



The First Year of INMR Reporting: Early Results, Compliance Tools, and Next Steps

Jodi Switzer
Water Program Director
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Overview

- Quick refresher: what the INMR is and what VCAILG calculates
- First-year reporting results and data quality
- How growers will receive and use their own INMR results
- What happens to the data after submittal
- What to expect for 2027
- Questions



Two Separate Requirements Under the Ag Order

Nitrogen tracking and reporting (INMP/INMR)

- Applies to all growers
- Always focuses on nitrogen
- Annual planning and reporting requirements



Today's focus:
INMR results

TMDL compliance requirements

- Applies only where representative water quality monitoring exceeds an applicable TMDL limit.
- Can apply to nitrate or other water quality constituents covered by a TMDL
- Additional requirements apply only to affected Responsibility Areas



From Planning to Reporting to Results

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INMP – The Plan

- What do I expect to apply?
- What are my crop irrigation and nutrient needs?

First Due: March 1, 2025

Updated Annually

On-Farm Only

2

INMR – The Report

- What did I actually apply?
- What did I harvest?
- What management practices did I use?

First Due: March 1, 2026

Reported Annually

Submitted in Clearwater

3

VCAILG Analysis and Reporting

- Calculate metrics and compare results across similar crops
- Provide results back to growers to inform future irrigation and nutrient decisions
- Submit anonymized results to the Regional Board annually
- **Future:** Identify outliers and implement follow-up education

What Are We Calculating?

A = Nitrogen Applied

- Total nitrogen applied per acre

R = Nitrogen Removed

- Harvested yield per acre $\times$ crop-specific nitrogen removal coefficient

Then VCAILG calculates:

A-R Difference

- Nitrogen Applied - Nitrogen Removed
- Expressed as lbs N/acre

A/R Ratio

- Nitrogen Applied $\div$ Nitrogen Removed
- Expressed as a ratio

Ag Order requirement: VCAILG must calculate both A-R and A/R values, including annual and 3-year rolling average metrics.



First Year Reporting: How Did We Do?

	Total	Submitted	Incomplete	Not Started
Growers	875	643 (72%)	89 (10%)	170 (19%)
Irrigated Acres	80,004	64,074 (80%)	10,752 (13%)	5,178 (6%)

What if an INMR was not submitted?

- Reporting is required annually for all VCAILG enrolled growers – even for fallow or not-yet-harvested crops.
- Completion status is reported to the Regional Board annually (NOT anonymized).
- Enforcement for non-reporting at discretion of Regional Board.

First-Year A-R Results: Annual Crops [PRELIMINARY]

Management Unit = same ranch, crop, age (perennial), and management practices

Crop	Acreage	MU	Min	Max	Average	Median
Strawberries	4,348	68	(24)	635	153	138
Cilantro	3,160	62	(327)	134	53	48
Celery	2,593	43	8	714	181	200
Peppers (Bell Pepper)	1,883	33	(89)	408	132	107
Cabbage (Fresh Market - Green)	838	13	(88)	140	10	(13)
Lettuce (Romaine)	541	14	14	116	69	65
Artichokes	418	8	245	458	299	287
Radishes	385	11	2	75	17	5
Brussels Sprouts	277	5	(31)	403	226	311
Parsley	260	10	(124)	107	22	54
Spinach (Bunch)	227	11	6	72	37	30
Beets	138	5	(26)	55	24	30
Kale	57	5	(337)	76	(25)	76

*All A-R values shown as lbs N/acre

**Does not include “No Complete Crop Cycle to Report” of “Fallow”



First-Year A-R Results: Perennial Crops [PRELIMINARY]

Crop	Acreage	MUs	Min	Max	Average	Median
Avocado >10 yrs	14,146	652	(1,179)	24,997	121	67
Lemons >10 yrs	11,117	447	(866)	368	31	28
Lemons 3-10 yrs	3,029	109	(331)	344	42	40
Avocado 3-10 yrs	2,511	156	(76)	2,932	110	74
Raspberries (Substrate Floricane)	1,528	37	(165)	525	96	46
Oranges (Valencia) >10 yrs	1,208	88	(608)	46,383	567	27
Raspberries (Substrate Primocane)	813	24	(1,692)	935	154	137
Mandarins & Tangelos >10 yrs	715	43	(653)	1,159	88	51
Blueberries	515	13	(9)	280	119	119
Avocado <3 yrs	436	21	(1)	306	79	51
Blackberries (In-Ground)	416	14	33	671	294	217
Lemons <3 yrs	287	6	5	65	41	46
Blackberries (Substrate Primocane)	209	9	(166)	400	63	5
Blackberries (Substrate Floricane)	202	13	(419)	405	112	77
Oranges (Navel) >10 yrs	115	20	(184)	21,649	1,095	14
Raspberries (In-Ground)	77	5	33	63	49	48
Oranges (Valencia) 3-10 yrs	20	6	(5)	77	41	43

*All A-R values shown as lbs N/acre



Common First-Year Reporting Errors

Fertilizer Material $\neq$ Nitrogen

-  Total lbs of fertilizer product applied
-  Convert fertilizer material to lbs of actual N

Conversion Errors

-  Incorrect unit/concentration conversions
-  Check calculations and units

Nitrogen Applied

-  Total lbs N applied to the entire Management Unit
-  lbs N applied per acre

Harvest Yield

-  Total harvest from the entire Management Unit
-  Harvest yield per acre

Improving Data Quality

2026: Post-Submission QC

April 2026 - VCAILG contacted growers whose INMR values were well above the expected range and asked them to review/update their data.

Outcomes:

- Some growers corrected and resubmitted their data.
- Some reviewed their calculations and confirmed their values were accurate, even though they were high.
- Others did not respond or make corrections.

2027: More QC Before Submission

Calculation Workshops in January/February 2027

- Fertilizer → lbs N conversions
- Nitrate in irrigation water calculations
- Organic amendment calculations
- Per-acre calculations
- Yield calculations

Built-in Clearwater Data Checks

- Flag values that appear potentially erroneous
- Provide real-time feedback before submission
- Give growers an opportunity to review and correct their data

Goal: Not to prevent unusual values, but to make sure unusual values are intentional and accurate.

Your Results Are Coming Soon

In about a month, look for an email with your INMR results. Results will be sent to the person who submitted the INMR and will include:

- Your A-R and A/R results
- Data range, average and median results for your crop

Example:

🍓 Strawberries (Ranch Name, MU Name)		
Your 2025 INMR Result	Crop Average	Crop Median
145	153	138
lbs N/ac A-R	lbs N/ac A-R	lbs N/ac A-R

Intended Takeaway:

- How do I compare with other growers of the same crop?
- Not targets or grades. They are a tool to help you understand your own results.



What Should You Do With Your Results?

If your result looks different from others growing the same crop, ask:

- Is my reported yield correct?
- Are my units and conversions correct?
- Did I account for all nitrogen sources?
- Was this an unusual production year?
- Were there anomalous conditions? (weather, pest, crop loss, etc.)
- Is my irrigation system applying water uniformly?
- Are there opportunities to improve timing, rate, placement, or irrigation efficiency?

Use the comparison to ask question, not as a fertilizer recommendation.



What Happens to Your Data?

December 15, 2026 → VCAILG submits its first annual INMR dataset to the Regional Board



INMR DATA Anonymized

Includes:

- Anonymous Management Unit ID
- Nitrogen and yield metrics
- A-R / A/R single-year values

COMPLIANCE STATUS Not anonymized

Includes:

- Parcels for which required INMR reporting was not completed
- Name of the landowner who owns each parcel

Important Note: Your name isn't attached to the INMR data - but the values you certify and submit still become part of the dataset used to characterize agricultural nitrogen management in Ventura County

Required Analysis of INMR Data

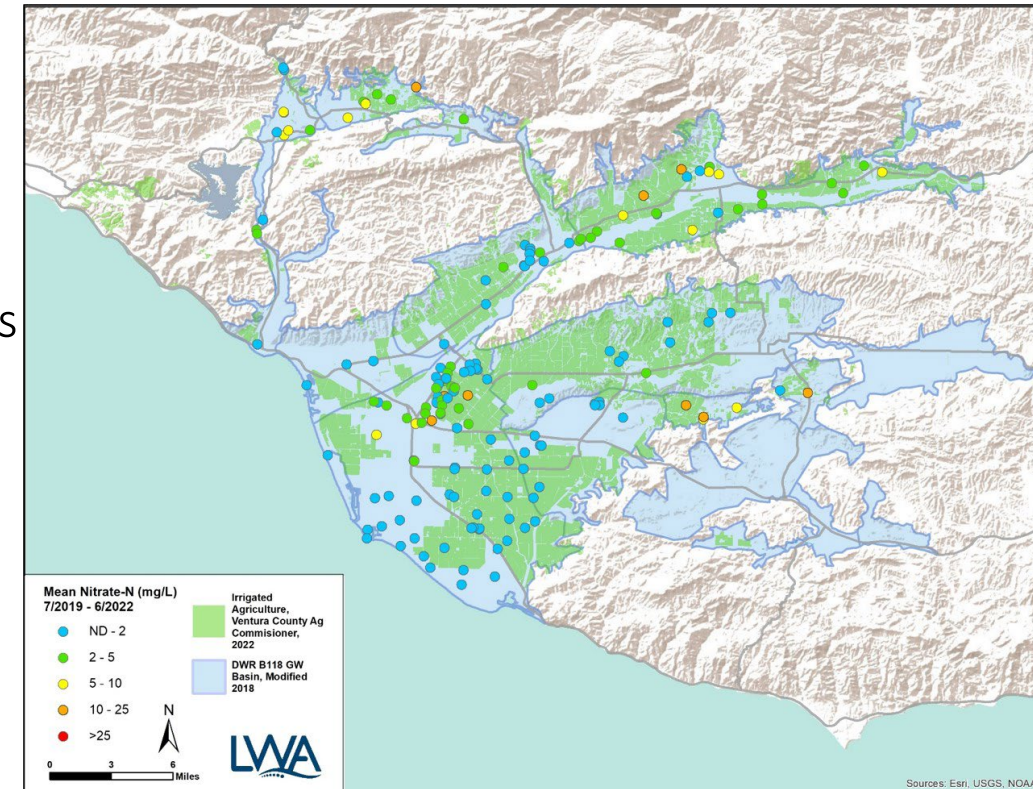
The Ag Order requires VCAILG to use INMR data for two analyses:

1. Groundwater Protection Formulas, Values & Targets

- Aggregate nitrogen applied and removed at the groundwater basin level
- Consider groundwater conditions, recharge, and other science-based factors
- Establish values and targets to evaluate collective progress over time
- Applies in designated High Priority groundwater areas

2. Statistical Outlier Analysis

- Use multi-year INMR data to identify statistically high A/R values among comparable crops
- Provides targeted education and follow-up where needed

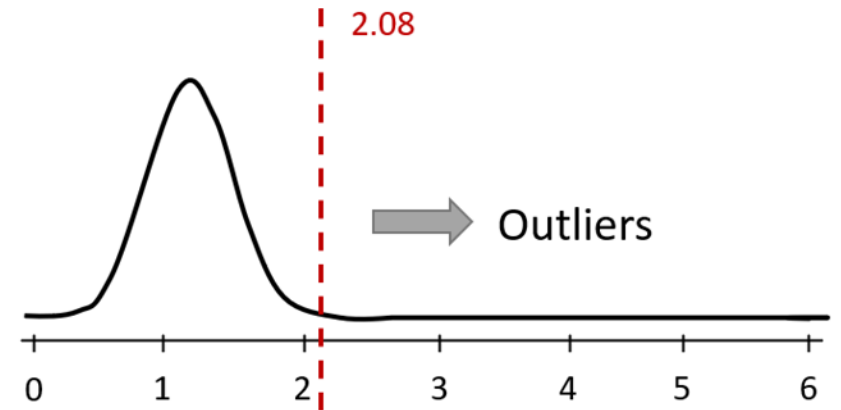


One Year of Data $\neq$ An Outlier

No grower is being identified as an outlier based on this first year of data.

Why use multiple years?

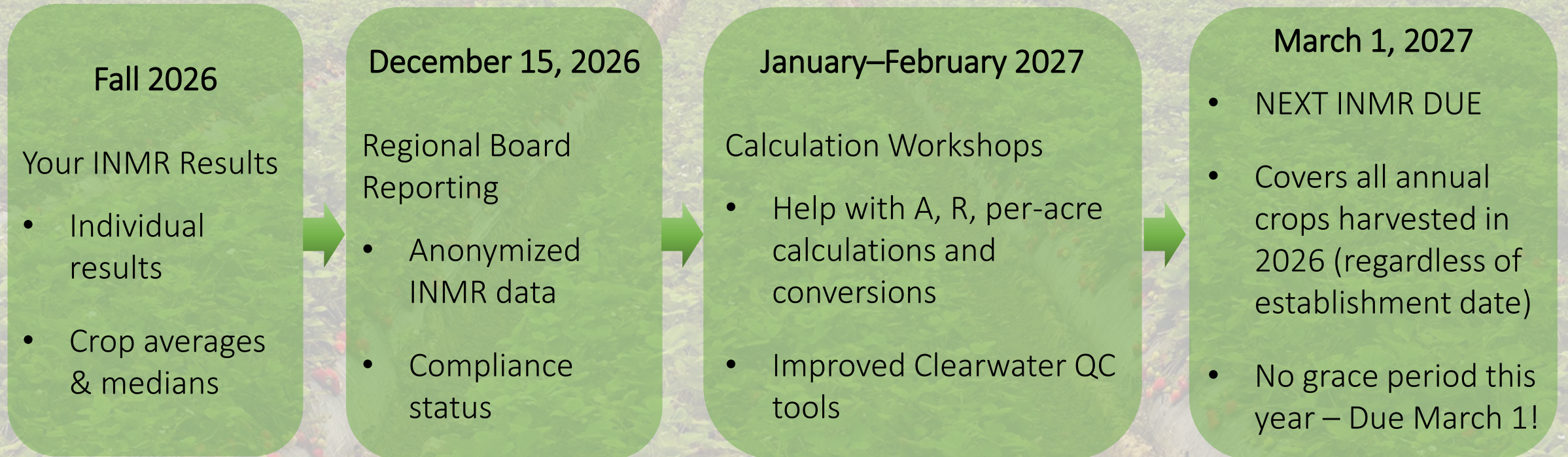
- Conditions vary from year to year
- Yield and nitrogen needs vary
- Multi-year values provide a more meaningful comparison
- Data quality will improve with reporting experience



How Outlier Analysis Will Work

- Uses 3-year rolling average A/R values — no outlier identification until 2028 or later
- Compares MUs within appropriate crop groups
- Uses a statistical method to identify unusually high A/R values
- Identified growers complete additional irrigation and nitrogen management education
- Being identified as an outlier is not a violation or penalty

What's Next?





VENTURA COUNTY
Agricultural Irrigated Lands Group



Questions?

VCAILG@farmbureauvc.com

(805) 289-0155

www.farmbureauvc.com