

Letter BO: Adam Secondo, Secondo Farms L.P. (June 22, 2020)**Letter BO**

From: [Secondo Farms](#)
To: AgNOI_WB@Waterboards
Subject: Comment letter for 4.0
Date: Monday, June 22, 2020 3:13:15 PM

EXTERNAL:

Hi,

- BO-1 I am Adam Secondo a 4th generation farmer in the Salinas Valley that has been on the same ground for close to 100 years. My operation is Secondo Farms L.P.. on reviewing 4.0 I have lots of questions. These are the main ones.
- BO-2 1)Regarding the riparian areas, setbacks and sediment plans. I have levies that are roughly 10+ feet high and 15+/- feet wide that are non vegetated. This stops runoff From my fields and keeps sediment on my property. So I do not understand why I need a riparian area when runoff/sediment from my fields cannot reach the Salinas river which I farm next to? Is there a review process for discussing this? Also my levies are kept un vegetated to keep the risk from rodent holes on it down. These holes present an issue and risk to the integrity of the levy in high water situations and a hole can cause a blowout and flooding. If for some reason I am required to vegetate my levy then the agency calling for it to be vegetated should take responsibility for damages that may occur. So again I hope there is a review process that can look at issues like this and allow variances.
- BO-3
- BO-4 2) fertilizer limits. On this in the roughly 100 years we have farmed the ground we have not had any ag or domestic well go over the current drinking water limits. Due to this is seems like we have done something right so why am I getting limited when my area is not having issues? Also with crop limits and the a total yearly limit it some slide it should just be a yearly total and let me decide how to best use what is allotted. Looking at lettuce 40 inch bed 2 line iceberg vs 80inch bed 6 line romaine is 2 very different crops. Why do they have the same amount of N units? The 80 inch 6 line beds have 50% more plants? And again is there a review process? Next is the question of what happens why an unexpected issue such as the current covid situation happens? We had crops walked by due to market conditions. Thus no N units removed. Also the same thing could happen in a flood situation. Where the 1st crop is not harvested. We plant based on the assumption of a full harvest when this doesn't happen soon it seems we may loose the ability to fertilize a 2nd crop. The 1 st crop would not breakdown fast enough in most situations to be useful in the 2nd crop. So in this situation when the 1st crop is lost due to unanticipated circumstances is there a process to get a waiver and get N units for a second crop? Otherwise you are looking at a potential situation where the 1st crop is lost and the 2nd can't be planted and mass shortages of lettuce,cold crops and other crops the valley grows for the consumer. Please keep in mind what the stores have looked like with covid and what they would look like if the Salinas valley didn't produce for the supply chain for 6 to 9 months. How many consumers would be hurt by this. On the financial side my employees would end up laid off for over 6months and odds are my business would never restart.
- BO-5
- BO-6
- BO-7
- BO-8 There is a lot that I am unclear of in this plan. After ag waiver 1.0 or 2.0 I was told it had to be a 5 year plan not a 30 year plan. At that time there was a idea of a 30 year goal. So why did we get a 30year plan now when it could not be done before?
- BO-9 These are my main concerns and worries. Please whatever is done make sure there is a review process to go through for those of us that have taken care of our areas or have issues that are not accounted for in the wide reaching plan.

Thank You,
 Adam Secondo
 Secondo Farms L.P.

Response to Comment BO-1

The CCWB acknowledges the commenter's background and interests.

Response to Comment BO-2 through BO-3

This comment is responded to in Master Response 2.8.8.

Response to Comment BO-4

This comment is summarized and responded to in the following Master Responses: 2.3.10 and 2.4.3.

Response to Comment BO-5

This comment is summarized and responded to in Master Response 2.3.10.

Response to Comment BO-6

This comment is summarized and responded to in Master Response 2.4.2.

Response to Comment BO-7

This comment is summarized and responded to in the following Master Responses: 2.9.1 and 2.4.2.

Response to Comment BO-8

The comment is noted.

Response to Comment BO-9

Thank you for your comment.

Letter BP: Bill and Teresa Hinrichs, Ranchita Canyon Vineyard (June 22, 2020)**Letter BP**

From: [Bill Hinrichs](#)
To: AgNOI_WB@Waterboards
Subject: "Comments on Draft Ag Ord"
Date: Monday, June 22, 2020 1:19:54 PM

EXTERNAL:

June 22, 2020

Matthew T. Keeling, Executive Officer
 Central Coast Regional Water Quality Control Board
 895 Aerovista Place, Suite 101
 San Luis Obispo, CA 94301

Delivered via electronic mail to AgNOI@waterboards.ca.gov

Dear Executive Officer Keeling:

- BP-1 We are a small family operated vineyard and winery, with about 74 acres planted in wine grapes as part of our total 320 acres. Our location is about 4 miles east of San Miguel.
- Our vineyard uses drip irrigation, which is applied minimally for cost savings and wine grape quality. Petiole samples are taken to ensure nutrients are only applied when necessary. Cover crops are used to supply some nutrients, to help with pest management, and for erosion control.
- We have been Vineyard Team members since the organization was formed, and benefit from all the information that is provided.
- Water quality is important to our family operation, especially since we live on the property and rely on the water from our wells.
- BP-2 The current Draft, EIR, and Attachments are long (900 pages), complicated, and confusing with different reporting and timelines for different constituencies.
- BP-3 While the staff outreach webinars did a good job of explaining the priority areas in their outreach webinars, details on the annual reporting were insufficient. If the annual reporting can not be described in a 2 hour webinar, then the content of those requirements should be seriously reconsidered.
- The reporting is overly burdensome, expensive for growers and staff, and will not improve water quality. The extent and scope of information required is so great, that it is doubtful that staff could analyze and act on the information in a meaningful and timely way to feedback to growers for improved water quality.
- BP-4 In addition, the Draft's economic analysis is insufficient and does not account for land fallowing, hiring professionals, loss of production, and several other costs associated with the grower requirements of this Draft.
- Additional costs for the small family farm can help to make them extinct.

Response to Comment BP-1

Thank you for your comment.

Response to Comment BP-2

This comment is summarized and responded to in the following Master Responses: 2.1.5; 2.1.6; 2.1.8; 2.1.4; and 2.2.2.

Response to Comment BP-3

The comment is noted. The CCWB appreciates the comment that webinars have been helpful to the commenter. In addition, this comment is summarized and responded to in the following Master Responses: 2.1.5; 2.1.6; 2.1.8; 2.1.4; and 2.2.2.

Response to Comment BP-4

The comment expresses concern that the economic analysis for DAO 4.0 does not account for land fallowing, hiring professionals, loss of production, and other costs associated with grower requirements. In response to concerns related to potential adverse economic impacts from DAO 4.0, refer to the following Master Responses: 2.9.1 and 2.1.7.

Response to Comment BP-5

The comment expresses concern that DAO 4.0 considers only the geographic location of an operation, and not the operational risk to water quality. In response to comments related to water quality, please refer to Master Response 2.1.7.

Response to Comment BP-6

The comment asserts that vineyards are a low risk to water quality and requests that the CCWB adjust compliance recommendations for vineyards. This comment is summarized and responded to in Master Response 2.2.2.

Response to Comment BP-7

The comment requests that because vineyards meet the 2050 nitrogen loading threshold, they should be exempt from monitoring and reporting related to groundwater. This comment is summarized and responded to in Master Response 2.3.5.

Response to Comment BP-8

The comment requests that monitoring and reporting requirements for vineyards be adjusted because they do not have tailwater and maintain winter cover. This comment is summarized and responded to in the following Master Responses: 2.2.2; 2.3.10; and 2.7.2.

Response to Comment BP-9

The comment expresses concern that expanding buffer zones would disrupt soils and create additional risk to water quality. Please note that RAO 4.0 does not include the riparian or operational setback components. This comment is responded to in Master Response 2.8.8.

Letter BQ: Brett Ferini, Rancho Laguna Farms (June 22, 2020)**Letter BQ**

From: [Brett Ferini](#)
To: AgNOI_WB@Waterboards
Subject: Comments of Draft Ag Order 4.0
Date: Monday, June 22, 2020 4:18:26 PM
Attachments: [AG Order 4.docx](#)

EXTERNAL:

Here are my comments. Thank you.

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Brett Ferini
Rancho Laguna Farms

AG Order 4.0 Comments

BQ-1 This AG order has serious flaws and overlooks scientific data. It appears to be a vast overreach and does not provide information that suggests it will accomplish what it is set out to accomplish. This order will make it less favorable to farm in the Central Coast resulting in loss of employment for thousands and the degradation of arable farmland. Due to heavy urban development arable land is already a diminishing resource that supports the community and feeds the world.

BQ-2 The nitrogen limits for commodities will decrease the Valley's efficiency by decreasing the crop rotations per year. This ordinance will make the soil less productive year over year and will also take arable land away because of the broad water way buffers. So, the valley will have less land and less rotations causing land prices to drop drastically. This decrease in value will not just affect farmers, but their employees and the community. With a decrease in productivity comes a decrease in labor needed. There will be a labor surplus and many families will struggle to find enough work to support themselves. The school districts in the are will also be affected. The loss in property tax revenue will be significant. Currently the arable land in the valley are valued on the higher end of agricultural land in the state and country because of the ability to grow multiple crop cycles per year. As the rotations are decreased rent will go down and many landowners will not be able to afford the mortgages or property tax resulting in a deflation in land costs through the region.

BQ-3 Many small and growing businesses will not be able to afford the new regulatory costs that will come along with this Order. Even before this order regulatory costs have increased 795% in the past ten years. Agriculture workers already make up less than 1% of the country and this will surely push more into other states and countries. As a California grower we take pride in our land and want it to be here for our future generations. I am a 5th generation farmer and have seen firsthand the extent this valley goes through to preserve the blood of our community. This regulation does not take any science or proven data and is forcing the hard-working people in our valley to move or get out of farming all together. I hope the order is modified greatly and takes the professional growers' concerns seriously and works with us to come up with a scientifically sound and successful Order.

Sincerely,

Brett Ferini

Rancho Laguna Farms

Response to Comment BQ-1

This comment is summarized and responded to in the following Master Responses: 2.9.1; 2.1.1; and 2.1.2.

Response to Comment BQ-2

This comment is summarized and responded to in the following Master Responses: 2.9.1 and 2.3.3.

Response to Comment BQ-3

This comment is summarized and responded to in the following Master Responses: 2.9.1 and 2.1.1.

Letter BR: Brian Driscoll, Driscoll Strawberry Affiliates (June 22, 2020)**Letter BR**

From: [Brian Driscoll](#)
To: AgNOI_WB@Waterboards
Subject: Comments of Draft Ag Order 4.0
Date: Monday, June 22, 2020 7:12:10 PM
Attachments: [DBA Comments on Draft Ag Order 4.0 062220.pdf](#)

EXTERNAL:

To whom it may concern,

Please see attached comment letter.

Thank you,

Brian

DRISCOLL BUSINESS AFFILIATES, LLC

P.O. Box 1115
Aromas, California 95004-1115

June 22, 2020

Mr. Matthew T. Keeling, Executive Officer
Central Coast Regional Water Quality Control Board
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401-7906

RE: Comments on Draft Ag Order 4.0

Dear Mr. Keeling:

BR-1

I have been following the progress of this Board's expansion of requirements to the Conditional Waiver of Waste Discharge Requirements for Dischargers from Irrigated Lands ("Ag Order 4.0") and am deeply concerned with the staff's draft Ag Order 4.0. The draft Ag Order 4.0 will negatively affect our prime farmland. The draft Ag Order 4.0 significantly expands previous requirements for agricultural operations to include requirements for irrigation, nutrient, pesticide management for surface and groundwater, limits on fertilizer applications not supported by agronomic science and expanded riparian habitat management.

BR-2

Driscoll Strawberry Affiliates currently owns over 200 acres of prime farmland in the Pajaro Valley. We require our tenants to farm in the most responsible manner to maintain the quality of our water wells and farmland.

BR-3

We are extremely concerned about the proposed riparian setbacks and loss of prime farmland and increased cost of management of these setbacks, as well as the substantial increase in food safety risks and conflicts with food safety measures. We question the authority of the Central Coast Regional Water Quality Control Board to force the taking of lands for water quality compliance without compensating the landowner. This loss of prime farmland production area will reduce rental income and definitely overall land values, resulting in an erosion of the tax base upon annual appeals with county tax assessors. Riparian setbacks should be a best management practice that is elected by the farm, and incentivized, not coerced.

BR-4

We are very concerned with the economic impacts that the draft Ag Order 4.0 presents to our farmland, land use, agricultural resources and especially jobs, by increasing levels of regulation and mitigation actions. The economics of the draft Ag Order 4.0 have not been fully evaluated in detail in Draft Environmental Impact Report (DEIR). The expected loss of our productive farmlands due to mitigation measures will have an absolute impact on property tax revenues and continued use of our lands.

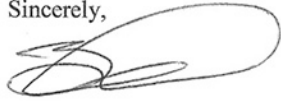
Mr. Matthew T. Keeling
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BR-5

I urge the Board to listen to farmers' feedback and suggestions, and incorporate that feedback into the draft Ag Order 4.0. We feel strongly that water quality improvements can be realized by using a balanced approach and working with farmers and agriculture landowners. Any future Ag Orders must be designed with achievable objectives and must be a transparent and collaborative process that utilizes agricultural stakeholders. The loss of farmer cooperation will be counterproductive to improving water quality.

Thank you for considering our views.

Sincerely,



Brian Driscoll
Member Manager

Response to Comment BR-1

Thank you for your comment. The CCWB acknowledges the commenter's concerns regarding the implementation of DAO 4.0. In addition, this comment is summarized and responded to in the following Master Responses: 2.8.8; 2.1.2; 2.3.10; and 2.3.3.

Response to Comment BR-2

The CCWB acknowledges Driscoll Strawberry Affiliates' background and interests.

Response to Comment BR-3

The comment expresses concern regarding riparian setbacks. Please note that DAO 4.0 does not include the riparian and operational setback components. This comment is responded to in Master Response 2.8.8.

Response to Comment BR-4

The comment expresses concern that DAO 4.0 would have adverse impacts on farmland, agricultural resources, land use, and jobs. In addition, the comment asserts that the DEIR did not fully evaluate such impacts. This comment is summarized and responded to in Master Response 2.9.1. Please also refer to Master Response 2.10.

Response to Comment BR-5

This comment is summarized and responded to in Master Response 2.1.8.

Letter BS: Brian Driscoll, Berry Mist Farms, LP (June 22, 2020)**Letter BS**

From: [Brian Driscoll](#)
To: AgNOI_WB@Waterboards
Subject: Comments of Draft Ag Order 4.0
Date: Monday, June 22, 2020 7:12:49 PM
Attachments: [BMF Comments on Draft Ag Order 4.0 062220.pdf](#)

EXTERNAL:

To whom it may concern,

Please see attached comment letter.

Thank you,

Brian

BERRY MIST FARMS, LP
P.O. BOX 1115
AROMAS, CA 95004



June 22, 2020

Mr. Matthew T. Keeling, Executive Officer
 California Regional Water Quality Control Board, Central Coast Region
 895 Aerovista Place, Suite 101
 San Luis Obispo, CA 93401-7906

RE: Comments on Draft Ag Order 4.0

Dear Mr. Keeling,

BS-1

Thank you for the opportunity to comment on the draft "Ag Order 4.0" water quality regulations. I come from a farming family and we have been farming in the Pajaro Valley for over 100 years. In order to protect the water resources we rely on, and to simply be good farmers, we have continuously introduced best management practices to our farming operations. We also need to be able to run a successful business which is becoming increasingly more difficult as costs continue to skyrocket. I am a 4th generation farmer, my family lives here, we farm here, and we are the irrigated lands being regulated. Please consider our comments to your draft regulations.

We continue to adopt new tools and practices to increase our data tracking and efficiency as best management practices and new technologies emerge and become available at more affordable prices. Currently, we use the CropManage program to manage our nitrate use and irrigation. We also use an irrigation management tool called Hortau to manage our water use. We are constantly training our field managers and irrigators to ensure we are making irrigation and fertilization decisions to match plant demand. We will continue to learn and continue to improve, as efficiency goals are simply good farming practice.

BS-2

While I understand the water quality improvement goal of the "Ag Order 4.0" draft regulations, the burden of reporting, testing, added infrastructure and food safety hazards will undermine the spirit, effectiveness and practicality of our current best management practice efforts.

BS-3

My strawberry operation is about 50 acres of a 100 acre ranch our family owns. We are near the Lower Pajaro River which is impaired, and based on our location, I have estimated some of the costs associated with the draft regulations. With the increased reporting requirements, well testing, water trend monitoring and erosion management, plus the potential set-back because of our proximity to the Pajaro River, I think these

Mr. Matthew T. Keeling, Executive Officer
RE: Comments on Draft Ag Order 4.0
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Page 2

BS-3
cont.

↑ regulations could cost \$2,500 per acre. This increased cost is as much as the land rent! For me, it appears like the limited profit in growing strawberries is going to pay for water reporting with nothing left over for a return on investment. If, as a result of this draft regulation, our family decides to rent the ranch, any tenant is going to ask for a substantial reduction in rent due to the water reporting and setbacks. I think the cost of the draft regulations will result in a substantial loss in value to our farmland and will make strawberry production unviable for my family.

BS-4

↑ Please consider working with agriculture in a meaningful way to develop regulations that are practical, cost-effective and impactful. The draft regulations will generate a lot of data at a great cost and the irrigated lands may no longer exist as a result of your regulations. I understand the need to improve water quality, but I ask that you take the livelihood of my family and those that we employ into consideration in the creation of these rules.

Sincerely,



Brian Driscoll
Partner

Response to Comment BS-1

The CCWB acknowledges the commenter's background and interests. In addition, this comment is summarized and responded to in the following Master Responses: 2.1.8; 2.2.3; and 2.5.8.

Response to Comment BS-2

This comment is summarized and responded to in the following Master Responses: 2.8.8 and 2.1.5.

Response to Comment BS-3 through BS-4

This comment is summarized and responded to in the following Master Responses: 2.8.8; 2.9.1; 2.1.5; 2.1.8; 2.2.3; and 2.4.4.

Letter BT: Brian Driscoll, Robdon Properties, LLC (June 22, 2020)**Letter BT**

From: [Brian Driscoll](#)
To: AgNOI_WB@Waterboards
Subject: Comments of Draft Ag Order 4.0
Date: Monday, June 22, 2020 7:13:35 PM
Attachments: [RP Comments on Draft Ag Order 4.0 062220.pdf](#)

EXTERNAL:

To whom it may concern,

Please see attached comment letter.

Thank you,

Brian

ROBDON PROPERTIES, LLC

P.O. Box 1810
Freedom, California 95019-1810

June 22, 2020

Mr. Matthew T. Keeling, Executive Officer
Central Coast Regional Water Quality Control Board
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401-7906

RE: Comments on Draft Ag Order 4.0

Dear Mr. Keeling:

- BT-1 We have been following the progress of this Board's expansion of requirements to the Conditional Waiver of Waste Discharge Requirements for Dischargers from Irrigated Lands ("Ag Order 4.0") and am deeply concerned with the staff's draft Ag Order 4.0. The draft Ag Order 4.0 will negatively affect our prime farmland. The draft Ag Order 4.0 significantly expands previous requirements for agricultural operations to include requirements for irrigation, nutrient, pesticide management for surface and groundwater, limits on fertilizer applications not supported by agronomic science and expanded riparian habitat management.
- BT-2 Robdon Properties currently owns over 100 acres of prime farmland in the Pajaro Valley. We require our tenants to farm in the most responsible manner to maintain the quality of our water wells and farmland.
- BT-3 We are extremely concerned about the proposed riparian setbacks and loss of prime farmland with increased cost of management of these setbacks, as well as the substantial increase in food safety risks and conflicts with food safety measures. We question the authority of the Central Coast Regional Water Quality Control Board to force the taking of lands for water quality compliance without leaving the landowner with an economically viable use. This loss of prime farmland production use will reduce overall land values, resulting in an erosion of the tax base with annual appeals to county tax assessors. Riparian setbacks should be a best management practice that is elected by the farm operator and incentivized, not coerced.
- BT-4 We are also very concerned with the economic impacts that the draft Ag Order 4.0 presents to our farmland, land use, agricultural resources and especially jobs, by increasing levels of regulation and mitigation actions. The economic impacts of the draft Ag Order 4.0 have not been fully evaluated in detail in Draft Environmental Impact Report (DEIR). The expected loss of our productive farmlands due to mitigation measures will have an absolute impact on property tax revenues and continued use of our lands.

Mr. Matthew T. Keeling

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June 22, 2020

BT-5

We urge the Board to listen to farmers' feedback and suggestions, and incorporate that feedback into the draft Ag Order 4.0. We feel strongly that water quality improvements can be realized by using a balanced approach and working with farmers and agriculture landowners. Any future Ag Orders must be designed with achievable objectives and must be a transparent and collaborative process that utilizes agricultural stakeholders. The loss of farmer cooperation will be counterproductive to improving water quality.

Thank you for considering our views.

Sincerely,



Brian Driscoll
Member Manager

Response to Comment BT-1

Thank you for your comment. The CCWB acknowledges the commenter's concerns regarding the implementation of DAO 4.0. In addition, this comment is summarized and responded to in the following Master Responses: 2.8.8; 2.1.2; 2.3.10; and 2.3.3.

Response to Comment BT-2

The CCWB acknowledges the commenter's background and interests.

Response to Comment BT-3

The comment expresses concern regarding riparian setbacks. Please note that DAO 4.0 does not include the riparian and operational setback components. This comment is responded to in Master Response 2.8.8.

Response to Comment BT-4

The comment expresses concern that DAO 4.0 will have adverse impacts on farmland, agricultural resources, land use, and jobs. In addition, the comment asserts that the DEIR did not fully evaluate such impacts. In response to concerns related to potential adverse economic impacts from DAO 4.0, refer to Master Response 2.9. In response to comments related to the DEIR's analysis of economic impacts, including CEQA Guidelines compliance requirements and the adequacy of the DEIR's approach for impact analysis, please refer to Master Response 2.10.

Response to Comment BT-5

This comment is summarized and responded to in Master Response 2.1.8.

Letter BU: Brooke Carhartt, Carhartt Vineyard (June 22, 2020)**Letter BU**

From: [Brooke Carhartt](#)
To: AgNOI_WB@Waterboards
Subject: Comments on draft ag order
Date: Monday, June 22, 2020 2:07:43 PM

EXTERNAL:

June 22, 2020

Dear Executive Officer Keeling,

- BU-1 We are a family owned and operated vineyard and winery in the Santa Ynez Valley, currently with 20 acres under our management. Although we are not SIP certified, we absolutely support and utilize sustainability practices, both in our farming and irrigation programs. Because we are third generation farmers of this land, and we live on the property, we are committed to protect our environment, including surface and water quality. Our farming practices include low applied irrigation, low applied nutrients, pest management, minimal storm water run-off, cover cropping, erosion control, and overall extremely low pesticide use.
- BU-2 Upon initial and further study of the current draft and EIR, they appear to be extremely complicated and frankly, very confusing on many levels. The proposed scope of information required from us as growers is overly burdensome and it would not be possible for us, as a family business, to complete the needed documentation on a timely basis, if ever.
- BU-3 To the best of my knowledge, vineyards are a low risk to water quality and should not be "lumped in" with all growers who will be required to comply with the new order. Our vineyard does not have tailwater, and we maintain a winter cover crop as well as having buffer zones to allow for equipment turnaround and passage. In addition, vineyards currently meet the 2050 Nitrogen Loading threshold and we personally have our groundwater tested twice yearly to determine those levels.
- BU-4 I ask that your staff consider modifying the proposed order to consider alternative compliance for low risk vineyards by utilizing current successful efforts, such as SIP certification programs and practices. This endeavor would then create a framework for incentivizing adoption of consistent water quality protection as well as reducing the burdensome regulatory requirements.

Sincerely,

Brooke Carhartt

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Brooke Carhartt
 1.805.714.4066
mbcarhartt@gmail.com
www.carharttvineyard.com

Response to Comment BU-1

The CCWB acknowledges the commenter's background and interests. This comment is summarized and responded to in Master Response 2.3.1.

Response to Comment BU-2

The comment is noted. This comment is summarized and responded to in the following Master Responses: 2.1.5; 2.1.2; 2.1.4; and 2.5.8.

Response to Comment BU-3

The comment asserts that vineyards are a low risk to water quality and requests that the CCWB adjust compliance recommendations for vineyards. This comment is summarized and responded to in the following Master Responses: 2.1.7 and 2.3.5.

Response to Comment BU-4

The comment requests that the CCWB consider modifying DAO 4.0 to allow for compliance mechanisms such as Sustainability in Practice (SIP) Certification programs. This comment is summarized and responded to in the following Master Responses: 2.1.8 and 2.2.2.

Letter BV: Ruthann Anderson, California Association of Pest Control Advisers (June 22, 2020)**Letter BV**

From: [Ruthann Anderson](#)
To: AgNOI_WB@Waterboards
Subject: Comments of Draft Ag Order 4.0
Date: Monday, June 22, 2020 7:05:18 AM
Attachments: [image001.png](#)
[Comment of Draft Ag Order 4.0 - CAPCA.pdf](#)

EXTERNAL:

Please see attached comments submitted on behalf of the local CAPCA Chapters – Ventura, Central Coast and Monterey Bay.

Thank you,

Ruthann Anderson
President/CEO
CAPCA
2600 River Plaza Drive, Suite 250
Sacramento, CA 95833
Phone: (916)928-1625
Fax: (916)928-0705
e-mail: ruthann@capca.com





June 22, 2020

Matthew T. Keeling, Executive Officer
895 Aeovista Place, Ste. 101,
San Luis Obispo, CA 93401

Dear Mr. Keeling,

- BV-1 The California Association of Pest Control Advisers (CAPCA) is comprised of over 3,000 professionals licensed by the State of California. Pest Control Adviser (PCA) recommendations are guided by strict regulations in the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), California Department of Pesticide Regulation (CDPR), and California Environmental Quality Act (CEQA). CEQA is tantamount to Integrated Pest Management (IPM) practices, which have been in place for more than 50 years, and the PCA's environmental assessment is mandatory and is addressed in each PCA recommendation.
- BV-2 The undersigned Chapters of CAPCA are contacting you regarding the proposed Central Coast Irrigated Lands Regulatory Program (Ag Order 4.0). The Central Coast, Monterey Bay and Ventura Chapters represent 859 PCA's who provided services to approximately 3,000 agricultural operations who farm approximately 540,000 acres and who would be affected by the draft Ag Order 4.0.
- BV-3 Our PCA members are licensed by the State of California in several areas of expertise which they utilize in their day-to-day interaction with their grower clients. Our job can be best summarized as providing growers with technical assistance in addressing real world farming issues in the most environmentally sensitive manner possible. The extreme restrictions in the draft Ag Order 4.0 will substantially disrupt the service we provide.
- BV-4 It is our opinion that the proposed cure you are pursuing is more harmful than the problem you allege. Unfortunately, this too often occurs in the siloed structure of government decision making where one-dimensional thinking is applied to a multi-dimensional issue.
- BV-5 The extremes of draft Ag Order 4.0 make the case for a more thoughtful, all encompassing analysis of relevant facts and the development of solutions which are as unintrusive as possible in the lives of the affected communities.
- BV-6
- Management practices can and do improve water quality, but it is infeasible to meet the numeric limits of the Draft WDRs at the edge of field under all conditions.
- BV-7
- The numeric limits of the draft WDRs are scientifically unsupported and inappropriate. The Agriculture WDRs must be data-driven and science-based. The Draft WDRs should



BV-7
cont. ↑

be modified to include a watershed-based approach that optimizes the collection of data and information, identifies and addresses the highest priority water quality concerns, and supports targeted implementation of management practices to improve water quality efficiently.

BV-8 ↑

In conclusion, we request that the harmful consequences we have identified be addressed and corrected prior to any further action on draft Order 4.0.

Thank you,



Paul Crout
Danilu Ramirez
Nic Vanherweg



Rick Harrison
Ted Swartzbaugh
Patricia Dingus



Sean Morelos
Drew Butler

Response to Comment BV-1

The CCWB acknowledges the commenter's background and interests.

Response to Comment BV-2

The comment is noted.

Response to Comment BV-3

The comment is noted.

Response to Comment BV-4 through BV-5

This comment is summarized and responded to in Master Response 2.1.2.

Response to Comment BV-6

This comment is summarized and responded to in Master Response 2.3.3.

Response to Comment BV-7

This comment is summarized and responded to in the following Master Responses: 2.1.5; 2.1.6; 2.1.8; 2.1.11; 2.2.3; and 2.5.5.

Response to Comment BV-8

Thank you for your comment.

Letter BW: Michael Miiller, California Association of Winegrape Growers (June 22, 2020)**Letter BW**

From: [Michael Miiller](#)
To: [AgNOI_WB@Waterboards](#)
Cc: [Gail Delihant](#); [Kim Stemler](#); [Noelle Cremers](#); [Kari E. Fisher \(kfisher@cfbf.com\)](#)
Subject: Ag Order 4.0 CAWG Letter
Date: Monday, June 22, 2020 5:29:16 PM
Attachments: [Ag_Order_4_pt_0_FINAL_CAWG_letter.pdf](#)

EXTERNAL:

Good Afternoon,

Please see the attached for your consideration. Please confirm receipt.

Thank you,

Michael



June 22, 2020

Matthew T. Keeling, Executive Officer
 Central Coast Regional Water Quality Control Board
 895 Aerovista Place, Suite 101
 San Luis Obispo, CA 94301

Delivered via electronic mail to AgNOI@waterboards.ca.gov

Re: Vineyard coalition comments on draft Agricultural Order 4.0

Dear Mr. Keeling,

BW-1 Thank you for the opportunity to comment on the draft Agricultural Order 4.0.

Our organization associates itself with comments submitted by Wine Institute, Monterey Vintners, California Farm Bureau, and Western Growers. We believe the research, science, and data do not support this proposal and with this letter are expressing our primary concerns. In the comments below, we focus on aspects of the draft order that are most relevant to vineyard operations.

BW-2 *Public Participation:*

First, we must object to moving this draft order forward during this pandemic. To protect their employees, our growers are heavily focused on continually changing workplace guidelines and how to implement those guidelines to keep their workers safe. With the increased and appropriate attention to worker safety, many small growers simply do not have the bandwidth to devote the time and energy necessary to properly comment on this proposal.

For many small growers, the same individual deals with compliance with both labor regulatory requirements and environmental regulatory requirements as well. Moving forward with this draft order at this time is to ask those growers to focus on this issue instead of the new CDC ag guidelines and statewide face covering guidance, all of which came out within the last two weeks.

Consequently, moving forward with the draft order during this pandemic is to effectively deny full public participation. Please consider delaying any action on this draft order until such time as the public has the opportunity to fully analyze and comment. Now is clearly not that time.

1121 L Street, Suite 304 | Sacramento, CA 95814 | Mobile (916) 204-0485 | www.cawg.org |



Matthew T. Keeling, Executive Officer
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Sustainability Certification Programs:

CAWG is a partner in the California Sustainable Winegrowing Alliance (CSWA). Certified California Sustainable Winegrowing is a certification program within CSWA that provides verification by a third-party auditor that a winegrape grower implements sustainable practices and continuous improvement.

BW-3 This has been a very successful program as there are more than 2,100 vineyards (more than 185,000 acres) that are certified sustainable. These growers are strong stewards of the land. A significant percentage of vineyard acres in the Central Coast region are certified to voluntary sustainability programs developed and administered by the Central Coast Vineyard Team and CSWA.

We ask that the board work with these sustainability programs to determine what is already being done and then work cooperatively with those programs in amending this draft order to recognize certified sustainability satisfies the farm plan requirements.

Small Growers:

BW-4 The draft order contains numerous monitoring and reporting requirements that would be particularly onerous for small vineyard operations. Many of these operations lack the technical expertise or in-house staff to satisfy the documentation required by the order and would therefore need to hire outside assistance at potentially considerable cost.

BW-5 Furthermore, due to the nature of winegrape growing, small vineyard operations are likely to pose a small to negligible threat to water quality. By requiring even the smallest vineyard operations in the Central Coast Region to comply with the full order and its documentation requirements, the board would create a significant burden on these small dischargers without a clear water quality benefit.

BW-6 We estimate that California winegrape growers will experience a loss of more than \$1.4 billion in this pandemic. The smallest growers will be the ones hardest hit. Not only does the draft order fail to recognize this painful reality, it makes things worse by treating small and large growers in the same manner thereby placing additional burdens on those same small growers.

Setback Requirements:

BW-7 Setback requirements are far too broad and apply across the entire region. Compliance would require removing existing vineyard acreage bordering a riparian area. At a time when many growers are uncertain about their economic future, this would be a

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- BW-7
cont. ↑ significant economic hit due to reduced production. Such requirements should not require growers to remove winegrapes and should only apply to a specific property's discharge potential.
- BW-8 ↑ *Discharge Monitoring:*
Discharge monitoring requirements are costly, unnecessary and excessive. The draft order is overly broad in its description of the circumstances under which the Executive Officer may unnecessarily require ranch-level surface discharge monitoring, quantitative assessments, and monitoring work plans.
- BW-9 ↑ As currently drafted, the draft order would create the potential for any discharger to be required to implement ranch-level monitoring simply because of its geographic location, but through no fault of that discharger's operation. Dischargers should not be required to submit costly quantitative assessments, monitoring work plans, and ranch-level monitoring information if there is clear evidence that the ranch is not contributing to an exceedance.
- BW-10 ↑ *Summary:*
Moving forward with the draft order at this time does not allow for full public participation. Additionally, the draft order creates substantial burdens on winegrape growers, especially small growers, with no real benefit to the environment. Please do not move forward with the draft order.

Please feel free to call on me at any time if you have any questions or need additional information. Michael@CAWG.org or (916) 204-0485.

Sincerely,

A handwritten signature in black ink, appearing to read "M. Müller", is positioned above the printed name.

Michael Müller
Director of Government Relations

1121 L Street, Suite 304 | Sacramento, CA 95814 | Mobile (916) 204-0485 | www.cawg.org |

Response to Comment BW-1

This comment is summarized and responded to in Master Response 2.1.2.

Response to Comment BW-2

This comment is summarized and responded to in Master Response 2.9.3.

Response to Comment BW-3

This comment is summarized and responded to in Master Response 2.2.2.

Response to Comment BW-4

This comment is summarized and responded to in the following Master Responses: 2.1.5 and 2.1.7.

Response to Comment BW-5

This comment is summarized and responded to in Master Response 2.1.7.

Response to Comment BW-6

This comment is summarized and responded to in Master Response 2.9.1.

Response to Comment BW-7

This comment is responded to in Master Response 2.8.8.

Response to Comment BW-8

This comment is summarized and responded to in the following Master Responses: 2.9.1; 2.1.5; 2.3.9; 2.3.8; 2.4.2; 2.5.5; 2.5.11; 2.5.2; 2.5.3; 2.6.6; and 2.7.3.

Response to Comment BW-9

This comment is summarized and responded to in the following Master Responses: 2.9.1; 2.1.5; 2.3.9; 2.3.3; 2.4.2; 2.5.5; 2.5.11; 2.5.2; 2.5.3; 2.6.6; and 2.7.3.

Response to Comment BW-10

This comment is summarized and responded to in Master Response 2.1.2.

Letter BX: Kaitlyn Kalua, California Coastkeeper Alliance (June 22, 2020)**Letter BX**

From: [Kaitlyn Kalua](#)
To: [AgNOI_WB@Waterboards](#)
Cc: [Sean Bothwell](#); [Steve Shimek](#); [Ben Pitterle](#)
Subject: Comments on Draft Ag Order 4.0
Date: Monday, June 22, 2020 3:07:43 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[NGO_Ag Order 4.0_06.22.2020_FINAL.pdf](#)

EXTERNAL:

To whom this may concern:

Please find the attached comment letter submitted on behalf of over 25 organizations regarding the Draft Ag Order 4.0 before the Central Coast Regional Water Quality Control Board. Please do not hesitate to contact me with any trouble uploading this attachment.

Sincerely,

Kaitlyn Kalua
Policy Analyst

California Coastkeeper Alliance
707.483.2868 | kaitlyn@cacoastkeeper.org
cacoastkeeper.org | bluebizcouncil.org







June 22, 2020

Chair Dr. Jean-Pierre Wolff and Board Members
Attention: ILRP
Central Coast Regional Water Quality Control Board
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401

Re: Comments on Draft Ag Order 4.0

Sent via electronic submission: AgNOI@waterboards.ca.gov.

Dear Chair Wolff and Members of the Board,

- BX-1 The undersigned organizations are committed to healthy watersheds, resilient water supplies, and the health of our communities. We write in strong support of the Central Coast Regional Water Quality Control Board's (Regional Board) proposed permit requirements for nutrient application and discharge within Draft General Waste Discharge Requirements for Discharges for Irrigated Lands (Order No. R3-20XX-XXX) (Draft Ag Order 4.0).
- BX-2 California leads the nation as a top agricultural producer – but not without a cost. Agriculture is the primary source of nutrient pollution throughout the state, with irrigation and rainfall sweeping excess fertilizers off agricultural fields into adjoining waters and leaching into groundwater, posing a severe threat to human and environmental health. Nutrient pollution exacerbates toxic algal blooms, making swimming unsafe, poisoning marine life, and can shut down entire fisheries. Meanwhile, nitrates leaching from fields into aquifers have left over 100,000 square miles of groundwater contaminated with nitrates throughout California resulting in toxic drinking water supplies. Studies have shown that fertilizer from irrigated agriculture is the largest source of nitrate pollution in drinking water in California. Researchers estimate that tens of millions of pounds of nitrate leach into groundwater in the Salinas Valley alone each year. As a result, thousands of domestic and small system wells serving hundreds of thousands of people have nitrate levels exceeding the drinking water standard.
- BX-3 These extremely high levels of nitrates from fertilizer can be fatal to small infants and can cause cancer. Residents of the small farming community of San Jerardo, outside Salinas, have complained of sickness, hair loss, stomach problems, sores and rashes; their water was tested and found to have ten-times the drinking water standard for nitrates and their symptoms disappeared when an alternative water source was provided. Nitrate pollution is so pervasive that many rural communities must abandon or drill deeper wells to avoid the shallower, more polluted aquifers. A 2012 report to the California Legislature found that “[I]n California’s Tulare Lake Basin and Salinas Valley, roughly 254,000 people are currently at risk for nitrate contamination of their drinking water” and “over 1.3 million people are financially susceptible because nitrate in raw source water exceeds the MCL [maximum contaminant level].”¹ Unfortunately, this nitrate pollution has continued unabated and the Central Coast Regional Water Board itself has recognized that water quality throughout the region has become “substantially worse each year, and the actual numbers of polluted wells and people affected are unknown.”²

¹ State Water Resources Control Board, Report to the Legislature, Recommendations Addressing Nitrate in Groundwater, February 20, 2013.

² California Regional Water Quality Control Board, Central Coast Region, Order No. R3-2017-002.

CALIFORNIA COASTKEEPER ALLIANCE

1100 11th STREET, 3rd FLOOR SACRAMENTO, CA 95814 | (916) 403-1123 | CACOASTKEEPER.ORG

- BX-4 To rectify this water quality crisis, proper nutrient management is needed to encourage the natural process of nutrient cycling, which in turn optimizes crop growth, limits costs for growers, and minimizes the environmental and human health impacts of nutrient pollution. Effective soil and irrigation water testing and monitoring of nutrient loading allows growers to ensure that nutrients are available to meet crop needs while eliminating extraneous nutrient movement off their fields. Source control, via the application of fertilizer, irrigation water, and organic materials, is often the easiest and most cost-effective method for growers to address nutrient pollution. Nitrogen has been applied to Central Coast agricultural fields unabated for decades, and we support this Order as a critical tool to rectify this ongoing pollution.
- BX-5 Specifically, we support this Order's precedential requirement that dischargers must monitor and report the amount of nitrogen applied (A) and nitrogen removed (R) with specific numeric limits based on a crop-specific A-R calculation. Different crops have varying removal limits to uptake the nitrogen applied in agricultural fields. In recent years, Regional Water Boards have required growers to report the total nitrogen applied to their fields, but none have capped the levels of nitrate applied for specific crops based on crop uptake.
- BX-6 This Order takes an important step to improve nitrogen management throughout the Central Coast – and sets critical precedent for other Regional Water Boards facing chronic water quality impairments and nitrogen contamination – by imposing specific limitations on nitrate loading from discharges that are reduced over time. We urge the Regional Water Board to ensure application limits fall within the range provided by the University of California Agriculture and Natural Resources (UCANR) for each of the individual crops, such as broccoli, spinach, and strawberries. We further request that the Regional Water Board establish a timeline to identify and impose application limits for additional crops not already listed in this Order – rather than allow the indefinite use of the overstated 500 pound per acre limit that could result in continued pollution.
- BX-7 This Order also imposes an initial time schedule to limit and reduce nitrogen discharge into our waterways and aquifers based on current nitrogen data listed as Table C.1-2. This time schedule is an essential step to require growers to monitor the use of nitrogen applied to their fields, hold these growers accountable, and drastically improve water quality within the next five to ten years and restore the health of these waters by 2050. Given individual monitoring wells in the Central Coast region have reported nitrogen levels well beyond the MCL limit of 10 mg/L – **levels that surpass 1,000 and even 3,000 mg/L³** – these quantifiable milestones and time schedules are essential to prevent the continued degradation of the Central Coast's aquifers and to achieve the individual surface water nitrate and nutrient TMDLs throughout the region. The limits imposed under this Order will need to be further strengthened as our understanding of nitrogen loading increases. Even before that, the Board's actions in highly contaminated basins (where nitrate concentrations exceed the 120 ppm level that is the upper limit of possible drinking water treatment) need to reflect the urgency of the problem facing small communities and domestic well users that lack a safe source of drinking water.
- BX-8 This Draft Ag Order 4.0 is critically important to all of California. The use of crop-specific A-R rates with specific timetables and numeric limits sets a long-needed and overdue precedent to other Regional Water Boards, and will ultimately ensure every human has "safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes," as required by California's Human Right to Water, enacted in 2013 by Assembly Bill 685, Water Code section 106.3. We applaud your Board's use of numeric A-R requirements to hold growers accountable for their nitrogen pollution and to put an end to the ongoing contamination of the Central Coast's waterways and aquifers.

³ State Water Resources Control Board, Groundwater Information System, available at <https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/>.

Sincerely,

Sean Bothwell
Executive Director
California Coastkeeper Alliance

Debi Ores
Senior Attorney
Community Water Center

Jennifer Clary
Water Programs Manager
Clean Water Action

Lisa Hunt, PhD, PE
Director of California River Restoration Science
American Rivers

Susan Jordan
Executive Director
California Coastal Protection Network

Bill Jennings
Executive Director
California Sportfishing Protection Alliance

Alan Levine
Director
Coast Action Group, Affiliate of Redwood Coast
Watersheds Alliance

Marco Gonzalez
Executive Director
Coastal Environmental Rights Foundation

Pamela Flick
California Program Director
Defenders of Wildlife

Linda Crop
Chief Counsel
Environmental Defense Counsel

Emily Parker
Coastal and Marine Scientist
Heal the Bay

Jennifer Savage
California Policy Manager
Surfrider Foundation

Steve Shimek
Coastkeeper & Executive Director
Monterey Coastkeeper
The Otter Project

Kira Redmond
Executive Director
Santa Barbara Channelkeeper

Michael Claiborne
Senior Attorney
Leadership Counsel for Justice and
Accountability

Lowell Chow
Staff Attorney
Environmental Law Foundation

Garry Brown
President
Coachella Valley Waterkeeper
Inland Empire Waterkeeper
Orange County Coastkeeper

Jennifer Kalt
Director
Humboldt Baykeeper

Bruce Reznik
Executive Director
Los Angeles Waterkeeper

Don McEnhill
Russian Riverkeeper & Executive Director
Russian Riverkeeper

Matt O'Malley
Executive Director & San Diego Coastkeeper
San Diego Coastkeeper

Melinda Booth
Executive Director
Yuba River Waterkeeper

Zachary Plopper
Associate Director
WILD Coast

Response to Comment BX-1

This comment is summarized and responded to in Master Response 2.1.1.

Response to Comment BX-2

This comment is summarized and responded to in the following Master Responses: 2.3.10; 2.3.2; and 2.4.6.

Response to Comment BX-3

This comment is summarized and responded to in Master Response 2.4.6.

Response to Comment BX-4

This comment is summarized and responded to in Master Response 2.1.1.

Response to Comment BX-5

This comment is summarized and responded to in the following Master Responses: 2.3.10 and 2.3.2.

Response to Comment BX-6

This comment is summarized and responded to in Master Response 2.3.10.

Response to Comment BX-7

This comment is summarized and responded to in Master Response 2.1.10.

Response to Comment BX-8

This comment is summarized and responded to in Master Response 2.1.1.

Letter BY: Steve Shimek, California Coastkeeper Alliance, Santa Barbara Channelkeeper, and Monterey Coastkeeper (June 22, 2020)**Letter BY**

From: [Steve Shimek](#)
To: AqNOI_WB@Waterboards
Cc: [Sean Bothwell](#); [Ben Pitterle](#); ["Kira Redmond"](#)
Subject: Comments on Draft Agricultural Order 4.0
Date: Monday, June 22, 2020 8:14:32 PM
Attachments: [200622_Final Draft 4.0 Comment.pdf](#)

EXTERNAL:

Attached is a pdf of our comments, thank you for this opportunity to offer our comments. These comments are made on behalf of the California Coastkeeper Alliance, Santa Barbara Channelkeeper, and Monterey Coastkeeper (a program of The Otter Project).

If you have any questions or concerns, please contact Steve Shimek, exec@otterproject.org, or call 831-663-9460 or 831-241-8984 cell.



June 22, 2020

Chair Dr. Jean-Pierre Wolff and Board Members
 Attention: ILRP
 Central Coast Regional Water Quality Control Board
 895 Aerovista Place, Suite 101
 San Luis Obispo, CA 93401

Re: Comments Ag Order 4.0

Sent via electronic submission: AgNOI@waterboards.ca.gov

Chair Wolff, Executive Officer Keeling, Board, and Staff,

- BY-1 Thank you for the opportunity to comment on the staff and board's "Draft Ag Order 4.0." These comments are offered on behalf of the California Coastkeeper Alliance, Santa Barbara Channelkeeper, and Monterey Coastkeeper (a program of The Otter Project).
- BY-2 CALIFORNIA COASTKEEPER ALLIANCE is a non-profit public benefit corporation organized under the laws of the State of California and headquartered in San Francisco, California. Founded in 1999, CCKA represents eleven non-profit Waterkeeper member organizations. California Waterkeeper organizations work to protect and enhance the water quality and overall health of coastal and inland waterways for the benefit of ecosystems and communities throughout California. Collectively, CCKA's member organizations are dedicated to the preservation, protection, and defense of the environment, and the natural resources of California watersheds and surface waters.
- BY-3 SANTA BARBARA CHANNELKEEPER is a California public benefit, non-profit corporation headquartered in Santa Barbara, California. Channelkeeper is a grassroots organization that works to protect and enhance the quality of waters of southern Santa Barbara County, as well as the area's natural ecosystems and human communities. It is dedicated to the preservation, protection, and defense of the environment, wildlife, and the natural resources of waters within southern Santa Barbara County and other receiving waters in the area. To further these goals, Channelkeeper works to ensure the implementation and enforcement of water quality and other relevant laws through a combination of policy advocacy, water quality monitoring, and community education and engagement.
- BY-4 MONTEREY COASTKEEPER, a program of The Otter Project, is a non-profit organization that works to tackle water pollution problems through policy advocacy and legal tools to ensure that the interests of development, industry and urban activity are kept in line with the environmental needs and wishes of the Monterey Bay and Salinas Valley community it serves. Monterey Coastkeeper's members are particularly concerned with pollution related to agricultural operations in the Monterey Bay watershed.

BY-5	<p>We believe the nation, if fact the world, is facing tumultuous times: racial and economic disparity have been laid bare, climate change may overtake our human ability to adapt, the United Nations has said that one billion species may soon go extinct, our insects including pollinators are precipitously declining, and in turn we have lost two billion birds in North America alone. Collectively we long for normalcy but a return to normal is not what is needed, not today. History requires nothing from us, the future requires bold steps and fundamental transformations.</p> <p>The litany of depressing truths we are facing have certainly been caused by many factors, but when we read the depth of research supporting the biological changes, there is a common denominator – the transformation of lands to intensive agricultural using synthetic fertilizers and pesticides. This is not to blame agriculture; intensive agriculture is a byproduct of a modernizing world. But as the recent op-ed by Brian Leahy, past director of the California Department of Pesticide Regulation points out, we must take bold steps and transform our agricultural systems (attached).</p>
BY-6	<p>Specifically, <i>this</i> Board and Staff must lead. This is a burden, and YES! this is a tremendous opportunity.</p> <p>In the same year, 2004, that California adopted its Nonpoint Source Pollution Policy, the Central Coast Region adopted California’s first agriculture order. And it was this Region in 2008, under the leadership of Roger Briggs, Michael Thomas, and Chair Young that the purposes of the Ag Order were specifically enumerated for the first time:</p>
BY-7	<p>[To] protect and restore beneficial uses and achieve water quality objectives specified in the Basin Plan for commercial irrigated agricultural areas in the central coast region by:</p> <ul style="list-style-type: none"> a. Minimizing nitrate discharges to groundwater, b. Minimizing nutrient discharges to surface water, c. Minimizing toxicity in surface water from pesticide discharges, d. Protecting and restoring riparian and wetland habitat, and e. Minimizing sediment discharges to surface water. <p>These are the same goals we are pursuing today.</p>
BY-8	<p>And it is to the credit of this Board and Staff under the leadership of John Robertson, Matt Keeling, and Chair Wolff, that we have embraced the “most successful” strategies for control of agricultural discharges:</p> <p>“NPS pollution typically results from contact between pollutants and land runoff, precipitation, atmospheric deposition, drainage, seepage, or hydrologic modification. Consequently, the most successful control of nonpoint sources is achieved by prevention or by minimizing the generation of NPS discharges.” NPS Policy page 7.</p> <p>The California Coastkeeper Alliance, Santa Barbara Channelkeeper, and Monterey Coastkeeper thank you for your leadership. We are in a moment that requires much more than incremental change, we must transform our agricultural systems.</p>
BY-9	<p>The statewide Irrigated Lands Regulatory Program will continue to evolve and we should accept that Ag Order 4.0 will not be perfect. We believe that a foundational purpose of Ag Order 4.0 is to apply firm regulatory pressure – time schedules, numeric objectives, milestones, and enforcement -- and require</p>

BY-9 ↑ innovation and adaptation by agriculture to meet the demands of the moment. The Central Coast has
cont. ↓ the best and most innovative growers in the world, we must lead, and we must transform.

BY-10 | We acknowledge the leadership of those already named plus Chris Rose and his team – and past teams
| – who have required us as stakeholders to think deeply, innovate, and adapt. Our comments support
| the work that has been done, offer some new ideas, and critique certain aspects of the Draft, with the
| intent of ensuring the plan will succeed in the short and long-term.

BY-11 | Our comments are in two sections: The legal frame followed by the specific general comments and line
| item comments and edits. There are two attachments: Attachment One is a 50-year history of nonpoint
| source policy in California, and Attachment Two, the op-ed by past DPR Director Leahy.

BY-12 | We sincerely appreciate this opportunity to comment and we offer these comments, and maybe even
| some innovation, for your consideration.

| Good leadership has brought us to this point, think big and bold, please.

Sincerely,



Steve Shimek
The Otter Project and Monterey Coastkeeper
And on behalf of:

Kira Redmond and Ben Pitterle, Santa Barbara Channelkeeper
Sean Bothwell, California Coastkeeper Alliance



June 22, 2020

Chair Jean-Pierre Wolff and Board Members
 Central Coast Regional Water Quality Control Board
 895 Aerovista Place, Suite 101
 San Luis Obispo, CA 93401-7906
 Email: AgNOI@waterboards.ca.gov

By Email

Re: Central Coast Regional Water Quality Control Board Draft Waste Discharge Requirement - Order 4.0

Dear Chair Wolff and Board Members:

BY-13 On February 21, 2020, the California Regional Water Quality Control, Central Coast Region ("Regional Board"), issued its Draft General Waste Discharge Requirements for Discharges from Irrigated Lands (hereafter "Draft Order 4.0" or "Draft"). To support the ongoing development of Order 4.0, Monterey Coastkeeper, California Coastkeeper Alliance, and Santa Barbara Channelkeeper ("Waterkeepers") submit the following comments focused on legal issues raised by Order 4.0. These legal comments serve two parallel objectives: (1) identifying elements of the Draft that must be further developed; and (2) providing a legal foundation for more specific comments by the Waterkeepers (attached "substantive comments").

BY-14 Legal comments first discuss overarching, fundamental legal issues related to nonpoint source pollution and irrigated agriculture including specific concerns related to the Nonpoint Source Policy's Key Elements. We then address the California Water Code's manner of compliance provision and issues related to approving third-party programs and alternative compliance pathways. We then focus on the Draft's failure to adequately address pesticide pollution. Finally, we note that the Draft appropriately deals with the issue of the State Board precedential orders

1. Order 4.0's Coverage of All of Irrigated Agriculture Operations

BY-15 The Waterkeepers support the strategy of adopting an order with broad coverage. Using one overarching Order will best promote fairness and provide the most efficient path to improving water quality by encouraging innovation, assuring economies of scale, and allowing improvements in practices to be used broadly.

Address: 536 Mission Street, Suite 3326, San Francisco, CA 94105-2968

Phone: (415) 442-6647, Facsimile: (415) 896-2450

Central Coast Regional Water Quality Board
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BY-16 | Simultaneously, we acknowledge that this undertaking raises at least three overarching
| issues. First, Order 4.0 must take into account the diversity of agricultural operations in the
| region, each with its own geography, soil conditions, levels of pollution, and unique grower(s).
BY-17 | Second, surface water and groundwater pollution are already severe and widespread in the
| Central Coast Region, so this Order must result in *improving* water quality rather than simply
BY-18 | maintaining water quality. Third, the law, including the Nonpoint Source Policy, sets a high bar
| for the Regional Board and provides a set of standards for Order 4.0 to satisfy.

BY-19 | This regulatory undertaking that the Regional Board has chosen in the Draft has legal
| consequences, in part because Order 4.0 must be “complete,” meaning that it must affirmatively
| provide for the current moment and for adjustments as the regulated community adapts to an
| Order that requires it do more to protect water quality. The Nonpoint Source Policy provides
| flexible and powerful tools for the Regional Board’s use, but the Policy does not give the
| Regional Board unlimited flexibility. The mandatory components of the Nonpoint Source Policy
| *must* be included in Order 4.0. In particular, the Regional Board “must be able to determine that
| there is a high likelihood that the program will attain water quality requirements.”¹ Therefore,
| Order 4.0 must describe, with specificity, the tools to be used for all the diversity of operations in
| the Region, and ensure that these tools will be effective in the long run. The Waterkeepers
| support the Regional Board’s effort to meet this standard.

BY-20 | The Regional Board should design an Order that is conservative, meaning that it should
| err on the side of assuring that water quality requirements are achieved and achieved on a time
| schedule that is “not . . . longer than that which is reasonably necessary.”² This approach is
| mandated by the law, State Board policy, and the evidence of continuing and severe water
| quality degradation and the impacts on communities and ecosystems. Water quality degradation
| will only become worse and even more difficult to solve as more time passes without compliance
| with the law.³ The fact that what constitutes *best* management practice may change over time is
| not a reason to wait to implement what is known now to be effective.⁴

BY-21 | The Water Boards should take a conservative approach with Order 4.0 to fulfill a primary
| agency purpose: achieving and preserving water quality in California. The Regional Board has
| repeatedly affirmed its commitment to ensure that Order 4.0 is legally sound, and the Board’s
| duty under the Public Trust Doctrine further urges conservatism in the design of Order 4.0.⁵ The
| State Board also takes this role seriously, and expects Regional Boards to regulate
| conservatively. Key Element 1 of the Nonpoint Source Policy recognizes that the requirement
| that water quality objectives be achieved and maintained is the *minimum* requirement. As the
| State Board explains:

¹ Nonpoint Source Policy, p. 12; See also Monterey Coastkeeper v. State Water Res. Control Bd., (“Coastkeeper”), 28 Cal. App. 5th 342, 370 (Ct. App. 2018).

² Nonpoint Source Policy, p. 13.

³ “To be effective, most Best Management Practices must be implemented on a long-term basis.” Basin Plan, p. 45.

⁴ “The ‘State-of-the-art’ for Best Management Practices design and implementation is expected to change over time.” Central Coast Region Basin Plan (2019) (“Basin Plan”), p. 45.

⁵ The Public Trust Doctrine creates an affirmative “duty of the state to protect the people’s common heritage of streams, lakes, marshlands and tidelands, surrendering that right of protection only in rare cases when the abandonment of that right is consistent with the purposes of the trust.” Nat’l Audubon Soc’y v. Superior Court, 33 Cal. 3d 419, 441 (1983).

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Phone: (415) 442-6647, Facsimile: (415) 896-2450

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- BY-21 cont. ↑ Conservatism in the direction of high quality should guide the establishment of objectives both in water quality control plans and in waste discharge requirements. A margin of safety must be maintained to assure protection of all beneficial uses.⁶
- BY-22 ↑ The ultimate determination of whether there is a high likelihood the program will attain water quality requirements can only be made once all the interrelated components are presented together. The Draft's inclusion of sophisticated numeric limits system for nitrogen and riparian zones developed from the best-available science shows the Regional Board's resolve to address agriculture's nonpoint source pollution. However, the Draft leaves a number of significant gaps that will surely undermine the validity and success of the Order.
- BY-23 ↑ **2. Satisfying the Key Elements of the Nonpoint Source Policy**
At its core, the Nonpoint Source Policy requires the Boards to make a determination that the Order has a high likelihood of attaining water quality objectives by a deadline no longer than that which is reasonably necessary to achieve the Order's ultimate goal: attainment and maintenance of water quality objectives for the protection of beneficial uses of water. To prevent empty requirements that fail to lead to the ultimate goal, the Key Elements require identification of "management practices" or other elements that are expected to be implemented to reduce pollution; the ultimate timeline and interim milestones; and "feedback mechanisms" to assess the chosen approach to determine whether it's actually working to attain the region's water quality objectives. The Key Elements also require the Order to specify additional actions that must be taken if, despite the Board's determinations at the time of the Order's adoption, the chosen approach fails to deliver the result it promised – i.e., meeting the interim milestones and the water quality objectives.
- BY-24 ↑ **a. The Key Elements of Nonpoint Source Policy Are Interdependent**
The strength of an Order depends on all the mandatory Key Elements of the Nonpoint Source Policy working in concert. Legal and substantive comments discuss the interdependent nature of the Order's elements in two distinct ways: (1) the interdependent nature of Key Elements of the Nonpoint Source Policy; and (2) the interdependent *design* elements of a regulatory plan.⁷
The flexibility embedded in the Nonpoint Source Policy does not excuse the *absence* of another element.⁸ This flexibility ensures that any analysis of whether Order 4.0 is consistent with the Nonpoint Source Policy requires looking at all the elements as they relate to one another. Indeed, each element is necessary to the success of the program overall.
Given the current severely degraded water quality in the Central Coast region and the limited resources of the Regional Board, Order 4.0 will need a strong design under each Key Element.

⁶ State Board Fact Sheet: *Nine Regional Water Quality Control Boards in California* (available at https://www.waterboards.ca.gov/publications_forms/publications/factsheets/docs/region_brds.pdf).

⁷ A plan can have multiple design elements that contribute to satisfying a Key Element, and a design element can help to satisfy multiple Key Elements of the Nonpoint Source Policy. For example, a design element specifying enforcement consequences for growers that violate numeric limits will deter non-compliance and will contribute to satisfaction of Key Element 5 relating to consequences, and simultaneously bolster the Order's overall likelihood of achieving water quality objectives under Key Element 2.

⁸ "NPS control implementation programs shall include the [] five key elements." Nonpoint Source Policy, p. 11.

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BY-25 The interdependent nature of Key Elements makes the analysis of the legality of a particular implementation plan challenging for a court tasked with reviewing an order. In order to facilitate the process, the Regional Board's findings supporting Order 4.0 should include more specifics, explaining how Key Elements interact with one another and focusing on how any design elements depend on one another.⁹

BY-26 **b. Key Element 1: The Purpose of an Implementation Program Must Be Explicitly Stated, and Must, at a Minimum, Achieve and Maintain Water Quality Objectives and Beneficial Uses**

Key Element 1 is the most general of the Key Elements, requiring primarily that purposes of the plan be explicitly stated. Key Element 1 also highlights that the requirement that water quality objectives be achieved and maintained is the *minimum* requirement; Regional Boards and third-party programs are free to go above and beyond this requirement.

BY-27 **c. Key Element 2: High Likelihood of Achieving Water Quality Objectives and Specificity of Management Practices**

Coastkeeper underscored that the ultimate goal of the Nonpoint Source Policy's is "to assure that the water quality objectives are eventually met."¹⁰ To ensure that such assurance is real – and not illusory – the Regional Board must make a determination, based on evidence (i.e., the chosen approach and the rationale provided for how and why it is expected to achieve the objectives), that there is a "high likelihood" of achieving the ultimate goal.¹¹

Here, the Draft's findings fail to consider all beneficial uses as required by the Central Coast Region Basin Plan (2019) ("Basin Plan").¹² Order 4.0 must consider all water quality requirements,¹³ including aquatic use, not just drinking water. The Draft does not deal adequately with toxicity (see section 5 Pesticides below and substantive comments). The Draft also has large gaps relating to enforcement (see Section 2.f below), and structure for approving third-parties and other alternative methods of compliance (see Section 4 below).

BY-28 **d. Key Element 3: Time Schedules and Quantifiable Milestones**

The Draft is inconsistent with the Nonpoint Source Policy because it establishes no timeline for when water quality requirements will be achieved. Coastkeeper explains that specific time schedules and quantifiable milestones are necessary to ensuring the program will

⁹ This explanation will serve to successfully "bridge the analytic gap between the raw evidence and ultimate decision or order." See Zuniga v. City of San Mateo Dep't of Health Services, 218 Cal. App. 3d 1521, 1530 (Ct. App. 1990).

¹⁰ 28 Cal. App. 5th, at 369.

¹¹ See Coastkeeper at 370; Topanga Ass'n for a Scenic Community v. Cty. of Los Angeles, 11 Cal. 3d 506, 515 (1974).

¹² "In setting waste discharge requirements, the Regional Board will consider the potential impact on beneficial uses within the area of influence of the discharge, the existing quality of receiving waters, and the appropriate water quality objectives. The Regional Board will make a finding of beneficial uses to be protected and establish waste discharge requirements to protect those uses and to meet water quality objectives." Basin Plan, p. 30.

¹³ These comments use the term "water quality requirements" as it is used in the Nonpoint Source Policy. The term includes "water quality objectives established to protect beneficial uses and any higher level of water quality needed to comply with the State's antidegradation policy." Nonpoint Source Policy, p. 12.

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- BY-28 cont. ↑ succeed.¹⁴ The Regional Board must address the severe water pollution problems in surface waters and groundwater in the Central Coast Region; without end goals, it is not possible to describe appropriate milestones.¹⁵
- BY-29 ↑ For example, timelines for achieving nitrate water quality objectives in groundwater are not included in the Draft Order 4.0, and it is unclear when, if ever, groundwater will achieve nitrate standards. The Regional Board has articulated no reason for not including a timeline for the reduction of nitrate pollution. The law and evidence both require that the Board set an aggressive timeline, one that is no longer than “reasonably necessary.”¹⁶ Both the Water Code and Nonpoint Source Policy clearly provide that discharging pollutants is a *privilege*, not a right. While some growers may assert that “we need time to figure out how to grow without polluting,” this delay is contrary to the spirit of the law, and ignores the tremendous costs to society being externalized in the process. Based on scientific studies, even if nitrate loading at the soil surface stopped today, loading to the groundwater will continue because nitrates already present in the soil’s unsaturated zone will take between several years and several decades to reach aquifers. In other words, any additional loading will exacerbate the already existing problem.¹⁷ However, Draft Order 4.0 only seeks to reach a discharge level of 50 pounds of nitrogen per acre per year in 2050. Thus, nitrate exceedances in groundwater will persist long beyond 2050 as the excess nitrate from the decades leading up to 2050 percolates into groundwater.
- BY-30 ↑ The evidence overwhelmingly demands that the Regional Board act immediately and use the full weight of its regulatory authority to ensure all growers begin to mitigate pollution. The record is devoid of evidence suggesting that letting the problem worsen is in the best interest of the public or the future of growers on the Central Coast, given that the problem will continue to worsen even if all nitrate discharges were to cease tomorrow. Any delay in commencing activities to reduce discharges must be clearly explained and supported by evidence.
- BY-31 ↑ Additionally, the interdependent relationship between design elements under Key Element 3 should be made explicit in the Order’s findings. Time schedules and quantifiable milestones are not only required by Key Element 3, but they are also critical to establishing consequences under Key Element 5 and assuring a high likelihood of success under Key Element 2. Meanwhile, Key Element 3 depends heavily on the monitoring and reporting design elements.
- BY-32 ↓ **e. Key Element 4: Feedback mechanisms**
- In order for Order 4.0 to have a high likelihood of achieving water quality objectives, the Order must contain an explicit commitment to ongoing evaluation of data and must provide opportunities to modify the plan’s design elements where feedback mechanisms show the plan is

¹⁴ “Without specific time schedules and quantifiable milestones, there is not a ‘high likelihood’ the program will succeed in achieving its objectives, as required by NPS Policy.” *Coastkeeper*, 28 Cal. App. 5th at 370. Cal. Water Code § 13242 requires a plan to include “a time schedule for action to be taken.”

¹⁵ *Coastkeeper* explained that the achievement of water quality objectives is not required “within the lifespan of the modified waiver” (i.e., five years) at issue in that case. 28 Cal. App. 5th at 369. However, the Waste Discharge Requirements in Order 4.0 do not expire in five years. Compare Cal. Water Code § 13263 (Waste Discharge Requirements) with § 13269(b)(1) (Waivers). Therefore, the Board must set a deadline for achieving the water quality objectives and make a finding that the Order’s requirements are designed to meet the deadline.

¹⁶ Nonpoint Source Policy, p. 13.

¹⁷ See Draft Order 4.0 Attachment A Findings (“Draft Findings”), p. 56, ¶ 111.

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BY-32
cont. not working. In addition, the Water Code requires that Order 4.0 be reviewed periodically.¹⁸ The Regional Board must provide a detailed and specifically tailored system of review including the “necessary iterative steps to adjust and improve the plan.”¹⁹ The Draft should include more opportunities for review to assure the program will achieve its short- and long-term goals.²⁰ The Waterkeepers’ substantive comments identify some instances where review or reopeners should be incorporated to ensure the Order stays on track.

BY-33 Where a specific opportunity for review is provided, the Order must ensure that modifications will be made if design elements are not functioning as intended. The Order must provide objective criteria to evaluate design elements,²¹ and ensure that the public is able to assess whether a design element under review is fulfilling its intended purpose.²² Important elements of review, including review of third-party programs and alternative compliance pathways, are impermissibly vague, relying entirely on executive officer discretion.²³

f. Key Element 5: Consequences and Enforcement

BY-34 Order 4.0 will not have a high likelihood of achieving water quality objectives without incorporating specific consequences -- such as reopeners and modification of standards -- as availability of data and management practices improve. These consequences are inherently linked to Key Elements 3 and 4 and specific recommendations for systems of review are provided in the preceding section on Key Element 4, in Section 4 related to third parties below, and throughout substantive comments from the Waterkeepers.

BY-35 Enforcement²⁴ is another element the Regional Board is required to consider that is lacking in the Draft. A well-conceived, adequately explained, and adequately funded enforcement regime will ensure increased compliance with the terms of Order 4.0. A failure to adequately plan enforcement will jeopardize other design elements.

BY-36 Active enforcement is required by the Water Code²⁵ and mandated by the Nonpoint Source Policy²⁶ and the State Board Water Quality Enforcement Policy (“Enforcement Policy”).²⁷ A significant purpose of the Nonpoint Source Policy is to enable enforcement, as reflected in its title: “Policy for Implementation and **Enforcement** of the Nonpoint Source Pollution Program.” Emphasis added. In fact, the Policy is designed to provide “a bridge

¹⁸ Cal. Water Code § 13263.

¹⁹ Nonpoint Source Policy, p. 11.

²⁰ Periodic review of a WDR should take into account the complexity and threat to water quality. Basin Plan, p. 44.

²¹ *Asociacion de Gente Unida por el Agua v. Central Valley Regional Water Quality Control Bd.* (“AGUA”), 210 Cal. App. 4th 1255, 1277 (discussing the necessity of mandatory standards to govern the executive officer’s exercise of discretion).

²² Nonpoint Source Policy, p. 13.

²³ Additional comments are provided in Section 4 below relating to the approval and review of third-party programs and alternative compliance pathways.

²⁴ Enforcement is defined as “the act or process of compelling compliance with a law [or other mandate].” *Black’s Law Dictionary* 645 (10th ed. 2009).

²⁵ “A nonpoint source management program shall include . . . the adoption and enforcement of waste discharge requirements that will require the implementation of best management practices.” Cal. Water Code § 13369.

²⁶ “[A]ny enforcement limitations that might be encountered should be well understood by the RWQCB prior to approving or endorsing an NPS control implementation plan.” Nonpoint Source Policy, p. 14.

²⁷ The Draft cites the State Board’s Water Quality Enforcement Policy as primary guidance. Draft, pp. 11-12.

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- ↑ between the NPS Program Plan and the [Enforcement Policy].”²⁸ Similarly, the Enforcement Policy emphasizes the importance of a well-developed enforcement plan:
- Without a strong and fair enforcement program to back up the cooperative approach, the entire regulatory framework would be in jeopardy. Enforcement is a critical ingredient in creating the deterrence needed to encourage the regulated community to anticipate, identify, and correct violations.²⁹
- ↑ The Draft’s failure to discuss how Order 4.0 will be enforced violates the Nonpoint Source Policy,³⁰ and eliminates the critical ingredient of deterrence, in effect making compliance with the provisions of the Order voluntary, undermining the program.
- ↑ Adequate details related to enforcement in Order 4.0 will greatly enhance its likelihood of achieving its purposes by ensuring a level playing field, providing motivation for growers to come into compliance quickly, protecting against situations where growers benefit by violating the Order, and ensuring the tool of enforcement is not undermined by inadequate resources, inefficiency, or inappropriate priorities.
- ↑ The Boards’ enforcement resources are limited, making enforcement prioritization specific to potential violations of Order 4.0 even more important.³¹ Prioritizing issues will help to manage the difficulty created by the number of dischargers, the overlapping design elements, and data points, combined with the absence of any history of enforcement related to the Order 4.0’s new requirements.³² The Order must also discuss the resources required to implement the enforcement program, and confirm that Regional Board resources are sufficient to enforce the Order effectively. To the extent that Order 4.0’s need for enforcement places impractical demands on Regional Board staff, the success of the Order will be undermined.
- ↑ **3. Manner of Compliance and the Structure of Order 4.0**
- ↑ The Draft Findings contain specific support for implementation of its proposed application, discharge, and receiving water limits, and setback requirements.³³ As detailed below, the Draft does not violate Water Code section 13360’s prohibition on dictating the manner of compliance because the Draft provides various ways for a grower to achieve waste discharge limits.

²⁸ Nonpoint Source Policy, p. 2.

²⁹ State Board Water Quality Enforcement Policy, p. 1. (2017) (available at https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2017/040417_9_final%20adopted%20policy.pdf).

³⁰ See footnote 25 supra.

³¹ “[E]nforcement prioritization enhances the Water Boards’ ability to leverage their scarce enforcement resources and to achieve the general deterrence needed to encourage the regulated community to anticipate, identify, and correct violations.” Enforcement Policy, p. 5.

³² For example, the Enforcement Policy defines “Class A Violations” as “violations that potentially pose an immediate and substantial threat to beneficial uses and/or that have the potential to individually or cumulatively cause significant detrimental impacts to human health or the environment.” See Enforcement Policy, p. 6. What will constitute a Class A Violation in the context of nonpoint source pollution from irrigated agriculture, where cumulative individual pollution has *already* caused significant detrimental impacts to human health or the environment?

³³ See e.g., Draft Findings, pp. 32-33; p. 62.

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BY-40 The Regional Board's authority to specify the use of management practices³⁴ is described in the Nonpoint Source Policy and other State Board guidance.³⁵ Tahoe-Sierra Pres. Council v. State Water Res. Control Bd. is instructive here.³⁶ In Tahoe-Sierra, developers challenged a Regional Board's regulations requiring developers to prove that any proposed development would prevent any increase to pollution in Lake Tahoe. The Regional Board's permitting system in Tahoe-Sierra did not provide any proxy or suggestion for how a developer could meet this burden. Here, the Regional Board has provided the grower with the same opportunity: the grower may offer proof that it is not polluting in excess of the established discharge limit. For example, the Draft specifies that the application limit for nitrogen does not apply if the grower can show its A - R meets the discharge limit.³⁷

BY-41 In contrast to Tahoe-Sierra, the Regional Board has also provided a detailed scheme of compliance pathways for irrigated agriculture in the Central Coast because it is apparent that growers collectively will not be able to ensure a high likelihood of attaining Water Quality Objectives without a specific and enforceable regulatory regime. The Draft acknowledges that Tahoe-Sierra's strategy of simply prohibiting discharge would be too disruptive.³⁸ Indeed, the compliance options provided in the Draft Order are exactly what developers requested in Tahoe-Sierra.³⁹ In fact, given the appropriate level of Regional Board oversight, Order 4.0 should encourage growers and third parties to further develop innovative, specific solutions for demonstrating compliance with discharge limits.⁴⁰ Because application limits⁴¹ and riparian setbacks⁴² provide an effective and reliable way to address agriculture discharges, and are among the Regional Board's legal regulatory tools, a failure to include them in Order 4.0 would be an abuse of discretion.

BY-42 ³⁴ The Regional Board should clarify whether it considers riparian setbacks and application limits to be discharge limits under the Water Code, management practices, or both. The following argument treats them as management practices.

³⁵ "As in a basin plan prohibition, a WDR may specify certain conditions under which, or areas where, the discharge of waste or certain types of waste will not be permitted . . . RWQCBs may also use conditional basin plan prohibitions as the primary administrative tool for implementation programs - for example, in cases where a RWQCB desires to prohibit discharges unless certain procedural or substantive conditions are met." NPS Policy, pp. 4-5. "The Regional Board may refuse to approve the discharge as proposed if, taking into account any best management practices or other control measures proposed, there is not reasonable assurance that water quality will be adequately protected . . . These restrictions do not amount to an invalid specification of the manner of compliance, so long as the Regional Board affords the discharger an opportunity to propose alternative methods of compliance." Basin Plan Attachment 10: *Chief Counsel's Statement of Legal Authority* (1988) p. C-12/bates stamp 6207.

³⁶ 210 Cal. App. 3d 1421, 1426 (1989).

³⁷ Draft Findings, p., 109, ¶ 22.

³⁸ See Draft Findings, p. 111, ¶ 28.

³⁹ The Tahoe-Sierra court noted that the task of providing such options would be difficult (i.e., developers were luring the board into "the oven," as in the story of Hansel and Gretel). Tahoe-Sierra, 210 Cal. App. 3d 1421, 1429.

⁴⁰ See Section 4 explaining that the system for approving these third-party programs and alternative methods of compliance needs to be developed as the Draft depends too heavily on executive officer discretion.

⁴¹ "Because the effectiveness of Best Management Practices is often uncertain, source control is generally preferable to treatment. It is also often less expensive . . . Some source control Best Management Practices (e.g., waste motor oil recycling) may be 100 percent effective if implemented properly." Basin Plan, p. 45.

⁴² Draft Findings, pp. 176-183.

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4. Third Parties, Transparency, and Executive Officer Discretion

BY-43

The Draft depends on various types of future decision-making by the executive officer but does not provide the requisite objective standards to proscribe the limits of executive officer discretion. Of particular concern are decisions for approving third-party programs⁴³ and alternative methods of compliance.⁴⁴

To the degree that Order 4.0 allows for third parties and individuals to seek exemptions or develop parallel compliance pathways, it effectively grants waivers of discharge requirements or something analogous to a separate Waste Discharge Requirement (“WDR”), without public scrutiny and assurance of compliance with the law.⁴⁵ Adequate provisions will ensure Order 4.0 will not have a “backdoor,” which would unlawfully allow alternative WDRs and waivers to be granted without meeting the requirements of the Water Code and Nonpoint Source Policy, including a public process and regular review.

BY-44

As necessary design elements of Order 4.0, third-party programs and alternative compliance pathways must comply with the Nonpoint Source Policy.⁴⁶ That is, Order 4.0 may not simply rely on the good judgment of the executive officer to ensure that the approved alternatives will perform equally as well as the design elements they replace. This is especially true here given the Order’s interdependent design elements, the novelty of the third-party programs contemplated by the Draft,⁴⁷ and the “the need to be wary of third-party programs that report compliance at too high a level of generality” and programs that may be “designed to obscure accountability.”⁴⁸

BY-45

Because the Order relies heavily on third-party programs, the Order must provide an efficient, lawful system for approving these programs and ensuring appropriate ongoing oversight of third-party programs.⁴⁹ For example, the Draft’s minimum criteria for third-party programs⁵⁰ are too vague and would impermissibly authorize the executive officer to approve programs that fail to satisfy legal requirements. In another example, the Draft provides that a discharger “who can quantifiably demonstrate that their ranch is achieving the final nitrogen discharge limit” may be excused from some reporting requirements.⁵¹ It may be theoretically

⁴³ The Nonpoint Source Policy discusses “third-party” programs administered by state agencies other than the Water Boards separately from third-party programs developed by non-regulatory parties. This section discusses the latter.

⁴⁴ Approval of third-party programs and alternative methods of compliance are similarly broad categories of decision-making left to executive officer discretion in the Draft. Page 28, ¶ 15 demonstrates the point: dischargers can receive an exemption from certain reporting if they are certified by a third-party program or approved by the executive officer.

⁴⁵ Both a WDR and a Waiver of Discharge Requirements may be included in one order, where the Waiver must be renewed every five years. See e.g., WQ 2017-0023-DWQ General Waste Discharge Requirements and Waiver of Waste Discharge Requirements for Discharges of Waste Associated with Cannabis Cultivation Activities, p. 17.

⁴⁶ AGUA, 210 Cal. App. 4th 1255, 1277 (Discussing the necessity of mandatory standards to govern the executive officer’s exercise of discretion).

⁴⁷ “Less is understood about the alternative alliances and management structures – the third-party programs – that most efficiently and effectively will result in the watershed or industry-wide action needed to control NPS pollution.” Nonpoint Source Policy, p. 16.

⁴⁸ Zamora v. Cent. Coast Regional Water Quality Control Bd., No. 15CV-0247, 2016 WL 7163991, at *8 (Cal. Super. Oct. 28, 2016) (quoting the State Board).

⁴⁹ Order 4.0 should provide for full review and approval by members of the board in certain circumstances.

⁵⁰ Draft Order, p. 19-20.

⁵¹ Draft, p. 28, ¶ 15.

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cont. possible for the Regional Board to craft a scheme setting a lessened reporting burden on growers who comply with the final discharge targets. However, it is unclear how a grower that claims to meet the final discharge limit can “quantifiably demonstrate” that it is doing so without reporting its R value.⁵²

BY-46 Public oversight is essential to enable improving the plan over time, and to ensure accountability and validation of all design elements, including those certified by third parties. Further, requiring public disclosure of data and program details will facilitate improvements and adoption of best practices in third-party operations. To the extent that any third-party data is not publicly available, findings should explain the Regional Board’s rationale including why such measures are in the public interest.

5. Pesticides’ Impacts on Water Quality and Beneficial Uses

BY-47 The Draft does not adequately explain its reliance on other agencies to achieve toxicity water quality objectives. When it comes to pesticide pollution, the Draft generally fails to bridge the analytic gap between the evidence, which shows that the status quo is not working, and the ultimate Order that continues to rely heavily on regulation by the Department of Pesticide Regulation (“DPR”) and U.S. EPA. Further, to the extent that the Order relies on riparian buffers and other mitigation measures as the primary vehicle for achieving its objective for pesticide pollution, that should be clearly stated.⁵³

BY-48 The Board may not delegate its responsibilities to another agency, and “may not indefinitely defer taking necessary action if another agency is not properly addressing a NPS problem.”⁵⁴ Therefore, the record in the Order 4.0 proceeding must adequately support any decision to rely on DPR, or any other third-party including U.S. EPA, addressing in particular whether ongoing reliance is appropriate given the persistence of the pesticide pollution.

BY-49 The record shows that the status quo of regulatory efforts by third-party agencies does not support the Regional Board’s reliance as to surface waters.⁵⁵ In addition, there is virtually no record related to groundwater.⁵⁶ The Regional Board should not expect DPR or U.S. EPA to fulfill the Board’s duty, as their legal responsibilities for protecting water quality differ substantially from the Water Boards’ duties. These third-party agencies identify risks related to chemicals, prescribe instructions as to their use, follow up to ensure compliance by users, and validate the process. For water quality purposes, their activities are inadequate. To the extent that Order 4.0 relies on other agencies, it must describe how this regulatory approach is not only capable of ultimately achieving water quality objectives, but has a high likelihood of doing so.

⁵² As another example of an alternative to the discharge requirements in Order 4.0, substantive comments provide the basic framework for a “pump and treat” alternative to replace certain discharge limits where groundwater is already heavily polluted.

⁵³ See e.g., Draft Findings, p. 167, ¶ 7.

⁵⁴ Nonpoint Source Policy, p. 10; see also Cal. Water Code §13242 (requiring an implementation plan to describe necessary actions to be taken by a third party).

⁵⁵ Draft Findings, p. 140, ¶ 4 (“Toxicity in surface water is widespread in agricultural areas of the central coast region”); p. 141, ¶ 7 (“Many of the findings included below demonstrate that the Basin Plan objectives for toxicity and pesticides are not being achieved in the central coast waters.”)

⁵⁶ Draft Findings, p. 124 ¶ 69 (“the potential impacts to groundwater resources are largely unknown”).

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6. Coordination with the State Board and Eastern San Joaquin Precedent as Applied to Order 4.0.

BY-50 The Draft Order 4.0 correctly takes a measured approach to the purportedly precedential nature of the ESJ Order. The Draft's findings on ESJ precedent are consistent with State Board policy, which requires a conservative approach to regulating water quality and including a margin for error. The Regional Board has correctly determined that the ESJ Order should establish a minimum standard, and does not prevent Order 4.0 from requiring additional measures based on conditions in the Central Coast Region.

BY-51 The Draft applies precedent correctly under the circumstances. The Regional Board distinguished the Central Coast Region from the facts of the ESJ Order based on multiple important factors, and applied the ESJ "precedent" in a most conservative manner, erring on the side of compliance with both *binding* precedent (statutes,⁵⁷ regulations, and court decisions), the State Board's official positions on its precedent,⁵⁸ and the State Board's policy of conservatism in protecting water quality.

BY-52 We note that the State Board's lack of clear guidance on its precedential orders obfuscates the precedential impact of the ESJ Order on Order 4.0. In its decisions, the State Board periodically asserts that all of its orders are precedential, citing Government Code section 11425.60. However, we have not been able to find any record of the State Board following the provisions of section 11425.60, including the requirements that the State Board: (1) maintain an index of significant legal and policy determinations made in such decisions; and (2) provide notice of the index.⁵⁹ No official notice of such an index has been issued by the State Board, and the only list of decisions we can locate includes all State Board orders, including many insignificant legal and policy decisions (for example, those which have been overturned). Further, the ESJ Order specifically states that certain of its provisions are *not* precedential, contradicting these periodic assertions that all State Board orders are precedential. Section 11425.60 places the burden on the State Board to provide a regularly updated index of significant legal and policy decisions. Absent such an index, and given the fifty years of orders available in its archive, it is unreasonable to expect anyone to sift through and ascertain what is precedential, what is significant, what has been overturned by a court, and what has been reversed by the State Board itself.⁶⁰

⁵⁷ For example, Water Code section 13000 states that "the statewide program for water quality control can be most effectively administered regionally, within a framework of statewide coordination and policy."

⁵⁸ "Precedential decisions and orders provide guidance for later decisions and orders. The State Water Board and the nine Regional Water Quality Control Boards ordinarily will follow State Water Board precedents, or provide a reasoned analysis for not doing so . . . A Regional Water Board may conclude that based on differences between the facts before the Regional Water Board and the facts that were the basis for the State Water Board precedent, a State Water Board precedent either does not apply or should be modified as applied in the proceeding before the Regional Water Board." (https://www.waterboards.ca.gov/board_decisions/adopted_orders/).

⁵⁹ See e.g., "California State Teachers Retirement System, Notice of Availability of Precedential Decisions and Decisions Index." 2020 no. 2-Z Cal. Regulatory Notice Reg. 87 (January 10, 2020) (Available at <https://oal.ca.gov/january-2020-california-regulatory-notice-registers/>).

⁶⁰ "The State Water Board may refine, reformulate or even reverse its precedents on a case-by-case basis in light of new insights or changed circumstances . . . All decisions and orders adopted by the State Water Board itself are precedential, except a decision or order states that it is not precedential, or is superseded by later enacted statutes,

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BY-53 [In addition, we note that the validity of the ESJ Order itself has been challenged in court. Therefore, relying on ESJ as precedent would serve only to introduce additional uncertainty into the ongoing Order 4.0 process.

BY-54 [The Regional Board's coordination with the State Board, which is required by law,⁶¹ must be a priority at this stage. The Central Coast Basin Plan notes that effective regulation of nonpoint sources will require the Regional Board to coordinate more effectively with the State Board.⁶²

We appreciate the opportunity participate in crafting a legal and effective order. Thank you for your concern and for your consideration of these comments.

Sincerely yours,

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Deborah A. Sivas
Environmental Law Clinic,
Mills Legal Clinic at Stanford Law School

On behalf of Monterey Coastkeeper, California
Coastkeeper Alliance, and Santa Barbara
Channelkeeper

judicial opinions, or actions of the State Water Board.”
(https://www.waterboards.ca.gov/board_decisions/adopted_orders/).

⁶¹ Cal. Water Code § 13225(a).

⁶² Basin Plan, p. 46.

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General Comments

Synergisms Between the Thematic Parts of the Order

BY-55

For the sake of clarity and discussion, the Board, staff, and public have dealt with the Order in its original thematic structure. We tried to think across this structure and examine interrelationships that would impact how quickly we tackle each theme. We all understand the synergies and dependencies between the themes: surface water toxicity cannot be improved without chemical spraying setbacks; sediment and turbidity cannot be improved without riparian vegetation and vegetated setbacks; surface water nitrogen cannot be improved without riparian function, reduced applications of fertilizer, and treatment of high nitrogen groundwater; and groundwater nitrogen is dependent on treating that water when it is pumped and on the surface, application limits, discharge limits, and improving surface water quality where percolation can occur.

Due to these interdependencies, we realize that to be most effective at improving ground water quality – a public health imperative -- we must do several things at once, including improving riparian function and nitrogen in surface waters. Improving riparian function and vegetated setbacks will have the added benefit of improving toxicity in surface waters and providing valuable positive feedback very early in the program.

The Order should look for interdependencies, build upon them, and make the Order as efficient as possible. As the draft becomes finalized, the Board should recognize the interrelated components and think carefully about removing or weakening any “cornerstone” component, examples would be application limits or vegetated no spray operational setbacks.

The draft needs clarification of the vocabulary, inclusion of milestones, and inclusion of “water quality requirement” endpoints protective of all appropriate beneficial uses.

BY-56

Because Ag Order 4.0 is an implementation program of the NPS Policy, it is essential to understand and, ideally, use the vocabulary of the NPS Policy.

We propose that Ag Order 4.0 should create time schedules with milestones to reach the specified water quality requirements (or objectives) protective of all appropriate beneficial uses.

Milestones appear to be entirely lacking; this word appears in paragraph headings but nowhere else in the Order. The draft uses the terms target and limit, and limit is used in two different ways (to identify enforceable milestones and to identify water quality objectives).

BY-57

The text describing NPS Policy Key Element 1 states, “For purposes of this policy, the term “water quality requirements” is used to include water quality objectives established to protect beneficial uses and any higher level of water quality needed to comply with the State’s antidegradation policy.”

In several instances, the draft Order confuses deadlines, which do not serve the purpose stated in the NPS Policy, with milestones. Key Element 3 states: “Where a RWQCB determines it is

- BY-57 cont. ↑ necessary to allow time to achieve water quality requirements, the NPS control implementation program shall include a specific time schedule, and corresponding quantifiable milestones designed to measure progress toward reaching the specified [water quality] requirements.” (Emphasis added)
- BY-58 ↑ Consistent with the NPS Policy, the milestones are required, must be “quantifiable,” and must “measure progress toward reaching the specified requirements.” Moreover, “The time schedule may not be longer than that which is reasonably necessary to achieve an NPS implementation program’s water quality objectives.” Finally, Regional Boards “are obligated to take steps to ensure that their NPS pollution control requirements are met.”
- BY-59 ↑ Milestones should be enforceable; the recently adopted Los Angeles Storm Water Plan – another NPS Policy implementation plan -- makes extensive use of enforceable milestones. Designation of enforceable milestones can add detail to the time schedule to help keep the program on track for success.
- BY-60 ↑ Milestones encourage immediate actions towards meeting a requirement; a single distant deadline, with no milestones, most often elicits inaction.
- BY-60 ↑ In sum, time schedules and milestones will put the focus on attainment of water quality requirements rather than paperwork deadlines.
- BY-61 ↑ Irrigation and Nutrient Management Planning, and Nutrient in soil (A_{soil}) and irrigation water (A_{irr}).
- BY-61 ↑ Irrigation and Nutrient Management Planning (INMP) has been a standard tool for informed farming for nearly two decades. INMP worksheets are readily available and the INMP practice is taught in schools and in farm fields by Crop Advisors across agricultural America. The standard practice of INMP is to measure and account for nutrient in both soil and water, and then to back-calculate how much fertilizer is necessary. *If all growers were practicing Irrigation and Nutrient Planning, we would have far fewer nutrient water quality problems.* If the Regional Board were to rely on the Natural Resources Conservation Service (NRCS) or Resource Conservation District (RCD), or Crop Advisors for field training, this complete view of fertilization would be taught (and should be taught by any third-party). It is critical to align Ag Order 4.0 with CDFA and UC Davis practices and Fertilization Guidelines found at <https://www.cdca.ca.gov/is/fldrs/frep/FertilizationGuidelines/> and UC ANR crop guides and research. All growers should be aware of their crop’s nutrient requirements, routinely measuring nutrients in soil and irrigation water, and the back-calculating the amount of fertilizer required. This Order should reinforce this basic principle. Having soil and water nutrient included in Order 4.0’s reporting requirements is not only more accurate, but it also reinforces this basic principle.
- BY-62 ↑ Many growers today apply nutrients with no regard for what is available in the soil and irrigation water. It will take time for growers to rely on available nutrient, but we strongly believe that Order 4.0 can effectively incentivize growers to clean the wells with high nutrient concentrations through a pump and treat alternative, making them valuable water sources in the region.
- BY-63 ↓ Every vegetable crop guideline begins with a soil test. Nutrient in soil is measured by a quick and inexpensive “Soil Quick Test” and nutrient in irrigation water can be easily measured using inexpensive test strips. Generally, if soil nitrate is above 20-30 ppm NO₃-N, no pre-plant

↑ fertilizer is required – an entire fertilizer application can be skipped. (ppm NO₃-N is equivalent to mg/L nitrate as nitrogen)

BY-63
cont. Relatively low nitrogen groundwater may measure 5 ppm NO₃-N or even less, and excessively high nitrogen water can measure 130 ppm or more. In terms of load, the range of 5 ppm to 130 ppm equates to 14 to 359 pounds of nitrogen per acre for every acre-foot of irrigation water.

BY-64 We encourage the Board to require reporting of: (1) pre-plant A_{soil} at the beginning and end of every growing season (this will give you some measure of nitrogen percolation through the winter rains); and (2) A_{irr} for every cropping.

Multi-cropping where discharge is solely to groundwater.

BY-65 Successful implementation of the Order will require moderate regulatory pressure for the Regional Board along with innovation and adaptation by the growers. Over the past months, we have talked with agricultural stakeholders to hear their fears, concerns, and positions. Among many issues, the two dominant fears are the growers' ability to grow multiple crops on a ranch every season (multi-cropping) and riparian setbacks. Although we recognize that multi-cropping has contributed to degradation of our waters, we understand that multi-cropping is a critical topic for the success of Ag Order 4.0. For this reason we describe here how multi-cropping and Order 4.0 may be compatible.

BY-66 Central Coast irrigated farmlands benefit from the mild climate, good soils, and the ability to produce multiple crops of high-value specialty vegetables. But, the draft could eliminate the multi-cropping of vegetables. The draft has taken a TMDL approach, limiting the total load a grower can discharge per acre (see Draft pg 61, table C.1-2. Loads in column 1 apply to pathways 1 and 2, confirmed with staff).

Understanding that multi-cropping was an important concern, we spent many hours and talked with many stakeholders to see if a potential solution could be found. A possible solution involves an alternative to the Draft's load limit using a nitrogen strategy that focuses on "pump and treat," an approach that could be a valid alternative because removes more nitrogen than the draft proposal and allows growers to farm all season long. The following table is a useful reference that brings together several UC ANR technical reports, blogs, and publications. All data is Central Coast specific. This information is the source of the interactive worksheet referred to later in this section.

BY-67

Crop	Days to Harvest ¹	Water Requirement ² Acre-feet/Acre	Seasonal crop N uptake ¹ (lbs/acre)	Common Practice N application rates ¹ (lbs/acre)	N removed at harvest ¹ (lbs/acre)	N scavenger? ³ (crop requires less N)
Broccoli	85-100	1.5-2.5	250-350	170-250	90-100	Y
Cauliflower	75-95	2-3	250-300	200-320	70-80	Y
Celery	90-110	2.5-3.5	200-250	200-320	140-160	Y
Head Lettuce	65-80	2-2.5	120-160	100-220	60-90	N
Romaine Lettuce	65-80	2-2.5	120-160	100-220	60-90	N

BY-67
cont.

Baby lettuce	30-35	1-2	60-70	160-190	40-50	N
Spinach	30-35	.3-1	100-130	160-200	70-90	N
Strawberries	Annual	2.0 ⁴	180-220 ⁵	162-433 ⁵ m=278	100 ⁴	N

Sources:

1

https://vric.ucdavis.edu/pdf/fertilization/fertilization_EfficientNitrogenManagementforCoolSeasonVegetable2017.pdf

²<https://anrcatalog.ucanr.edu/Items.aspx?hierId=12500> and look for appropriate crop

³<https://ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=23791>

⁴<http://ciwr.ucanr.edu/files/283985.pdf>

⁵http://www.swrcb.ca.gov/centralcoast/water_issues/programs/grants/docs/2011-076.pdf

BY-68

Much of the groundwater in the lower Pajaro, Salinas, and Santa Maria watersheds is contaminated by high levels of nitrates. Concentrations are converted to loads per acre-foot of water by multiplying the concentration by 2.76: 5 ppm NO₃-N equals 14 pounds of nitrogen per acre-foot of water and 60 ppm equals 166 pounds per acre-foot. That result is then multiplied by the number of acre-feet of irrigation water applied to produce the crop to determine A_{irr}. Broccoli, an 85-100 day crop, requires about 2.0 acre-feet of irrigation water per acre. Baby lettuce, a fragile and shallow-rooted 30-35 day crop, requires about 1.5 acre-feet.

The following examples use reasonable numbers from the reference table and UC ANR resources above:

Example One. A broccoli crop grown in an area with high nitrate groundwater.

- 2 ac-ft irrigation water @ 40ppm = 221 pounds nitrogen (A_{irr}).
- Broccoli N uptake: 250-350 pounds per acre
- 80 pounds N amendment A_{fer} (this example).
- Total pounds N applied this example (A_{fer} + A_{irr}): 301 pounds per acre.
- N Removed (R) = 95 pounds per acre.
- A_{fer} – R = negative 15 (this example)
- Pounds N discharged: A_{total} – R = 206 pounds N per acre (this example).

In this example, the broccoli crop complies with the draft's Pathway 2 (A_{fer} is equal or less than R). While 2-3 crops of broccoli per year are generally grown, it would be impossible to grow a third crop because, in spite of complying with Pathway 2, the high-N water would result in a load discharged over the limit even in the first year (500 pounds), given the draft. By 2030, no broccoli crop could be grown (2030 discharge limit = 200 pounds).

In this example, however, the broccoli crop removed 15 pounds of nitrogen from the water before it was discharged, a very good thing.

Example Two. A romaine lettuce crop grown in an area with high nitrate groundwater.

- Irrigation water (2.25 ac-ft) @ 40 ppm = 248 pounds nitrogen (A_{irr}).

BY-69 cont.	<ul style="list-style-type: none"> • Romaine lettuce nitrogen uptake: 150 pounds per acre (UC ANR) • 85 pounds nitrogen amendment A_{fer} (this example) • Total pounds nitrogen applied this example ($A_{fer} + A_{irr}$): 333 pounds per acre. • N Removed (R) = 75 pounds per acre (UC ANR 40-50). • $A_{fer} - R$ = positive 10 • Pounds nitrogen discharged: $A_{total} - R$ = 258 pounds nitrogen per acre. <p>Because of the high nitrogen irrigation water, it would be impossible to grow a second crop even in the first year in the draft's framework. In this example, the nitrogen pumped from the ground is 248 pounds and the load discharged back to the ground is 258 pounds nitrogen per acre, an increase of 10 pounds.</p>
BY-70	<p>As an alternative to a discharge limit (similar to a TMDL), it could be possible to fashion a metric that incentivizes reducing nitrogen with every pass through the treatment system – in this case a crop. Consequently, it may be possible to accommodate multi-cropping <u>and</u> remove nitrogen from the water.</p>
BY-71	<p>It appears the Board could require a total annual reduction in nitrogen discharge of a very modest 5 to 15 pounds of nitrogen, then grower(s) would be able to grow a single crop of broccoli and a crop of romaine (5 pounds nitrogen improvement) or two crops of broccoli and a crop of romaine (20 pounds improvement). The net improvement to groundwater would outpace the draft approach and would also allow growers to put food on America's tables.</p>
BY-72	<p>We believe this is an example of how the Draft's discharge limits could incentivize a pump and treat alternative which includes a requirement that the nitrogen discharge, per year must be reduced by some set amount, which amounts to a treatment efficiency standard. A reduction of 5 to 15 pounds per acre per year can be reasonably attained.</p>
BY-73	<p>We believe it will take time for growers to adjust to lower application rates. As shown in the earlier table of reference values, many growers are not considering the nitrogen in the water and are simply applying fertilizer based on their crops' uptake requirement. The farm advisors we have talked with believe the first two or three milestones will be easiest to meet, and these milestones are essential to build confidence as the application and discharge limits gradually step down.</p>
BY-74	<p>The pump and treat alternative also shows that the Regional Board should hasten timelines for attainment of water quality objectives. The Draft approach reduces nitrogen discharge and <i>additional new</i> loads to zero over the next 30 years. By focusing on smart rotations and using crops as a treatment system it could be possible to reduce loading to zero in 15 years and actual <i>treatment</i> in the years following. There are some limitations to this approach after about the first 15 or 20 years.</p>
BY-75	<p>We offer the treatment approach in line item comments below, but we would like to stress that this is one possible idea. As we mentioned above, the Regional Board should apply regulatory pressure and agriculture should innovate and adapt. As described in our line item comments below, it would be possible to decrease applied nitrogen using Table C.1-1 and increase removal efficiency through time with pump and treat, Table C.1-2.</p>
BY-76	<p>What monitoring and reporting must be required for this proposal to work?</p>

- BY-76
cont.
- *Accurate measures of A_{irr} , A_{ter} , evapotranspiration, and irrigation volume for every crop.*
 - *Reporting of irrigation method per crop. (Note: irrigation method is important because more efficient irrigation can reduce A_{irr} . Drip is more efficient at delivering nitrogen to the root zone than sprinklers, which is more efficient than furrow, which is more efficient than flood).*
 - *Nutrient in soil at the beginning and end of every season.*
 - *Third-party lab quality testing of all irrigation wells.*

Note: An interactive worksheet demonstrating compliance with both the draft proposal and calculations supporting this proposal can be downloaded at <https://otterproject.files.wordpress.com/2020/06/n-applied-worksheet.xlsx>.

- BY-77
- Multi-cropping where discharge is to surface water or tile drain.
- The above examples apply only to fields solely discharging to groundwater. It is likely that most all surface tailwater runoff has not passed through the crop's root system and likely has about the same nitrogen concentration as A_{irr} plus some additional nitrogen due to A_{ter} . Water discharging to tile drains may contain a lesser concentration of nitrogen than irrigation water if the grower is practicing pump and treat or could have a higher concentration from passing through high nitrogen soils.

- BY-78
- Aquatic organisms are sensitive to concentration as well to load:
- No grower should discharge directly to surface water more than the seasonal ambient concentration of the receiving water; discharge more than ambient levels would likely "cause or contribute" to pollution or degrade water quality conditions.
 - All ranches discharging to surface water must not discharge water at concentrations greater than the next milestone as shown in (modified) Table C.2-2.
- As an example, if a baby lettuce grower has tailwater discharge of 20 acre-feet of water per year with an average concentration of 30 ppm NO₃-N and the next milestone is 15 ppm, the grower will need to reduce or mitigate the load by 42 pounds per acre-foot for 20 acre-feet, a total of 840 pounds nitrogen. Most likely, this will require some combination of capture and treatment, application reduction, and additional practices. Various practices are currently known, researched, and available to reduce nitrogen in surface water discharges including, but not limited to: PAM, bioreactors, and vegetative treatment.

- BY-79
- The final Order should also include provisions for offsite mitigation as long as that mitigation is in the same sub-watershed and is constructed, monitored, and maintained by a third party willing to measure and report the mitigation credit per enrolled grower, the specific location of the ranch being mitigated, and an accounting of the efficacy of the water quality improvement at the mitigation site. Further discussion of offsite mitigation follows in the next comment.

- BY-80
- What monitoring and reporting must be required for this to work?
- *From growers: To determine how much nitrogen must be mitigated, growers or the third-party must provide accurate measures of tailwater NO₃-N concentration both during normal irrigation and immediately after fertilizer application or fertigation, volume of tailwater discharged, and discharge point.*

- BY-80
cont.
- For tile drains, the same information must be provided at the end of pipe(s).
 - From CMP: Seasonal nitrogen of more receiving waters; the surface water point-of-compliance is the first water of the state, not the faraway monitoring site (Tests may not need to be lab quality).
 - From the new mitigation third-party: Measured and calculated efficacy of treatment, enrolled ranches, and measured nitrogen removed per enrolled ranch acre. Periodic monitoring of toxicity and pesticide chemistry.

Off-Site Mitigation by Third Party Groups

BY-81 Discharges to surface waters can be more problematic than discharges to groundwater because nutrient and pesticide discharges cannot be allowed to additionally degrade surface waters, impacting the larger range of surface water beneficial uses. Because of the likely proximity of discharging farms to their receiving waters, the low retention time, and because surface water discharges have not passed through the crop's root system, surface discharge waters can carry high concentrations of nutrients and/or pesticides. Tile drain discharges can also have high contaminant concentrations.

BY-82 Even with good fertilizer and pesticide management, situations are likely to occur when the tailwater discharge has greater concentrations of pollutants than the receiving water and cannot be discharged without treatment. The Regional Board could allow nutrient and pesticide discharges to surface waters to, having met appropriate conditions, be mitigated off-site. Off-site mitigation should never become a strategy to avoid controlling and treating nutrient and pesticide discharges on-site. Off-site mitigations must be in the same sub-watershed as the site being mitigated.

BY-83 Offsite mitigation offers the opportunity for projects to serve multiple ranches, and under some circumstances off-site mitigation can be more effective than onsite solutions. We can support off-site mitigation if sites are well chosen for their efficacy, maintained, well monitored (including periodic toxicity and pesticide chemistry testing), with data publicly disclosed, and well documented. The third-party must provide some mechanism to measure and report the nitrogen removed for each grower or landowner.

BY-84 Off-site mitigation may be essential, but projects must be well managed and monitored. Ag Order 4.0 must include provisions in the Order and MRP for such projects. We believe these third-party mitigation groups exist now and want to do the work; they need to be folded into the Order.

BY-85 In contrast, nutrient discharges to groundwater cannot be offset by mitigation projects. A mitigation that reduces the load moving to surface waters does nothing to reduce the load moving to groundwater; they are two different paths.

Compost

BY-86 We understand that some growers and stakeholder groups would like to see further incentives for the use of compost. Incentives to use compost are already available through CDFA, but as CDFA points out, over-application of compost can lead to water quality problems as well:

- ↑
- BY-86
cont.
- “Potential nutrient inputs from compost application in multiple successive years, due to the slow-release nature of compost nutrients, could become an environmental concern” (https://www.cdfa.ca.gov/oefi/efasap/docs/CompostApplicationRate_WhitePaper.pdf pg10). A potential flaw in the Draft’s approach is to assume the amount of nutrient provided to the crop by compost will be constant, and it is not. Composts have different amounts of water, available nutrient, varying rates of nutrient release (mineralization), and high amounts of carbon that all interact to change nutrient availability. New applications of compost with variable characteristics complicate the ability to predict the available nitrogen. Again, as has been stated previously, growers should use a soil quick test to measure the actual amount of nutrient available to the crop. We note that CDFA “requires” a soil test when using compost for crops, because of the complexities of nutrient release. Id.
-
- Certainly, compost must be accounted for in the calculation of A_{fer} , like any other applied N.
-
- Commodity, watershed, or other group withdrawal from the order
- BY-87
- Generally, when groups withdraw from the Order, it weakens the Order and the chances for success in improving water quality. The wine grape growers enrolled in the Sustainability in Practice (SIP) program were certainly using less nitrate, but they were also using persistent pesticides listed by DPR as a threat to groundwater. Strawberry growers continue to position themselves for a waiver from the Order, and research sponsored by the Regional Board has shown that most strawberry growers can produce a maximum yield with around 100 pounds of A_{fer} . Yet some growers are applying over 400 pounds per acre. In addition, strawberry growers apply more pesticide per acre than any other crop on the Central Coast and strawberries are often grown on plastic covered slopes.
- We strongly believe that all irrigated agriculture growers should be subject to the same Order, doing business on the same level playing field. No crop is perfect. Reducing the number of growers contributing to receiving water monitoring weakens the program as a whole.
- Order 4.0 should make clear that any alternative to the WDR will require the same monitoring regime. For the essential receiving water monitoring program to be financially feasible and robust, all growers must contribute to that core program. We need a higher density of receiving water monitoring sites, which will not be feasible with a financially constrained program.
-
- TMDL and Non-TMDL Time Schedules
- BY-88
- Time schedules for areas covered by TMDLs must be folded into the time schedule for non-TMDL areas.
- Nutrient TMDLs range in compliance dates from 2012 through 2044, with dry season concentration limits ranging from 1.3 to 10 mg/L nitrate as N. Toxicity TMDLs range in compliance dates from “not defined” or 2016 thru 2044. Non-TMDL areas must reach the drinking water standard of 10 mg/L nitrogen by 2031.
-
- BY-89
- ↓
- Most, if not all, of the TMDLs seem to be concentration-based limits measured at receiving waters as opposed to points of discharge or edge of field. To our best knowledge, there were no consequences for the dischargers that missed their already passed TMDL compliance dates.

- ↑
 BY-89
 cont. Although we have not reviewed each TMDL, we believe that most, if not all TMDLs have no milestones to encourage any action until at or near the compliance date. With no consequences for noncompliance, no point of measurement to identify specific dischargers, and no milestones, there is no reason for a discharger to act. TMDLs are generally created for the areas with the most extreme exceedances and cover a vast area. In effect, dischargers in the most impaired areas are shielded from having to act, or even to join a third-party that encourages action. The Order must create incentives to take action, to seek help (likely the third-party), and improve water quality; if the TMDL acts as a shield, water quality will not be improved, the third-party will be weakened, and stakeholders and the Board will end up, again, in San Luis Obispo negotiating a new Order.
- BY-90 Especially for the nutrient TMDLs, the timeline parallels the agricultural order: Many nutrient TMDLs have compliance limits in the 1-4 mg/L range, with compliance dates very near the 2044 endpoint we will propose in our time schedule. Therefore, 10 mg/L in 2031 could become an enforceable milestone for all dischargers to both TMDL and non-TMDL surface waterbodies. The TMDLs are implemented by the Ag Order and all waters should be on the same schedule.
- BY-91 Nearly all the pesticide TMDLs focus on individual pesticides or a class of pesticide. As detailed below, our pesticide plan will focus on general water column and sediment toxicity. We believe that a more general focus is appropriate because the Basin Plan requires that: "All waters shall be maintained free of toxic substances in concentrations which are toxic..." (Basin Plan, pg 30). We believe that focusing on general toxicity best serves the requirement of the Basin Plan and avoids the problems associated with pesticide switching.
- BY-92 In its essence, the Nonpoint Source Policy requires the Board adopt a plan to meet the applicable water quality standards; that plan "shall" include timelines, milestones, monitoring, and enforcement. Because the TMDLs are implemented by the Agricultural Order, the board-created plan to comply with TMDLs must have these same essential properties. The TMDLs, across the board, have almost none of these properties. Generally, the TMDLs have deadlines set far in the future without any timelines or milestones. As we've seen with the TMDLs with deadlines that have already expired, there is no enforcement, notice, resolution, or consequence for failure to meet the TMDLs. Moreover, this Draft also lacks any commitment to enforcement.
- BY-93 The Order must include timelines, milestones, monitoring, and enforcement. The Order must specify what actions will be taken when exceedances are found. The Order applies to dischargers, not to watersheds. How will the dischargers "causing or contributing" to the exceedance be located, what corrective actions will be taken, and how will their improvement be documented? These same requirements apply to the TMDLs implemented by the Order as well. The Board must adopt an Order that contains a plan to "at a minimum, address NPS pollution in a manner that achieves and maintains water quality objectives and beneficial uses, including any applicable antidegradation requirements." NPS Policy Key Element 1. The plan must have detail and requirements, and that detail and those requirements must apply to individual dischargers or a third-party, not be created at some later date by the individuals or third-party.
- BY-94 ↓ Because all the listed TMDLs are implemented by the Agricultural Order, there is no reason why the compliance dates for the non-TMDL areas cannot become the TMDL

BY-94
cont. ↑ compliance date as well.

BY-95 Limits stated in the Order.
Throughout the Draft, there are statements such as "If there is any exceedance of an applicable XY limit in Table x.x-x ..." We suggest this type of reference should also include the Basin Plan. For example, the phrase "where surface water monitoring shows an exceedance of an applicable surface water limit in Table C.4-1 or Table C.4-2..." should be edited to read, "where surface water monitoring shows an exceedance of an applicable surface water limit in Table C.4-1, Table C.4-2, or the Basin Plan." This minor change is important because the Ag Order will be a WDR instead of a Waiver and we cannot predict the future standards, 303d list, or beneficial uses that may be adopted into the Basin Plan.

BY-96 Growers suspended from coalitions or who elect to participate as an "individual."
In many places in the Draft (such as the continuation of the example immediately above), the Draft states text similar to "where water monitoring shows an exceedance of an applicable surface water limit in Tables XX [or the Basin Plan], dischargers who elect to participate individually may be subject to ranch-level monitoring and reporting." (Emphasis added). We strongly believe that "may" must be "shall". We know of no other way that an individual can demonstrate compliance with the Order. In the case of members of a third-party coalition, the coalition should be required to conduct track-back and on-farm field-level testing that both inform the grower and the coalition of the source and extent of any discharge. In the case of an individual, there is no such assurance. If a subwatershed were to be found in violation of the Order, it is critical that data be available for any load discharged by the individual so that the load contribution can be taken into account when determining compliance by coalition members; this is critical for the public, the board, and the third-party. We support a strong, well-staffed, transparent, accountable, and financially stable third-party coalition. Finally, as stated above, all irrigated agricultural growers should contribute a fair share of the Cooperative Monitoring Program expense.

BY-97 The same is true for any exceedances of enforceable milestones. In every instance, the grower must demonstrate compliance and be required to conduct individual monitoring until back in compliance.

In various places, the Order refers to growers electing to act as "individuals," cases where a grower will be suspended from a coalition, and cases of exceedances. In every case, the grower must be required to individually *demonstrate* compliance through individual monitoring and reporting.

BY-98 Meaningful comments would be lost in the weeds if we made every one of these corrections and we trust they can be made in the final Order.

BY-99 Executive Officer authority
There will be hundreds of decisions that the staff and executive officer will need to make as the Order is implemented. We do not advocate that every detail must be approved by the Board. However, we do believe that it is the Board's responsibility to shape the Order including the

BY-99 cont.	<p>↑ pathways for compliance. Our legal comments provide additional thoughts on approval for all pathways for compliance. The third-party scope of work and workplan should be approved by the Board with public process. We do not believe this needs to be a long process; the process should require noticing, a public meeting, an opportunity for discussion, and approval. In addition, we do not believe the scope of work and workplan must be negotiated and approved before the Order itself is considered and passed by the Board. After all, there is no Order to build a workplan around until after the Board vote. We realize there will be at least two third-parties and all will need a scope of work and work plan brought to the board for approval. But the Order must also consider (and should encourage) that other third parties will seek to provide services to growers under the Order in the future.</p>
BY-100	<p>↓ We would like to point out that a likely third-party has asked for the same public board process.</p>
BY-101	<p>↓ Again, there are multiple places throughout the document referring to an “Executive Officer approved third-party program.” In every instance, we believe this should read “board approved third party program.” We have not called out these changes individually.</p>
BY-102	<p>↓ Our page by page comments follow. View in track changes, all markup.</p> <p>Pg 5, 3</p> <p>The State Water Resources Control Board (State Water Board) and Regional Water Quality Control Boards (Regional Water Boards) are the principal state agencies with primary responsibility for the coordination and control of water quality for the health, safety and welfare of the people of the state, <u>and protection of all beneficial uses of water</u> pursuant to the Porter-Cologne Water Quality Control Act (Porter-Cologne Act, codified in Water Code Division 7).</p>
BY-103	<p>↓ Pg 7, 13</p> <p>We believe the Order should give the Executive Officer discretion to require any appropriate additional monitoring. This is especially critical for wells on agricultural lands that provide drinking water. 1,2,3 trichloropropane is a toxic chemical, found in shallow wells, sometimes used in agriculture, that can be especially dangerous when aerosolized, such as in showers. Other widely used chemicals, such as the imidacloprid, while less toxic to humans, is especially persistent and will likely be found and best monitored in shallow domestic wells. We also believe that chemicals on the DPR Groundwater Protection List should be monitored.</p> <p>The Executive Officer may<u>shall</u> require Dischargers to locate (inventory) and conduct monitoring of private domestic wells in or near agricultural areas with high nitrate, <u>1,2,3 trichloropropane, agricultural pesticides on the DPR Sec. 6800 Groundwater Protection List, or other contaminants of concern</u> in groundwater and submit technical reports evaluating the monitoring results.</p>
BY-104	<p>↓ Pg 10,</p> <p>25. This Order also regulates agricultural activities such as the removal or degradation of riparian vegetation resulting in the loss or degradation of <u>ecosystem services and</u> instream beneficial uses.</p>

BY-104
cont.

26. Although physically occupying only a small percentage of California watersheds, wetlands and riparian areas provide valuable water quality functions such as flood control, pollutant filtration, water supply and replenishment, recreation, and habitat for a wide variety of plants and animals. Wetlands and riparian areas act to promote the health and existence of other vital natural resources, and provide significant economic benefits to California. (SWRCB Resolution 2008-0026)

Pg 11-12, Enforcement for Noncompliance

The NPS Policy requires more than a recitation of authorities: "KEY ELEMENT 5: Each RWQCB shall make clear, in advance, the potential consequences for failure to achieve an NPS control implementation program's stated purposes."

BY-105

It is inappropriate for us or any other stakeholder to write the "potential consequences for failure to achieve an NPS control implementation program's stated purposes." NPS Policy Key Elements 1 through 4 are meant to describe the purpose of the program, exactly what dischargers shall do to achieve the purpose, how progress will be measured, and requires milestones and timelines describing when and how fast the purpose will be achieved. Key Element 5 however, uniquely requires that the Board makes "clear," "in advance," the "potential consequences for [the dischargers and third-party's] failure" to "achieve the stated purposes." While Key Element 5 clearly must come from the Board, we emphatically state that Key Element 5 is entirely absent from the draft. The Board must commit its "clear" intent to take corrective actions at specific milestones along the path to achieve the stated purposes. Growers who are working towards clean water deserve the level playing field provided by the consequences for any grower not putting in the same effort, and the public deserves the transparency and assurance uniquely provided by Key Element 5.

The text goes on to further explain that while the board has discretion, consequences can apply to third-party programs as well as to individual dischargers, "Clear expectations regarding potential RWQCB responses to inadequate or ineffective programs, including but not limited to adopting a revised program or the taking of an enforcement action, provides dischargers and the public with greater certainty regarding the process."

For the enforcement where the enforceable milestone or standard is overseen by a third party, we suggest the following:

- After a reasonable effort is made by a third-party group to bring all dischargers in a watershed into compliance with discharge milestones and standards, the third-party group shall suspend a member for nonparticipation or failure to meet reduced-discharge expectations.
- A third-party group that fails to lead its member dischargers to compliance with an enforceable milestone shall suspend all members in the watershed or sub-watershed, or shall provide empirical and conclusive water quality data to the Board showing which members are in compliance and which members are not. Members not in compliance shall be suspended.
- Suspended members shall be immediately reported to the Regional Board.
- Dischargers suspended from a third-party group shall be required to immediately conduct and report individual discharge monitoring, including edge of field monitoring.

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BY-111	<p>Pg 20, New Provision</p> <p>I. <u>The program must serve the purpose of achieving water quality objectives within the timelines, milestones, and goals of this Order. The third party must define measurable metrics for documenting and reporting progress towards achieving those objectives. Measurable metrics must be part of the work plan approved by the Board.</u></p>
BY-112	<p>Pg 19, 31</p> <p>In this case, the third party will assist individual growers in achieving compliance with this Order, including implementing water quality improvement projects, <u>meeting enforceable milestones</u>, and required monitoring and reporting as described in the MRP.</p>
BY-113	<p>Pg 24 Fertilizer Nitrogen Application Limits</p> <p>Comment. The draft Fertilizer Nitrogen Application Limits are on a per-crop basis and include A_{fer} only. The Draft Order sets the application limit at the 90th percentile of all applications since 2014 for a very limited number of specific crops and requires no improvement over time. For several reasons, the draft approach is problematic.</p>
BY-114	<p>As discussed in our general comments, irrigation water can carry large amounts of nitrogen. As an example of the problem, the draft allows 295 pounds of fertilizer amendment per crop of broccoli. Broccoli is grown near the coast where irrigation water is often well above the drinking water standard and is sometimes 60 ppm NO₃-N or more. If a grower were to grow two crops of broccoli in 60 ppm water and add 295 pounds of fertilizer as allowed in the Draft, the total nitrogen applied would be 1252 pounds and 200 pounds removed, with a loading to groundwater of over 1000 pounds of nitrogen. We generally agree with the draft's 2022 application limit, but we suggest continuing the process with a series of stepped down milestones over a period of 10 years. We are in a hole and must stop digging.</p>
BY-115	<p>A large problem is that the application limit table, Table C.1-1, has a single deadline, 2022, with no further stepping down of this excessively loose limit. Perhaps the draft's assumption is that the <u>discharge</u> limits/milestones will replace the application limits after the first year. We have no idea what the future of Ag Order 4.0 will bring, but we can be reasonably certain that if petitioned by agriculture, an argument will be that the <u>process</u> to develop A and R must be the lengthy public process described in the Eastern San Joaquin Ag Order, a delay of over a decade. The extreme risk of having a static Central Coast Order stuck on the starting block with the most liberal numeric limits is just too great.</p>
BY-116	<p>We suggest a modified approach. We believe that application and discharge milestones and time schedules are tools for different jobs that should both be used together and for the long run. Application milestones and time schedule are about the relationship between the growers and each of their specific crops, and about teaching, learning, and applying the most modern ways of farming; the grower learns more, saves money, and nutrient applications and discharges are reduced. The Discharge milestones and time schedule, using A & R, are the best tool to estimate the nitrogen discharge moving to ground and surface waters, but it is more of a regulatory construct pushing all growers towards the common goal of not causing or contributing to the pollution of our waters. We believe both application and discharge strategies should be used over time to solve our groundwater and drinking water problems.</p>

BY-117

Many additional crops than what are included in the Draft have science based, field trial tested, uptake values. The UC ANR Catalog includes commercial production guidelines for over 40 vegetables; most guidelines include detailed fertilization procedures and amounts. While not shown on the client-facing side of the CropManage app created by UC ANR in cooperation with CDFA, the uptake values exist and work in the background of CropManage to help growers calculate nutrient requirements. Based on the UC ANR Catalog, the Order should provide a more complete list of crop uptake values. The more crops that can be listed, the fewer the crops that must be included in the "other crops" category.

BY-118

For Table C.1-1, we use the UC ANR field tested uptake values as the basis for our application limits. Using crop specific, science derived, field tested UC ANR crop uptake values as a foundation is far less arbitrary than picking the 90th percentile, especially when we know that far more growers are overapplying chemicals. Our 2022 application limit is pegged to the median crop uptake, not considering nitrogen in soil or in water.

With the exception of baby lettuce and spinach (crops where the common practice is to apply far more than the maximum uptake values), our 2022 application rate is within the "common practice" range. We step down the application rate over 10 years. The 10-year timeline puts growers on a trajectory to meet our modified A and R *discharge* requirements.

The text of fertilizer application limits stays the same. The following table replaces Table C.1-1 as shown on page 61 of the Draft Order and as discussed starting on page 24:

Table C.1-1 Nitrogen application limits for each cropping. All milestones beginning 2026 are enforceable. Application limits are in pounds of nitrogen amendment per acre.

<u>Crop</u>	<u>Crop Uptake Lbs/ac UC ANR</u>	<u>UC ANR Reported Common Practice</u>	<u>2022</u>	<u>2024</u>	<u>2026</u>	<u>2028</u>	<u>2030</u>	<u>2032</u>
Broccoli	250-350	170-250	300	250	210	170	130	105
Cauliflower	250-300	200-320	300	250	200	145	105	85
Celery	200-250	200-320	225	220	210	200	190	185
Head Lettuce	120-160	100-220	140	135	130	125	120	115
Romaine Lettuce	120-160	100-220	140	135	130	125	120	115
Baby Lettuce	60-70	160-190	120	110	100	90	80	75
Spinach	100-130	160-200	145	140	135	125	115	105
Strawberry	180-220	162-433 m=278	200	185	160	145	135	130
All other crops*			250	230	200	170	150	130

BY-119

Page 24 Part 2 C.1.d

- d. For any grower exceeding an enforceable milestone of tables C.1-1, the next year shall become an enforceable milestone and a grower exceeding a milestone for two years shall be required to ~~Where required by the Executive Officer based on~~

groundwater quality conditions or exceedances of the targets or limits established in this Order, the INMP must incorporate ranch-level groundwater discharge monitoring described in the MRP. The ranch-level groundwater discharge monitoring must be designed and implemented to inform effective and measurable improved management practices to protect and achieve groundwater quality.

2. ~~As shown in Table C.1-1 and Table C.1-2, t~~ 2. The fertilizer nitrogen application limits and milestones shown in Table C.1-1 go into effect beginning 2022 and nitrogen discharge milestones targets and limits described in Table C.1-2, below do not go into effect in 2023, until the second year of this Order (January 1, 2022).

As with the draft proposal, our alternative proposal incentivizes growers to use their highest nitrogen water as this water provides additional nitrogen as the tables step down allowable applied fertilizer. The Draft limits the number of crops any given ranch can produce in a season. As explained in our general comments, we suggest it could be better to think of cropping as "treatments" that potentially remove nitrogen with every cycle. Current "Common practice" does not rely on nitrogen present in water and soil and we believe it will take time for the growers to trust that this nitrogen is available to the crop. After talking with a trusted crop advisor, we do believe this change will take time.

We are offering a different approach from the two pathways suggested in the draft proposal. As discussed in our general comments, growers be required to track their cumulative N discharge for the season and limit their discharge to equal or less than the appropriate milestone.

Page 25

The following table replaces and clarifies Table C.1-2 shown on Pg 61 of the Draft Order and discussed starting on page 25:

Table C.1-2 Time Schedule and Milestones for Total Annual Nitrogen Removed Efficiency in Pounds per Acre. Any "savings" cannot be transferred or carried forward from year to year.

	2023	2026	2029	2032	2035	2038	2041	2044	2047	2050
Total Season of Annual A_{fer} -R for all crops	190	160	130	100	70	40	20	10	0	-10

As an example, a broccoli grower producing one crop (with an R value of 100) could use 290 pounds of fertilizer in 2023 or, could grow three broccoli crops applying 160 pounds A_{fer} each crop ($160-100=60$; $60 \times 3=180$).

4. This Order requires Dischargers to submit information on nitrogen applied (A) and nitrogen removed (R) per crop. This Order also establishes nitrogen discharge targets and limits based on the calculation of nitrogen applied minus nitrogen removed (A-R) using the formulas below. Nitrogen must not be discharged at rates greater than the ~~targets-milestones~~ and limits in Table C.1-2. Compliance with nitrogen discharge ~~targets-milestones~~ and limits ~~is are~~ assessed annually for the entire ranch in the INMP Summary report ~~through either of the two compliance pathways shown below. Compliance with both pathways is not required.~~

BY-120
cont.

Compliance Pathway 1: $AFER + (C \times ACOMP) + AIRR - R = \text{Nitrogen Discharge}$

OR

Compliance Pathway 2: $AFER + (C \times ACOMP) = R$

In both formulas, $R = RHARV + RSEQ + RTREAT + ROTHER$

- a. **AFER** is the amount of fertilizer nitrogen applied in pounds per acre including compost mineralized.
- b. **C** is the compost discount factor used to represent the amount of compost nitrogen mineralized during the year that the compost was applied.
- c. **ACOMP** is the total amount of compost nitrogen applied in pounds per acre.
- d. **AIRR** is the amount of irrigation water nitrogen applied in pounds per acre.
- e-b. **R** is the amount of nitrogen removed from the field through harvest, sequestration, or other removal methods, in pounds per acre.
- f-c. **RHARV** is the amount of nitrogen removed from the field through harvest or other removal of crop material.
- g-d. **RSEQ** is the amount of nitrogen removed from the field through sequestration in woody materials of permanent or semi-permanent crops.
- h-e. **RTREAT** is the amount of nitrogen removed from the ranch through a quantifiable treatment method (e.g., bioreactor). (Only applicable to ranches discharging to surface water).
- i-f. **ROther** is the amount of nitrogen removed from the ranch through other methods not previously quantified (e.g. third-party project). (Only applicable to ranches discharging to surface water).

Pg 26

BY-121

Delete 6.

7. The amount of crop material removed through harvest or other methods (**RHARV**) must be calculated using the formula described below. Dischargers must either use the UC Davis ANR crop-specific conversion coefficient values found in the MRP or develop their own conversion coefficient values following the approved method in the MRP. If Dischargers develop their own conversion coefficient, they must maintain information on the method used in the Farm Plan, and these records must be submitted to the Central Coast Water Board upon request.

RHARV = Conversion Coefficient x Material Removed

- a. The **Conversion Coefficient** is a crop-specific coefficient used to convert from units of material removed per acre to units of nitrogen removed per acre.
- b. **Material Removed** is the amount of nitrogen-containing material removed from the field, in units of pounds per acre.

BY-122	<div>Pg 27</div> <div>Delete 11</div> <div>12. The discharge of nitrogen in excess of the nitrogen discharge <u>milestones or limits in Table C.1-2</u> is prohibited and <u>for any discharger exceeding the next year shall become an enforceable milestone and a grower exceeding a milestone for two years shall be required to incorporate ranch-level groundwater discharge monitoring described in the MRP. The ranch-level groundwater discharge monitoring must be designed and implemented to inform effective and measurable management practices and achieve groundwater quality, may result in additional requirements, including obtaining additional education, implementing additional or improved management practices, lower fertilizer nitrogen application limits, increased monitoring and reporting, or progressive enforcement actions.</u></div>
BY-123	<div>Pg 27-28</div> <div>Comment: Items 14 and 15 are problematic because in the case of 14, discharger is no longer required to demonstrate compliance by reporting A and R, the fundamental metrics the Order relies upon. 15 is additionally problematic because it places the third-party directly between the grower, Executive Officer, Board, and public. We believe this is something the Board cannot approve.</div> <div>14. Dischargers who can quantifiably demonstrate that their ranches pose no threat to surface water quality or groundwater quality may submit a technical report to the Executive Officer for review. <u>If approved, the Discharger is not required to conduct the nitrogen application (A) or removal (R) monitoring and reporting or to submit the INMP Summary report, regardless of what Groundwater Phase area the ranch is in. The technical report must demonstrate with tested and repeatable quantifiable measures</u> that nitrogen applied at the ranch does not percolate below the root zone in an amount that could degrade groundwater and does not migrate to surface water through discharges, including drainage, runoff, or sediment erosion. Dischargers must provide the Executive Officer with annual updates to confirm that the exemption is still applicable.</div>
BY-124	<div><u>15. Delete</u> (Comment: As explained in the legal comments, this provision is vague and impermissibly relies on executive officer discretion. More detail must be provided in the Order to structure a legal system for approving third party programs and alternative pathways for compliance.)</div>
BY-125	<div>17. Dischargers must record and report total nitrogen applied <u>including A_{fer} and A_{irr} forte</u> all crops grown on the ranch, electronically in the TNA report form, as described in the MRP. <u>Dischargers shall also report first-crop pre-plant A_{soil} and after final harvest A_{soil}.</u></div>
BY-126	<div>Pg. 28 New Provision</div> <div><u>Dischargers in areas where the water quality for a pollutant is better (i.e., of higher quality) than the applicable limit in Table C.4-2 the Basin Plan must not cause or</u></div>

BY-126
cont.

contribute to an increase in the concentration of that pollutant in receiving waters except as consistent with the antidegradation findings of this Order.

Page 29

BY-127

21. Dischargers must conduct on-farm domestic well monitoring and reporting, either individually or as part of a cooperative effort, as described in the MRP. Monitoring shall include nitrates, 1,2,3 TCP, and any contaminant of concern as directed by the executive officer.

BY-128

Pg. 30 Part 2, Section C.2, 2-3 (Irrigation and Nutrient Management for Surface Water Protection)

Comment. Table C-2.2. As stated previously, we believe that California's Nonpoint Source Pollution Control Program requires milestones and a time schedule that details achievement water quality requirements protective of all beneficial uses. The Draft Irrigation and Nutrient Management for Surface Water Protection plan contains no milestones and stops with achievement of the drinking water standard, a standard not protective of all beneficial uses, specifically the uses associated with aquatic life. To this Region's credit, in 2010 staff researched and published the report, "Interpreting Narrative Objectives for Biostimulatory Substances for California Central Coast Waters." As stated in the report, a numeric standard of 1.0 mg/L NO₃-N is protective of aquatic life:

"Based on this analysis, we will designate water bodies as impaired for aquatic life use when nitrate concentrations exceed 1.0 mg/L NO₃-N and there is additional evidence of eutrophication..."

We believe the Draft is not consistent with NPS Policy and is not protective of all appropriate beneficial uses. We suggest the following table entirely replace Table C.2-2:

	2022	2025	2028	2031	2034	2037	2040	2043	2047	2050
<u>Enforceable Y/N</u>	<u>N</u>	<u>N</u>	<u>N</u>	<u>Y</u>	<u>N</u>	<u>Y</u>	<u>N</u>	<u>N</u>	<u>Y</u>	<u>N</u>
<u>N – All Receiving waters</u>		<u>20</u>	<u>15</u>	<u>10</u>	<u>8</u>	<u>6</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>

BY-129

Comment. As detailed in our general comments, we believe the success of Ag Order 4.0 is dependent on implementation of the TMDLs through the Ag Order and folding the time schedules together.

BY-130

2. Dischargers in an area with an established TMDL for a pollutant must not cause or contribute to an exceedance of the pollutant's surface receiving water limit in Table C.2-1 or Table C.2-2, whichever is lower, and in accordance with the compliance schedule specified in ~~the~~ Table C.2-2, no matter what their priority area.

BY-131

3. Dischargers in an-all areas without an established TMDL for a pollutant must not cause or contribute to an exceedance of the pollutant's surface receiving water milestones or limits in Table C.2-2 in accordance with the compliance schedule specified in the Table.

BY-132		Pg. 31	5. Dischargers in areas that do not achieve an applicable <u>enforceable milestone or limit</u> in <u>Table C.2-1 or Table C.2-2</u> in the surface receiving water <u>may-shall</u> be required to perform ranch-level surface discharge monitoring and reporting and must achieve the applicable limit in <u>Table C.2-1 or Table C.2-2</u> for the discharge from their ranch by <u>the the next milestone or limit</u> compliance date <u>or be subject to enforcement</u> .
BY-133		Comment. 6. If the RB were to adopt our modified Table C.2-2, we do not believe 6 is necessary.	
BY-134		7. Dischargers must complete <u>surface receiving water monitoring and reporting</u> as described in the MRP, either individually or through a cooperative monitoring program approved by the <u>Executive Officer Board</u> . Dischargers, <u>either individually or not working</u> through a cooperative monitoring program, must submit a work plan, including a SAP and QAPP as described the MRP, for Executive Officer review prior to implementation. Once approved by the Executive Officer, the work plan must be implemented. The work plan must include applicable monitoring for the pollutants in Table C.2-1 or <u>Table C.2-2</u> and must describe the actions that will be taken to achieve the limits in the Tables.	
BY-135		8. Dischargers must develop a <u>follow-up surface receiving water implementation work plan</u> , either individually, <u>with Executive Officer approval</u> or through a cooperative program approved by the <u>Executive Officer Board</u> , as described in the MRP. The work plan due date is based on the Surface Water Priority of the ranch. The work plan must include follow-up actions, such as outreach, education, and management practice implementation, and, where applicable for pollutant source identification and abatement, additional surface receiving water monitoring locations. The work plan must include a SAP and QAPP. The work plan must describe the implementation measures that will be taken to reduce the discharge of relevant pollutants and achieve the applicable surface water limits by the compliance dates in <u>Table C.2-1 or Table C.2-2</u> . The work plan must be submitted for Executive Officer review prior to implementation. Once approved, the work plan must be implemented.	
		b. Dischargers who elect to develop their work plan <u>individually</u> and whose ranches are located in areas where surface receiving water monitoring shows an exceedance of an applicable surface water limit in <u>Table C.2-1 or Table C.2-2</u> <u>may-shall</u> be <u>subject required to conduct</u> to ranch-level surface discharge monitoring and reporting, described below.	
BY-136		Pg 32	Our intent is to require any grower having exceedances or any grower suspended from the third-party coalition to conduct ranch-level surface discharge monitoring. For this reason, some of the language in 9 is unnecessary. 9. <u>When required by the Executive Officer, Dischargers must complete ranch-level surface discharge monitoring and reporting, as described in the MRP. Surface</u>

BY-136 cont.	<p>discharge monitoring and reporting may be required of a Discharger or set of Dischargers if surface receiving water monitoring shows an exceedance of an applicable surface water limit in Table C.2-1 or Table C.2-2. When ranch-level surface discharge monitoring and reporting is required, a work plan, including a SAP and QAPP, must be submitted for Executive Officer review prior to implementation. Once approved by the Executive Officer, the work plan must be implemented.</p>
BY-137	<p>Pg. 33 4. Dischargers in areas where the water quality for a pollutant is better (i.e., of higher quality) than the applicable limits in Table C.3-2 <u>the Basin Plan</u> must not cause or contribute to an increase in the concentration of that pollutant in receiving waters except as consistent with the antidegradation findings of this Order.</p>
BY-138	<p>Part 2, Section C.3. Pesticide Management for Surface Water Protection</p> <p>Comment: We have many concerns regarding the Pesticide Management Section of the Order.</p>
BY-139	<p>TMDLs. Eleven pesticide TMDLs are listed, all in the Santa Maria Watershed with the same compliance date of 10/29/2044. We have the same concerns with these TMDLs as we have with all the other TMDLs listed in this Order. They seem unrelated to all the other parts of the Order: no timelines, no milestones, arbitrary compliance dates, no connection to the non-TMDL waterbodies, and no real incentive for anyone to take any action.</p>
BY-140	<p>In addition, this troubling statement is in the TMDL section:</p> <ul style="list-style-type: none"> Dischargers must develop a follow-up surface receiving water implementation work plan, either individually or through a cooperative program approved by the Executive Officer, as described in the MRP. <p>In other words, for TMDLs, the words say that the Board and staff will require someone else to develop an implementation plan to implement the TMDL implementation plan. Isn't this the definition of kicking the can? The Order itself must contain the plan to comply with the Nonpoint Source Policy.</p>
BY-141	<p>The draft offers a boilerplate recitation as guidance:</p> <ul style="list-style-type: none"> Dischargers in an area with an established TMDL for a pollutant must not cause or contribute to an exceedance of the pollutant's surface receiving water limit in Table X.3-1 in accordance with the compliance schedule specified in the Table. The discharge of pollutants from a ranch in excess of the applicable limits after the compliance date in Table C.X-X or Table C.X-X is prohibited and may result in additional requirements, including obtaining additional education, implementing additional or improved management practices, follow-up monitoring and reporting, ranch-level surface discharge monitoring and reporting, the prohibition of discharge from the ranch, and progressive enforcement actions.

BY-142 TMDLs and their Implementation Plans are action plans to restore clean water in impaired waterbodies in need of the most help. These eleven Pesticide TMDLs are woefully inadequate because they have NONE of the essential properties required by the Nonpoint Source Policy. For example, these TMDLs lack any monitoring. The constituents endrin, dieldrin, toxaphene, chlordane, and DDE/DDT, all organochlorine pesticides (remember Rachel Carson's *Silent Spring*?), are not even mentioned in the MRP, and as with all the TMDLs implemented by the Order, they fall from sight.

BY-143 Comment: We have generally focused on the Order rather than the MRP. In general, the MRP should reflect what is needed to implement the Order, which is not yet final. In the case of pesticides, however, you will only find what you are looking for. Accordingly, the Order must include some detail on how and when to look, and how to adapt to changing conditions.

The draft MRP calls out the specific toxicity tests to be conducted using the midge, water flea, and scud, but nowhere in the Order do we find the executive officer's authority to adopt new tests as may be needed. We know that this authority will be needed as exemplified by the addition of the midge *Chironomus* as neonicotinoids became popular. It will surely happen again.

New provisions in the Order:

BY-144 Toxicity tests shall be conducted using the most appropriate and sensitive EPA approved test species and tests for the pesticides in current use at the time of testing and approved by the executive officer.

Toxicity tests shall be conducted following any available and current Statewide Ambient Monitoring Program and UC Extension Granite Canyon Water Pollution Laboratory guidance and as approved by the executive officer.

Based on discussions with Granite Canyon Lab, we believe the current testing can be improved. Whether these changes are stated in the Order or MRP is at your discretion – as long as the executive officer clearly has the authority to make changes as necessary.

"More is better" as toxicity is often transient.

Toxicity tests should be conducted monthly during the most active growing season, March thru October.

BY-145 We must use what we have learned and research tells us: The "first flush" storm event is very important because the growing season's accumulation of chemicals is mobilized, and toxicity and pesticide concentrations can peak, sometimes creating lethal conditions.

In addition to the growing season toxicity tests, the "first flush" event shall be tested. Because conditions such as slippery banks and high flows can be dangerous, sampling will always be at the discretion of personnel on-site. [Note: perhaps sampling could be conducted at a subset of sites that are generally safe].

BY-146 Toxicity and pesticide chemistry tests are complementary; toxicity tests are pass/fail and are clear indications that additional action is required. Toxicity tests can reveal synergistic and additive effects of pesticides. Pesticide chemistry tests provide clues to what chemicals may be causing the toxicity or causing an increase in toxicity, regardless of whether an MCL has been established or not. For example, imidacloprid, the most widely used neonicotinoid and known to cause widespread toxicity, has an LC 50 but no MCL.

Toxicity and pesticide chemistry tests shall always be conducted together.

The Board should regulate at the level of toxicity rather than at the level of a chemical or even a class of chemicals. There may be situations when (expensive) Toxicity Identification Evaluations (TIE test) should be conducted but should be at the discretion of the involved staff and executive officer.

MRP Pg 26, 15

BY-147 If water column toxicity analyses must be conducted to comply with follow-up monitoring requirement, the analyses must be performed on 100% (undiluted) samples. At sites where persistent unresolved toxicity is found, the Executive Officer may require concurrent toxicity, ~~and~~ chemical analyses, and/or a TIE to identify the individual discharges causing the toxicity.

As previously noted, toxicity is often transient in time and location and a failing toxicity results means that the water is killing the life that lives in it.

BY-148 Failing toxicity test results shall be reported to the executive officer within 48 hours of the test result and shall be publicly posted, electronically, within 72 hours of the result. A link shall be posted on the Regional Board's home page to the test results.

BY-149 Toxicity, water deadly to the life that lives in it, is the focus of the Water Code and Basin Plan prohibition: "All waters shall be maintained free of toxic substances in concentrations which are toxic to, or produce detrimental physiological responses in human, plant, animal, or aquatic life." Toxicity testing measures the critical aspects of agricultural pesticide use and regulation caused by overapplication, improper application, pesticide switching, and the synergistic and additive effects of pesticides. The Board should focus and regulate on water column and sediment *toxicity* rather than chemistry. The draft Order has no timeline or milestones. A new table should be added:

Table C.3-3	2023	2025	2027	2029	2031
Water column Toxicity	No site shall have a 100% toxic event for any test organism	For a calendar year, no site shall have more than three toxic events for any test organism	For a calendar year, no site shall have more than two toxic events for any test organism	For a calendar year, no site shall have more than one toxic events for any test organism	No site shall have a toxic event for any test organism
Sediment Toxicity	No site shall have a 100% toxic event for any test organism	For a calendar year, no site shall have more than three toxic events for any test organism	For a calendar year, no site shall have more than two toxic events for any test organism	For a calendar year, no site shall have more than one toxic events for any test organism	No site shall have a toxic event for any test organism

- BY-150 | Comment: DPR should not play any role in enforcing any portion of this Order unless the Board makes a finding, supported with facts, that DPR will find, enforce against, and report to the Board any discharger causing or contributing to an exceedance of the limits, targets, milestones, or objectives of the Basin Plan or Water Code. In our opinion, such a finding would require a MOU between the Regional Board and DPR detailing DPR's intent to monitor discharges, identify sources, and enforce against violators. The "fact" that we see is 15 years of deteriorating water quality conditions -- even though DPR has had the same authority the Board has stated it could rely upon. DPR enforces the pesticide labeling requirements; the deteriorating water quality conditions, which the labeling requirements are supposed to protect, indicates that DPR's regulation and enforcement has failed to protect water quality.
- BY-151 | Part 2, Section C.4. Sediment and Erosion Management for Surface Water Protection.
Pg. 36
- 1.e. Where required by the Executive Officer based on surface water quality conditions or exceedance of the limits established in this Order, the SEMP must incorporate ranch-level surface discharge monitoring described in the MRP. The ranch-level surface discharge monitoring must be designed and implemented to inform improved-effective and measurable management practices ~~to protect and achieve~~ surface water quality.
4. Dischargers in areas where the water quality for a pollutant is better (i.e., of higher quality) than the applicable limit in Table C.4-2 or Basin Plan must not cause or contribute to an increase in the concentration of that pollutant in receiving waters except as consistent with the antidegradation findings of this Order.
- BY-152 | Pg. 36-37
5. Dischargers in areas that do not achieve an applicable limit in Table C.4-1 or Table C.4-2 in the surface receiving water by the compliance date ~~may be~~ shall be required to perform ranch-level surface discharge monitoring and reporting and must achieve the applicable limit in Table C.4-1 or Table C.4-2 for the discharge from their ranch.
- BY-153 | Pg. 37
6. The discharge of pollutants from a ranch in excess of the applicable limits after the compliance date in Table C.4-1, ~~or Table C.4-2, or the Basin Plan~~ is prohibited and shall result in ranch-level surface discharge monitoring and reporting, and may result in additional requirements, including obtaining additional education, implementing additional ~~or improved~~ management practices, follow-up monitoring and reporting, ranch-level surface discharge monitoring and reporting, the prohibition of discharge from the ranch, and progressive enforcement actions.
- BY-154 | 11. Dischargers must develop a follow-up surface receiving water implementation work plan, either individually or through a cooperative program approved by the ~~Executive Officer~~ Board, as described in the MRP. The work plan due date is based on the Surface Water Priority of the ranch. The work plan must include follow-up actions, such as outreach, education, and management practice implementation, and, where applicable for pollutant

BY-154
cont

source identification and abatement, additional surface receiving water monitoring locations. The work plan must include a SAP and QAPP. The work plan must describe the implementation measures that will be taken to reduce the discharge of relevant pollutants and achieve the applicable surface water limits by the compliance dates in Table C.4-1, ~~or~~ **Table C.4-2, or the Basin Plan**. The work plan must be submitted for Executive Officer review prior to implementation. Once approved, the work plan must be implemented.

Tables C.4-1 and C.4-2

If the Board intends to deal with both the sediment TMDLs and turbidity Region-wide, it must take into account the meanings in the NPS Policy and translate them to meaningful time schedules with measurable milestones. Some milestones must be enforceable in order to catalyze action.

The Draft versions of Tables C.4-1 and C.4-2 are deadlines, not time schedules with milestones. This is not a theoretical discussion of the vocabulary of the NPS Policy. This is about requiring action, establishing a trajectory towards success, and having measurable and enforceable milestones along the way.

While this table is incomplete, we suggest that tables C.4-1 and C.4-2 be replaced with the single completed Table C.4-1:

Table C.4-1

	2022	2023	2026	2029	2032	2035	2038	2041	2044	2047	2050	2053
Morro Bay Sediment TMDL	Where are you today? xx	xx	xx	xx	xx	50% there	xx	xx	xx	xx	xx	6,652 Tons
Pajaro Watershed Sediment TMDL	Where are you today? same					50% there						4114 Tons
General Turbidity Warm	Where are you today? same		50% there		40 NTU							
General Turbidity Cold	Where are you today? same		50% there		25 NTU							

BY-156

What's required to monitor and report this section? CMP monitoring during significant storm events when turbidity and load is likely to be high. Checking to make sure the CMP turbidity monitoring program is adequate to meet the need. Any ranch on a slope and with plastic: Certification of a Sediment Control Plan, show-your-work calculations/sizing of any constructed basin, and picture of the constructed basin annually. Individuals: individual discharge monitoring including during significant events. Report on existing management practices and additional practices. Morro Bay and Pajaro sediment monitoring programs.

Part 2, Section C.5. Riparian Area Management for Water Quality Protection

BY-157

Comment: As mentioned in the general comments, riparian protections are essential to achieving nearly all water quality improvements. The irrigated Ag Order is a long term effort to improve water quality; likely the first parameter to improve will be surface water toxicity due to the relatively short toxic life of most pesticides. Vegetated no-spray setbacks are essential to curbing toxicity. There have been arguments against even modest setbacks, but: 1) the label requirements of most pesticides restrict spraying within 25-feet of water, and 2) Farm machinery requires 25 feet, or more, to turn around at the edge of fields. Extensive agriculture-specific research has shown that, while more is better, vegetated buffers of 35 to 50 feet will filter sediment, pathogens (i.e. *E. coli*), and sediment-adhered pesticides. Rangeland research focusing on sediment and *E. coli* has shown that wheat or rye-grass stubble can be effective as well. We base our suggested setback requirements on these facts and research.

- The minimum vegetated setback from any water, including ditches, must be at least 50-feet.
- The setback cannot be sprayed, including spot-treatments with herbicides.
- A durable stubble, planted annually is acceptable as a vegetation and can be used for light or infrequent operations providing:
 - The grass cannot be mowed less than six to eight inches high.
 - It should be planted or seeded at moderate to high density in the fall; some re-seeding may be necessary in the spring to fill in any bare spots
 - The setback cannot be overused, creating bare areas or extensive road-tracks (any lightly used road should use the crop side 15-foot margin of the setback).
 - Note: We are not suggesting the chosen grass must be native; it should be chosen for its durability. Some cover-crop type grasses could be appropriate, provide added benefit, and may not be native.
 - The 50-foot setback cannot be used as a high-use roadway.

BY-158

The operational and riparian setbacks are no-spray. We understand this potentially impacts *Arundo* eradication efforts. Review of the current (January 2020) glyphosate "Interim Registration Review Decision" suggests that glyphosate is generally not toxic to humans, mammals, and most vertebrates. There is some evidence of toxicity to birds and some pollinators, and glyphosate is highly toxic to a broad spectrum of plants. Although glyphosate is registered for aquatic use to kill a broad spectrum of aquatic plants, the registration does not mean glyphosate is safe for aquatic life and beneficial uses. There is a warning that killing a broad spectrum of plants can impact the terrestrial food and pollen resource for birds and bees. There is also a warning that aquatic use or contamination can cause aquatic plants to die, decompose, and suffocate fish and other aquatic life. There are strict requirements for avoiding spray drift. An additional EPA study noted that the aquatic half-life is up to 91 days. Glyphosate adheres to soils and sediments and moves with those particles. Yet another study found that glyphosate spray drift can have toxic impacts on resources up to 1000 feet away. While we understand and agree with the desire to eradicate *Arundo* using both mechanical and spray methods, the interests of protecting aquatic life beneficial uses are best served by at least a 50-foot no-spray buffer from any waterbody.

Pg 42, 4

BY-159

- b. The operational setback distance ~~must be either 1) 1.5 times the width of the active channel, on each side of the stream, or shall not be less than 35-50-feet wide measured from the crop margin towards the for waterbodies-waterbody. that are not~~

BY-159
cont

BY-160

Pg 43,

~~streams such as wetlands and lakes; or 2) The applicable riparian setback, if required, can include up to a 50-foot vegetated operational setback on the field-side of the riparian setback, the applicable riparian setback distance in Table C.5-1 (and Table C.5-2, where applicable), whichever is less.~~

9. The introduction of invasive species in the ~~minimum~~ riparian setback ~~and operational setback~~ is prohibited.

The following table replaces Table C.5-1

<u>Order of stream</u>	<u>Minimum Operational Set Back (ft)</u>	<u>Riparian Setback (ft)</u>	<u>Min Multi- Benefit Riparian Vegetation (columns 3 – 2)</u>
	<u>Stubble or low dense vegetation</u>	<u>Native vegetation 5+ incl trees</u>	
<u>Ditches and order 1</u>	<u>50</u>	<u>0</u>	<u>0</u>
<u>Order 2</u>	<u>50</u>	<u>75</u>	<u>25</u>
<u>Order 3 & 4</u>	<u>50</u>	<u>100</u>	<u>50</u>
<u>Order 5+</u>	<u>50</u>	<u>200</u>	<u>150</u>
<u>Wetland area < 10</u>	<u>50</u>	<u>0</u>	<u>0</u>
<u>Wetland 10-100</u>	<u>35</u>	<u>70</u>	<u>35</u>
<u>Wetland 101-350</u>	<u>50</u>	<u>125</u>	<u>75</u>
<u>351 or greater</u>	<u>50</u>	<u>175</u>	<u>125</u>

BY-162

Table C.5-2 is deleted

BY-163

Table C.5-3 is kept but becomes C.5-2

Attachments

- Attachment 1. California's History of Regulating Agricultural Pollution
- Attachment 2. Farms don't need dangerous chemicals to grow food.
Let's cut our dependence on them (Sacramento Bee
March 2020)

Note to Readers:

The materials provided in Attachments 1 and 2 have been omitted from this section of the document because they do not contain specific comments on the DEIR or DAO 4.0.

These materials are available for review in Section 3.3.

Response to Comment BY-1

Thank you for your comment.

Response to Comment BY-2

CCWB acknowledges the commenter's background and interests.

Response to Comment BY-3

CCWB acknowledges the commenter's background and interests.

Response to Comment BY-4

CCWB acknowledges the commenter's background and interests.

Response to Comment BY-5

This comment is noted.

Response to Comment BY-6

This comment is noted.

Response to Comment BY-7

This comment is noted.

Response to Comment BY-8

This comment is noted.

Response to Comment BY-9

This comment is noted.

Response to Comment BY-10

This comment is noted.

Response to Comment BY-11

This comment is noted.

Response to Comment BY-12

This comment is noted.

Response to Comment BY-13

This comment is noted.

Response to Comment BY-14

This comment is noted.

Response to Comment BY-15

The comment states that “one overarching Order will best promote fairness and provide the most efficient path to improving water quality by encouraging innovation, assuring economies of scale, and allowing improvements in practices to be used broadly.” The comment also states that the Regional Board should design an Order that is conservative, meaning that it should err on the side of assuring that water quality requirements are achieved and achieved on a time schedule that is “not . . . longer than that which is reasonably necessary.” Finally, the comment states that the Regional Board has repeatedly affirmed its commitment to ensure that DAO 4.0 is legally sound, and the Board’s duty under the public trust doctrine further urges conservatism in the design of DAO 4.0. The commenter’s general concerns are noted, and, as appropriate, specific responses to comments are addressed below.

Response to Comment BY-16 through BY-22

Please refer to Response to Comment BY-15.

Response to Comment BY-23

The comment states that DAO 4.0 must satisfy the key elements of the Nonpoint Source Policy, which the commenter states are interdependent. The comments further state that given the current severely degraded water quality in the Central Coast region and the limited resources of the Regional Board, DAO 4.0 will need a strong design under each Key Element, and that Regional Board’s findings supporting DAO 4.0 should include more specifics, explaining how Key Elements interact with one another and focusing on how any design elements depend on one another. The commenter’s general concerns are noted, and specific responses to comments are addressed below.

Response to Comment BY-24 through BY-25

Please refer to Response to Comment BY-23.

Response to Comment BY-26

The comment generally states that Key Element 1 requires primarily that purposes of the plan be explicitly stated, that Key Element 1 also highlights that the requirement that water quality objectives be achieved and maintained is the minimum requirement; and that Regional Boards and third-party programs are free to go above and beyond this requirement. The commenter’s general concerns are noted.

Response to Comment BY-27

The comment states that the ultimate goal of the Nonpoint Source Policy is “to assure that the water quality objectives are eventually met” and that the Regional Board must make a determination that there is a “high likelihood” of achieving the ultimate goal. The comment also states that DAO 4.0 must consider all water quality requirements, including aquatic life, not just drinking water; DAO 4.0 does not deal adequately with toxicity; and DAO 4.0 also has large gaps relating to enforcement and structure for approving third-parties and other alternative methods of compliance. The commenter’s general concerns are noted, and responses to specific comments are below. DAO 4.0 includes a finding that there is a high likelihood that the Order will achieve the ultimate purpose of preventing exceedances of water quality objectives and

protecting beneficial uses. (RAO 4.0, Attachment A, page 37, paragraph 102). The comments do not specify how the Order fails to implement all water quality objectives in the Basin Plan to protect the relevant beneficial uses, including those protective of aquatic life. Table A.B-1 and Table A.B-2 identify the water quality objective/beneficial use combinations in the Basin Plan, which are the bases of some surface receiving water limits in the Order. Where a receiving water limit is based on a narrative water quality objective, such as toxicity, the CCWB has interpreted the narrative water quality objective as described in Attachment A (Findings), pages 132-147, paragraphs 49-110. Water quality objectives have not been adopted for every beneficial use.

Response to Comment BY-28

The comment states that DAO 4.0 is inconsistent with the Nonpoint Source Policy because it establishes no timeline for when water quality requirements will be achieved. The comment also states that the evidence overwhelmingly demands that the Regional Board act immediately and use the full weight of its regulatory authority to ensure all growers begin to mitigate pollution. The CCWB disagrees that the Order lacks timelines for when water quality requirements will be achieved. RAO 4.0 establishes nitrogen discharge targets and limits that are based on the applicable water quality requirements. The nitrogen discharge targets limits are phased in over a period of time to allow sufficient time for Dischargers to adapt and for development of new and improved management practices and tools. Additionally, to further address nitrate pollution in groundwater due to overapplication of fertilizer, nitrogen application targets and limits are established and also become more stringent over time. Surface receiving water limits are based on water quality objectives and TMDLs. Where the water quality objective is narrative, the CCWB has interpreted the narrative objective to establish a numeric receiving water limit, as described in the Findings (e.g., RAO 4.0 Attachment A, pages 132-147, paragraphs 49-110, Table A.C.3-2, and Response to Comments BN-046, BN-047, BN-048). Where a time schedule has been provided in the Order, the time schedule either incorporates quantifiable milestones or the Order requires submission of a work plan incorporating quantifiable milestones to ensure progress toward the achievement of the applicable water quality requirement. (e.g., RAO 4.0 Attachment B, page 26, paragraph 15.b.)

Response to Comment BY-29 through BY-31

Please refer to Response to Comment BY-28.

Response to Comment BY-32

The comment states that for DAO 4.0 to have a high likelihood of achieving water quality objectives, it must contain an explicit commitment to ongoing evaluation of data and must provide opportunities to modify the plan's design elements where feedback mechanisms show the plan is not working. The follow-up surface receiving water implementation workplan that Dischargers are required to prepare is one type of feedback mechanism in the Order, used to assess the impact of irrigated agricultural waste discharges on receiving water. The workplan is designed to, among other things, identify and abate the source of water quality impacts and identify additional monitoring and reporting. Based on water quality data obtained, the Executive Officer will require additional monitoring sites be added to the workplan to further evaluate the waterbody. See RAO 4.0, Monitoring and Reporting Program, Attachment C, page 26, paragraph 15. The Order also includes opportunity to "modify the plan's design elements where feedback mechanisms show the plan is not working" on a case-by-case basis. Based on

data received, if a discharge of nitrogen occurs in excess of the nitrogen discharge targets or limits, the Discharger may be subject to additional requirements, including obtaining additional education, INMP certification by a qualified professional, implementing additional or improved management practices, or increased monitoring and/or reporting. These consequences are part of a feedback mechanism designed to identify and abate the source of water quality impacts from nitrogen discharges to groundwater and surface water. Finally, consistent with Water Code section 13263(e), the Order has been revised to include a finding that it is the CCWB's intent to annually receive information from staff to evaluate the Order's effectiveness and identify "emerging science and management practices; consider potential Order modifications as may be appropriate at five-year intervals; and generally inform the Board and public regarding the Order's effectiveness towards achieving the stated objectives." RAO 4.0, page 8, paragraph 35.

Response to Comment BY-33

Please refer to Response to Comment BY-32.

Response to Comment BY-34

The comment states that DAO 4.0 will not have a high likelihood of achieving water quality objectives without incorporating specific consequences – such as reopeners and modification of standards – as availability of data and management practices improve. The commenter also states that the DAO 4.0 does not discuss how the Order will be enforced. Please refer to the Response to Comments BY-32 and BY-33 regarding the revision of the Order to include language regarding the Central Coast Water Board's periodic review and consideration of potential modifications of the Order as data is acquired and management practices evolve. Enforcement of the Order is governed by Water Code section 13050 and the State Water Board's Enforcement Policy, as discussed in the Order at RAO 4.0, pages 7-8, paragraphs 32-34. At RAO 4.0, page 8, paragraph 33, the Order enumerates the Order violations Central Coast Water Board considers priorities. Please also refer to Master Response 2.1.9.

Response to Comment BY-35 through BY-38

Please refer to Response to Comment BY-34.

Response to Comment BY-39

The comment states that DAO 4.0 does not violate Water Code section 13360's prohibition on dictating the manner of compliance and includes a discussion of this position. The commenter's concerns are noted.

Response to Comment BY-40 through BY-42

Please refer to Response to Comment BY-39.

Response to Comment BY-43

The comment states that DAO 4.0 depends on various types of future decision-making by the executive officer but does not provide the requisite objective standards to proscribe the limits of executive officer discretion. The comment identifies in particular decisions for approving third-party programs and alternative methods of compliance. RAO 4.0 has been revised to define the alternative compliance pathway for third-party programs for groundwater protection and trend

monitoring (RAO 4.0, Part 2, Section C.2), and to describe the minimum requirements (backstops) for third-party program proposals (RAO 4.0, page 15, paragraph 34).

Response to Comment BY-44 through BY-46

Please refer to Response to Comment BY-43.

Response to Comment BY-47

This comment is noted.

Response to Comment BY-48

This comment is noted.

Response to Comment BY-49

This comment is noted.

Response to Comment BY-50

The comment addresses the State Board ESJ Order's weight of authority and states that the State Board's lack of clear guidance on its precedential orders obfuscates the precedential impact of the ESJ Order on DAO 4.0. The comment also states that the ESJ Order's validity is in question due to ongoing litigation. Consistent with applicable statutory provisions and State Board determinations, the State Board identifies portions of its ESJ Order that are precedential, which regional boards are expected to follow. (Gov't Code section 11425.60; State Board Order WR 96-1 (Lagunitas Creek), at fn. 11; see also index of State Board precedential water quality orders at https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/, including Order WQ 2018-0002.) Although a reviewing court may overturn a State Board order in the course of litigation, the mere legal challenge of such an order does not inherently cast doubt as to whether it is valid, as the commenter suggests. In certain situations, the State Board may find it appropriate to overturn an order previously designated as precedential or to distinguish it from a set of facts presently before it.

Response to Comment BY-51 through BY-54

Please refer to Response to Comment BY-50.

Response to Comment BY-55

This comment is summarized and responded to in the following Master Responses: 2.8.8 and 2.3.10.

Response to Comment BY-56

This comment is noted.

Response to Comment BY-57

This comment is noted.

Response to Comment BY-58

This comment is noted.

Response to Comment BY-59

This comment is noted.

Response to Comment BY-60

This comment is noted.

Response to Comment BY-61

This comment is summarized and responded to in the following Master Responses: 2.3.10 and 2.5.10.

Response to Comment BY-62

This comment is summarized and responded to in Master Response 2.1.8.

Response to Comment BY-63

This comment is summarized and responded to in Master Response 2.3.7.

Response to Comment BY-64

This comment is summarized and responded to in Master Response 2.3.8.

Response to Comment BY-65

This comment is noted.

Response to Comment BY-66

This comment is noted.

Response to Comment BY-67

This comment is summarized and responded to in Master Response 2.1.8.

Response to Comment BY-68 through BY-78

This comment is summarized and responded to in Master Response 2.1.8.

Response to Comment BY-79 through BY-82

This comment is summarized and responded to in Master Response 2.2.3.

Response to Comment BY-83 through BY-84

This comment is summarized and responded to in Master Response 2.2.5.

Response to Comment BY-85

This comment is summarized and responded to in Master Response 2.2.6.

Response to Comment BY-86

This comment is summarized and responded to in Master Response 2.1.8.

Response to Comment BY-87

This comment is summarized and responded to in Master Response 2.2.2.

Response to Comment BY-88

This comment is summarized and responded to in Master Response 2.5.6.

Response to Comment BY-89

This comment is noted.

Response to Comment BY-90

This comment is summarized and responded to in Master Response 2.5.6.

Response to Comment BY-91

This comment is summarized and responded to in Master Response 2.6.4.

Response to Comment BY-92

This comment is summarized and responded to in Master Response 2.1.9.

Response to Comment BY-93

This comment is summarized and responded to in the following Master Responses: 2.5.11 and 2.7.3.

Response to Comment BY-94

This comment is summarized and responded to in Master Response 2.5.6.

Response to Comment BY-95

This comment is noted.

Response to Comment BY-96 through BY-97

This comment is summarized and responded to in the following Master Responses: 2.1.9; 2.3.3; 2.4.2; 2.5.5; 2.5.11; 2.5.2; 2.5.3; and 2.6.6.

Response to Comment BY-98

This comment is summarized and responded to in the following Master Responses: 2.3.3; 2.4.2; 2.5.5; 2.5.11; 2.5.2; 2.5.3; and 2.6.6.

Response to Comment BY-99

This comment is summarized and responded to in Master Response 2.5.3.

Response to Comment BY-100

This comment is noted.

Response to Comment BY-101

This comment is noted.

Response to Comment BY-102 through BY-163

This comment is noted.

Response to Comment BY-164

The comment is attachment 1 to the comment letter, consisting of the commenter's interpretation of "California's History of Regulating Agricultural Pollution" in support of the comment letter. Responses to specific comments that rely on the attachment are addressed, as appropriate, where they were raised in the comment letter.

Response to Comment BY-165

The comment is attachment 2 to the comment letter, consisting of a reprint of an article published in the Sacramento Bee, in support of the comment letter. Responses to specific comments that rely on the attachment are addressed, as appropriate, where they were raised in the comment letter.

Letter BZ: Sarah Aird, Californians for Pesticide Reform (June 22, 2020)**Letter BZ**

From: [Sarah Aird](#)
To: AgNOI_WB@Waterboards
Subject: Comments on Draft Ag Order
Date: Monday, June 22, 2020 11:54:42 PM
Attachments: [FINAL CPR Comments on Draft Ag Order 4.0 062220.pdf](#)

EXTERNAL:

Please find attached comments on the Draft Ag Order 4.0 from the statewide coalition Californians for Pesticide Reform.

Best,

Sarah Aird
Co-Director

Sarah Aird, Esq., Co-Director (pronouns: she/her)
Californians for Pesticide Reform
2029 University Ave., Suite 200, Berkeley, CA 94704
Phone: 510-788-9025 x5
www.pesticidereform.org
Working together for a just & sustainable food system since 1996



June 22, 2020

Central Coast Regional Water Quality Control Board (Region 3)
 895 Aerovista Place, Suite 101
 San Luis Obispo, CA. 93401-7906
 Submitted via email to AqNOI@waterboards.ca.gov

RE: Comments on Ag Order 4.0, Draft General Waste Discharge Requirements for Discharges from Irrigated Lands

Dear Central Coast Regional Water Board members and staff:

BZ-1

These comments on Ag Order 4.0, Draft General Waste Discharge Requirements for Discharges from Irrigated Lands, are submitted on behalf of the statewide coalition Californians for Pesticide Reform (CPR). CPR is a statewide coalition of nearly 200 organizations, working directly with frontline farmworker communities in seven of the largest agricultural counties in the state, including in the Central Coast and San Joaquin Valley. Pesticide leaching and runoff from farming can result in significant damage to groundwater and surface water, threatening community health and endangering other species, and is of grave concern to our members. We appreciate many of the measures in the current draft Ag Order 4.0 and urge the Board to adopt even stronger pesticide protections to ensure improved water quality.

BZ-2

Groundwater Protection

Critically, the draft Order requires monitoring of 1,2,3-Trichloropropane (1,2,3-TCP), a hazardous pesticide phased out by the 1980s. Unfortunately, the Order includes only vague requirements for monitoring groundwater for other pesticides currently in use, seemingly reliant on the California Department of Pesticide Regulation's groundwater monitoring, prioritization and annual compilation of pesticide use data [Part 2, Section C.1. Irrigation and Nutrient Management for Groundwater Protection, para. 24].¹

¹ Part 2, Section C.1. Irrigation and Nutrient Management for Groundwater Protection, 24: "When required by the Executive Officer based on water quality data and pesticide use, Dischargers must conduct monitoring and reporting for pesticides in groundwater, either individually or as part of a cooperative effort. The Department of Pesticide Regulation (DPR) monitors groundwater for pesticides that have been detected in groundwater or have the potential to migrate to groundwater. Based on DPR's groundwater monitoring, prioritization, and annual compilation of pesticide use data, a subset of Dischargers may be required to conduct groundwater monitoring and reporting for specific pesticides."

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BZ-3 We believe that rather than relying on future review of DPR data, the Order should specify under what conditions Dischargers would be required to conduct pesticide monitoring in groundwater. Current groundwater monitoring is utterly insufficient, with DPR and other agencies currently conducting groundwater monitoring at a very limited number of locations. Significant data gaps exist, as referenced in Attachment A of the Order (Item 69): “As discussed in the May 2018 staff report, monitoring data for pesticides in groundwater in the central coast region is limited, *meaning the potential impacts to groundwater resources are largely unknown* (CCRWB, 2018c).” [emphasis added] To address this data gap, it is vital that the Order - at a minimum - require agricultural Dischargers to allow DPR access to their wells (both domestic and agricultural) for pesticide sampling. It is not sufficient for the Board to defer to DPR for groundwater protection.

Pesticide Discharges to Surface Water

BZ-4 Californians for Pesticide Reform supports the draft Order’s framework of establishing numeric limits on individual pesticides in receiving waters and discharges from ranches, along with imposing limits on combined toxicity of multiple pesticides through total Toxic Units and compliance with site-specific toxicity testing. We believe that these three types of monitoring and compliance limits will help prevent simple replacement of one bad-actor pesticide class to another.

BZ-5 In addition to that important framework, we urge the Central Coast Regional Water Quality Control Board to add and adopt the following protective measures in Ag Order 4.0:

- BZ-6 • Not have Ag Order 4.0 rely on LC50 values, which set a threshold resulting in unacceptable lethal concentration for 50% of the population of organisms. Much more protective values are needed.
- BZ-7 • Adopt a provision for adding monitoring and limits for additional pesticides as they become more widely used and as additional aquatic toxicity data becomes available.
- BZ-8 • Add a provision for periodically reviewing and modifying toxicity test methods and species to ensure they are able to detect impacts of newer pesticides.
- BZ-9 • Require that Dischargers adjust the pesticides they monitor for based on review of the most recent pesticide use data, as is required in the Central Valley.
- BZ-10 • Require pesticide and toxicity monitoring in water and sediment on a monthly basis during the irrigation cycle and during “first flush” events.
- BZ-11 • Require that pesticide chemistry is always monitored concurrently with toxicity testing.
- BZ-12 • Specify triggers in the Order that when exceeded automatically start the process of Toxicity Identification Evaluations since TIEs need to be conducted immediately upon mortality findings in order to properly determine the cause of observed toxicity. TIEs should be reserved for cases where there is substantial toxicity not explained by pesticide levels exceeding toxic thresholds.
- BZ-13 • Monitor pesticide chemistry and toxicity in water and sediment in line with the bioassessment monitoring conducted every 5 years.
- BZ-14 • Change the timeline of the draft Order, giving growers 5 years rather than 10 to implement new measures and change pesticide use practices. As we learn more about

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BZ-14
cont.

how the use of agricultural pesticides are one of the primary factors in reducing global biodiversity and causing irreversible species loss, it is critical that we be ambitious in our goals for reducing these unintended impacts and support farmers' transition to more ecological farming practices.

BZ-15

CPR appreciates the improvements made by the Central Coast Regional Water Quality Control Board and staff to better protect water quality in the Central Coast region. We hope you adopt our additional recommendations and thank you for the opportunity to submit these comments.

Sincerely,



Sarah C. Aird
Co-Director

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Response to Comment BZ-1

This comment is summarized and responded to in Master Response 2.1.1.

Response to Comment BZ-2 through BZ-3

This comment is summarized and responded to in the following Master Responses: 2.4.5 and 2.4.6.

Response to Comment BZ-4

This comment is summarized and responded to in Master Response 2.5.1.

Response to Comment BZ-5

The CCWB acknowledges the commenter's input.

Response to Comment BZ-6

This comment is summarized and responded to in Master Response 2.6.4.

Response to Comment BZ-7 through BZ-11

This comment is summarized and responded to in Master Response 2.6.3.

Response to Comment BZ-12

This comment is summarized and responded to in Master Response 2.6.7.

Response to Comment BZ-13

This comment is summarized and responded to in Master Response 2.6.3.

Response to Comment BZ-14

This comment is summarized and responded to in Master Response 2.6.5.

Response to Comment BZ-15

Thank you for your comments.