
Central Valley Regional Water Quality Control Board

6 September 2023

Agricultural Water Quality Coalitions [See
[See Attached List – sent by email only]

IRRIGATION AND NITROGEN MANAGEMENT PLAN REPORTING, NURSERIES

The purpose of this letter is to provide updated guidance on nitrogen use reporting by nurseries in the Central Valley Region, as it relates to the regulation of nitrogen fertilizer impacts to groundwater used for drinking water.

Coalition members in the Irrigated Lands Regulatory Program (ILRP) are required to complete a pre-season Irrigation and Nitrogen Management Plan (INMP) worksheet annually to record planned nitrogen use and an INMP Summary Report after the growing season to record actual nitrogen use. INMP Summary Reports are submitted to the coalition, who then reports summary data and analyses to the Central Valley Water Board in the Annual Management Practice Implementation and Nitrogen Application Reports (AMPINARs). The INMP Summary Report data are collected to aid in determining (a) where agricultural fertilizer use may be causing or contributing to elevated nitrate levels in groundwater used for drinking water, and (b) where nitrogen use reduction goals might be focused to avoid future groundwater quality impacts. In this letter, the pre-season INMP worksheet and INMP Summary Report will be referred to collectively as “INMP Forms”.

The Irrigated Lands General Orders¹ require that INMP Summary Report data be reported separately for each “Field” or “Management Unit”, which is defined as a section of the operation that has (1) the same crop type, (2) the same fertilizer inputs, (3) the same irrigation management, and (4) the same management practices. The Order also requires reporting of “harvested yield” data so that estimations of nitrogen removed in the harvested material can be calculated.²

ILRP staff have received feedback that nurseries have been unable to complete the INMP forms due to confusion over the “same crop type” and “harvested yield” reporting requirements described above. Specifically, nurseries often grow tens to hundreds of plant varieties, which may be considered different “crop types” and would require

¹ https://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/regulatory_information/#adopted

² The INMP forms require additional information, but this letter is specific to the sections of the INMP that have been reported as difficult for nurseries to complete. The other sections of the INMP should continue to be completed by nursery operators.

separate tracking and reporting of nitrogen applied (and may need further separation if each plant variety has different fertilizer inputs, irrigation types, and/or management practices). Additionally, nurseries are uncertain what units of harvested yield should be used that would be useful for calculating a nitrogen removed estimate. Unlike a more conventional crop where pounds of a fruit or nut are harvested and weighed, a nursery sells the entire plant in a container with the planting substrate. The containers, as well as the plants, can range in size from very small to very large.

Limited information currently exists to allow for nitrogen removed estimate calculations in nursery “harvested material” (e.g., pot substrates, plant tissue), which are needed to estimate the remaining nitrogen potentially available for leaching to groundwater. More research is needed in this area. Because of this information gap, the ILRP has not expected nitrogen removed (R) estimates for nurseries be calculated by coalitions. Without R calculations, coalitions have also not been able to determine nursery outliers.

In response to the feedback on the difficulty of using the existing form for nurseries as well as the difficulty of estimating R by coalitions, staff began working on a nursery-specific INMP and provided some informal guidance. Staff’s guidance directed nursery members to complete those portions of the INMP Forms that are possible to complete and submit partial INMP Summary Reports to the coalitions.

Staff have evaluated the sections of the INMP Forms reported as problematic to nurseries (crop type, production unit, and harvested yield) as well as the coalition AMPINARs and **are providing the following updated guidelines so that the INMP Forms can be completed and information reported in AMPINARs:**

(1) Member INMP Forms

Crop Type – For the purposes of the INMP Forms, each nursery can determine what is the best plant grouping to equate to “crop type” for reporting nitrogen use, as long as (a) the chosen grouping is defined on each INMP Form, and (b) all nitrogen sources at the nursery are included on each INMP Form.

For example, the simplest grouping definition would be one grouping for the entire nursery as “nursery plants” and report all nitrogen used on all plants at the nursery in one grouping. Alternatively, the nursery could choose to break it down into multiple groupings, such as annuals, perennial herbaceous, perennial woody shrubs, trees, and indoor houseplants. If genus or species is what works best for the nursery, this could be used as well. These are just a few examples and do not represent all the plant grouping possibilities that nurseries can use.

Harvested Yield & Production Unit – For the purposes of the INMP Forms, nurseries should use a quantity production unit, such as the number of plants or number of containers. If the nursery has the ability to break down the number of units per size groupings, this can be added to the INMP Forms.

The harvested yield should include all plants that were removed from the operation

during the reporting year, such as through sale or discarding of waste materials. Waste materials that are not removed from the operation (e.g., collection in a compost pile or other waste pile that remains on-site) should not be counted in the harvested yield.

(2) Coalition AMPINARs

The AMPINARs must contain the applied nitrogen, crop type, production unit, and harvested yield data provided by nurseries.

Based on the above information and guidance, **I am requiring nurseries to complete the existing INMP Forms and coalitions to report on the INMP Summary Report data using the guidance as described above.** Please notify all member nurseries that this applies to the 2024 crop year and future crop years moving forward. This also applies to the coalition AMPINARs for the 2024 crop year.

ILRP staff are continuing work on nursery-specific INMP Forms that should increase usability of the forms and resulting data. Staff will continue to solicit input throughout the process from nursery operators, nursery fertilizer/water quality subject matter experts and researchers, other related governmental agencies, and coalitions. The nursery INMP project is a work in progress and the INMP Forms as well as the guidelines set forth in this letter may change as the project evolves.

For questions about this letter, please contact Sue McConnell at sue.mcconnell@waterboards.ca.gov.

Sincerely,

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Date: 2023.09.08 14:31:35
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