

**STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION**

STAFF REPORT FOR REGULAR MEETING OF DECEMBER 8-9, 2016
Prepared on November 8, 2016

ITEM NUMBER: 12

SUBJECT: Status of Draft 2017 Agricultural Order, Order No. R3-2017-0002, also known as Ag Order 3.0

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KEY INFORMATION

Location: Central Coast Regional Boundaries

Discharge Type: Discharge to surface waters and groundwater from commercial, irrigated agricultural operations

Existing Orders: Order No. R3-2012-0011 and associated Monitoring and Reporting Programs

This Action: Informational

SUMMARY

This staff report summarizes draft Ag Order 3.0 and its associated Monitoring and Reporting Programs and public outreach efforts to date.

Draft Ag Order 3.0 and its associated Monitoring and Reporting Programs reflect public dialogue with the Water Board, outreach efforts with stakeholders, internal discussions with technical staff and legal counsel, and staff's ongoing analysis of water quality data and lessons learned from the existing Ag Order (Ag Order 2.0, adopted in 2012). Staff has made every effort to incorporate input from the Water Board during public meetings, as referenced throughout this staff report, recognizing that the Water Board will make its final decision and provide final direction at the scheduled public hearing on March 7-9, 2017, after considering all public comments.

This item is an informational item only. Draft Ag Order 3.0 is currently posted for public comment, and comments are due by January 3, 2017. The draft documents can be accessed by clicking the DRAFT AGRICULTURAL ORDER in the ANNOUNCEMENTS section of the Central Coast Water Board website provided below:

<http://www.waterboards.ca.gov/centralcoast/>

Draft Ag Order 3.0 is color-coded and uses underline and strikeout for ease of identifying changes relative to Ag Order 2.0.

DISCUSSION

The current Agricultural Order No. R3-2012-0011 (Ag Order 2.0) is a waiver of waste discharge requirements that will expire on March 14, 2017. At the July 2016 meeting, staff presented an informational item regarding the process and timing of replacing Ag Order 2.0 to the Central Coast Water Board ([agenda item 6](#)). Staff provided a summary of pending legal issues likely to affect the Central Coast Water Board's future agricultural orders. Staff also provided a summary of proposed changes to the current order as well as an anticipated timeline that included outreach efforts and regular updates to the board. The proposed timeline included a goal of posting for public comment the draft Ag Order 3.0 by November 15, 2016. Draft Ag Order 3.0 was posted on November 1, 2016.

Staff held several outreach events in August 2016 following the July Board meeting discussion. The outreach efforts included webcast meetings with agricultural technical service providers, environmental and environmental justice advocates, California Department of Food and Agriculture, and California Department of Pesticide Regulation. Staff also hosted two public workshops, one in the northern and another in the southern part of the region; the workshops were well attended by growers and technical service providers.

Staff provided another informational item to the Central Coast Water Board at the September 2016 meeting as [agenda item 11](#), including proposed revisions to Ag Order 2.0. Among other topics, the Water Board gave feedback regarding the term of Ag Order 3.0 and the concept of expanding total nitrogen applied reporting requirements.

Through our outreach efforts, public dialogue with the Water Board, and internal discussion with technical staff and legal counsel, staff has received varied recommendations, feedback, and concerns regarding the content of draft Ag Order 3.0 and associated Monitoring and Reporting Programs. Draft Ag Order 3.0 reflects these recommendations, feedback, and concerns as much as possible; where comments from various stakeholders were inconsistent, the language of the draft is intended to reflect the Water Board's primary mission to protect and restore water quality.

On November 1, 2016, staff notified interested parties that [draft Ag Order 3.0](#) and associated Monitoring and Reporting Programs were available for public review on our website. Staff has provided color-coded strikeout and underlined versions so the public can easily identify additions and deletions. Staff has also provided clean versions with the deletions removed and additions in standard black print. The November 1, 2016 document posting included the Notice of Opportunity to Comment and Notice of Public Hearing, draft Ag Order 3.0, Attachment A (Additional Findings) to draft Ag Order 3.0, the Monitoring and Reporting Program for tier 1 ranches, the Monitoring and Reporting Program for tier 2 ranches, and the Monitoring and Reporting Program for tier 3 ranches. Staff is providing a 63-day public comment period, inviting written comments beginning November 1, 2016, and ending January 3, 2017.

Following the release of draft Ag Order 3.0 and associated documents, staff engaged in a second phase of outreach efforts with interested parties. At the time of writing this staff report, the following outreach events were completed or scheduled:

1. November 7, 2016: Workshop at San Luis Obispo County Farm Bureau in Cambria
2. November 9, 2016: Webcast meeting with Monterey County Farm Bureau, Grower-Shipper Association of Santa Barbara and San Luis Obispo Counties, Grower Shipper Association of Central California, Preservation Inc., Central Coast Groundwater Coalition
3. November 10, 2016: Workshop at Farm Bureau of San Luis Obispo County in San Luis

Obispo

4. November 14, 2016: Webcast discussion with staff of CalEPA, California Department of Food and Agriculture, and California Department of Pesticide Regulation
5. November 16, 2016: Public workshop in Santa Maria
6. November 28, 2016: Public workshop in Salinas
7. November 29, 2016: Workshop at Monterey County Farm Bureau in Salinas

PROPOSED CHANGES

The discussion below summarizes many of the changes to Ag Order 2.0 that result in the requirements described in draft Ag Order 3.0.

Term of Order

Staff is proposing that Ag Order 3.0 have a term of three years; this is consistent with the Water Board's discussion at the September 2016 board meeting, [agenda item 11](#). Ag Order 2.0 had a term of five years, consistent with the maximum term for a waiver of waste discharge requirements. A three-year term balances the need for time to allow legal proceedings to run their course with the urgency for moving on toward compliance with existing decisions and greater water quality protection.

All Ranches

eNOI requirements

All growers must enroll all operations and ranches using the electronic notice of intent (eNOI). In Ag Order 2.0, growers updated the eNOI annually by October 1 of each year. Draft Ag Order 3.0 only requires updates when a change affecting an answer to a question in the eNOI occurs. This change is in response to growers' requests.

Draft Ag Order 3.0 requires that within 30 days of a change in control or ownership of a ranch or operation, the former responsible party must notify the succeeding owner and operator about the requirement to enroll in the order.

See Condition 55.d. and e. in draft Ag Order 3.0 for the changes discussed above.

Staff edited the eNOI form wording to provide clarity regarding when chlorpyrifos or diazinon was last used. This change will result in a more streamlined approach to ranch tier assignments.

The eNOI form section requiring growers to name surface waters adjacent to the enrolled ranch has been removed from the form. This information is used by staff for ranch tier assignments. In many cases, growers do not know the names of the waterbodies adjacent to the ranch. Staff assesses the waterbodies adjacent to the enrolled ranch using GIS software; growers will no longer need to provide this information.

Surface Receiving Water Monitoring and Reporting

The Preservation Inc. Cooperative Monitoring Program will continue to conduct surface water monitoring on behalf of growers. The details of the proposed monitoring requirements are outlined in the Monitoring and Reporting Programs (MRP) for tier 1, tier 2, and tier 3 ranches; the surface receiving water monitoring requirements are identical in each MRP.

The draft Ag Order 3.0 MRP surface water monitoring requirements are largely the same as the amended MRPs issued by the Executive Officer on August 22, 2016 (Amended MRPs). One additional monitoring requirement in the draft Order 3.0 MRPs but not in the Amended MRPs is the requirement to monitor one additional neonicotinoid pesticide, clothianidin, resulting in a total of six neonicotinoids that must be monitored. As the Board learned from an information item in the [Executive Officer's Report](#) for the May 2015 Central Coast Water Board meeting, California Department of Pesticide Regulation (DPR) data indicate a steady increase in neonicotinoid use from 2010 to 2014 in the Central Coast Region. Clothianidin use has increased in Santa Barbara County from 138 pounds of active ingredient in 2010 to 911 pounds in 2014; in Monterey County clothianidin use has increased from 160 pounds in 2010 to 4,426 pounds in 2014. DPR and Granite Canyon Marine Pollution Studies Laboratory conducted a research project assessing toxicity in the Salinas Valley using the indicator species *Chironomous*, which is sensitive to neonicotinoid pesticides. The resulting data indicates that 67% of the sites monitored were toxic to *Chironomous*. Since a summary of this information was presented to the Board at the May 2015 Central Coast Water Board meeting, Board members have continued to expressed their wish for staff to align monitoring requirements with current pesticide use and corresponding toxicity indicator species. The Amended MRPs and the proposed MRPs for draft Ag Order 3.0 both require water toxicity using the indicator species *Chironomous*, which is consistent with Granite Canyon Marine Pollution Studies Laboratory [recommendations](#).

During the three years covered by the draft order 3.0 MRPs, the proposed surface receiving water monitoring and reporting requirements for 2018 are the same as those proposed for 2017, except for the one change noted above.

The proposed surface receiving water monitoring and reporting requirements for 2019 do not include monitoring requirements for pesticides and a few other chemicals, including organophosphates (chlorpyrifos and diazinon), pyrethroids, neonicotinoids, herbicides, and metals. Staff concludes that two years of this data (2017 and 2018), in conjunction with other monitoring requirements, is sufficient to meet monitoring and reporting goals. Development of Ag Order 4.0 will begin shortly after Ag Order 3.0 adoption, with an anticipated 4.0 approval in March 2020. Lab analysis of these chemicals is among the most expensive budget item of the Cooperative Monitoring Program; removing these requirements in 2019 allows the Cooperative Monitoring Program to spread the savings over the proposed three-year term of the order.

The previous Ag Order 2.0 MRPs (prior to 2017 requirements) required pesticide monitoring four times in the term of the five-year order; the proposed Ag Order 3.0 MRPs significantly increase pesticide monitoring frequency requirements relative to the previous MRPs. Toxicity testing using the indicator organisms sensitive to pesticides, including *Ceriodaphnia* (sensitive to organophosphates), *Hyalella* (sensitive to pyrethroids), and *Chironomous* (sensitive to neonicotinoids) is required during multiple seasons in every year of the proposed order, as is the potential to require a toxicity identification evaluation (TIE) as directed by the Executive Officer. To offset the additional costs incurred by these proposed changes, staff is proposing the removal of other monitoring requirements, such as toxicity testing using fathead minnow and monitoring for organochlorine and carbamate pesticides. The infrequency in exceedance of benchmarks of these parameters also justifies their removal from the proposed MRPs.

The monitoring requirements proposed in the draft Ag Order 3.0 MRPs are intended to collect data necessary to understand the effects on and risks to human health and the environment from chemicals applied to agricultural operations. The data will assist staff in developing

appropriate regulatory mechanisms in future ag orders. The benefits to be obtained from this data outweigh the burden, including costs, of these additional monitoring requirements.

See Part 1 of any of the MRPs, as well as Table 1 and Table 2 (located towards the end of each MRP) for surface receiving water monitoring and reporting requirements.

Groundwater Monitoring

The draft Ag Order 3.0 MRP groundwater monitoring requirements are largely the same as the Amended MRPs. Staff is proposing additional language to the draft Ag Order 3.0 MRPs clarifying that a cooperative monitoring effort could fulfill the groundwater monitoring and reporting requirements on behalf of growers. The language included in the draft Ag Order 3.0 MRPs is as follows:

Groundwater monitoring may be conducted through a cooperative Monitoring and Reporting Program on behalf of growers, or Dischargers may choose to conduct groundwater monitoring and reporting individually. Qualifying cooperative groundwater Monitoring and Reporting Programs must implement the groundwater monitoring and reporting requirements described in this Order, unless otherwise approved by the Executive Officer. An interested person may seek review by the Central Coast Water Board of the Executive Officer's approval or denial of a cooperative groundwater Monitoring and Reporting Program.

At the time of this staff report's development, the Santa Rosa Creek Valley Cooperative Groundwater Monitoring Program has submitted a draft cooperative groundwater monitoring proposal, and the Central Coast Groundwater Coalition (CCGC) indicated it will likely also submit a proposal.

The draft Ag Order 3.0 MRP groundwater monitoring requirements include two rounds of sampling in 2017 for: 1) all domestic wells and 2) the primary irrigation well. Samples must be collected from March-June and again from September-December 2017. Groundwater monitoring is not required in 2018 or 2019. Recall that the previous Ag Order 2.0 MRPs required the same monitoring frequency in the five-year term of the order for growers implementing individual groundwater monitoring requirements; most of the individual groundwater samples were collected by 2014.

See Part 2 of any of the MRPs as well as Table 3 (located towards the end of each MRP) for groundwater monitoring and reporting requirements.

Farm Plans

Ag Order 2.0 required all growers, by a specified date, to develop a farm water quality management plan, install backflow prevention devices if using any sort of chemigation, and properly destroy abandoned wells. Draft Ag Order 3.0 has no dates associated with these requirements because the dates in Ag Order 2.0 have passed; however, the requirements have been retained.

See Condition 44 of draft Ag Order 3.0 for Farm Plan requirements.

See Conditions 31 and 32 of the Ag Order 3.0 for backflow prevention and well abandonment requirements, respectively.

Enrollment Terminations

Ag Order 2.0 did not clearly state when required information must be submitted in the event of ranch termination. Consequently, a grower might terminate and vacate a ranch months before required information was due. Draft Ag Order 3.0 requires growers to submit required data and information within 30 days of terminating a ranch, unless otherwise approved by the Executive Officer. For example, if a grower terminates a ranch and was required to track and report total nitrogen applied by March 1st, the total nitrogen applied report must be submitted within 30 days of the termination date.

See Condition 61 of draft Ag Order 3.0 for termination requirements.

Tier 2 and Tier 3 Ranches

Annual Compliance Forms

Draft Ag Order 3.0 requires tier 2 and tier 3 ranches to electronically submit an annual compliance form (ACF) and update the form annually. Ag Order 2.0 had the same requirement.

Growers have requested that the required update be scheduled for March of each year, rather than October of each year as was required in Ag Order 2.0. In response, draft Ag Order 3.0 incorporates that request and requires that the ACF be updated each March 1st, beginning in 2018.

Staff is proposing to remove three sections of the ACF:

- Section B, irrigation water concentration information. Staff is proposing an expansion of the total nitrogen applied reporting requirement. The total nitrogen applied form includes reporting of irrigation water nitrate concentration. Requiring this information on the ACF would be redundant.
- Section C, risk assessment of loading nitrogen to groundwater. In Ag Order 2.0, this section was used to assess whether a ranch was required to report total nitrogen applied and develop an irrigation and nutrient management plan (INMP). In Ag Order 3.0, staff is proposing that the total nitrogen applied and INMP requirements be based on a different set of criteria (discussed below); Section C, therefore, is no longer necessary.
- Photo monitoring requirement. Staff is proposing to remove photo monitoring requirements in draft Ag Order 3.0. This section is therefore not necessary. Staff has informed a wide spectrum of stakeholders of this proposal during Water Board meetings and other public outreach events since July 2016. Staff has consistently received positive feedback for this proposal.

See Condition 67 of draft Ag Order 3.0 and Part 3 of the MRP for tier 2 and MRP for tier 3 ranches for Annual Compliance Form requirements.

Total Nitrogen Applied

Draft Ag Order 3.0 requires that tier 2 and tier 3 ranches growing any crop with a high potential to load nitrogen to groundwater (high-risk crops) annually submit a total nitrogen applied report for all crops grown on that ranch. This requirement is consistent with the Water Board's discussion at the September 2016 Board meeting, [agenda item 11](#). Specified ranches must track total nitrogen applied from January 1 through December 31 of each year, then report total nitrogen applied by the following March 1st. The first report would be due March 1, 2018.

The list of high-risk crops was defined in Ag Order 2.0, Attachment A: Definitions. Staff is proposing to use the identical definition in draft Ag Order 3.0. The list is as follows:

beet, broccoli, cabbage, cauliflower, celery, Chinese cabbage (napa), collard, endive, kale, leek, lettuce (leaf and head), mustard, onion (dry and green), spinach, strawberry, pepper (fruiting), and parsley.

In Ag Order 2.0, the total nitrogen applied requirement is triggered by a “high” risk determination in Section C of the annual compliance form. Ranches with a high-risk determination reported total nitrogen applied for all crops grown on the ranch, resulting in over 1,200 reports received from about October 2014 through October 2015. Different growers reported total nitrogen applied to the same crop ranging from single digit pounds per acre to hundreds of pounds per acre, and illustrated widespread occurrences of total nitrogen applied that greatly exceeded crop requirements. This variability was reported not only for high-risk crops, but other crops as well; this data is an important insight into fertilizer nitrogen use, giving staff necessary information to propose measures addressing nitrate contamination in surface waters and groundwater.

Staff estimates that the change in the requirement will result in an increase of required ranches reporting from the current 600 ranches to about 1,700 ranches, representing a reported acreage increase from about 97,000 acres currently required to 230,000 acres proposed in draft Ag Order 3.0.

Ag Order 2.0 requires growers to track total nitrogen applied from September 1st to August 31st each year, then submit the total nitrogen applied report by the next October 1st. As a response to grower’s requests, draft Ag Order 3.0 proposes a reporting period from January 1st to December 31st, with total nitrogen applied reports due on March 1st.

See Conditions 68 and 69 in draft Ag Order 3.0 and Part 2 of the MRP for Tier 2 and MRP for Tier 3 ranches for total nitrogen applied reporting requirements.

Tier 3 Ranches

Individual Surface Water Discharge Monitoring and Reporting

Ag Order 2.0 required tier 3 ranches with either stormwater or irrigation water discharges to a surface water to conduct monitoring and reporting of the discharge. The ranches were required to develop and submit a Sampling and Analysis Plan (SAP) and Quality Assurance Project Plan (QAPP) to the Executive Officer for approval, prior to conducting monitoring by December 1, 2013. Monitoring and reporting results were due each October 1st, beginning in 2014.

Draft Ag Order 3.0 continues the required monitoring and reporting of individual surface water discharges from tier 3 ranches. Any newly enrolled tier 3 ranch must submit a SAP and QAPP by March 1, 2018. For tier 3 ranches newly enrolled after March 1, 2018, a SAP and QAPP must be submitted on a schedule directed by the Executive Officer.

See Condition 70 and 71 of the draft Ag Order 3.0 and Part 5 of the MRP for tier 3 ranches.

Irrigation and Nutrient Management Plan

Ag Order 2.0 required tier 3 ranches with a high risk of loading nitrate to develop and implement an irrigation and nutrient management plan (INMP). The high-risk determination was assessed using Section B of the Annual Compliance Form. These ranches were not required to submit the INMP; rather, they were required to submit an INMP Effectiveness Report by October 1, 2016. Draft Ag Order 3.0 requires these same growers to update their INMP, as necessary, implement

their INMP, and submit an updated Effectiveness Report each March 1st, beginning in 2018. The required information is the same as that required in Ag Order 2.0, and is described in the MRP for tier 3 ranches.

Draft Ag Order 3.0 requires newly enrolled tier 3 ranches to develop and implement an INMP, as directed by the Executive Officer. For newly enrolled tier 3 ranches, the Executive Officer will use the risk assessment established in Ag Order 2.0 and outlined in Section C of the Annual Compliance Form to make this determination. Required tier 3 ranches must develop and implement an INMP within 18 months of enrolling the ranch, then submit an INMP Effectiveness Report each March 1st thereafter.

See Condition 72-74 of draft Ag Order 3.0, and Part 6 of the MRP for tier 3 ranches.

Water Quality Buffer Plan

Ag Order 2.0 required tier 3 ranches adjacent to a surface water listed on the 2010 Clean Water Act section 303(d) list for sediment, turbidity, or temperature to draft, submit, and implement a water quality buffer plan or alternative plan demonstrating water quality protection. Draft Ag Order 3.0 requires these same growers to submit a water quality buffer plan status report (WQBP Status Report) or an Alternative to WQBP Status Report. The status report is due annually, beginning March 1, 2018. Growers must use the form developed and distributed during Ag Order 2.0, or submit an alternative status report in a format approved by the Executive Officer. The required information is the same as that required in Ag Order 2.0 and is described in the MRP for tier 3 ranches.

Draft Ag Order 3.0 requires newly enrolled tier 3 ranches that are adjacent to a 303(d) listed water for sediment, turbidity or temperature to comply with the water quality buffer plan requirement. Newly enrolled tier 3 ranches must submit a plan, or alternative, within 18 months of enrolling the ranch, and then submit a status report each March 1st, thereafter.

See Condition 75-77 of the draft Ag Order 3.0, and Part 7 of the MRP for tier 3 ranches.

Effective Control of Discharges

Ag Order 2.0 required tier 3 ranches to effectively control discharges of pesticides, toxic substances, sediment, turbidity, nutrients, and nitrate to groundwater by specified dates outlined in Conditions 78-83 of the order. The specified dates have now passed. Draft Ag Order 3.0 does not contain new dates in these conditions, but includes language (shown in underline) that "...Tier 3 Dischargers must continue to effectively control..." these discharges.

See Conditions 79-84 of draft Ag Order 3.0.

CONCLUSION

Staff has incorporated input from a variety of sources (stakeholders via outreach, Central Coast Water Board members, data from Ag Order 2.0 implementation, etc.) in developing draft Ag Order 3.0. Staff is currently conducting an extensive second phase of outreach efforts to communicate draft Ag Order 3.0 proposed changes and inform stakeholders of the opportunity to comment. Staff looks forward to receiving additional feedback from Board members, interested parties, and the public during this discussion item.