



Total Nitrogen Applied and Irrigation & Nutrient Management Plan

Preparing for and filing your report on 2023 crops

CENTRAL COAST WATER QUALITY PRESERVATION, INC.,



OUTLINE

- What are the TNA/INMP reporting requirements, and why do these requirements exist?
- What happens if my results are “high”?
- Records needed to report
- Calculations needed to report
- Filing your report



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*



Exemptions & Pending Requests

- SIP-Certified wine grape growers do not need to file a TNA report that is separate from their existing SIP-Certified reporting
 - SIP sends data to Pres, Inc.; we send data to GeoTracker
- Request to Water Board (response pending): INMP reporting exemption for SIP-Certified growers (basis – Meeting final A-R Discharge Limit)
- Request to Water Board (response pending): INMP reporting exemption for any Third Party member whose TNA report documents application of 50 lbs N/acre or less (basis – Meeting final A-R Discharge Limit)



What if my results are “high”? (TNA)

TNA Limits in Ag Order 4.0

Crop	90 th Percentile AFER =	Compliance Date	85 th Percentile AFER =	Compliance Date
Broccoli	295	12/31/2023	280	12/31/2025
Cauliflower	310		285	
Celery	360		330	
Lettuce	275		255	
Spinach	245		230	
Strawberry	320		295	
All Other Crops	500		480	

Operators of ranches reporting N-application above 90th percentile limits are contacted by Preservation, Inc. to confirm accurate reporting and ensure Operator is aware of limits/targets.

In 2024, referrals will be made for technical assistance. In future, documented improvements may be required to maintain compliance and/or Third Party membership.



What if my results are “high”? (INMP)

Table C.1-3. Compliance Dates for Nitrogen Discharge Targets and Limits

	Compliance Date	
	Target	500
Target	400	12/31/2025
Limit	300	12/31/2027
Limit	200	12/31/2031
Limit	150	12/31/2036
Limit	100	12/31/2041
Limit	50	12/31/2051

Compliance Pathway 1
 $A_{FER} + (C \times A_{COMP}) + (O \times A_{ORG}) + A_{IRR} - R =$

Notification/verification → referrals for assistance → future requirement to document changes

“Limits” are not enforceable (per State Board Order, 9/20/23), and compliance schedule/targets may change with the developing Third Party ACP, but the big picture may not change much in the long run... it’s time to get to work on improved N and irrigation management (kudos to those already working).



Records Needed to Report TNA or INMP

- Preparer Name
- Preparer Company
- Preparer Email
- Preparer Phone Number
- Calendar year of TNA data being reported
- Ag Waiver (AW) number
- Global ID (AGL) number
- Ranch name
- Assessor Parcel Number(s) (APN's) farmed
- The total number of acres that were farmed
- Total number of acres left fallow
- Whether or not the ranch is a greenhouse, nursery, or hydroponic operation
- Primary source of irrigation water (i.e. well versus city versus recycled, etc.)

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- Whether or not the ranch is a greenhouse, nursery, or hydroponic operation
- Primary source of irrigation water (i.e. well versus city versus recycled, etc.)
- Total volume (in gallons) of irrigation water applied to the entire reported acreage during the reporting period
- The average nitrate concentration (in mg/L or ppm) of irrigation water applied
- The average nitrate concentration unit of irrigation water applied
- Crop(s) you are reporting
- Total crop acres for selected crop*
 - Crop acres takes into account successions (i.e. if you have 10 acres and you did two successions of lettuce then you will report 20 acres)
- Amount of Nitrogen present in soil as pounds of Nitrogen per crop acres (lbs/crop-acre)
- Amount of conventional (synthetic) fertilizers and other materials pounds of Nitrogen per crop acre (lbs/crop-acre)



Calculations Needed to Report TNA / INMP

- Irrigation water volume applied
- Nitrate concentration in irrigation water → Pounds of N applied
- Soil N concentration → Pounds of N in soil
- Fertilizers applied → Pounds of N applied
- Organic amendments applied → Pounds of N applied
- Crop-Evapotranspiration (INMP only)
- Quantity of crop harvested → Pounds of N removed at harvest



Lists/links for Calculator Tools

www.ccwqp.org/tna

www.ccwqp.org/inmp



Membership

Surface Water

Groundwater

TNA/ INMP

Resources

About

- Amount of Nitrogen present in soil as pounds of Nitrogen per crop acres (lbs/crop-acre)
- Amount of conventional (synthetic) fertilizers and other materials pounds of Nitrogen per crop acre (lbs/crop-acre)

Section II – Recordkeeping & Calculations

If you are not already closely tracking the types and amounts of fertilizers and irrigation water that you apply to each crop, you will need to do a significant amount of record keeping before preparing your TNA report.

Once you have all of your fertilizer and irrigation records in one place, you will need to convert this information into the total pounds of N and volume of water applied to each crop on each of your ranches for the year.

Here is a link to the Regional Water Board's introductory video on TNA reporting. Information on recordkeeping begins at the 3:50 point in the video:

<https://www.youtube.com/watch?v=Y-w882JKz0w>

The following records or calculations are needed to complete the TNA report. In some cases there are also links to recordkeeping and/or calculator tools. Use of these tools is not required, but they may be helpful if you do not already have a system in place:

1. Volume of irrigation water applied, in gallons
 - Flow meter
 - Convert kw hours to volume
 - Unit conversions, acre feet/inches/gallons ([Link to Water Board conversion instructions, see pg. 21](#))
2. Pounds of N in irrigation water