

**Waste Discharge Requirements General Order
for Growers Within the Tulare Lake Basin Area that are
Members of a Third-Party Group**

Response to Comments

The California Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board or “board”) has provided opportunity for the public written comments on the tentative Waste Discharge Requirements General Order for Growers within the Tulare Lake Basin Area that are Members of a Third-Party Group, Order R5-2013-XXXX (referred to as “tentative Order”). This document contains the Central Valley Water Board staff’s written responses to comments received on the tentative Order.

The tentative Order was circulated for 31-days for public comment ending on 15 April 2013. Written comments were received during this comment period from the following.

	Commenter
1	Southern San Joaquin Valley Water Quality Coalition
2	Kern River Watershed Coalition Authority
3	Agricultural Organizations
4	Community Water Center, Clean Water Action CA, CA Rural Legal Assistance Foundation
5	California Farm Bureau Federation
6	Innovative Ag Services, LLC
7	Excelsior /Kings River Resource Conservation District
8	Arvin-Edison Water Storage District
9	Kern-Tulare Water District
10	North Kern Water Storage District
11	Wheeler Ridge-Maricopa Water Storage District
12	Paramount Farming Company
13	Grimmway Farms
14	Bolthouse Farms, Inc.
15	California Grape Co., LLC
16	Val-Mar Farms, LLC
17	Munger Farms
18	Dan Andrews Farms
19	LT Farm, Inc.
20	Carreon Vineyards, Inc.
21	Leland Bell Farms, Inc.
22	South Valley Farms
23	Snell Partnership
24	AMA Pistachio Development
25	D.M. Camp & Sons
26	Stiefvater Orchards, LP
27	Gardiner Farms
28	King & Gardiner Farms, LLC
29	Pacific Ag Management Inc.
30	Rosedale Ranch
31	Sierra Land & Farming, LLC

32	Wasco Real Properties
33	Wise Farming
34	Nickel Family, LLC
35	Giumarra Vineyards
36	Pioneer Nursery
37	NeuHouse Farms
38	John Andreas Ranch
39	Gless Ranch
40	Maricopa Orchards, LLC
41	Johnson Drilling Corp
42	Kirschenmann Farms, Inc.
43	Stull Farms
44	M. Caratan, Inc.
45	Edison Highway Ranch, LLC
46	Argo Farming Corporation
47	NJL Ranch
48	SVS Viticulture, LLC
49	Porter Citrus, Inc.
50	Lehr Brothers, Inc.
51	Handel and Wilson Farms, LLC
52	Starrh & Starrh Family Farms
53	Steven M. Goddard Company, Inc.
54	Way Gin, LP
55	Wayde S. Kirschenman, Et. Al
56	Sonshine Properties, LLC
57	Caffee Family Trust
58	Taylor Farms
59	Andrew S. Pandol
60	Donald Urfrig
61	Gwendolyn Neufeld
62	Hannah M. Neufeld
63	James K Pflugh
64	Jeff Siemens
65	Matt Pandol Jr.
66	Matthew Fisher
67	Peter Ermigarat
68	Tim Holtermann
69	Tom Fry
70	Wayne & Virginia Kirschenman

Prior to circulating the tentative Order for public comment, the board circulated a “draft” Order for public review and comment. The draft public review process that the board engaged in is not required by law or policy, but was conducted to help the board work with dischargers and other interested parties to develop the best possible policies for the protection of water quality while maintaining the viability of the Central Valley’s agricultural industry. The draft review period began on 12 July 2012 and closed on 10 August 2012. The board staff did not develop written responses to comments on the draft Order. In its notices to interested persons, board staff has explained that, while written responses to comments on the tentative Order would be provided, written responses to comments on the draft Order would not. Several commenters

expressed an intent that all of their comments on the draft Order or other previous Irrigated Land Regulatory Program (ILRP) documents, e.g., Irrigated Lands Program Environmental Impact Report (PEIR) ¹, are to be incorporated into comments on the tentative Order. The commenters did not provide any specific discussion of which comments in their previous letters had not been adequately addressed in the modifications from the draft to tentative Order or addressed in a previous response to comments. Furthermore, the tentative Order has been substantially modified from the draft Order; therefore board staff considers it a new document, different from the draft Order and previous ILRP documents. Despite being aware that written responses would only be provided in response to comments on the tentative Order, these commenters did not identify which of their previous comments were still germane to the tentative Order or were inadequately addressed in previous comments. The board staff is not legally required to ascertain whether comments on prior drafts are still of concern to the commenter or are germane to the tentative Order. Nor is it reasonable to expect that the staff would go through such an exercise. In light of the above, this response to comments does not include written responses to comments on the previous draft Order or other ILRP documents.

This response to comments is organized to include a series of master response and singular responses. The master responses apply to broader issues that may address multiple comments. When issues are addressed in this broader context, the interrelationships between some of the individual issues raised can be better clarified. It is also possible to provide a single explanation of an issue that is more thorough than separate, narrowly focused responses would be. The master responses are presented below.

1. Tentative Order development – process concerns and differences in conditions between coalition areas
2. Concern regarding expense, “reasonable” regulations
3. CEQA concerns
4. Effectiveness of existing management practices
5. Groundwater vulnerability area designation process – alternative proposals
6. Discharge limitations and enforcement
7. Management Practice Evaluation Program
8. Sign-up period
9. Definition of “waste”
10. Executive Officer authority
11. Educational component
12. Benefits to surface water importation

The master responses are given first, followed by responses to the remaining singular comments. The following table lists the comment numbers that were answered in a master response, per comment letter. The master response numbers listed in the table below are hyperlinked to the master response location in this document. The letter number and name are to the beginning of the singular response for that letter.

¹ ICF International. 2011. Irrigated Lands Regulatory Program Final Program Environmental Impact Report. Final and Draft. March. (IFC 05508.05.) Sacramento, CA. Prepared for: Central Valley Regional Water Quality Control Board, Sacramento, CA Water Quality Control Board, Sacramento, CA

Master Response Key for Each Comment Letter

Letter	Comment Number ²	Master Response Number
1. Southern San Joaquin Valley Water Quality Coalition	1-1	1
	1-2,12,14,15,27,28	2
	1-4	9
	1-7	8
	1-10,24	5
	1-19	6
	1-30,31,32	7
2. Kern River Watershed Coalition Authority	2-1	3
3. Kern River Watershed Coalition Authority	3-1,13,14	1
	3-3,5,8,12	5
	3-4,6,9,10	2
	3-11	3
4. Agricultural Organizations	4-3	5
	4-4	8
	4-6	2
5. Community Water Center, Clean Water Action CA, CA Rural Legal Assistance Foundation	5-16	10
6. California Farm Bureau Federation	6-1	1
	6-2	9
	6-4	3
	6-5,7	2
	6-6	6
7. Innovative Ag Services, LLC	7-1	10
	7-4	11
8. Excelsior /Kings River Resource Conservation District	8-2	2
	8-4	11
9. Arvin-Edison Water Storage District	9-1,2,3,4	1
	9-5	12
10. Kern-Tulare Water District	1-1,2,3,4,5,6	1
11. North Kern Water Storage District	11-2	5
	11-3,4,6,8	1
	11-5	2
	11-7	12
12. Wheeler Ridge-Maricopa Water Storage District	12-1,2	1
	12-3	4
	12-5	2
13. Paramount Farming Company	13-1	1
14. Paramount Farming Company	14-1,2,5,7,8,11	1
	14-3,9	2

² Comment letters have been labeled with comment numbers along the right-hand margins and denoted with red lines. Refer to these comment letters, provided as a separate attachment to this document to determine comment numbers used for these responses to comments (Attachment 1).

	14-4	4
	14-6	5
	14-10	3
15. Grimmway Farms	15-1	1
	15-2	4
	15-3	2
16. Bolthouse Farms, Inc.	16-1,5,6	1
	16-2,4	4
	16-3	2
17. California Grape Co., LLC	17-1	1
	17-2	4
18. Val-Mar Farms, LLC	18-1	1
	18-2	4
19. Munger Farms	19-1,4	4
	19-2	1
	19-3	2
20. Dan Andrews Farms	20-1	1
	20-2	4
21. LT Farm, Inc.	21-1	1
	21-2	4
22. Carreon Vineyards, Inc.	22-1	1
	22-2	4
23. Leland Bell Farms, Inc.	23-1	1
	23-2	2
24. South Valley Farms	24-1	1
	24-2	4
25. Snell Partnership	25-1,3	1
	25-2,4	4
26. AMA Pistachio Development	26-1	1
	26-2	4
	26-3	2
27. D.M. Camp & Sons	27-1	1
	27-2	4
28. Stiefvater Orchards, LP	28-1,3	1
	28-2	4
29. Gardiner Farms	29-1	1
	29-2	4
	29-3	2
30. King & Gardiner Farms, LLC	30-1	1
	30-2	4
	30-3	2
31. Pacific Ag Management Inc.	31-1	1
	31-2	4
	31-3	2
32. Rosedale Ranch	32-1	1

	32-2	4
	32-3	2
33. Sierra Land & Farming, LLC	33-1	1
	33-2	4
	33-3	2
34. Wasco Real Properties	34-1	1
	34-2	4
	34-3	2
35. Wise Farming	35-1	1
	35-2	4
	35-3	2
36. Nickel Family, LLC	36-1	4
	36-2	1
37. Giumarra Vineyards	37-1	1
	37-2	4
38. Pioneer Nursery	38-1	1
	38-2	4
	38-3	2
39. Jim Neufeld	39-1	1
	39-2	4
40. John Andreas Ranch	40-1	1
	40-2	4
41. Gless Ranch	41-1	1
	41-2	4
42. Maricopa Orchards, LLC	42-1,3	1
	42-2	4
	42-4	2
43. Johnson Drilling Corp	43-1	1
	43-2	4
44. Kirschenmann Farms, Inc.	44-1	1
	44-2	4
45. Stull Farms	45-1	1
	45-2	4
46. M. Caratan, Inc.	46-1	1
	46-2	4
	46-3	2
	46-4	11
47. Edison Highway Ranch, LLC	47-1	1
	47-2	4
48. Argo Farming Corporation	48-1	1
	48-2	4
49. NJL Ranch	49-1	1
	49-2	4
50. SVS Viticulture, LLC	50-1	1
	50-2	4

51. Porter Citrus, Inc.	51-1	1
	51-2	4
52. Lehr Brothers, Inc.	52-1	1
	52-2	4
53. Handel and Wilson Farms, LLC	53-1	1
	53-2	4
54. Starrh & Starrh Family Farms	54-1	4
	54-2	2
55. Steven M. Goddard Company, Inc.	55-1	1
	55-2	4
56. Way Gin, LP	56-1	1
	56-2	4
57. Wayde S. Kirschenman, Et. Al	57-1	1
	57-2	4
58. Sonshine Properties, LLC	58-1	1
	58-2	4
59. Caffee Family Trust	59-1	1
	59-2	4
60. Taylor Farms	60-1	1
	60-2	4
61. Andrew S. Pandol	61-1	4
	61-2	1
62. Donald Urfrig	62-1	1
	62-2	4
	62-3,4	2
63. Gwendolyn Neufeld	63-1	1
	63-2	4
64. Hannah M. Neufeld	64-1	1
	64-2	4
65. James K Pflugh	65-1	1
	65-2	4
66. Jeff Siemens	66-1	4
67. Matt Pandol Jr.	67-1	4
	67-2	1
68. Matthew Fisher	68-1	1
	68-2	4
69. Peter Ermigarat	69-1	4
	69-2,3	1
70. Tim Holtermann	70-1	1
	70-2	4
71. Tom Fry	71-1	1
	71-2	4
72. Wayne & Virginia Kirschenman	72-1	1
	72-2	4

Master Response 1. Tentative Order development - process concerns and differences in conditions between coalition areas

Comment summary

During discussions with the Southern San Joaquin Valley Water Quality Coalition, Central Valley Water Board staff indicated that there would be some general conformity between ILRP Orders; however, each would be crafted so as to reflect the characteristics of the particular coalition area. As the tentative Order is almost identical to the East San Joaquin River Watershed Order adopted by the Board, it appears that this approach has been overridden by considerations of absolute uniformity and administrative convenience. It appears that Central Valley Water Board staff did not consider the technical information and expert testimony provided to the Board when drafting the tentative Order but rather applied a “cookie cutter” approach to developing the ILRP Orders.

Differences in conditions between the Tulare Lake Basin area and the East San Joaquin River Watershed area include:

- Surface waters within the Tulare Lake Basin area have few water quality exceedances attributed to agriculture, few 303d listings, and no TMDLs.
- The Southern San Joaquin Water Valley Water Quality Coalition area is totally covered with Senate Bill 1938 management plans and some of the States leading Integrated Regional Management Plans. Sufficient water quality monitoring programs already exist.
- The Tulare Lake Basin area has limited rain, limited irrigation volumes, few live water courses running through the coalition area, and some of the States greatest depths to groundwater. Large areas within the Tulare Lake Basin area are historic lake beds where salts have accumulated and have historically had impacted groundwater.

Specific conditions that should be considered for the Kern River Sub-watershed area include:

- There are very few streams and creeks within the Kern River Sub-watershed. The current surface water program is being successfully implemented and only one area within the Kern River Sub-watershed detected actionable exceedances which are currently being addressed by an approved surface water quality management plan.
- Large scale water banking projects operated within the Kern River Sub-watershed would be threatened by the intrusion of poor quality groundwater and therefore motivation already exists to protect groundwater quality. Increase horizontal flow due to water banking would add complexity to a groundwater monitoring program.
- There are few areas within the Kern River Sub-watershed area where communities have drinking water systems which have delivered water that exceeded the nitrate maximum contaminant level (MCL). The area with the greatest nitrate concentrations within the Kern River Sub-watershed is the Rosedale area where many of the residents that rely on septic systems instead of a sewer system.
- Sufficient groundwater quality protection programs and monitoring are currently being conducted by water districts and agencies within the Kern River Sub-watershed.
- High salinity shallow groundwater present in the Buena Vista and Kern Lake bed region is present due to the accumulation of salt over the millennia. This is caused by thick stratified layers of heavy clay soils, the closed nature of the basin(s), and past evaporation of water. These clays and other fine grained materials are effective confining zones that limit the flow of water to greater depths. This shallow water is inappropriately designated at having a beneficial use of MUN.
- The average depth to groundwater in Kern River Sub-watershed is greater than that in other coalition sub-watershed in the Tulare Lake Basin area. The greater depth to

groundwater translates to greater transit times for waters on the surface to reach groundwater.

- Kern River Sub-watershed is generally more efficient with regards to water use and nitrogen use than the other coalition sub-watershed in the Tulare Lake Basin area. Cropping patterns continue to trend to more permanent crops with highly efficient irrigation.

Based on these differences, it is inappropriate for the tentative Order to so closely resemble the East San Joaquin River Watershed Order. As written, the tentative Order would result unnecessary regulation costs with without meeting the objective to protect water quality.

The tentative Order appears to be a “rush to regulate” and is the wrong approach to solve the problem. The ILRP should evaluate the costs and benefits of monitoring and reporting requirements, assess potential alternatives, define and account for baseline conditions by specific geographic areas and provide measurable goals for each level of regulation, that if obtained result in a defined, decreased level of future monitoring and reporting. Aside from the 30th November 2012 workshop, Central Valley Water Board has not had any interaction with the agricultural community in the Kern River Watershed Coalition Authority area. The ILRP has lacked a collaborative stakeholder process.

Response

Differences between the Tulare Lake Basin Area and the East San Joaquin River Watershed Area Orders

Board staff acknowledge similarities between the tentative Tulare Lake Basin Area order (tentative TLBA order) and the adopted East San Joaquin River order (ESJ Order). The similarities in structure are purposeful, since both deal with discharges from irrigated lands to groundwater and surface water. Board staff believes it is appropriate for the general approach and regulatory structure for addressing similar discharges to be similar. The general approach of monitoring surface water and groundwater quality, conducting studies to determine whether practices are protective of groundwater quality, and reporting on key aspects of management practice implementation are fundamental to determining whether Members of the third-party are in compliance with the Order’s requirements. Both the tentative TLBA Order and the ESJ Order have a structure that includes treating high vulnerability areas and low vulnerability areas differently (more reporting and monitoring requirements are associated with high vulnerability areas). To the extent there are more or less high vulnerability areas under one Order versus the other, the degree of regulation will differ.

While there are similarities between the Orders, there are key differences as well. For example, the surface water monitoring program is different in the TLBA tentative Order than in the ESJ Order. In addition, the reports provided by the third-party (e.g., the Groundwater Quality Assessment Report or GAR) will be based on the area-specific conditions in the Tulare Lake Basin, which, in turn, will drive the regulatory approach (e.g., identification of the high vulnerability areas where growers need to submit nitrogen management plan summary reports).

The templates to be developed by the water quality coalitions and commodity groups for required reports are an example of a similarity that will benefit all growers by simplifying reporting requirements. There are also provisions in the tentative Order that provide an

opportunity for the third-party to submit comments on the templates regarding any changes that should be made to reflect the unique conditions in the area.

The commenters have not clearly identified where the flexibility provided by the tentative Order prevents the board from reasonably addressing the purported differences between the two areas. No compelling reason for changing the general structure of the tentative Order or alternative structure has been provided by the commenters. However, the tentative TLBA Order includes considerable flexibility with respect to how the requirements of the orders and monitoring and reporting requirements are addressed by the third party. The Surface Water Monitoring Plan requirements for the tentative TLBA Order remains essentially the same as the monitoring program implemented under the Conditional Waiver at the request of the current Coalition (Southern San Joaquin Valley Water Quality Coalition). New requirements for groundwater monitoring will begin with a Groundwater Quality Assessment Report (GAR) prepared by the third party, which must include a review of all available and applicable water quality data to describe existing groundwater quality and any data gaps. Review and inclusion of data currently being collected under SB 1938 Management Plans and other groundwater management plans should be incorporated into the GAR and any subsequent monitoring efforts as appropriate. Regional differences and existing data and monitoring considered by the third party when preparing the GAR may provide baseline conditions that will be the basis for decisions on what areas are highly vulnerable, where data gaps exist, and where low vulnerability areas exist.

Specific conditions to consider for the Kern Sub-watershed:

Board staff agrees that climatic and hydrologic conditions in the western portion of the Kern sub-watershed differ from those in the eastern portions of the Tulare Lake Basin area (TLBA). Much of the western TLBA in Kings and Fresno counties also differ from the eastern portions of those counties. The tentative TLBA Order contains sufficient flexibility to address differences in stream flow patterns, which will be addressed through ephemeral stream monitoring throughout the TLBA (currently several ephemeral streams are or have been sampled as special studies under the Conditional Waiver).

The tentative TLBA order also contains flexibility with respect to groundwater monitoring. How and where groundwater monitoring is implemented will be decided only after the third party prepares the GAR and proposes high and low vulnerability areas (subject to Executive Officer approval). As stated above, the tentative TLBA order requires the third party to examine all available and applicable data when preparing the GAR and proposing vulnerability classes. While staff is cognizant of the influence that greater depths to groundwater and semi-confining clay layers have on the rate of groundwater recharge, staff disagrees that the presence of such hydrogeologic conditions necessarily precludes agricultural discharges from adversely impacting groundwater quality. This hydrogeologic information will be useful in future vulnerability designations and MPEP development.

The unique conditions within the Kern area do not prevent wastes from irrigated lands from reaching surface water or groundwater, and therefore waste discharges that could affect water

quality warrant coverage under an Irrigated Lands Regulatory Program Order.

Need to assess alternatives, rush to regulate, lack of collaborative process:

Board staff disagrees with the comments claiming that the ILRP has lacked a collaborative stakeholder process or that there has been a "rush to regulate." The board staff held initial CEQA scoping meetings to get public input in 2003. Following release of the final Existing Conditions Report, the board conducted another series of CEQA scoping meetings in March and April 2008 to gather recommendations on the scope and goals of the long-term ILRP. During these meetings, stakeholders expressed a desire to be actively engaged in program development. The long-term Irrigated Lands Program Stakeholder Advisory Workgroup was formed to provide stakeholders the opportunity to work with staff to develop the long-term program. The workgroup included participants representing federal, state, and local government agencies; agricultural groups, environmental groups; and environmental justice groups. Over the course of nine months, the workgroup developed long-term program goals and objectives and a range of alternatives for consideration in the PEIR. During the development of the draft PEIR, board staff met multiple times with a variety of stakeholders to provide updates on the status of the draft PEIR and receive feedback.

The board certified the Final Program Environmental Impact Report for the ILRP (PEIR) in April 2011. In June 2011, the board directed staff to begin developing waste discharge requirements (orders) that would implement the long-term ILRP to protect surface and groundwater quality. During 2011, the board reconvened the Stakeholder Advisory Workgroup to provide additional input in the development of the orders. Also, during the same time, the board worked with the Groundwater Monitoring Advisory Workgroup to develop an approach for groundwater monitoring in the ILRP.

With respect to the long-term ILRP, including the tentative TLBA Order, board staff has engaged in multiple meetings with the coalitions, other agricultural representatives, environmental justice groups, and state agencies. Beginning in early 2012 through early 2013, board staff meet with the Southern San Joaquin Valley Water Quality Coalition, including representatives from the Kern River Sub-watershed area 14 times prior to the release of the tentative Order. During these meetings, Board staff and stakeholders discussed various alternatives regarding the content that would be included in the tentative Order. For example, based on discussions during these meetings, Board staff included language that gives the Executive Officer authority to reduce the frequency of monitoring and the submission of some reports if the implementation of management practices is shown to achieve performance standards. Also, as described above, the board included an additional "draft" public review step that is not required for board consideration of orders. In summary, board staff has engaged in numerous formal and informal meetings with stakeholders over the course of five years in developing this program. In addition, the board has held multiple public meetings and workshops to consider staff proposals, provide direction on the program, and to take action related to various elements of the program. Stakeholder engagement during development of the PEIR and the tentative Order has been extensive.

Master Response 2. Concern regarding expenses and “reasonable regulations”

Comment summary

Comments regarding the expenses of the tentative Order include:

- As nitrates residing in the unsaturated zone will be an ongoing and legacy source for years to come, the costs of implementation are unreasonable considering the groundwater objectives in the tentative would likely not be achieved. Other measures should be taken to address legacy issues (e.g. importation of high quality surface waters and/or nitrate recovery and reuse efforts).
- Costs associated with the tentative Order have not been adequately assessed. The variability in cost estimates prepared by Central Valley Water Board staff illustrates the uncertainty of estimated costs. Costs are likely to be far greater than what Central Valley Water Board staff has estimated. Costs estimates prepared for the Kern area by a third party estimate the costs of implementation, not including any management practices made by growers, is \$16.04 per acre per year. This estimate is significantly greater than Central Valley Water Boards staff estimates. With the margin of profitability already shrinking, the additional costs per-acre associated with the Order will adversely impact farmers.
- The fact that the ILRP is being implemented through a series of waste discharge requirements does not negate the applicability of section 13141 of the California Water Code. The costs of the ILRP program are significant and need to be considered by the Regional Board in its adoption of the tentative Order. Thousands of acres would be regulated out of business and the real costs will augment that impact greatly.
- Throughout the Porter-Cologne Act, there is an underlying requirement of reasonableness to the regulation of water quality in the state. The tentative Order fails to meet this legal standard.
- The tentative Order incorrectly assumes that all growers within the Tulare Lake Basin area are dischargers and therefore are subject to the Order.
- Growers in low vulnerability areas that are not associated with nitrate problems should not be required to prepare Nitrogen Management Plans.
- The regulatory requirement that all surface and groundwater tests must not exceed required standards within ten years is unreasonable. It is recognized that these types of regulations will not have a favorable impact for perhaps 40 years. Irrigated agriculture is in compliance with water quality objectives limitations if its discharges are not the principal cause, or do not significantly contribute to water quality objective exceedances even if the surface water or groundwater in question does not meet applicable water quality standards. The time schedules for compliance must also be specifically related to causing or significantly contributing to exceedances and guaranteeing full compliance in the receiving water itself.

Response to comment that legacy nitrate issues will prevent the goals from being achieved, and that other measures should be taken:

The presence of contaminants in the unsaturated zone or in the aquifer from previous discharges does not exempt current discharges from regulation. The Order is structured to require current landowners and farm operators to ensure their discharges do not cause or contribute to exceedances of water quality objectives or unreasonably affect beneficial uses). There are no obligations in the Order to remediate legacy problems. Implementation of the Order will ensure that current practices do not create future “legacy” water quality problems that

would prove more difficult and costly to address. The costs of monitoring and reporting are modest compared to an individualized regulatory approach that would require site specific monitoring and reporting. The costs are reasonable given the board's need to determine whether the practices employed on irrigated lands are protective of groundwater and surface water quality.

Alternative strategies for mitigation of legacy issues through importation of fresh surface water are beyond the jurisdiction of the Board but may be within the ability of the irrigation districts within the third-party areas. Nitrate recovery and reuse technologies that are viable management practices may be identified and implemented in the Management Practices Evaluation Program.

Response to comment that cost estimates are not adequate, are too low, and are uncertain; Costs will adversely impact growers; and Section 13141 applicability:

Board staff considered the estimated costs to implement the tentative Order while acknowledging the vast range of farming practices used within the 2.89 million acre Order area. The average costs provided in the Order are estimates for the entire area only, and do not reflect any single farm's expected actual cost. The criteria that were considered when developing the average costs for the Order are explained in Attachment A of the Order, were discussed during numerous meetings with the third-party, include revisions based on feedback from the third-party (particularly with respect to the Kern River Sub-watershed), and have been discussed at previous Board workshops

One commenter takes issue with finding 34 of the tentative Order, which states that section 13141 of the Water Code "does not necessarily apply" to the tentative Order. In making this statement, the tentative Order has not taken a position on the applicability of that code section to the tentative Order. Instead, the tentative Order notes that costs of the long-term ILRP were estimated in its Basin Plans prior to the implementation of the tentative Order, consistent with section 13141 of the Water Code. The commenter has pointed to no authority requiring the board to affirmatively opine about a statute's applicability, as opposed to taking a neutral position as the tentative Order does. Moreover, Board staff notes that the State Water Resources Control Board staff has released a draft water quality order to be considered for State Water Board adoption. The draft order concludes that Water Code section 13141 is "applicable only to an agricultural water quality control plan that is adopted within a water quality control plan." (See August 20, 2013 Draft Water Quality Order, *In the Matter of the Review of Conditional Waiver of Waste Discharge Requirements Order No. R3-2012-0001*, at p. 15). The Central Valley Water Board has prepared a cost estimate for the long-term ILRP, and added it to its Basin Plans prior to implementation of this tentative Order. The State Water Resources Control Board approved these Basin Plan amendments on 17 July 2012. To estimate costs for this tentative Order, staff used the same study used to develop the Basin Plan amendments and supplemented the study based on the Order's requirements and in consideration of new information, such as comments provided by the Kern River Sub-watershed. The comment further claims that the tentative Order proposes new costly regulatory components not previously analyzed and states that the board must analyze, evaluate, and

estimate all of the costs of these new regulatory requirements. The board has estimated the potential costs to Dischargers of the tentative Order. Detailed discussion of the estimated cost may be found in Attachment A, under the section titled “California Water Code Sections 13141 and 13241.”

Response to comment that Order does not meet the legal reasonableness standard:

The suggestions that the tentative Order is not reasonable, within the meaning of the Water Code, is not supported by any facts or analysis provided by any of the commenters. Board staff believes that it is reasonable to require Members regulated by the Order and the third-party representing them to provide information necessary to demonstrate compliance with the Order. As described in Attachment A of the tentative Order, farm evaluations and nitrogen management plan summary reports provide information on overall implementation of practices to protect water quality, in some ways serving as a surrogate to individual water quality sampling. Many other board programs require individual sampling of waste discharges to assess impacts to water quality. For the ILRP, the board has recognized that it may not be reasonable to require tens of thousands of growers to sample their waste discharge. Also, the burden of such monitoring would be extensive (see analysis for Alternative 5, Economics Report). Consequently, the tentative Order relies on a regional monitoring approach and evaluation of management practices at representative sites, coupled with farm-specific planning, evaluations, and reporting. Considering this, board staff disagrees that the tentative Order's approach is unreasonable. On the contrary, the approach has been crafted considering the reasonableness of the requirements and the needs to consider the burden of reporting.

The monitoring and reporting requirements have been crafted considering reasonableness and the Water Code's requirement to consider the burden of reporting. The Order takes a reasonable approach by tailoring the monitoring and reporting requirements to the potential constituents of concern and the water quality threat. The Order also requires key information to be provided by Members to the third party annually for summarization and submittal to the Regional Board in an annual report. Annual reporting is a common requirement in California, and the third-party reporting structure allows Members to submit information in a cost-effective manner. The commenters have not provided evidence that any of the proposed monitoring or reporting requirements are unreasonable or unnecessary.

Response to Comment that all growers are dischargers:

Irrigated farming operations that do not have a discharge or that do not have a discharge with a potential to affect the quality of the State's waters are not required to seek coverage under this Order. Irrigated agricultural operations have the potential to discharge waste to surface water when situated near streams, or ditches and canals tributary to streams, or through subsurface flow from tile drained lands to surface waters. Irrigated agricultural operations discharge or have the potential to discharge to ground water through percolation of irrigation water past the root zone of the crop. Deep percolation of the excess irrigation water past the root zone carries salts and nutrients that can impact groundwater quality. If a grower can demonstrate that his operations do not discharge in a manner that could affect water quality, then he would not be subject to the Order. Such an evaluation would need to be a site-specific assessment of the conditions of the field purported to not discharge to groundwater or surface water. Commenters have argued that it may take a great deal of time (on the order of decades) for a discharge of

waste to reach groundwater. However, that does not necessarily mean a discharge that could affect the quality of a water of the state has not occurred. In addition, even in areas with a great depth to groundwater, improperly sealed or protected wells or wells without backflow prevention can provide a preferential pathway to groundwater resulting in near-term impacts to groundwater quality.

Response to comment that no NMP should be required if in a Low Vulnerability Area:

Low vulnerability areas are not “no vulnerability” areas. The potential to discharge waste that could affect groundwater from irrigated agricultural operations exists in these areas even if physical or hydrologic site conditions do not warrant a high vulnerability designation. The impacts from irrigated agricultural application of nitrogen need to be addressed in all areas of the Order regardless of groundwater vulnerability designation. Nitrogen management planning is an efficient farming practice as well as a management practice that should help growers to meet the requirement to minimize excess nutrient application relative to crop consumption. The Nitrogen Management Plan is kept on-site and Members in low vulnerability areas do not have to submit a Nitrogen Management Plan Summary Report.

Response to comment that all water quality analyses must not exceed a water quality objective within 10 years of adoption:

The commenters misinterpret the compliance time schedule in the tentative Order. The tentative Order requires that Members in violation of the receiving water limitations implement an approved management plan in accordance with an approved time schedule authorized pursuant to sections VIII.I and XII of this Order. The time schedule must be as short as practicable, but cannot exceed ten years from the date that the plan is submitted, not the date of the adoption of the Order. The statement that all receiving waters must be meeting objectives within 10 years of adoption of the Order is not accurate when an approved management plan is in place.

Master Response 3. CEQA concerns

Comment summary

Comments were received indicating that Finding No. 34 and 39 incorrectly specifies that the PEIR includes six alternatives. This matter is presently before the Superior Court Judge Timothy M. Frawley. Judge Frawley’s tentative ruling grants significant portions of the relief sought by the California Sportfishing Protection Alliance and the San Joaquin County Resource Conservation District in their respective Writ of Mandate. The Court is likely to issue a Writ is consistent with the grounds for relief sought in the respective petitions which would necessitate significant revisions to the PEIR as well as the Irrigated Lands Regulatory Program. A legally adequate PEIR is needed before proceeding with any additional project approvals.

Response

Judge Frawley’s final ruling, issued on 21 May 2013, did not identify any legal deficiencies with the Program EIR and no writ was granted to the agricultural petitioners. The Board staff continues to rely on the PEIR, absent a final court ruling that it is legally deficient. *Kriebel v. City Council* (1980) 112 Cal.App.3d 693, 702.

Master Response 4. Effectiveness of existing management practices

Comment summary

Economics, market forces, and cultural practices have led to current irrigation, fertilization, and pesticide application practices that do not cause an adverse impact or pose little threat to groundwater quality. Past agricultural practices may have contributed to nitrate contamination; however, this Order is intended to regulate current practices. Some of the technologies that are currently being used that minimize agricultural discharges to groundwater include monitoring evapo-transpiration rates, neutron probes used to monitor soil moisture, drip irrigation, nitrogen applications based on tissue tests, soil tests, and tail water return systems.

Response

Board staff agrees that in many areas, farming operations have changed to more efficient irrigation and operational management practices that may reduce the potential for discharge of waste to surface and ground waters. Operations that have already implemented improved practices protective of water quality will have fewer management changes and consequently have lower costs for compliance with Management Practice Evaluation Plan requirements. However, there has been no comprehensive reporting of those practices, so the degree of implementation of practices protective of water quality is not clear. The legacy issues resulting from past less protective management practices are addressed in response Master Response 2 above.

Master Response 5. Groundwater vulnerability area designation process – alternative proposals

Comment summary

The Regional Board and its staff, have been presented on several occasions with a formal proposal for designating and assessing specific site's "potential to discharge" through the use of a Nitrogen Hazard Index ("NHI"), which is scientifically supportive and cost effective. Rather than burden individual landowners with costly monitoring and reporting, pursuing an approach like the NHI can easily and economically assesses a specific site's potential to discharge.

The current language in the tentative Order gives the Third-Party the ability to propose high and low vulnerability areas with the final approval from the Executive Officer. This approach is favored over the previous approach in the draft Order. This more focused approach will allow Third-Parties and growers to address the areas where farm nitrogen use has an effect on drinking water sources. However, the language in Finding 22 of the tentative Order still gives the Executive Officer total discretion to set high and low vulnerability areas. This finding should be revised to state that "the Executive Officer, upon review and making a finding that the proposed high vulnerability is significantly inadequate, may make an amendment."

Response

Information on the NHI is available on the University of California (UC) website: http://ucanr.edu/sites/wrc/Programs/Water_Quality/Nitrate_Groundwater_Pollution_Hazard_Index/. Essentially, the NHI works with an overlay of soil, crop, and irrigation information. Based on the three components, an overall potential hazard number [for nitrogen to pollute groundwater] is assigned and management practices are suggested, where necessary. The use of the NHI to evaluate whether there is a discharge to groundwater is not supported by the model's documentation for interpretation. The reader is directed to the document titled "*Interpretation of Nitrate Groundwater Pollution Hazard Index Number, a supporting document for the UC Center for Water Resources Nitrate Groundwater Pollution Hazard Index.*" This document is accessible on the UC's website: <http://ucanr.org/sites/wrc/pdfs/HINumberInterp.pdf>

This supporting document for the UC Center for Water Resources NHI states that “...*some groundwater degradation can occur even with a hazard index of 1.*” The supporting document further states that under lower NHI numbers (1 to 20) “...*the farmer must still implement sound management practices but extraordinary procedures are not required.*” The document clearly indicates that, even under low NHI numbers, wastes can be discharged in an amount that degrades groundwater. As described above, the Water Code requires a report of waste discharge where a waste discharge could affect the quality of state waters. The tentative Order will provide regulatory coverage for the waste discharge and ensure the protection of groundwater quality. The tentative Order also utilizes the concept of vulnerability to assign more intensive groundwater monitoring only in areas of high vulnerability. Also, as stated throughout this comment response, the third-party orders will provide Dischargers with a cost effective cooperative monitoring approach to evaluating effects of waste discharges to groundwater.

The purpose of the NHI, as stated on the UC’s website is “*To provide information for farmers to voluntarily target resources for management practices that will yield the greatest level of reduced nitrogen contamination potential for groundwater by identifying the fields of highest intrinsic vulnerability.*”³ The index can be used by Members to help target management practices to achieve the greatest level of reduction of nitrogen contamination. Using the index in this manner should help Dischargers to minimize the cost of management practices to protect water quality. The tentative Order’s monitoring program will provide the necessary feedback to ensure that any degradation that may occur from waste discharge is not causing exceedance of water quality objectives.

Board staff agree that the NHI can be a useful model, similar to other models prepared by the USGS, or State Water Resources Control Board; however, like all models, it needs a method to validate its output. Its use, in conjunction with other sources of data and similar models may prove useful when assessing vulnerable groundwater areas. Its sole use, when other data and models exist or may be obtained is unlikely to be the best method of determining groundwater vulnerability throughout the Central Valley.

With respect to the commenters concern about Finding 22, it states in part: *The Executive Officer will review third-party proposed high and low vulnerability areas and make the final determination of these areas. High and low vulnerability areas will be reviewed and updated throughout the implementation of this Order.* The California Water Code section 13267 allows the Board, or when delegated, the Executive Officer, to require reports of any discharger when a discharge or proposed discharge may affect the quality of a water of the state. Should an interested person disagree with the Executive Officer’s decision regarding a vulnerability designation, that person may petition the board to reconsider that decision.

The process by which high and low vulnerability areas will be determined include the preparation of a Groundwater Quality Assessment Report (GAR) by the third party within one year of receipt of a Notice of Applicability. The GAR must assess all available, applicable and relevant data and information to determine high and low vulnerability areas where discharges from irrigated lands may result in groundwater quality degradation. Sufficient time and opportunity exists during the year-long process of GAR preparation for issues related to vulnerability status to be thoroughly discussed by third parties and Regional Board staff. Staff do not recommend a change in the language.

³ http://ucanr.edu/sites/wrc/Programs/Water_Quality/Nitrate_Groundwater_Pollution_Hazard_Index/

Master Response 6. Discharge limitations and enforcement

Comment summary

The tentative Order includes discharge limitations for surface and groundwater. The discharge limitations are summarized below for reference:

- Wastes discharged from Member operations shall not cause or contribute to an exceedance of applicable water quality objectives in surface water/underlying groundwater, unreasonably affect applicable beneficial uses, or cause or contribute to a condition of pollution or nuisance.

Comments regarding the discharge limitations include two main concerns. These concerns include 1) the tentative Order's convention of "discharge limitations" essentially establishes that water quality objectives would apply at the "edge-of-field" instead of in the receiving waters, and 2) the requirement that Member operations not cause or "contribute" to an exceedance would establish an unrealistic standard that holds Members accountable to the smallest contribution.

Response

To tentative Order does not include "discharge limitations," but includes "receiving water limitations."

The limitations establish that discharge from the field must not cause or contribute to exceedance of water quality objectives in receiving waters, unreasonably affect applicable beneficial uses, or cause or contribute to a condition of pollution or nuisance. For example, consider a field discharging directly to a surface water body. If the field's discharge contains waste at a level greater than a water quality objective, but the surface water receiving the waste remains below the water quality objective, the limitation is not violated. However, if the same discharge causes the receiving water to exceed a water quality objective, the receiving water limitation would be violated. Similarly, if the same discharge is above water quality objectives and the receiving water is above objectives, that discharge is contributing to an exceedance of the water quality objective and, therefore would be violating the receiving water limitation. In the scenario where the waste discharge is below the water quality objective and the receiving water exceeds objectives, the receiving water limitation would not be violated.⁴ In this case, the waste discharge is not contributing to the problem; on the contrary, it would be helping to dilute the receiving water for the particular constituent.

In light of the above, board staff disagrees with commenters who assert that the receiving water limitations make irrigated agriculture accountable for *de-minimus* discharges. Only discharges causing or contributing to the exceedance of the objective would be in violation of the limitation. *De-minimus* discharges (e.g., below water quality objectives) can actually improve receiving waters for the constituent of concern.

Master Response 7. Management Practice Evaluation Program

Comment summary

The language in Section IV.B. of the MRP is overly strong. It requires the development of a workplan that will "achieve the MPEP requirement." It should be softened to something like "may lead to," "may," or "is likely to achieve" such requirements.

⁴ Note that this scenario could be more complicated for certain cases, such as a bioaccumulative substance, for which the concentration of the discharge may not be as important in determining whether beneficial uses are protected as the mass discharged.

The MPEP objective to develop an estimate of the effect of Members' dischargers of constituents of concern on groundwater quality in high vulnerability areas through the use of a mass balance and conceptual model of transport, storage, and degradation/chemical transformation is impossible and is an unreasonable regulatory demand. Central Valley Water Board staff has been unable to define what would be required, how this language would be interpreted, and how a farmer would calculate a mass balance for nitrate.

The new language would compel reports to identify site specific and/or commodity specific management practices. There are dozens of farm management practices, often varying between fields of the same farmer and same commodity. It is unreasonable to require each management practice to be evaluated and nonsensical to demand some determination of each practices connection to groundwater protection.

Response

Staff disagrees that language in Section IV.B of the MRP is overly strong, or that the description and intent of the required workplan would be clearer if the language were amended as suggested by the commenter. Staff agrees with the commenter that there are dozens of farm management practices, and that practices may vary. The objective of the MPEP is to determine which management practices (or suite of practices) are protective of water quality for a given area and crop type. This must necessarily begin with a survey of existing practices. The MPEP builds on an understanding of the hydrogeologic conditions obtained through preparation of the GAR, and although the process will likely be iterative, the goal of the MPEP remains the same.

Staff disagrees that the requirement to prepare a mass balance is unduly burdensome. In its simplest form, a mass balance compares inputs and outputs to a system. This concept is already used by growers whenever they assess irrigation water needs of a crop (e.g., how much water is applied [the input] versus where the water goes (e.g., crop uptake, evaporation from the soil surface, leaching to groundwater) [the output]). The required mass balance need not be more complex than necessary to show whether nitrogen applied to a field or crop was balanced by nitrogen contained in the harvested portion of the crop along with any storage in soil or losses to atmosphere or soil water. For the MPEP, the mass balance is not applied by each grower, but is an analysis conducted by the third-party to evaluate the effect of Members' discharges in a high vulnerability area for constituents of concern. It is important to note that the requirement for a mass balance is contained in many Board orders, such as the Dairy General Order, R5-2007-0035. In the Dairy General Order, crop advisors and other consultants calculate the amount of nitrogen applied and removed on a field by field basis for each dairy enrolled under that order.

It is also important to note that if the analysis of linking management practices to groundwater protection is "nonsensical" as suggested by the Commenter, the other option available to the board is to require site-specific groundwater monitoring in order to determine compliance. The board is not starting with this approach, since the board believes the approach outlined in the MPEP is a sensible and more cost effective method for evaluating compliance.

Master Response 8. Sign-up Period

Comment summary

The 150-day requirement for all current coalition group Members to submit their Notice of Confirmation (NOC) and all new growers to submit their membership application to the third-party is not sufficient and should be revised to 180 days

Response

The tentative Order has been revised to allow 180 days from the Executive Officer's issuance of a Notice of Applicability to a third party, for all current Members to submit a NOC, and all new members to become members of a third party without incurring fees and administrative requirements. The longer, 180-day time frame allowed by the revised tentative Tulare Lake Basin Area Order acknowledges the larger number of new participants that will need to be contacted and enrolled.

Master Response 9. Definition of "Waste"

Comment summary

Comments provide that the tentative Order expands the definition of "waste" from that provided in the Water Code so as to include "earthen materials, inorganic materials, organic materials such as pesticides and biological materials... such water may directly impact beneficial uses or may impact water temperature, pH and dissolved oxygen." Specifically, comments question the basis and authority for departing from the Water Code's definition of waste.

The definition of "waste" in the tentative Order is ambiguous, clarification is needed regarding how or when a constituent becomes a "waste".

Response

Section 13050(d) of the Water Code specifies that "'waste' includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal." The definition of waste in the tentative Order repeats this language word for word and also provides a citation to the Water Code section 13050(d). For clarity purposes, the tentative Order also provides examples of wastes that fall under the definition of waste in section 13050(d). The commenters have not provided any evidence that the "wastes" potentially discharged from irrigated lands described in the tentative Order would not fall within the Water Code section 13050(d) definition of waste. All of the examples provided in the tentative Order's definition of waste are in liquid, solid, or gaseous form and could be discharged as a direct result of crop production, livestock production (i.e., irrigated pasture), or wetland management (i.e., the human "production" or creation of wetland habitat), which are all activities of human origin.

Master Response 10. Executive Officer authority

Comment Summary

As written, the tentative Order contains little data to inform the Board's decision and as implementation proceeds over the next decade, the Board has no continuing decision-making role. The Executive Officer, on the other hand, can make large-scale changes to the Order (amending vulnerability areas, reducing reporting requirements, and determining where and how monitoring of COCs will occur). The Board has a responsibility to make sure that the Order is effectively and adequately implemented/enforced and should identify a trigger for ensuring that this responsibility is carried out.

The tentative Order gives the Executive Officer discretion and authority to implement/approve several key components without a due process for interested parties and the public to evaluate the effects of the Order. To decrease the margin of interpretation, the tentative Order should be revised to include more descriptive parameters to guide the Executive Officer.

Response

The Board may delegate tasks to the Executive Officer, which in this instance are related to implementation of the Order once it is adopted by the Board. Such delegable tasks include the setting and implementation of monitoring and reporting requirements pursuant to Water Code section 13267. In addition, the board in its delegation of tasks to the Executive Officer, has confined the discretion the Executive Officer may exercise by specifically prescribing the manner in which the tasks are to be implemented. For example, the tentative Order would allow the Executive Officer to approve a reduction of the frequency of Farm Evaluation submissions, but only if “year to year changes in Farm Evaluation updates are minimal and the Executive Officer concurs that the practices identified in the Farm evaluations are consistent with practices that, when properly implemented, will achieve receiving water limitations and best practicable treatment or control, where applicable.” While the commenters have requested that more descriptive parameters be provided to guide the Executive Officer, it has not suggested any specific language for staff to consider related to any of the tasks identified in the comment letters.

It is the common practice of the Executive Officer and Board staff, to periodically update the Board on progress, issues, and successes achieved in the implementation of Board approved orders, and this practice will be implemented with all of the Irrigated Lands Regulatory Program orders, including the Tulare Lake Basin Area order if it is adopted. Such updates are done as part of public meetings at which interested persons can raise any issues of which they would like the board to be aware. In addition, the tentative TLBA Order has been revised to include additional information (see Attachment A, Information Sheet) regarding the ability of an interested person to seek board review regarding any plans or reports approved by the Executive Officer under this Order.

Master Response 11. Educational component**Comment Summary**

The tentative Order should include an educational component to provide a better understanding to growers, dischargers, interested parties, and the general public of the Central Valley Water Boards position.

Response

Board staff agrees and believe such an educational effort has and will continue to occur. Board members and board staff have participated in meetings with farmers, crop advisors, industry and commodity group representatives in the Tulare Lake Basin Area, and will continue to participate in outreach and educational events. Additionally, various water or irrigation districts have also informed their members of the anticipated order, articles have appeared in newspapers and trade publications, and a series of outreach efforts by third parties and Board staff will begin once the order is adopted. Participation in outreach events is required of growers in high vulnerability areas, and the tentative order requires the third party to summarize outreach events and participation by growers annually

Master Response 12. Benefits to surface water importation**Comment Summary**

The best strategy for the Board to pursue to maintain and improve water quality would be to encourage its other state agencies to take appropriate actions to maintain import of surface waters to the San Joaquin Valley. Irrigating agricultural lands by importing surface water is beneficial to the groundwater basins and is not a discharge of waste.

Response

The Board recognizes that the importation of good quality water into the Tulare Lake Basin Area is necessary to sustain the abundant agricultural production of this area; however, even good quality water contains salts that will eventually effect water quality in the essentially closed Tulare Lake Basin. Implementing a strategy of importing good quality surface water is beyond the jurisdiction of the Board but may be within the ability of the irrigation districts within the third-party areas.

SINGULAR RESPONSES

Comment Letter 1

1-3, Tentative Order Findings

Comment Summary

Commenter recommends the inclusion of additional findings in the tentative Order regarding the scope and ambitious nature of the Long-term ILRP Program, the Order's reliance on trend and EMP monitoring to determine BMPs and BPTC, and the role that Central Valley agriculture plays in California's economy and food production. The proposed findings are made in light of recent court rulings.

Response

Board staff presumes that the suggested findings are intended to be incorporated into the Order's discussion of compliance with the State Antidegradation Policy. Staff believes that the tentative Order's findings, as well as the information contained in the PEIR and attachments to the tentative Order, sufficiently discuss compliance with the State Antidegradation Policy, along with the goals of the long term ILRP, the intent of the monitoring programs to determine compliance with the Order and evaluate management practices, and the importance of agriculture within California. While staff appreciates the constructive nature of the comment, it has not accepted the proposed language.

1-5, Irrigation conveyance and agricultural drainage structures

Comment Summary

The language in Finding 5 and Footnote 2 of the tentative Order should be revised so that it cannot be construed to mean that the structure must be owned by a single member. The tentative Order should state that it does not apply to manmade conveyance structures, distribution systems, ancillary structures, and canals as these are not waters of the state.

Response

The Order does not exempt water in conveyance structures that are operated by multiple Members or run through or along multiple Members properties and the board staff did not intend to do so by proposing Finding 5. A discharge of waste by a Member into a channel that is used by other Members may result in a negative impact on the beneficial uses of that water for those other Members. In addition, the Commenter is suggesting that certain waters are not waters of the state, although Porter-Cologne defines waters of the state broadly (see Water Code section 13050(e)).

It is important to note that water in constructed conveyances can have beneficial uses beyond those associated with the intended use of the conveyance structure. As an example, comments and photographs provided by California Department of Fish and Game during the draft stages of this Order show that abundant wildlife use these waters and therefore the beneficial uses should be protected.

In light of the above discussion, staff does not agree that a revision to Finding 5 is appropriate.

1-6, Small Farms

Care should be given to assure that the additional time afforded to small farms for submission of required reports does not create duplicative requirements for the coalitions at the same or at overlapping times.

Response

Central Valley Water Board staff has reviewed the required reporting schedule and determined that the additional time afforded to small farms for submission of required reports does not create duplicative requirements for the coalitions at the same or at overlapping times.

1-8, Nitrate Exceedances

Comment Summary

Nitrates should not be classified as a contaminant unless they cause or contribute to an exceedance of water quality objective. Finding 17 should be revised to include language that nitrate is the most essential nutrient for life and growth and that nitrogen is the most prevalent element in our atmosphere. The commenter recommends moving the sentences following the footnote into a separate paragraph or finding.

Response

Finding 17 identifies that elevated levels of nitrates in drinking water can have significant health effects on sensitive individuals and that the Basin plan has establish numeric water quality objectives for nitrate based on standards established by the California Department of Public Health. Following this language, Finding 17 goes on to explain that groundwater in the Tulare Lake Basin area has been designated for drinking water uses by the Basin Plan and therefore the water quality objects apply. Finding 17 also notes that there are portions of the Tulare Lake Basin Area that do not have available data regarding nitrate concentrations in groundwater; however, information on the hydrogeological characteristics suggests that significant portions of the area are vulnerable to nitrate contamination. Finding 17 generally does not refer to nitrate as a contaminant but rather summarizes the basis for the numeric water quality objective and the possible sources of nitrate within the Tulare Lake Basin area. Board staff does not recommend the inclusion of the recommended language regarding the nitrogen cycle as it is not pertinent to the water quality objectives.

1-9, Section 13267 reports

Comment Summary

Finding 21 should be revised to include the language in California Water Code Section 13267(b)(1) which requires the Regional Board to provide an individual with a written explanation with regards to the need of the report and identify evidence that supports the report request.

Response

Finding 21 of the tentative Order already includes this language by quoting Section 13267(b)(1) of the California Water Code in its entirety. In addition, the findings and Information Sheet include extensive discussion regarding the need for reports and information associated with this Order.

1-11, Water quality objectives

Comment summary

The proper EC objective level needs to be clarified such that the general objective is 1,000 micromhos per centimeter ($\mu\text{nhos/cm}$) unless there is a sensitive crop in the area, where the level would then be 700 $\mu\text{nhos/cm}$. Also, such sensitive crops need to be expressly identified. The tentative Order also needs to include a provision to address areas where groundwater already exceeds water quality objectives and for water for which there is no actual beneficial use.

Response

The Commenter has cited EC values commonly held to be appropriate for most agricultural purposes (1000 $\mu\text{nhos/cm}$) and for sensitive crops (700 $\mu\text{nhos/cm}$). Table 5 of Attachment B (MRP) indicates that the numeric threshold for EC is between 900-1600 $\mu\text{nhos/cm}$. This range of values is based on the secondary MCL as established by Title 22 of the CCR. The Basin Plan states that the maximum EC of a discharge shall not exceed the quality of the source water plus 500 $\mu\text{nhos/cm}$ or 1,000 $\mu\text{nhos/cm}$, whichever is more stringent. The secondary MCL addresses aesthetic issues for municipal supply, but does not address the water quality necessary to support the Ag Supply beneficial use, which may require better water quality than that required for Municipal Supply

Board staff cannot identify which crops grown within the Tulare Lake Basin area are considered salt sensitive crops, or where they are grown. Both crop type and planted acreage change, and are dependent on many factors including the availability of water of sufficient quantity and quality to support the crop. However, the water quality in areas where sensitive crops are currently grown or in areas that have the potential to support their growth should be protected by use of appropriate farm management practices as required by this tentative Order.

If the underlying groundwater is unusable for a particular designated beneficial use, the applicable Basin Plan would need to be amended to modify or remove the designated beneficial use if authorized by the State Water Board's Sources of Drinking Water Policy (as set forth in the Basin Plan). The Central Valley Water Board is currently engaged with stakeholders through the Central Valley Salinity Alternatives for Long-term Sustainability (CV-SALTS) process, which will address issues such as the appropriate designation of beneficial uses as such designations apply to salt and nitrate. The tentative Order has been modified to allow a third party or discharger to pursue a Basin Plan amendment if they identify groundwaters that qualify for de-designation under the Basin Plan. The Order allows reduced monitoring during the period (not to exceed 5 years unless significant progress is being made) when a Basin Plan amendment is being pursued. The process is described in the revised tentative Order under Required Reports and Notices, VIII.M. Basin Plan Amendment Workplan, and in the revised tentative MRP under Third Party Reporting Requirements, V.E. Basin Plan Amendment Workplan.

1-13, "High quality waters" vs. "quality waters"

Comment summary

In 1968, the State Water Board wanted to provide special protection for the state's pristine "high quality waters" as distinct from mere "quality waters", which would be those represented by waters meeting the Basin Plan standards. For those pristine high quality waters, the Antidegradation policy provided for specific regulatory efforts. This general order should identify those waters which are classified as high quality, and those which are only quality waters.

Response

Appendix A to the PEIR and Attachment A of the tentative Order describe in detail the proposed approach to compliance with State Water Board Resolution 68-16 (State Antidegradation Policy). As mentioned in the PEIR, very little guidance has been provided by the State Water Board with respect to applying the State Antidegradation Policy to a general permit where multiple water bodies are affected by various discharges, some of which may be high quality waters and some of which may have constituents at levels that already exceed water quality objectives. In the context of the tentative Order, which aims to regulate discharges to a very large number of water bodies, each with numerous constituents, making comprehensive determinations as to water quality is a near impossible task. There is no comprehensive, waste constituent-specific information for all water bodies in the permit area available for current conditions. Neither the tentative Order or the State Antidegradation Policy makes a distinction between 'high quality waters' and 'quality waters' as proposed by the commenter. The commenter did not provide any discussion, reference, or State Board or Regional Board guidance supporting this interpretation.

Attachment A of the tentative Order explains how data collected by the Central Valley Water Board, dischargers, educational institutions, and others demonstrate that many water bodies within the Tulare Lake Basin Area are already impaired for various constituents that are or could be associated with irrigated agricultural activities. As described in Attachment A, there are surface water quality management plan requirements for the following constituents and indicators: pH, electrical conductivity, dissolved solids, dissolved oxygen, E. coli, fecal coliform, boron, molybdenum, chlorpyrifos, DDE, toxaphene, Ceriodaphnia dubia, Pimephales promelas, Selenastrum capricornutum, and Hyalella azteca. Those same data collection efforts also indicate that surface water bodies within the watershed meet objectives for particular agriculturally-related constituents and would be considered "high quality waters" with respect to those constituents.

Similarly, as described in Attachment A, available data show that currently existing quality of certain water bodies is better than the water quality objectives; for example, deeper groundwaters, represented by municipal supply wells, are generally high quality with respect to pesticides and nitrates. Degradation of such waters can be permitted only consistent with the state and federal antidegradation policies.

Attachment A also describes how the State Water Board has not distinguished between the level of treatment and control required under best practicable treatment or control [BPTC] (required if degradation of high quality waters is authorized) and what can be achieved through "best efforts" (required under State Water Board precedent for regulation of waters that are not high quality). This is because the State Water Board applies the same factors in determining "best efforts" as it does in interpreting BPTC (see State Water Board Order Nos. WQ 79-14 and WQ-2000-07). Accordingly, the tentative Order proposes to apply BPTC and "best efforts" equally to high quality waters and those that are not high quality. The request to create a comprehensive inventory of high quality waters is neither feasible nor would it affect the ultimate management practice requirements of the tentative Order, as it applies BPTC and "best efforts" equally throughout the coverage area. Nothing in the State Antidegradation Policy itself or its guidance documents indicates that an inventory of high quality waters is required.

1-16, CV-SALTS

Comment summary

The CV-SALTS process is not a codified regulatory program; therefore, it is improper to state the Order would be amended to conform to actions of an unofficial stakeholder process. The

statement that salts and nitrates are “increasing” in the region is not believed to be universally true and is therefore improper to include in Finding 42. Salt disposal should be included as a remedial option.

Response

CV-SALTS is a collaborative program that includes the Central Valley Regional Water Board and various other stakeholders working to develop sustainable salinity and nitrate management planning for the Central Valley. The findings and recommendations that come out of the CV-SALTS process may be directly applicable to irrigated agriculture due to the nature of agricultural discharges. The Order would only be amended, if necessary, based on the eventual adoption and approval of any applicable basin plan amendments that may result from the CV-SALTS process. Any such amendment would be preceded by a public notice and comment period, and consideration by the Board at a publicly noticed board meeting. Finding 42 does not indicate that the Order would be amended to “conform” to CV-SALTS actions; instead, it provides notice that future amendments are foreseeable.

Based on the findings of “Addressing Nitrate in California’s Drinking Water,” a report for the State Water Resources Control Board to the legislature, nitrate contamination is widespread and increasing. Groundwater data show that 57% of the current population in the study area (Central Valley and Salinas Valley) use a community public water system with recorded raw (untreated) nitrate concentrations that have exceeded the MCL at least once between 2006 and 2010. Continued basin-wide trends in nitrate groundwater concentration may raise the affected population to nearly 80% by 2050.

Finding 42 of the tentative Order does not discuss any specific remedial measures for salt and nitrate; therefore it is not appropriate to include the suggested language in the finding. The Board encourages the commenter to actively participate in the CV-SALTS process, where the commenter would have the opportunity to discuss specific remedial measures such as salt disposal.

1-17, Coordination with the Dairy General Order

Comment summary

There has been considerable uncertainty regarding the interface between the Dairy General Order and the existing ILRP waiver. This has been particularly evident involving dairy operations’ farm properties, whether they spread manure on such property or not. Central Valley Water Board staff has stated that the Dairy Order would be amended to require similar testing for constituents as required by the tentative Order. The Dairy General Order has not yet been amended to incorporate this similar testing.

Response

This comment does not appear to be relevant to consideration of the tentative Order. The commenter should direct its concern to the Board’s dairy program staff, which is currently drafting revisions to the Dairy General Order. It is anticipated that additional testing requirements will be included in later revisions to the Dairy General Order.

1-18, Edge of Field Discharge

Comment summary

It is inappropriate to set forth requirements that specifically apply to water leaving the field because about half of the irrigated lands do not drain to surface water and many of the irrigation wells exceed 800 feet below ground surface. Enforcement actions should not be taken when receiving water limitations are not met because this would exceed the Regional Board’s

authority. The commenter states that regulating water quality at the end of the field is not reasonable and violates the legislative intent with respect to Porter-Cologne control of non-point discharges. Findings 50 and 51 of the tentative Order need to be revised such that it is clear that enforcement would not be pursued on “edge of field” discharges.

Response

Findings 50 and 51 of the tentative Order outline the methodology behind how Central Valley Water Board staff would pursue enforcement actions against a member who is in violation of the Order. There is no language in Findings 50 or 51 that suggests that the Central Valley Water Board will pursue enforcement actions on a Member due to an “edge of field” discharge. Finding 51 does however state in part that the Board may pursue enforcement on Members that fail “to meet receiving water limitations, unless the Member is implementing a Central Valley Water Board approved SQMP or GQMP in accordance with the time schedule provisions” of the Order. In summary, edge of field discharges that adversely affect receiving waters may be subject to enforcement.

1-20, Sediment erosion plan

Comment summary

Revise section IV.B.6. to require that all members shall implement effective sediment discharge and erosion prevention practices to minimize or eliminate the discharge of sediment above background levels “as a result of irrigation.”

Response

Board staff does not agree that the suggested revision is appropriate. The discharge of sediment can negatively impact beneficial uses whether such discharge occurs during the irrigation season or non-irrigation season. Effective sediment erosion and discharge practices should be considered for all farm practices that may contribute to a discharge of sediment, including stormwater discharges, and not be limited to sediment discharges as a result of irrigation.

1-21, Third-party responsibilities regarding determining individual Member compliance with the tentative Order

The Third-party should not act as an enforcing agency and therefore should not be responsible for reporting Members that fail to implement improved water quality management practices, provide confirmation of participation in outreach events, and/or fail to submit required fee to the Third-party.

Response

The board staff does not intend for the third-party to act as an enforcing agency; however, the third-party is required to provide the information necessary for Board staff to evaluate Member compliance with the Orders provisions (see section IV.C.9 of the Order), and is otherwise fulfilling its responsibilities necessary to maintaining eligibility to serve as a third-party.

1-22, Membership application process

Comment summary

A new provision should be added to section VII.A. of the tentative Order to allow landowners or growers that regain control or acquires control through a leasehold interest for land previously covered by this Order may be covered by providing them with 180 days to submit a completed membership application.

Response

Board staff anticipates that the third party would record the name change when there is a change in ownership or control of land already enrolled with a third party under the Order. The third party would inform the Board of these changes, most conveniently when submitting the annual membership list..

1-23, Sediment Water Management Plan**Comment summary**

The Sediment Water Management Plan is a new requirement which has not had sufficient discussion or understanding on what triggers the report or as to its content. Small farms in low vulnerability areas should be given additional time to complete this report.

Response

There is no requirement for the submission of a Sediment Water Management Plan in the tentative Order. Sediment Discharge and Erosion Control Plans are required of Members that have the potential to cause erosion and discharge sediment above background levels as identified by the Member in their Farm Evaluation Report, by the Third-Party in the Sediment Discharge and Erosion Assessment Report, or by the Executive Officer. Section VII.C. of the tentative Order states in part that the "Member must use the Sediment and Erosion Control Plan Template." Currently, the coalition groups are collaboratively drafting a Sediment and Erosion Control Plan Template for Executive Officer approval, so representatives from the agricultural community are involved in crafting the content. Once a template has been approved by the Executive Officer, the specific content that will need to be considered will be available. The tentative Order does provide small farms with additional time to complete the Sediment and Erosion Control Plan. The Plans are kept on-farm and not submitted to the third-party and only submitted to the board upon request.

1-25, Groundwater Quality Management Plans**Comment summary**

The tentative Order should clearly state that a groundwater exceedance is limited to a drinking water nitrate basin plan exceedance when it reaches a usable aquifer.

Multiple non-point sources over wide geographic areas contribute to groundwater degradation, possibility from sources far removed from the monitoring location and/or by past practices, and therefore do not lend themselves to the same management plan approach as surface water. Groundwater plans should instead identify areas through prioritization efforts where the coalition should concentrate its efforts on education and outreach, as well as identify appropriate management practices for implementation.

The commenter recommends that the following language be included in the Groundwater Quality Management Plan requirements. "A GQMP may not be required if the Executive Officer determines that ambient background water quality exceed (is better than) water quality objectives or if the beneficial uses have been de-listed through the Basin Plan amendment process.

Response

Although nitrate is one of the primary constituents of concern related to irrigated agricultural discharges, it is not the Boards intent to limit exceedances of groundwater quality limitations solely to nitrate. Currently all groundwater within the Tulare Lake Basin area, except for those areas specifically addressed in the Basin Plan, has the designated beneficial use of drinking water, and this includes first encountered groundwater. As stated in staff's response to

comment 1-11 above, if a Discharger believes the underlying groundwater is unusable for a particular designated beneficial use, the applicable Basin Plan would need to be amended to modify or remove the designated beneficial use. If the use is modified and there is no longer an exceedance or a degradation trend that could impact the beneficial use, a Groundwater Quality Management Plan would not be required. Finally, the Commenter's suggestion for a prioritization process, education and outreach, and identification of practices is already included in the requirements for a GQMP.

1-26, Reporting Provisions

Comment summary

Section IX.2 should be revised to clarify that third party coalition managers are authorized to sign such reports. As members are not required to directly file any reports to the Central Valley Water Board, members should be removed from the Section IX.1 of the tentative Order. The first clause of the second sentence in section IX.3 should be eliminated.

Response

The Board staff agrees that the language in Section IX.2 should be modified to clarify that authorized third-party representatives are allowed to sign reports. Section IX.2 has been modified to allow signature by persons duly authorized under California law to bind the party submitting the report.

Although Members are not required to submit reports directly to the Central Valley Water Board, the tentative Order grants the Executive Officer authority to request an individual Member's submission and therefore it is appropriate that the member, or authorized representative as defined in Section IX.2. of the tentative Order, sign the reports as directed in Section IX.2.

1-29, Groundwater Quality Assessment Report – irrigation and fertilization practices

Comment summary

The MRP calls for the coalition to identify irrigation and fertilization practices for the commodities that make up 80% of the irrigated agriculture grown in high vulnerability areas. It must be understood that because there would be several hundred combinations of such practices employed this report will by necessity be both general and summarized.

Response

The Commenter appears to be referring to section IV.A.5. of the MRP, which discusses prioritization of the high vulnerability groundwater areas. In the context of that prioritization, the Central Valley Water Board understands that the discussion of practices will be generalized.

1-33, Monitoring Reports

Comment summary

The requirement to summarize the following items is an excessive and unreasonable obligation:

1. Input, uptake, and loss of nitrogen fertilizer.
2. Comparisons of management of farms growing the same crops.
3. Summary of "nitrogen consumption ratios," and "crop nitrogen needs."
4. Nitrogen conservation ratio (total nitrogen available vs. crop consumption).

Response

Central Valley Water Board staff disagrees with the commenter that the summarization of the above listed information is excessive and unreasonable. As Members submit their Nitrogen Management Plans and Farm Evaluation Plans to the third-party and not directly to the Central Valley Water Board, it is appropriate for the third-party to summarize that data in a way that will

allow the Central Valley Water Board to evaluate whether Members are implementing management practices that meet the requirements of the Order. However, both the California Department of Food and Agriculture's (CDFA) Task Force and the State Water Resources Control Board's (SWRCB) Expert Panel are currently investigating nitrogen management and nitrogen tracking issues. The deadlines for preparation of a nitrogen management plan and associated reporting have been established to allow the board to make any necessary adjustments to the Order based on the finding and recommendations of the CDFA Task Force and the SWRCB Expert panel prior to the established compliance dates.

1-34, *Subsidiary or affiliated operation definition*

Comment summary

What is the purpose of the detailed definition of a subsidiary operation?

Response

This definition for subsidiary or affiliated operation was included to clarify what qualifies as a subsidiary or affiliated operation for the purpose of determining the size of the farming operation. The size of the farming operation determines the due dates for certain reports and plans.

Comment Letter 3

3-2, *Senate Bill X2 1 Report "Addressing Nitrate in California's Drinking Water"*

Comment Summary

The Board and Central Valley Water Board staff should not place any reliance on the findings of the subject report due to errors in assumptions and calculations within the report.

Response

The State Water Board contracted with the University of California, Davis to conduct an independent study on the nitrate pilot projects in the Tulare Lake Basin and the Salinas Valley. The UC Davis report titled "Addressing Nitrate in California's Drinking Water" (SB X2 1 Report)⁵ was delivered to the State Water Board in March 2012. The SB X2 1 Report used an accumulation of professional, peer reviewed resources and nitrate studies to develop the models and findings of the report. The contrasting assessments of some of the assumptions made in SB X2 1 Report between the authors of the report and Provost & Pritchard Consulting and Engineering does not provide grounds for dismissal of the report's findings. The State Water Board has used the report as the basis for its recommendations to the legislature, suggesting its findings have merit. Therefore, it is appropriate for the Central Valley Water Board to refer to the report in this Order.

3-7, *Finding 20*

Comment Summary

Finding 20 of the tentative order states in part that based on the quality of the discharge and the sites hydrogeological conditions, individual discharges of waste from irrigated lands may adversely impact waters of the State. The commenter states that Finding 20 does not have an objective standard for individual growers, the coalition, or Central Valley Water Board staff to determine whether standards are being met. This will likely lead to non-compliance as growers will take the position they are not dischargers under the Order.

⁵Harter, T., et.al. 2012, Addressing Nitrate in California's Drinking Water with a Focus on Tulare Lake Basin and Salinas Valley Groundwater. Report for the State Water Resources Control Board Report to the Legislature. Center for Watershed Sciences, University of California, Davis.

Response

Finding 20 of the tentative Order is not intended to establish any standards but rather discuss various hydrogeological conditions and discharge characteristics attributed to an individual discharge that may affect water quality and the cumulative effect that these individual discharges have on water quality. The tentative Order establishes receiving water limitations, prohibitions, and performance standards that growers must meet. The monitoring and reporting requirements of the Order are intended to evaluate compliance with those requirements.

Comment Letter 4**4-1, Nitrogen Management Plan Templates****Comment Summary**

The commenter requests that the tentative Order be revised to allow Members in high vulnerability areas, many who are already utilizing nitrogen managing techniques, to provide nutrient management documentation to the Third-Party for use in the Nitrogen Management Plan Summary Report in lieu of reporting the data using the approved Nitrogen Management Plan Worksheet Template. The commenter contends that as long as the same calculations are used as in the approved Nitrogen Management Plan template that this revision would satisfy the Board's desire to get consistent information and reduce the paperwork burden for growers who are already implementing nitrogen management planning on their farms.

Response

The third-party groups will need to summarize data received from thousands of growers each. Allowing multiple formats would result in a larger workload for the third-party as each individual submittal would need to be carefully reviewed against the approved requirements to determine if the grower has met their regulatory obligation. The draft templates, which have been designed by the coalitions to streamline the reporting, are currently available to the public through our website for review and comment.

4-2, Nitrogen management in low vulnerability areas**Comment Summary**

The tentative Order requires that all growers in low vulnerability areas prepare a Nitrogen Management Plan using either the Executive Officer approved Nitrogen Management Plan Template or an equivalent. Further discussion with the Executive Officer is needed on how growers can comply with the order using alternative approaches to satisfy the BPTC requirement.

Response

Board staff is available for additional discussions regarding alternative approaches for satisfying the Nitrogen Management Plan requirements for low vulnerability areas.

4-5, Nitrogen Management Plan Summary reporting**Comment Summary**

The commenter supports Nitrogen Management Plan Summary Reporting to the Central Valley Water Board at a township level; however, does not support the comparison of data at a field level by Central Valley Water Board staff with or without the member's parcel being identified. Reporting data at a field level is an inefficient use of resources and compromises the Third-Parties from proactively working with outliers.

Response

The tentative Order has been changed to allow the third-party to provide statistical summaries of the information collected from individual Members. If Members are not improving their practices despite the outreach required by the tentative Order, the board needs to be able to follow-up with those Members. In order to ensure that the board is able to evaluate whether Members are implementing management practices to meet the Order's requirements, and to be able to target areas or Members for follow-up, the third-party's assessment of Nitrogen Management Plan information must include, at a minimum, comparisons of farms with the same crops, similar soil conditions, and similar practices.

Comment Letter 5

5-1, Technical support for small farms

Comment Summary

Rather than additional times for completion, technical assistance in developing farm evaluations and management plans should be provided for small farming operations and/or disadvantaged growers.

Response

Technical assistance is being provided to all irrigated farm operations, including small farm operations, by the cooperative efforts by coalition groups and Board staff in the preparation of templates for the farm evaluation, nutrient management plan, sediment and erosion control plan, and annual reports. Additional assistance may be available through the NRCS, UC Extension, and through outreach events required by the tentative order and coordinated by the third party.

5-2, Obligations under the Human Right to Water Act

Comment Summary

Finding 31 does not sufficiently address the requirements of Assembly Bill 685. To fulfill the legislative directive, the Board should undertake a range of activities that include:

- When considering a range of policies or regulations, the Board should give preference and adopt policies that advance the human right to water.
- The Board should refrain from adopting policies or regulations that run contrary to securing equal access to safe drinking water.
- The Board should note in its record of decision the consequences that its actions have on access to safe drinking water in California.

Access to affordable, accessible, acceptable and safe water should be prioritized over other water uses and special attention must be given to those who do not have access to safe drinking water.

Response

Staff has expanded finding 31 to further clarify that the board has considered the human right to water when developing the tentative Order. Finding 31 describes how various provisions of the tentative Order address the policy expressed in AB 685.

Board staff agrees that the court cases cited by the commenter establish that public agencies must consider factors mandated by applicable laws, but disagrees that the cases dictate the

manner in which public agencies consider these factors or that all of the cases interpret statutes similar to AB 685. The commenter provides no discussion of any deficiencies in the tentative Order vis a vis AB 685 or any recommendations for remedies or changes.

While strictly speaking, AB 685 may not apply to the adoption of waste discharge requirements (as opposed to a “regulation” or “policy”) such as the tentative Order, the Board has considered the human right to water, consistent with the policy expressed in AB 685.

5-3, Violation of Antidegradation Policy – Trend Monitoring and reporting requirements Comment Summary

The trend monitoring requirements in the tentative Order do not provide sufficient information to track trends or detect degradation for most contaminants. The tentative Order does not require that trend monitoring include all the constituents of concern (COCs) (including deleterious minerals, pesticides, and pesticide degradants) related to agricultural discharges in the region. The inclusion of these constituents is needed to ensure that the Order adequately protects groundwater from these constituents. The tentative Order gives the Executive Officer authority to require additional monitoring or development of management plans if determined that irrigated agriculture may be causing or contributing to a trend of degradation in groundwater; however, it is unclear how that determination can be made if trend monitoring only focuses on a few COCs.

Response

Staff disagree that the trend monitoring requirements in the tentative Order provide insufficient information to track trends or that they otherwise violate the State Antidegradation Policy. Other than characterizing the trend monitoring requirements as “insufficient,” the commenter does not specifically explain how the requirements violate the State Antidegradation Policy. The purpose of the trend monitoring is to detect long-term trends in water quality on a regional scale. As discussed in the Information Sheet, the Groundwater Monitoring Advisory Workgroup suggested that nitrates would serve as a good indicator of potential problems associated with irrigated agricultural practices. Although all potential constituents of concern are not part of the trend monitoring program, the primary indicators and constituents with the most significant and widespread potential impacts are included (salts and nitrate). These monitored constituents can act as general indicators for related constituents of concern. Additionally, the tentative Order leverages monitoring for pesticides being conducted by the Department of Pesticide Regulation (DPR). Monitoring for key constituents such as nitrate, and constituents of concern that already impair water quality, and coordinating with DPR, are effective and cost efficient ways to track long term water quality trends, including trends of degradation that may trigger additional groundwater management plan requirements..

The information contained in the Groundwater Assessment Report will also provide an indication as to whether degradation is occurring, based on an evaluation of available data. The trend monitoring and Management Practices Evaluation Program will also provide indications as to whether degradation is occurring on a regional scale (through the trend monitoring) or due to the implementation of specific practices (through the MPEP).

5-4, Violation of Antidegradation Policy - Regional monitoring Comment Summary

The Order violates the State Antidegradation Policy because township level monitoring and reporting does not provide sufficient resolution to confirm compliance with the Order. The Board should consider using an approach similar to the approach applied by the USGS GAMA

program which included a grid of one well per square mile.

Response

Other than criticizing the spatial resolution of the monitoring requirements, the commenter does not specifically explain how the monitoring requirements violate the State Antidegradation Policy. As described in detail in the Information Sheet, the Order meets the requirements of Resolution 68-16.

The information provided by the third-party on management practices implemented by Members and nitrogen management plan summary reports, in combination with the requirements for monitoring and studies, will allow the board to evaluate compliance with the Order. Based on the information submitted, together with board inspections of farm operations, the board will be able to evaluate Member compliance with the Order. The board also has the ability to require submittal of Member specific information (also see the Information Sheet for a discussion of Compliance and Enforcement).

5-5, Violation of Antidegradation Policy - Nitrogen use efficiency

Comment Summary

In order to ensure that all high quality waters are adequately protected under the Antidegradation Policy, there must be a mechanism to determine whether degradation is occurring and a way of determining BPTC is being implemented. Therefore, nitrogen use efficiency should be required for all waters and not just high vulnerability areas.

Response

The Information Sheet (Attachment A, pages 34-36) explains that the tentative Order requires the implementation of BPTC when waters are of high quality and best efforts when they are not. Although an inventory of all areas of high quality waters has not been prepared (see response to comment 1-13 above), the Order makes no distinction between management practices that represent BPTC and best efforts. For example, the Order requires that all Members, in both high and low vulnerability areas, prepare nitrogen management plans, which, in addition to the Order's farm management performance standards and other requirements, would be considered BPTC for nitrogen discharges in areas with high quality water, and best efforts in all other areas. The farm management performance standards (Attachment A, page 36) must be achieved by all members, regardless of vulnerability status. These performance standards include minimization of off-site waste discharges, discharges of sediment, percolation of waste to groundwater, excess nutrient application, and the protection of wellheads from surface water intrusion.

The information contained in the Groundwater Assessment Report will provide an indication as to whether degradation is occurring, based on an evaluation of available data. The trend monitoring and Management Practices Evaluation Program will also provide indications as to whether degradation is occurring on a regional scale (through the trend monitoring) or due to the implementation of specific practices (through the MPEP).

5-6, Violation of Antidegradation Policy - receiving water limitations and associated time schedules

Comment Summary

The receiving water limitations in the tentative Order fail to comply with the Antidegradation Policy or the Basin Plans, and do not support the findings of the tentative Order. The time schedule for compliance (10 years) for receiving water limitations in the tentative Order will allow the continued contribution to exceedance of water quality objectives. This means that the

tentative Order is not only authorizing the maximum amount of degradation possible, but also authorizes continued pollution and nuisance and undermines the ability to take enforcement actions for those causing or contributing to pollution and/or nuisance.

Response

Staff disagrees with the commenter's assertion that the receiving water limitations fail to comply with the Antidegradation Policy or the Basin Plans, and do not support the findings of the tentative Order. The receiving water limitations require that waste discharged from a Member's operations not cause or contribute to an exceedance of an applicable water quality objective, unreasonably affect applicable beneficial uses, or cause or contribute to a condition of pollution or nuisance.

The commenter is correct that the tentative Order's time schedule provisions may allow up to 10 years for full compliance with receiving water limitations once a violation is detected. However, staff emphasizes that the 10-year timeframe is a maximum and does not default to 10 years. Instead, the provisions would require the discharger to propose a schedule that is as short as practicable with appropriate technical and economic justification. The Executive Officer may then approve the proposed time schedule or require modifications, such as a reduced timeframe.

Antidegradation requirements do not require instantaneous compliance or otherwise provide time limitations on achieving policy objectives; i.e., to ensure that best practicable treatment or control is in place and that degradation is not allowed above applicable water quality objectives. The Water Code, however, clearly provides the board with the discretion to prescribe time schedules within waste discharge requirements [section 13263(c)]. This discretion in implementing antidegradation requirements was explicitly recognized and endorsed by the California Court of Appeal, who wrote with respect to the Board's Dairy Waste Discharge Requirements that "[a] phased approach... is reasonable, and is authorized by section 13263, which allows the requirements of a regional water quality control board to contain a time schedule." *AGUA v. Central Valley Water Board*, 210 Cal.App.4th 1255, 1277.

Consistent with the Water Code and antidegradation requirements, the tentative Order establishes requirements that will result in the implementation of best practicable treatment or control by every Discharger (e.g., through farm management performance standards, nitrogen planning, farm planning, and feedback monitoring) and, as a ceiling, does not allow degradation above water quality objectives. The time schedule provisions in the tentative Order are intended to bring a Discharger into compliance with receiving water limitations as quickly as possible once violations are detected. This process, along with the performance standards and other requirements of the tentative Order, will ensure that all Dischargers reduce their waste discharges in the short-term (see further discussion in the Information Sheet), while fully complying with objectives in the long-term. Nowhere does the tentative Order establish requirements that will allow discharges to cause or contribute to exceedances of an applicable water quality objective, or a condition of pollution or nuisance, outside a temporary Executive Officer approved time schedule. Likewise, nothing in the tentative Order exempts Dischargers from the performance standards, and other management practice implementation requirements.

5-7, Violation of Antidegradation Policy - Groundwater limitations

Comment Summary

Section III.B. Groundwater Limitations should be revised to include a limitation on degradation consistent with minimizing degradation to ensure the highest water quality consistent with the maximum benefit to the people of the State and the application of BPTC and delete the footnote

in order to omit altogether any authorization of continued contribution to pollution, nuisance or exceedances of water quality objectives.

Response

See response to comment 5-7. The commenter recommends that the board establish a maximum amount of degradation at a level below the water quality objective. The comment implies that the amount must be expressed numerically, and may not be expressed narratively. Staff disagrees, and believes the tentative Order expresses such limits narratively. The tentative Order's performance standards, management practice implementation requirements, and monitoring requirements will limit and reduce the waste discharges that may result in the degradation of high quality waters. As discussed earlier in response to this commenter, it is infeasible for board staff to quantitatively review each potential waste discharge and receiving water scenario (tens of thousands) throughout the Central Valley, quantify each scenario's potential degradation of high quality waters, and determine whether that quantified degradation is consistent with the maximum benefit to the people of California. By that same token, it is infeasible to quantify and numerically limit a precise amount of degradation below a water quality objective that is authorized by the tentative Order. Moreover, the requested quantitative allocations are not required by State Water Board Resolution 68-16 or any related State Water Board guidance documents.

5-8, Violation of Antidegradation Policy - Management Practice Evaluation Report

Comment Summary

Not requiring the completion of the Management Practice Effectiveness Report until 2023 undermines the enforceability of BPTC and violates the Board's duty to ensure rapid compliance through this Order.

Response

The board concurs with the commenter that it is important to achieve water quality goals as quickly as possible. This is why time schedule provisions for violations of receiving water limitations do not default to 10-years, but must be as short as practicable. Board staff is confident that the tentative Order's process will lead to reductions in waste discharge, implementation of best practicable treatment or control, and compliance with receiving water limitations. The completion of the Management Practice Evaluation Report may result in implementation of new, additional, or more effective management practices identified by the report. The possibility that new and more effective management practices may be required in the future does not undermine the current requirements or the tentative Order's BPTC findings.

5-9, Antidegradation Policy – 3 Step Process

Comment Summary

The State Antidegradation Policy requires that baseline water quality is to be maintained unless it has been demonstrated to the State that any change in water quality will be consistent with the maximum benefit to the people of the State, will not unreasonably affect present or probable future beneficial uses of such water, and will not result in water quality less than prescribed in state polices. Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in BTPC of the discharge necessary to assure that pollution or nuisance will not occur and that the highest water quality consistent with the maximum benefit to the people of the State will be maintained. Analysis of whether the tentative Order violates the anti-degradation policy is a 3 step process..

Response

The comment attempts to restate or paraphrase the State Antidegradation Policy, and also to prescribe a specific 3-step process that should or must be followed to determine whether the tentative Order violates the State Antidegradation Policy. There is no need to respond to this comment, as terms of the State Antidegradation Policy are laid out in Resolution 68-16, and do not prescribe the specific 3-step process enunciated by the comment. The tentative Order describes at great length Board staff's process for determining compliance with Resolution 68-16.

5-10, Violation of Antidegradation Policy – Failure to Determine baseline conditions

Comment Summary

The tentative Order fails entirely to protect baseline water quality by failing to establish a baseline or set in place a mechanism for doing so. At a minimum, should be revised to direct the Third-Party to develop a basic analysis of baseline water quality utilizing available existing data to establish historic baseline levels for the COCs in the Region.

Response

See response to comment 1-13. Nothing in the State Antidegradation Policy itself, its guidance documents, or published appellate decisions indicates that the regional board must determine the best quality of the receiving waters that have existed since 1968, and from that compile an inventory of all high quality waters within the permit area for all constituents of concern. The commenter cites *Asociacion de Gente Unide por el Agua v. Central Valley Water Board* (2013) 210 Cal.App.4th 1255, 1270 in support of its position. However, that court decision did not specifically require the Central Valley Water Board to conduct an inventory of high quality waters. Instead, the court assumed that the State Antidegradation Policy applied throughout the region for nitrate based on its finding that “at least some of the water affected by the Order is high quality water.” (*Id.*, at p. 1271). This is essentially the same approach taken by the tentative Order, which proposes to apply BPTC and “best efforts” equally to high quality waters and already degraded waters.

5-11, Violation of Antidegradation Policy – Maximum Benefit to the People of the State and Best Practicable Treatment or Control (BPTC)

Comment Summary

The tentative Order fails to demonstrate, or encourage analysis to determine, that the change in water quality authorized by this permit will be consistent with the maximum benefit to the people of the State. If the Board wants to permit degradation up to water quality objectives, it needs to determine that this is the highest water quality for the maximum benefit to the people of the State. There is no such finding in the tentative Order.

The tentative Order fails to demonstrate that the permitted degradation that would occur under the Order will not unreasonably affect present or probable future beneficial uses of such waters. Setting the effective level of degradation at the water quality objective will ensure impacts to domestic water use. The tentative Order must set a goal for degradation far enough below the water quality objective to ensure that high quality waters do not exceed water quality objectives and beneficial uses are not impaired. Additionally, the tentative Order fails to establish that the discharges to existing high quality waters will result in the legally adequate BPTC.

Response

The commenter contends that where the Order will allow further degradation of high quality

waters, the board must engage in an analysis to determine if further degradation is consistent with maximum benefit to the people of California. As documented in the Information Sheet, the Board has conducted an analysis of whether the potential degradation of high quality waters authorized by the tentative Order is consistent with the maximum benefit to the people of California. The analysis is qualitative. Because of the widespread nature of irrigated agriculture and the numerous water bodies potentially affected, it is infeasible for the board to quantitatively review each potential waste discharge and receiving water scenario (tens of thousands) throughout the Central Valley, quantify its potential degradation of high quality waters, and determine whether that quantified degradation is consistent with the maximum benefit to the people of California. Instead, the board conservatively assumed that there are high quality waters receiving irrigated agricultural wastes that may be degraded by continued discharge. Operating under this supposition, the tentative Order applies requirements to minimize such degradation not just for those operations discharging to a high quality water, but all operations; requirements to implement best practicable treatment or control or “best efforts”; and requirements to ensure that waste discharge is not above an applicable water quality objective (see 1-3 below). While the complete analysis is contained within the Information Sheet, three main points are highlighted below.

1. Farm and nitrogen management planning indicating practices in place to achieve the Order’s requirements including farm management performance standards (to be submitted to the board)
2. Surface and groundwater monitoring programs to evaluate effectiveness of implemented practices and verify compliance with the Order’s requirements (reported to the board)
3. Establishment of receiving water limitations, setting highest level at water quality objectives

The tentative Order’s approach, generally outlined in 1-3, will result in the implementation of practices that minimize waste discharge to surface and groundwater, contrary to the commenter’s assertion that the order authorizes the maximum level of discharges authorized by the State Antidegradation Policy. As mentioned above, the numeric receiving water limitations establish a ceiling for degradation, but the farm management performance standards (listed on page 38 of the Information Sheet, Attachment A) and other requirements of the tentative Order provide additional enforceable requirements that will further minimize degradation. For example, under the performance standards, the tentative Order requires all Dischargers to implement practices to minimize waste discharge to surface water even where a discharge is currently meeting water quality objectives. In other words, there is no exemption from this requirement for Dischargers that are in compliance with the tentative Order’s receiving water limitations. As another example, the nutrient performance standard requires minimization of nutrient application relative to crop consumption regardless of the concentrations of nutrients in the receiving groundwater. Therefore, where underlying groundwater is of high quality for nutrients, the tentative Order requires minimization of nutrient application relative to crop consumption, which will minimize waste discharge to groundwater and any associated potential degradation through the implementation of best practicable treatment or control. Where the underlying groundwater is not high quality, this standard will ensure that nutrient discharged is minimized using “best efforts,” not just limited by the numeric objective. The information the board gathers through farm planning and monitoring will inform implementation of the tentative Order’s performance standards.

These requirements are fully consistent with the antidegradation requirements, which limit additional controls to situations where a discharge may cause degradation of a high quality water. Board staff has proposed a finding that the degradation allowed under the tentative

Order is consistent with maximum benefit to the people of the state, in consideration of factors listed in State Water Board guidance documents for determination of maximum benefit to the people. Staff notes that it has received no comments providing specific scenarios or information that potential degradation under the tentative Order would be inconsistent with that proposed finding.

The commenter also asserts that the tentative Order will not result in the implementation of BPTC where the discharge is to a high quality water. The Information Sheet (under the heading “Consistency with BPTC and the ‘Best Efforts’ Approach,” goes into great detail explaining how the tentative Order will result in the implementation of BPTC where applicable. The commenter points to specific examples in support of its BPTC assertions. In response to the assertion that the receiving water limitations and time schedules preclude the attainment of BPTC, see the responses to comments 5-7 and 5-8. With respect to its concern over Groundwater Management Plans that are not adequately making progress to address a degradation trend, the commenter is incorrect that the Board would be precluded from taking enforceable actions. Under the Order’s “GQMP General Requirements” the Executive Officer may require changes to a management plan if the current management plan approach is not “making adequate progress towards addressing the water quality problem.” Members are required to comply with management plans once approved; failure to comply with an approved management plan is considered a priority violation. The commenter also points to a scenario where discharger to an already polluted water should be required to implement more stringent management practices. Board staff concurs, as Management Plan requirements are triggered by exceedances of water quality objectives, and the receiving water limitations prohibit members from causing or contributing to those exceedances in accordance with an approved time schedule. For the above reasons, the tentative Order’s finding that the Order will result in the implementation of BPTC is appropriate.

***5-12, Violation of Antidegradation Policy - Pollution and nuisance
Comment Summary***

If implemented the tentative Order would result in pollution as defined by the Water Code by allowing the degradation of groundwater up to the water quality objective, disregarding relevant public health goals in favor of less protective water quality objectives, failing to monitor for all COCs, and allowing continued discharger contribution to exceedances of water quality objectives and nuisance for the next ten years.

Response

Water quality objectives are established to protect beneficial uses. Therefore, discharges that meet water quality objectives would not be considered “pollution” per the definition in the Water Code (section 13050(l)(1)) . There are no requirements in the Water Code for the board to “favor” public health goals over established water quality objectives in establishing WDRs. As discussed in previous comments, all COCs do not need to be monitored to provide a sufficient indication of compliance.

Finally, as discussed previously, the State Antidegradation Policy does not require, nor is it reasonable to expect, immediate compliance when an exceedance of water quality objectives is identified. The diffuse nature of nonpoint source pollution may not allow the board or dischargers to immediately determine the practices causing or contributing to the exceedance of objectives, nor to determine the most effective and practicable remedies. Therefore, the compliance time schedule provides the time necessary for the determination of which practices are protective (through the Management Practices Evaluation Program) and a process for establishing timelines to implement those practices (through the Groundwater Management

Plan). It would be unreasonable to require immediate compliance prior to generating the information needed to understand how to address the problem and providing time to implement the corrective actions.

5-13, Violation of Civil Rights and Anti-Discrimination Laws

Comment Summary

The tentative Order, if implemented, would disproportionately impact low income communities and communities of color by failing to protect groundwater from continued degradation. Latino and low-income communities are more likely to have nitrate contaminated drinking water in the Central Valley and the allowance of further degradation would likely High levels of nitrate in groundwater, Latino and low-income communities are more likely disproportionately impact these communities. Continued degradation and/or exceedances of groundwater objectives will cause less water availability for domestic use, therefore resulting in fewer will-serve letters and the inability to develop housing in the region which violates the California Government Code, Sections 11135 & 12900. If the tentative Order fails to protect drinking water for California's most vulnerable communities, California Government Code Section 65008 renders the Boards decision null and void.

Response

Staff understand that low income communities and communities of color are vulnerable to having nitrate impacted wells and may not have the resources to correct this problem. Consistent with the tentative Order's and PEIR's stated goal of ensuring that irrigated agricultural discharges do not impair access to safe and reliable drinking water, the Order protects high quality waters relied on by local communities from degradation of their water supplies by current practices on irrigated lands. The Order is designed to prevent irrigated lands discharges from causing or contributing to exceedances of water quality objectives, which include maximum contaminant levels for drinking water. In evaluating the tentative Order's regulatory approach, Board staff has specifically considered the nitrate pollution in the Central Valley affecting small communities and others (See PEIR, Appendix A, Sections IX-XI). Should the Board adopt the tentative Order, it will not be in violation of California Government Code, sections 11135, 65008, or 12900, et seq.

5-14, Implementation and compliance timeline

Comment Summary

Under the timeline of the tentative Order, the earliest results trend monitoring would not be seen before 2017 and the BPTC will only be confirmed in 2023. As the tentative Order is written, enforcement based on actual impacts to water quality will not be possible for at least a decade. The tentative Order should be revised to set a level for appropriate deviation from median for crop-based nitrogen budgets, and issues violation notices and fines to those growers who report nitrogen budgets outside of that deviation. This fine could be set at a minimal level initially, and increase with each nutrient report, with the fines generated going to SEP established to provide safe drinking water to communities with nitrate contamination.

Response

Board staff agrees that the initial groundwater trend monitoring results will not occur until 2017. However, some practices identified as protective of groundwater quality are immediately in effect upon adoption of the Order and can be enforced (including, but not limited to, backflow prevention and wellhead protection); some practices are already enforced through the Department of Pesticide Regulation's existing Groundwater Protection Program; while others will be identified through the Management Practices Evaluation Program (MPEP). In total, the

Information Sheet explains how the Order will result in the implementation of BPTC. See also, response to comment 5-12.

Although the final report for the MPEP will not be due for a number of years, updates are required every year, including an evaluation and determination as to whether groundwater is being impacted by activities at farms being monitored. Those annual evaluations should help identify some practices that are protective (or not) prior to submittal of the final report. As the board identifies practices that are not protective of groundwater quality, the board can take enforcement action, where needed.

In order to establish a nitrogen application rate limitation, as specified above, or universal standards for nutrients in the Order, the board would first need to establish a link between fertilizer use and leaching of nitrogen-containing wastes (e.g., nitrates) to groundwater under multiple scenarios. For example, some crop types may need higher nitrogen ratios than others. Comments received during the development of the PEIR have indicated that applying too little nitrogen may have similar effect as applying too much nitrogen in that crops may “shut down,” reducing the amount removed in the root zone and encouraging leaching of nitrates. Consideration of these processes reveals a complex system that varies not only by crop type, but also with geologic factors (depth to groundwater, conditions within the groundwater) and ambient conditions (e.g., soil temperature). The choice of a deviation from the median would be arbitrary at this point, since the board would not have the information support whether such a deviation would result in the discharge causing or contributing to a water quality problem. Because of these complexities, the board does not have enough information to develop a crop-based nitrogen application rate limitation or base fines on such a limitation. As more information is collected, the board may reconsider this issue.

5-15, Nitrogen loading and fertilizer application reporting Comment Summary

While Nitrogen budgets are useful, they fail to provide needed information about nitrogen loading. The tentative Order should be revised to require reporting of fertilizer applications which will, when combined with the nitrogen budget ratio, provide important information about nitrogen loading to groundwater.

Response

Staff agrees that it is important to relate information contained in the nitrogen management plan to the potential effect on groundwater quality. However, fertilizer application is not the only source of available nitrogen for the crop and would, therefore, provide an incomplete picture of the potential for nitrate to leach to groundwater.

The Order is structured such that the information provided by the Member to the third-party (including nitrogen management information) must include information needed for the Management Practices Evaluation Program (MPEP). The MPEP includes a requirement to develop an estimate of the effect of Members' discharges of constituents of concern on groundwater quality. To develop that estimate, the third-party must provide a mass balance and conceptual model. For nitrates, such a mass balance and conceptual model may include fertilizer application, in addition to other key variables, such as residual nitrogen in the soil or the level of nitrates in irrigation supply water. To the extent that such data are needed to meet the requirements of the MPEP, Members will be expected to provide that information to the third-party through their farm evaluation or nitrogen management plan summary reports.

Comment Letter 6

6-3, Finding 5

Comment Summary

Finding 5 of the tentative Order should be revised to clarify that the Order is not intended to regulate water in agricultural fields, including, but not limited to, furrows, beds, checks, and ancillary structures, contained on private lands associated agricultural operations. This Order is not intended to address the lawful application of soil amendments, fertilizers, or pesticides to land.

Response

The Central Valley Water Board disagrees with the comment that Finding 5 of the tentative Order needs clarification. Finding 5 states “This Order is not intended to regulate water quality as it travels through or remains on the surface of a Member’s agricultural fields or the water quality of soil pore liquid within the root zone.” The footnote to Finding 5 states “Water that travels through or remains on the surface of a Member’s agricultural fields includes ditches and other structures (e.g., ponds, basins) that are used to convey supply or drainage water within that Member’s parcel or between contiguous parcels owned or operated by that Member.” It is unclear how the suggested revision would support clarification.

California Water Code section 13263 requires the Central Valley Water Board to prescribe WDRs, or waive WDRs, for proposed, existing, or material changes in discharges of waste that could affect water quality. Finding 20 of the tentative Order provides rationale for why irrigated agricultural discharges are subject to regulation pursuant to the Porter-Cologne Water Quality Control Act (codified in California Water Code Division 7). If applications of soil amendments, fertilizers, or pesticides to land result in a discharge of waste to waters of the state that could affect water quality, then those materials are subject to this Order.

6-8, Template Development

Comment Summary

The tentative Order no longer allows the Third-Party to develop the templates for the Farm Evaluations, Nitrogen Management Plans, Nitrogen Plan Management Summary Reports, and Sediment and Erosion Plans. This is problematic as all these documents need to be developed by those who directly work in agriculture, with the assistance of agronomists, agricultural engineers, or other professionals that support agriculture.

Response

This comment suggests that agricultural representatives do not have a role in development of the Farm Evaluation, Nitrogen Management Plan, Nitrogen Plan Management Summary Report, and Sediment and Erosion Plan templates. However, the existing agricultural coalitions (including the Southern San Joaquin Water Quality Coalition), commodity groups, and agricultural technical services providers, and interested parties submitted proposed templates as part of the “Group Option” outlined in the Eastern San Joaquin River Watershed Order (see R5-2012-0116, section VIII.C.), and are therefore participating. Additionally, the tentative Order provides the third party with an opportunity to propose changes to the templates before implementing them in their area.

6-9, Toxicity Testing

Comment Summary

The tentative Order requires aquatic toxicity testing for three species (Ceriodaphnia dubia,

Pimephales promelas, and Selenastrum capricornutum). Attachment B of the tentative Order describes that the testing follow specified USEPA testing methods. The commenter argues that the tentative Order does not provide evidence that indicates acute testing is no longer adequate and the added expense would trigger the need for new economic analysis of impacts. The Order should only require acute toxicity testing and that the tentative Order should be revised to remove references to chronic toxicity testing.

Response

The aquatic toxicity testing required by the tentative Order and described in detail in the MRP does not require that chronic toxicity testing for Ceriodaphnia dubia or Pimephales promelas (see Section III.B.3.a of the MRP). The MRP does require that testing for Selenastrum capricornutum follow USEPA short-term chronic toxicity testing methods. The short-term chronic toxicity testing for Selenastrum capricornutum is needed as there is no USEPA acute toxicity testing method for Selenastrum capricornutum. The toxicity testing requirements in the tentative Order are identical to those currently implemented under the existing ILRP Waiver Program.

Comment Letter 7

7-2, Agronomic and nitrogen Technology

Comment Summary

In order to avoid confusion and misunderstanding due to incorrect terminology, the commenter recommends that the following changes be made;

- The tentative Order should be revised to define a Nitrogen Management Plan as a plan for what will happen with the nitrogen applied and removed during a season.
- The Nitrogen Management Plan Summary Report should be renamed the Nitrogen Management Record Summary. The word plan implies that it will occur, yet the report is asking for a historical summary of nitrogen that was applied and removed.

The tentative Order commonly addresses nitrate-nitrogen as the form of nitrogen identified as a water quality pollutant, yet the tentative order and the Information Sheet also refer to total nitrogen, total nitrogen available, and nitrogen fertilizer data. Chemically, there are many different forms of nitrogen and the use of different terminology to describe nitrogen should be carefully used and defined within the definition of the Order.

Response

Attachment A (Information Sheet) of the tentative Order describes Nitrogen Management Plans as a tool for Members to document their nitrogen use management practices and how these management practices minimize excess nutrient application relative to crop need (a key requirement that the Member must meet under the tentative Order). Attachment A also states in part that the Nitrogen Management Plan template should consider, to the extent appropriate, the major criteria established in Code 590 of the NRCS Nutrient Management document, including soil and plant tissue testing, nitrogen application rates, nitrogen application timing, consideration of organic nitrogen fertilizer, consideration of irrigation water nitrogen levels to minimize surface and groundwater pollution and meet crop nitrogen requirements and crop yield potential. Although renaming the Nitrogen Management Plan Summary Report to the Nitrogen Management Record Summary may help clarify the intent of the report, it may add confusion as it would differ from already approved ILRP General Orders requiring the same report.

The comment inaccurately states that the tentative Order refers to the total nitrogen and total

nitrogen available. Attachment A does however refer to total nitrogen available (pg.19) and nitrogen fertilizer (pg.17 and 21). The term total nitrogen available used on pg.19 was correctly used to discuss the total available nitrogen for crop consumption. The term nitrogen fertilizer on pg.17 was used to describe some of the data used in a peer reviewed article evaluating spatial and temporal trends in nitrate concentrations. The term nitrogen fertilizer on pg.21 was used to discuss organic nitrogen fertilizer (i.e., manure or compost). These uses of terminology are appropriate.

7-3, Proprietary nature of nutrient application information

Comment Summary

Some growers in the Central Valley have developed nutrient management plans based on their years of experience with a specific crop and/or property and the actual records of nutrient applications are proprietary information that should not be submitted for public record.

Response

The tentative Order does not require Members to submit nitrogen management plans or actual records of nitrogen applications directly to the Central Valley Water Board. The third-party will summarize nitrogen management plan summary reports and submit the information as a part of the monitoring report, but this will not include data identifiable to specific farms. Additionally, in the case where a Member or the third-party would be required to submit farm-specific data, Provision IX.4 describes the process whereby Members or the third-party can assert that a report or a portion of a report is exempt from public disclosure in accordance with California laws and regulations, including the Public Records Act, Water Code section 13267(b)(2), and the California Food and Agriculture Code. The commenter has not indicated how this process is inadequate, and if so, how it should be revised.

Comment Letter 8

8-1, Coverage of all sources of pollution

Comment Summary

Many sources of pollution have the potential to degrade and/or pollute water quality within the Central Valley (e.g. septic systems, residential landscape irrigation, community irrigated landscapes, community and industrial development). The ILRP and the tentative Order do not address these significant and growing risks. Any regulations imposed on irrigated agriculture should be made in conjunction with all major risks to water quality.

Response

Although it is true that there are multiple sources contributing to nitrate contamination within the Tulare Lake Basin area, agricultural fertilizers and animal wastes applied to cropland are the largest regional sources of nitrate in groundwater. According to a UC Davis report⁶, application of nutrients to cropland was responsible for 96% of the estimated groundwater nitrate loading within the Tulare Lake Basin and Salinas Valley of California. The Board has already adopted General Waste Discharge Requirements to regulate discharges from dairies that may cause or contribute to nitrate pollution within the region. It is appropriate for the Board to move forward with the long-term ILRP and adopt Orders like the tentative Order that will bring the remaining cropland not covered under the Dairy General Order under regulation even if all contributing sources of nitrate have not yet been addressed.

⁶Harter, T., et.al. 2012, Addressing Nitrate in California's Drinking Water with a Focus on Tulare Lake Basin and Salinas Valley Groundwater. Report for the State Water Resources Control Board Report to the Legislature. Center for Watershed Sciences, University of California, Davis.

It is important to note that the board has applied its authority to regulate sources of groundwater pollution for decades. Where high priority water quality issues have been identified, such as discharge of treated wastewater to land or leaking underground storage tanks, the board has used its regulatory authority to protect groundwater quality. The board's approach to discharges from irrigated lands to groundwater is consistent with the board's historical approach of regulating other significant sources of pollution.

8-2, Uncertainty of effectiveness

Comment Summary

It is not clear whether implementation of the tentative Order will improve water quality. Unless the Board is certain that the tentative Order will improve water quality, the Board should not move forward with the Order. More time should be given to ensure that the proposed regulations will provide the desired outcome.

Response

Board staff disagrees that it is unclear whether the tentative Order will result in improvements to water quality. Through the Management Plan Evaluation Program, the tentative Order requires third-party groups to determine what management practices are protective of groundwater quality and requires Members to implement these management practices, or their equivalent, which will improve water quality over time. Further, the tentative Order requires monitoring and reporting to ensure that protective practices are being implemented and receiving water trends are monitored. The process is iterative. If management practices are found not to be protective of receiving water quality, then changes in practices will be required.

Board staff disagree with the statement that additional time is needed to ensure that the long-term ILRP will meet the desired outcomes, The tentative Order allows sufficient time for growers to implement management practices that are protective of water quality. It is recognized that in some areas, improvements to water quality will take considerable time. The process of improvement starts with implementation of management practices.

Comment Letter 11

11-1, High vulnerability area

Comment Summary

The commenter states that all of the area within the North Kern Water Storage District coverage is classified as high vulnerability by the Central Valley Regional Water Board.

Response

Section VIII.D.1 of the tentative order states in part that the Groundwater Quality Assessment Report prepared by the Third-Party must include an "assessment of all available, applicable and relevant data and information to determine the high and low vulnerability areas where discharges from irrigated lands may result in groundwater quality degradation". Central Valley Water Board staff does not designate high or low vulnerability areas. Vulnerability designation is proposed by the third-party group through the Groundwater Quality Assessment Report, subject to Executive Officer approval. The Central Valley Water Board has yet to make any final vulnerability determinations in the area covered by this Order.

Comment Letter 12

12-4, Drinking water supply to disadvantaged communities

Comment Summary

The commenter states that they are concerned with the dilemma faced by members of disadvantaged communities who are faced with the choice of either buying bottled water or drinking domestic well water (some of which is of questionable quality); however, the tentative Order will not provide these communities drinkable water.

Response

The objective of the tentative Order is to regulate discharges of waste from irrigated agriculture to protect, preserve, and improve water quality. The Board understands that adoption of the Order will not directly provide drinking water to those individuals that currently who are impacted by nitrate contaminated drinking water sources; however, the tentative Order will reduce these impacts and require that future discharges not cause or contribute to pollution.