decreasing	0
No Trend	7

Salinas HU Trends	Count
Increasing	3
Decreasing	2
No Trend	14



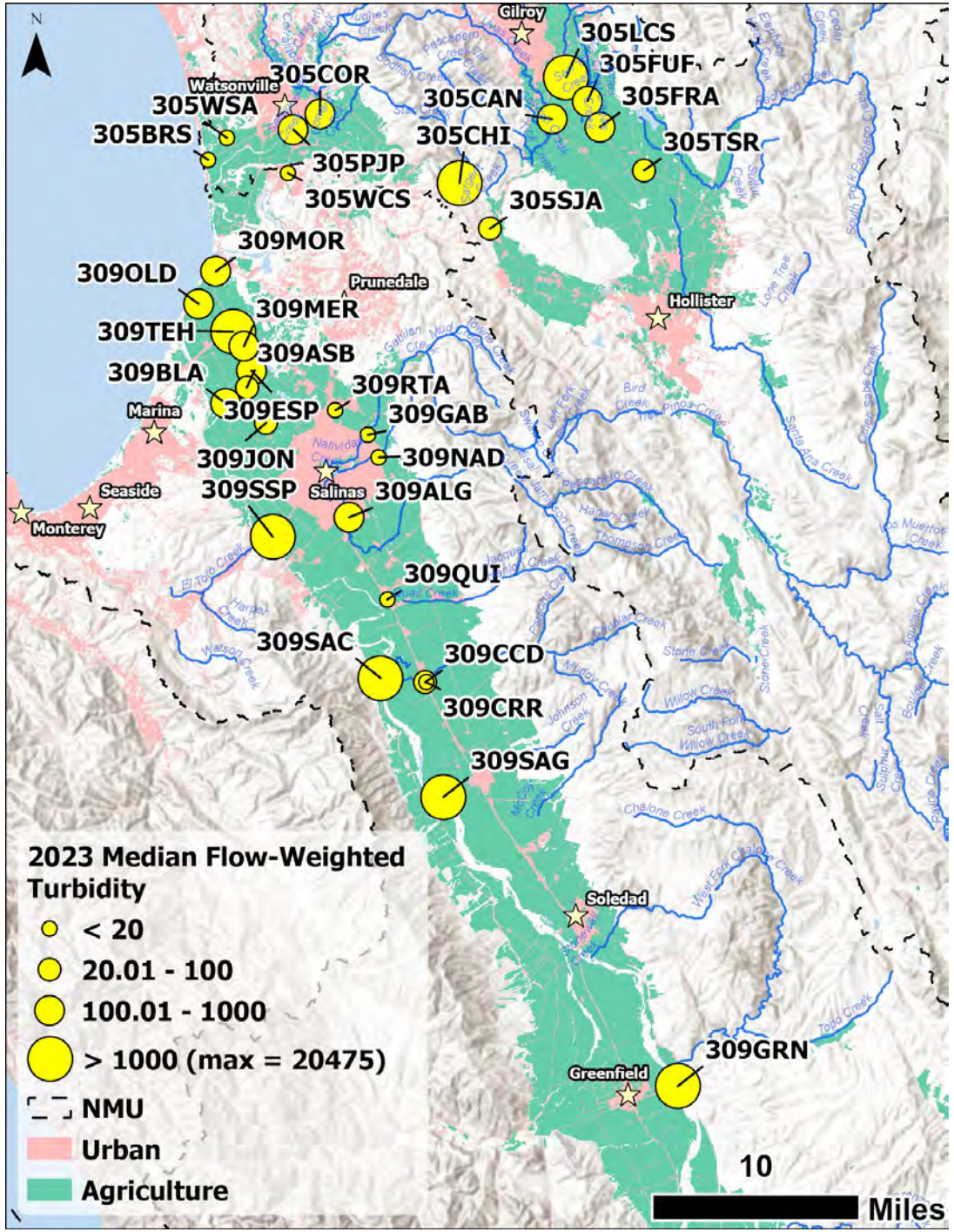
Turbidity

Pajaro & Salinas

TRENDS

Pajaro HU Trends	Count
Increasing	4
Decreasing	3
No Trend	5

Salinas HU Trends	Count
Increasing	1
Decreasing	14
No Trend	4



Sediment "Loading"
(i.e., Flow Weighted Turbidity)
Pajaro & Salinas

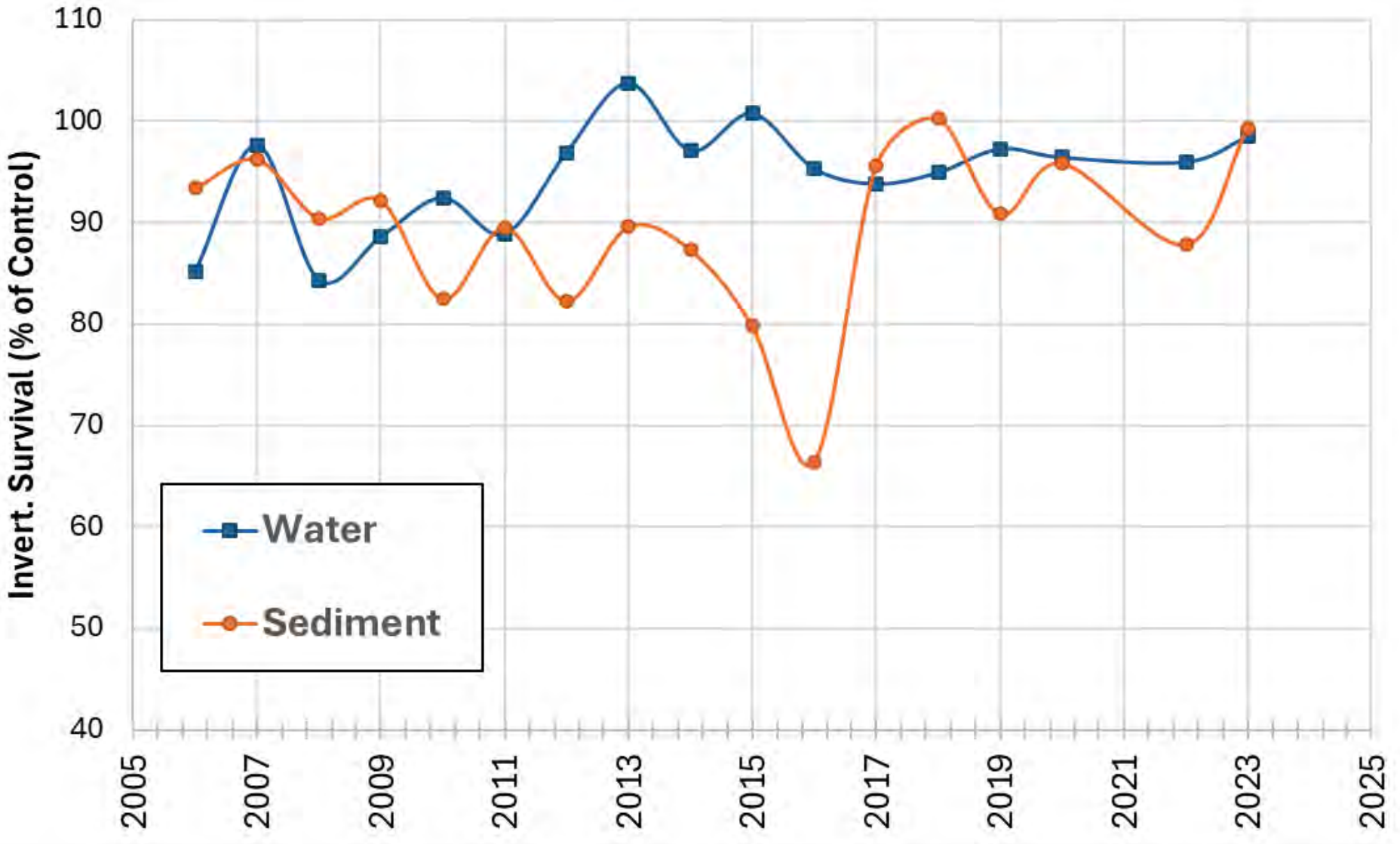
TRENDS

Pajaro HU Trends	Count
Increasing	5
Decreasing	2
No Trend	5

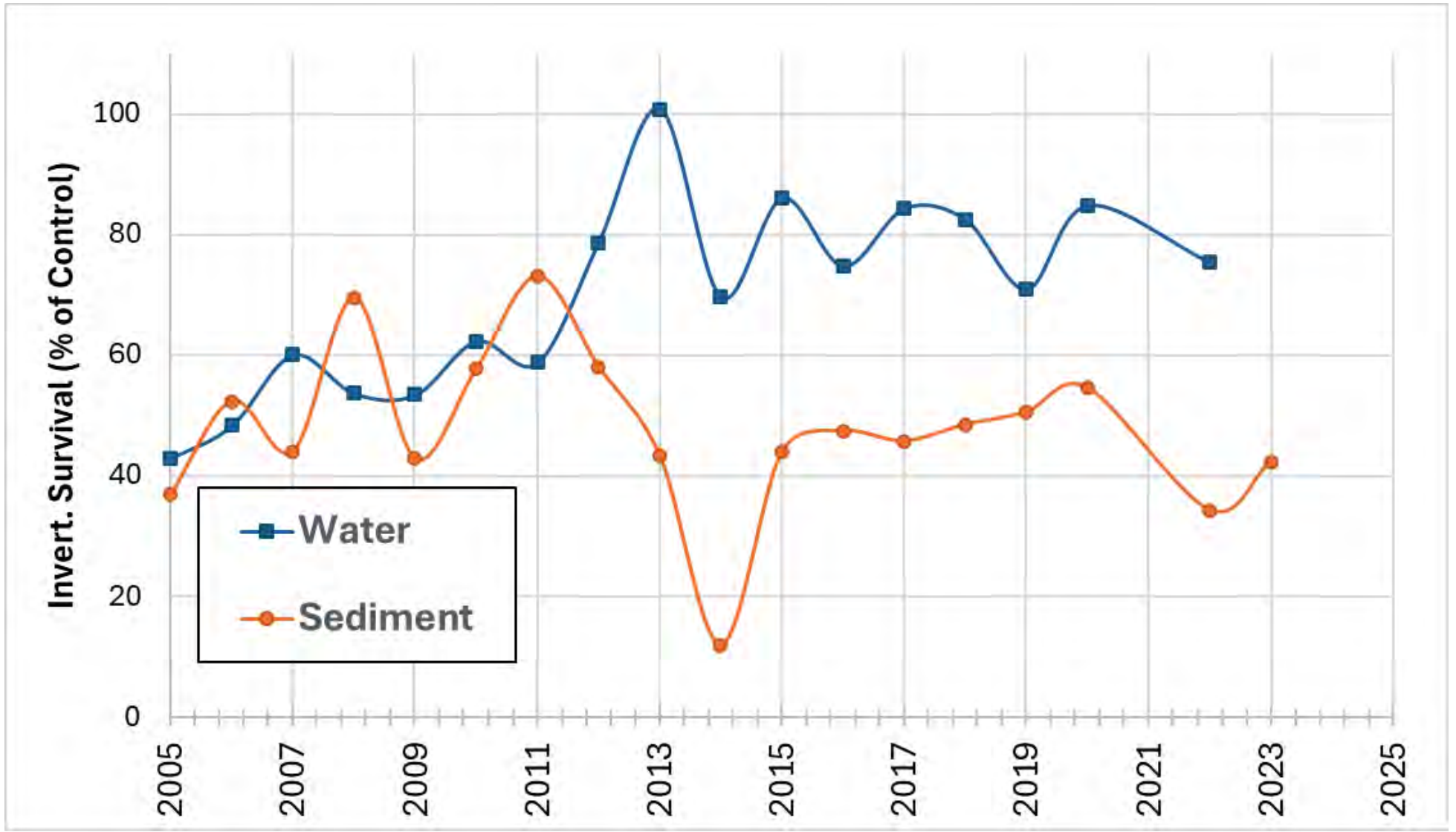
Salinas HU Trends	Count
Increasing	2
Decreasing	6
No Trend	11

Invertebrate Survival Rates in Toxicity Tests

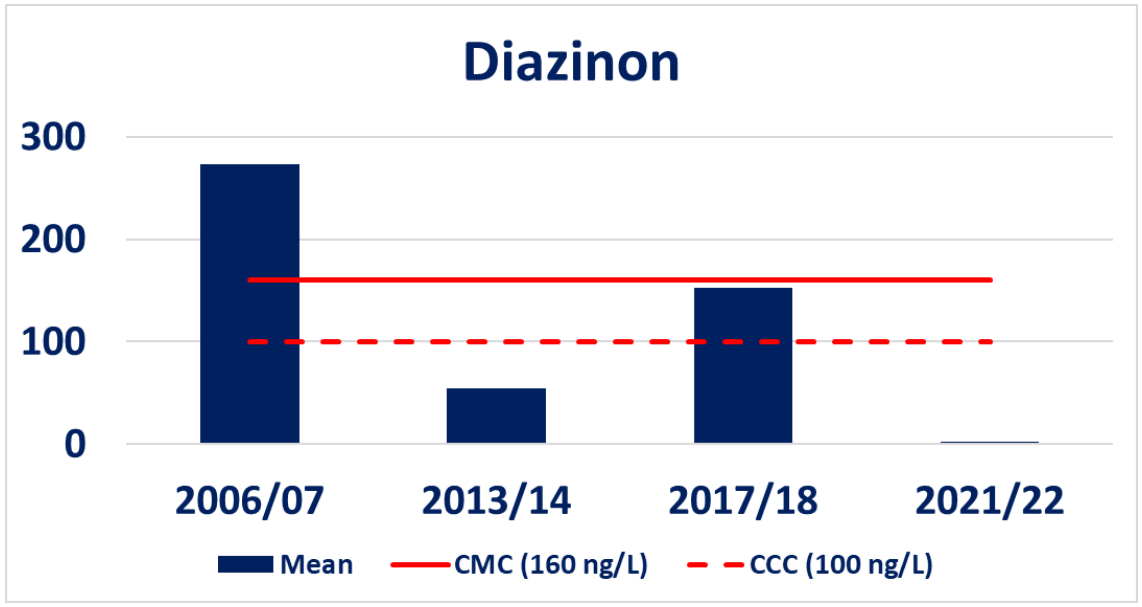
Pajaro Hydrologic Unit

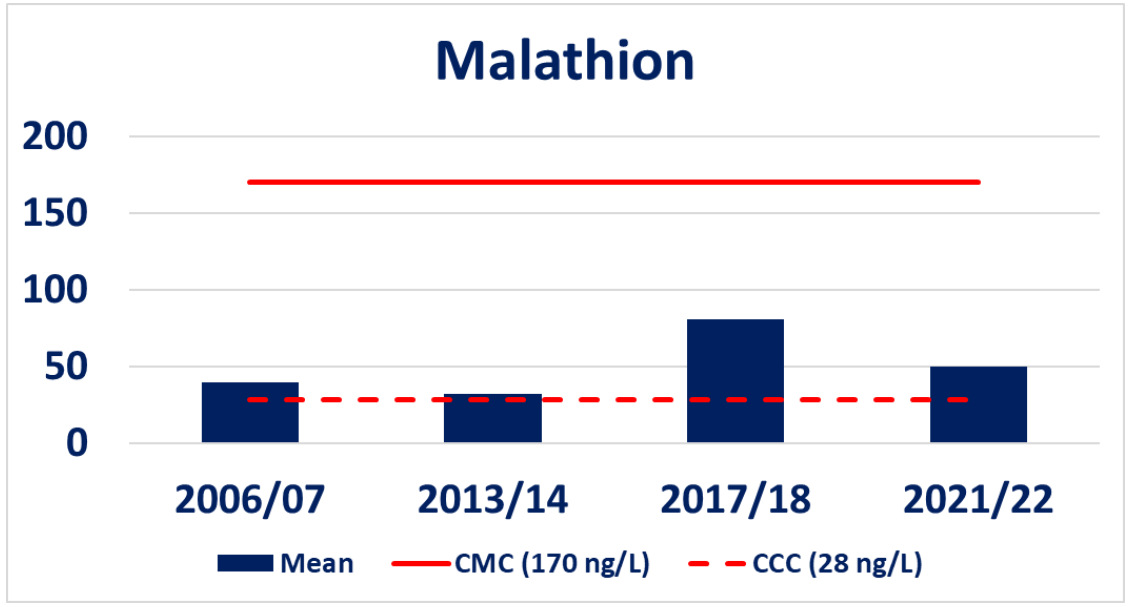


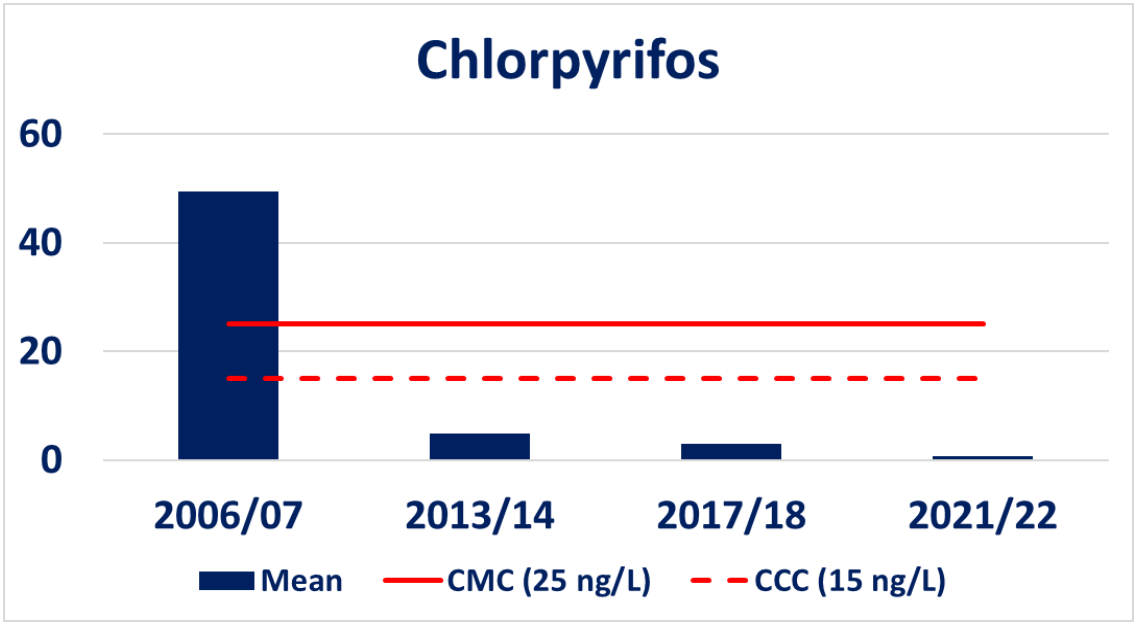
Invertebrate Survival Rates in Toxicity Tests Salinas Hydrologic Unit

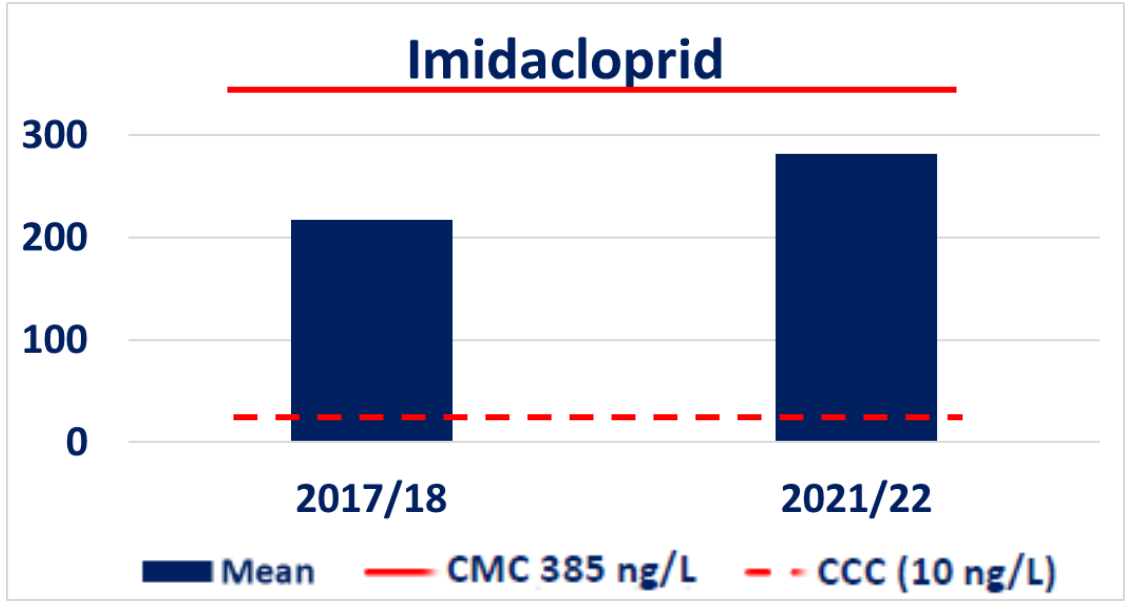


Pesticides in Water

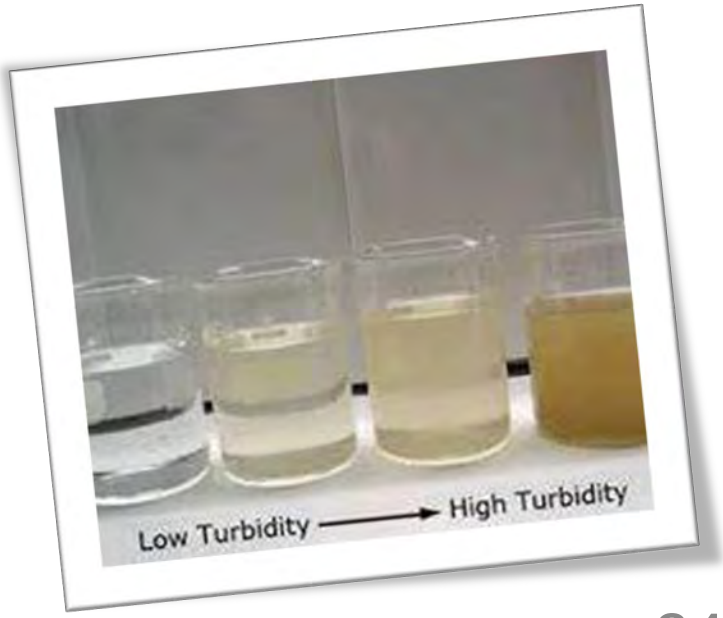








Surface Water Follow-Up Program

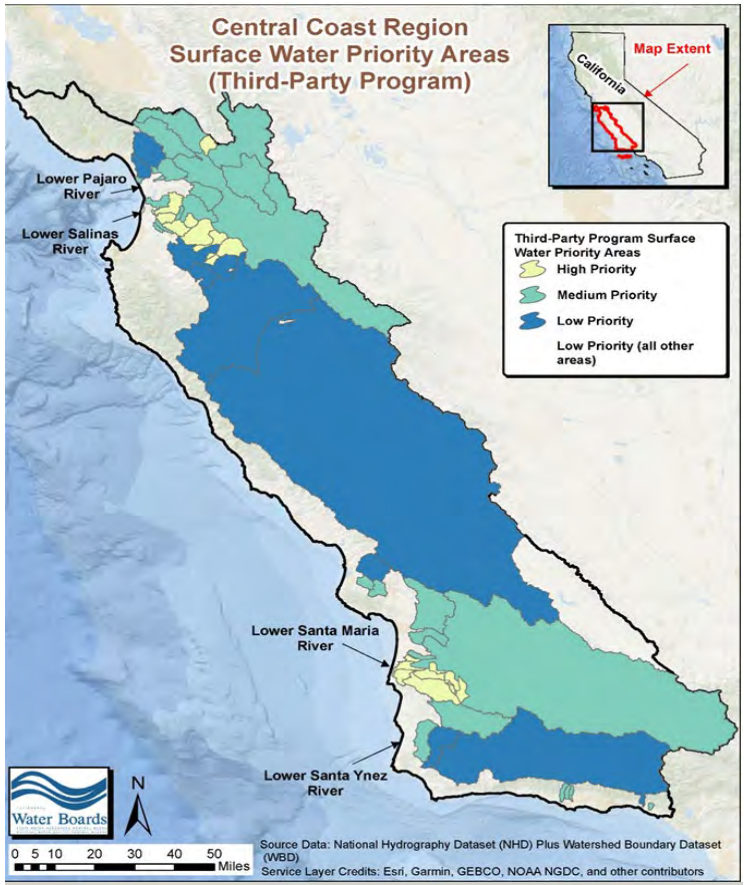


Ag Order Requirements

- Required under Ag Order 4.0 – response to surface water exceedances detected by routine cooperative monitoring
- Work Plans for Individuals were due 3/1/23 (none we are aware of)
- Third Party Work Plan for Salinas & Santa Maria submitted in March; currently in revision but the program has started
- Full compliance with numeric Limits by 2032 (most cases)
- Interim milestones (50% improvement by 2028; 2026?)

SW Follow-Up in 2024

- High Priority watersheds (per Ag Order 4.0 designations for 3P)
  - Santa Maria (8), Lower Salinas (10), Upper Pajaro (1)
- Ranch-level awareness of irrigation runoff ("tailwater")
  - Participation mandatory
  - Nitrate, turbidity, pesticides, volume/frequency
  - 170 introductory meetings and > 330 individual ranch visits conducted
- Response to stormwater/sediment complaints (6-7 watersheds)
  - Winterization Plans
  - Sediment Erosion Management Plans (SEMP)
  - Plan effectiveness evaluations



2024 “Complaint Areas”

- 5 multi-ranch complaints received by Water Board from County agents and residents
  - 2 in southern Santa Cruz County
  - Upper Santa Rita/Little Bear Creek
  - Alisal/Hartnell Rd
  - Old Stage Rd (Chualar, Esperanza, Quail)
- Effective SEMP (Sediment & Erosion Management Plan) required
  - Immediately (Option 1) or in 2025, with an immediate Winterization Plan (Option 3)
- www.ccwqp.org/complaints
  - Winterization Plan template & best practices posted now
  - SEMP template coming soon

SW Follow-Up in 2025

- Continue work in High Priority watersheds;
- Begin work in Medium Priority watersheds
- Increase stormwater outreach/awareness -
- Move beyond notification & awareness

New/increased management mandatory

- Continue to support trial & development of highly effective treatment technologies (bioreactors for N and biochar for pesticides)
- Continue work towards watershed-scale restorations/enhancements
- Complete Work Plan revisions

Groundwater

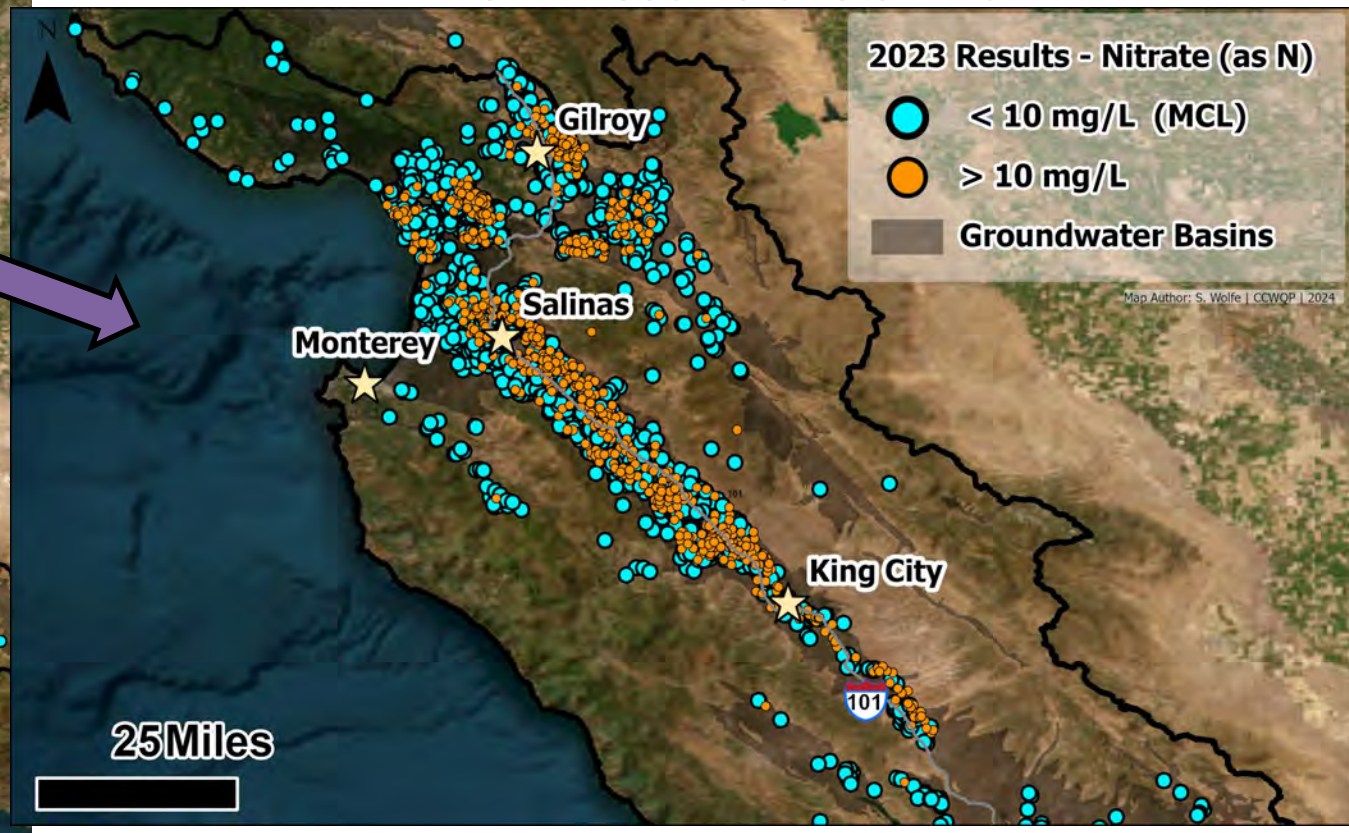
Monitoring

& Work Planning

Nitrate

Annual Well Sampling

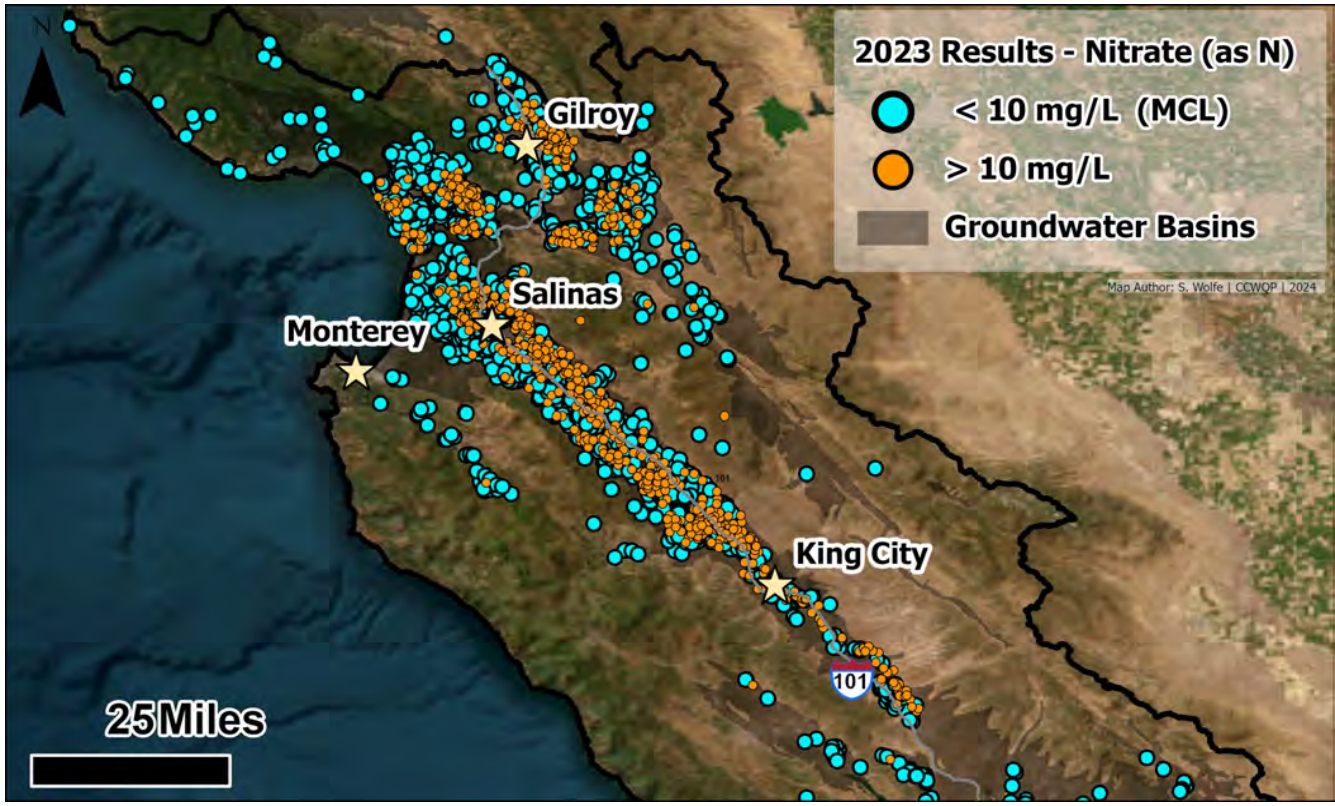
Maps currently reflect 2023 data; 2024 results are simlar

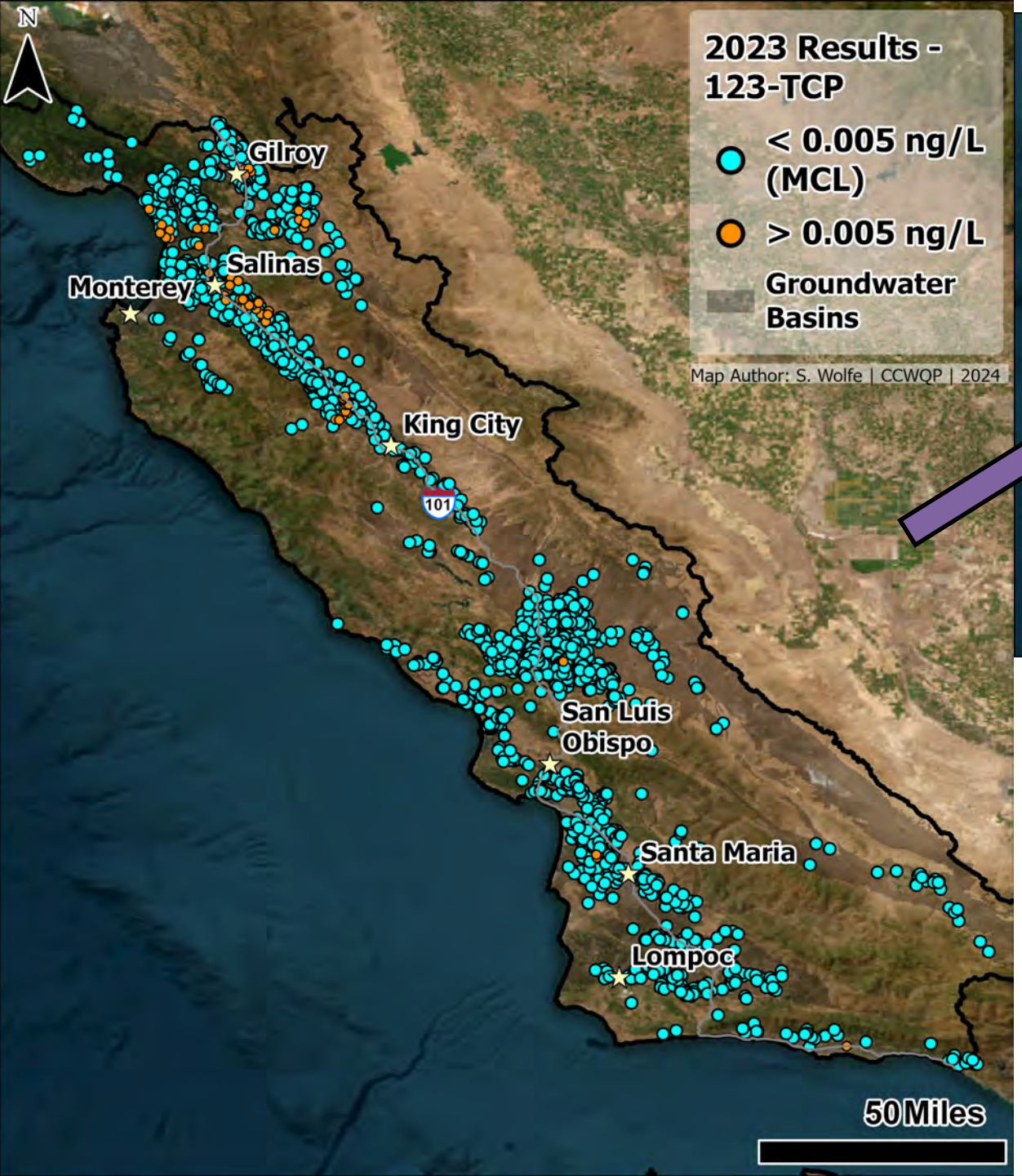


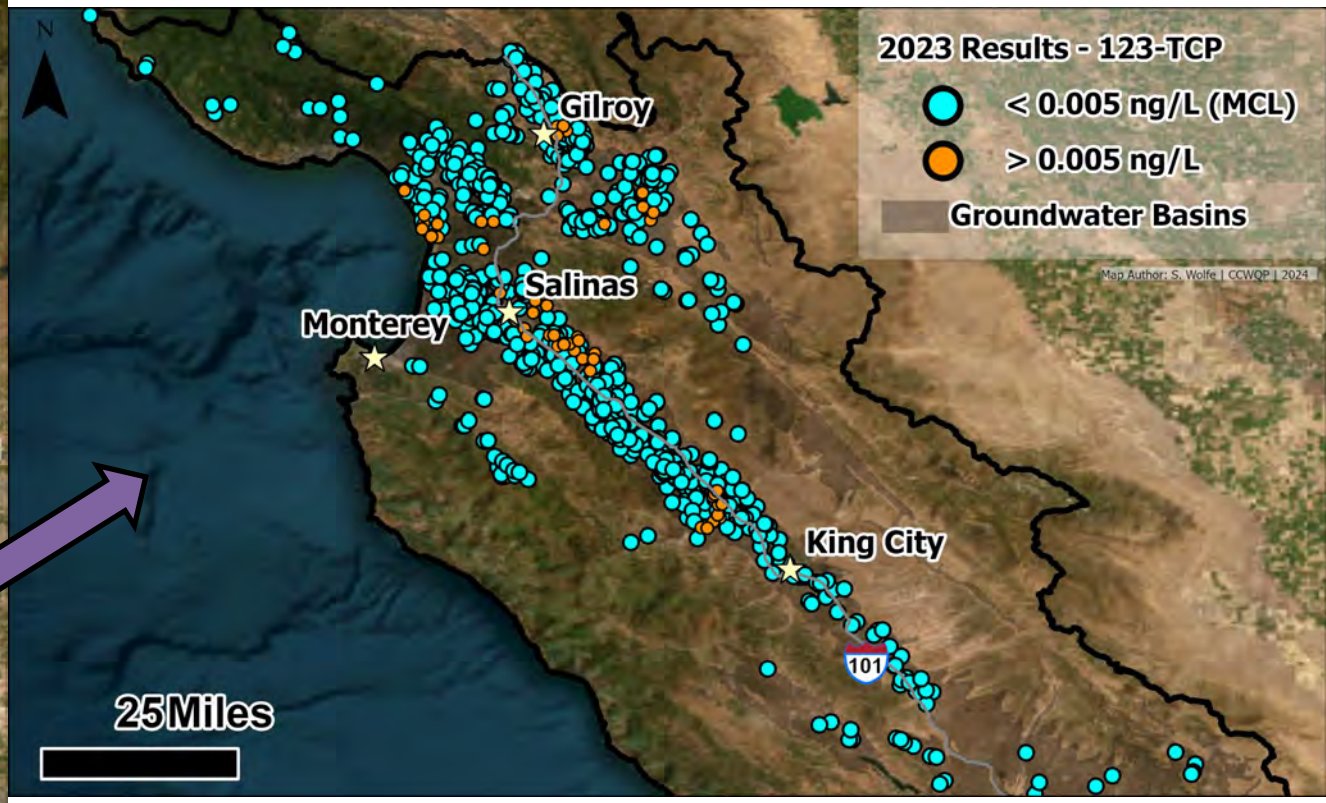
Nitrate

Well Sampling Results

County	Count	Exceed. Rate	Mean	Median
Monterey	1,375	37%	15	6
San Benito	284	29%	9	4
San Luis Obispo	1,280	14%	6	2
San Mateo	3	0%	0	0
Santa Barbara	818	29%	10	3
Santa Clara	255	36%	11	7
Santa Cruz	307	26%	9	1
Ventura	19	5%	4	1
Total	**4,341**	**22%**	**8**	**3**







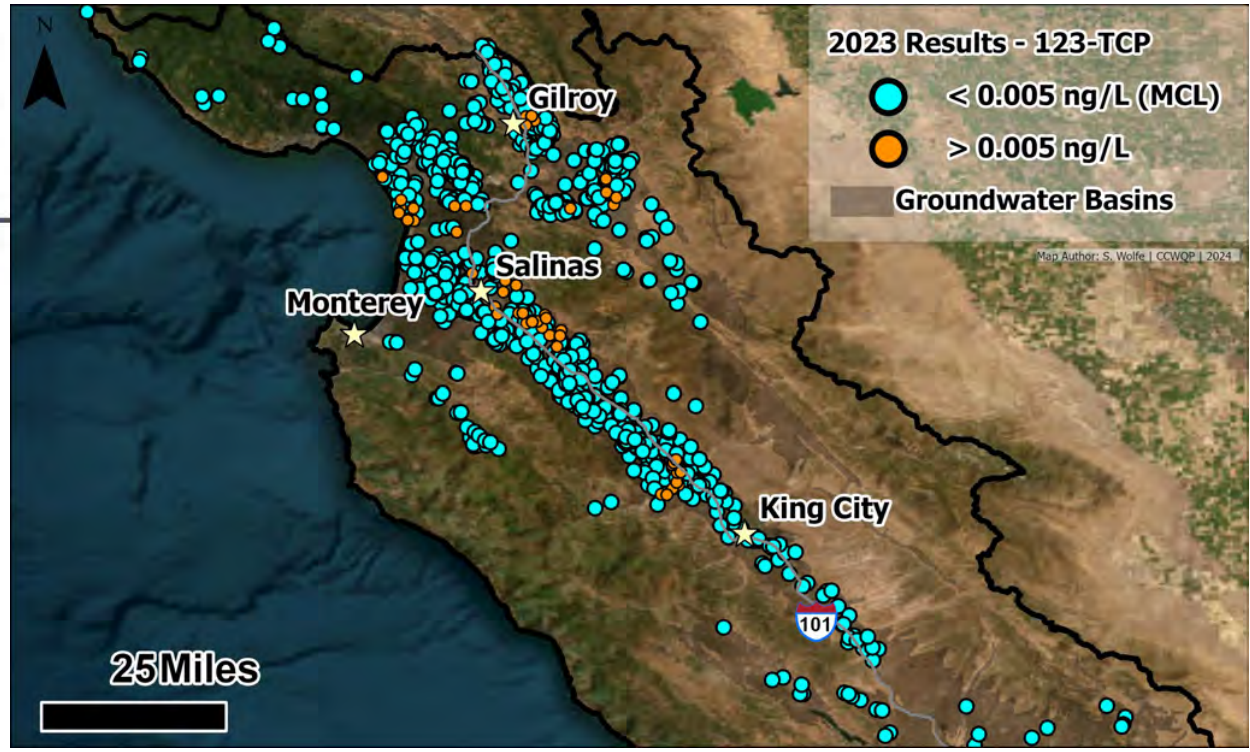
123-Trichloropropane

Well Sampling Results

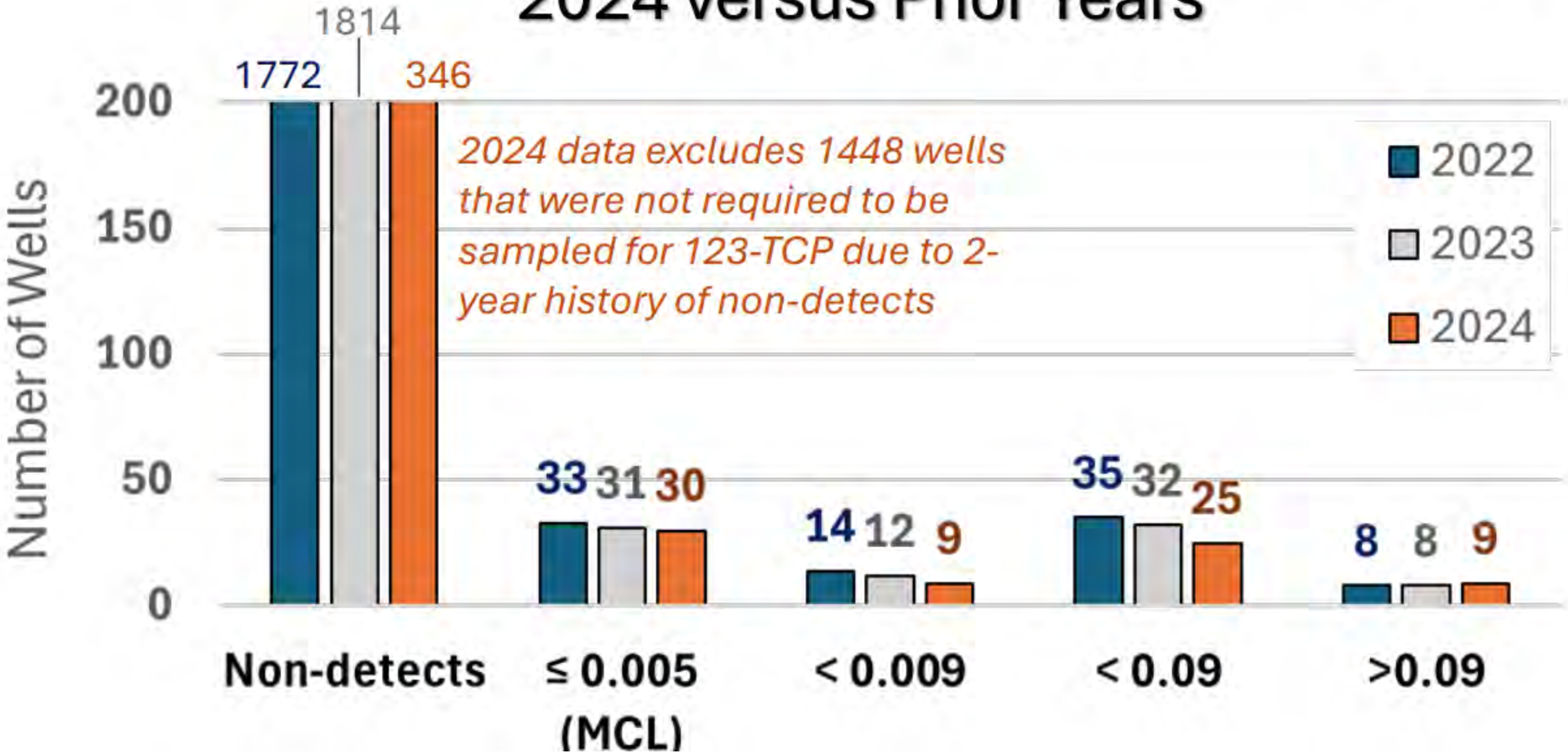
123-Trichloropropane

County	Count (2022)	% > MCL	Median	Count (2023)	% > MCL	Median
Monterey	593	7%	ND	564	7%	ND
San Benito	135	2%	ND	133	4%	ND
San Luis Obispo	664	0.2%	ND	714	0.4%	ND
San Mateo	0	0%	ND	3	0%	ND
Santa Barbara	239	1%	ND	237	0.4%	ND
Santa Clara	113	2%	ND	127	3%	ND
Santa Cruz	104	4%	ND	112	1%	ND
Ventura	1	0%	ND	6	0%	ND
Total	**1,849**	**2%**	**ND**	**1,896**	**2%**	**ND**

Well Sampling Results



Well Sampling Results for 123-Trichloropropane in 2024 versus Prior Years



Summary

- Ag Order 4.0 – New/changing requirements
- Surface Water – Trends are a mixed bag
- Aquatic/Sediment Toxicity – General improvement; more needed
- Surface Water Follow-Up – Is happening now. Ranch-level management actions required.
- Well Sampling – High nitrate in Ag aquifers; Isolated 123-TCP cases
- Groundwater Quality Trend Monitoring: In revision; nearly complete

Irrigation & Nutrient Management

What is TNA/INMP Reporting?

- TNA = Total Nitrogen Applied
- INMP = Irrigation & Nutrient Management Plan (summary report)

  - Generally, TNA info plus crop yields (i.e. N removed at harvest)

Introductory video on TNA/INMP reporting:

www.youtube.com/watch?v=Y-w882JKz0w

Why is TNA/INMP reporting required?

- Groundwater throughout California's irrigated Ag lands is significantly impaired by Nitrate
- Ag fertilizers (and dairy waste) are the largest source of N, and have not been regulated to the same extent as WWTP's or septic
- A statewide Expert Panel concluded that the most important management tool for this issue would be to monitor, report, and manage the balance of N-Applied to fields vs. N-Removed from fields

    - Because the difference (A/R or A-R) is highly susceptible to leaching

Member Support for TNA & INMP Reporting

- Total Nitrogen Applied (TNA) reporting phased in for all ranches
  - Reports due by March 1, 2024 on crops grown in 2023
  - Many new growers dealing with water-applied and N-applied calculations
- Irrigation & Nutrient Management Plan (INMP) reporting began for Phase 1 ranches
  - New reporting issues like Crop ET, R-coefficients and N-removed calculations
- Survey-style “EZ-Form” in English & Spanish for simple ranches
- Excel-based Spreadsheet Form supports high-volume reporting for consultants, large operations, and sustainability certification programs
- Workshop series in collaboration with ILP staff (English, Spanish, Chinese)
- Phone, Zoom and In-Person support sessions

Total Nitrogen Applied (TNA) and Irrigation & Nutrient Management Plan (INMP) Reporting in 2024

~ reports on 2023 crops ~

	TNA	INMP
Number of acres* reporting	328,063	46,274
Number of ranches reporting	3632	304
Ranches with past-due reports**	168 (4%)	11 (4%)

** ranch-acres (not crop-acres)*

*** Third Party membership revoked; report required to reinstate membership*

Follow-Up Efforts in 2024

Individual calls to all Operators of ranches with “high” INMP reports

- i.e. A-R (N-applied minus N-removed) balance >500 and >400 lbs N/acre

Individual calls to Operators of ranches with very low INMP report results (i.e. << 0 lbs N/acre)

Outcome 1: Calculation errors played a significant role in high/low reports

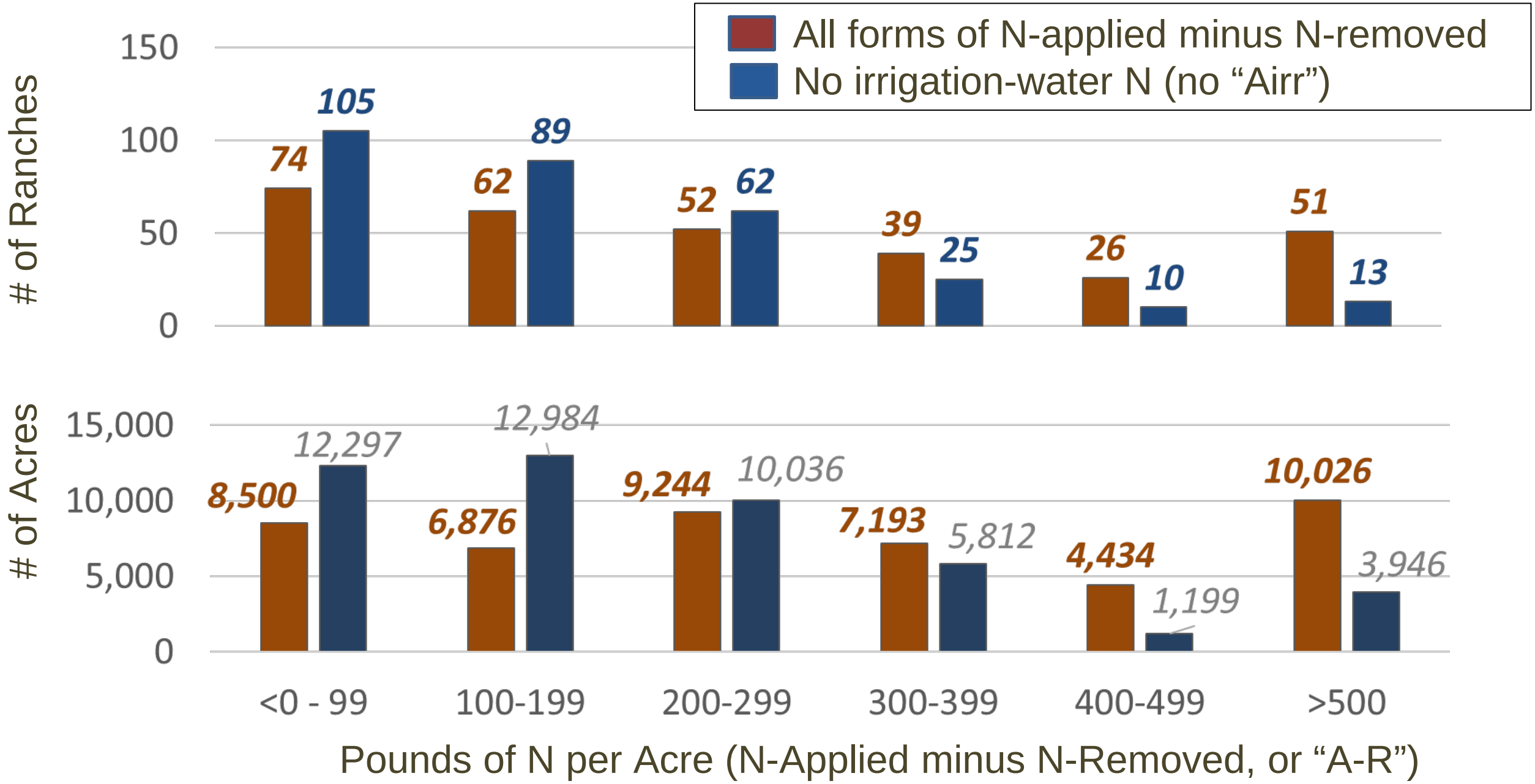
- Example: Reporting “pounds applied or removed” instead of “pounds per acre”

Outcome 2: Purposely high N-application rates played a small role

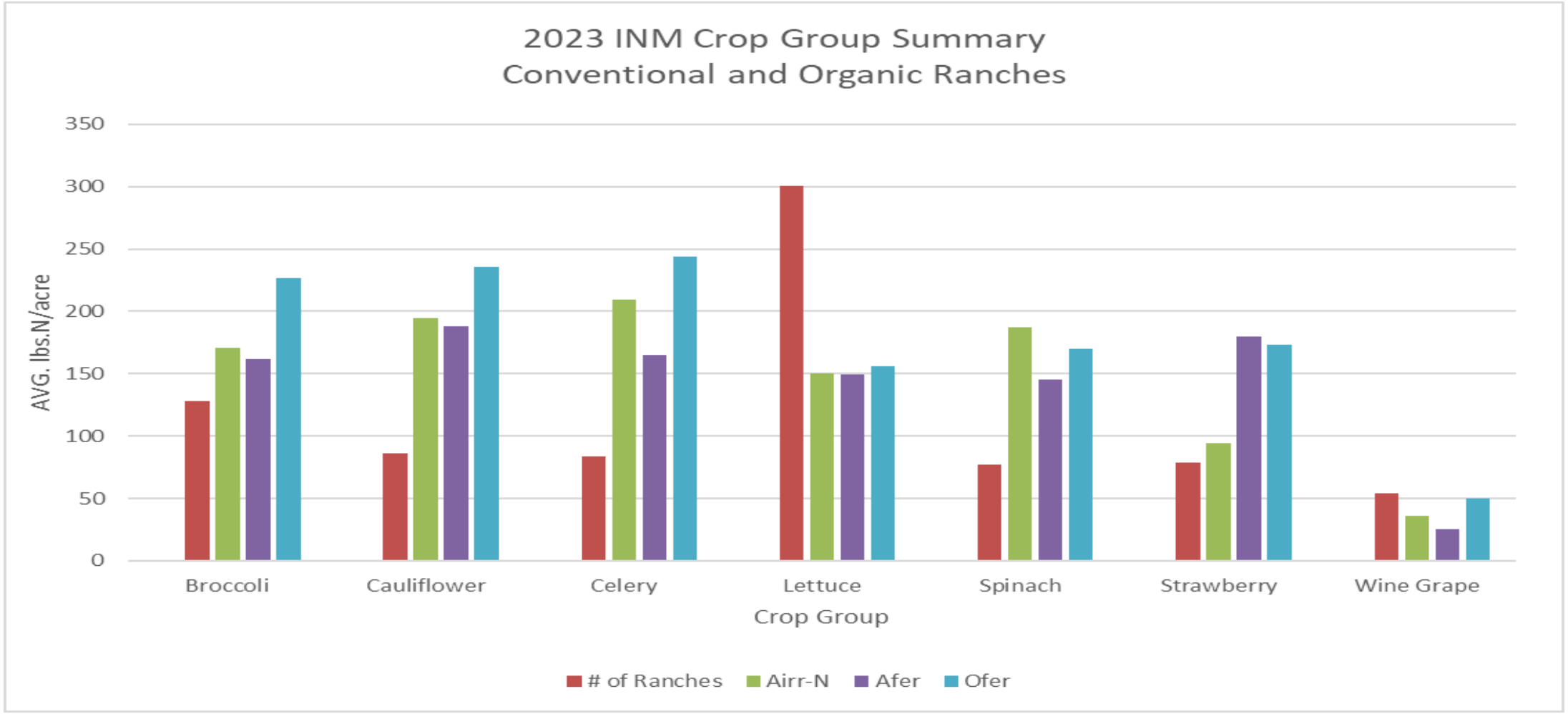
- Example: Sequential storms in early 2023 drove multiple fertilizer applications on some ranches that would have otherwise only applied once or twice

Outcome 3: N in irrigation water played a significant role in high reports

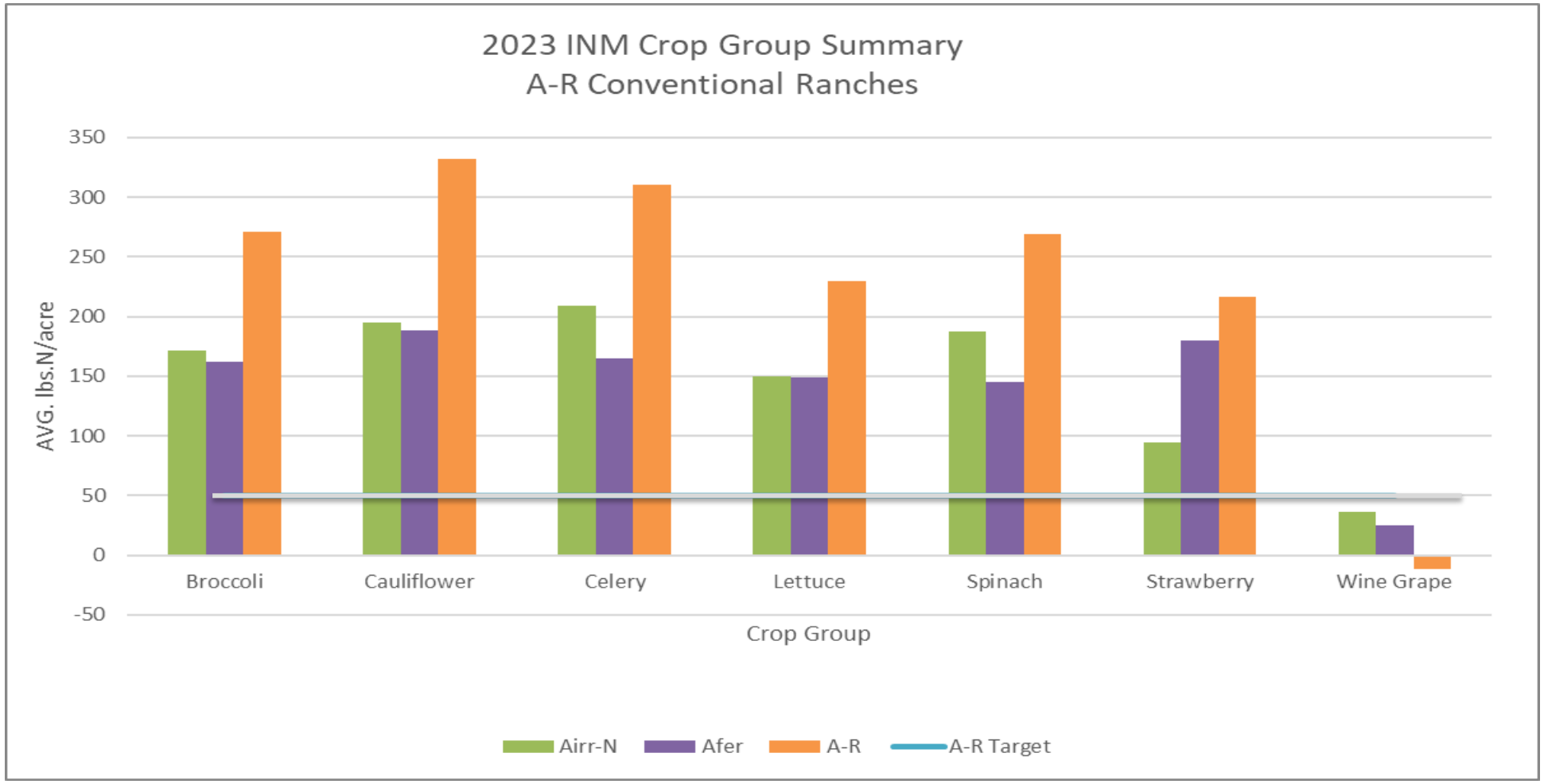
N-Applied minus N-Removed ("A-R"), 2023 crops



Nitrogen-Applied Summary for Major Crops



Nitrogen Applied-minus-Removed (A-R) Summary for Major Crops



Follow-Up Efforts Planned for 2025

- During & prior to reporting: Expand outreach to reduce calculation errors

- After reporting: Continue to validate high/low outlier results; Expand data validation to include “middle of the road” results

- Expand individual outreach to Operators with INMP results with A-R (N-applied minus N-removed) balance >300 lbs N/acre

- - Improve interview to identify additional important drivers of high N-applications and high A-R balance

- Conduct outreach and request expert involvement in early/rainy season fertilizer decisions

- Engage with State Water Board N Expert Panel as applicable

Alternative Water Supply

Recognize the need for interim and long-term drinking water solutions while we work to bring down N loading and groundwater responds with a lag-time

Participating in discussions with Ag Partners and Water Board staff on overarching concepts for a future program

- Seek to understand scope and timing of what is needed
- Contribute perspectives on implementation and feasibility

Watching and learning from Central Valley processes

Considering potential future roles