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16 **BEFORE THE STATE WATER RESOURCES CONTROL BOARD**

17  
18 In the Matter of Review of Irrigated Lands  
Regulatory Program, Executive Officer  
19 Approval of the Central Coast Groundwater  
Coalition Program  
20  
21  
22

SWRCB File No.  
**PETITION FOR REVIEW**

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1 **I. INTRODUCTION**

2 CARMEN ZAMORA and the ENVIRONMENTAL LAW FOUNDATION (“ELF”) peti-  
3 tion the State Water Resources Control Board (“State Board”) to review the Central Coast  
4 Groundwater Coalition (“Coalition”)’s third-party monitoring and reporting program as it relates  
5 to the Counties of Monterey, Santa Clara, Santa Cruz, and San Benito. (Wat. Code § 13320, Cal.  
6 Code Regs., tit. 23, § 2050.) This petition seeks State Board review of the Central Coast Region-  
7 al Water Quality Control Board (“Regional Board”)’s approval of the Coalition’s groundwater  
8 monitoring and reporting program (the “Workplan”). (See Central Coast Groundwater Coalition  
9 Work Plan for Monterey, Santa Clara, Santa Cruz, and San Benito Counties (Nov. 1, 2013), Ex.  
10 A.) This petition alleges that: (1) the Coalition reporting program violates state law and State  
11 Board policy because the Coalition is not required to submit drinking water data, and notifica-  
12 tion and compliance letters directly to the Regional Board, in violation of Water Code section  
13 13269(a)(2) and the State Board’s Nonpoint Source Policy; (2) the Workplan is an invalid dele-  
14 gation of governmental authority and power to a private power; (3) the Workplan deprives the  
15 public access to vital groundwater monitoring and reporting information in violation of the Pub-  
16 lic Records Act; (4) submission of contour maps in lieu of data violates state law and State  
17 Board Policy; and (5) the notification process violates the Human Right to Water Act because it  
18 impedes enforcement and public access to information about nitrate pollution.

19 This petition challenges:

- 20 (1) the Executive Officer’s approval of the Coalition’s drinking water notification  
21 process, and;  
22 (2) the Executive Officer’s approval of the Coalition’s plan to submit contour maps  
23 displaying groundwater contamination in lieu of raw monitoring data.

24 **II. NAME, ADDRESS, TELEPHONE NUMBER AND E-MAIL ADDRESSES OF THE PETITIONERS**

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12           **III. THE ACTION OR INACTION OF THE REGIONAL WATER BOARD BEING**  
13           **PETITIONED**

14           This Petition challenges:

- 15           (1)     The denial of the petition for discretionary review of the Workplan approvals. The  
16                    petition for discretionary review was filed on July 3, 2014. (Pearl Kan, Attorney,  
17                    CRLA, Letter to Regional Board (July 3, 2014), Ex. B.) The Regional Board denied  
18                    this discretionary review in a letter dated December 18, 2014. (Kenneth A. Harris,  
19                    Jr., Executive Officer, Regional Board, Letter to Pearl Kan, Attorney, CRLA (Dec.  
20                    18, 2014), Ex. C.)
- 21           (2)     The approvals of revisions to the Workplan as memorialized in a letter from the  
22                    Executive Officer of the Regional Board to the Coalition, dated December 8, 2014.  
23                    (Kenneth A. Harris, Jr., Executive Officer, Regional Board, Letter to Parry Klassen,  
24                    Executive Director, Coalition (Dec. 8, 2014), attached as Ex. D.)

25           **IV. THE DATE THE REGIONAL WATER BOARD ACTED, REFUSED TO ACT, OR**  
26           **WAS REQUESTED TO ACT**

27           The Executive Officer amended and approved the latest Coalition Workplan on Decem-  
28           ber 8, 2014, and expressly denied the July 3, 2014 request for discretionary review of the Work-  
plan by letter dated December 18, 2014. (Exs. B, C, D.)

**A. Timeliness**

          The Coalition groundwater monitoring program was conditionally approved on Decem-  
ber 17, 2013. (See Kenneth A. Harris, Executive Officer, Regional Board, letter to Parry Klas-  
sen, Executive Director, Coalition (Dec. 17, 2013), Ex. E.) The State Board Order provided that  
interested parties would be able to seek discretionary review of any cooperative monitoring pro-

1 grams. (State Board Order No. WQ 2013-0101 (Sept. 23, 2013), at 16, Ex. F.) However, the Re-  
2 gional Board provided no procedural mechanism to seek review of the December 17, 2013 ap-  
3 proval and thus Petitioners awaited further communication from the Board on when such review  
4 would be ripe. Six months after the approval, on June 5, 2014, the Regional Board first sent a  
5 public notice of determination for discretionary review of cooperative monitoring programs.  
6 (See Regional Board Agricultural Order No. R3-2012-0011, Items for Discretionary Review  
7 (June 5, 2014), Ex. G.) On behalf of petitioner Zamora, CRLA timely sought discretionary re-  
8 view of the Coalition program on July 3, 2014. (See Ex. B.) The Board divided the petition into  
9 two parts, which it heard on July 2014 and November 2014.

10 Following the November Regional Board meeting, on December 18, the Executive Officer  
11 sent CRLA a letter for the first time responding to and denying the first portion of the discre-  
12 tionary review. (See Ex. C.)<sup>1</sup> The December 18 letter generally discussed some modifications to  
13 the Coalition's notification process made since the filing of the July 3 discretionary review letter,  
14 but did not otherwise address or resolve all the concerns originally raised in the discretionary  
15 review letter. Accordingly, Petitioners Zamora and ELF now petition the State Board to review  
16 the entirety of the Coalition program.

17 Notably, from the inception of the program through the December 8 letter, the provisions  
18 constituting the Coalition Workplan have been constantly shifting and edited behind closed  
19 doors. Because the Coalition program is being implemented simultaneously with being modi-  
20 fied, this iterative procedure has created much uncertainty for stakeholders interested in seeking  
21 administrative review. In brief, there has never been any final program or final agency action on  
22 the program; it has been unknown what portion is still under review or subject to further modifi-  
23

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24  
25 <sup>1</sup> The December 18 letter to CRLA tentatively schedules discussion of the second portion  
26 of CRLA's discretionary review item for the January 2015 Regional Board meeting, but this is  
27 still uncertain.

28 In addition to the negative determination sent on December 18, the Executive Officer had  
previously sent the Coalition a letter on December 8, 2014, approving the latest Coalition notifi-  
cation proposal with further minor modifications of the program, but which did not address any  
specific issue in the petition for discretionary review. (See Ex. D.)

1 cation. What is certain, however, is that the Regional Board's December 18 letter affirmatively  
2 concluded the Regional Board's decision regarding the letter for discretionary review of the en-  
3 tire program as challenged. ELF and Ms. Zamora now petition the issues originally raised in  
4 CRLA's July 2014 discretionary review letter.<sup>2</sup>

5 **V. STATEMENT OF THE REASONS THE ACTION OR INACTION WAS**  
6 **INAPPROPRIATE OR IMPROPER**

7 As stated above, the State Board should reverse the Regional Board's decision for the  
8 following reasons: (1) the Coalition reporting program violates state law and State Board policy  
9 because the Coalition is not required to submit drinking water data, and notification and compli-  
10 ance letters directly to the Regional Board, in violation of Water Code section 13269(a)(2) and  
11 the State Board's Nonpoint Source Policy; (2) the Workplan is an invalid delegation of govern-  
12 mental authority and power to a private power; (3) the Workplan deprives the public access to  
13 vital groundwater monitoring and reporting information in violation of the Public Records Act;  
14 (4) submission of contour maps in lieu of data violates state law and State Board Policy; and (5)  
15 the notification process violates the Human Right to Water Act because it impedes enforcement  
16 and public access to information about nitrate pollution. A full statement of reasons and points

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17  
18 <sup>2</sup> The December 18 letter contains a curious concluding paragraph, suggesting that the  
19 December 8th letter actually constituted denial of the discretionary review letter, although the  
20 December 8th letter nowhere references the discretionary review, nor is it even addressed to  
21 CRLA or Petitioners. It is addressed to the Coalition, and CRLA was copied as a courtesy. None-  
22 theless, the December 18 letter refers to the December 8 letter as the trigger for seeking review  
23 by the Regional Board for two obvious and unsavory reasons. First, it foreshortens the time in  
24 which to seek review by ten days (which matters during the holiday season). Second, and more  
telling, the December 18 letter purports to hold that the only issues for which state board review  
may be sought are those expressly referenced in the December 8 letter, suggesting that all other  
challenges raised in the letter for discretionary review have somehow been foreclosed by the  
passage of time and the Regional Board's complete silence toward the letter for discretionary  
review.

25 This kind of gamesmanship to attempt to escape this Board's review is beneath the  
26 dignity of a respected public agency. The first time that a review of the Workplan was permitted  
27 was June 3, 2014; no decision taken before that time could have been reviewed. CRLA filed its  
28 July 3 letter in timely reliance. The December 18 letter is the first and only writing directed to  
CRLA and addressing the letter for discretionary review. Nonetheless, so as not to allow the Re-  
gional Board to introduce spurious procedural issues to derail State Board review, Petitioners  
file this petition on shortened time.

1 and authorities is included in Section VIII below.

2 **VI. HOW THE PETITIONER IS AGGRIEVED**

3 Ms. Zamora is a resident of Monterey County. Her small community of ten households  
4 relies upon a groundwater well contaminated by nitrate for their domestic drinking water supply.  
5 Ms. Zamora's community now relies solely upon bottled water for its domestic water use. Ms.  
6 Zamora's community is surrounded by agricultural land. Ms. Zamora and other residents in her  
7 community seek a long-term drinking water solution. Without ready and easy access to regulato-  
8 ry groundwater monitoring and reporting information, challenges to drinking water solutions are  
9 rendered even more difficult. Hundreds if not thousands of residents in Monterey County alone  
10 are similarly situated in Ms. Zamora's position.

11 Ms. Zamora is aggrieved because the Regional Board fails to hold itself accountable and  
12 transparent to the public, tens of thousands of residents like herself who suffer from drinking  
13 water contamination. Instead, the Regional Board yields time and again to the pressures of a pri-  
14 vate party whose manifest intention is to shield groundwater monitoring information from those  
15 who may be affected.

16 ELF is a California nonprofit organization founded on Earth Day in 1991 that has a  
17 longstanding interest in reducing pollution to groundwater and ensuring public access to clean  
18 and uncontaminated drinking water. As such, ELF has a direct interest in the proper implementa-  
19 tion of the Regional Board's Irrigated Lands Regulatory Program and the content and implemen-  
20 tation of the Coalition workplan. Adoption of the workplan, with its inadequate provisions for  
21 public notice of violations, would impede public access to information concerning nitrate pollu-  
22 tion, thus directly harming ELF.

23 **VII. THE ACTION THE PETITIONER REQUESTS THE STATE WATER BOARD TO**  
24 **TAKE**

- 25 (1) Petitioners request that the State Board order the Regional Board to withdraw its  
26 approvals of the Coalition Workplan.  
27 (2) Petitioners further request that the State Board order the Regional Board to reis-  
28 sue any such approval only if such a approvals satisfy the following conditions:



- 1 (a) The Regional Board must affirmatively require that the Coalition provide  
2 copies of all drinking water well pollution data, all notification letters is-  
3 sued to dischargers and all compliance letters and other responses received  
4 from dischargers directly to the Regional Board, and to the public upon  
5 request. .
- 6 (b) The Regional Board must affirmatively require that where a well shows an  
7 exceedance, that data is immediately sent to without delay for “validation”  
8 or any other reason by the Coalition to the Regional Board, the local  
9 health agencies, and be released to the public upon request. In addition,  
10 copies of any Notification Letter issued to dischargers whose wells exceed  
11 nitrate exceedances must also be copied to the local health agency, and be  
12 released to any member of the public upon request.
- 13 (c) The Regional Board must require all cooperative groundwater monitoring  
14 programs, including the Coalition program at issue, to display monitoring  
15 results on the public side of GeoTracker pursuant to the requirements of  
16 Water Code section 13269(a)(2).
- 17 (d) The Regional Board must revoke its approval of the Coalition’s submis-  
18 sion of contour maps and must provide for full public disclosure of the  
19 underlying groundwater monitoring data.

20 **VIII. STATEMENT OF POINTS AND AUTHORITIES FOR ANY LEGAL ISSUES**  
21 **RAISED IN THE PETITION**

22 **A. Introduction**

23 The Regional Board has approved a Workplan for a Coalition of growers who are dis-  
24 chargers of pollutants that can result in nitrate contamination of groundwater used for drinking  
25 water. (See Ex. A.)

26 Under the Workplan, the Coalition—comprised solely of members of the regulated com-  
27 munity and funded and run entirely by them—has taken on critical functions of the Regional  
28 Board with regard to groundwater monitoring and public health protection from nitrate contami-  
nation under a Conditional Waiver of Waste Discharge Requirements (the “Conditional Waiv-

1 er”). (See Regional Board Order R3-2012-0011, as modified by State Board Order WQ 2013-  
2 0101 (Jan. 16, 2013), Ex. H.) For growers and polluters who do not join the Coalition the pro-  
3 gram is relatively simple. The grower tests drinking water wells for nitrates. The results are sent  
4 to the Regional Board, which then informs the grower whether there is an “exceedance,” i.e.,  
5 water not fit to drink. If there is an exceedance, the Regional Board sends a standardized notifi-  
6 cation letter to the grower, informing the grower of that fact and requiring certain actions, nota-  
7 bly a notice to affected residents with instructions not to drink the water, and provision of an  
8 alternate drinking water supply. Last, the grower must send the Regional Board a compliance  
9 letter describing the steps taken.

10 All of that documentation is public, without exception or limitation.

11 Growers who join the Coalition get a very different program, because the Coalition takes  
12 all that information into itself. It does the testing, receives the results, determines whether it be-  
13 lieves the data are “valid,” determines whether there is an exceedance, sends any required notifi-  
14 cation letter, and receives the compliance letter or other materials. (Ex. A at 26-27.) While the  
15 Coalition provides some summary information to the Regional Board, and allows access to some  
16 of the originals, the data are summarized, masked, encoded and originals are never left in the  
17 Regional Board’s possession. The Coalition is a black box, as far as the public is concerned.

18 There are two fundamental flaws with this scheme.

19 First, whatever the merits of using cooperatives to accomplish public regulatory pro-  
20 grams for efficiency and relieving the public agency of costs and burdens, those purposes are  
21 surpassed here by one other: secrecy. In the words of the Coalition itself, its core purposes “in-  
22 clude[] *not* providing individual member information that specifically ties domestic well ex-  
23 ceedances with individual growers, companies, or landowners in a manner *that would be*  
24 *public.*” (Parry Klassen, Executive Director, Coalition, Letter to Kenneth A. Harris, Jr., Execu-  
25 tive Officer, Regional Board (June 10, 2014), at 7, Ex. I.) Secrecy lies at the heart of this Coali-  
26 tion.

27 Secrecy and “privacy” have no place when it comes to the public’s drinking water, en-  
28 forcing public laws and protecting the public health. This Regional Board knew that, when it

1 initially told the Coalition, “[w]hile we understand this is a sensitive issue for growers, the real  
2 public health risk component of this issue outweighs the desire for privacy.” (Kenneth A. Harris,  
3 Jr., Executive Officer, Regional Board, Letter to Parry Klassen, Executive Director, Coalition  
4 (Mar. 21, 2014), at 1, Ex. J.)

5         Unfortunately, the Regional caved on this principle, and eventually approved a plan that  
6 gives it limited rights to see the original data and documents, and the public none. This violates  
7 fundamental principles of statutes governing the State Board’s own policies regarding water pol-  
8 lution data and conditional waivers, the Public Records Act, and specific provisions of the Water  
9 Code. It must be reversed.

10         Second, the Coalition seeks to live in a netherworld, being neither a public agency nor a  
11 truly private one. It wants the powers of the Regional Board to receive public data, issue public  
12 orders, and monitor compliance with public mandates, but it wants also to enjoy the cloak of se-  
13 crecy of a private organization for its private members.

14         It cannot have both. The Regional Board initially tried to ensure that public functions  
15 remained in public hands, and not in the hands of an entity created and run by the regulated, as it  
16 stated in a letter to the Coalition: “The Water Board cannot delegate this responsibility to main-  
17 tain a written record, or its authority to protect public health, to a third party. The Water Board  
18 also cannot rely on anecdotal, aggregated, or anonymous information or records regarding this  
19 public health/drinking water issue.” (Ex. J at 1.) But again, the Regional Board in the end aban-  
20 doned that principle in favor of protecting the polluters’ secrecy.

21         Again this violates fundamental principles of democratic governance. Public agencies  
22 cannot delegate their responsibilities to private entities, particularly those controlled by the regu-  
23 lated. Public agencies also cannot pass off their monitoring and enforcement powers to private  
24 entities, particularly where the public agency agrees to forebear public disclosure and public en-  
25 forcement for those who belong to a special club, while nonmembers face a different legal re-  
26 gime.

27         This Coalition must operate under a very different set of rules. Either it is a purely pri-  
28 vate club, in which case it can have no public duties—it can act merely as a facilitator for its

1 members, perhaps handle the paper flow for the Regional Board, and it can keep its members'  
2 information secret. Or it can act on behalf of the Regional Board in receiving data, issuing notic-  
3 es and receiving documents about compliance, in which case it does so under the same rules that  
4 govern the Regional Board.

5 It can have darkness or sunshine, but it cannot live in the shadows. In short, it cannot  
6 wield public agency authority but claim private agency secrecy.

### 7 **B. Background**

8 Nitrate pollution is the preeminent threat to drinking water for farmworker communities  
9 who live in the Central Coast Region. Nitrate pollution traceable to irrigated agricultural opera-  
10 tions is a significant source of contamination of these communities' aquifers. (Ex. H at 3.)  
11 Drinking water polluted with nitrate harms children and all people in many ways: birth defects,  
12 potentially deadly "blue baby syndrome," thyroid, spleen, and kidney disease, and cancer. (*Id.* at  
13 49.)

14 In recent years, the State and Regional Boards have taken affirmative steps to address  
15 this ongoing public health crisis. Along with the Conditional Waiver, the Regional Board issued  
16 accompanying Monitoring and Reporting Programs. (Regional Board Monitoring and Reporting  
17 Program Orders No. R3-2012-0011-01, R3-2012-0011-02, and R3-2012-0011-03, Exs. K, L, M.)  
18 The Conditional Waiver contained an increased monitoring and reporting scheme for the pur-  
19 pose of improving the understanding of groundwater contamination in the Central Coast.

20 In response to petitions from both the environmental community and agricultural inter-  
21 ests to review the program, the State Board adopted State Water Board Order WQ 2013-0101.  
22 (See Ex. F.) The State Board Order modified portions of the Conditional Waiver in order to  
23 strengthen its provisions regarding public disclosure of nitrate standard exceedances. Specifical-  
24 ly, the Order requires that dischargers notify water users within 10 days when a groundwater  
25 well on the discharger's property used for drinking water tests above 45 mg/L of nitrate as NO<sub>3</sub>.  
26 (Exs. K at 10, L at 10, M at 10.) The discharger must also notify the Regional Board within 24  
27 hours that it has sent such a letter. (Ex. F at 34.) Within 10 days, the discharger must notify all  
28 well users that the water is unfit for human consumption with an explicit warning not to use the

1 water for drinking or cooking. (*Ibid.*) The discharger must provide written confirmation to the  
2 Regional Board within 30 days that it has complied with these steps. (See Sample Drinking Wa-  
3 ter Notification Letter, Ex. N.)

4 A discharger can comply with this testing and notification requirement in one of two  
5 ways. Under the “individual monitoring program,” a discharger conducts (or contracts for) its  
6 own testing and a certified laboratory electronically transmits the results to the Regional Board.  
7 (Exs. K at 8-9, L at 8-9, M at 8-9.) The Regional Board notifies the discharger if the domestic  
8 supply well exceeds the drinking water standard. If it does, the discharger sends both the notifi-  
9 cation and compliance letters to the users and Regional Board, respectively. Notably, all com-  
10 munications to and from the discharger and the Regional Board are public records, fully  
11 disclosable to any member of the public who asks for them.<sup>3</sup> (See Regional Board Staff Report  
12 for Nov. 13-14 Meeting (Oct. 21, 2014) at 4-5, Ex. Q.)

13 The second method is the subject of this Petition; it employs a third-party cooperative.  
14 (See Ex. F at 14, 29.) The Coalition, a nonprofit organization consisting of growers and their  
15 representatives, acts as an intermediary between the growers, the Regional Board, and the af-  
16 fected water users. The Coalition conducts the testing and receives the results. The Coalition de-  
17 termines whether there is an exceedance, after delaying any reporting to perform some form of  
18 unspecified “validation.”<sup>4</sup> If the Coalition decides the result is “valid” and the result is an ex-  
19 ceedance, the Coalition notifies the member discharger.<sup>5</sup> The member discharger is then respon-  
20

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21 <sup>3</sup> CRLA has asked for and received these materials without delay or objection from the  
22 Regional Board. (Pearl Kan, Attorney, CRLA, Letter to Regional Board (Mar. 3, 2014), Ex. O  
23 [Public Records Act request]; Regional Board, Letter to Pearl Kan, CRLA (Apr. 10, 2014), Ex. P  
[Public Records Act response with sample notification letters and confirmation].)

24 <sup>4</sup> It is unknown whether the Coalition could decide that a test result is not “valid” if it  
25 shows an exceedance, discard the test results, retest and use the second results if they do now  
26 show an exceedance. (See Ex. A at 26-27.) Nothing in the Workplan prohibits it, and the Re-  
27 gional Board—because it does not mandate reporting of *all* testing—would never know. As the  
discharger is the Coalition “member” from which it derives its sole operating income, the poten-  
tial for bias is obvious.

28 <sup>5</sup> It is unknown whether the Coalition has ever done so in the year since the program was  
tentatively approved originally. In a letter to CRLA dated December 19, 2014, responding to a

1 sible for sending the notification letter to at-risk water users and to report any follow-up or com-  
2 pliance not to the Regional Board but only to the Coalition. (Ex. A at 26-27.)<sup>6</sup> The Coalition  
3 provides an aggregated exceedance report to the Regional Board, an *anonymous* list of Coalition  
4 member dischargers with information concerning monitoring results and actions taken. This ag-  
5 gregated exceedance report is not tied to a standard reporting schedule. (See Ex. Q at 5.)

6 The State Board Order requires that the Regional Board review third party monitoring  
7 proposals “to ensure consistency with legal requirements to verify the adequacy and effective-  
8 ness of waiver conditions and provide sufficient feedback mechanisms for determination of  
9 whether the required controls are achieving the Agricultural Order’s stated purposes.” (Ex. F at  
10 14.) As noted, the Regional Board is not doing so.

11 **1. The Workplan allows the Coalition to retain the notification and**  
12 **compliance letters**

13 In March 2014, the Regional Board’s Executive Officer issued a letter to the Coalition  
14 requesting that each individual Coalition notification letter with attachments and written re-  
15 sponse be uploaded to the GeoTracker site.<sup>7</sup> (Ex. J at 2-3.) The Executive Officer reasoned that  
16 these requirements and “follow up reporting protocol . . . are necessary to provide clarity and  
17 ensure that our respective drinking water notification protocols are as credible and transparent as  
18 possible, given the significance of this human health issue.” (*Id.* at 4.) The letter stated that

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19 Public Records Act request from CLRA on December 11, 2014, the Board admitted it had never  
20 asked the Coalition for any such letters, although it could. (Pearl Kan, Attorney, CRLA, Letter to  
21 Regional Board (Dec. 11, 2014), Ex. R [Public Records Act request]; Regional Board, Letter to  
22 Pearl Kan, CLRA (Dec. 19, 2014), Ex. S [Public Records Act response].)

23 <sup>6</sup> Oddly, under the Workplan as amended, the Coalition then sends a “summary” of  
24 actions taken by its members to comply (by sending the notification letter and providing alter-  
25 nate supply of drinking water), but it expressly excludes any notice to the Regional Board of co-  
26 alition members who do *not* comply. The Regional Board receives this information only if it  
27 expressly asks for it. As noted above in the previous note, the Water Board has never asked.

28 <sup>7</sup> GeoTracker GAMA is the State Board’s comprehensive online groundwater monitoring  
tool. Its goals are to “improve statewide groundwater monitoring, and to increase the availability  
of groundwater quality information to the public.” (See State Board, GeoTracker GAMA Pro-  
gram Fact Sheet (May 2013), Ex. T.) GeoTracker GAMA contains over 125 million data records  
from different sources.

1 “[t]he Water Board cannot delegate this responsibility to maintain a written record, or its au-  
2 thority to protect public health, to a third party. The Water Board also cannot rely on anecdotal,  
3 aggregated, or anonymous information or records regarding this public health/drinking water  
4 issue.” (*Id.* at 1.)

5 The letter went on to emphasize the necessity of access to the letters: “Water Board staff  
6 must maintain and frequently access appropriate written records, as we currently do in our pro-  
7 cess for non-coalition farmers. While we understand this is a sensitive issue for growers, the real  
8 public health risk component of this issue outweighs the desire for privacy.” (*Ibid.*)

9 In a letter dated June 10, 2014, the Coalition responded, refusing to comply with the Ex-  
10 ecutive Officer’s requirement to upload notification letters and related attachments issued by the  
11 Coalition to its members. The Coalition stated that one of the central tenets of its program “in-  
12 cludes not providing individual member information that specifically ties domestic well exceed-  
13 ances with individual growers, companies, or landowners in a manner *that would be public.*”  
14 (Ex. I at 7, emphasis added.) It is clear from this letter that one of the central purposes of the  
15 Coalition is to keep information that would otherwise be public secret. Having undertaken criti-  
16 cal public roles—receiving data unimpeded by “validation” review, sending notification letter if  
17 there are exceedances, receiving Compliance Letters—the Coalition nonetheless wants the se-  
18 crecy of a private entity, all in order to shield their members’ pollution and contaminated drink-  
19 ing water from the public.

20 The Coalition offered instead to allow Regional Board staff access to audit, but *not* copy  
21 or receive, Coalition records. (*Id.* at 9.) To this date, the Coalition has not submitted the notifica-  
22 tion letters issued to their member dischargers to GeoTracker pursuant to the Executive Officer’s  
23 March 21 request. On December 8, 2014, the Executive Officer approved a Coalition proposal  
24 that does not require the Coalition to submit copies of notification letters the Coalition sends to  
25 its member dischargers to the Regional Board. Instead, the Coalition will bring copies of notifi-  
26 cation letters to quarterly Coalition–Regional Board meetings to review and audit, but not to  
27 keep. (Ex. D at 2.)

28 On December 11, 2014, CRLA, acting as attorneys for ELF and Carmen Zamora, submit-

1 ted a Public Records Act Request for these letters, among other documents. (Ex. R.) As noted,  
2 the Regional Board has none and apparently has never asked for them. (Ex. S.)

3 **2. The Workplan allows the Coalition to submit contour maps in lieu of**  
4 **groundwater monitoring data**

5 The Coalition workplan requires that in addition to characterizing groundwater aquifers,  
6 the Coalition must also “sample all domestic drinking water wells on participant  
7 owned/leased/operated land.” (Kenneth A. Harris, Jr., Executive Officer, Regional Board, Letter  
8 to Abby Taylor-Silva, Grower-Shipper Association of Central California (July 11, 2013) at 3, Ex.  
9 U.) Sampling domestic drinking water wells is a requirement of the Conditional Waiver. (Ex. H  
10 at 8.) As a way of reporting the results of this monitoring process, the Executive Officer ap-  
11 proved Coalition submittal of technical reports and contour maps as a substitute for displaying  
12 individual well information on GeoTracker. (Ex. U at 6.)<sup>8</sup>

13 **C. The Coalition Workplan violates state law and State Board policy**

14 **1. Failure to require the Coalition to submit drinking water data, and**  
15 **notification and compliance letters directly to the Regional Board**  
16 **violates Water Code section 13269(a)(2)**

17 Under the Water Code, groundwater “monitoring results *shall* be made available to the  
18 public.” (Wat. Code § 13269(a)(2), emphasis added.) Additionally, a waiver’s monitoring provi-  
19 sions must include provisions for “verifying the adequacy and effectiveness of the waiver’s con-  
20 ditions.” (*Ibid.*) In other words, the Regional Board may not do what it has done in the Workplan  
21 approval: allow the Coalition to construct a process to hide monitoring, notification and compli-  
22 ance information from the public.

23 The groundwater data, notification letters, and compliance letters are clearly “monitoring  
24 results” under section 13269(a)(2). They are the direct product of the monitoring process that the  
25 Regional Board required under the MRPs. (Exs. K at 11, L at 11, M at 11.) As such, they must be  
26 made public.

27 As it stands, the Coalition’s drinking water data, and Notification and Compliance Letter

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28 <sup>8</sup> Conversely, dischargers in the individual monitoring program will have their groundwa-  
ter results publicly reported through GeoTracker. (Ex. U at 6-7.)



1 processes do the opposite of making monitoring results public: they hide the letters from the  
2 public. Currently, the Coalition is the sole recordkeeper of all original documentation for dis-  
3 chargers who are its members. Thus, the Coalition is the only organization that knows whether  
4 there are exceedances, and whether those dischargers are complying with the law. In theory, the  
5 Regional Board may request copies of the individual notification letters, but as was demonstrat-  
6 ed over the course of the year, absent extraordinary circumstances, the Regional Board will not  
7 receive actual copies of these notification letters when it requests them. Between March 21,  
8 2014 and December 8, 2014, the Regional Board’s position shifted from a demand that the Coa-  
9 lition provide all notification letters to the Regional Board to complete acquiescence. In the De-  
10 cember 8, 2014 letter, the Regional Board conceded to the Coalition’s demand that it not even be  
11 able to copy these notification letters at Coalition and Regional Board quarterly meetings. (Ex.  
12 D at 2.) This regulatory design violates section 13269(a)(2) because it does not make the letters  
13 and data public, as required by statute.

14 **2. Failure to require the Coalition to submit drinking water data, and**  
15 **notification and compliance letters directly to the Regional Board**  
16 **violates the State Water Board’s Nonpoint Source Policy**

17 The Regional Board may issue a Conditional Waiver only if it is consistent with the Ba-  
18 sin Plan. (Wat. Code § 13269(a)(1)). The Basin Plan incorporates the State Board’s Nonpoint  
19 Source Pollution Control Program. (See State Board Policy for Implementation and Enforcement  
20 of the Nonpoint Source Pollution Control Program (May 20, 2004) (“Nonpoint Source Policy”),  
21 Ex. V.) As such, all monitoring and reporting programs must satisfy the Nonpoint Source Poli-  
22 cy. NPS Policy Key Element 4 mandates that “[a]n NPS control implementation program shall  
23 include sufficient feedback mechanisms so that the RWQCB, dischargers, and *the public* can de-  
24 termine whether the program is achieving its stated purpose(s).” (*Id.* at 14, emphasis added.)

25 The State Board’s purpose behind mandating identification of contaminated wells and  
26 requiring (1) notification to the Regional Board of contaminated wells and (2) notification to  
27 water users of the risks associated with drinking contaminated water stems from the significant  
28 widespread public health threat to drinking water in the Central Coast Region:

Recogniz[ing] the potential severity and urgency of the health issues associ-  
ated with drinking groundwater with high concentrations of nitrates . . .

1 [we] will require that the discharger conducting individual groundwater  
2 monitoring or the third party conducting cooperative groundwater monitor-  
3 ing notify the Central Coast Water Board when a well is identified as ex-  
ceeding the MCL for nitrate, and that the Discharger or the Central Coast  
Water Board timely notify users of the well.

4 (Ex. F at 32-33.) The purpose of these notifications is to increase awareness, information, and  
5 communication regarding the location of contaminated drinking water wells.

6 In direct contrast, Coalition’s scheme was intended, in its words, to “not provid[e] indi-  
7 vidual member information that specifically ties domestic well exceedances with individual  
8 growers, companies, or landowners in a manner *that would be public.*” (Ex. I at 7, emphasis  
9 added.)<sup>9</sup> Under the revised Coalition program, the Regional Board does not receive or retain, the  
10 notification letters of exceedances, the compliance letters from violators, or any other corre-  
11 spondence between the Coalition and the member dischargers. This partially blinds the Regional  
12 Board, which at least gets summaries and masked data, and can ask to see materials (but not  
13 keep them); but it completely blinds the public. Desirous though it may be to achieve secrecy  
14 about pollution, contaminated water, notices of law violations and whether or how compliance  
15 has been achieved, the Regional Board should not have given wing to that wish.

16 The very purpose behind the State Board Order’s requirement for dischargers to notify  
17 both the Regional Board and water users with regard to nitrate exceedances is due to the public  
18 health risk associated with the crisis of widespread contaminated drinking water wells in the  
19 Central Coast Region. And yet, the Coalition program as approved precludes the public from  
20 verifying whether this notification process is working or not because there is no requirement for  
21 the Coalition to submit notification or compliance letters to which the public can have access.  
22 The Coalition data, notification and compliance process directly violates NPS Policy Key Ele-  
23 ment 4 because the public has no way of directly verifying whether the Coalition has adequately  
24 notified dischargers of exceedances or whether the dischargers are properly notifying water us-  
25 ers and giving them alternative drinking water supplies.

26 The Coalition attempts to distract the Regional Board and the public to the exceedance

27 \_\_\_\_\_  
28 <sup>9</sup> Rarely does a regulated entity put its improper—nay illegal—purpose so bluntly.

1 reports that the Coalition produces. But the Coalition misses the point entirely. It is not the  
2 amount of information in the exceedance reports that is at issue, it is the data, the exceedance  
3 reports and the compliance measures taken, all as evidenced in the documents themselves. No  
4 aggregate report, masked data or opportunity to see (but not touch or take) can substitute for the  
5 actual evidence of whether compliance is occurring or not, i.e., the notification letters.

6 The Regional Board must receive and maintain records of drinking water well pollution,  
7 notification letters and associated compliance letters documenting whether and how dischargers  
8 elect to comply. Without maintaining proper records, there is no way for the public to verify  
9 whether individual dischargers within the Coalition program are complying with the legal re-  
10 quirements of the Modified Conditional Waiver. Without these, the Regional Board is in viola-  
11 tion of NPS Policy Key Element 4. As the Regional Board originally stated its position, which it  
12 then abandoned, the public has a right to know.

13 **D. The Workplan is an invalid delegation of governmental authority and power**  
14 **to a private party**

15 While the above-referenced violations of state law, the State Board Order, and the Re-  
16 gional Board's own policies should be enough to require sending the Coalition Workplan back  
17 for substantial revision, there are additional legal reasons that compel revisions. Simply put, the  
18 Coalition Workplan amounts to an improper delegation of government authority to a private par-  
19 ty and a surrender of the Regional Board's police power.

20 **1. The Workplan is an improper delegation of government authority**

21 The Workplan is invalid because it is an improper delegation to an interested private par-  
22 ty of the Regional Board's authority over issues relating to drinking water and public health. A  
23 public body such as the Regional Board "may delegate the performance of administrative func-  
24 tions to a private entity," but only if the public body "retains ultimate control over administra-  
25 tion so that it may safeguard the public interest." (*Intl. Longshoremen's and Warehousemen's*  
26 *Union v. Los Angeles Export Terminal, Inc.* (1999) 69 Cal.App.4th 287, 297-98.)

27 Over a century ago, our Supreme Court addressed the question of whether a public agen-  
28 cy can delegate essentially complete control over a public function to a private entity. The Court

1 answered it in the negative. The Court reviewed a contract between San Francisco and a private  
2 corporation that sought to build an opera house on public land; because the city did not retain  
3 sufficient control over operation of the opera house for the delegation of authority to be valid, it  
4 ruled the agreement was void. (*Egan v. San Francisco* (1913) 165 Cal. 576, 583-84.) The Su-  
5 preme Court held that although the city may have had the right to own and manage an opera  
6 house, the city did not have the authority to “turn over in perpetuity to a private corporation, or  
7 to a body of private citizens,” the control and management of both the land and the building. (*Id.*  
8 at 583.) This is all the more true, the Court wrote, because it could “certainly not be claimed that  
9 property devoted to the more familiar municipal purposes, such as policing, fire protection, or  
10 the assessment and collection of taxes, could be turned over to be administered by private agen-  
11 cies.” (*Ibid.*) The same is true for turning over enforcement of a law designed to protect drinking  
12 water from polluters and the public from the effects of that pollution, to a private cooperative  
13 controlled by the polluters.

14 The Workplan approved by the Regional Board runs afoul of this rule, not least because  
15 it transfers to an improper extent the control of a private party’s regulation to the private party  
16 itself.<sup>10</sup> As a Court of Appeal recently wrote, “There is a tension when private industry shares  
17 responsibility for the governmental regulation of its commercial activities.” (*Light v. State Water*  
18 *Resources Control Board* (2014) 226 Cal.App.4th 1463, 1490.) The Court of Appeal recognized  
19 that “members of the industry are well positioned to understand the regulatory needs and the im-  
20 pact of regulation on their business activities,” and that therefore mere involvement of a private  
21 industry in matters of the industry’s own regulation is not *per se* invalid. (*Ibid.*) Importantly,  
22 however, the court acknowledged that not all such delegation of regulatory authority are proper:  
23 “[B]y involving members of the regulated industry the agency runs the risks associated with the  
24 fox guarding the henhouse. As a result, there is a tight line between lawful and unlawful delega-  
25 tion of regulatory authority.” (*Ibid.*)

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27 <sup>10</sup> It is worth noting that the Coalition has no purpose other than this program, no mem-  
28 bers except those subject to the regulation, and no operating income save from the members. It  
is entirely run by persons who own or have a stake in the regulated growers. Its Executive Direc-  
tor/CEO is a regulated grower.

1           Petitioners acknowledge that the State Board has expressed general support for third-  
2 party monitoring approaches and that the Board, as did the *Light* court, has recognized that such  
3 approaches have advantages such as resource efficiency, deployment of technical expertise, and  
4 leverage of existing relationships between third parties and dischargers. (State Board Order, at  
5 13.) However, this Board cautioned against third-party solutions that report compliance at “too  
6 high a level of generality,” and that a regional board must only approve third-party monitoring  
7 plans that “provide sufficient feedback mechanisms for determination whether the required con-  
8 trols are achieving the Agricultural Order’s stated purposes.” (*Id.* at 14.)

9           Here, the Regional Board has outsourced its eyes, ears, and brain. All of the mechanisms  
10 by which the Regional Board monitors and enforces groundwater health as it relates to exceed-  
11 ances has been transferred and effectively hidden. The State Board Order specifically requires  
12 that, in case of exceedance, the discharger must—whether the discharger is conducting its own  
13 monitoring or is a member of a cooperative—send notice to the Regional Board within 24 hours  
14 of learning of the exceedance. (Ex. F at 32-34.) As the State Board observed, this requirement  
15 stems from “the potential severity and urgency of the health issues associated with drinking  
16 groundwater with high concentrations of nitrates.” (*Id.* at 32.) But here, the data, its interpreta-  
17 tion, its “validity,” notification letters, compliance letters, even the fact of *non-compliance* are  
18 all within the Coalition’s black box.

19           The Workplan’s notification system conflicts with the State Board’s goals. Even to the  
20 extent that any data or correspondence is available to the Regional Board, it is summarized,  
21 masked, coded and copies are withheld. For example, under the Workplan, rather than individual  
22 notification letters being *pushed* to the Regional Board, the Regional Board can only *pull* the  
23 information “upon request”—an event that Regional Board staff admitted in its October 21,  
24 2014 staff report would only occur in “unusual circumstances.” (Ex. Q at 3.)

25           Moreover, under the terms of the plan as finally approved by the Executive Officer, the  
26 sole remaining fixed obligation of the Regional Board relating to exceedance notification let-  
27 ters—at least with respect to Coalition members—is actually illusory. In the December 8, 2014  
28 approval letter, the Executive Officer added the condition that Coalition members must bring

1 copies of all drinking water notification letters to quarterly board meetings for inspection by Wa-  
2 ter Board staff. (Ex D at 2.) Thus, barring any intervening “unusual circumstance,” the Regional  
3 Board need only inspect the accumulated notification letters four times a year, ostensibly to veri-  
4 fy that Coalition is doing what it says it is doing. However, the Regional Board cannot, merely  
5 by inspecting the letters presented to it *by Coalition itself* accumulated over a span of three  
6 months, assess whether Coalition is sufficiently policing its own members in a timely manner.  
7 Furthermore, the system allows Regional Board staff only to “view” and “inspect” the letters;  
8 the Regional Board may *not* retain copies of the letters, and it is unknown by what process Re-  
9 gional Board staff tracks compliance with the rules.<sup>11</sup>

10 In short, the Regional Board must trust that Coalition is adequately fulfilling the duties  
11 that the Regional Board has decided to delegate to a third party. This trust is ripe for abuse. Un-  
12 der the Workplan, the Coalition is charged with collecting and interpreting raw well data, “vali-  
13 dating” the data, and then enforcing the drinking water notification and compliance requirements  
14 against its own members. That Coalition may at times be compelled to act against its own mem-  
15 bers’ interests is self evident. It is naïve to think that CCGC can effectively enforce the Regional  
16 Board’s rules without running into opposition from the very members that constitute the core of  
17 the organization’s financial support.

18 The inherent risk of conflict is precisely why a public body such as the Regional Board  
19 may not delegate its enforcement powers to a private organization composed of interested mem-  
20 bers. The Regional Board has transferred to a private party the control over public functions that  
21 *Egan* requires remain in the Board. Earlier in the approval process, the Regional Board itself has  
22 recognized that it could not delegate the “responsibility to maintain a written record, or its au-  
23 thority to protect public health, to a third party.” (Ex. J at 1.) But the Regional Board in its final  
24

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25 <sup>11</sup> Some of the means the Coalition uses to both report yet hide data border on the absurd,  
26 and certainly do not comport with any notion of efficiency or cost savings. Some reports are  
27 summarized and then the data and identifying farms are masked with secret codes and a decod-  
28 ing index created for the Board’s use alone, all with the intention of ensuring the public can nev-  
er know where the contaminated wells are located. (Ex. D at 2.) It sounds like bad fiction, but it  
is fact.

1 action has done just that. Just as the *Egan* Court could not countenance San Francisco’s delega-  
2 tion of control over prices and management of what was supposed to be a public building and  
3 public use of that building, so too should the State Board reject the Regional Board’s relin-  
4 quishment of any effective oversight over nitrate exceedance notification.

5 **2. The Workplan is an invalid surrender of the Regional Water Board’s**  
6 **police powers**

7 The Workplan’s exceedance notification system is invalid because it also constitutes a  
8 violation of a related legal doctrine: it is an impermissible surrender of the Regional Board’s po-  
9 lice powers to a private third party. It has been a settled rule in California that “the government  
10 may not contract away its right to exercise the police power in the future.” (*Avco Community*  
11 *Developers, Inc. v. South Coast Regional Commission* (1976) 17 Cal.3d 785, 800.) Any agree-  
12 ment that attempts to do so is invalid as contrary to public policy. (*Ibid.*) The “controlling con-  
13 sideration” is whether the contract amounts to anything that can be characterized as a “surrender,  
14 abnegation, divestment, abridging, or bargaining away” of the public entity’s “control of a police  
15 power or municipal function.” (*County Mobilehome Positive Action Committee, Inc. v. County of*  
16 *San Diego* (1998) 62 Cal.App.4th 727, 738, internal quotation marks omitted.)

17 For example, an agreement between a developer and a local harbor district that purports  
18 to exempt a development tract from future zoning laws is void because of the state’s overriding  
19 authority under its police power to enact land use regulations, even where the agreement had  
20 been ratified by the State Lands Commission. (*Avco Community Developers, supra*, 17 Cal.3d at  
21 800.) Similarly, an agreement among several governmental entities was held invalid where the  
22 agreement provided that any one entity’s attempt to amend its general plan would become effec-  
23 tive only if *all* of the entities adopted the same amendment, because such an agreement “divests  
24 each [entity], presently and in the future, of its sole and independent authority to amend its re-  
25 spective general plan, by providing outside jurisdictions a veto over such amendments.” (*Ala-*  
26 *meda County Land Use Assn. v. City of Hayward* (1995) 38 Cal.App.4th 1716, 1720.)

27 *County Mobilehome, supra*, provides a prime example of when an impermissible surren-  
28 der of police power has occurred, with particular relevance to aspects of the current petition. In

1 *County Mobilehome*, the County of San Diego instituted a program whereby it agreed to a 15-  
2 year moratorium on enacting rent-control legislation over owners of mobile home parks who  
3 decided to opt into the program by signing an accord with the County. (*County Mobilehome, su-*  
4 *pra*, 62 Cal.App.4th at 730-31.) If the County were to enact such legislation, the provisions of  
5 the agreement with the park owners participating the program would prevail and render the rent  
6 controls inapplicable to them. (*Id.* at 732.) According to the Court of Appeal, this program was  
7 an unlawful surrender of the County’s police power to regulate rents with respect to those own-  
8 ers who signed the accord. (*Id.* at 739-41.)

9 Moreover, the Court of Appeal additionally held that the County, by distinguishing be-  
10 tween park owners who have and have not signed the accord, created the “danger of inconsistent  
11 application” of regulatory authority. Specifically, residents in some mobile home parks would be  
12 at risk of being subjected to the moratorium (i.e., they would not be protected by rent control  
13 laws), simply because the resident’s park owner chose to participate, while for residents of mo-  
14 bile home parks whose owners did not participate, the County would be free to adopt rent con-  
15 trol laws. (*Id.* at 740.)

16 Here, the duty of the Regional Board to monitor and control water contamination levels  
17 and to enforce monitoring and reporting of contamination in groundwater wells is undoubtedly  
18 an exercise of the Regional Board’s police powers over water and the interest in public health.  
19 By approving the Workplan, however, the Regional Board has abrogated its police powers over  
20 growers who are Coalition members. As *County Mobilehome* instructs, a class of regulated enti-  
21 ties should not be allowed to benefit by contracting with a governmental regulating body to sus-  
22 pend or otherwise not enforce laws that would otherwise apply to them, particularly while others  
23 who do not join the class remain subject to the body’s regulatory authority. This is exactly what  
24 the Regional Board’s approval of the Workplan has done.

25 The few cases in which agreements with private parties purportedly restricting a gov-  
26 ernmental entity’s ability to enforce its laws have been found valid do not change this conclu-  
27 sion. The courts have reasoned that some agreements were permissible because they contained  
28 embedded within them the always-present power of the government to enforce its laws, and the



1 private party took their rights under the contract subject to that unstated reservation. (E.g., *Professional Engineers v. Dept. of Transportation* (1993) 13 Cal.App.4th 585, 591 [rejecting the ar-  
2 gument that a Caltrans agreement designating certain areas as “franchise” zones and granting  
3 exclusive development rights within them was a “contracting away” of the state’s police powers  
4 in those zones].) As the California Supreme Court has noted, “It is to be presumed that parties  
5 contract in contemplation of the inherent right of the state to exercise unhampered the police  
6 power that the sovereign always reserves to itself . . . . Its effect cannot be nullified in advance  
7 by making contracts inconsistent with its enforcement.” (*Delucchi v. County of Santa Cruz*  
8 (1986) 179 Cal.App.3d 814, 823.) This reasoning would not apply, however, in situations where  
9 the governmental entity has “disabled itself” of the ability to regulate, such that the reserved  
10 sovereign power could not be meaningfully put into action. (*County Mobilehome, supra*, 62  
11 Cal.App.4th at 739-40 [stating that the potential exposure of County to liability for damages for  
12 breach of contract if police power is asserted renders agreement void].) Here, by entirely hand-  
13 ing off oversight of data, exceedance notifications, and compliance monitoring to an interested  
14 third party, ostensibly retaining only an illusory check on the process that leaves true enforce-  
15 ment of compliance in the hands of those who must comply, the Regional Board has done exact-  
16 ly that.

17  
18 The staff report submitted to the Regional Board in advance of the November 14, 2014  
19 board meeting argued that the systems for Coalition members and nonmembers were “function-  
20 ally equivalent.” (Ex. Q at 6.)<sup>12</sup> This is clearly not the case, as the staff report itself reveals. For

21  
22 <sup>12</sup> The staff report additionally gave credence to the Coalition position that the Work-  
23 plan’s system of indirect submission of information to the Regional Board was necessary to al-  
24 leviate security and privacy concerns of Coalition members. (Ex. Q at 4-5.) But this is not a  
25 valid reason for establishing a system that would shield what would otherwise be public infor-  
26 mation from public view, again, as the Executive Officer has already acknowledged. (Ex. J at 1.)  
27 The Court of Appeal in a similar situation rejected the idea that public interests can be made pri-  
28 vate merely by delegating public functions to a private entity. In a case involving the City of  
West Covina, the city had delegated the duty of trash collection to a private disposal company  
but purportedly retained the power to monitor the disposal company’s performance of that duty.  
The Court of Appeal held that “[t]here is no question that the Disposal Company is providing a  
service to the residents of the City”—that is, a public service—such that “[a]ssurances of confi-  
dentiality by the City to the Disposal Company that the data would remain private was not suffi-  
cient to convert what was a public record into a private record.” (*San Gabriel Tribune v.*

1 one thing, while exceedance notification letters for nonmembers would be copied to the local  
2 environmental health agency for assessment on impacts to public health, no such reporting  
3 mechanism is in place under the Workplan, depriving the county health agency of valuable in-  
4 formation about Coalition members. (*Id.* at 5.) For another, the programs differ in how compli-  
5 ance is enforced if a discharger refuses to comply with the directions contained in the letter.  
6 Under the individual monitoring program, the Regional Board itself issues the letter and may  
7 enforce noncompliance if the discharger fails to confirm that it has taken the necessary steps.  
8 But under the Workplan, the Coalition issues the notification letters, leaving the question of their  
9 legal force unclear. Either the letters have regulatory force, in which case the Regional Board  
10 has improperly delegated control of a core governmental function to a private party, or the letters  
11 have no regulatory force, in which case the Regional Board has abdicated its obligations under  
12 its police powers. In neither case it is possible for the Regional Board to truly know whether Co-  
13 alition members are complying with their legal obligations.<sup>13</sup>

14 For Coalition members, the Workplan shields from both the Regional Board’s review and  
15 the public any effective means to determine whether the proverbial fox is adequately guarding  
16 the henhouse. (*Light, supra*, 226 Cal.App.4th at 1490.) By extension, the Regional Board has no  
17 effective way to police the dischargers of drinking water contaminants. The police power “must  
18 ever be reposed somewhere” (*Mott v. Kline* (1927) 200 Cal. 434, 446), but this “somewhere”  
19 cannot be in the hands of the private third party who would otherwise be the subject of regula-  
20 tion under that power. (*Egan, supra*, 165 Cal. at 584 [stating that public powers of control “nec-  
21 essarily devolve upon some officer or board of the municipality, and . . . powers of this character  
22 cannot be delegated,” emphasis added].) The State Board cannot allow such a situation to stand.

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24  
25 *Superior Court* (1983) 143 Cal.App.3d 762, 775.)

26 <sup>13</sup> And, as noted, the Coalition does not automatically inform the Regional Board about  
27 any of its members who are *not* complying with notification or remedial efforts to protect the  
28 affected public; the Regional Board has to affirmatively ask about them. As with notification let-  
ters, one can expect that such an occasion will occur, in the Regional Board staff’s own words,  
only in “unusual circumstances.” (Ex. Q at 3.)

1                   **E.     The Regional Board’s approval of the Coalition program violates the Public**  
2                   **Records Act**

3                   As discussed *supra*, the Coalition program as approved in the Workplan is unlawful. But  
4                   to the extent that one of its core purposes is protecting the secrecy of its members’ information,  
5                   it simply does not work. The Coalition’s stated purposes “include[] not providing individual  
6                   member information that specifically ties domestic well exceedances with individual growers,  
7                   companies, or landowners in a manner *that would be public.*” (Ex. I at 7, emphasis added.) But  
8                   under controlling principles of the California Public Records Act and our Constitution, the Coa-  
9                   lition cannot satisfy that goal. The Coalition is acting as the agent of the Regional Board, and the  
10                  Regional Board has access to all of the records about well pollution, letters citing violations of  
11                  law and correspondence to correct and ameliorate those violations to protect vulnerable mem-  
12                  bers of the public. Because it has access it has constructive possession and, if asked, must go  
13                  retrieve those records and disclose them.

14                                   **1.     Under California law, the notification letters and responses are public**  
15                                   **records which are presumptively open and available to the public**

16                  “Implicit in the democratic process is the notion that government should be accountable  
17                  for its actions. In order to verify accountability, individuals must have access to government rec-  
18                  ords. Such access permits checks against the arbitrary exercise of official power and secrecy in  
19                  the political process.” (*Los Angeles Unified Sch. Dist. v. Superior Court* (2004) 228 Cal.App.4th  
20                  222, 237 (quoting *Intl. Federation of Professional & Technical Engineers, Local 21, AFL-CIO v.*  
21                  *Superior Court* (2007) 42 Cal.4th 319, 328-329.) Indeed, “access to information concerning the  
22                  conduct of the people’s business is a fundamental and necessary right of every person in this  
23                  state.” (Gov. Code § 6250; see also Cal. Const. art. I, § 3(b)(1).) Thus, the presumption under  
24                  our Public Records Act (“PRA”) (Gov. Code § 6250 et seq.), is that this information is open and  
25                  accessible (see, e.g., *Sander v. State Bar of Cal.* (2013) 58 Cal.4th 300, 318; *Sierra Club v. Supe-*  
26                  *rior Court* (2013) 57 Cal.4th 157, 166-67; *County of Los Angeles v. Superior Court*, (2012) 211  
27                  Cal.App. 4th 57, 60), and PRA exemptions are limited and narrowly construed (*ibid.*; Cal. Const.  
28                  art. I, § 3(b)(2)). “Given the strong public policy of the people’s right to information concerning  
the people’s business (Gov. Code, § 6250), and the constitutional mandate to construe statutes

1 limiting the right of access narrowly (Cal. Const., art. I, § 3, subd. (b)(2)), ‘all public records are  
2 subject to disclosure unless the Legislature has expressly provided to the contrary.’” (*Sierra*  
3 *Club, supra*, 57 Cal.4th at 166-67 (internal citations omitted) (quoting *State Office of Inspector*  
4 *General v. Superior Court* (2010) 189 Cal.App.4th 695, 703).)

5 The Water Board is a state agency within the meaning of the PRA, and thus, must dis-  
6 close its public records upon request. (Gov. Code § 6252(f).) “Public records” include “any writ-  
7 ing containing information relating to the conduct of the public’s business prepared, owned,  
8 used, or retained by any state or local agency regardless of physical form or characteristics.” (*Id.*  
9 § 6252(e).) “This definition is intended to cover every conceivable kind of record that is in-  
10 volved in the governmental process . . . . Only purely personal information unrelated to ‘the  
11 conduct of the public’s business’ could be considered exempt from this definition . . . .” (*Sander,*  
12 *supra*, 58 Cal. 4th at 322 (emphasis added).)

13 The well data, notification letters, and responses contain “information relating to the  
14 conduct of the people’s business.” It is the law of this state that “every human being has the right  
15 to safe, clean, affordable, and accessible water . . . .” (Wat. Code § 106.3(a).) As acknowledged  
16 by the Regional Board, the potential contamination of drinking wells is a public health issue.  
17 (See, e.g., Ex. J at 1.) The Conditional Waiver, as modified by the State Board Order, advances  
18 this policy by requiring a monitoring and reporting system to ensure compliance with the re-  
19 quirements of the Conditional Waiver. (Ex. F at 67-68; Wat. Code § 13269.) These records are a  
20 “vital resource” and “serve as the memory of the Board organization, a record of past events,  
21 and the basis for future actions.” (See State Board Public Records Policy,  
22 [http://www.waterboards.ca.gov/centralcoast/resources/public\\_records.shtml](http://www.waterboards.ca.gov/centralcoast/resources/public_records.shtml) (last visited Jan. 7,  
23 2015).)

24 Much as the Coalition, and perhaps the Regional Board, would like to keep these docu-  
25 ments out of the public’s hands, they cannot. Under the terms of the PRA, these documents are  
26 “owned, used, or retained by” the Regional Board. (Gov. Code § 6252(e).) In the case of non-  
27 coalition members, the Regional Board sends and receives the well water data, the notification  
28 letters, the compliance letters, and other responses itself. In the case of Coalition members,

1 while the Regional Board has delegated these functions to the Coalition, it has “retained the  
2 power and duty to monitor the [Coalition’s] performance of its delegated duties” both under the  
3 terms of the Work plan, and pursuant to its obligations to implement and enforce the State Order.  
4 (*San Gabriel Tribune, supra*, 143 Cal.App.3d at 775; see e.g., Ex. F at 3-7 (detailing the Region-  
5 al Board’s audit and compliance measures for individual and cooperative program members;  
6 Dec 8 and 18 letters).) The Regional Board has even provided a template for the letters. (See Ex.  
7 N.) Even more, the Regional Board has retained control of these documents to ensure compli-  
8 ance with the law by, for example, requiring the Coalition to bring these documents to quarterly  
9 Coalition/Regional Board meetings for inspection and to provide these documents to the Re-  
10 gional Board upon request. (Ex. D at 2.)

11 **2. The Regional Board’s obligation to disclose public documents upon**  
12 **request is not diminished because of its relationship with the Coalition**

13 The Regional Board has many statutory obligations under the PRA.<sup>14</sup> But it is fundamen-  
14 tal that “[a] state or local agency may not allow another party to control the disclosure of infor-  
15 mation that is otherwise subject to disclosure . . . .” (Gov. Code § 6253.3) As explained above,  
16 the well pollution data, the Notification and Compliance Letters and other responses, whether  
17 sent and received by the Regional Board or the Coalition, are public documents owned, used, or  
18 retained by the Regional Board. Thus, the Regional Board has an affirmative obligation to make  
19 these documents available for inspection during normal business hours, which it cannot do, if it  
20 does not retain actual possession of the documents at all times.

21 Because the Regional Board retains constructive possession of these documents, they are  
22 also subject to copying and disclosure. Public documents are in the “possession” of a state agen-  
23 cy when they are in its actual *or* constructive possession. (*Consolidated Irrigation Dist. v. Supe-*

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24  
25 <sup>14</sup> First, public records are required to be “open to inspection “at all times during the of-  
26 fice hours of the state or local agency.” (Gov. Code § 6253(a).) Second, copies of the records in  
27 the possession of the agency shall be made “promptly available to any person” upon request. (*Id.*  
28 § 6253(b), (c).) The law also requires the Regional Board to assist members of the public to  
identify the records and information responsive to their requests; describe the information tech-  
nology and physical location in which the records exist; and to provide suggestions for overcom-  
ing any practical basis for denying access to the records or information sought.” (*Id.* § 6253.1.)

1 *rior Court* (2012) 205 Cal.App.4th 697, 710 (citing *Batt v. City and County of San Francisco*  
2 (2010) 184 Cal.App.4th 163, 172).) For purposes of this statute, “an agency has constructive  
3 possession of records if it has the right to control the records, either directly or through another  
4 person.” (*Ibid.*)

5 These records are in the constructive possession of the Regional Board because it has the  
6 right to access and control the documents, and they exist solely because the Coalition has taken  
7 on the Regional Board’s public duties. (Wat. Code § 13269.) Moreover, the Regional Board has  
8 stated that it intends that the notification process through the Regional Board and the Coalition  
9 be “functionally equivalent.” (Ex. C at 3.)

10 *Consolidated Irrigation* is instructive. The Court of Appeal addressed the issue of wheth-  
11 er, under the PRA, “the files of consultants retained to prepare an EIR for the City are ‘public  
12 records’ that the City has a duty to seek [and] obtain to respond to a public records request.” In  
13 that case, there were two levels of consultants whose files were sought, the primary consultant  
14 and the subconsultants. The files for the primary consultant were not at issue—access to those  
15 records had been granted. With respect to the subconsultants’ files, the court looked to the nature  
16 of the contractual relationship between the public entity and the subconsultants, to decide  
17 whether (1) the files of the subconsultants were “ ‘in the [actual or constructive] possession of  
18 the agency” for purposes of Government Code section 6253, subdivision (c); and (2) the nature  
19 of the agency’s right, if any, to control the files and records of the subconsultants.” (*Consolidat-*  
20 *ed Irrigation Dist., supra*, at 710.) The Court of Appeal found that the agency lacked control  
21 over the subconsultants files because the operative contract was only between the agency and  
22 the primary consultant, and granted ownership of the primary consultant’s files (as opposed to  
23 anyone hired by the that party) to the agency. (*Id.* at 711-12.) While the facts are distinguishable,  
24 this case is significant because it makes clear that the nature of the relationship between a public  
25 agency and a private party is important in determining the agency’s duty of disclosure.

26 In *Community Youth Athletic Center. v. City of National City* (2013) 220 Cal.App.4th  
27 1385, the court relied in part on *Consolidated Irrigation* to hold that under the PRA the City  
28 must produce, upon request, the raw data collected by an independent consultant that formed the

1 basis of legally mandated reports relied upon by the agency in passing a redevelopment plan.  
2 The consultant's contract with the agency "provided that this agency would have the property  
3 rights to the memoranda, reports, maps, drawings, plans, specifications and other documents  
4 prepared by" the consultant the project, and all of these would be turned over to the agency.  
5 (*Cnty. Youth Athletic Ctr., supra*, 220 Cal.App.4th at 1399).

6 The trial court held that the underlying raw data to the report that was held and stored by  
7 the agency's consultant were public records. (*Ibid.*) The trial court further held that the agency  
8 was not justified in failing to require that the known custodians of the existing records should  
9 produce them. (*Ibid.*) Based on the contractual language between the consultant and the agency,  
10 the City had an ownership interest in the field survey material and it had the right to possess and  
11 control it, even though it did not enforce its contractual right. (*Id.* at 1428.) The Court explained  
12 that Government Code section 6253.3 provided that a public agency "may not allow another par-  
13 ty to control the disclosure of information that is otherwise subject to disclosure pursuant to this  
14 chapter," showing the trend in the law is toward promoting such disclosure. (*Id.* at 1428-29.)  
15 Thus, "[t]he City's duty requires it to communicate the scope of the information requested to the  
16 custodians of its records, who may include private retained consultants." (*Id.* at 1426-27, inter-  
17 nal citations omitted.)

18 Regardless of the specific contractual language in *Community Youth Athletic Center*, it is  
19 the nature of the relationship that is significant. Here, the relationship between the Regional  
20 Board and the Coalition is even stronger than than that of the consultant and City in *Community*  
21 *Youth Athletic Center*. The documents at issue are necessary to the discharge of the Water  
22 Board's official duties. Whether or not the Regional Board may properly delegate any of its  
23 power to Coalition the Coalition can only act because it is acting as an agent of the Regional  
24 Board, i.e., an administrative arm of the state. The purpose of the Coalition is to assist in facili-  
25 tating and making more efficient the Water Board's legal obligations with respect to implement-  
26 ing and enforcing the State Order. Indeed, as explained above, the Regional Board may only  
27 delegate these functions to the Coalition if it "retains ultimate control over administration so that  
28 it may safeguard the public interest." (*Intl. Longshoremen's and Warehousemen's Union, supra*,

1 69 Cal.App.4th at 297-98.) Thus, even if it is permissible for the Regional Board to delegate part  
2 of its authority to the Coalition, it must comply with its statutory duty of releasing those public  
3 documents under the PRA. (See *San Gabriel Tribune v. Superior Court* (1983) 143 Cal.App.3d  
4 762, 768.) Assurances of confidentiality by the CCGC to its members does *not* transform a pub-  
5 lic document into a private one. (*Id. at 775.*)

6       Regardless of whether the well pollution data, the notification and compliance letters and  
7 other responses are issued or received by the Regional Board or Coalition, the Regional Board  
8 has an affirmative obligation to comply with the PRA and copy and disclose all such documents  
9 in a reasonable time upon request. The failure to make *all* data, notification letters and responses  
10 available to the public upon request, for inspection or copying, runs afoul of clear language and  
11 intent of the Public Records Act.

12       **F.       Submission of contour maps in lieu of data violates state law and State Board**  
13       **Policy**

14       **1.       The Regional Board’s approval of the Coalition’s proposal to submit**  
15       **contour maps in lieu of displaying monitoring results on GeoTracker**  
16       **violates Water Code section 13269(a)(2)**

17       The Coalition’s proposal to only submit contour maps is unlawful. Under a Conditional  
18 Waiver, “all monitoring results must be made available to the public” whenever there is a waiver  
19 for individual waste discharge requirements. (Wat. Code § 13269(a)(2).)

20       Substituting contour maps for actual groundwater monitoring data is unlawful because  
21 the maps are not the actual monitoring results. Rather, contour maps are an interpretation of da-  
22 ta; by their very design, they obscure the data points themselves. The maps may be helpful and  
23 they may be analytical, but they are not the monitoring results themselves.<sup>15</sup> Therefore, authoriz-  
24 ing contour map display in lieu of displaying Coalition monitoring results on GeoTracker vio-  
25 lates the Water Code’s explicit mandate that the results be made public.

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26       <sup>15</sup> Compare Coalition contour maps in April (see *Distribution of Groundwater Nitrate*  
27 *Concentrations, Salinas Valley, California* (Coalition report prepared by HydroFocus, Inc., Apr.  
28 30, 2014) at 20, Ex. W) and in December (see *Groundwater Nitrate, Salinas Valley, California,*  
*Technical Memorandum* (Coalition report prepared by HydroFocus, Inc., Dec. 10, 2014) at 55,  
Ex. X). The dataset used to produce the contour maps were almost identical, and yet by framing  
the dataset in different ways, one is able to produce very different looking maps.



1 Further, all interested public stakeholders need wide access to the raw monitoring data to  
2 come to their own conclusions about groundwater quality. To allow one set of interpretative con-  
3 tour maps to function as a wholesale substitute for raw data violates section 13269(a)(2). The  
4 Regional Board cannot equate analysis of data with data itself. Doing so violates section  
5 13269(a)(2)'s unqualified requirement that monitoring results be made available to the public.

6 All other dischargers regulated under the Conditional Waiver, such as those who conduct  
7 individual monitoring, already have their groundwater monitoring results displayed on Geo-  
8 Tracker with a one-half mile radius of obfuscation for privacy measure. These results are acces-  
9 sible via the GeoTracker GAMA Web portal.<sup>16</sup>

10 The *only* dischargers who may avoid public access to their data on GeoTracker are the  
11 subset of dischargers who conduct monitoring through the Coalition. As an issue of policy, this  
12 creates an impression for GeoTracker users that all information with regard to the Conditional  
13 Waiver is being displayed on GeoTracker, when in fact, there is a subset of data that is currently  
14 being withheld.

15 And most importantly, obfuscating the raw data by submitting contour maps violates the  
16 clear text of section 13269(a)(2).

17 **2. Allowing display of contour maps in lieu of displaying monitoring**  
18 **results on GeoTracker violates the Groundwater Quality Monitoring**  
19 **Act of 2001**

20 The Groundwater Quality Monitoring Act of 2001 requires integration of monitoring  
21 programs in order to improve “comprehensive groundwater monitoring and increase the availa-  
22 bility to the public of information about groundwater contamination.” (Wat. Code § 10781.) In  
23 enacting the Groundwater Quality Monitoring Act, the Legislature declared that “[t]he im-  
24 portance of maintaining and monitoring a safe groundwater supply in this state for purposes of  
25 maintaining a healthy environment and a safe supply of drinking water cannot be minimized”  
26 and “[t]he lack of information about groundwater contamination greatly impairs the ability of  
27 regulators and the public to protect and restore the state’s groundwater basins.” (Assem. Bill No.

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28 <sup>16</sup> Available at <http://geotracker.waterboards.ca.gov/gama/>.

1 599 (2000-01 Reg. Sess.) § 1.)

2 The Groundwater Quality Monitoring Act required the State Board to “make recommen-  
3 dations to enhance the public accessibility of information on groundwater conditions.” (Wat.  
4 Code § 10782(a)(2).) In its report to the Legislature, the State Board presented GeoTracker  
5 GAMA as the primary internet based information management system that increases “public ac-  
6 cessibility to groundwater information.” (SWRCB Report to the Legislature re: Public Accessi-  
7 bility to Information About Groundwater Conditions (Dec. 2010) at 6, Ex. Y.)<sup>17</sup> GeoTracker was  
8 created as an answer to the Legislature’s concern about the lack of comprehensive data with re-  
9 gard to California’s groundwater quality. Therefore, GeoTracker was created with an explicit  
10 purpose to publish information about California’s groundwater quality (pulling from a variety of  
11 databases) into a comprehensive format, housed in one location, to ensure information is widely  
12 accessible, for the benefit of both regulators and the public.<sup>18</sup> The State Board further recom-  
13 mended to “continue to populate GeoTracker GAMA with groundwater quality and related in-  
14 formation.” (Ex. Y at 15.) The State Board specifically acknowledged that “[g]roundwater  
15 information that is collected includes that required by state agencies (for example, for regulatory  
16 compliance.)” (*Id.* at 15.)

17 Thus, the State Board explicitly articulated the need to populate GeoTracker with  
18 groundwater information collected for regulatory compliance: the exact dataset at issue here.  
19 The State and Regional Boards must show some consistency with regards to policy positions and  
20 implementation. As it stands, the Regional Board is undercutting its own public access policy by  
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22 <sup>17</sup> “The State Water Board’s website provides the portal to GeoTracker GAMA so that the  
23 public has access to introductory information about groundwater and groundwater quality prior  
24 to accessing the system.” (Ex. Y at 7.) GeoTracker GAMA provides information regarding both  
public supply wells as well as domestic wells.

25 <sup>18</sup> The goal of GeoTracker GAMA is to “improve statewide groundwater monitoring, and  
26 to increase the availability of groundwater quality information to the public.” (See Ex. T.) Geo-  
27 Tracker GAMA “contains over 125 million data records from different sources such as cleanup  
28 sites, well logs, CDPH public supply drinking water quality, water levels from Department of  
Water Resources, Department of Pesticide Regulation, USGS GAMA Priority Basin, GAMA  
Domestic Well, and LLNL Special Studies Projects.” (*Ibid.*)

1 allowing a subset of a regulated class, the Coalition, to deviate from standard GeoTracker re-  
2 porting protocol.

3         Given the importance of groundwater quality information, Coalition data should not be  
4 treated any differently than non-Coalition data collected through the Conditional Waiver. Indeed,  
5 all the data is part of the same regulatory scheme. Preventing public access to one subset of reg-  
6 ulatory data over the rest would be a sharp violation of the Groundwater Quality Monitoring  
7 Act’s call to integrate all groundwater monitoring information. It would also be an unnecessary  
8 departure from the State Board’s efforts and policy to provide wide and comprehensive public  
9 access to groundwater information.

10         **G.         The notification process violates the human right to clean water act because it**  
11         **impedes enforcement and public access to information about nitrate pollution**

12         In 2013, the Legislature codified the human right to clean and safe water as state policy.  
13 But the Workplan approvals obscure so much information and so muddles the Regional Board’s  
14 enforcement powers that it can no longer be said to protect this right.

15         Water Code section 106.3 provides that “every human being has the right to safe, clean,  
16 affordable, and accessible water.” Section 106.3 directs “all relevant state agencies,” including  
17 both the Regional and State Boards to consider this human right to clean water “when revising,  
18 adopting, or establishing policies, regulations, and grant criteria . . . pertinent to . . . uses of wa-  
19 ter.”

20         Section 106.3’s legislative history shows that the Legislature groundwater issues in the  
21 Central Coast in mind when considering the bill. The authors of the act pointed specifically to  
22 the dire consequences of groundwater contamination in the Central Coast, where 90% of water  
23 users rely on groundwater for their drinking water supply. (Sen. Rules Com., Off. of Sen. Floor  
24 Analyses, 3d reading analysis of Assem. Bill No. 685, as amended Aug. 22, 2011 in Sen., at 5.)  
25 And the Legislature knew that passing a law explicitly stating that “access to an amount of clean  
26 water necessary for basic human needs is a ‘right’ of every Californian” would ensure that “state  
27 agencies, dealing with water resources will make these agencies conform their programs and  
28 practices to this policy.” (*Id.* at 5-6.)

1           The State Board has an opportunity to correct a Regional Board action that erodes that  
2 right. In the State Board Order, it ruled that the Agricultural Order advanced the human right to  
3 water by requiring “monitoring of on-farm wells that may be at risk of exceeding the MCL for  
4 nitrate,” requiring reporting of exceedances. (Ex. F at 67-68.)

5           But the Workplan approval reneges on these commitments by obfuscating the monitoring  
6 and notification data. As discussed above, the Workplan’s notification process actively infringes  
7 on the right to clean water. By obscuring data and hiding the notification letters from the public,  
8 the Workplan prevents the public from even knowing whether exceedances have occurred, po-  
9 tentially until it is too late. And by restricting the Regional Board’s access to the exceedance let-  
10 ters, the Workplan constrains even the government’s ability to monitor the affected wells. If  
11 users and the Regional Board do not know when and where violations are occurring, it will be  
12 impossible for them to avoid drinking contaminated water. This lack of knowledge guarantees  
13 violations of section 106.3.

14           The Regional Board’s deliberate evasion of monitoring guts the State Board Order’s con-  
15 clusion that the Agricultural Order complies with the Human Right to Water Act. Even if the  
16 original order was in compliance, the implementation envisioned by the Workplan approvals has  
17 so reduced the effectiveness of the monitoring plan that it now violates the Human Right to Wa-  
18 ter Act.

#### 19           **H. Conclusion**

20           The State Board Order explicitly states that drinking water evaluation is a very high pri-  
21 ority for the State Water Board. (Ex. F at 33.) Thousands of residents in the Salinas Valley alone  
22 are consuming contaminated water. (Ex. H at 3.) And yet, against this backdrop, the Regional  
23 Board’s concessions to the desires of the Coalition is alarming.

24           The Coalition is a third-party facilitator, comprised solely of members of the regulated  
25 community, but it is certainly not the regulator. There is no right of privacy that protects pollut-  
26 ing the public’s water, receive legal notifications of the violation of law in secret, and secretly  
27 transmit one’s willingness (or opposition) to take responsive action. To erode public accessibility  
28 to vital information regarding a real, acute, widespread public health threat that affects drinking

1 water by allowing a private third party group, the Coalition, to cloak this with secrecy has no  
2 place in this regulatory regime and has no place in the law. The irony of it all is that the individ-  
3 ual monitoring program is functioning well. And the public can readily identify which dis-  
4 chargers have notified water users or not and individuals' monitoring results are to be displayed  
5 on GeoTracker.

6 The Coalition's Workplan must be scrapped and substantially rewritten. The Regional  
7 Board must decide what the Coalition is. Either it is a purely private group and can keep its op-  
8 erations secret, in which case it cannot have a role in sending or receiving the public's agencies  
9 materials or using its powers. Or it is an arm of the public agency, in which case it must operate  
10 by the same rules as the public agency (including, perhaps, open meeting laws for its board). It  
11 cannot be a little of one, a little of the other. It needs to recede entirely into the dark, or come  
12 into the light; it cannot legally continue to exist in the shadows.

13 **IX. STATEMENT THAT COPIES OF THE PETITION HAVE BEEN SENT TO THE**  
14 **REGIONAL WATER BOARD AND TO THE DISCHARGER**

15 A true and correct copy of this petition, was sent via first-class mail on this date to:

16 Kenneth A. Harris, Jr.  
17 Executive Officer  
18 Central Coast Regional Water Quality Control Board  
19 895 Aerovista Place, Suite 101  
20 San Luis Obispo, CA. 93401-7906  
21 ken.harris@waterboards.ca.gov

22 A true and correct copy of this petition was also sent via e-mail on this date to:

23 Mr. Parry Klassen  
24 Executive Director  
25 Central Coast Groundwater Coalition  
26 P.O. Box 828  
27 Salinas, CA 93902  
28 pklassen@unwiredbb.com

Theresa A. Dunham  
Attorney at Law  
Somach Simmons & Dunn  
500 Capitol Mall, Suite 1000  
Sacramento, CA 95814  
tdunham@somachlaw.com

1 **X. STATEMENT THAT THE ISSUES RAISED IN THE PETITION WERE**  
2 **PRESENTED TO THE REGIONAL BOARD BEFORE THE REGIONAL BOARD**  
3 **ACTED**

4 CRLA, on behalf of the Petitioners, raised the issues discussed in this petition before the  
5 Regional Board in written and verbal comments during various public comment periods, and in  
6 addition, sought discretionary review of the very same issues in July 2014. (See, e.g., Exs. B, O,  
7 R, Z, AA, BB, CC, DD.)  
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Dated: January 7, 2015

Respectfully submitted,  
CALIFORNIA RURAL LEGAL ASSISTANCE



By: Pearl Kan

ENVIRONMENTAL LAW FOUNDATION  
FIRST AMENDMENT PROJECT



By: James Wheaton

Attorneys for Petitioners Carmen Zamora and  
Environmental Law Foundation

## **LIST OF EXHIBITS TO THE PETITION**

<b><u>Exhibit #</u></b>	<b><u>Date</u></b>	<b><u>Document</u></b>
A	Nov. 1, 2013	Coalition Workplan
B	July 3, 2014	Letter from CRLA to Regional Board seeking discretionary review
C	Dec. 18, 2014	Letter from Regional Board Executive Director Ken Harris to Pearl Kan, CRLA, responding to Part 1 of CRLA's request for discretionary review
D	Dec. 8, 2014	Letter from Regional Board Executive Officer Ken Harris to Coalition Executive Director Parry Klassen approving Coalition's Oct. 9 proposal
E	Dec. 17, 2013	Regional Board Conditional Work Plan Approval
F	Sept. 23, 2013	State Board Order WQ 2013-0101
G	June 5, 2014	Regional Board public notice of items up for discretionary review
H	Jan. 16, 2014	Regional Board Order R3-2012-0011, as modified by State Board Order WQ 2013-0101
I	June 10, 2014	Letter from Coalition Executive Director Parry Klassen to Regional Board Executive Officer Ken Harris
J	Mar. 21, 2014	Letter dated from Regional Board Executive Officer Ken Harris to Coalition Executive Director Parry Klassen re: Regional Board Directive to Ensure Implementation of Consistent Drinking Water Notification and Followup Reporting Processes
K	June 5, 2014	Regional Board Monitoring and Reporting Program (MRP) Order R3-2012-0011, Tier 1
L	June 5, 2013	Regional Board Monitoring and Reporting Program (MRP) Order R3-2012-0011, Tier 2
M	July 1, 2014	Regional Board Monitoring and Reporting Program (MRP) Order R3-2012-0011, Tier 3
N	—	Sample notification exceedance letter issued by Regional Board to dischargers
O	Mar. 3, 2014	CRLA Public Records Act request to Regional Board
P	Apr. 10, 2014	Regional Board response to Mar. 3, 2014 CRLA Public Records Act request, including sample notification letters



Q	Oct. 21, 2014	Staff report for November 2014 Regional Board meeting
R	Dec. 11, 2014	CRLA Public Records Act request to Regional Board
S	Dec. 19, 2014	Regional Board response to Dec. 11, 2014 CRLA Public Records Act request
T	May 2014	SWRCB Factsheet on GeoTracker GAMA
U	July 11, 2013	Regional Board Approval of Central Coast Cooperative Groundwater Program
V	May 20, 2004	SWRCB Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program
W	Apr. 30, 2014	Excerpts from “Distribution of Groundwater Nitrate Concentrations, Salinas Valley, California” (Coalition report prepared by HydroFocus, Inc.)
X	Dec. 10, 2014	Excerpts from “Groundwater Nitrate, Salinas Valley, California, Technical Memorandum” (Coalition report prepared by HydroFocus, Inc.)
Y	December 2010	SWRCB Report to the Legislature re: Public Accessibility to Information About Groundwater Conditions
Z	Nov. 7, 2014	Letter from CRLA to Regional Board re: November 2014 Regional Board meeting
AA	July 28, 2014	Letter from CRLA to Regional Board re: July 2014 Regional Board meeting
BB	Nov. 18, 2014	CRLA Public Records Act request to Regional Board
CC	Oct. 1, 2014	CRLA Public Records Act request to Regional Board
DD	Jan. 5, 2015	CRLA Public Records Act request to Regional Board
EE	Dec. 18, 2013	Regional Board Conditional Work Plan Approval
FF	July 17, 2014	Staff report for July 2014 Regional Board meeting
GG	Oct. 9, 2014	Letter from Coalition Executive Parry Klassen to Regional Board Executive Officer Ken Harris re: Coalition Proposal for Providing Member Information to Regional Board Staff

# **Exhibit A**

# Central Coast Groundwater Coalition Work Plan for Monterey, Santa Clara, Santa Cruz, and San Benito Counties

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Updated November 1, 2013

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## List of Acronyms

DPH	Department of Public Health
CCGC	Central Coast Groundwater Coalition
GIS	Geographic Information System
MCL	Maximum Contaminant Level
MRP	Monitoring and Reporting Program
QAPP	Quality Assurance Project Plan
SOP	Standard Operating Procedure

## Introduction

The CCRWQCB adopted Order No. R3-2012-0011 Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands (Conditional Waiver) and associated Monitoring and Reporting Program Orders (MRPs) on March 15, 2012. The Conditional Waiver and the MRPs specify that landowners and growers (here forward referred to as L&Gs) in Tiers 1, 2 and 3 may meet groundwater monitoring requirements by either monitoring groundwater individually on their agricultural operations, or by joining a groundwater cooperative monitoring program. The purpose of this document is to set forth the plan for a Central Coast Groundwater Coalition (CCGC) that satisfies the requirements in the Conditional Waiver and MRPs for participating L&Gs in Monterey, Santa Cruz, Santa Clara, and San Benito Counties. The steps outlined in this work plan provide a foundation for a CCGC that L&Gs can support, and that satisfies the requirements as set forth in the MRPs which states, "At a minimum, the cooperative groundwater monitoring effort must include sufficient monitoring to adequately characterize the groundwater aquifer(s) in the local area of the participating Dischargers, characterize the groundwater quality of the uppermost aquifer, and identify and evaluate groundwater used for domestic drinking water purposes." (Page 9 of the MRP - Tiers 1, 2, 3).

One of its primary purposes is to provide the Water Board with information that fills the gaps in the current understanding of groundwater quality throughout the region. Depending on the further development of the Conditional Waiver and its implementation, the program may also eventually provide information to the Water Board on existing farming practices and additional farming practices that will result in improved groundwater quality over time.

Agricultural landowners and growers recognize there is a shared responsibility for maintaining acceptable water quality. They recognize that past fertilizer inputs, as well as other historical land use practices, may have contributed to groundwater quality problems, and are focused on finding solutions to address the contribution that may be coming from existing agricultural practices. L&Gs who choose to participate in this coalition are making a commitment to address groundwater quality in the aquifers supplying drinking water. If sample data indicates that nitrates are above the MCL identified by the Department of Public Health (DPH) as safe for human consumption, and that water coming from that well is currently being consumed, the CCGC will notify the grower/landowner immediately. The notification will allow the member to notify users of the water within 10 days of confirmation that the data provided by the laboratory meet the data quality objectives outlined in the QAPP.

## CCGC Boundaries

The CCGC covers enrolled L&Gs in the northern part of the Central Coast region including portions of Santa Cruz County, Santa Clara County, San Benito County, and Monterey County (Figure 1). The Coalition is providing a shapefile to the Water Board along with this submission that outlines the outer perimeter of the cooperative program region (Projection – NAD 83, Scale – 1:24,000). The shapefile will include the extent of the agricultural regions in the four counties. Parcels enrolled in the actual Coalition region will be a subset of this area (see below).

L&Gs in the four counties are all potential participants in this program. Over 1,500 L&Gs have indicated that they will join a Coalition monitoring and reporting program but there are numerous other L&Gs that selected individual reporting as the preferred method of compliance with the Conditional Waiver. Because enrollment in the Coalition is unlikely to include all L&Gs in the northern region, the exact participating





The Coalition will provide to the CCRWQCB a list of members on ~~September 1~~ **November 15**, 2013, and will provide an annual update on September 1 of each year. In the first year of the CCGC existence, the CCCGP will provide quarterly updates to the list of members as new members may enter the program as they become aware of its existence. Because a number of leases change hands during October, the Coalition will provide an annual update shapefile of the Coalition land area by November ~~1~~ **15** of 2013 and on **November 1** of each year beginning in ~~2013~~ **2014**.

## Task Deliverables

Table 1. Deliverables for Coalition Boundary Delineation.

Deliverable	Elements	Date
Shapefile of external boundaries of Coalition region	ArcGIS shapefile in NAD 83 at 1:24,000 scale; general outline of the Coalition region without individual member landholdings or leases	May 31, 2013
List of members who have enrolled and paid fees to the Coalition	Excel spreadsheet of member IDs, member names, member farm operation names, and contact information as specified below in section	<del>September 1</del> <b>November 15</b> , 2013 and annually thereafter on September 1
Shapefile of Coalition region on a parcel by parcel basis	ArcGIS shapefile in NAD 83 at 1:24,000 scale; includes the land owned and/or leased by Coalition members at the individual parcel level	November <del>1</del> <b>15</b> , 2013 and annually thereafter on November 1

## Description of Cooperative Program Coalition Technical Activities

### Approach

The Coalition will undertake two related technical tasks; locating and sampling domestic supply wells on member owned/leased land, and characterizing groundwater aquifers in the CCGC region with a focus on shallow groundwater. The domestic supply wells sampled will be those not sampled by the counties and consequently, the concentration of nitrate in the water in those wells is not known. The CCGC will use data generated by the counties, as well as data submitted to GeoTracker by individual L&Gs to be in compliance with the Conditional Waiver to complete the characterization of the domestic drinking water-supply and shallow groundwater aquifer. The primary focus is characterization of the domestic drinking water-supply aquifer.

Domestic supply well identification and sampling from the start of the Coalition to September 1, 2014, and will be completed in three (3) phases. Each phase consists of identifying a subset of wells to sample from a specific geographic area within the Coalition region and then conducting sampling of those wells. Sampling involved in all three phases will be completed by September 1, 2014

The location and sampling of wells on member parcels will occur in three phases during 14 months with activities beginning during the summer of 2013. Phasing will occur by basin as follows. During Phase I wells in the Salinas Valley and Lockwood Valley will be located and sampled. Phase II will focus on

locating and sampling wells in the Pajaro Valley, and Phase III will focus on locating and sampling wells in the Gilroy-Hollister area. Figure 2 shows the location of the phased areas. Using maps and lists of member parcels, we will identify all wells that can be potentially sampled within each basin. These will include domestic wells with single and double connections. These wells will be identified via a combination of Google Earth maps overlaid on a map of member parcels.

The phasing is required because the process of obtaining well logs and reviewing for information on screening depth(s) (see below) to identify wells for sampling is time consuming. Once a list of candidate wells have been identified, the list must be narrowed to those wells that are located on CCGC member parcels, that are accessible, and that are reasonably certain to provide a valid sample (see below). This process is expected to take up to several weeks as individual members are contacted, arrangements are made to visit the wells, and samples are collected.

Based on recent information (see reports cited below and the recent report released by Harter et al. 2012), it appears that groundwater conditions in the Salinas Valley/Lockwood Valley may be the lowest quality in the CCGC region, and those valleys may have the largest number of unsampled domestic supply wells. Consequently, the CCGC will initiate its sampling and characterization efforts in those areas, moving to the Pajaro Valley, and finally the Gilroy-Hollister area last. The three phases are overlapping in that once the list of wells is finalized and arrangements are made for sampling, work on developing the next list will be initiated.

## Locating and Sampling Domestic Supply Wells

The CCGC will gather available well logs for all domestic wells that are filed with the Department of Water Resources with written authorization from the CCRWQCB. Because of the time-sensitive nature of this project, in order for the CCGC to meet the deadlines, the CCRWQCB has agreed to authorize the CCGC and its consultants to obtain the well logs from the Department of Water Resources upon final approval of this groundwater program. Wells that do not have a well log will be assigned low priority for sampling. For wells with well logs, the utility of sampling each well will be assessed using additional information including but not limited to well density in the immediate vicinity and well depth. These criteria will be used to prioritize wells to be sampled based on answers to the following questions.

- Based on the depth and screened interval for each domestic well, are there reliable and existing data for the depth interval and immediate area that can provide sufficient information about drinking water quality without sampling the well in question (immediate area is defined by the degree of spatial uncertainty in the available water quality data, see bullet point 3 below)?
- Can the well water be accessed for reliable sampling?
  - That is, is the well head and casing intact and can a reliable water sample be collected?
  - Are there obvious potential avenues for surface contamination to enter the well?
- What do the existing data indicate about spatial variability of the water quality in the area?

Based on the analysis of existing data, the level of spatial uncertainty in water quality data in the area surrounding the well will be quantified and for each well, a determination will be made of how sampling each well can reduce uncertainty. This is an iterative process and the density of wells within a subbasin or area within a subbasin may depend on the concentration of nitrate in the wells that are selected for sampling. It is possible that after the list of wells to sample is finalized, there could be a need for additional samples. Consequently, a step in each phase has been added that allows additional wells to be identified and sampled to allow adequate characterization of drinking water. A list of any new wells that are proposed for sampling will be submitted to the CCRWQCB for Executive Officer approval. Except as provided in the section entitled “Deliverables and Schedule”, all referred to well lists in this document would be available only through a valid public records act request, in which case well

coordinates would be shown with an uncertainty by one mile squared.

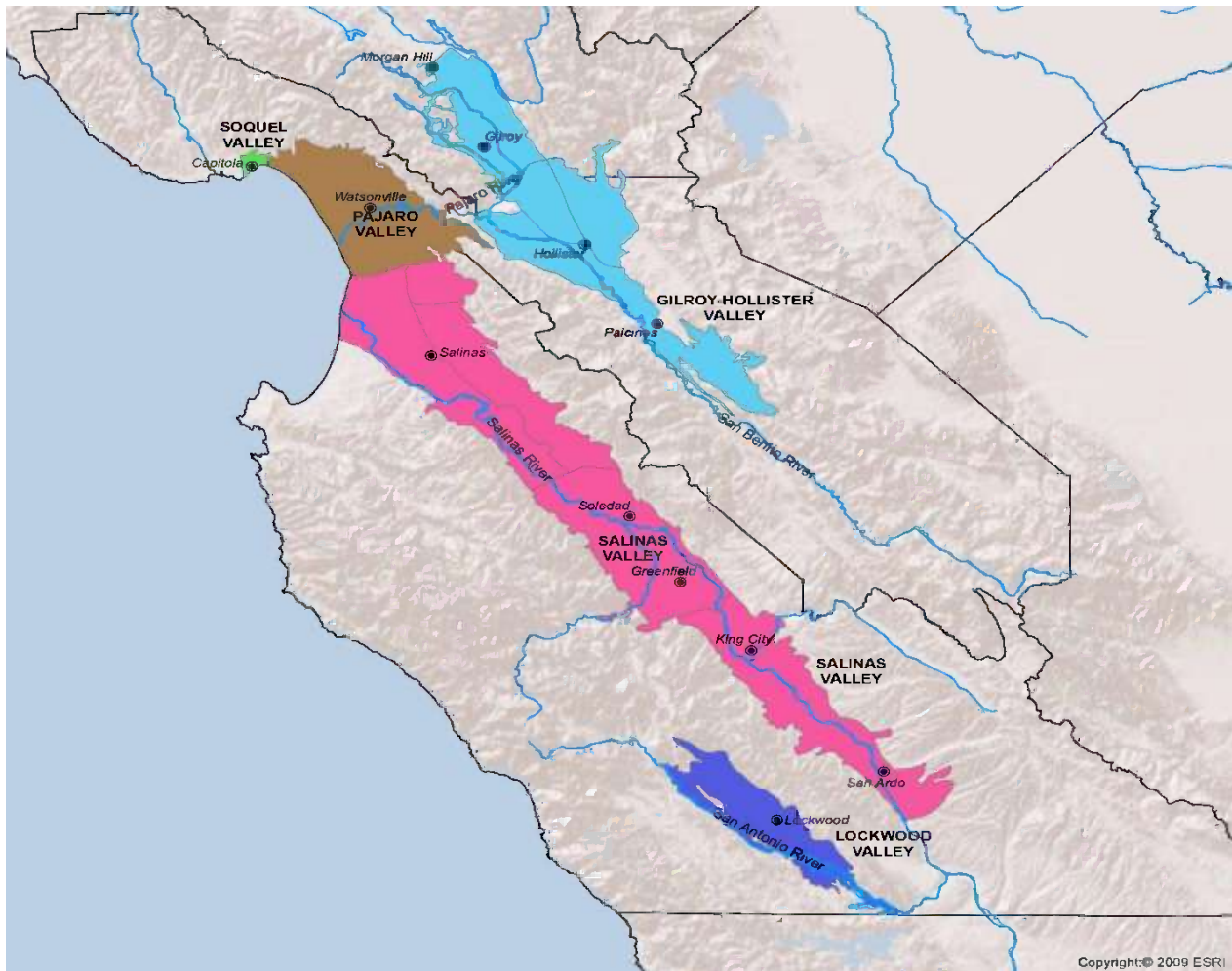
In summary, a staged approach will be used to identify wells for sampling within member parcels.

- Stage 1 – domestic drinking water supply wells with depth and screened interval information. Within those wells identified in Stage 1, wells will be selected that 1) provide essential information about the quality of drinking water based on the analysis of existing data, 2) are accessible and 3) will provide good quality groundwater samples.
- Stage 2 – If there are wells with depth and screened interval information on non-member parcels, this will greatly improve the certainty in the characterization of domestic drinking water quality, we will work with Water Board staff to gain access and sample these wells.
- Stage 3 – if after Stages 1 and 2 an insufficient number of wells are identified to effectively characterize drinking water quality within reasonable certainty in specific areas, domestic water supply wells without depth and screened interval information will be sampled. In addition, as required by Order WQ 2013-0101, any well that is estimated by a contour analysis to have a concentration of nitrate within 50% of the MCL will be added to the list of wells to sample.

In addition to the three stages listed above, any well that has a concentration of nitrate within 20% of the MCL (80% of the MCL) will be sampled within a year of the original sample collection date and annually thereafter. The second sample is to determine if seasonal conditions could result in the concentration of nitrate in the well exceeding the MCL.

The approach for determining the adequacy of the number of wells for characterizing domestic drinking water quality is threefold. First, the existing data will be used to estimate the spatial variability of groundwater nitrate concentrations at various depths. The CCGC proposes to use standard statistical and geostatistical methods to estimate based on the existing data, the number of samples required to represent a value for the central tendency (mean or median) for different levels of variance. Second, the CCGC will use the characterization of the aquifer to assess factors such as soils, subsurface texture, land use and land- and water-management practices and existing water quality data to provide causal explanation of groundwater nitrate concentration distributions. Third, the CCGC will use this assessment and the distribution of existing water quality data to select wells identified during Stage 1 and 2 for sampling based on this analysis and discussions with the Water Board staff to develop consensus with regard to wells to be sampled and the criteria used to develop the list of wells. The objective is to identify an optimal number of wells that allow characterization within an acceptable level of variance. The CCGC will endeavor to minimize to the extent possible, the spatial estimation variance and maximize the confidence level with existing domestic supply wells.

Figure 2. Groundwater basins in the CCCGP region.



The CCGC expects to identify a sufficient number of wells in the first two stages that when combined with existing data, will result in adequate characterization of drinking water quality. However, as indicated above if any well is estimated to have a concentration of nitrate at 50% of the MCL that well will be added for sampling during the third stage. As described above, the initial list of wells selected for sampling will necessarily be larger than the number of wells eventually sampled because many wells may not be accessible, may not be located on member parcels, or will not provide groundwater quality samples that can contribute to characterizing the concentration of nitrate in domestic supply wells. In addition to nitrate, samples may be analyzed for constituents that will aid in aquifer characterization. A list of constituents is shown in Table 2. Constituents listed in line one of Table 2 (Compliance with Conditional Waiver and MRPS) will be analyzed in all circumstances. Constituents listed in lines 2-5 may be analyzed in situations where doing so would aid in aquifer characterization, as determined by the CCGC. All wells will be sampled and the groundwater analyzed for at least the constituents specified in line one of Table 2 by the dates detailed in Table 3. The other constituents listed in lines 2-5 of Table 2 may be sampled if it is determined that it is necessary to obtain specific information needed to better characterize the aquifers.

Table 2. Constituents to be monitored to characterize drinking water and the shallow aquifers.

Function	Constituents
1. <b>Compliance with Conditional Waiver and MRPs<sup>1</sup></b>	pH, SC, TDS, total alkalinity, CA, Mg, Na, K, SO <sub>4</sub> , Cl, NO <sub>3</sub> <sup>-</sup> , NO <sub>2</sub>
2. <b>Potential for denitrification</b>	Oxidation-reduction potential, N <sup>15</sup> and O <sup>18</sup> isotopes
3. <b>Nitrogen source analysis</b>	N <sup>15</sup> and O <sup>18</sup> isotopes, pharmaceuticals
4. <b>Age of water in aquifer</b>	Tritium/H4, chlorofluorocarbons <sup>2</sup>
5. <b>Source of water</b>	Ca, Mg, Na, K, Cl, CO <sub>3</sub> , SO <sub>4</sub> , Br, O <sup>18</sup> , deuterium, N <sup>15</sup>

<sup>1</sup>From Table 3 of MRP documents.

## Deliverables and Schedule

Table 3. Phase I deliverables and dates for sampling and analysis performed on samples collected in the Salinas Valley/Lockwood Valley.

Deliverable	Elements	Date
Salinas Valley/Lockwood Valley list of wells <sup>1</sup> , sampling schedule and initiation of sampling	Initial list of wells to sample and initiation of sampling <sup>2</sup> ; list will include all wells on member owned, leased, or operated lands as best the CCCGP can determine as of that date	September 1, 2013
Salinas Valley/Lockwood Valley final list of wells	including justification for wells selected and wells excluded; discussion of final list with CCRWQCB staff if desired	<del>November 1</del> December 15, 2013
Data entry to regulatory side of GeoTracker	Complete uploading of groundwater quality data from Salinas Valley/Lockwood Valley	February 28, 2014 <sup>3</sup> (Completion of data entry from wells identified in November 1, 2013 list)
Develop supplemental list of wells for sampling (if necessary)	List of wells needed to complete characterization of nitrate concentrations in domestic drinking water supply and shallow groundwater	March 1, 2014
Technical Memo on concentration of nitrates in domestic supply wells in the Salinas Valley/ Lockwood Valley	Finalize data upload to GeoTracker, discussion of sampling results including contour map and shapefile of nitrate concentrations	April 30, 2014

<sup>1</sup> Except as provided in this section, all referred to well lists in this document would be available only through a valid public records act request, in which case well coordinates would be shown with an uncertainty by one mile squared.

<sup>2</sup> Because the list of wells to sample must be approved by the Executive Officer, sampling will begin as soon as approval is received including possibly September 2, 2013.

<sup>3</sup> Data entry will begin within 30 days of sample delivery to the laboratory as required. Dates provided in these rows indicate when the groundwater quality data entry into the regulatory-only side of GeoTracker, where it will remain, for at least the term of the Agricultural Order which expires on March 14, 2017.

Table 4. Phase II deliverables and dates for sampling and analysis performed on samples collected in the Pajaro Valley.

Deliverable	Elements	Date
Pajaro Valley list of wells <sup>1</sup> , Initial list of wells to sample; schedule and initiation of sampling	Initial list of wells to sample; list will include all wells on member owned, leased, or operated lands	<del>January 2, 2014</del> December 1, 2013
Pajaro Valley final list of wells	Final list of wells to sample including justification for wells selected and wells excluded; discussion of final list with CCRWQCB staff if desired; sampling begins upon approval of list from Executive Officer	February, 1 2014
Data entry to regulatory side of GeoTracker	Uploading of groundwater quality data from Pajaro Valley	April 30, 2014 <sup>2</sup> (Completion of data entry from wells identified in November 1, 2013 list)
Develop supplemental list of wells for sampling (if necessary)	List of wells needed to complete characterization of nitrate concentrations in domestic drinking water supply and shallow groundwater	June 1, 2014
Technical Memo on concentration of nitrates in domestic supply wells in the Pajaro Valley	Finalize data upload to GeoTracker, discussion of sampling results including contour map and shapefile of nitrate concentrations	July 31, 2014

<sup>1</sup> Except as provided in this section, all referred to well lists in this document would be available only through a valid public records act request, in which case well coordinates would be shown with an uncertainty by one mile squared.

<sup>2</sup> Data entry will begin within 30 days of sample delivery to the laboratory as required. Dates provided in these rows indicate when the groundwater quality data entry into the regulatory-only side of GeoTracker, where it will remain, for at least the term of the Agricultural Order which expires on March 14, 2017.

**Table 5. Phase III deliverables and dates for sampling and analysis performed on samples collected in the Gilroy-Hollister area.**

Deliverable	Elements	Date
Gilroy-Hollister list of wells, 2014 sampling schedule and initiation wells on member of sampling <sup>1</sup>	Initial list of wells to sample; list owned, leased, or operated	February 1, will include all
Final list of wells to sample selected and wells excluded; discussion of final list with CCRWQCB staff if desired	March 31, 2014 including justification for wells	
Data entry to regulatory side of quality data from Gilroy-Hollister	Uploading of groundwater data entry from wells identified in November 1, 2013 list)	July 31, 2014 <sup>2</sup> (Completion of
Develop supplemental list of 2014 wells for sampling (if necessary) concentrations in domestic drinking water supply and shallow groundwater	List of wells needed to complete characterization of nitrate	August 1,
Technical Memo on 2014 concentration of nitrates in domestic supply wells in the contour map and shapefile of nitrate concentrations	Finalize data upload to GeoTracker, discussion of sampling results including	October 31,

<sup>1</sup> Except as provided in this section, all referred to well lists in this document would be available only through a valid public records act request, in which case well coordinates would be shown with an uncertainty by one mile squared.

<sup>2</sup> Data entry will begin within 30 days of sample delivery to the laboratory as required. Dates provided in these rows indicate when the groundwater quality data entry into the regulatory-only side of GeoTracker, where it will remain, for at least the term of the Agricultural Order which expires on March 14, 2017.

All well sampling activities will be concluded by August 31, 2014. The CCGC will provide a short memorandum to the CCRWQCB by September 15, 2014 indicating that all sampling activities were completed by the September 1, 2014 deadline. By December 15, 2014, the CCGC will submit a detailed report to the CCRWQCB summarizing the information obtained during the domestic supply well monitoring program. The summary will include the overall distribution of domestic supply wells that are not sampled by the counties, a description of the depths of those wells to the extent known, contour maps of the concentration of nitrate in all wells sampled stratified for different screening depths, and an accounting of the number/percentage of domestic supply wells that are supplying water with concentrations of nitrate above the primary MCL.

The Coalition participants have significant concerns and objections to displaying individual well locations to the public on maps available on the Internet using GeoTracker. Instead of displaying individual well locations to the public, the CCRWQCB agrees to display Coalition data as contour maps on GeoTracker after January 1, 2015<sup>1</sup>, as long as 1) the contour maps meet the conditions described in

<sup>1</sup> Note that the delay of display of data on GeoTracker until January 1, 2015 does not affect the immediate availability of information to the public in response to a PRAR.

Conditions 10 through 13 contained in the June 10, 2013 Conditional Approval Letter from the Central Coast Regional Water Quality Control Board to Abby Taylor-Silva, representing the Central Coast Groundwater Coalition, and are approved by the Executive Officer, and 2) the State Water Resources Control Board makes the necessary modifications to GeoTracker so that it can properly display the contour maps with other existing data currently in GeoTracker.

If by January 1, 2015, the functionality does not exist in GeoTracker to properly display the approved contour maps, the Coalition has the option to submit static images (e.g. pdf, bitmap) of the contour maps by March 15, 2015; If the Coalition does not choose to submit static images of the contour maps or if the Coalition does not submit contour maps that meet Conditions 10 through 13 as described above, then the data will be displayed as individual wells on GeoTracker and the well location and data will only be referenced within a one-mile square of the actual well location, using the existing mapping functionality for CDPH wells in GeoTracker.

## Contour Confidence Interval

The analysis by the CCGC will be performed to achieve the highest level of certainty possible using all publicly available well samples and integrating the wells that are selected for sampling by this program, and that the analysis will explicitly provide the confidence value for any location on the map. If wells owned by individuals who are not members of the CCGC can be used to increase the level of confidence, those owners can be contacted to determine if they are willing to allow samples of the water to be collected.

HydroFocus is a hydrogeology consulting company retained by the CCGC to provide expertise in developing the groundwater program. HydroFocus was asked to determine the possibility providing high-confidence interval contours by reviewing all of the available nitrate data for the Salinas Valley. They plotted the kriging standard error for the concentrations of nitrate as N for 670 well samples from the Salinas Valley. The standard errors range from 10% to 20%. Therefore, for the 670 well samples and a grid spacing of about 1 mile, the estimated concentration of nitrate at any point where there is not a well will theoretically be within approximately plus or minus 20% of the range of the estimated value at points where there are not samples. Therefore for points on the grid where there are no samples, the confidence level for the estimated concentration is 80% to 90%. For a contour interval of 5 mg/L that encompasses known concentrations ranging from 5 to 10 mg/L nitrate as N, an estimated value of 9 mg/L with the 20% standard error would result actual values being outside the contour range some of the time.

The analysis performed by HydroFocus used data for 670 well samples. HydroFocus has been searching for potential domestic drinking water supply wells in the Salinas Valley and has identified about 500 locations where domestic supply wells may exist. Across the northern region, the Salinas Valley is assumed to be the most densely populated region within the CCGC region. Consequently, for the domestic drinking water supply wells in the Salinas Valley and most probably in the entire region, even if a sample is collected from every well, the sample size will likely be too small to generate a 90% or 95% confidence interval for all locations. Therefore, the number of available wells dictates that there will be a higher level of uncertainty associated with the contours in certain, but not all, areas.



## Temporal Variability

The Coalition commits to the CCRWQCB to perform additional sampling after the initial sampling outlined in this program is completed to determine temporal variability in wells determined by the CCGC and the CCRWQCB to be high priority.

Table 6. Report deliverables and dates.

Deliverable	Elements	Date
Memo to CCRWQCB documenting the completion of groundwater sampling	Final list of wells sampled	September 15, <del>2013</del> 2014
Initial characterization of the shallow groundwater aquifer	Aquifer characterization using information known about geology and water quality in the CCGC region	December 15, <del>2013</del> 2014
Draft final report on concentration of nitrates in domestic supply wells across the Coalition region	Discussion of sampling results December 15, 2014 concentration of nitrates in including contour maps and domestic supply wells across the shapefiles of nitrate concentration contours, depths of domestic supply wells, number/percentage of wells with NO <sub>3</sub> above the MCL; discussion of any data gaps in knowledge of shallow groundwater quality	December 15, 2014
Final report incorporating Water Board comments	Discussion of sampling results including contour maps and shapefiles of nitrate concentration contours, depths of domestic supply wells, number/percentage of wells with NO <sub>3</sub> above the MCL	March 15, 2015

## **Characterizing groundwater aquifers with focus on domestic drinking water supply and shallow groundwater**

The primary objective for characterizing groundwater aquifers will be to develop 1) a process-level understanding of distribution of nitrate contamination in domestic supply wells with single connections or a small number of connections and 2) identify regions for evaluation of agricultural land- and water-management practices to reduce discharges to groundwater. The CCGC covers enrolled L&Gs in the northern part of the Central Coast region including portions of Santa Cruz County, Santa Clara County, San Benito County, and Monterey County (Figure 1).

The region contains three principle groundwater basins where agriculture is the predominant land use; Pajaro Valley, Salinas Valley and the Gilroy-Hollister basins (Figure 2). As the project proceeds, these groundwater basins will be characterized more fully using the known geology and available information for the aquifer. For the initial characterization to be completed by December 15, 2013, the CCGC will focus on describing the groundwater quality in each aquifer based on the existing data and hydrogeologic conditions.

Initially, aquifer characterization will be conducted on two levels. The CCGC will 1) characterize the distribution of nitrate concentrations in aquifers used for domestic drinking water supply, and 2) use existing data to provide information about the source of the nitrates and the age of the groundwater (year of recharge). A more complete characterization, due December 2014, will utilize groundwater data collected by the CCGC to more fully explain the nature of groundwater degradation and its causality.

### **Notification of Growers**

The goal of the member notification system is to identify wells that have a concentration of nitrate above the MCL and make sure the users of the water are notified. The CCGC has developed a notification system that will guarantee that members are notified that the domestic supply well is above the MCL with sufficient time to notify users of the water within the 10 day period specified by Order WQ 2013-0101. In addition, if the statistical analysis of the available data indicates that there are un-sampled wells with an estimated concentration of nitrate above the MCL, members who own those wells will be notified in a timeframe that will allow users of the water to be notified within 10 days of the statistical analysis. A more detailed description is included in the addendum at the end of the work plan.

### **Current knowledge of aquifer conditions**

The groundwater basins to be evaluated within the framework of this workplan are generally geologically similar. They are intermountain valleys where there is extensive faulting and resultant deep Tertiary and Quaternary alluvial fill and drainage to the Pacific Ocean. Water bearing units include unconsolidated and semi-consolidated alluvial fan and river deposits interbedded with marine clays. Episodic changes in sea level during the Miocene through Pleistocene led to alternating deposition between coarse grained materials in riverine and alluvial fan environments, and fine grained sediments in estuarine and marine environments. The following discussion of the basins and subbasins was extracted from the Department of Water Resources Bulletin 118, USGS publications and consultant reports.

The Pajaro Valley basin contains water-bearing geologic units that include from oldest to youngest, the Purisima Formation, the Aromas Sand Formation, Terrace Deposits, Quaternary alluvium, and Dune Deposits. The Purisima Formation is mainly of marine origin, and contains a thick sequence of highly variable sediments ranging from shale beds near the base to continental deposits in the upper portion. The sediments are poorly consolidated, moderately permeable gravel, sands, silts, and silty clays. The Aromas Sand is considered the primary water-bearing unit of the basin and consists of upper eolian and lower fluvial sand

units that are separated by confining layers of interbedded clays and silty clay. The Terrace Deposits consist of unconsolidated gravel, sand, silt, and clay overlain by alluvium. The alluvium is composed of Pleistocene terrace materials that are overlain by Holocene alluvium, consisting of sand, gravel, and clay deposited by the Pajaro River, and dune sands, with an average thickness of 50 to 300 ft.

South of the Pajaro Valley Basin, in the Monterey Bay and the Salinas Valley area, the Langley Area and 180/400-Foot subbasins include from oldest to youngest, the Pliocene to Pleistocene Paso Robles Formation, the Pleistocene Aromas Sands, Quaternary terrace deposits, Holocene alluvium, and sand dunes. The 180/400-Foot subbasin includes three water-bearing units, the 180-Foot, the 400-Foot, and the 900-Foot aquifers, named for the average depths of each aquifer. The confined 180-Foot Aquifer occurs only in this subbasin, as its confining blue clay layer thins and disappears east and south of the subbasin and does not extend into the Eastside Aquifer subbasin.

The 180-Foot Aquifer consists of interconnected sand, gravel, and clay lenses, and ranges in thickness from 50 to 150 ft. The 180-Foot Aquifer is separated from the 400-Foot Aquifer by a zone of less coarse-grained strata and confining units that range in thickness from 10 to 70 feet. The 400-Foot Aquifer is about 200-ft thick and consists of sands, gravels, and clay lenses. The upper portion of the aquifer appears to be correlated with the Aromas Sand and the lower portion with the upper part of the Paso Robles Formation. The 900-Foot Aquifer, present in the lower (northern) Salinas Valley, consists of alternating layers of sand, gravels and clays and is separated from the 400-Foot Aquifer by a blue marine clay-confining unit.

The Corral de Tierra Area subbasin includes the following water-bearing units, from oldest to youngest: the Miocene and Pliocene Santa Margarita Formation, the Pliocene Paso Robles Formation, the Pleistocene Aromas Formation, and Pleistocene and Holocene age alluvial deposits. The Paso Robles Formation is the primary water-bearing unit in the area and consists of sand, gravel, and clay interbedded with some minor calcareous beds. The East Side subarea includes a narrow strip on the eastern half of the valley. It is similar in geologic structure as the 180/400-Foot Aquifer subbasin except that the confining blue clay layer thins and disappears east of the subbasin.

The upper Salinas Valley contains the Forebay Aquifer and Upper Valley Aquifer subbasins. The Forebay subarea encompasses the entire width of the unconsolidated alluvial fill between Gonzales and the bluff line two miles south of Greenfield. The primary water-bearing units of this subbasin are the same units that produce water in the adjacent 180/400-Foot Aquifer Subbasin; 180-Foot Aquifer and the 400-Foot Aquifer. However, the near-surface confining unit of the 180/400-Foot Aquifer Subbasin does not extend into the Forebay subbasin. Groundwater in the Forebay Aquifer subbasin is unconfined and occurs in lenses of sand and gravel that are interbedded with finer grained material.

The Upper Valley subarea includes the entire alluvial fill in the valley floor between the bluff line two miles south of Greenfield to the southern end of the San Ardo Valley. The primary aquifer is unconfined and deposits range from unconsolidated to semi-consolidated. It consists of inter-bedded gravel, sand, and silt of the Paso Robles Formation, alluvial fan and river deposits. These deposits are equivalent to the 180-Foot and 400-Foot Aquifer units of the lower Salinas Valley. However, confining units comparable to those separating aquifers in the lower Salinas Valley are present. Groundwater is unconfined and is replenished primarily with water from the Salinas River and its tributaries.

Recharge in the Salinas and Pajaro valleys occurs from infiltration from the Salinas River and deep percolation of irrigation water. Flow in the Salinas River is seasonally controlled for conjunctive use. Precipitation, subsurface and boundary inflow, and seawater intrusion are other sources of recharge of lesser importance. The Salinas Valley and Pajaro Valley groundwater basins are drained by the Salinas and

the Pajaro rivers. Directions of groundwater flow generally follow the topography of the basins, from high altitudes towards the drainages, and down valleys towards Monterey Bay. Major water supply and water quality issues include overdraft of aquifers and contamination by nitrate.

Concentrations of nitrate in groundwater vary temporally and spatially. Primary sources of data include irrigation, public supply, and monitoring wells. Concentrations of nitrate above 100 mg/L and up to several hundred mg/L are observed sporadically in all of the Salinas Valley subbasins. Kulongoski and Belitz<sup>2</sup> used a non-parametric statistical analysis to examine the relationship between nitrate and potential explanatory factors including land use, well construction, groundwater age, and geochemical condition. Nitrate concentrations were slightly higher in wells with groundwater ages classified as modern or mixed compared to wells classified as pre-modern.

The Gilroy-Hollister Basin in San Benito and Santa Clara counties includes the Llagas, Bolsa, Hollister, and San Juan Bautista groundwater subbasins. The Llagas subbasin extends from the groundwater divide at Cochran Road near Morgan Hill in the north to the Pájaro River in the south in Santa Clara County. It is drained to the south by tributaries of the Pájaro River, including Uvas and Llagas creeks. The water bearing formations include Pliocene to Holocene age continental deposits of unconsolidated to semi-consolidated gravel, sand, silt and clay. Recharge to the Llagas subbasin occurs from a variety of sources: natural recharge from streams, principally Uvas and Llagas Creeks; percolation of precipitation and irrigation water, and artificial recharge. Nitrate in groundwater is a key water quality issue in this subbasin. Since 1997, more than 600 wells in south Santa Clara County including the Llagas and Coyote subbasins have been tested for nitrate. More than half exceed the federal safe drinking standard for nitrate.

Todd Engineers<sup>3</sup> summarized the water quality data for the remaining subbasins in San Benito County. Key constituents of concern include boron, chloride, hardness, metals, nitrate, sulfate, potassium, and TDS. In some parts of the Basin, concentrations of these constituents do not meet water quality standards necessary to support drinking water beneficial uses (MUN). In most areas of the Basin in San Benito County, concentrations of key constituents of concern remained relatively unchanged from 2005 – 2010. In the eastern portion of northern San Juan Subbasin, nitrate and chloride concentrations have decreased over time owing to land use and groundwater-level changes. Concentration of nitrate in shallow groundwater is generally higher than the concentration of nitrate in deeper groundwater. Average nitrate concentrations in all subbasins in San Benito County are below the MCL.

The Bolsa Area subbasin lies within the northwest portion of the Gilroy-Hollister Valley Groundwater Basin, and is bounded on the north by the Pajaro River, to the southwest by the Flint Hills. The aquifer consists mainly of clay, silt, sand, and gravel ranging in age from Tertiary to Holocene. Holocene alluvium consists of unconsolidated lenticular beds of gravel, sand, silt, and clay deposited by streams as flood plain, alluvial-fan, slope-wash, and terrace deposits. Thickness generally ranges from 0 to 300 feet. The Purisima Formation while lithologically similar to the overlying alluvium is generally more consolidated and less permeable. The Purisima Formation ranges from the surface in some areas to several thousand feet. Vertical groundwater flow is restricted by an extensive clay confining layer. The water quality constituents of greatest concern are salinity, nitrate, boron, hardness, and trace elements that occasionally exceed drinking water standards.

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<sup>2</sup> Justin T. Kulongoski and Kenneth Belitz. 2005. Program Status and Understanding of Groundwater Quality in the Monterey Bay and Salinas Valley Basins, 2005: California GAMA Priority Basin Project, US Geological Investigations Report 2011 – 5058.

<sup>3</sup> Todd Engineers. 2012. Technical Memorandum 1, Hydrogeologic Conceptual Model for Northern San Benito County Salt and Nutrient Management Plan.

The Hollister Area subbasin lies within the northeast portion of the Gilroy-Hollister Valley Groundwater Basin. The Calaveras fault is the western boundary and abuts the Bolsa Area subbasin. The northern portion of the subbasin drains toward Monterey Bay by the Pajaro River and its tributaries. The southern portion is drained by the San Benito River and its tributaries. Groundwater occurs in the alluvium of Holocene age and older alluvium. The aquifers consist of clay, silt, sand, and gravel, and poorly consolidated sandstone. The unconsolidated or poorly consolidated Tertiary or Quaternary rocks underlying the alluvium have been divided into three units which consist of a thick sequence of clay, silt, sand and gravel. Most recharge to the subbasin is derived from rainfall and stream flow from creeks entering the basin. Pacheco Pass Water District operates North Fork Dam on Pacheco Creek for the primary purpose of supplying groundwater recharge to the northeast portion of the subbasin. Water levels have generally risen since 1987 when surface water was delivered. The water quality constituents of greatest concern are salinity, nitrate, boron, hardness, and trace elements that occasionally exceed drinking water standards.

The San Juan Bautista Area subbasin lies within the southwest portion of the Gilroy-Hollister Valley Groundwater Basin, is bounded on the north by Sargent Fault and Sargent anticline and abuts the Bolsa Area subbasin. Groundwater occurs in the alluvium of Holocene age, and the Purisima Formation of Pliocene age. The subbasin is drained primarily by the San Benito River and its tributary creeks. The Pajaro River drains the northern boundary. The primary source of recharge is the San Benito River which is managed to provide groundwater recharge. Groundwater level measurements since 1913 indicate significant declines from early in the century to the 1970's. Water levels have risen over 100 feet since 1976 due to the construction of Hernandez Reservoir on the San Benito River in 1961 and the delivery of imported surface water beginning in 1987.

## Quality Assurance Project Plan/Sampling Analysis Plan

### Quality Assurance

A Surface Water Ambient Monitoring Program (SWAMP) comparable Quality Assurance Program Plan (QAPP) will be developed for the project. The QAPP will include all 24 elements found in the SWAMP checklist. Analytes covered in the QAPP are from Table 3 of MRP documents (MRP No. R3-2012-0011-01, MRP No. R3-2012-0011-02, and MRP No. R3-2012-0011-03) and Table 2 above.

Briefly, the QAPP will include but is not limited to:

- Project organizational structure;
- A discussion of the field methods to be used;
- Meter maintenance and calibration;
- Sample collection methods;
- Chain of custody form;
- Field and laboratory SOPs;
- Sample containers; and
- Sample processing and preservation methods.

Field parameters and analytes will be listed and the laboratory method(s) of analysis will be provided. Data quality objectives will be provided and the quality control samples (e.g. duplicates, blanks) needed to meet those objectives will be discussed. The laboratory identified to perform the analysis will be provided and the analytical methods used will be described. Laboratory SOPs will be included as well as the laboratory QA/QC measures (e.g. spikes, blanks). The QAPP will be circulated for approval prior to initiation of sampling and analysis. The QAPP will be provided to the Water Board by August 15, 2013.

## Sampling and Analysis Plan

A sampling plan for the domestic supply wells will be developed and submitted to the CCRWQCB. The Sampling Plan will:

- Develop the logistical details of field sampling, e.g., timing;
- Identify who will perform sampling;
- Describe how sampling will be coordinated with landowners and tenants;
- Identify wells to be sampled and timing of sampling;
- Describe type of well (domestic supply, agricultural supply, monitoring); and
- Provide map of wells using same NAD 83 and 1:24,000 scale as provided for the cooperative program boundary

## Third Party Implementation

### Member Organization and Member Responsibilities

The CCGC will form a non-profit organization to direct and administer the activities of the program and its contractors. The purpose of the Coalition's organizational structure is to organize agricultural L&Gs to support Coalition activities, and to conduct the monitoring, reporting, and outreach activities. The program anticipates forming a non-profit organization immediately after acceptance of the work plan. The organization will be functional within 75 days after initiation of the paperwork needed to file for non-profit status.

To perform the CCGC tasks, it is necessary to have an organization in place to:

- Collect and manage the funds to pay for required activities;
- Conduct outreach, implement, and assume responsibility for the tasks to be completed; and
- Coordinate with the CCRWQCB to resolve issues that may arise.

Organization responsibilities include:

- Tracking members and reporting required member information to CCRWQCB;
- Collect fees to operate program;
- Manage communications and notifications to members and CCRWQCB;
- Conduct sampling to remain in compliance with the MRP requirements;
- Manage water quality monitoring data;
- Manage contracts for technical work;
- Interpret data;
- Submit reports to CCRWQCB on behalf of members;
- Document its organizational and management structure; and
- Provide members with annual summaries of expenditures of revenue.

One of the CCGC's long-term goals is to inform L&Gs about their responsibility to use farming practices that are protective of groundwater resources. This goal needs to be accomplished with a cost effective data collection program to properly characterize groundwater quality, and to assist L&Gs in implementing effective practices to protect groundwater quality.

Participating in the CCGC will carry responsibilities for members including:

- Paying dues necessary to fund CCGC activities (monitoring, reporting, outreach); and

- Completing any required reports/forms requested by the CCGC.

Enrollment forms will include a signed provision allowing the CCRWQCB to provide the CCGC with information on the eNOI. Failure to meet membership responsibilities will result in dismissal from the CCGC. Once a grower is dismissed from the CCGC, their name is no longer included in the annual member list provided to the CCRWQCB by the CCGC organization. These responsibilities provide assurances to the CCRWQCB and stakeholders that membership in the CCGC provides for the proper characterization of local groundwater conditions and a commitment on the part of members to be protective of groundwater quality.

## Coalition Responsibilities

The CCGC will insure that there is sufficient financial support to implement the program and will include the approximate cost to implement the program and identification of resources available (e.g., the fees and number of participating L&Gs to generate the funds necessary to meet the budgeted costs) to fully implement all technical and administrative aspects of the program.

The CCGC will insure sampling is conducted by dates established in the Coalition program, sampling schedule (see Table 8).

The CCGC will insure data and reports are submitted to the CCRWQCB in format specified and by dates established in Table 8.

The CCGC will insure all participating L&Gs are providing any required information and are taking necessary steps to address any obstacles, or issues that arise to implementing the Coalition program.

The CCGC will insure that any activities conducted on behalf of the third-party by other groups meet the terms and requirements of the program. The CCGC is responsible for any activities conducted on its behalf.

The CCGC will establish and conduct governance, including but not limited to:

- i. As a legally defined entity (i.e. non-profit corporation; local or state government; Joint Powers Authority) or have a binding agreement among multiple entities that clearly describes the mechanisms in place to ensure accountability to participating L&Gs;
- ii. With a governing structure that includes a governing board of directors composed in whole or in part of participating L&Gs, and that provides participating L&Gs with a mechanism to direct or influence the governance of the third party through appropriate by-laws.
- iii. With appropriate authorization from participating L&Gs to access individual grower eNOI information in GeoTracker (e.g., AW#, current contact information);
- iv. The CCGC will describe and provide evidence for i-iii, above.

The CCGC will provide the following information and reports to the CCRWQCB and participating L&Gs, on the dates specified:

- By September 1, 2013 the documentation of its organizational or management structure and its by-laws or operating procedures. The documentation shall identify persons responsible for ensuring that the program is implemented as approved. The CCGC must also provide to the CCRWQCB confirmation that this information was provided to participating L&Gs;
- By September 1, 2013, the list of participating L&Gs, and quarterly, thereafter, the list of new

enrollees, as follows:

- Participating grower information in Microsoft Access or Excel format, including AW#, Ranch Name and GeoTracker global ID for each participating grower, physical mailing address, and email address. Information provided must be accurate and consistent with that reported in the electronic-Notice of Intent (eNOI);

The CCGC must also provide to the CCRWQCB, confirmation that the following information was provided to participating L&Gs;

- On September 1, 2013, in the Draft Final Report by December 15, 2014, and the Final Report by March 15, 2015, the annual summaries of expenditures of fees and revenues. The CCGC must also provide to the CCRWQCB, confirmation that this information was provided to the participating L&Gs;
- By September 1, 2013 and annually thereafter, notification to participating L&Gs of the following, and provide confirmation to the CCRWQCB of such notification to participating L&Gs:
- Participating L&Gs, as enrolled L&Gs in the Agricultural Order, are individually responsible for the successful implementation of the program and that this individual responsibility has two consequences if the CCGC is not successfully implemented: 1) The CCRWQCB or Executive Officer will require individual dischargers to conduct individual monitoring per the requirements of the Agricultural Order, 2) The CCRWQCB may take enforcement action against individual dischargers. The failure of a third party group to successfully implement an approved program cannot be used as an excuse for lack of individual discharger compliance;
- Quarterly, beginning within three months of notice of approval, if the third-party group is unable to implement any aspect of the program that could result in a violation of the program’s monitoring or reporting requirements, notification describing the inability to implement and the possible violations. The CCGC must also provide to the CCRWQCB, confirmation that this information was provided to participating L&Gs;
- Quarterly, beginning within three months of notice of approval, notification to participating L&Gs of any changes to the program approved by the Executive Officer or the CCRWQCB and confirmation to the CCRWQCB that this notification was provided to participating L&Gs.

Table 7. Coalition administrative deliverables.

Deliverable	Elements	Date
List of participating L&Gs	List of members in good standing	<del>September 1</del> November 15, 2013
Member parcel map specifying exact CCGC area	GIS shapefile of geographical boundary of program based upon member parcels	November <del>1</del> 15, 2013 and annually thereafter
Quarterly update of member list	List of members who enrolled in last quarter, in Access or Excel format	January 1, 2014; April 1, 2014, July 1, 2014, October 1, 2014
Organizational/administrative structure	Category, names of Board of Directors, Executive Director, Contractors as appropriate; operating procedures; fees and expenditures, confirmation of member notification	September 1, 2013; December 15, 2014; March 15, 2015 and annually thereafter



Member notification of responsibilities as a discharger	Consequences to members for not accepting member responsibilities; CCRWQCB notification that members have been contacted	September 1, 2013
Notice of inability to successfully conduct business as required by the CCRWQCB	Confirmation of member notification	Quarterly as necessary starting 90 days after formation of cooperative program organization

## Summary

Table 8. Chronology of all submissions to the Central Coast Regional Water Board by the CCGC on behalf of its members.

Deliverable	Date
Shapefile of external boundaries of Coalition region May 31, 2013	May 31, 2013
QAPP provided to the CCRWQCB	August 15, 2013
List of members who have enrolled and paid fees to the Coalition September 1, 2013 and annually thereafter on September 1	September 1, 2013 and annually thereafter on September 1
Salinas Valley/Lockwood Valley list of wells <sup>1</sup> , sampling schedule, and initiation of sampling September 1, 2013	September 1, 2013
List of participating L&Gs September 1, 2013	<del>September 1</del> November 15, 2013
Organizational/administrative structure September 1, 2013; December 15, 2014; March 15,	September 1, 2013; December 15, 2014; March 15, 2015 and annually thereafter 2015 and annually thereafter
Member notification of responsibilities as a discharger September 1, 2013	September 1, 2013
Shapefile of cooperative program region including thereafter on individual parcels owned or operated by all members November 1, 2013 and annually thereafter on individual parcels owned or operated by all members November 1	November <del>1</del> 15, 2013 and annually
Salinas Valley/Lockwood Valley final list of wells November 1, 2013	wells November 1, 2013
Initial characterization of the shallow groundwater aquifer	December 15, 2013
Quarterly update of member list	January 2, 2014; April 1, 2014, July 1, 2014, October 1, 2014
Pajaro Valley list of wells, sampling schedule and initiation of sampling January 2, 2014 – June 30, 2014 initiation of sampling	January 2, 2014 – June 30, 2014
Gilroy-Hollister list of wells, sampling schedule, and initiation of sampling February 1, 2014 initiation of sampling	February 1, 2014
Pajaro Valley final list of wells February 1, 2014	February 1, 2014
Begin Salinas Valley/Lockwood Valley data entry to regulatory side of GeoTracker February 28, 2014 <sup>2</sup> (Completion of data entry from regulatory side of GeoTracker wells identified in November 1, 2013 list)	February 28, 2014 <sup>2</sup> (Completion of data entry from wells identified in November 1, 2013 list)
Develop supplemental list of wells for sampling in Salinas Valley/Lockwood Valley (if necessary) March 1, 2014	March 1, 2014

Gilroy-Hollister final list of wells March 31, 2014	March 31, 2014
Technical Memo on concentration of nitrates in domestic supply wells in the Salinas Valley/Lockwood Valley	April 30, 2014
Begin Pajaro Valley data entry to regulatory side of GeoTracker April 30, 2014	April 30, 2014
Develop supplemental list of wells for sampling in Pajaro Valley (if necessary) June 1, 2014	June 1, 2014
Technical Memo on concentration of nitrates in domestic supply wells in the Pajaro Valley July 31, 2014 domestic supply wells in the Pajaro Valley	July 31, 2014
Begin Gilroy-Hollister data entry to regulatory side of GeoTracker July 31, 2014 (Completion of data entry from wells	July 31, 2014 (Completion of data entry from wells identified in November 1, 2013 list)
Develop Gilroy-Hollister supplemental list of wells for sampling (if necessary) August 1, 2014 sampling (if necessary)	August 1, 2014
Memo to CCRWQCB confirming the completion of groundwater sampling September 15, 2014 groundwater sampling	September 15, 2014
Technical Memo on concentration of nitrates in domestic supply wells in the Gilroy-Hollister October 31, 2014 domestic supply wells in the Gilroy-Hollister	October 31, 2014
Draft final report on concentration of nitrates in domestic supply wells across the Coalition region December 15, 2014 domestic supply wells across the cooperative program	December 15, 2014
Final report incorporating CCRWQCB comments March 15, 2015	March 15, 2015
Notice of inability to successfully conduct business as required by the CCRWQCB Quarterly as necessary starting 90 days after notice of required by the CCRWQCB approval of cooperative program organization	Quarterly as necessary starting 90 days after notice of approval of cooperative program organization

<sup>1</sup> Except as provided in the section entitled "Deliverables and Schedule", all referred to well lists in this document would be available only through a valid public records act request, in which case well coordinates would be shown with an uncertainty by one mile squared.

<sup>2</sup> Data entry will begin within 30 days of sample delivery to the laboratory as required. Dates provided in these rows indicate when the groundwater quality data entry into the regulatory-only side of GeoTracker, , where it will remain, for at least the term of the Agricultural Order which expires on March 14, 2017.

## **Addendum – Member Notification**

### **Notification of Members**

The goal of the member notification system is to identify wells that have a concentration of nitrate above the MCL and make sure the users of the water are notified. The CCGC has developed a notification system that will guarantee that members are notified that the domestic supply well is above the MCL with sufficient time to notify users of the water within the 10 day period specified by Order 2013-0101. In addition, if the statistical analysis of the available data indicates that there are un-sampled wells with an estimated concentration of nitrate above the MCL, members who own those wells will be notified in a timeframe that will allow users of the water to be notified within 10 days of the statistical analysis.

Notification of members occurs several times during the monitoring and reporting process as described below.

- Outreach to members requesting the location of domestic supply wells on their property
- Notification to growers indicating that their wells were sampled and providing the responsibilities of the grower should the concentration of nitrate in the well exceed the MCL
- Federal Express notification within 36 hours of receipt of the results, informing the member that the concentration of nitrate in their well is above the MCL and providing the standardized notice to give to users of the water
- Mail notification to all remaining growers of the concentration of nitrate in their domestic supply wells and any follow-up activity that will occur
- Federal Express notification sent to member reporting the results of the contour analysis (concentration of nitrate above the MCL)

A brief discussion of each of these steps is provided below.

### **Outreach to members requesting the location of domestic supply wells on their property**

When the CCGC is ready to initiate monitoring of domestic supply wells in a region, the CCGC contacts the member with a request for the location of all wells providing water for domestic use. Members respond with the requested information and a list of wells is developed. The list of wells provided will be compared to the wells listed by the member on their eNOI to guarantee that the wells scheduled for sampling are domestic supply wells. Wells scheduled for sampling are visited to determine the suitability of the well for sampling and to discuss with the member the use of the well to further confirm that all domestic supply wells are identified and available for sampling.

### **Notification to growers indicating that their wells were sampled**

Once the member's wells have been sampled, they are sent a pre-notification letter confirming the sampling, providing information about the potential outcomes of the laboratory analysis of the water, and stating that the member will receive one of several types of follow-up notifications determined by the concentration of nitrate in the well. One pre-notification letter per well is sent to the member such that a single member could receive several pre-notification letters depending on the number of wells across their ranches.

### **Exceedance report to the Regional Board if necessary**

All laboratory analyses will be uploaded to GeoTracker by the well, and also sent to the CCGC for review of the quality assurance information. When the CCGC determines that the data meet the data quality objectives outlined in the QAPP, the data are considered validated. Validation is generally performed within

24 hours after receipt of the data from the laboratory. If the results of the laboratory analyses indicate that the concentration of nitrate in the well exceeds the MCL, the CCGC will notify the CCRWQCB within 24 hours of data validation. The notification will include all relevant data including but not limited to well ID, Ranch Name, sample date, and concentration.

### **Federal Express notification of the member**

When the data are validated and it is determined that the concentration of nitrate in a member domestic supply well exceeds the MCL, the member will be notified of the exceedance. A standard notification letter will be sent via Federal Express overnight delivery to every member for every well that is in exceedance. All members will receive the notification letter within 36 hours of the CCGC learning of the exceedance in the member's well. Accompanying the notification letter will be the announcement that the member can provide to users of the well that they are drinking water with a concentration of nitrate above the MCL. The 36 hour delivery allows sufficient time for the member to notify the users of the well within the 10 day period required by Order WQ 2013-0101.

### **Mail notification to all remaining members of the concentration of nitrate in their domestic supply wells**

All members that own domestic supply wells with a concentration of nitrate below the MCL will be notified by regular US Mail of the results of the analysis and any follow-up activity that will occur. If the well has a concentration of nitrate between 80% and 100% of the MCL, the member will be notified that the well will be resampled within a year and annually thereafter for the life of the Conditional Waiver.

### **Federal Express notification sent to member reporting the results of the contour analysis (concentration of nitrate above the MCL)**

When the estimated concentration of nitrate in a member domestic supply well exceeds the MCL, the member will be notified of the exceedance. A standard notification letter will be sent by Federal Express overnight delivery to every member for every well that is estimated to be in exceedance. All members will receive the notification letter within 36 hours of the CCGC learning of the exceedance in the member's well. Accompanying the notification letter will be the announcement that the member can use to notify the users of the well that they are drinking water with a concentration of nitrate above the MCL. The 36 hour delivery allows sufficient time for the member to notify the users of the well within the 10 day period required by the Conditional Waiver.

# **Exhibit B**



# CALIFORNIA RURAL LEGAL ASSISTANCE, INC.

July 3, 2014

Central Coast Regional Water Quality Control Board  
Attn: Chair Wolff c/o Ken Harris  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401

## **Re: Items for Discretionary Review**

Dear Regional Board:

This letter seeks discretionary review from the Central Coast Regional Water Quality Control Board (“Regional Board”) with regards to two aspects of the Central Coast Groundwater Coalition’s (“CCGC” or “the coalition”) groundwater monitoring program:

- 1) The coalition’s notification process for wells that have exceeded the nitrate Maximum Contaminant Level (MCL), and;
- 2) The manner in which the groundwater testing results of CCGC will be disclosed to the public.

### **I. The Board should bring the coalition’s notification process in alignment with the Regional Board’s individual monitoring notification process**

In the coalition’s latest workplan, the coalition articulates that “the goal of the member notification system is to identify wells that have a concentration of nitrate above the MCL and to make sure users of the water are notified.” (CCGC November 2013 Final Workplan pg. 26)

This notification process is insufficient for two reasons:

- 1) The workplan does not affirmatively require any confirmation that users have been notified that the groundwater from their well is unfit for human consumption, and;
- 2) The notification process does not affirmatively inform the Regional Board staff of particular wells that contain nitrate MCL exceedances.
  - a. *Written confirmation that growers and well users have been notified of nitrate exceedance is necessary to ensure the coalition’s notification program is effective.*

Under the Regional Board’s individual monitoring program, individual dischargers are required to confirm that well users are aware that the domestic supply well exceed the drinking water standard and that the water poses a human health risk due to an elevated nitrate concentration. The letter sent by the Regional Board Staff also includes local public health agency contacts and resources regarding nitrate in drinking water, including health effects.

Effective notification of drinking water exceedance ensures that both the grower and the users of the domestic supply well are aware that the drinking water well exceeds the MCL for nitrate and

the water is unfit to drink and presents a health hazard if consumed.

Under the CCGC cooperative monitoring program workplan, there is no requirement that there be written confirmation that the affected well user has been notified of any exceedances. We request that the Board review the coalition's notification process for its members to ensure that their notification procedure contains a written confirmation component by which the Regional Board can hold the coalition accountable for the work it lays out within their workplan.

The Regional Board can only ascertain if CCGC notification is effective or not only if the Board receives written confirmation that both the grower and all users of the water supply are informed of nitrate exceedance.

The CCGC cooperative monitoring program covers over 1,500 landowner and grower memberships within portions of Santa Cruz, Santa Clara, San Benito, and Monterey Counties. (CCGC November 2013 Final Workplan pg. 5) Because the majority of landowners and growers in the region have elected to participate in a cooperative program to comply with the Agricultural Order, it remains critical that the notification process implemented by CCGC be as robust as the notification process implemented by the Regional Board Staff.

- b. *The coalition must inform the Regional Board of the particular wells that have nitrate exceedances.*

The coalition currently does not notify the Regional Board of the specific wells which have nitrate exceedances above the MCL. This is a serious deficiency. According to coalition presentations, the coalition only provides a summary table of wells tested that exceed the nitrate MCL but fails to provide information regarding which wells specifically exceed the drinking water standard.

If the Regional Board cannot discern which wells have specific nitrate exceedance in the way that it can under the individual monitoring program, how can the Regional Board properly assess priority areas of known nitrate contamination of drinking water wells?

The coalition must bring its notification process into alignment with the individual monitoring program with regards to its notification method to members and well users, and also to the Regional Board itself.

## **II. Contour mapping should supplement, not substitute the display of individual well location, obscured by ½ mile, on GeoTracker GAMA.**

The July 11, 2013 CCGC approval letter states the following:

19. We understand that the cooperative program participants have significant concerns and objections to displaying individual well locations to the public on maps available on the Internet using GeoTracker. The Central Coast Water Board agrees to display cooperative program data as contour maps on GeoTracker after January 1, 2015 [...]

20. Withholding the display of individual well information on maps on the public side



of GeoTracker limits the Central Coast Water Board's ability to provide all members of the public with broad and convenient access to its records and to promptly make the fullest possible disclosure of its records. Therefore, I do not agree to withhold the cooperative program individual well data from maps on the public side of Geotracker in perpetuity unless reviewed and approved by the Central Coast Water Board as they evaluate and adopt future irrigated lands orders [...] Doing so affects the Central Coast Water Board's ability to adapt in the future to changing needs, and may have unanticipated consequences on the Central Coast Water Board's ability to readily provide information to the public in cases where there is an acute and imminent threat to public health and safety, or to address issues related to consistency between regions and regulatory programs.

I will agree to withhold the display of individual wells sampled by the cooperative program on maps on the public side of GeoTracker for at least the term of the Agricultural Order, which expires on March 14, 2017 [...] Further, if the existing Waiver expires prior to adoption of renewed Waiver or other similar orders, this data would remain on the regulatory-only side of GeoTracker until such time that a renewed Waiver or other similar order is adopted. (emphasis added)

- a. *Contour Mapping should act as a supplement to well location information and not as a substitute.*

There are two reasons why contour mapping should act as a supplement to well location and not as a substitute:

- 1) It is still uncertain if GeoTracker has the ability to display approved contour maps and it is also still uncertain what the contour confidence interval will be for the contour mapping. While contour mapping may satisfy the conditions set out by the Executive Officer within the confines of the cooperative program, it still remains critical that well location mapping be readily available on the public side for the duration of the ag waiver.

Public supply wells and monitoring wells are displayed on GeoTracker with an appropriate privacy measure. CCGC member wells deserve the same treatment as other wells. Given that the actual well locations of CCGC members will not be displayed on GeoTracker – the location will be blurred by a half mile square, pursuant to Provision 65 of the Ag Order—privacy and confidentiality concerns are satisfied by this blurring.

- 2) The Porter-Cologne Water Quality Control Act mandates an affirmative obligation that “[m]onitoring results shall be made available to the public.” (Cal Water Code 13269(a)(2)). In addition, because it is the policy of the Central Coast Regional Water Quality Control Board “to provide members of the public broad and convenient access to its records and to promptly make the fullest possible disclosure of its records,” the Regional Board should not allow the cooperative monitoring program to substitute display of well location information completely with contour mapping.

We are confident that contour mapping will aid in providing summary information and display of water quality information to the public. However, there is no legally adequate reason to completely substitute display of individual wells on GeoTracker with its

blurring reference of half-mile square of the actual well location, with contour mapping for the duration of the Agricultural Order, which expires in 2017.

We are dealing with a public health emergency that is widespread and only increasing. Thousands of Californians are at risk of consuming contaminated water from domestic wells. Water users of public water systems are protected because public water systems are legally bound to serve safe water under the Health Code.

Here, by contrast, we are looking at a whole universe of domestic wells that have no safety assurances under the law. It remains critical for water users to readily access information regarding possible contamination of their potable water supply. The public has a right to readily accessible information about their drinking water without having to wait *after* January 2015 to see a contour map or after at least March 2017 to see a map with individual well locations.

Contour mapping confidence intervals are dependent upon the number of wells sampled and so by design are an indirect way of displaying information. By contrast, GeoTracker allows for water users to identify with more precision whether they may be consuming water from a contaminated well by referencing concentration of sampling sites in their surrounding area, history of sampling events and exact nitrate concentrations associated with that sampling.

- b. *Well information displayed on GeoTracker can aid communities in finding alternate sources of clean drinking water.*

Well users can also integrate this broader set of parameters into a rudimentary evaluation of options for a long-term solution and thereby inform the need to invest in the services of a well driller, engineer, or consultant. The Regional Board should prioritize the most direct and efficient display of information so that potential users of contaminated water supply can take proper precautions to protect their health, make informed decisions, and explore solutions.

The technology that is available now through GeoTracker is both sufficiently protective of privacy concerns and descriptive enough to provide convenient access to the public. There is no justification for substituting GeoTracker display completely with contour mapping. Contour mapping should be a supplement and not a substitute for data available for public inspection.

### **III. Conclusion**

The Regional Board Order No. R3-2012-0011 “encourages Dischargers to coordinate the effective implementation of ... cooperative monitoring and reporting efforts to lower costs, maximize effectiveness, and achieve compliance with this Order.” (R3-2012-0011, Finding 11) The purpose of forming a coalition groundwater monitoring group, such as the CCGC, is to lower costs and to maximize effectiveness for the purpose of achieving compliance with the Order. The purpose is not to develop an alternative mechanism of reporting that circumvents notification to the Regional Board.

The Regional Board should also ensure that the coalition does not violate the affirmative right of Californians to readily access public information by substituting display of well information on GeoTracker completely with contour mapping.

Thank you for this opportunity to seek discretionary review of the CCGC's cooperative groundwater monitoring plan. We look forward to your response.

Respectfully,

/s/ YPK

Pearl Kan  
Attorney | Equal Justice Works Fellow  
California Rural Legal Assistance, Inc.  
pkan@crla.org

/s/ KA

Kenia Acevedo  
Safe Drinking Water Attorney  
California Rural Legal Assistance, Inc.  
kacevedo@crla.org

# **Exhibit C**

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## Central Coast Regional Water Quality Control Board

December 18, 2014

Pearl Kan, Safe Drinking Water Attorney  
California Rural Legal Assistance, Inc.  
3 Williams Road  
Salinas, CA 93905  
[pkan@crla.org](mailto:pkan@crla.org)

***Via Electronic Mail Only***

Dear Ms. Kan:

### **CENTRAL COAST WATER BOARD DISCRETIONARY REVIEW OF THE CENTRAL COAST GROUNDWATER COALITION'S DRINKING WATER NOTIFICATION PROCESS**

This letter is in response to the California Rural Legal Assistance (CRLA) request for discretionary review of the Central Coast Groundwater Coalition (CCGC) drinking water notification process. In letters dated July 3, 2014 and July 28, 2014, CRLA requested discretionary review from the Central Coast Water Board with regards to two aspects of the CCGC groundwater monitoring program:

- 1) The CCGC's notification process for wells that have exceeded the nitrate Maximum Contaminant Level (MCL), and;
- 2) The manner in which the groundwater testing results of the CCGC will be disclosed to the public.

This letter is to notify you that the Central Coast Water Board completed its review of Part 1 of CRLA's request. The Central Coast Water Board is tentatively scheduled to review Part 2 of CRLA's request at the January 29-30, 2015 Central Coast Water Board meeting in Santa Barbara, CA. The agenda and staff report for the January 2015 Board meeting will be available at: [http://www.waterboards.ca.gov/centralcoast/board\\_info/agendas/2015/2015\\_agendas.shtml](http://www.waterboards.ca.gov/centralcoast/board_info/agendas/2015/2015_agendas.shtml)

### **Evaluation of CCGC Drinking Water Notification Process**

Agricultural Order R3-2012-0011 (as modified by State Water Resources Control Board Order WQ 2013-0101) states that in cases where there are drinking water exceedances, the Central Coast Water Board will require that the grower or landowner notify the users within 10 days. At the Central Coast Water Board meetings on July 31, 2014 and November 13, 2014, the Central Coast Water Board heard staff's evaluation and recommended path forward concerning CCGC's process for sharing drinking water notification information that will allow the Central Coast Water Board staff to verify such notification (Items 13 and 15, respectively). The agenda, staff report, and minutes for these items are available at: [http://www.waterboards.ca.gov/centralcoast/board\\_info/agendas/2014/2014\\_agendas.shtml](http://www.waterboards.ca.gov/centralcoast/board_info/agendas/2014/2014_agendas.shtml)

As part of the evaluation, Central Coast Water Board staff considered CCGC's proposed drinking water notification process. Staff also compared the CCGC drinking water notification process to the Central Coast Water Board's notification process for growers who comply with individual groundwater monitoring requirements.

During the November 13, 2014 Board meeting Item 15 discussion, Board Members provided general feedback and suggested modifications to staff's conclusion that CCGC must submit additional information in order to ensure that the Central Coast Water Board can effectively verify proper drinking water notification and conduct necessary follow-up. As a result, the Executive Officer issued a letter to CCGC (copied to CRLA) on December 8, 2014, requiring the following:

1. CCGC must provide a relational key to the Central Coast Water Board. The relational key must include the CCGC Member ranch-specific Global ID and the associated CCGC Field Point Name (individual well identification) for all groundwater wells sampled by the CCGC in compliance with the Agricultural Order. CCGC submitted this information to the Central Coast Water Board on December 5, 2014.
2. CCGC must provide a Final CCGC Exceedance Notification Follow-Up Report to the Central Coast Water Board. The Exceedance Notification Follow-Up Reports must comprehensively identify all wells sampled by the CCGC with exceedances of the drinking water standard, and must include the notification date, the manner of notification, and any follow-up action to ensure safe drinking water, etc.
3. CCGC must ensure that users receive a written drinking water notification of drinking water exceedances (verbal notifications are not acceptable). In addition, the CCGC must conduct annual follow-up to ensure that users continue to be properly notified of drinking water exceedances and to confirm any follow-up action to ensure safe drinking water.
4. CCGC representatives must bring copies of all drinking water notification letters to the quarterly CCGC/Water Board Coordination meetings for inspection by staff. In addition, staff is conducting site visits with landowners/operators enrolled in the Agricultural Order to verify proper drinking water notifications.

The effect of these requirements is that the Regional Water Board will have sufficient information from CCGC regarding drinking water notifications such that the CCGC notification process is functionally equivalent to the process used by individual growers.

#### Response to Part 1 of CRLA's Discretionary Review Request

At the Central Coast Water Board meetings on July 31, 2014 and November 13, 2014, the Central Coast Water Board also reviewed CRLA's request for discretionary review of the CCGC drinking water notification process. In response to Part 1 of CRLA's request for discretionary review, staff evaluated CRLA's specific concerns regarding written confirmation of notification and the identification of particular wells that have a nitrate exceedance.

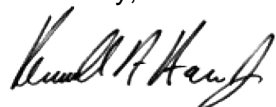
In CRLA's request for discretionary review, CRLA indicates that "the Board should bring the coalition's notification process in alignment with the Regional Board's individual monitoring notification process." As discussed above, staff found that the CCGC drinking water notification process, as originally proposed, did not adequately provide notification and proof of notification.

With the above-described modifications to the CCGC notification process, staff concluded that the CCGC drinking water notification process is functionally equivalent to the Central Coast Water Board's drinking water notification process, which should address CRLA's concern that the process be equivalent to the notification process for individual growers. At the November 13 Board meeting, Board Members indicated that discussion of this item at the July 31, 2014 and November 13, 2014 Board meetings and Board Member consideration and suggested modifications of staff's evaluation and recommendations completed the response to Part 1 of CLRA's request for discretionary review of the CCGC groundwater monitoring program.

It is my understanding that you have already discussed the petition process and timing with Jessica Jahr, counsel for the Central Coast Region, and Phillip Wyels, Assistant Chief Counsel at the State Water Resources Control Board (State Board). The December 8 letter concluded the discretionary review process. The normal regulations concerning petitions of Regional Water Board actions apply to the December 8 letter. As you are aware, only the changes to the original order resulting from the letter may be petitioned. Any person affected by this action of the Regional Water Board may petition the State Board to review the action in accordance with Section 13320 of the California Water Code and Title 23, California Code of Regulations, Section 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of the December 8 letter, except that if the thirtieth day following the date of this letter falls on a Saturday, Sunday, or State Holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at: [http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality](http://www.waterboards.ca.gov/public_notices/petitions/water_quality) or will be provided upon request.

If you have any questions concerning this letter, please contact Angela Schroeter at (805) 542-4644 or via e-mail at: [angela.schroeter@waterboards.ca.gov](mailto:angela.schroeter@waterboards.ca.gov) or John Robertson at (805) 542-4630.

Sincerely,



Kenneth A. Harris Jr.  
Executive Officer

cc:

Interested Parties List (email Lyris)  
Agricultural Order – Discretionary Review

Mr. Parry Klassen  
Central Coast Groundwater Coalition  
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Tim Borel  
Central Coast Groundwater Coalition  
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Ms. Claire Wineman  
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Hector Hernandez  
Hector.Hernandez@waterboards.ca.gov

Chris Rose  
Chris.Rose@waterboards.ca.gov



# **Exhibit D**

---

## Central Coast Regional Water Quality Control Board

December 8, 2014

Mr. Parry Klassen  
Executive Director  
Central Coast Groundwater Coalition  
P.O. Box 828  
Salinas, CA 93902  
pklassen@unwiredbb.com

*Sent via Electronic Mail*

Dear Mr. Klassen,

### **IRRIGATED LANDS REGULATORY PROGRAM – EXECUTIVE OFFICER APPROVAL OF CENTRAL COAST GROUNDWATER COALITION'S OCTOBER 9, 2014 PROPOSAL TO PROVIDE MEMBER INFORMATION TO THE CENTRAL COAST WATER BOARD**

As individual growers and the Central Coast Groundwater Coalition (CCGC) implement the groundwater monitoring requirements of the Agricultural Order R3-2012-0011 and State Board Order WQ-2013-0101, sampling results indicate that many domestic drinking water wells exceed the safe drinking water standard for nitrate. Due to the severity and urgency of the health issues associated with drinking groundwater with high concentrations of nitrate, the requirement to notify well users of these exceedances is a top priority of the Irrigated Lands Regulatory Program.

At the Central Coast Water Board meeting on November 13, 2014, Board Members concurred with staff's recommendation for the Executive Officer to approve the CCGC proposal submitted on October 9, 2014 to require the CCGC to submit supplemental information regarding CCGC members in order to verify proper drinking water notifications. Board Members also agreed with staff's recommendation to maintain the requirement for CCGC to provide copies of individual drinking water notification letters upon request, as required in the December 17, 2013 work plan approval letter. Additionally, the Board also discussed various ways to improve the CCGC drinking water notification process related to drinking water follow-up actions and follow-up notifications in the future.

This letter approves the proposal submitted by the CCGC on October 9, 2014 and amends the Central Coast Water Board's approval of the CCGC work plan documented in letters dated July 11, 2013, December 17, 2013 and December 18, 2013 (attached), with the following specific conditions described below:

1. **By December 15, 2014, the CCGC must provide a relational key**, which will include the CCGC Member ranch-specific Global ID and the associated CCGC Field Point Name (individual well identification) for all groundwater wells sampled by the CCGC in compliance with the Agricultural Order (Order R3-2012-0011). Please provide the relational key as a

table (pdf format) with two columns (Ranch-Specific Global ID and CCGC Field Point Name).

2. **By December 22, 2014, the CCGC must provide a Final CCGC Exceedance Notification Follow-Up Report.** The Exceedance Notification Follow-Up Reports must comprehensively identify all wells sampled by the CCGC with exceedances of the nitrate drinking water standard.

The CCGC must amend its Exceedance Notification Follow-Up Report format to include the information described in the attachment to the October 9, 2014 proposal (manner of notification, any follow-up action to ensure safe drinking water, etc.). The information should be presented in order of timing of the various activities. In addition, the notification date and manner of notification must be provided for all CCGC member wells with exceedances of the drinking water standard and used for domestic purposes. The CCGC must also include the Final CCGC Exceedance Notification Follow-Up Report as an appendix to the Final Characterization Report for the northern and southern counties.

3. **Effective immediately, CCGC must ensure that users receive a written notification of drinking water exceedances. For any drinking water exceedances where the users have only received prior verbal notification, the CCGC must follow-up with the members to ensure that users receive a written notification that the drinking water exceeds safe levels for nitrate.** CCGC must also conduct annual follow-up to ensure that users continue to be properly notified of drinking water exceedances and to confirm any follow-up action to ensure safe drinking water. CCGC must submit annual updated notification information for each drinking water well exceedance showing that for those users that are new in the last 12 months, written notification has taken place.
4. **Effective immediately, CCGC representatives must bring copies of all drinking water notification letters to the quarterly CCGC/Water Board Coordination meetings for inspection by Water Board staff.** CCGC must inform their members that Water Board staff is conducting site visits with landowners/operators enrolled in the Agricultural Order to verify proper drinking water notifications and staff may request to view a copy of the drinking water notification letter in cases where there is a drinking water exceedance.

Staff finds that the required information will ensure that the Water Board can efficiently and effectively identify the landowner/operator associated with the wells included in exceedance reports and thereby verify that proper drinking water notification of users has occurred by conducting follow-up.

If you have any questions regarding this letter, please contact **Hector Hernandez at (805) 542-4641** or via e-mail at [Hhernandez@waterboards.ca.gov](mailto:Hhernandez@waterboards.ca.gov), or Angela Schroeter at (805) 542-4644 or via e-mail at: [Aschroeter@waterboards.ca.gov](mailto:Aschroeter@waterboards.ca.gov).

Sincerely,



Digitally signed by Kenneth A Harris Jr.  
DN: cn=Kenneth A Harris Jr., o=Central  
Coast Regional Water Quality Control  
Board, ou=Executive Officer,  
email=Ken.Harris@waterboards.ca.gov,  
c=US  
Date: 2014.12.08 15:59:59 -08'00'

Kenneth A. Harris Jr.  
Executive Officer

Attachments

1. Central Coast Water Board's Approval of Central Coast Cooperative Groundwater Program, dated July 11, 2013  
[http://www.waterboards.ca.gov/centralcoast/water\\_issues/programs/ag\\_waivers/docs/gr\\_ouundwater/2ccgc\\_workplan\\_approval\\_071113.pdf](http://www.waterboards.ca.gov/centralcoast/water_issues/programs/ag_waivers/docs/gr_ouundwater/2ccgc_workplan_approval_071113.pdf)
2. Central Coast Water Board's Conditioned Work Plan Approval letter to the Coalition, dated December 17, 2013 for the Northern Counties  
[http://www.waterboards.ca.gov/centralcoast/water\\_issues/programs/ag\\_waivers/docs/gr\\_ouundwater/3ccgc\\_workplan\\_approval\\_121713.pdf](http://www.waterboards.ca.gov/centralcoast/water_issues/programs/ag_waivers/docs/gr_ouundwater/3ccgc_workplan_approval_121713.pdf)
3. Coast Water Board's Conditioned Work Plan Approval letter to the Coalition, dated December 18, 2013 for the Southern Counties  
[http://www.waterboards.ca.gov/centralcoast/water\\_issues/programs/ag\\_waivers/docs/gr\\_ouundwater/4ccgc\\_workplan\\_approval\\_121813.pdf](http://www.waterboards.ca.gov/centralcoast/water_issues/programs/ag_waivers/docs/gr_ouundwater/4ccgc_workplan_approval_121813.pdf)

cc

Mr. Tim Borel  
Central Coast Groundwater Coalition  
tborel@foxyproduce.com

Ms. Kara Stuart  
Central Coast Groundwater Coalition  
karamstuart@gmail.com

Ms. Claire Wineman  
Grower-Shipper Association  
claire.wineman@grower-shipper.com

Ms. Abby Taylor-Silva  
Grower-Shipper Association of Central California  
abby@growershipper.com

Mr. Michael L. Johnson, LLC  
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Mr. Steve Deverel  
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Ms. Mellissa Turner  
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Ms. Pearl Kan  
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Ms. Tamarin Austin  
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Ms. Lori Okun  
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Mr. John Robertson  
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Ms. Angela Schroeter  
Angela.Schroeter@waterboards.ca.gov

Mr. Chris Rose  
Chris.Rose@waterboards.ca.gov

Mr. Hector Hernandez  
Hhernandez@waterboards.ca.gov

# **Exhibit E**

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## Central Coast Regional Water Quality Control Board

December 17, 2013

Parry Klassen  
Executive Director  
Central Coast Groundwater Coalition  
512 Pajaro St.  
Salinas, CA 93901  
[pklassen@unwiredbb.com](mailto:pklassen@unwiredbb.com)

Dear Mr. Klassen:

### **IRRIGATED LANDS REGULATORY PROGRAM – APPROVAL OF CENTRAL COAST GROUNDWATER COALITION UPDATED WORK PLAN FOR THE NORTHERN COUNTIES**

On November 1, 2013, the Central Coast Groundwater Coalition (Coalition) submitted an updated version of the final workplan, approved by the Central Coast Regional Water Quality Control Board (Central Coast Water Board) on July 11, 2013 to comply with Order No. R3-2012-0011 and associated Monitoring and Reporting Programs (MRPs). The revised workplan is titled, “*Central Coast Groundwater Coalition Work Plan for Monterey, Santa Clara, Santa Cruz, and San Benito Counties*” (workplan). The most significant changes to the revised workplan include the incorporation of the groundwater monitoring and reporting changes set forth in Order WQ 2013-0101, adopted by the State Water Resources Control Board on September 24, 2013. The revised workplan also includes changes in the dates of sampling and reporting activities that resulted from an extension of the enrollment period to November 1, 2013. The Coalition will complete sampling in three different phases, according to basin: Phase 1 - Salinas Valley and Lockwood Valley, Phase 2 – Pajaro Valley, and Phase 3 – Gilroy and Hollister area. Although the revised workplan includes several date changes to the deliverable schedule, there is no change in the overall implementation schedule and sampling activities must be completed for all phases by September 1, 2014 (with the exception of repeat sampling ordered by State Board Order WQ-2013-0101).

Additionally, State Board Order WQ-2013-0101 also included specific requirements related to drinking water notifications for situations where results for domestic drinking water wells indicate an exceedance for the drinking water standard for nitrate as NO<sub>3</sub> or nitrate+nitrite as nitrogen. While the revised workplan includes an Addendum titled “Member Notification”, the specific requirements are described below and included as a condition of our approval of the revised workplan.

This letter is to approve the revisions to the workplan for the Monterey, Santa Clara, Santa Cruz, and San Benito Counties with the specific conditions described below. Please note that the conditions for approval set forth in the Central Coast Water Board’s July 11, 2013 letter to the Coalition remain in effect for activities not addressed in the revised workplan. These conditions are important and required to clarify and confirm our expectations about how you will

comply with the Order No. R3-2012-0011 and associated MRPs on behalf of individual landowners and growers who participate in your cooperative program.

## CONDITIONS

The revised workplan includes an Addendum which describes a member notification system that the Coalition intends to use to identify wells that exceed the drinking water standard and to ensure that users of the water are notified, in compliance with State Board Order WQ 2013-0101. If the Coalition determines that water in any well that is used or may be used for drinking water exceeds or is projected to exceed the drinking water standard, the Coalition must do the following:

1. Within 24 hours of learning of the exceedance or projected exceedance of the drinking water standard, provide notice to the Central Coast Regional Water Quality Control Board (Central Coast Water Board);
2. Within 48 hours of learning of the exceedance or projected exceedance of the drinking water standard, notify Coalition members that they are required by the Central Coast Water Board to notify the landowner and well users of the exceedance within 10 days. The content of the notifications must be consistent with that described in State Board Order WQ-2013-0101.
3. Within 10 days of learning of the exceedance or projected exceedance of the drinking water standard, provide a copy of the template notification letter, list of members notified, and the date the member was notified to the Central Coast Water Board. Additionally, at that time, the Coalition must also provide the Central Coast Water Board with the names and contact information for any member not successfully notified by the Coalition. The Coalition must also provide copies of the individual notification letters sent to Coalition members informing them of the exceedance of the drinking water standards, upon request of the Central Coast Water Board.
4. Within 30 days of completing notifications for an individual phase of the workplan (Salinas-Lockwood, Pajaro, Gilroy-Hollister), the Coalition must provide to the Central Coast Water Board a summary of any follow-up actions taken by Coalition members to provide treatment or alternative drinking water supplies for well users affected by drinking water exceedances. In addition, upon request by the Central Coast Water Board, the Coalition must provide a list of Coalition members who have not provided information about follow-up actions or who have not taken actions to provide treatment or alternative drinking water supplies for well users affected by drinking water exceedances. The Central Coast Water Board will contact these members directly.


Additionally, pursuant to a telephone conversation between your consultant Michael L. Johnson and Hector Hernandez of our staff, we have corrected Table 8 (Summary Table) of the updated Work Plan to show that the submission date of the "Initial Characterization of the Shallow Groundwater Aquifer" is due December 15, 2014, as specified in the text on page 13 of the Work Plan (paragraph following Table 5).

I appreciate the Coalition's efforts and progress made thus far to comply with the cooperative groundwater monitoring requirements. The above conditions are important and required to clarify and confirm our expectations related to how the Coalition will ensure that well users are notified in the case of drinking water exceedances, as required by State Board Order WQ-2013-0101. Additionally, implementation of these notification requirements will ensure that the Coalition's drinking water notification process is consistent with the notification process that is

presently followed by the Central Coast Water Board for dischargers who comply with individual groundwater monitoring requirements.

If you have any questions concerning this letter, please contact Hector Hernandez of my staff at (805) 542-4641 or via e-mail at [hhernandez@waterboards.ca.gov](mailto:hhernandez@waterboards.ca.gov), or Angela Schroeter at (805) 542-4644 or via e-mail at: [Aschroeter@waterboards.ca.gov](mailto:Aschroeter@waterboards.ca.gov)

Sincerely,



Digitally signed by Kenneth A Harris Jr.  
DN: cn=Kenneth A Harris Jr., o=Central  
Coast Regional Water Quality Control  
Board, ou=Executive Officer,  
email=Ken.Harris@waterboards.ca.gov,  
c=US  
Date: 2013.12.17 13:18:45 -08'00'

Kenneth A. Harris Jr.  
Executive Officer

cc:

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# **Exhibit F**

STATE OF CALIFORNIA  
STATE WATER RESOURCES CONTROL BOARD  
**ORDER WQ 2013-0101**

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In the Matter of Review of

Conditional Waiver of Waste Discharge Requirements Order No. R3-2012-0011  
for

**DISCHARGES FROM IRRIGATED LANDS**

and Monitoring and Reporting Program Order Nos. R3-2012-0011-01,  
R3-2012-0011-02, and R3-2012-0011-03,  
and Resolution No. R3-2012-0012

Issued by the  
California Regional Water Quality Control Board,  
Central Coast Region

***SWRCB/OCC FILES A-2209(a)-(e)***

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BY THE BOARD:

In this Order, the State Water Resources Control Board (State Water Board) reviews the Conditional Waiver of Waste Discharge Requirements [Order No. R3-2012-0011](#), the accompanying Monitoring and Reporting Program [Orders Nos. R3-2012-0011-01](#), [R3-2012-0011-02](#), and [R3-2012-0011-03](#),<sup>1</sup> and the accompanying [Resolution No. R3-2012-0012](#) (collectively referred to hereinafter as the Agricultural Order) issued by the Central Coast Regional Water Quality Control Board (Central Coast Water Board or Board) for discharges from irrigated agricultural lands in the Central Coast region. The Agricultural Order waives the requirement to obtain waste discharge requirements for discharges from irrigated lands that comply with certain conditions. For the reasons discussed herein, the State Water Board upholds most of the Agricultural Order but amends several requirements, including those with regard to approval of alternative third party water quality improvement projects and monitoring and reporting programs, authority of the executive officer to change tier designations, compliance with water quality standards and effective control of certain pollutants, maintenance of containment structures, recording of practice effectiveness and compliance in the farm plan,

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<sup>1</sup> When referring to the Monitoring and Reporting Program Orders individually, this Order will use "Tier 1 MRP," "Tier 2 MRP," and "Tier 3 MRP," respectively.

cooperative groundwater monitoring, photo monitoring, monitoring of individual surface water discharges, reporting of total nitrogen application, reporting of elements of the irrigation and nutrient management plan, and compliance with nitrogen balance ratio milestones.<sup>2</sup>

## I. BACKGROUND

The Central Coast Region has approximately 435,000 acres of irrigated land. The Agricultural Order, adopted pursuant to Water Code section 13269, regulates the discharge of irrigation return flows and storm water from irrigated lands in the region and supersedes a conditional waiver of waste discharge requirements in effect since 2004 (2004 Agricultural Order).<sup>3</sup> The provisions of the Agricultural Order address discharges to both surface water and groundwater.

The Agricultural Order defines three tiers of agricultural dischargers based on the risk of water quality impacts. A number of criteria are considered in determining the appropriate tier for a discharger. These include the proximity of the discharger's farm to a surface waterbody listed as impaired by toxicity, pesticides, nutrients, turbidity, or sediment; whether the discharger applies the pesticides chlorpyrifos or diazinon; and whether the discharger grows crop types with high potential to lead to discharge of nitrogen to groundwater. The Agricultural Order categorizes dischargers that pose the lowest threat to water quality as Tier 1 dischargers, and those that pose the highest risk as Tier 3 dischargers, with Tier 2 dischargers representing an intermediate risk level. The tier to which a discharger is assigned then determines the requirements that apply to that discharger. Tier 2 dischargers face more stringent requirements compared to Tier 1 dischargers; Tier 3 dischargers, in turn, must comply with the most stringent requirements.

The Agricultural Order requires dischargers to implement a number of controls to reduce discharge of pollutants from agricultural operations. The controls include, but are not limited to, the installation of backflow prevention devices, maintenance of containment

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<sup>2</sup> The Central Coast Water Board has submitted a request for official notice of the "Report to the Legislature – Addressing Nitrate in California's Drinking Water" (Harter, T. et al., UC Davis Groundwater Nitrate Project, prepared for the State Water Board, March 2012) (UCD Nitrate Report). The UCD Nitrate Report was prepared for the State Water Board and we recognize the high significance of the information and analysis contained in the Report in understanding the impact of nitrate on drinking water and potential solutions to that issue. As discussed elsewhere in this Order, the State Water Board has committed to convening an expert panel to consider the findings of the UCD Nitrate Report and to assess agricultural nitrate control practices. However, for the short-term purposes of resolving the Petitions, we find that the administrative record already before us contains sufficient evidence of the impact of agricultural practices on drinking water in the Central Coast region as well as practices that may ameliorate the problem. The request to take official notice of the UCD Nitrate Report is therefore denied.

<sup>3</sup> While the 2004 Agricultural Order expired in 2009, the Central Coast Water Board, or its Executive Officer, due to a lack of quorum of board members eligible to act, administratively extended it several times.

structures, maintenance of riparian vegetative cover and riparian areas, and preparation of a farm plan for dischargers in all three tiers, initiation of certain irrigation and nutrient management practices to control nitrates for Tier 2 and Tier 3 dischargers, and maintenance of water quality buffers for Tier 3 dischargers. The Agricultural Order also has extensive monitoring and reporting requirements, including receiving water monitoring and groundwater monitoring for dischargers in all three tiers, photo monitoring and submission of an annual compliance form for Tier 2 and Tier 3 dischargers, and individual surface water discharge monitoring for Tier 3 dischargers. The Central Coast Water Board staggered compliance deadlines for the provisions of the Agricultural Order over its five-year term.

The Central Coast Water Board adopted the Agricultural Order and certified an associated Subsequent Environmental Impact Report (SEIR) on March 15, 2012, following a multi-year public process that included issuance of several draft orders and associated staff reports, with public comment periods and multiple public workshops and hearings before the Board.<sup>4</sup> The State Water Board received timely petitions for review of the Agricultural Order from five groups of petitioners: Monterey Coastkeeper, Santa Barbara Channelkeeper, San Luis Obispo Coastkeeper (collectively, Keepers); Ocean Mist Farms and RC Farms (collectively, Ocean Mist); Grower-Shipper Association of Central California, Grower-Shipper Association of Santa Barbara and San Luis Obispo Counties, and Western Growers (collectively, Grower-Shipper); California Farm Bureau Federation, Monterey County Farm Bureau, San Benito County Farm Bureau, San Luis Obispo County Farm Bureau, San Mateo County Farm Bureau, Santa Barbara County Farm Bureau, Santa Clara County Farm Bureau, and Santa Cruz County Farm Bureau (collectively, Farm Bureau); and Jensen Family Farms, Inc., and William Elliott (collectively, Jensen).<sup>5</sup>

Ocean Mist and Grower-Shipper also submitted complete requests that the State Water Board stay certain provisions of the Agricultural Order pending our resolution of the petitions for review on the merits. Following an evidentiary hearing to consider the requests for

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<sup>4</sup> These included a Board workshop on September 2, 2010, Board panel hearings on March 17 and May 4, 2011, a Board workshop on February 1, 2012, and a Board hearing on March 14-15, 2012.

<sup>5</sup> Ocean Mist, Grower-Shipper, Farm Bureau, and Jensen are collectively referred to herein as the "Agricultural Petitioners." Not all of the arguments attributed to the Agricultural Petitioners in this Order were made by all four of these petitioners; however, for ease of reference, we refer to arguments made by one or more of Ocean Mist, Grower-Shipper, Farm Bureau, and Jensen as being made by the Agricultural Petitioners.

stay on August 30, 2012, we adopted an order on September 19, 2012 (Stay Order),<sup>6</sup> granting the requests in part and denying the remainder of the stay requests.

Having deemed the petitions complete, received the record and a response to the petitions from the Central Coast Water Board, and received responses to the petitions from interested persons, we now turn to the merits of petitioners' arguments. As permitted under our regulations,<sup>7</sup> we will consolidate the petitions and address all five petitions in this Order.

As an initial matter, in addressing the merits, we acknowledge that the State Water Board committed in a report to the Legislature in February of this year to convene a panel of experts to assess existing agricultural nitrate control practices and propose new practices to protect groundwater as appropriate (Expert Panel).<sup>8</sup> The Expert Panel, which the State Water Board is currently in the process of convening, will consist of a broad spectrum of experts from relevant disciplines and will hold several public workshops to take input and comment before making proposals to the State Water Board. Many of the groundwater issues contested in the petitions are best addressed by the Expert Panel, and we will task the Expert Panel with certain issues related to the impact of agricultural discharges on surface water as well.

While we have not delayed arriving at some resolution of the contested provisions of the Agricultural Order, we have in a number of instances indicated in this Order that we will pose the issue to the Expert Panel. We expect the panel to conduct a more thorough analysis and to provide long-term recommendations that may be applied statewide. Broadly, the issues we will request the Expert Panel to consider include: the indicators and methodologies for determining risk to surface and groundwater quality, the appropriate targets for measuring progress in lowering that risk, and the efficacy of groundwater and surface water discharge monitoring in evaluating practice effectiveness. More specific questions that will be posed to the Expert Panel are stated in the relevant sections of this Order. Answers to these broad and specific questions will inform the development of the agricultural regulatory program in the Central Coast and elsewhere in the State. We therefore emphasize, at the outset of our discussion of the issues, that this Order constitutes only an interim determination as to how to move forward on the difficult and complex questions presented in the petitions, pending the Expert Panel's more thorough examination of the underlying issues. If, following release of the

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<sup>6</sup> State Water Board [Order WQ 2012-0012](#) (*Ocean Mist et al.*). With adoption of this Order, the stay has no further effect and is dissolved.

<sup>7</sup> Cal. Code Regs., tit. 23, § 2054.

<sup>8</sup> State Water Board, Report to the Legislature, *Recommendations Addressing Nitrate in Groundwater* (Feb. 20, 2013), available at <[http://www.swrcb.ca.gov/water\\_issues/programs/nitrate\\_project/docs/nitrate\\_rpt.pdf](http://www.swrcb.ca.gov/water_issues/programs/nitrate_project/docs/nitrate_rpt.pdf)> (as of Jun. 4, 2013).

Expert Panel's findings, we determine that additional revisions to the Agricultural Order are warranted, we will provide appropriate direction at that time.<sup>9</sup>

## II. ISSUES AND FINDINGS

Between the five petitions, over forty contentions were raised claiming deficiencies in the Agricultural Order. Several issues were resolved, in whole or in part, in the Stay Order. We do not see the need to revisit these issues.<sup>10</sup> This Order addresses the most significant remaining contentions. To the extent petitioners raised issues that were not resolved in the Stay Order or are not discussed in this Order, such issues are dismissed as not raising substantial issues appropriate for State Water Board review.<sup>11</sup>

Following circulation of a first proposed draft of this Order on June 6, 2013, the State Water Board received a comment letter from representatives of the environmental justice community (Environmental Justice Groups).<sup>12</sup> Grower-Shipper submitted objections to certain references and comments in the comment letter,<sup>13</sup> specifically asking us to disregard (1) all references to the UCD Nitrate Report; (2) all comments related to Assembly Bill 685's<sup>14</sup> directive to consider the human right to safe, clean, affordable, and accessible water; (3) all comments related to antidegradation requirements; and (4) all comments addressing the recent approval by the Central Coast Water Board of cooperative monitoring plans. With regard to the UCD Nitrate Report, we agree that the report is not a part of the administrative record of this proceeding and we will not rely on the report in this Order.<sup>15</sup> We also agree with Grower-Shipper that the recently approved cooperative groundwater plans are not properly before us at

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<sup>9</sup> We note that unlike a National Pollutant Discharge Elimination System permit, a general, conditional waiver is not subject to stringent limitations on re-opening and modification. (Compare 40 C.F.R §§ 122.62 & 122.64 [limiting modification and termination] with Wat. Code, § 13269, subd. (a)(2) [recognizing that termination may occur at any time].) Revisions to the Agricultural Order would be subject to the applicable public notice requirements.

<sup>10</sup> Issues we will not revisit because they were sufficiently resolved in the Stay Order include TMDL compliance (~~id.~~ Stay Order, pp. 9-10); installation of backflow prevention devices (*id.*, pp. 10-12); and maintenance of riparian areas (*id.*, p. 14). While the Stay Order has no further effect following adoption of this Order, we decline to revise the provisions regarding TMDL compliance, installation of backflow prevention devices, and maintenance of riparian areas for the same reasons articulated in the Stay Order regarding the lack of substantial questions of fact and law raised by these issues.

<sup>11</sup> *People v. Barry* (1987) 194 Cal.App.3d 158, 175-177; *Johnson v. State Water Resources Control Bd.* (2004) 123 Cal.App.4th 1107, 1114; Cal. Code Regs., tit. 23, § 2052, subd. (a)(1).

<sup>12</sup> Comment Letter from Clean Water Action et al. (Jul. 16, 2013).

<sup>13</sup> Grower Shipper Motion to Strike (Jul. 22, 2013).

<sup>14</sup> AB 685 (Stats. 2012, ch. 524) added section 106.3 to the Water Code. While the Environmental Justice Groups refer to the legislative measure, for the remainder of this order we will refer to its statutory codification in Water Code section 106.3.

<sup>15</sup> See footnote 2, *ante*.

this time as they reflect actions taken after adoption of the Agricultural Order that are not part of the administrative record. However, we distinguish in Section G of this Order between reviewing the approved cooperative groundwater monitoring programs that are outside the scope of these proceedings and reviewing the provisions of the Agricultural Order that relate to cooperative groundwater monitoring. With regard to whether the State Water Board should consider Water Code section 106.3 and antidegradation requirements in adopting this Order, we address those questions in greater depth following our discussion of the issues raised in the petitions.

Following circulation of a second proposed draft of this Order on August 20, 2013, the State Water Board received comments from the Central Coast Groundwater Coalition (CCGC) and from Grower-Shipper discussing, in part, specific elements of a cooperative groundwater program submitted by CCGC and approved by the Central Coast Water Board (CCGC Program). Antonia Manzo, a petitioner challenging approval of the CCGC Program in a separate action, but represented by California Rural Legal Assistance, one of the Environmental Justice Groups participating in the current proceedings, filed an objection to all comments discussing the substance of the CCGC Program.<sup>16</sup> Manzo stated that comments not properly before the Board included, but were not limited to, (1) statements in the CCGC comment letter, including on page 1, asserting that the CCGC Program is consistent with the Tier 1, 2, and 3 MRPs; (2) the detailed description of the work plan of the CCGC Program on pages 3-4 of the CCGC comment letter; (3) various other comments on pages 2, 3, and 5 of the CCGC letter speaking to the adequacy and efficacy of the approved work plan; and (4) similar statements regarding the adequacy and efficacy of the approved work plan on pages 6-7 in the Grower-Shipper comment letter. As above, we hold that the recently approved cooperative groundwater plans, including the CCGC Program, are not properly before us at this time as they reflect actions taken after adoption of the Agricultural Order that are not part of the administrative record. The comments discussing the substance of the CCGC Program will not be made part of the record of these proceedings and we will not consider those comments in resolving issues in the proceedings. However, we continue to distinguish in Section G of this Order between reviewing the approved cooperative groundwater monitoring programs that are outside the scope of these proceedings and considering options for and potential effects of revisions to the cooperative groundwater monitoring provisions that are in the Order.

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<sup>16</sup> Antonia Manzo Motion to Strike (Sept. 5, 2013).

**A. Due Process Considerations and Third Party Compliance Options, Provision 11**

At the March 14-15, 2012 hearing, after the close of public testimony and during Central Coast Water Board member deliberations, Board member Michael Johnston introduced a proposal that would allow third party approaches to implementation of controls and monitoring requirements (Johnston Proposal). The Central Coast Water Board then adopted the Agricultural Order with the Johnston Proposal. The Agricultural Petitioners argue that the inclusion of the Johnston Proposal violated their due process rights because it was developed based on impermissible ex parte communications and because they were not given an opportunity to comment on the Johnston Proposal.<sup>17</sup>

Allowing third party approaches to meeting permit obligations was a recurring discussion throughout the development of the Agricultural Order. There is a wide range and scope of potential third party approaches, but the distinguishing characteristic of all third party approaches is that they involve a group of dischargers organized around an entity other than a regional water quality control board (regional water board) that assists the dischargers with compliance with some or all of a regulatory program like the Agricultural Order. The Farm Bureau proposed third party based monitoring and data collection options in the first set of public comments in early 2010 and in correspondence thereafter.<sup>18</sup> A coalition of agricultural organizations (Farmers for Water Quality), which included the Agricultural Petitioners, presented a third party alternative to the Central Coast Water Board at the March 17, 2011 and May 4, 2011 Board meetings, and in written comments.<sup>19</sup> Farmers for Water Quality continued to refine its third party proposal with presentations at the February 1, 2012 Board workshop, and finally, at the Board adoption hearing on March 14-15, 2012.<sup>20</sup> In essence, this third party approach (referred to hereinafter as the “Agricultural Proposal”) contemplated that dischargers would have the option of joining a coalition of dischargers in lieu of meeting certain Tier 2 and Tier 3 requirements, including annual compliance reporting, photo monitoring, surface water discharge monitoring, and implementation of a water quality buffer plan. The coalition would, with the assistance of a technical advisory committee (TAC), develop an auditable farm water quality management plan and a program for auditing twenty percent of members each year to evaluate management practice implementation, as well as develop a practice effectiveness

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<sup>17</sup> See Gov. Code, § 11425.10, subd. (a)(1) & (8).

<sup>18</sup> See Administrative Record (AR) File Nos. 96 & 213.

<sup>19</sup> AR File Nos. 242, 264, 278 & 287.

<sup>20</sup> AR File Nos. 311 & 344.



evaluation program. The coalition would submit aggregated compliance data to the Central Coast Water Board, in contrast to the farm-level data required to be submitted by the draft order proposed by Central Coast Water Board staff.<sup>21</sup>

In February 2012, in response to the Agricultural Proposal, Steve Shimek, representing Monterey Coastkeeper, drafted a proposed compromise to allow for the development of third party approaches subsequent to adoption of the Agricultural Order (Shimek Proposal). The compromise did not specify any particular third party compliance option, but allowed for a third party administered program to be reviewed by a TAC and approved by the Central Coast Water Board's Executive Officer subsequent to adoption by the Central Coast Water Board of the Agricultural Order. Shimek shared his Proposal with several interested parties, including Agricultural Petitioners' experts Marc Los Huertos and Ross Clark, Rick Tomlinson with the Strawberry Commission, California Environmental Protection Agency Undersecretary Gordon Burns, Executive Officer of the Central Coast Water Board, Roger Briggs, and Central Coast Water Board staff Lisa McCann and Angela Schroeter. The Shimek Proposal did not garner full support from either the agricultural community or the environmental community and Shimek did not present it during testimony at the March 14-15, 2012, Central Coast Water Board hearing.<sup>22</sup>

At some point shortly before the March 2012 hearing, Board Member Johnston communicated with Executive Officer Briggs about developing language for the Agricultural Order that would allow the dischargers to propose third party options for compliance subsequent to permit adoption. Mr. Briggs, in collaboration with Board Counsel Frances McChesney, drafted language that became the Johnston Proposal, borrowing some of that language from the Shimek Proposal.<sup>23</sup> Board Member Johnston introduced his proposal during Board member deliberations on March 15, 2012, as an alternative to adopting the Agricultural Proposal. Although Central Coast Water Board staff had proposed during the hearing to incorporate some changes responsive to comments from Farmers for Water Quality, staff had not recommended adopting an order with the Agricultural Proposal, primarily because of concerns with moving away from farm-level accountability. Board Member Johnston suggested that his proposal would allow the Board to adopt the Agricultural Order as proposed by staff, but retain the option

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<sup>21</sup> AR File No. 344.

<sup>22</sup> Declaration of Steve Shimek, attached to Response of Monterey Coastkeeper, San Luis Obispo Coastkeeper, and Santa Barbara Channelkeeper (Oct. 31, 2012), pp. 3-4, ¶¶ 4-9, Exh. A & B; Petition for Review and Statement of Points and Authorities of Grower-Shipper et al. (Apr. 16, 2012) (Grower-Shipper Petition), Exh. G.

<sup>23</sup> AR File No. 352; Grower-Shipper Petition, Exh. G.

of approving third party approaches to compliance in the future, including potentially the Agricultural Proposal in some modified form. After extensive discussion on whether it was preferable to instead spend the additional time to iron out any issues with the Agricultural Proposal for incorporation into a final order, the Board unanimously<sup>24</sup> chose to adopt the Agricultural Order with the Johnston Proposal instead. Neither Board Member Johnston nor the other Board members appear to have been aware that the Johnston Proposal included ideas and language from the Shimek Proposal.<sup>25</sup>

### **1. Ex Parte Communications Claims**

Adoption of the Agricultural Order was an adjudicative proceeding, subject to the provisions of chapter 4.5 of the Administrative Procedures Act, including the prohibition against ex parte communications.<sup>26</sup> Although the Legislature has since created certain exceptions to the ex parte communications prohibition for general orders such as the Agricultural Order, the prohibition against both direct and indirect communications to Board members from parties or interested persons applied to the adoption of the Agricultural Order while it was pending before the Central Coast Water Board. The Agricultural Petitioners argue that the Johnston Proposal resulted from prohibited, indirect ex parte communications with a Board member, with Executive Officer Briggs acting as a conduit communicating Mr. Shimek's proposal to Board Member Johnston.

We disagree. The prohibition against ex parte communications does not apply to a board member's communications with advisory staff<sup>27</sup> as long as advisory staff does not (1) augment, diminish, or modify evidence in the record or (2) act as a conduit, or intermediary, between a party and a board member. Mr. Briggs and Ms. McChesney were advisory staff to the Board in the proceeding. Throughout development of a permit, advisory staff engages with parties and interested persons in the proceedings. Staff evaluates and synthesizes the feedback it receives through this ongoing process, and pushes forward ideas and solutions to

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<sup>24</sup> Board Member Dr. Jean-Pierre Wolff recused himself from the proceedings and vote.

<sup>25</sup> AR File No. 352.

<sup>26</sup> Gov. Code, § 11430.10 et seq.

<sup>27</sup> *Id.*, § 11430.30; see also State Water Board, Chief Counsel Michael A.M. Lauffer, *Ex Parte Questions and Answers* (Sep. 17, 2008) [version in effect at time of Agricultural Order adoption], p. 9, Question No. 22. Jensen argues that, regardless of whether Executive Officer Briggs was acting as a conduit for the communication from Mr. Shimek, his communications with Board Member Johnston were prohibited ex parte communications from a staff member acting as an advocate. Jensen misconstrues the facts of the proceedings before the Central Coast Water Board. Unlike in enforcement actions, in permitting actions such as the adoption of the Agricultural Order, the State Water Board and regional water boards do not separate functions between prosecutorial and advisory staff members. In permitting actions, staff members are expected to make recommendations to the board members and doing so does not convert their role from advisory staff to independent advocates.

problems it finds to have merit. This process would be unreasonably hampered if staff were prohibited from communicating such ideas and solutions to board members seeking advice on permitting challenges, simply because some of those ideas and solutions may have originated in discussions with stakeholders.

Here, Central Coast Water Board staff met with both agricultural representatives and environmental representatives numerous times throughout the multiple-year process of developing the Agricultural Order, both in formal stakeholder settings and informally in meetings. Staff released several public drafts that were informed by these discussions, incorporating, in many instances, proposals made by agricultural representatives. Similarly, when asked to draft language for a compromise third party approach, it was not inappropriate for Executive Officer Briggs to turn to the input he had received from Mr. Shimek proposing a similar approach and to rework that input to address Mr. Johnston's inquiry. While the line between acting as a conduit to an indirect ex parte communication and proposing a solution based, in part, on a stakeholder's advocated position may be admittedly difficult to pinpoint, in the context discussed, we find that the Johnston proposal did not cross that line. It was not a result of a prohibited indirect ex parte communication, but rather a legitimate advisory action by the Board Executive Officer and Counsel.<sup>28</sup>

## **2. Notice and Opportunity to be Heard**

The Agricultural Petitioners additionally argue that they were deprived of due process because they were not given notice and opportunity to be heard on the Johnston Proposal.<sup>29</sup> We again disagree. As a preliminary matter, the Central Coast Water Board staff and members were certainly not required to bring the process of revising the Agricultural Order to a halt with the release of the final proposed draft for comment. In most permitting actions, revisions continue to be made through adoption of the permit. The Agricultural Petitioners themselves anticipated this when they brought a revamped Agricultural Proposal to the March 14-15, 2012 Board Hearing and presented it to the Board. The law recognizes a

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<sup>28</sup> We also note that recent legislation added Water Code section 13287, which, effective January 1, 2013, created an exception to the ex parte communications prohibition for certain proceedings concerning general orders. Under Water Code section 13287, Mr. Shimek would have been allowed to bring his proposal directly to the Board members up to 14 days prior to Board adoption, as long as he disclosed that communication. The exception was not in effect at the time and does not control resolution of this matter, but we nevertheless view the subsequent legislative endorsement of these types of communications as further grounds for resolving any ambiguity in favor of the Board. Finally, we note that to the extent there has been full consideration of the underlying proposals by us during this petition review process, any procedural defect at the Central Coast Water Board has either been cured or rendered harmless by our review and this Order.

<sup>29</sup> The Agricultural Petitioners cite to Government Code section 11425.10, subdivision (a)(1).

dynamic process in which revisions will be made in response to comments received on the proposed draft and requires that a new opportunity for comment be created only if the revisions were not a “logical outgrowth” of comments received. If the interested parties reasonably could have anticipated the final version from the draft permit, then an additional opportunity for notice and comment is not required.<sup>30</sup>

As stated previously, proposals for third party compliance options had been discussed throughout the process of developing the Agricultural Order. Although the final draft that went before the Board on March 14-15, 2012, did not include the Agricultural Proposal,<sup>31</sup> that alternative was clearly on the table as Farmers for Water Quality continued to push for the proposal in written and oral comments before the Board and in a presentation at the Board hearing.<sup>32</sup> The Johnston Proposal was an attempt to acknowledge the potential of third party approaches while declining to adopt the particular third party option presented in the Agricultural Proposal. As such, Board Member Johnston’s proposal was a direct outgrowth of the extensive comments received on the proposed Agricultural Order.<sup>33</sup>

We understand, however, that the argument made by the Agricultural Petitioners is more nuanced. They point out that Board Member Johnston waited to introduce his proposal until after the close of public testimony and that as a result there was no opportunity for them to weigh in orally on the proposal. They also argue that this late introduction of a new proposal shifted the focus of the deliberations away from how to re-work the Agricultural Proposal such that the Board might agree to adopt some version of it at the hearing<sup>34</sup> by, in essence, giving the Board members the appearance of an option to postpone those difficult determinations to a future date. Had the Agricultural Petitioners been given an opportunity to engage the Board members on the Johnston Proposal earlier in the proceedings, they assert, the Board members may have reconsidered whether the Johnston Proposal in fact was the reasonable compromise it appeared to be. It is not clear to the Agricultural Petitioners that the Johnston Proposal, and in

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<sup>30</sup> See *Natural Resources Defense Council v. U.S. E.P.A.* (9<sup>th</sup> Cir. 2002) 279 F.3d 1180, 1186; *First American Discount Corp. v. Commodity Futures Trading Com.* (D.C. Cir. 2000) 222 F.3d 1008, 1015; State Water Board Order WQ 2012-0013 (*Sacramento Regional Wastewater Treatment Plant*), p. 39.

<sup>31</sup> AR File No. 338.

<sup>32</sup> AR File Nos. 287, 311, & 344.

<sup>33</sup> We also note that the Proposal did not change any of the future requirements of the proposed final draft of the Agricultural Order, but merely added a path that allowed for consideration of alternative compliance options.

<sup>34</sup> Here, the Agricultural Petitioners appear also to be arguing that the Board members were misled into thinking they could not adopt the Agricultural Proposal as presented and were therefore drawn to the Johnston Proposal because staff had misrepresented that the Agricultural Proposal failed to meet certain legal or policy requirements. On this point, we find that Board members were entitled to rely on Board staff and counsel’s advice regarding asserted policy and legal deficiencies in the Agricultural Proposal and to decline to adopt the Proposal wholesale.

particular the Agricultural Order's resulting Provision 11 would, in fact, accommodate approval of a proposal similar to the Agricultural Proposal in the future, even if the differences between Board staff and Farmers for Water Quality were resolved. This is so because Provision 11 primarily contemplated water quality improvement projects rather than third party monitoring and reporting programs.

On this last point, we are somewhat sympathetic to the Agricultural Petitioners' position. As apparent during deliberations, the Central Coast Board members anticipated that the Johnston Proposal was broad enough to be inclusive of future consideration of the type of third party proposal advocated by Farmers for Water Quality, albeit with changes to address certain legal and policy concerns.<sup>35</sup> Provision 11 as written, however, is confusing and arguably too narrow to allow for the approval of third-party auditing, monitoring, and reporting proposals because such proposals focus on the methodologies for data gathering and reporting and may be neutral as to practice implementation for water quality achievement.<sup>36</sup> Provision 11 mentions both water quality management "projects" and cooperative monitoring and reporting "programs" but does not clarify the distinction in the criteria for evaluation of these separate categories.

This is not to say that we find that the process for adoption of Provision 11 was legally flawed. The Board members had the record before them and had heard extensive comments from interested persons. We expect regional water board members to evaluate the evidence before them and deviate from staff or stakeholder-proposed options to formulate their own solutions when appropriate. Nothing in the law precludes Board members from introducing their own proposals during Board deliberations and other Board members from signing on to those solutions. Adoption of the Johnston Proposal was accordingly a legitimate and legal exercise of the Board's discretion.

Yet, it appears that in this particular case, because the issue of third party alternatives had been so central to the proceedings, all parties, including the Board itself, would have benefited had the Board sought at least some brief oral input on the Johnston Proposal from the interested persons present at the hearing. The Board Chair has the discretion to reopen a hearing when he or she believes that additional comment would benefit the Board's

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<sup>35</sup> AR File No. 352, pp. 24-38; see also AR File No. 331 (showing that Johnston Proposal edits to Finding 11 included discussion of aggregate monitoring and reporting programs).

<sup>36</sup> Certain provisions of the proposed draft Agricultural Order, notably the surface receiving water monitoring and groundwater monitoring provisions, allowed for cooperative monitoring alternatives prior to introduction of Provision 11 in the final adopted Agricultural Order. (See Tiers 1, 2, & 3 MRPs, Part 1, Section A.1 & Part 2, Section A.6). As a result, Provision 11 is in certain instances duplicative of (but not inconsistent with) alternative monitoring requirements in the Agricultural Order.

decision. The value of such input would have been in helping the Board to refine the Johnston Proposal to ensure that it captured the Board's intent in adopting it. Accordingly, while we decline to overturn or amend the Agricultural Order on grounds of due process violations, we will address the ambiguity in the scope of Provision 11, as set out in the edits below. Specifically, we draw out the options of proposing third party water quality improvement programs and monitoring and reporting programs<sup>37</sup> in addition to third party water quality improvement projects and clarify the criteria for evaluating such program proposals.

We make two additional revisions to Provision 11. First, with regard to third party water quality improvement projects and programs, we revise the requirement regarding the chance of success of the project or program with the goal of permitting consideration of a range of water quality improvement projects and programs, not just those that may address toxicity or nutrients on a large scale. Second, we expand the role of the Central Coast Water Board in considering third party proposals. Provision 11 allows the Board's review only when the Executive Officer denies approval of a project or program. We have not found an articulated basis in the record for limiting review to denial of a project or program approval, when approval of a project or program may be equally concerning to interested persons – for instance, because a proposed project may not be sufficiently protective of water quality or a third party monitoring program may be designed to obscure accountability.<sup>38</sup>

Finally, while this last point is not reflected in specific revisions to Provision 11, we believe it is important here for us to express our support of third party approaches generally. There are a number of advantages to utilizing a third party approach to regulation of agricultural discharges. From a resource perspective, third parties allow a regional water board to leverage limited regulatory staff by acting as intermediaries between the regional water board staff and the growers, freeing regional water board resources to focus on problem areas or actors. Third parties also may have the expertise to provide technical assistance and training to growers at a scale that cannot be matched by regional water board staff resources, and, in many cases, third parties already have relationships in place with the dischargers. We recognize the need to be wary of third party programs that report compliance at too high a level of generality. As a result,

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<sup>37</sup> In the new language describing third party monitoring and reporting programs, we state that “aggregate monitoring and reporting must be on a scale sufficient to track progress in small sub-basins and be sufficiently representative of conditions in the sub-basins.” The program proponents have flexibility to propose the appropriate scale for such sub-basins. We expect small sub-basins to be a real representations that are dictated by local conditions and constitute a reasonable unit for follow-up practice implementation for water quality improvement.

<sup>38</sup> See discussion of Executive Officer discretion, *post*, at section II.C “Reasonableness of Tiering Criteria, Provisions 13-21.”

we expect the Central Coast Water Board to review proposals carefully to ensure consistency with legal requirements to verify the adequacy and effectiveness of waiver conditions and provide sufficient feedback mechanisms for determination of whether the required controls are achieving the Agricultural Order's stated purposes.<sup>39</sup> However, we also expect the Central Coast Water Board to give fair and due consideration to proposed third party projects and programs and work with third party groups in good faith to develop viable alternatives. Depending on the scope of any proposed third party program under the current Agricultural Order, the Central Coast Water Board may consider developing a separate order specific to the third party program. Further, in the next iteration of the Agricultural Order, the Central Coast Water Board should strongly consider developing orders for both third party programs and individual dischargers.

We shall amend Provision 11 as follows:<sup>40</sup>

11. Dischargers may form third party groups to develop and implement alternative water quality ~~management practices (i.e., group projects)~~ **improvement projects or programs** or cooperative monitoring and reporting programs to comply with this Order. At the discretion of the Executive Officer, Dischargers that are a participant in a third party group that implements Executive Officer-approved water quality improvement projects **or programs** or Executive Officer-approved alternative monitoring and reporting programs may be moved to a lower Tier (e.g., Tier 3 to Tier 2, Tier 2 to Tier 1) and/or provided alternative project **or program**-specific **requirements**, timelines, and/or milestones.

~~To be subject to~~ **qualify for** Tier changes or alternative **requirements**, timelines, **and/or milestones**. ~~Projects~~ **third party water quality improvement projects and programs** will be evaluated for, among other elements:

- Project **or Program** Description. Description must include identification of participants, methods, and time schedule for implementation.
- Purpose. Proposal must state desired outcomes or goals of the project **or program** (e.g., pollutants to be addressed, amount of pollution load to be reduced, water quality improvement expected).
- Scale. Solutions must be scaled to address impairment.
- Chance of Success. Projects **or programs** must demonstrate a reasonable chance of ~~eliminating toxicity within the permit term (five years) or reducing discharge of nutrients to surface and groundwater~~ **improving water quality and/or reducing pollutant loading**.

<sup>39</sup> Wat. Code, § 13269, subd. (a)(2); Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program, State Water Board (May 20, 2004), available at <[http://www.waterboards.ca.gov/water\\_issues/programs/nps/docs/oalfinalcopy052604.pdf](http://www.waterboards.ca.gov/water_issues/programs/nps/docs/oalfinalcopy052604.pdf)> (as of Jun. 4, 2013) (Non-Point Source Policy), p. 13.

<sup>40</sup> Throughout this Order we will use ~~strikeout~~ text to indicate text to be removed from the Agricultural Order and **bold-underline** text to indicate our additions. All other emphasis is maintained from the existing Agricultural Order.

- Long term solutions and contingencies. Proposals must address what new actions will be taken if the project or program does not meet goals and how the project or program will be sustained through time.
- Accountability. Proposals must set milestones that indicate progress towards goals stated as above in “purpose.”
- ~~M~~ **Project or program** monitoring and reporting. Description of monitoring and measuring methods, and information to be provided to the Water Board. Monitoring points must be representative but may not always be at the edge-of-farm so long as monitoring results ~~demonstrate~~ **provide indicators of water quality improvement and/or pollutant load reductions,** and the efficacy of a project or program. **The monitoring and reporting may be a third party monitoring and reporting program consistent with the requirements in the next paragraph.** ~~In addition, monitoring must 1) characterize and be representative of discharge to receiving water, 2) demonstrate project effectiveness, 3) and verify progress towards water quality improvement and pollutant load reduction,~~

**To qualify for Tier changes or alternative requirements, timelines, and/or milestones, third party monitoring and reporting programs will be evaluated for, among other elements:**

- **Program Description: Description of monitoring methodologies, schedule, and reporting.**
- **Purpose: Third party monitoring and reporting programs must include collection of data that will provide indicators of water quality improvement and/or pollutant load reduction and aggregate monitoring and reporting must be on a scale sufficient to track progress in small sub-basins and be sufficiently representative of conditions in the sub-basins.**

~~Project~~ **Third party water quality improvement project or program and third party monitoring and reporting program** proposals will be evaluated by a Technical Advisory Committee (TAC) comprised of: Two researchers or academics skilled in agricultural practices and/or water quality, one farm advisor (e.g., from Natural Resources Conservation Service or local Resource Conservation Districts), one grower representative, one environmental representative, one environmental justice or environmental health representative, and one Regional Board staff. The TAC must have a minimum of five members to evaluate project or program proposals and make recommendations to the Executive Officer. The Executive Officer has discretion to approve any **third party water quality improvement project or program or third party monitoring and reporting program** after receiving project or program evaluation results and recommendations from the committee. ~~If the Executive Officer denies approval, the third party group~~ **The Executive Officer may waive the requirement for TAC review of a project or program if the Executive Officer determines that three or more of the seven specified representatives are unavailable for serving on a TAC. The Executive Officer shall document efforts to convene representatives from each category. Third party projects or programs specifically allowed elsewhere in this Order, such as cooperative receiving water monitoring and**



**cooperative groundwater monitoring, are subject to the specific provisions authorizing such third party projects and programs, rather than the requirements of Provision 11.**

**An interested person** may seek **discretionary** review by the Regional Board **of the Executive Officer's approval or denial of a third party project or program**. As stated in the NPS Policy, management practice implementation is not a substitute for compliance with water quality requirements. If the project is not effective in achieving water quality standards, additional management practices by individual Dischargers or the third party group will be necessary.

**B. Water Code Sections 13141 and 13241**

Water Code section 13141 states:

State policy for water quality control adopted or revised in accordance with the provisions of this article, and regional water quality control plans approved or revised in accordance with Section 13245, shall become a part of the California Water Plan effective when such state policy for water quality control, and such regional water quality control plans have been reported to the Legislature at any session thereof.

However, prior to implementation of any agricultural water quality control program, an estimate of the total cost of such a program, together with an identification of potential sources of financing, shall be indicated in any regional water quality control plan.

The Agricultural Petitioners point to Water Code section 13141 to argue that the Central Coast Water Board is required to amend the Water Quality Control Plan for the Central Coastal Basin (Central Coast Basin Plan) to add a cost analysis for the Agricultural Order prior to implementation. Section 13141 is in article 3 of chapter 3 of division 7 of the Water Code, which addresses state policy for water quality control, not permitting. The second paragraph of section 13141 simply modifies the first paragraph. We therefore read the second paragraph as applicable only to an agricultural water quality control program that is adopted within a water quality control plan. We do not read section 13141 to require amendment of a water quality control plan prior to reissuance of a conditional waiver regulating agricultural discharges, especially given later-enacted amendments to Water Code section 13269.<sup>41</sup> We also note that the Central Coast Water Board in fact engaged in an extensive analysis of the costs of the Agricultural Order requirements to the agricultural dischargers and of sources of financing to

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<sup>41</sup> Stats. 1999, ch. 686 (adding provisions to Water Code section 13269 terminating all existing waivers, including agricultural waivers, and specifying that future waivers must be reconsidered at least every five years). Water Code section 13269 also requires that waivers must be consistent with any water quality control plan.

meet such costs.<sup>42</sup> As such, the Central Coast Water Board met the intent of section 13141 by considering the economic impact of the Agricultural Order on the dischargers.

The Agricultural Petitioners also argue that Water Code section 13241 required the Central Coast Water Board to conduct an analysis of the economic costs to the agricultural dischargers prior to adoption of the Agricultural Order. Water Code section 13241 requires the regional water boards to take into account “economic considerations” when establishing water quality objectives. Water Code section 13269, the authority under which the Central Coast Water Board adopted the Agricultural Order, does not reference Water Code section 13241.<sup>43</sup> Regardless, as stated above, the Central Coast Water Board did consider the economic implications of the Agricultural Order.

Accordingly, for the stated reasons, we find neither Water Code section 13141 nor section 13241 barred the Central Coast Water Board from adoption or implementation of the Agricultural Order.

### **C. Reasonableness of Tiering Criteria, Provisions 13-21**

The Agricultural Order assigns each discharger to one of three “tiers,” which determine the requirements applicable to the discharger. The tier designations are based on a number of criteria intended to capture the risk posed by the operation to water quality, including whether the discharger uses the pesticides chlorpyrifos or diazinon, proximity of discharger’s farm to a surface waterbody listed as impaired for toxicity, pesticides, nutrients, turbidity or sediment,<sup>44</sup> and whether the discharger grows crop types with high potential to discharge nitrogen to groundwater.<sup>45</sup>

Specifically, a discharger is classified as a Tier 3 discharger – the tier expected to pose the highest threat to water quality – if (a) the discharger grows crop types with high potential to discharge nitrogen to groundwater and the farm total irrigated acreage is 500 acres or more, *or* (b) the discharger applies chlorpyrifos or diazinon at the farm, and the farm discharges irrigation or storm water runoff to a waterbody listed as impaired for toxicity or pesticides.

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<sup>42</sup> AR File No. 234.

<sup>43</sup> Water Code section 13263 explicitly references section 13241 in establishing the factors to be taken into consideration when adopting waste discharge requirements. (See *City of Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4<sup>th</sup> 613, 625.) Unlike section 13263, section 13269 contains no reference to section 13241.

<sup>44</sup> Relevant Central Coast region waterbodies are listed in Table 1 of the Agricultural Order based on the 2010 Clean Water Act Section 303(d) List of Impaired Waterbodies.

<sup>45</sup> The definitions section of the Agricultural Order specifies the crop types with high potential to discharge nitrogen to groundwater. (Agricultural Order, Att. A., Part C, & Prov. 10.)

On the other hand, a discharger is classified as a Tier 1 discharger – the lowest threat tier – if (a) if the discharger does not use chlorpyrifos or diazinon at the farm; *and* (b) the discharger’s farm is located more than 1,000 feet from a surface waterbody listed as impaired for toxicity, pesticides, nutrients, turbidity, or sediment; *and* (c) the discharger either does not grow crop types with high potential to discharge nitrogen to groundwater or, if the discharger does grow such crops, the farm has less than 50 acres of total irrigated area and is not within 1,000 feet of a well that is part of a public water system that exceeds the maximum contaminant level (MCL) for nitrogen-related pollutants. Additionally, a discharger is classified as Tier 1 if the farm is certified by Sustainability in Practice (SIP), a sustainable agriculture program certified by a group of Central Coast vineyards, or a similar certified sustainable agriculture program approved by the Executive Officer of the Central Coast Water Board.

Dischargers that do not meet the criteria for Tier 1 or Tier 3 are classified as Tier 2 dischargers.<sup>46</sup>

Consistent with the expectation of threat to water quality, Tier 3 dischargers must comply with more stringent requirements than Tier 2 dischargers. Tier 2 dischargers, in turn, must meet more stringent requirements than Tier 1 dischargers. For example, while dischargers in all three tiers must prepare Farm Plans, only Tier 2 and Tier 3 dischargers are subject to annual reporting on their practices. And only Tier 3 dischargers are required to conduct and report individual surface water discharge monitoring.

The Agricultural Petitioners argue that the tiering criteria used by the Central Coast Water Board do not necessarily correlate to risk to water quality and are therefore arbitrary. They argue, for example, that there may be farms smaller than 50 acres that pose a greater risk to water quality than larger farms.<sup>47</sup> They posit that some farms using diazinon and chlorpyrifos may have no discharges to surface water.<sup>48</sup> They point out that the tiers do not capture the geology of a farm’s soil or the depth to groundwater, both of which affect impacts to

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<sup>46</sup> In general, the following categories of dischargers will be in Tier 2: dischargers that apply chlorpyrifos or diazinon at the farm, but do not discharge to a waterbody listed as impaired for toxicity or pesticides; dischargers with farms located within 1000 feet of a surface waterbody listed for impairment for toxicity, pesticides, nutrients, turbidity, or sediment, or dischargers that grow crop types with high potential to discharge nitrogen to groundwater and that are 50 acres or more but less than 500 acres or are within 1000 feet of a public water well that exceeds the MCL for nitrogen-related pollutants.

<sup>47</sup> Petition for Review of Farm Bureau et al. (Apr. 16, 2012) (Farm Bureau Petition), p. 67; Grower-Shipper Petition, p. 37, Request for Stay and Petition for Review of Ocean Mist and RC Farms (Apr. 16, 2012) (Ocean Mist Petition), p. 24. Ocean Mist appears to have misinterpreted the tiering criteria on this issue. Size is relevant to tiering only to the extent the farm already grows crops that have high potential to discharge nitrogen to groundwater.

<sup>48</sup> Grower-Shipper Petition, p. 37.

groundwater.<sup>49</sup> They argue that the management and cultural practices of certain commodities may be a better indicator of threat to water quality than the physical characteristics of the farms.<sup>50</sup> But the Agricultural Petitioners do not appear to be advancing a proposed, well-defined, alternative, and they are not advocating for uniform requirements for all dischargers.

The Central Coast Water Board chose to use a general order in the form of a conditional waiver, rather than farm-specific orders, to regulate agricultural discharges. The State Water Board supports the use of a general order given the general similarity of operations and discharges for the agricultural community in the Central Coast and in particular the considerations of efficiency in regulating a large number of dischargers. A general order necessitates either a one-size-fits-all approach or a scheme for grouping the dischargers into different categories to enable assigning different requirements. With as many farms as are covered by the Agricultural Order, it is no surprise that the categories chosen by the Central Coast Water Board may not fit each circumstance perfectly. The question for the State Water Board is not whether the Central Coast Water Board's criteria capture the risk level posed by each farm with perfect accuracy, but, rather, whether the Board chose rational distinctions between the farms to create those different categories.

We recognize that the tiering approach used by the Central Coast Water Board was not the only reasonable option available to it. There are numerous factors that determine the threat a given farm will pose to water quality and multiple variations on how those factors may be organized to provide a reasonable framework for assigning the farm to a risk category. Moreover, while the Central Coast Water Board utilized an approach based on individual farm characteristics, the Board could instead have chosen an approach based on regional characteristics, where dischargers are placed in a higher risk category commensurate with the vulnerability of the groundwater in the larger geographic area rather than individual farm characteristics.<sup>51</sup>

Yet, while the approach that was ultimately chosen by the Central Coast Water Board may not be perfect, it is a reasonable approach based on the evidence in the record<sup>52</sup>

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<sup>49</sup> Petition to Review of Jensen (Apr. 13, 2012), pp. 18-20.

<sup>50</sup> Grower-Shipper Petition, p. 36.

<sup>51</sup> This type of approach is utilized by the Central Valley Water Board in waste discharge requirements issued to growers in the Eastern San Joaquin River Watershed. (Order R5-2012-0116, <[http://www.swrcb.ca.gov/rwqcb5/board\\_decisions/adopted\\_orders/general\\_orders/r5-2012-0116.pdf](http://www.swrcb.ca.gov/rwqcb5/board_decisions/adopted_orders/general_orders/r5-2012-0116.pdf)> [as of Jun. 4, 2013].) For illustrative purposes, we take official notice of the Central Valley Water Board's order (Cal. Code Regs., tit. 23, § 648.2 and Evid. Code, § 452, subd. (c)), although we express no opinions here on the merits of its approach.

<sup>52</sup> Such evidence includes, but is not limited to, the following: AR Reference Nos. 35, 47, 72, 74, 75, 132, 133, 134, 137, 145, 146, 147, 148, 149, 165, 226, 227, 228, & 258.

and based on a rationale articulated in the staff reports and responses to comments supporting the Agricultural Order.<sup>53</sup> For example, the criteria make distinctions in risk to water quality based on use of pesticides that are currently documented as a primary cause of toxicity in the Central Coast region.<sup>54</sup> As another example, with regard to farms growing crops with high potential to discharge nitrogen, the Central Coast Water Board analyzed the impact of size of the farm on such potential and explained that the numbers less than 50 acres and more than 500 acres were chosen as the thresholds for placing a discharger in Tiers 1 or 3 respectively because 50-500 acres represented an average loading appropriate for Tier 2 categorization.<sup>55</sup> The Board further articulated that, regardless of size, proximity of a farm to a public water system polluted by nitrate should trigger Tier 2 requirements consistent with proximal distances recommended by the Department of Public Health for source water assessment and protection.<sup>56</sup> The Central Coast Water Board also pointed out that the particular tiering criteria were selected in part because they reflect already available information and do not require additional data collection or complicated or expensive site evaluations.<sup>57</sup> Finally, the Central Coast Water Board included provisions that allow the Executive Officer to adjust the tier for any given farm, which helps ameliorate any potentially unreasonable result of the tiering scheme.

We are reluctant to substitute another reasonable, but imperfect, set of criteria for those selected by the Central Coast Water Board. Further, we will ask the Expert Panel to evaluate the selection of appropriate indicators of risk to water quality as one of the long-term, state-wide issues it considers. Accordingly, in the short-term, we will not disturb the tier structure set out in the Agricultural Order.

The Agricultural Petitioners also contend that the Agricultural Order inappropriately delegates authority to the Executive Officer to elevate the tier of a given discharger. On this point, we agree with the Agricultural Petitioners, but reach the broader conclusion that the Agricultural Order's unconfined delegation of authority to the Executive Officer in provisions 18 and 19 to move a discharger up *or down* the tiering scheme is problematic. The categorization of a farm in a specific tier under the Agricultural Order is determinative of the requirements that the discharger must comply with. For example, if the Executive Officer determines that a particular discharger will be in Tier 3 instead of Tier 2, that

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<sup>53</sup> AR File Nos. 228, pp. 21-27; 232, pp. 6-16; 233; 260.

<sup>54</sup> See discussion of toxicity related to chlorpyrifos and diazinon at AR File No. 228, p. 23.

<sup>55</sup> See AR File Nos. 260, slides 18-23; 265, pp. 586-591; 283, p. 25.

<sup>56</sup> See AR File No. 228, p. 26.

<sup>57</sup> *Id.*, p. 22.

discharger will be required to implement a number of additional measures, including preparation of an Irrigation and Nutrient Management Plan and conducting of individual surface water discharge monitoring, with corresponding expenditures. Conversely, if the Executive Officer determines that a discharger qualifying as a Tier 2 discharger under the tiering criteria is more appropriately treated as a Tier 1 discharger, that discharger is no longer obligated to submit an annual compliance report or conduct photo monitoring, a reduction in requirements that could have significant implications for water quality protection.

As we have discussed, no tiering structure can perfectly account for all individual farm characteristics. There is accordingly a benefit to providing some flexibility for individual review of tier placement. However, the discretion provided to an Executive Officer to do so should not substitute for the role of the Central Coast Water Board in determining the appropriate requirements imposed on a discharger when the Board has issued an order broadly categorizing and prescribing requirements for a class of dischargers.<sup>58</sup> Provisions 18 and 19 state that the Executive Officer will make a determination based on information indicating a lower or higher threat to water quality than indicated by the assigned tier, but we find the concepts of “lower threat” or “higher threat” too vague to sufficiently circumscribe the Executive Officer’s discretion. Nor are these concepts tied, even indirectly, to the tiering criteria of the Agricultural Order in any manner that would provide transparency about why a given discharger’s water quality risk is not appropriately accounted for by the default tier under the Agricultural Order. While such a delegation may be appropriate with more specific criteria for the Executive Officer to evaluate, those criteria are lacking here.

In order to balance the need for some flexibility in tier determination with the need to confine that flexibility when carried out by the Executive Officer, we will amend the Agricultural Order to provide for discretionary Central Coast Water Board review, upon

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<sup>58</sup> Water Code section 13223 excepts the issuance, modification, or revocation of waste discharge requirements from powers that a regional water board may delegate to its executive officer. By analogy, regional water boards should be cautious in delegating to an executive officer the power to determine a discharger’s substantive requirements under a waiver of waste discharge requirements, when the boards themselves have issued the waivers in the first instance.

request,<sup>59</sup> of any Executive Officer determination of a tier when that determination deviates from the assignment of a tier under the tiering criteria.<sup>60</sup>

Although no petitioner contested the particular provision, we have similar concerns with the authority given to the Executive Officer to approve proposed sustainable agriculture programs, the result of which is that all certified participant dischargers in an approved program are lowered to Tier 1. Because approval of a sustainable agriculture program would allow a whole set of dischargers to be moved to a lower Tier, we believe the approval should be carried out by the Board in the first instance, rather than by the Executive Officer.<sup>61</sup>

We shall amend Provisions 15, 18, and 19 as follows:

15. **Tier 1** – Applies to all Dischargers whose individual farm/ranch meets all of the criteria described in **(1a)**, **(1b)**, and **(1c)**, or whose individual farm/ranch is certified in a sustainable agriculture program identified in **(1d)** that requires and verifies effective implementation of management practices that protect water quality:

- 1a. Discharger does not use chlorpyrifos or diazinon at the farm/ranch, which are documented to cause toxicity in surface waters in the Central Coast Region;
- 1b. Farm/ranch is located more than 1000 feet from a surface waterbody listed for toxicity, pesticides, nutrients, turbidity or sediment on the 2010 List of Impaired Waterbodies<sup>9</sup> (Table 1);
- 1c. If the Discharger grows crop types with high potential to discharge nitrogen to groundwater (as defined in Attachment A) at the farm/ranch, and the farm/ranch total irrigated acreage is *less than* 50 acres, and is *not* within 1000 feet of a well that is part of a public water system (as defined by the California Health and Safety Code, section 116275) that exceeds

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<sup>59</sup> The Executive Officer is expected to provide notice of the determination through appropriate methods to facilitate a request for review. Where review by the Central Coast Water Board of an Executive Officer decision is expressly provided in the Agricultural Order, we would expect that any person not satisfied with the Executive Officer's determination would file a request for Central Coast Water Board review prior to filing a petition for review with the State Water Board. We understand that the Central Coast Water Board may not have the opportunity to review the Executive Officer's decision within the 30 day deadline for filing a petition for review with the State Water Board; in such a situation, the petitioner may ask that the petition for review be held in abeyance.

<sup>60</sup> In the case of Provision 11, we added review by the Board for both approval and denial of a third party project or program. Here, it is appropriate to limit review to instances where the Executive Officer makes a determination that deviates from a tier assignment based on the Agricultural Order's established criteria since the Board has already carefully considered the standard outcomes from application of the criteria.

<sup>61</sup> We support SIP's approval as a sustainable agricultural program protective of water quality. We expect, however, that the Executive Officer will exercise his authority to elevate an individual SIP farm to a higher tier if the farm is either out of compliance with the requirements of the SIP program or unique physical characteristics of the farm render the management practices recommended by the certified program ineffective at that particular location.

the maximum contaminant level (MCL) for nitrate, nitrite, or nitrate + nitrite<sup>10</sup>;

- 1d. Sustainability in Practice (SIP, certified by the Central Coast Vineyard Team) or other certified programs approved by the ~~Executive Officer~~ **Central Coast Water Board**.

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18. Dischargers may submit a request to the Executive Officer to approve transfer to a lower tier. The Discharger must provide information to demonstrate a lower level of waste discharge and a lower threat to water quality, including site-specific operational and water quality information to characterize the waste discharge and resulting effect on water quality. Dischargers remain in the tier determined by the criteria above and must meet all conditions for that tier until the Executive Officer approves the request to transfer to a lower tier. At a minimum, information provided by Dischargers requesting transfer to a lower tier must include the following:

- a. Farm/ranch maps(s) identifying discharge points and any water quality sampling locations;
- b. Schematic showing the flow of irrigation and stormwater runoff, including where it leaves the farm/ranch and where the discharge enters receiving water;
- c. Description of the volume of discharges and when the discharge is present;
- d. Description of type of chemicals applied (e.g., pesticide and fertilizer use);
- e. Description of estimated pollutant loading to groundwater;
- f. Description and results of any individual discharge water quality sampling information available (e.g., irrigation runoff and stormwater sampling, lysimeter sampling);

**If the Executive Officer approves a transfer to a lower tier, any interested person may request that the Central Coast Water Board conduct a discretionary review the Executive Officer's determination.**

19. The Executive Officer may elevate Tier 1 or Tier 2 Dischargers to a higher tier if the Discharger poses a higher threat to water quality based on information submitted as part of the NOI, MRP, or information observed upon inspection of a ranch/farm, or any other appropriate evidence that indicates the ranch/farm meets the criteria for a higher tier. **If the Executive Officer requires a transfer to a higher tier, any interested person may request that the Central Coast Water Board conduct a discretionary review the Executive Officer's determination.**

**D. Water Quality Standards Compliance, Provisions 22-23; Effective Control of Pollutant Discharges, Provisions 82, 84-87**

The Agricultural Petitioners contest Provisions 22 and 23 of the Agricultural Order on grounds that the provisions expose dischargers to immediate liability for non-



compliance with water quality standards and other provisions of the Central Coast Basin Plan. Although Provisions 22 and 23 are not qualified by any time schedule, we found in the Stay Order that, read in the context of other provisions and findings of the Order, the provisions do not require immediate compliance. Provision 12 of the Agricultural Order states that “[d]ischargers who are subject to this Order shall implement management practices, as necessary, to improve and protect water quality and to achieve compliance with applicable water quality standards.” Finding 10 of the Agricultural Order similarly states that [d]ischargers must implement, and where appropriate update or improve, management practices . . . to effectively control discharges, meet water quality standards and achieve compliance with this Order.”<sup>62</sup> We accordingly declined to stay Provisions 22 and 23 because we found that the Central Coast Water Board made it sufficiently clear in the Agricultural Order that it will not take enforcement action against a discharger for violations of Provisions 22 and 23 where that discharger is implementing or improving management practices to address discharges impacting water quality.

The Agricultural Petitioners also challenge Provisions 84 through 87 of the Agricultural Order, which were not before us in the stay proceedings. These provisions prescribe dates by which Tier 3 dischargers must “effectively control” discharges of pesticides and toxic substances, sediment and turbidity, nutrients, and nitrate to groundwater, respectively. The Agricultural Petitioners argue that the provisions are unreasonable and render dischargers vulnerable to enforcement for failing to control all relevant discharges by the prescribed dates. According to the Central Coast Water Board, provisions 84-87 were intended to be read in the context of Provision 82, which states that the Central Coast Water Board will consider a wide set of factors in determining whether a Tier 3 discharger is effectively controlling the relevant pollutants. Those factors include effectiveness of management practice implementation, effectiveness of treatment or control measures, results of individual discharge monitoring and downstream surface water monitoring, and information obtained from inspections. Provision 82 also references Table 4, which sets targets and milestones for reaching those targets for the pollutants referenced in Provisions 84-87. The Central Coast Water Board’s Response to the Petitions clarifies that the Board intended to use multiple indicators, including the milestones in Table 4, which are non-enforceable indicators, to determine whether a discharger is effectively controlling a pollutant. The Central Coast Water Board also states that, consistent with Finding 10 and Provision 12 of the Agricultural Order, and similar to its approach to water quality

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<sup>62</sup> See also Agricultural Order, Attachment A, Finding 2.

standards, the Board will not take enforcement action against a discharger that is implementing and improving management practices to address discharges impacting water quality.<sup>63</sup> We find that, while Provision 82 gives some context to the term “effectively control,” the factors to be considered are phrased in terms of the “effectiveness” of practice implementation and “results” of monitoring, so that it is not entirely clear whether a discharger may be in violation of Provisions 84-87 even if the discharger is implementing management practices in good faith to address problem discharges. We will add a new provision to the Order to make explicit the Central Coast Water Board’s intent that implementation of increasingly more effective management practices in an iterative manner as necessary constitutes compliance with Provisions 22-23 and Provisions 84-87 of the Agricultural Order. While agricultural regulatory programs must in the long-term achieve actual quantifiable reductions in pollutant discharges in order to protect and restore water quality, in this permit term, it is appropriate for the Central Coast Water Board to determine that a discharger is in compliance with these provisions where a discharger is engaged in a process to implement effective controls.<sup>64</sup> Dischargers must make a conscientious effort to identify and implement management practices that effectively address the relevant water quality issue. While we encourage innovation, we expect that most dischargers will implement known and available management practices in the near term.

We will also include in the new provision a reference to Provision 33 of the Order. Provision 33, which is discussed in greater detail in the next section, requires that discharges of waste to groundwater and surface water from containment structures not cause or contribute to water quality exceedances. For the same reasons discussed above, compliance with Provision 33 may also be achieved through implementation of management practices through a process of iterative improvement.

Finally, we edit Provision 22 to clarify that the appropriate requirement is for dischargers to not “cause or contribute to exceedances of water quality standards,” rather than “comply with water quality standards.”<sup>65</sup>

We shall amend Provision 22 as follows:

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<sup>63</sup> Central Coast Water Board Petition Response, pp. 81-82.

<sup>64</sup> The approach taken in the Agricultural Order to achieving compliance with the Central Coast Basin Plan requirements over time through management practice implementation is consistent with the State Water Board’s Non-Point Source Policy (pp. 12-13) and consistent with the public interest in addressing a water quality issue that has few immediate and easy solutions.

<sup>65</sup> Although we have not revised every reference to compliance with water quality standards in the Agricultural Order, in all appropriate places, we interpret the requirement to “comply” with water quality standards to mean “not cause or contribute to exceedances of” water quality standards.

22. Dischargers ~~must comply with~~ **shall not cause or contribute to exceedances of** applicable water quality standards, as defined in Attachment A, **shall** protect the beneficial uses of waters of the State and **shall** prevent nuisance as defined in Water Code section 13050.

We shall add Provision 87.5 as follows:<sup>66</sup>

- 87.5. **To comply with Provisions 22, 23, 33, and 84-87 of this Order, Dischargers must (1) implement management practices that prevent or reduce discharges of waste that are causing or contributing to exceedances of water quality standards; and (2) to the extent practice effectiveness evaluation or reporting, monitoring data, or inspections indicate that the implemented management practices have not been effective in preventing the discharges from causing or contributing to exceedances of water quality standards, the Discharger must implement improved management practices.**

#### E. Containment Structures, Provision 33

The Agricultural Petitioners assert that Provision 33 of the Agricultural Order, requiring that dischargers “manage, construct, or maintain” containment structures “to avoid percolation of waste to groundwater” and to “minimize surface water overflows,” constitutes an unreasonable restriction on the use of retention ponds. In particular, the Agricultural Petitioners argue that compliance with this provision would require dischargers to design or construct new containment structures or replace or upgrade existing containment structures, possibly requiring lining the structures. The Central Coast Water Board has stated that Provision 33 does not require lining of containment structures and that dischargers are expected to simply make iterative progress toward meeting the requirement “to avoid percolation to groundwater.”<sup>67</sup> In the Stay Order, we stayed Provision 33 on the grounds that the plain language of the provision does not align with the Central Coast Water Board’s stated intentions for it. We now make the necessary changes to make Provision 33 consistent with its intended purpose. We have already stated that compliance with Provision 33 is subject to an iterative process of management practice implementation as specified in new Provision 87.5. We additionally specify some of the types of management practices that may result in compliance with Provision 33.

We shall amend Provision 33 as follows:

33. Dischargers who utilize containment structures (such as retention ponds or reservoirs) to achieve treatment or control of the discharge of wastes must

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<sup>66</sup> Provision 87.5 is to be inserted between provisions 87 and 88 as a new provision; it is not to be inserted as a subsection of provision 87.

<sup>67</sup> See Stay Order, pp. 12-13; Central Coast Water Board Written Response to Petitions (Oct. 31, 2012) (Central Coast Water Board Response to Petitions), pp. 75-77.

manage, construct, or and maintain such containment structures to avoid percolation of waste to groundwater that causes or contributes to exceedances of water quality standards, and to minimize surface water overflows that have the potential to impair water quality discharges of waste to groundwater and surface water that cause or contribute to exceedances of water quality standards. Dischargers may choose the method of compliance appropriate for the individual farm, which may include, but is not limited to:

- implementing chemical treatment (e.g., enzymes);
- implementing biological treatment (e.g., wood chips);
- recycling or reusing contained water to minimize infiltration or discharge of waste;
- minimizing volume of water in the containment structure to minimize percolation of waste;
- minimizing percolation of waste via a synthetic, concrete, clay, or low permeability soil liner.<sup>[68]</sup>

#### F. Farm Plan/Practice Effectiveness and Compliance, Provision 44

The Agricultural Petitioners argue that Provision 44.g, which requires the Farm Plan to include a “description and results of methods used to verify practice effectiveness,” is unreasonable because the term “verify” implies the need for costly studies and statistical analyses. During the stay proceedings, the Central Coast Water Board testified that Provision 44.g does not dictate how the discharger would evaluate practice effectiveness and that it was the Board’s expectation that dischargers could meet the requirements of 44.g by reporting on standard farming practices, such as evaluating irrigation efficiency to determine water use, combined with visual inspection and record keeping.<sup>69</sup> We stayed Provision 44.g pending resolution of the petitions on the merits, finding it ambiguous as written.

In its Response to the Petitions, the Central Coast Water Board has recommended that the State Water Board provide clarifying language for Provision 44.g, consistent with its position that practice effectiveness verification may rely on standard farming practices, visual inspections, and record keeping.<sup>70</sup> With this clarification, we find that the burden of the reporting required under 44.g bears a reasonable relationship to its anticipated benefits, as dischargers will not be required to hire consultants for study design and analysis. The practice effectiveness reporting, along with the water quality monitoring and photo monitoring required by the Agricultural Order, inform a determination of the adequacy and

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<sup>68</sup> The edits to Provision 33 generally track those suggested by the Central Coast Water Board in its Response to the Petitions, pp. 75-77.

<sup>69</sup> See Stay Order, pp. 14-16.

<sup>70</sup> Central Coast Water Board Response to Petitions. p. 15.

effectiveness of the Agricultural Order's conditions, as required by Water Code section 13269, subdivision (a)(2).<sup>71</sup>

The Agricultural Petitioners additionally argue that privacy and competitive advantage concerns should preclude the requirement in Provision 44 that a current copy of the Farm Plan be made available to the Central Coast Water Board staff upon request. Petitioners' concern appears to be that proprietary information contained in the submitted Farm Plan could then be disclosed in response to a Public Records Act request.<sup>72</sup> We recognize the concern with disclosure of sensitive business information; however, the existing exceptions to the Water Code and to the Public Records Act, which allow withholding of information deemed trade secrets and secret processes, is sufficient to protect the most sensitive submitted data.<sup>73</sup> We must strike a balance between the need of the Central Coast Water Board to obtain information for compliance determination and the need of the public for transparency on the one hand, and the need of the agricultural community to innovate and compete on the other hand. Given the significant water quality problems facing the Central Coast region due to agricultural discharges, we decline to strike that balance in a manner more protective of business information than that established by the Legislature in the Water Code and the Public Records Act. The Central Coast Water Board has established an appropriate process in the Agricultural Order in Provision 65 for identifying information that is asserted to be exempt from disclosure.

We shall amend Provision 44 as follows:

**44. By October 1, 2012, Dischargers must develop a farm water quality management plan (Farm Plan), or update the Farm Plan as necessary, and implement it to achieve compliance with this Order. Farm Plans must be kept current, kept on the farm, and a current copy must be made available to Central Coast Water Board staff, upon request. At a minimum, Farm Plans must include:**

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<sup>71</sup> We decline to amend subsection c because we do not construe the word "locations" in 44.c to mean only "points," as Ocean Mist appears to construe it. "Locations" includes both points (e.g., outfalls such as pipes/culverts) and areas (e.g., low points on the edge of the field). We also will not amend subsection d. The phrase "description of the typical volume of discharges and when the discharge is typically present" is sufficiently descriptive of the type of estimated, general information sought by the Central Coast Water Board under the provision. Similar information is required to be reported in Section E of the Annual Compliance Form (see Exhibit 1 attached hereto). To the extent there is any remaining confusion as to what should be recorded in the Farm Plan under subsection d, the information requested in the Annual Compliance Form may act as an example. Finally, we will not remove the requirement in subsection f to identify management practices implemented to minimize the impact of tile drain discharges to water quality. Discharges from tile drains carry pollutants to surface waters and are appropriate for management practice implementation. (See AR File Nos. 207 [Letter 85]; 228. p. 50; 265, p. 483.) Requiring ongoing management practice implementation to minimize the impact of tile drain discharges on water quality is not inconsistent with the Central Coast Water Board staff's acknowledgment that tile drain discharges will require longer term study and cooperative solutions. (See AR File Nos. 233, pp.48-50; 295, pp. 8-10).

<sup>72</sup> Gov. Code, §§ 6250 et seq.

<sup>73</sup> Wat. Code, § 13267, subd. (b)(2); Gov. Code, § 6254, subd. (k); Evid. Code, § 1060.

- a. Copy of this Order and a copy of the Notice of Intent (NOI) submitted to the Central Coast Water Board for reference by operating personnel and inspection by Central Coast Water Board staff;
- b. Date the Farm Plan was last updated;
- c. Farm/ranch maps(s) identifying irrigation and stormwater runoff discharge locations where irrigation and stormwater runoff leaves or may leave the farm/ranch and where the discharge enters or may enter receiving water;
- d. Description of the typical volume of discharges and when the discharge is typically present;
- e. Description of type of chemicals applied (e.g., pesticide and fertilizer use);
- f. Description and time schedule for any farm water quality management practices, treatment and/or control measures implemented to comply with this Order. This includes, but is not limited to, management practices related to irrigation efficiency and management, pesticide management, nutrient management, salinity management, sediment and erosion control (including stormwater management), and aquatic habitat protection to achieve compliance with this Order. In addition, Farm Plans must describe tile drain discharges and the management measures Dischargers have implemented or will implement to minimize impacts to water quality;
- g. ~~Description and results of methods used to verify practice effectiveness and compliance with this Order (e.g., water quality sampling, discharge characterization, reductions in pollutant loading);~~ **A description of the method and schedule for assessing the effectiveness of each management practice, treatment, and control measure identified in accordance with subsection (f). Such methods for assessing effectiveness are expected to be based on standard practices such as, but not limited to: visual inspections, photographs, soil nutrient testing, soil moisture measurements, and recordkeeping. Dischargers may also choose more advanced methods for assessing effectiveness, such as water quality sampling, modeling software, calculated reductions in pollutant loading, toxicity testing, biological indicators evaluations, and other measurement types that prove useful to determining the effectiveness of a management practice. The use of advanced methods is not required.**

**G. Groundwater Monitoring, Provision 51 and Part 2 of Tier 1-3 MRPs**

The Agricultural Order requires dischargers in all tiers to sample private domestic drinking water wells and at least one irrigation water well on the farm to evaluate groundwater conditions. All dischargers must conduct two rounds of monitoring over the course of the first year of the Agricultural Order and must submit the results by October 1, 2013. Tier 3 dischargers must additionally sample once per year and submit the results annually thereafter. In each case, the dischargers may choose to participate in a cooperative groundwater monitoring effort in lieu of individual monitoring and reporting, and Tier 1 and Tier 2 dischargers

also have the option of submitting existing data instead of conducting new sampling.<sup>74</sup> The Agricultural Petitioners assert that the burden of conducting the groundwater monitoring does not bear a reasonable relationship to the need for the monitoring and reporting and that the monitoring is therefore contrary to the requirements of Water Code section 13267.<sup>75</sup>

We declined to stay the groundwater monitoring provisions when we considered the issue as part of the stay proceedings, pointing to the compelling concerns regarding drinking water safety and nitrates in groundwater.<sup>76</sup> We decline to strike them now for the same and additional considerations as explained below.

The Agricultural Petitioners' primary objection to the monitoring of drinking water and irrigation water wells appears to be that such information does not accurately measure compliance with the Agricultural Order. In other words, the current levels of nitrate in supply wells may be unrelated to current management activities. Therefore, they posit, the burden of conducting the monitoring is not reasonably related to the benefit of compliance determination. We do not disagree with Agricultural Petitioners' position that groundwater monitoring is an inexact measure of compliance. Nitrate measured in the groundwater now may reflect historic practices, not current practices. Further, in some areas – but not all – trends must be measured over the course of a number of years, often decades, so that even annual data over the course of the five-year term of the Agricultural Order may reveal little about whether concurrently implemented management practices are leading to improvements. We will task the Expert Panel with considering appropriate structures and methodologies for monitoring that may support long-term nitrate control efforts.

Compliance determination is not, however, the sole, or even primary, reason the Central Coast Water Board has required groundwater monitoring. After a review of the record, we find that the Central Coast Water Board required groundwater monitoring for reasons reasonably related to the relatively low burden of conducting the monitoring. The Board asserted that the shallow or intermediate groundwater depths of agricultural and domestic drinking water wells may provide shorter-term indicators of impacts from agricultural discharges.

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<sup>74</sup> Agricultural Order, Prov. 51, MRPs 1, 2, & 3, Part 2, §§ A, B.

<sup>75</sup> We see no merit in the argument made by the Agricultural Petitioners that, for all contested monitoring and reporting provisions, the Central Coast Water Board failed to provide dischargers “with a written explanation with regard to the need for the reports” and to “identify the evidence that supports requiring that person to provide the reports.” (Wat. Code, § 13267, subd. (b)(1).) The need for the monitoring and reporting provisions, as well as the bases for including these requirements, is well documented in the various staff reports supporting the Agricultural Order as cited throughout this Order.

<sup>76</sup> Stay Order, pp. 16-17.

But the Board also stated that the data is needed to characterize groundwater quality to help the Board identify and prioritize for follow up areas and individual farms that are at greater risk for pollutant loading and to inform those domestic well users who may be affected by poor drinking water quality. With regard to monitoring in individual irrigation water wells, the Central Coast Water Board also found that such monitoring will provide information to the discharger to account for nitrogen in irrigation water and inform appropriate reduction in fertilizer application.<sup>77</sup>

We considered the cost of groundwater monitoring in the Stay Order and contrasted the \$2,000-\$3,000 per sample projected by the dischargers with laboratory quotes introduced by Central Coast Water Board estimating charges of less than \$200 per sample.<sup>78</sup> The actual costs may fall somewhere in between, but we do not view these costs as unreasonable in light of the benefits of groundwater monitoring.<sup>79</sup> Further, we note that dischargers have the option of sharing costs by joining a third party group for groundwater monitoring in lieu of individual monitoring and, as we discussed previously, we expect the Central Coast Water Board to work in good faith with dischargers to make this option a viable one. Given the importance of characterizing groundwater quality in the region, the significant danger to the public of consuming drinking water with high nitrate concentrations, and the need for dischargers to know the nitrogen levels in their irrigation water supply, we find that the Central Coast Water Board reasonably required initial sampling of drinking water wells and agricultural supply wells.

We see the benefits of annual groundwater monitoring for Tier 3 dischargers as less compelling. Once dischargers have conducted the first-year round of monitoring of drinking water wells and irrigation water wells, the primary purpose of such monitoring in detecting unhealthy levels of nitrates or of evaluating the nitrogen content of irrigation water is arguably accomplished. However, we cannot rule out the possibility that water quality in a well may fluctuate within a year, and, particularly in the context of health concerns with drinking water quality, find that annual monitoring for the highest risk dischargers is reasonable.

We deny the Agricultural Petitioners' request to strike or amend Provision 51 of the Agricultural Order and Sections A.1-5 and B of Part 2 of MRP Orders 1, 2, and 3.

However, we will make revisions to the cooperative groundwater monitoring provisions at Section A.6 of Part 2 of MRP Orders 1, 2, and 3. Nitrate in groundwater is a

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<sup>77</sup> AR File No. 291, pp. 17-19; see also Central Coast Water Board Response to Petitions, p. 48.

<sup>78</sup> Stay Order, pp.16-17 (citing AR File No 234 at p. 34; Central Coast Water Board Submission (Aug. 27, 2012), Exh. 21; Schroeter Testimony (Aug. 30, 2012)).

<sup>79</sup> Wat. Code, § 13267, subd. (b)(1).



significant public health threat facing the Central Coast region. Nitrate pollution is especially prevalent in the Salinas Valley area, where a large population relies on groundwater for drinking water. Nitrates consumed at concentrations above the MCL of 45 milligrams per liter (mg/L)<sup>80</sup> set by the Department of Public Health can pose serious health risks to pregnant women and infants. Given the significant concerns with drinking water safety in the Central Coast Region, we find that any cooperative groundwater monitoring must still characterize drinking water at the level of the individual well if there is a concern that the nitrate concentration in the well may approach the MCL. The cooperative groundwater monitoring provision states that “at a minimum, the cooperative groundwater monitoring effort must include sufficient monitoring to . . . identify and evaluate groundwater used for domestic drinking water purposes.”<sup>81</sup> The significant health and safety concerns in conjunction with widespread evidence of elevated nitrate levels in the Central Coast Region lead us to the conclusion that identification and evaluation should encompass monitoring of all at risk wells that are used or may be used for drinking water purposes.<sup>82</sup> Our revision states that, even where a cooperative groundwater monitoring program relies on representative sampling to determine nitrate levels in drinking water wells, direct sampling of the individual well is required if the nitrate level is projected to be within 50% of the MCL. Further, repeat sampling is required if the nitrate level is within 80% of the MCL because of the potential for such wells to exceed the MCL in a short timeframe. We note that the Executive Officer has the authority within the MRPs to require increased sampling for both individual and cooperative monitoring where warranted. We expect that, in most cases, the Executive Officer would also require repeat sampling where individual groundwater monitoring shows a nitrate level within 80% of the MCL.

Because the data to be generated through groundwater monitoring is of significant public interest and value, we also find that it is appropriate to provide for discretionary Central Coast Water Board review of Executive Officer approvals or denials of cooperative groundwater monitoring programs, if requested by an interested person. Finally, we recognize the potential severity and urgency of the health issues associated with drinking groundwater with high concentrations of nitrates, and we will require that the discharger conducting individual

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<sup>80</sup> Expressed as NO<sub>3</sub>.

<sup>81</sup> Tier 1, 2, & 3 MRPs, Part 2, §A.6.

<sup>82</sup> In making this determination, we do not review or rely on any cooperative groundwater monitoring programs that have been proposed to or approved by the Central Coast Water Board to date. As stated previously in this Order, those programs post-date the Central Coast Water Board’s adoption of the Agricultural Order and are outside the scope of these proceedings. We expect, however, that the Central Coast Water Board will reevaluate any previously-approved cooperative groundwater monitoring programs to ensure that they are consistent with this Order.

groundwater monitoring or the third party conducting cooperative groundwater monitoring notify the Central Coast Water Board when a well is identified as exceeding the MCL for nitrate, and that the discharger or the Central Coast Water Board timely notify users of the well..

We shall amend Section A.6 of Part 2 of the Tier 1, 2, and 3 MRPs, and add Section A.7 to Part 2 of the Tier 1, 2, and 3 MRPs as follows:

6. In lieu of conducting individual groundwater monitoring, Dischargers may participate in a cooperative groundwater monitoring effort to help minimize costs and to develop an effective groundwater monitoring program. Qualifying cooperative groundwater monitoring and reporting programs may include, but are not limited to, regional or subregional groundwater programs developed for other purposes as long as the proposed cooperative groundwater monitoring program meets the Central Coast Water Board's general purpose of characterizing groundwater quality and ensuring the protection of drinking water sources. Proposals for cooperative groundwater monitoring efforts, including the use of other regional or subregional groundwater monitoring programs, must be approved by the Executive Officer. **An interested person may seek discretionary review by the Regional Board of the Executive Officer's approval or denial of a cooperative groundwater monitoring program.** At a minimum, the cooperative groundwater monitoring effort must include sufficient monitoring to adequately characterize the groundwater aquifer(s) in the local area of the participating Dischargers, characterize the groundwater quality of the uppermost aquifer, and identify and evaluate groundwater used for domestic drinking water purposes.

**Because drinking water evaluation is a very high priority, the cooperative groundwater monitoring proposals must, at a minimum, include one or more of the following approaches for each of the participating Dischargers' wells that is or may be used for drinking water purposes: (1) direct sampling; (2) submission of existing data for the well if it has been sampled and analyzed for nitrate using U.S. EPA approved methods at least twice within the last five years; or (3) a statistically valid projection of groundwater quality at the location of the well. In addition, each of the participating Dischargers' wells that is or may be used for drinking water that is projected to have a nitrate concentration between 22.5 and 45 mg/L nitrate as NO<sub>3</sub> (or between 5 and 10 mg/L nitrate + nitrite as N) must be individually sampled. Each of the participating Dischargers' wells that is or may be used for drinking water that has a nitrate concentration between 36 and 45 mg/L nitrate as NO<sub>3</sub> (or between 8 and 10 mg/L nitrate + nitrite as N) must have a repeat sample taken within 12 months and must be sampled annually thereafter unless an alternate sampling schedule based on trending data for the well is approved by the Executive Officer. Consideration shall be given to the timing of all sampling so that potential seasonal fluctuations and other variables are accounted for, in order that the wells are sampled at the highest potential nitrate value to the extent practicable. Cooperative groundwater monitoring program work must be scheduled so as to make drinking water evaluation the first priority. Drinking water quality information must be reported as it becomes**

**available, and all of the requirements of this paragraph, with the exception of any repeat sampling, must be completed by December 1, 2014.**

Cooperative groundwater monitoring efforts must comply with the requirements for sampling protocols and laboratory analytical methods identified in this MRP, including parameters listed in Table 3, or propose a functional equivalent that meets the same objectives and purposes as individual groundwater monitoring. The cooperative groundwater monitoring program must report results consistent with individual groundwater reporting defined in part 2.B, or report results in a manner that is consistent with that approved by the Executive Officer in his or her approval of the cooperative groundwater monitoring proposal. Dischargers electing to participate in a cooperative groundwater monitoring effort must convey this election to the Central Coast Water Board within 90 days of adoption of this Order, and the individual groundwater monitoring requirements shall not apply as long as a cooperative groundwater monitoring proposal for that Discharger's area is submitted within one (1) year of adoption of this Order. If no cooperative groundwater monitoring proposal for that Discharger's area is submitted within one (1) year **of adoption of this Order**, then the individual groundwater monitoring provisions shall apply and the Discharger shall have **two (2) ~~one (1)~~ years from the adoption of this Order** to comply with the provisions identified in Part 2. **Notwithstanding the foregoing, cooperative groundwater monitoring proposals may be submitted between September 24, 2013, and November 1, 2013. Dischargers who have not joined a cooperative groundwater monitoring group prior to September 24, 2013, may participate in an approved cooperative groundwater monitoring program, provided they have completed two rounds of monitoring as required under individual groundwater monitoring requirements.**

- 7. If a discharger conducting individual groundwater monitoring or a third party conducting cooperative groundwater monitoring determines that water in any well that is used or may be used for drinking water exceeds or is projected to exceed 45 mg/L of nitrate as NO<sub>3</sub> (or 10mg/L of nitrate + nitrite as N), the discharger or third party must provide notice to the Central Coast Water Board within 24 hours of learning of the exceedance or projected exceedance. For wells on a Discharger's farm/ranch, the Central Coast Water Board will require that the Discharger notify the users within 10 days. For all other wells, the Central Coast Water Board will notify the users promptly.**

We direct the Central Coast Water Board to work with the State Water Board, dischargers, any third-party cooperative groundwater monitoring groups, interested stakeholder groups, and public health agencies to develop and make available uniform English and Spanish language templates for notification consistent with new Section A.7 of Part 2 of the Tier 1, 2, and 3 MRPs. Any templates developed shall include the following minimum information:

- Information identifying affected well
- Level of Nitrate as NO<sub>3</sub> or Nitrate + Nitrite (as N) in well

- Potential health effects associated with consuming the water, including the following:  
Nitrate: Infants below the age of six months who drink water containing nitrate in excess of the MCL may quickly become seriously ill and, if untreated, may die because high nitrate levels can interfere with the capacity of the infant's blood to carry oxygen. Symptoms include shortness of breath and blueness of the skin. High nitrate levels may also affect the oxygen-carrying ability of the blood of pregnant women.  
Nitrite: Infants below the age of six months who drink water containing nitrite in excess of the MCL may become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blueness of the skin.
- Direction to share the notice with all the other people who drink the well water, especially those who may not have received the notice directly (for example, people in apartments, nursing homes, schools, and businesses), by posting the notice in a public place or distributing copies by hand or mail.
- Information as to whether the nitrate level was derived using direct sampling or a statistical projection.

#### **H. Photo Monitoring, Provision 69 and Part 4 of Tier 2 and Tier 3 MRPs**

The Agricultural Order requires Tier 2 and Tier 3 dischargers with farms adjacent to impaired water bodies to photo monitor the condition of perennial, intermittent, or ephemeral streams and riparian and wetland area habitat. Dischargers are required to conduct such monitoring consistent with a protocol issued by the Executive Officer.<sup>83</sup> In the Stay Order, we found that the photo monitoring protocol issued by the Executive Officer provided implementation avenues for photo monitoring that were too limited, unnecessarily increasing the cost of monitoring for some dischargers. We stayed the requirement until June 1, 2013, and directed the Central Coast Water Board Executive Officer to amend the protocol to allow alternative documentation methods such as aerial photography or the use of elevated vantage points.<sup>84</sup> The Executive Officer issued a revised protocol on February 28, 2013 (Revised Protocol).<sup>85</sup>

We now find that the Revised Protocol does not fully comply with the State Water Board's direction to the Central Coast Water Board to allow alternative photo documentation methods. The Revised Protocol contemplates that the discharger may propose alternative methods, but does not provide any direction or specification on how aerial or elevated vantage

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<sup>83</sup> Agricultural Order, Tier 2 and Tier 3 MRPs, Part 4.

<sup>84</sup> Stay Order, pp. 19-21.

<sup>85</sup> Photo Monitoring and Reporting Protocol, Central Coast Water Board (Feb. 28, 2013), available at <[http://www.waterboards.ca.gov/centralcoast/water\\_issues/programs/ag\\_waivers/docs/resources4growers/photomonitoring\\_protocol\\_and\\_form\\_28feb2013.pdf](http://www.waterboards.ca.gov/centralcoast/water_issues/programs/ag_waivers/docs/resources4growers/photomonitoring_protocol_and_form_28feb2013.pdf)> (as of Jun. 4, 2013). To the extent necessary, we take official notice of the revised protocols on our own motion. (Cal. Code Regs., tit. 23, § 648.2 and Evid. Code, § 452, subd. (c).)

point photography may be used to fulfill the photo monitoring requirements. To make clearer our intent that these alternative methods be specifically permitted and discussed in the Protocol, we will now make revisions to the photo monitoring provisions of the Agricultural Order. We recognize that the initial compliance deadline for photo monitoring has passed and that photo monitoring is required every four years with dischargers directed to use the same photo point locations in the next iteration.<sup>86</sup> Nevertheless, we believe it is important to make the revision to achieve consistency with the Stay Order and to provide direction to the regional water boards that photo monitoring requirements be made more cost-effective by allowing for reasonable alternatives. Some dischargers may find it advantageous to repeat the photo monitoring using a more cost-effective methodology in order to set the baseline for future monitoring.

We will also make a revision to clarify that photo documentation must be maintained in the Farm Plan and needs to be submitted to the Executive Officer only upon request. This revision makes Provision 69 consistent with revisions made by the Central Coast Water Board Executive Officer to the Tier 2 and Tier 3 MRPs subsequent to adoption of the Agricultural Order.

We shall amend Provision 69 as follows:

69. By ~~October June 1, 2012, 2014, and by June 1, 2017,~~ and every four years thereafter, Tier 2 and Tier 3 Dischargers with farms/ranches adjacent to or containing a waterbody identified on the 2010 List of Impaired Waterbodies as impaired for temperature, turbidity, or sediment (identified in Table 1) must conduct photo monitoring per MRP Order No. R3-2012-0011-02 and MRP Order No. R3-2012-0011-03, respectively. Photo monitoring must document the condition of perennial, intermittent, or ephemeral streams and riparian and wetland area habitat, and demonstrate compliance with Basin Plan erosion and sedimentation requirements (see Part F. 80 of this Order), including the presence of bare soil vulnerable to erosion and relevant management practices and/or treatment and control measures implemented to address impairments. **Aerial photography and photography from an elevated vantage point are permitted methodologies for photo monitoring.** Photo documentation must be ~~submitted electronically, in a format specified by the Executive Officer.~~ **maintained in the Farm Plan and must be submitted upon request of the Executive Officer.**

Additionally, we direct the Executive Officer of the Central Coast Water Board to further revise the Revised Protocol consistent with this Order, including specifically allowing aerial photography and elevated vantage photography, and establishing an appropriate methodology for monitoring, documentation, and reporting for these alternatives.

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<sup>86</sup> Tier 3 dischargers that are required to prepare a Water Quality Buffer Plan must submit photo monitoring annually beginning October 1, 2016. (Tier 3 MRP, Part 7, Section A.2.g)

## **I. Individual Surface Water Discharge Monitoring, Provisions 72-73 and Part 5 of Tier 3 MRP**

The Agricultural Order requires Tier 3 dischargers that discharge irrigation water (tailwater or tile drain discharges) or storm water to a surface water or a containment structure to conduct both dry and wet weather monitoring of a number of parameters, including turbidity, chlorpyrifos, diazinon, and nitrate.<sup>87</sup> As discussed *ante*, Tier 3 dischargers are those that either (a) grow crop types with high potential to discharge nitrogen to groundwater and are greater than or equal to 500 acres; or (b) apply chlorpyrifos or diazinon and discharge to a waterbody listed for toxicity or pesticides. Thus, for dischargers with these high-risk characteristics, the individual surface water discharge monitoring is intended to determine the characteristics of the discharges that leave the fields, through tailwater, tile drain discharges, or storm water.

The record conveys that limitations of cooperative surface receiving water monitoring in identifying the causes and sources of measured exceedances under the 2004 Agricultural Order drove inclusion of individual surface water discharge monitoring in the Agricultural Order.<sup>88</sup> The Central Coast Water Board argues that it is appropriate for the highest risk dischargers to monitor for the presence and absence of critical water quality parameters such as toxicity, pesticides, and nitrates, and generate data that will help the Board prioritize follow up of the greatest threats to public health and the environment.<sup>89</sup>

We are skeptical that the Central Coast Water Board has adopted the monitoring program best suited to meet the purpose of identifying and following up on high-risk discharges. The variability in the composition of end-of-field discharges makes it difficult to characterize such discharges through sampling at a limited number of locations and in a limited number of sampling events. Further, even though the surface water discharge monitoring requirements are targeted to the highest risk dischargers, problem discharges and areas are likely to be found outside of the influence of farms operated by Tier 3 dischargers. The better approach may be to rely on receiving water monitoring data and to require the third party monitoring groups administering receiving water monitoring to pursue exceedances with increasingly focused monitoring in upstream channels designed to narrow down and identify the sources of the

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<sup>87</sup> Although the Agricultural Order and the Tier 3 MRP do not explicitly state that only those Tier 3 dischargers that have discharges to a receiving water must conduct individual surface water monitoring, the Central Coast Water Board has since made that clarification in guidance. (Central Coast Water Board, Resources for Growers, Tier 3 – Individual Surface Water Discharge Monitoring (Feb. 7, 2013, revised Mar. 4, 2013) available at <[http://www.waterboards.ca.gov/centralcoast/water\\_issues/programs/ag\\_waivers/docs/resources4growers/tier3ind\\_discharge\\_overview\\_revised.pdf](http://www.waterboards.ca.gov/centralcoast/water_issues/programs/ag_waivers/docs/resources4growers/tier3ind_discharge_overview_revised.pdf)> [as of Jun. 4, 2013].)

<sup>88</sup> Agricultural Order, Finding 16; AR File Nos. 232, pp. 22-23; 233, p. 26.

<sup>89</sup> Central Coast Water Board Response to Petitions, pp. 49-50; AR File No. 233, pp. 45, 101.

exceedances. Although the Agricultural Order’s surface receiving water monitoring contemplates that the Executive Officer may approve additional monitoring sites to “better assess the pollutant loading from individual sources”<sup>90</sup> or may require toxicity evaluation “to identify the individual discharges causing the toxicity,”<sup>91</sup> it does not establish the type of comprehensive process necessary to identify and address problem discharges. The surface receiving water monitoring approach recently approved by the Central Valley Regional Water Quality Control Board (Central Valley Water Board) for growers in the Eastern San Joaquin Watershed, where a detected exceedance may trigger source identification, management practice implementation, and follow up reporting,<sup>92</sup> perhaps more closely matches the type of monitoring that would assure pollutant discharges are actually addressed.

We will ask the Expert Panel to consider both the receiving water and discharge monitoring approaches to identification of problem discharges. In the interim, we believe the Agricultural Order must retain some methodology for addressing high risk discharges and some accountability for high-risk dischargers. Although we could strike the individual surface water discharge monitoring requirements and amend the receiving water monitoring section of the Agricultural Order to add the type of follow up monitoring described above, we are hesitant at this point to substitute an expanded monitoring requirement that would impact all dischargers in the region for the existing discharge monitoring impacting only a subset of Tier 3 dischargers.

We accordingly retain the requirement for Tier 3 dischargers to conduct individual surface water discharge monitoring. However, we will narrow the scope of such monitoring. As drafted, the individual surface water discharge requirements could be interpreted to be inclusive of monitoring of sheet flow, which is a burdensome requirement given the difficulty in identifying the locations of such discharges and anticipating discharge frequency. Individual surface water discharge monitoring should be limited to monitoring of discharges conveyed through pipes, ditches, swales, tile drains, and other discrete structures and features. We will also revise the requirement to monitor containment structures to clarify that such structures should be monitored only if the water is not being reused for irrigation.<sup>93</sup> The water in some containment structures is re-applied to the fields, and there is no significant benefit to characterizing the

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<sup>90</sup> Tiers 1-3 MRPs, Part 1, § A.9.

<sup>91</sup> *Id.* at Part 1, § A.13.

<sup>92</sup> Central Valley Water Board Order R5-2012-0116, Appendix MRP-1.

<sup>93</sup> Our revisions also state that the water in the containment structures need not be monitored if it is discharged to surface waters. This is because the water will then be monitored at the point of discharge, as we have clarified that locations where discharges exit the farm/ranch after being conveyed by a containment structure are considered outfalls.

quality of that water unless it will reach surface waters or is retained in the structure to percolate to groundwater.<sup>94</sup> We decline, however, to eliminate monitoring requirements for discharges conveyed to surface waters through tile drains. Discharges from tile drains carry pollutants to surface waters and are appropriate for monitoring under the Agricultural Order.<sup>95</sup>

With the revisions below, we find that the cost of carrying out the surface water discharge monitoring requirement is reasonably related to the benefit of identifying and addressing those discharges at highest risk of impacting surface water quality.<sup>96</sup>

The sampling and analysis plan and the quality assurance project plans for the individual surface water discharge monitoring were due by March 15, 2013, and dischargers have presumably already submitted such plans indicating the discharge points that will be sampled.<sup>97</sup> While the plans may now require amending for consistency with this Order, such amendments will only result in reduced monitoring. We will, however, extend the deadline to initiate surface water discharge monitoring from October 1, 2013, as required under the Agricultural Order, to December 1, 2013.

We shall amend Provision 72 and Part 5, Section A, of the Tier 3 MRP as follows:

72. **By ~~October~~ December 1, 2013**, Tier 3 Dischargers must initiate individual surface water discharge monitoring per MRP Order No. R3-2012-0011-03 or alternative monitoring and reporting programs approved by Executive Officer as set forth in Finding 11 and Condition 11.

## **PART 5. INDIVIDUAL SURFACE WATER DISCHARGE MONITORING AND REPORTING REQUIREMENTS**

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<sup>94</sup> The Agricultural Order already requires Tier 2 and Tier 3 dischargers to report total nitrogen applied to the fields. That reporting requirement is inclusive of the nitrogen content of the irrigation water as clarified further in the next section. Irrigation water reapplied from a containment structure is expected to generally be only a small component of overall irrigation water and not significant enough to require characterization.

<sup>95</sup> See AR File Nos. 207 (Letter 85); 228, p. 50; 265, p. 483. As previously stated, we do not see ongoing monitoring of tile drains as inconsistent with the Central Coast Water Board staff's acknowledgment in the administrative record that addressing pollutants discharged through tile drains is an issue requiring long-term perspectives and cooperative solutions. (See AR File Nos. 233, pp. 48-50, 295, pp. 8-10).

<sup>96</sup> Cost information submitted in the stay proceedings primarily addressed costs associated with preparation of the sampling and analysis plans and the quality assurance project plans for individual surface water discharge monitoring. We found then that the cost estimates submitted by dischargers were inflated and declined to stay preparation of the relevant plans. (Stay Order, pp. 23-24.) Those plans were due by March 15, 2013. The Stay Request submitted by Grower-Shipper included a declaration asserting that a grower with five to ten sampling locations would incur costs ranging from \$7000 to \$11,000 per sampling event. (Grower-Shipper Request for Stay, Suverkropp Decl.[Apr. 12, 2012], ¶ 8.) The Central Coast Water Board has estimated the cost of sampling and laboratory analysis to be in the range of \$5,000 for one tailwater discharge point, one storm water discharge point, and three sampling events. (Central Coast Water Board Response to the Petitions, p. 33; AR File No. 234, p.34)

<sup>97</sup> We declined during the stay proceedings to stay the provisions for preparation of the sampling and analysis plan and the quality assurance project plan. (Stay Order at 23-24.)



Monitoring and reporting requirements for individual surface water discharge identified in Part 5.A. and Part 5.B. apply to **all** Tier 3 Dischargers **with irrigation water or stormwater discharges to surface water from an outfall. Outfalls are locations where irrigation water and stormwater exit a farm/ranch, or otherwise leave the control of the discharger, after being conveyed by pipes, ditches, constructed swales, tile drains, containment structures, or other discrete structures or features that transport the water. Discharges that have commingled with discharges from another farm/ranch are considered to have left the control of the discharger.** Key monitoring and reporting requirements for individual surface water discharge are shown in Tables 5A and 5B. Time schedules are shown in Table 6.

## **A. Individual Surface Water Discharge Monitoring**

- ~~1.2.~~ Tier 3 Dischargers must conduct individual surface water discharge monitoring to a) evaluate the quality of individual waste discharges, including concentration and load of waste (in kilograms per day) for appropriate parameters, b) evaluate effects of waste discharge on water quality and beneficial uses, and c) evaluate progress towards compliance with water quality improvement milestones in the Order.

### Individual Sampling and Analysis Plan

- ~~2.3.~~ **By March 15, 2013**, Tier 3 Dischargers must submit an individual surface water discharge Sampling and Analysis Plan and QAPP to monitor individual discharges of ~~waste~~ **irrigation water and stormwater** from **that leaves** their farm/ranch **from an outfall**, including irrigation run-off (including tailwater discharges and discharges from tile drains, tailwater ponds and other surface water containment features unless constructed with impermeable liner), and stormwater discharges. The Sampling and Analysis Plan and QAPP must be submitted to the Executive Officer.

- ~~3.4.~~ The Sampling and Analysis Plan must include the following minimum required components to monitor irrigation **water** run-off, including tailwater discharges and discharges from tile drains, tailwater ponds and other surface water containment features and stormwater discharges:

- a. Number and location of ~~discharge points~~ **outfalls** (identified with latitude and longitude or on a scaled map);
- b. Number and location of monitoring points;
- c. Description of typical irrigation runoff patterns;
- d. Map of discharge and monitoring points;
- e. Sample collection methods;
- f. Monitoring parameters;
- g. Monitoring schedule and frequency of monitoring events;

- ~~4.5.~~ The QAPP must include appropriate methods for sampling, measurement and analysis, data collection or generation, data handling, quality control activities, and documentation.

5.6. The Sampling and Analysis Plan and QAPP, and any proposed revisions are subject to approval by the Executive Officer. The Executive Officer may require modifications to the Sampling and Analysis Plan or Tier 3 Dischargers may propose Sampling and Analysis Plan modifications for Executive Officer approval, when modifications are justified to accomplish the objectives of the MRP.

#### Individual Surface Water Discharge Monitoring Points

6.7. Tier 3 Dischargers must select monitoring points to characterize at least 80% of the estimated **maximum** irrigation run-off discharge volume from each farm/ranch ~~at the point in time the sample is taken~~ **based on that farm's/ranch's typical discharge patterns,**<sup>8, 7</sup> including tailwater discharges and discharges from tile drains. Sample must be taken when irrigation activity is causing maximal run-off. Load estimates will be generated by multiplying flow volume of discharge by concentration of contaminants. Tier 3 Dischargers must include at least one monitoring point from each farm/ranch which drains areas where chlorpyrifos or diazinon are applied, and monitoring of runoff or tailwater must be conducted within one week of chemical application. If discharge is not routinely present, Discharger may characterize typical run-off patterns in the Annual Report. See Table 5A4a for additional details.

7.8. Tier 3 Dischargers must also monitor ~~tailwater~~ **storage** ponds and other **terminal** surface water containment features **structures that collect irrigation and stormwater runoff, unless the structure is (1) part of a tail-water return system where a major portion of the water in such structure is reapplied as irrigation water, or (2) the structure is primarily a sedimentation pond by design with a short hydraulic residence time (96 hours or less) and a discharge to surface water when functioning.** If multiple ponds are present, sampling must cover at least **those structures that would account for 80% by of the maximum storage** volume of the containment features, **regardless of their current stored volume.** See Table 4b 5B for additional details. **Where water is reapplied as irrigation water, Dischargers shall document reuse in the Farm Plan.**

#### Individual Surface Water Discharge Monitoring Parameters, Frequency, and Schedule

8.9. Tier 3 Dischargers must conduct monitoring for parameters, laboratory analytical methods, frequency and schedule described in Tables 5A and 5B4A and 4B. Dischargers may utilize in-field water testing instruments/equipment as a substitute for laboratory analytical methods if the method is approved by U.S. EPA, meets reporting limits (RL) and practical quantitation limits (PQL) specifications in the MRP, and appropriate sampling methodology and quality assurance checks can be applied to ensure that QAPP standards are met to ensure accuracy of the test.

~~9.10.~~ **By October December 1, 2013** of the adoption of the Order, Tier 3 Dischargers must initiate individual surface water discharge monitoring per the Sampling and Analysis Plan and QAPP, unless otherwise directed by the Executive Officer.

<sup>8</sup> The requirement to select monitoring points to characterize at least 80% of the estimated **maximum** irrigation run-off **based on typical discharge patterns** is for the purposes of **attempting to** collecting samples that represent a majority of the volume of irrigation run-off discharged; **however, the Board recognizes that predetermining these locations is not always possible and that sampling results may vary**. The MRP does not specify the number or location of monitoring points to provide maximum flexibility for growers to determine how many sites are necessary and exact locations given **the anticipated** site-specific conditions.

## **J. Provisions Addressing Nitrogen Application**

The Agricultural Order contains a number of provisions designed to control and reduce the discharge of nitrogen to groundwater (collectively referred to herein as “nutrient management requirements”). As previously discussed, nitrate in groundwater is a significant public health threat facing the Central Coast Region. We initially proposed convening the Expert Panel primarily to study and make recommendations with regard to how to address nitrate in groundwater statewide.

We will make some revisions to the nutrient management requirements of the Agricultural Order. These revisions reflect our best judgment as to temporary measures required to keep work on this important public health and environmental issue moving forward, while we await the results of the more extensive analysis from the Expert Panel. We expect the Expert Panel to propose a comprehensive, consistent approach that will inform agricultural regulatory programs statewide. However, the work on nitrates in groundwater is too critical to await those results, and we support the Central Coast Water Board’s efforts to address the issue in the interim, with the revisions directed below.

### **1. Determination of Nitrate Loading Risk Level, Provision 68 and Part 2, Section C.1-4 of Tier 2 and Tier 3 MRPs**

The nutrient management requirements of the Agricultural Order apply only to dischargers in Tier 2 and Tier 3 that are determined to have a high risk of causing nitrate loading to the groundwater. The Agricultural Order allows Tier 2 and Tier 3 dischargers to determine whether they have a high nitrate loading risk using one of two methodologies. The first is a methodology developed by the Central Coast Water Board that considers crop type, irrigation system type, and irrigation water nitrate concentration at the farm (or, at the discretion of the discharger, in smaller “nitrate loading risk units”) and assigns a risk based on these

factors.<sup>98</sup> Alternatively, dischargers may use the Groundwater Pollution Nitrate Hazard Index developed by the University of California Agricultural and Natural Resources (UCANR) group, which assigns a risk level based on crops grown, irrigation type, and soil type at the farm, and whether the fields have been deep ripped.<sup>99</sup> Dischargers report a Nitrate Loading Risk level for each farm or each nitrate loading risk unit, which is a subdivision of the farm based on farm conditions such as irrigation system type or crop type.

We agree with the Agricultural Petitioners that neither methodology can provide a precise measurement of risk of nitrate loading to groundwater, although the UCANR methodology comes closer because of the inclusion of soil type in the risk factors. Further, as the Agricultural Petitioners point out and the Central Coast Water Board acknowledges, the dischargers will need to estimate some of the inputs; for example, they may have to rely on crop substitutions when the exact crop is not ranked for risk or enter the most permeable soil type as the input when the farm has several soil types. We will task the Expert Panel with developing or endorsing a methodology for determining when a particular farm poses a risk to loading nitrates to groundwater.

However, despite the flaws in the proposed methodologies, we will not disturb the nitrate loading risk level determination set up by the Central Coast Water Board. We previously stayed these provisions, finding that the Agricultural Petitioners had raised enough concerns and questions about the reliability of the methodologies and stating that the methodologies needed to provide meaningful and reliable information.<sup>100</sup> Our review on the merits has not alleviated our concern that the methodologies are imprecise; however, neither has it revealed a more suitable methodology. In the absence of a clearly superior single methodology, we believe that the dischargers should have the opportunity to estimate their risk under either method. The effect of having both options is to permit a discharger with a high-risk determination under the Central Coast Water Board methodology to recalculate that result using the UCANR method. In effect, the discharger must submit to the nutrient management requirements of the Agricultural Order only if the discharger measures as high risk under both methods – a result that reduces the chances that a farm that is actually low risk will be categorized as high risk under the Agricultural Order.

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<sup>98</sup> Tier 2 and Tier 3 MRPs, Part II, §§ C.1-4 & Table 4.

<sup>99</sup> University of California, Center for Water Resources, Nitrate Groundwater Pollution Hazard Index, <[http://ucanr.org/sites/wrc/Programs/Water\\_Quality/Nitrate\\_Groundwater\\_Pollution\\_Hazard\\_Index/](http://ucanr.org/sites/wrc/Programs/Water_Quality/Nitrate_Groundwater_Pollution_Hazard_Index/)> (as of Jun. 4, 2013).

<sup>100</sup> Stay Order, p. 18.

The deadline for calculation of the nitrate loading risk level in the Agricultural Order is October 1, 2012, which was stayed by our Stay Order. We now direct Tier 2 and Tier 3 dischargers to calculate their Nitrate Loading Risk Level by January 15, 2014.

We shall amend Provision 68 as follows:

68. **By ~~October~~ January 15, 2012, 2014**, Tier 2 and Tier 3 Dischargers must determine nitrate loading risk factor(s) in accordance with MRP Order No. R3-2012-0011-02 and MRP Order No. R3-2012-0011-03 and report the nitrate loading risk factors and overall Nitrate Loading Risk level calculated for each ranch/farm or nitrate loading risk unit in the Annual Compliance Form, electronically (or in a format specified by the Executive Officer).

**2. Total Nitrogen Applied, Provision 70 and Part 2, Section C.5 of Tier 2 and Tier 3 MRPs**

Once a Tier 2 or Tier 3 discharger is determined to have high nitrate loading risk, the requirement to report total nitrogen applied is triggered. By October 1, 2014, and by October 1 annually thereafter, the discharger must report the total annual nitrogen applied per crop per acre for each farm or nitrate loading risk unit.

We support the reporting of total nitrogen applied, but find that this requirement is confusing as written. Also, because we strike some of the requirements for reporting under the Irrigation and Nutrient Management Plan provisions as discussed in the next section, we believe it is especially important that a comprehensive set of data is reported under the provisions for total nitrogen applied. Our amendments to Part 2, Section C.5 of the Tier 2 and Tier 3 MRPs clarify the set of data expected to be reported by creating two methods for reporting. The first method requires reporting for each field or management block that is planted with a single crop and requires reporting of nitrogen applied through fertilizers, nitrogen in the irrigation water, and nitrogen present in the soil.<sup>101</sup> This method is preferred because it will assist the discharger in determining how much nitrogen should be applied to the field or management block. We note that the practice of recording and budgeting of nitrogen application is a relatively low-cost, standard industry practice that is widely recommended by agronomists and crop specialists and already utilized by many growers in the Central Coast region.<sup>102</sup> However, we recognize that for some farms that have multiple crops planted over multiple rotations, this reporting requirement may be overly burdensome. As a result, we provide a second method of reporting for such

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<sup>101</sup> The Central Coast Water Board has acknowledged in its Response to the Petitions that the provisions on total nitrogen applied require revision and clarification. (Central Coast Water Board Response to the Petitions, pp. 18-20.)

<sup>102</sup> See AR File Nos. 23, 177, 178, & 234.

farms that allows for aggregated data to be reported at the nitrate loading risk unit level. While the second method does not assist the discharger in effectively managing nitrogen inputs, it will provide sufficient data to the Central Coast Water Board to identify dischargers who are applying relatively high levels of nitrogen for any appropriate follow up action. We will ask the Expert Panel to evaluate both methods of reporting.

The Agricultural Order allows dischargers to develop an individual discharge groundwater monitoring and reporting program in lieu of reporting total nitrogen applied. We do not see this alternative as one that will produce data of use to the Central Coast Water Board in the absence of an ambitious and costly approach that would include drilling and monitoring of monitoring wells. We will strike that alternative and instead require all Tier 2 and Tier 3 dischargers to report total nitrogen applied.<sup>103</sup>

We shall amend Sections C.2 and C.5 of Part 2 of the Tier 2 and Tier 3 MRPs as follows:

Tier 2 MRP, Part 2, Section C:

2. Tier 2 Dischargers may choose to subdivide the ranch/farm into "nitrate loading risk units," based on the variability of ranch/farm conditions for the purposes of complying with this Order. A nitrate loading risk unit is a subdivided unit of the ranch/farm ~~with different farming conditions.~~ **Factors that a discharger may consider in subdividing the farm into nitrate loading risk units include but are not limited to** (irrigation system type, crop type, nitrate concentration in the irrigation water, **soil type, number and size of management blocks that would have to otherwise be reported under Method 1 in subsection C.5 below** etc.). The nitrate loading risk unit may be the total ranch, a number of blocks, or an individual block. If a Discharger chooses to subdivide the ranch/farm into individual nitrate loading risk units, the Discharger must maintain individual record keeping, and conduct monitoring and reporting for each nitrate loading risk unit.  
. . .
5. Tier 2 Dischargers with individual farms/ranches or nitrate loading risk units that have a HIGH nitrate loading risk must report **application of nitrogen annually using Method 1 or 2:**  
**Method 1 (by field or management block):**
  - a. ~~Total nitrogen applied~~ **in lbs/acre per crop<sup>1</sup> for each field or management block and identification of the crop type<sup>2</sup>** ~~per crop, per acre, per year to each farm/ranch or nitrate loading risk unit in the electronic Annual Compliance Form.~~ Total nitrogen must be reported

<sup>103</sup> We reject the argument made by the Agricultural Petitioners that total nitrogen applied is sensitive proprietary information not appropriate for reporting for the same reasons articulated in our discussion of Farm Plans. We have already stated in this Order that, with regard to the proprietary of information submitted by dischargers, we will defer to the protections for sensitive business information created by the Legislature in the Water Code and the Public Records Act. Further, we see the timing and frequency of applications, which are not required to be reported, rather than data regarding total amount, as more relevant to competitive business practices.

in units of nitrogen, for **applied includes** any product, form, or concentration including, but not limited to, organic and inorganic fertilizers, slow release products, compost, compost teas, manure, **and** extracts, nitrogen present in the soil, and nitrate in irrigation water; **The discharger shall also identify the underlying basis for the amount of total nitrogen that the discharger decided to apply. The discharger may report more than one basis.**

- b. Average nitrogen concentration in irrigation water during the annual reporting period, reported as total nitrogen in mg/L, applied to each farm/ranch or nitrate loading risk unit, and also the calculated or estimated nitrogen load in lbs/acre for each field or management block.**
- c. Total nitrogen present in the soil in lbs/acre for each field or management block prior to the first application of fertilizer to the crop.**
  - ~~a. As an alternative to reporting total nitrogen, Tier 2 Dischargers with high nitrate loading risk may propose an individual discharge groundwater monitoring and reporting program (GMRP) plan for approval by the Executive Officer. The GMRP plan must evaluate waste discharge to groundwater from each ranch/farm or nitrate loading risk unit and assess if the waste discharge is of sufficient quality that it will not cause or contribute to exceedances of any nitrate water quality standards in groundwater.~~

**Method 2 (by nitrate loading risk unit):**

- a. Total acres of each nitrate loading risk unit.**
- b. Total nitrogen applied (sum of all applications) to each nitrate loading risk unit during the annual reporting period in lbs.<sup>1</sup> Total nitrogen applied includes any product, form, or concentration including, but not limited to, organic and inorganic fertilizers, slow release products, compost, compost teas, manure, and extracts. The discharger shall also identify the underlying basis for the amount of total nitrogen that the discharger decided to apply. The discharger may report more than one basis.**
- c. Average nitrogen concentration in irrigation water during the annual reporting period, reported as total nitrogen in mg/L, applied to each farm/ranch or nitrate loading risk unit, and also the calculated or estimated nitrogen load in lbs/acre.**
- d. Total acres of each crop type grown<sup>3</sup> within the nitrate loading risk unit during the annual reporting period.**
- e. Total nitrogen present in the soil in lbs/acre for each field within the nitrate loading risk unit, measured once per annual reporting period prior to the first application of fertilizer to the first crop in rotation.**

<sup>1</sup> **This reporting requirement is for the nitrogen content of fertilizer in lbs and not the total lbs of fertilizer. For example, if 100 lbs/acre of fertilizer is applied with 12 percent nitrogen, 12 lbs/acre of nitrogen is reported.**

<sup>2</sup> **In order to report on a field basis, the entire field must be planted with the same crop and receive the same fertilizer inputs. A management block is any portion of a discharger's land that is planted with the same crop and receives the same**

fertilizer inputs. Management blocks may consist of multiple fields and/or divisions of a single field.

<sup>3</sup>If a crop type is grown in more than one rotation during the annual reporting period, then total acres of the crop type equals the sum of the acres planted in each rotation.

Tier 3 MRP, Part 2, Section C:

3. Tier 3 Dischargers may choose to subdivide the ranch/farm into "nitrate loading risk units," based on the variability of ranch/farm conditions for the purposes of complying with this Order. A nitrate loading risk unit is a subdivided unit of the ranch/farm ~~with different farming conditions.~~ **Factors that a discharger may consider in subdividing the farm into nitrate loading risk units include but are not limited to** (irrigation system type, crop type, nitrate concentration in the irrigation water, **soil type, number of management blocks that would have to otherwise be reported under Method 1 in subsection C.5 below** etc.). The nitrate loading risk unit may be the total ranch, a number of blocks, or an individual block. If a Discharger chooses to subdivide the ranch/farm into individual nitrate loading risk units, the Discharger must maintain individual record keeping, and conduct monitoring and reporting for each nitrate loading risk unit.

...

5. Tier 3 Dischargers with individual farms/ranches or nitrate loading risk units that have a HIGH nitrate loading risk must report **application of nitrogen annually using Method 1 or 2:**
  - Method 1 (by field or management block):**
    - a. ~~†~~**Total nitrogen applied in lbs/acre<sup>1</sup> per crop for each field or management block and identification of the crop type.<sup>2</sup> per crop, per acre, per year to each farm/ranch or nitrate loading risk unit in the electronic Annual Compliance Form. Total nitrogen must be reported in units of nitrogen, for applied includes** any product, form, or concentration including, but not limited to, organic and inorganic fertilizers, slow release products, compost, compost teas, manure, **and** extracts, ~~nitrogen present in the soil, and nitrate in irrigation water;~~ **The discharger shall also identify the underlying basis for the amount of total nitrogen that the discharger decided to apply. The discharger may report more than one basis.;**
    - b. **Average nitrogen concentration in irrigation water during the annual reporting period, reported as total nitrogen in mg/L, applied to each farm/ranch or nitrate loading risk unit, and also the calculated or estimated nitrogen load in lbs/acre for each field or management block.**
    - c. **Total nitrogen present in the soil in lbs/acre for each field or management block prior to the first application of fertilizer to the crop.**
      - a. ~~As an alternative to reporting total nitrogen, Tier 3 Dischargers with high nitrate loading risk may propose an individual discharge groundwater monitoring and reporting program (GMRP) plan for approval by the Executive Officer. The GMRP plan must evaluate~~



waste discharge to groundwater from each ranch/farm or nitrate loading risk unit and assess if the waste discharge is of sufficient quality that it will not cause or contribute to exceedances of any nitrate water quality standards in groundwater.

**Method 2 (by nitrate loading risk unit):**

- a. **Total acres of each nitrate loading risk unit.**
- b. **Total nitrogen applied (sum of all applications) to each nitrate loading risk unit during the annual reporting period in lbs.<sup>1</sup> Total nitrogen applied includes any product, form, or concentration including, but not limited to, organic and inorganic fertilizers, slow release products, compost, compost teas, manure, and extracts. The discharger shall also identify the underlying basis for the amount of total nitrogen that the discharger decided to apply. The discharger may report more than one basis.**
- c. **Average nitrogen concentration in irrigation water during the annual reporting period, reported as total nitrogen in mg/L, applied to each farm/ranch or nitrate loading risk unit, and also the calculated or estimated nitrogen load in lbs/acre.**
- d. **Total acres of each crop type grown<sup>3</sup> within the nitrate loading risk unit during the annual reporting period.**
- e. **Total nitrogen present in the soil in lbs/acre for each field within the nitrate loading risk unit, measured once per annual reporting period prior to the first application of fertilizer to the first crop in rotation.**

<sup>1</sup> **This reporting requirement is for the nitrogen content of fertilizer in lbs and not the total lbs of fertilizer. For example, if 100 lbs/acre of fertilizer is applied with 12 percent nitrogen, 12 lbs/acre of nitrogen is reported.**

<sup>2</sup> **In order to report on a field basis, the entire field must be planted with the same crop and receive the same fertilizer inputs. A management block is any portion of a discharger's land that is planted with the same crop and receives the same fertilizer inputs. Management blocks may consist of multiple fields and/or divisions of a single field.**

<sup>3</sup> **If a crop type is grown in more than one rotation during the annual reporting period, then total acres of the crop type equals the sum of the acres planted in each rotation.**

**3. Irrigation and Nutrient Management Plan, Provisions 74-77 and 79 and Part 6 of Tier 3 MRP**

Tier 3 dischargers with a high nitrate loading risk must prepare and implement an Irrigation and Nutrient Management Plan (INMP) and have it certified by a qualified professional. The INMP is a plan to help the dischargers budget and manage nutrients applied to the fields<sup>104</sup> and requires identification of crop nitrogen needs, record keeping of nitrogen applied, balancing nitrogen applied and nitrogen uptake, and identification of practices to reduce nitrogen loading to groundwater. The Agricultural Petitioners do not object generally to the requirement to

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<sup>104</sup> Tier 3 MRP, Part 6, § A.2.

prepare and implement an INMP, but challenge four elements of the INMP that must be reported on the annual compliance form: (1) identification of crop nitrogen uptake values; (2) annual balance of nitrogen applied per crop compared to typical crop nitrogen uptake for each farm or nitrate loading risk unit; (3) annual estimation of nitrogen loading to groundwater and surface water; and (4) annual evaluation of reductions in nitrate loading to groundwater due to practice implementation. The Agricultural Petitioners argue that the information gathered and calculated for these elements is speculative and therefore not appropriate for inclusion in the INMP and for public reporting, as it might be misinterpreted or misused.<sup>105</sup> For the same reasons, the Agricultural Petitioners argue that an INMP effectiveness report to be submitted by October 1, 2016, will be speculative and should not be required. The Agricultural Petitioners additionally posit that the certification requirement for the INMP constitutes an unnecessary expense and that the dischargers can prepare the INMP without expert assistance.

With regard to the four reportable elements of the INMP, we agree with the Agricultural Petitioners that they result in at best an estimate of the nutrient balance ratio at a given farm and of the nitrate load leaving the farm. Crop nitrogen uptake values are not widely available and will require crop substitution, making the accuracy of the balance ratio questionable. An accurate calculation of the load discharged to surface water and groundwater requires a much more nuanced calculation than simply comparing the nitrogen applied to the fields and the amount expected to be taken up by the crops. Without reliable data on annual nitrate loading to groundwater in the first place, estimates of annual reductions in that loading are also unreliable. For these reasons, we will strike the requirements in the Agricultural Order to include calculations of the balance ratio of nitrogen applied to nitrogen uptake, the estimation of annual loading of nitrogen to groundwater and surface water, and the annual reduction in nitrogen loading to groundwater, as well as the requirement to report this information to the Central Coast Water Board. We will retain the requirement to determine crop nitrogen uptake values as part of preparation of the INMP, as this information is important to both the discharger and the professional certifying the INMP in determining the appropriate amount of nitrogen to be applied at the farm, but we will strike the requirement to have that information reported.

We recognize the value to the Central Coast Water Board of collecting data that will help identify dischargers that significantly overapply nitrogen. Such data allows the Central

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<sup>105</sup> The Agricultural Petitioners also argue that the requested information is proprietary. Because we strike the reporting requirement based on other grounds, *post*, we do not need to address this contention. Additionally, we have already stated in this Order that, with regard to the proprietary of information submitted by dischargers, we will defer to the protections for sensitive business information created by the Legislature in the Water Code and the Public Records Act.

Coast Water Board to follow up and work with these dischargers to reduce nitrogen loss to groundwater and surface water. But we do not agree with the Central Coast Water Board that the balance ratio constitutes the appropriate data for identifying excess application. We think the more detailed and accurate data that we have required to be reported under the total nitrogen applied provisions, which does not suffer from the same level of unreliability as the balance ratio (and which must be reported by both Tier 2 and Tier 3 dischargers that have high nitrate loading risk), will allow the Central Coast Water Board to easily identify outliers in nitrogen application and to prioritize these dischargers for follow up.

Further, while we strike the nitrogen balance requirements in the short-term, we will ask the Expert Panel to develop a template for nutrient balance determinations. We will also ask the Expert Panel to consider the best approaches to evaluating nitrate discharges to groundwater. For example, a more promising approach may be to require dischargers to do a soil profile analysis designed to determine the extent to which nitrogen applied to the fields moves below the root zone, a measure of excessive application. In the interim, we see little benefit to the Central Coast Water Board in collecting data upon which it cannot draw any reliable conclusions.

We will also strike Provision 76, which allows dischargers to develop an individual discharge groundwater monitoring and reporting program in lieu of the development and implementation of an INMP. As with the similar alternative provided under the total nitrogen reporting requirements, we do not see this alternative to the INMP as one that will produce data of use to the Central Coast Water Board in the absence of an ambitious technical undertaking. The INMP is a management practice that is generally supported by agricultural experts,<sup>106</sup> and we believe preparation of the INMP, rather than an alternative, is appropriate for Tier 3 dischargers with high nitrate loading risk.

We will not strike the requirements for certification of the INMP. The Central Coast Water Board convincingly argues that the certification requirement assures the Board that the INMPs will be agronomically sound and environmentally effective.<sup>107</sup> We will also retain the effectiveness report, but with revisions to clarify that the evaluation may be carried out by the dischargers, as opposed to a qualified professional, based on data that the discharger is already required to collect under the Agricultural Order. Unlike the reporting of elements of the INMP

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<sup>106</sup> See AR File Nos. 23; 177; 178; 233, p. 61; 287 (Letter 12), pp. 5-6; see also Ocean Mist Petition, p. 19, & Grower-Shipper Petition, p. 46 (stating that petitioners do not generally oppose a requirement for an irrigation and nutrient management plan).

<sup>107</sup> Central Coast Water Board Response to the Petitions, p. 21; AR File Nos. 233, p. 146; 265, pp. 490-91.

that we will strike, the effectiveness evaluation, as revised, constitutes a more qualitative assessment of the discharger's experience in implementing the INMP and, as a result, does not suffer from the same level of imprecision as the individual numbers required to be reported for balance ratios, loads, and load reductions.

We shall delete Provisions 74, 76, and 77 and Section B.1 of Part 6 of the Tier 3 MRP.<sup>108</sup> We shall amend Sections A.3-5 and Section B.2 of Part 6 of the Tier 3 MRP as follows:

Section A:

3. The professional certification of the INMP must indicate that the relevant expert has reviewed all necessary documentation and testing results, evaluated ~~nutrient balance calculations (total nitrogen applied relative to typical crop nitrogen uptake and nitrogen removed at harvest), evaluated estimated~~ **with consideration to potential** nitrate loading to groundwater, ~~evaluated progress towards nutrient management targets,~~ and conducted field verification to ensure accuracy of reporting.
4. Tier 3 Dischargers with High Nitrate Loading Risk must include the following elements in the INMP. The INMP is not submitted to the Central Coast Water Board, ~~with the exception of key elements identified in Part 6B~~ **with the exception of the INMP Effectiveness Report:**
  - a. Proof of INMP certification;
  - b. Map locating each farm/ranch or nitrate loading risk unit;
  - c. Identification of nitrate loading risk factors or input to the Groundwater Pollution Nitrate Hazard Index and overall Nitrate Loading Risk level calculation for each ranch/farm or nitrate loading risk unit;
  - d. Identification of crop nitrogen uptake values for use in nutrient balance calculations;
  - e. Record keeping **annually** ~~of~~ **by either Method 1 or Method 2:**
    - Method 1 (by field or management block):**
      - i. ~~The total nitrogen applied~~ **in lbs/acre** per crop, ~~per acre to each farm/ranch or nitrate loading risk unit~~ **for each field or management block and identification of the crop type.** ~~(in units of nitrogen, in~~ **Total nitrogen applied includes** any product, form, or concentration) including, but not limited to, organic and inorganic fertilizers, slow release products, compost, compost teas, manure, **and** extracts, ~~nitrogen present in the soil, and nitrate in irrigation water.~~ **The discharger shall also identify the underlying basis for the amount of total nitrogen that the discharger decided to apply. The discharger may report more than one basis.**
      - ii. **Average nitrogen concentration in irrigation water during the annual reporting period, reported as total nitrogen in mg/L,**

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<sup>108</sup> Throughout this Order, when we order deletion of an entire provision from the Agricultural Order, the strikeout text will not reflect that deletion. For example, the text below does not reproduce the stricken Table 5B. At the end of this Order, we identify for clarity the specific provisions deleted from the Agricultural Order.

applied to each farm/ranch or nitrate loading risk unit, and also the calculated or estimated nitrogen load in lbs/acre for each field or management block.

iii. Total nitrogen present in the soil in lbs/acre for each field or management block prior to the first application fertilizer to the crop.

Method 2 (by nitrate loading risk unit):

i. Total acres of each nitrate loading risk unit.

ii. Total nitrogen applied (sum of all applications) to each nitrate loading risk unit during the annual reporting period in lbs. Total nitrogen applied includes any product, form, or concentration including, but not limited to, organic and inorganic fertilizers, slow release products, compost, compost teas, manure, and extracts. The discharger shall also identify the underlying basis for the determination of the amount of total nitrogen applied. The discharger may report more than one basis.

iii. Average nitrogen concentration in irrigation water during the annual reporting period, reported as total nitrogen in mg/L, applied to each farm/ranch or nitrate loading risk unit, and also the calculated or estimated nitrogen load in lbs/acre.

iv. Total acres of each crop type grown within the nitrate loading risk unit during the annual reporting period.

v. Total nitrogen present in the soil in lbs/acre for each field within the nitrate loading risk unit, measured once per annual reporting period prior to the first application of fertilizer to the first crop in rotation.

- f. ~~Dischargers must~~ **To meet the requirement to record total nitrogen in the soil in 4.e. dischargers may** take a nitrogen soil sample (e.g. laboratory analysis or nitrate quick test) or use an alternative method to evaluate nitrogen content in soil, prior to planting or seeding the field or prior to the time of pre-sidedressing. The amount of nitrogen remaining in the soil must be accounted for as a source of nitrogen when budgeting, and the soil sample or alternative method results must be maintained in the INMP.
- g. ~~Annual balance of nitrogen applied compared to typical crop nitrogen uptake for each ranch/farm or nitrate loading risk unit (Nitrogen Balance ratio);~~
- h. ~~Annual estimation of nitrogen loading to groundwater and surface water, including subsurface drainage (e.g., tile drains), from each ranch/farm or nitrate loading risk unit;~~
- i. **g.** Identification of irrigation and nutrient management practices in progress (identify start date), completed (identify completion date), and planned (identify anticipated start date) to reduce nitrate loading to groundwater to achieve compliance with this Order.
- j. ~~Annual evaluation of reductions in nitrate loading to groundwater resulting from decreased fertilizer use and/or implementation of irrigation and nutrient management practices;~~
- k. **h.** Description of methods Discharger will use to verify overall effectiveness of the INMP.

5. Tier 3 Dischargers must evaluate the effectiveness of the INMP. Irrigation and Nutrient Management Plan effectiveness monitoring must be conducted or supervised by a registered professional engineer, professional geologist, Certified Crop Advisor, or similarly qualified professional. Monitoring must evaluate measured progress towards protecting, preserving, and restoring groundwater quality in the upper-most aquifer (or perched aquifer, whichever is first encountered), resulting from reductions in loading based on reduced fertilizer use and improved irrigation and nutrient management practices **in order to minimize nitrate loading to surface water and groundwater**. Monitoring **Evaluation** methods used may include, but are not limited to, lysimeter monitoring, shallow groundwater or soil monitoring, or **analysis of groundwater well monitoring data or soil sample data, or analysis of trends in nitrogen application data**. If the physical monitoring by itself cannot demonstrate progress towards compliance with the Order, the Discharger may need to supplement physical monitoring with contaminant transport and flow modeling.

Section B:

1. **2. By October 1, 2016**, Tier 3 Dischargers that have farms/ranches with high nitrate loading risk to groundwater must submit an INMP Effectiveness Report to evaluate measured progress towards protecting, preserving, and restoring groundwater quality in the upper-most aquifer, including reductions in **nitrate loading to surface water and groundwater** based on the implementation of irrigation and nutrient management practices. The INMP Effectiveness Report must be prepared by a state registered professional engineer, professional geologist, Certified Crop Advisor, or similarly qualified professional. Dischargers in the same groundwater basin or subbasin may choose to comply with this requirement as a group by submitting a single report that evaluates the overall effectiveness of the broad scale implementation of irrigation and nutrient management practices identified in individual INMPs to protect groundwater and achieve water quality standards for nitrate. Group efforts must use data from each farm/ranch (e.g., **data from individual groundwater wells, lysimeters, and/or soil samples, or nitrogen application**) to adequately represent groundwater quality and progress towards groundwater protection for all farms/ranches in the group. The INMP Effectiveness Report must include **a description of the methodology used to evaluate and verify effectiveness of the INMP**. the following elements and submitted with the electronic Annual Compliance Form:
  - a. A description of the methodology used to evaluate and verify effectiveness of the INMP (e.g., lysimeter monitoring, shallow groundwater or soil monitoring, groundwater well monitoring, contaminant transport and flow modeling);
  - b. An evaluation of how discharges of waste and any associated reductions in nitrate loading will decrease the concentration of nitrate in the upper-most aquifer, commensurate with water quality standards, within a reasonable and foreseeable time frame, and compared to milestones identified in the Order;

~~c. Based on estimated nitrate loading reductions to the groundwater basin or subbasin, the estimated number of years to achieve water quality standards in receiving water;~~

#### **4. Nitrogen Balance Ratios, Provision 78**

Provision 78 requires Tier 3 dischargers with high nitrate loading risk level to “report progress toward certain nitrogen balance ratios by October 1, 2015.” Dischargers producing crops in annual rotation must report progress toward a nitrogen balance ratio target of 1.0. Dischargers producing annual crops occupying the ground for the entire year must report progress towards a nitrogen balance ratio target of 1.2. The Agricultural Petitioners argue that the ratios represent an oversimplification of crop nutrient needs compared to nutrient applied and are therefore inappropriate targets. They further contend that the requirement constitutes the Central Coast Water Board dictating the manner of compliance in contravention of Water Code section 13360. Because our conclusion below rests on the former issue, we need not address the latter argument.

Going into the March 14-15, 2012 Central Coast Water Board hearing, the proposed Draft Agricultural Order Provision 78 stated that the relevant dischargers “must meet,” as opposed to “report progress toward,” the nitrogen balance ratio targets.<sup>109</sup> The provision was amended in response to comments at the hearing. The Keepers argue that elimination of the firm and measurable requirement that would have applied to nitrate discharges to groundwater rendered the Agricultural Order inconsistent with the water quality objectives in the Central Coast Basin Plan<sup>110</sup> and with Water Code section 13269’s mandate that any waiver of waste discharge requirements be in the public interest.

We have already stated above that we view the balance ratio required to be calculated by the dischargers in the INMP to be at best an estimate of the relationship between the nitrogen employed by the discharger and the nitrogen needed by the crop. Similarly, the target ratios advocated by the Central Coast Water Board and the Keepers are approximations of a complex relationship between nitrogen application and crop uptake.<sup>111</sup> We are keenly aware of the benefit and necessity of providing targets to encourage and measure progress in

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<sup>109</sup> AR File No. 338, p. 29.

<sup>110</sup> The Keepers reference the Central Coast Basin Plan requirements that 1) all waters be maintained free of toxic substances in concentrations which are toxic to, or which produce detrimental physiological responses in, human, plant, animal or aquatic life (Central Coast Basin Plan, § III-4); that 2) waters not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses (*id.* at § III-3); and that 3) nitrate concentrations in domestic water supplies shall not exceed 45 mg/l (*id.* at §§ III-5, III-7). (Petition Requesting Review by Monterey Coastkeeper et al. (Apr. 16, 2012), p. 10.)

<sup>111</sup> AR File Nos. 254, pp. 52-57; 287 (Letter 12), pp. 6-8.

reducing pollutant discharges in agricultural regulatory programs. However, because of the speculative and overly simplistic nature of both the calculated ratios relevant to each farm and of the target ratios, we see little to be gained from asking the dischargers to even “make progress toward” these particular targets. As such, we disagree with the Keepers that the nitrogen balance ratio targets are in fact firm and measurable requirements.<sup>112</sup> We will ask the Expert Panel to determine whether the targets can be reformulated to support some firm and measurable requirement or if an alternative approach, such as soil profile monitoring or monitoring of a regional network of monitoring wells would be preferable.

We shall delete Provision 78.

**K. Water Quality Buffer Plan, Provision 80 and Part 7 of Tier 3 MRP**

Provision 80 and Tier 3 MRP Part 7 require a subset of Tier 3 dischargers, specifically those with farms adjacent to or containing a waterbody listed as impaired for temperature, turbidity, or sediment, to prepare and implement a Water Quality Buffer Plan. The Water Quality Buffer Plan must propose a 30-foot or more buffer of undisturbed soil and riparian vegetation along the impaired waterbody or justify a smaller buffer based on an analysis of site-specific conditions approved by the Executive Officer.<sup>113</sup> As an alternative to the development and implementation of the Water Quality Buffer Plan, the affected dischargers may submit evidence to the Executive Officer demonstrating that any discharge of waste is sufficiently treated or controlled such that it will not cause or contribute to exceedances of water quality standards.

The Agricultural Petitioners make two arguments that the Water Quality Buffer Plan is contrary to law. First, they argue that the requirement dictates the manner of compliance in contravention of Water Code section 13360. Given the alternative compliance option whereby a discharger can choose instead to demonstrate that the discharge is treated or controlled to a level of not causing or contributing to violations of water quality standards, we

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<sup>112</sup> As discussed, the Agricultural Order requires compliance with applicable water quality standards and with applicable provisions of the Central Coast Basin Plan at Provisions 22 and 23. The approach taken in the Agricultural Order to achieving compliance with the Central Coast Basin Plan requirements over time through management practice implementation is consistent with the State Water Board’s Non-Point Source Policy (pp. 12-13) and consistent with the public interest in addressing a water quality issue that has few immediate and easy solutions.

<sup>113</sup> To the extent the Central Coast Water Board picked the buffer width of 30 feet based on the Basin Plan language cited in the Agricultural Order, the Board was misguided. A filter strip width of 30 feet is specified in the Basin Plan only for construction activities, not all land disturbance activities. (Central Coast Basin Plan, § V-13.) However, we find no harm as the provisions contemplate that the buffer width may be less (or more) than 30 feet based on site-specific conditions.



find that the Central Coast Water Board is not dictating the dischargers' manner of compliance here.<sup>114</sup>

Second, the Agricultural Petitioners argue that the requirement to implement the Water Quality Buffer Plan effects a regulatory taking prohibited by the Fifth Amendment by interfering with the investment-backed expectations of the dischargers who would otherwise utilize the buffer strips for agricultural use. A regulatory taking is an economic loss resulting from a regulatory action, as opposed to the government physically taking property through its power of eminent domain. The seminal case on regulatory takings is *Penn Central Transp. Co. v. City of New York* (1978) 438 U.S. 104 (*Penn Central*). *Penn Central* held that determining whether a regulatory action constitutes a taking requires a fact-specific consideration of “[t]he economic impact of the regulation on the claimant and, particularly, the extent to which the regulation has interfered with distinct investment-backed expectations,” as well as the nature of the taking, i.e. whether it is “a physical invasion by government . . . or arises from some public program adjusting the benefits and burdens of economic life to promote the common good.”<sup>115</sup>

Here, the alleged taking – the requirement that a subset of Tier 3 dischargers devote a strip of land along impaired water bodies to uses consistent with providing a filter to pollutants – is the result of regulatory action to promote environmental and public health protection. Further, with regard to the economic impact, the reduction in agricultural production is limited by the fact that the buffer strips will in most cases constitute a small portion of any given farm.<sup>116</sup> Finally, we note that dischargers may avoid the Water Quality Buffer Plan requirements by utilizing the alternative compliance option or by opting out of the Agricultural Order altogether in favor of individual waste discharge requirements. We reject the argument that the requirement to implement the Water Quality Buffer Plan constitutes a taking.

Accordingly, we will make no changes to the Water Quality Buffer Plan provisions. We emphasize that the buffers required by the relevant provisions will be along water bodies with known impairments due to pollutants associated with agricultural discharges.

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<sup>114</sup> See *Tahoe-Sierra Preservation Council v. State Water Resources Control Bd.* (1989) 210 Cal.App.3d 1421, 1438 (recognizing that preserving freedom of compliance options does not violate Water Code section 13360).

<sup>115</sup> *Penn Central*, 438 U.S. at 124; see also *Keystone Bituminous Coal Assoc. v. DeBenedictis* (1987) 480 U.S. 470, 487-493 (emphasizing the importance of the state’s purpose in takings analysis and finding no taking where regulation was enacted to prevent subsidence resulting from coal extraction).

<sup>116</sup> “‘Taking’ jurisprudence does not divide a single parcel into discrete segments and attempt to determine whether rights in a particular segment have been entirely abrogated.” (*Penn Central*, *supra*, 438 U.S. at 130; see also *Keystone Bituminous Coal Assoc.*, *supra*, 480 U.S. at 497; *MacLeod v. Santa Clara County* (9<sup>th</sup> Cir. 1984) 749 F.2d 541, 547.) The case before us is not a total taking where a discharger is deprived of “all economically beneficial or productive use of land.” (*Lucas v. South Carolina Coastal Council* (1992) 505 U.S.1003; see also *Palazzolo v. Rhode Island* (2001) 533 U.S. 606, 631-632.)

We support the Central Coast Water Board's determination that providing a buffer for filtration of the pollutants in these discharges is one of the most effective practices for protecting these most vulnerable waterways.<sup>117</sup>

We shall deny the request to delete Provision 80 and Part 7 of the Tier 3 MRP.

**L. Annual Compliance Form, Provision 67 and Part 3 of Tier 2 and Tier 3 MRPs**

The Agricultural Order requires Tier 2 and Tier 3 dischargers to electronically submit an Annual Compliance Form to the Central Coast Water Board on October 1, 2012, and to update it annually thereafter. In the Stay Order, we endorsed the use of the Annual Compliance Form generally,<sup>118</sup> but stayed certain provisions and required revisions consistent with the Stay Order directives.<sup>119</sup> We now make revisions to the Tier 2 and Tier 3 MRPs to make the Annual Compliance Form requirements consistent with our revisions elsewhere in this Order.

We shall amend Part 3 of the Tier 2 and Tier 3 MRPs as follows:

Tier 2 MRP, Part 3:

**A. Annual Compliance Form**

1. **By October 1, 2012 and updated annually thereafter by October 1,** Tier 2 Dischargers must submit an Annual Compliance Form electronically, in a format specified by the Executive Officer. The electronic Annual Compliance Form includes, but is not limited to the following minimum requirements:<sup>3</sup>
  - a. Signed transmittal letter;
  - b. Verification that any change in general operation or farm/ranch information (e.g., crop type, irrigation type, discharge type) is reported on update to Notice of Intent (NOI);
  - c. Verification of compliance with monitoring requirements, including any cooperative monitoring fees;
  - d. Verification of completed Farm Plan and date of last update;
  - e. Information regarding type and characteristics of discharge (e.g., number of discharge points, estimated flow/volume-number of tailwater days);

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<sup>117</sup> See AR File No. 232, pp. 71-74.

<sup>118</sup> Our endorsement of the use of the Annual Compliance Form was based in part on the Central Coast Water Board's representation that it would be a user-friendly document facilitating ease of reporting. We reiterate our expectation here that the form be clear and user-friendly, and that it facilitate efficient reporting as well as allow easy updating and revising of submissions. We see the Annual Compliance Form more as a means of communicating the iterative process that the dischargers are undertaking, and less as a strict compliance point, since the iterative process of trying management practices and adjusting to changing conditions is a continuous process.

<sup>119</sup> Stay Order, pp. 21-22. The Annual Compliance Form is available at <[http://www.waterboards.ca.gov/centralcoast/water\\_issues/programs/ag\\_waivers/docs/resources4growers/2012\\_09\\_26\\_acf\\_instructions\\_sampleform.pdf](http://www.waterboards.ca.gov/centralcoast/water_issues/programs/ag_waivers/docs/resources4growers/2012_09_26_acf_instructions_sampleform.pdf)> (as of Jun. 4, 2013).

- f. Identification of any direct agricultural discharges to a stream, lake, estuary, bay, or ocean;
- g. Identification of specific farm water quality management practices completed, in progress, and planned to address water quality impacts caused by discharges of waste including irrigation management, pesticide management, nutrient management, salinity management, stormwater management, and sediment and erosion control to achieve compliance with this Order, **and identification of specific methods used, and described in the Farm Plan consistent with Order Provision 44.g., for the purposes of assessing the effectiveness of management practices implemented and the outcomes of such assessments** ;
- h. Nitrate concentration of irrigation water **Average nitrogen concentration in irrigation water during the annual reporting period, reported as total nitrogen in mg/L applied for each farm/ranch or nitrate loading risk unit, and also the calculated or estimated nitrogen load in lbs/acre;**
- i. Identification of the application of any fertilizers, pesticides, fumigants or other chemicals through an irrigation system (e.g. fertigation or chemigation) and proof of proper backflow prevention devices;
- j. Description of method and location of chemical applications relative to surface water;
- k. Nitrate Loading Risk factors in Table 4 or Nitrate Groundwater Pollution Hazard Index input and Nitrate Loading Risk level;
- l. Proof of approved California Department of Fish and Game (CDFG) Streambed Alteration Agreement, as required by CDFG for any work proposed within the bed, bank or channel of a lake or stream, including riparian areas, that has the potential to result in erosion and discharges of waste to waters of the State;

**Tier 2 Dischargers with farms/ranches that contain or are adjacent to a waterbody impaired for temperature, turbidity or sediment:**

- m. Photo monitoring to document condition of streams, riparian, and wetland area habitat and the presence of bare soil within the riparian habitat area that is vulnerable to erosion;<sup>4</sup>

**Tier 2 Dischargers with farms/ranches that have High Nitrate Loading Risk:<sup>5</sup>**

**Either:**

**Method 1 (by field or management block):**

- n. ~~m.~~ Total nitrogen applied per acre to each farm/ranch or nitrate loading risk unit **in lbs/acre per crop for each field or management block and identification of the crop type.** ~~(in units of nitrogen, in~~ **Total nitrogen applied includes** any product, form, or concentration) including, but not limited to, organic and inorganic fertilizers, slow release products, compost, compost teas, manure, **and** extracts, ~~nitrogen present in the soil, and nitrate in irrigation water;~~ **The discharger shall also identify the underlying basis for the determination of the amount of total**

**nitrogen applied. The discharger may report more than one basis;**

**o. Total nitrogen present in the soil in lbs/acre for each field or management block prior to the first application of fertilizer to the crop;**

**or**

**Method 2 (by nitrate loading risk unit):**

**p. Total acres of each nitrate loading risk unit;**

**q. Total nitrogen applied (sum of all applications) to each nitrate loading risk unit during the annual reporting period in lbs. Total nitrogen applied includes any product, form or concentration including, but not limited to, organic and inorganic fertilizers, slow release products, compost, compost teas, manure, and extracts. The discharger shall also identify the underlying basis for the determination of the amount of total nitrogen applied. The discharger may report more than one basis;**

**r. Total acres of each crop type grown within the nitrate loading risk unit during the annual reporting period;**

**s. Total nitrogen present in the soil in lbs/acre for each field within the nitrate loading risk unit, measured once per annual reporting period prior to the first application of fertilizer to the first crop in rotation.**

<sup>3</sup>Items reported in the Annual Compliance Document are due by October 1, 2012 and annually thereafter, unless otherwise specified.

<sup>4</sup>**Reporting due by October 1, 2014.**

<sup>5</sup>Due by October 1, 2014 and annually thereafter by October 1.

Tier 3 MRP, Part 3:

**A. Annual Compliance Form**

1. **By October 1, 2012 and updated annually thereafter by October 1,** Tier 3 Dischargers must submit an Annual Compliance Form electronically, in a format specified by the Executive Officer. The electronic Annual Compliance Form includes, but is not limited to the following minimum requirements<sup>3</sup>:
  - a. Signed transmittal letter;
  - b. Verification that any change in general operation or farm/ranch information (e.g., crop type, irrigation type, discharge type) is reported on update to Notice of Intent (NOI);
  - c. Verification of compliance with monitoring requirements, including any cooperative monitoring fees;
  - d. Verification of completed Farm Plan and date of last update;
  - e. Information regarding type and characteristics of discharge (e.g., number of discharge points, estimated flow/volume, number of tailwater days);
  - f. Identification of any direct agricultural discharges to a stream, lake, estuary, bay, or ocean;
  - g. Identification of specific farm water quality management practices completed, in progress, and planned to address water quality impacts caused by discharges of waste including irrigation

management, pesticide management, nutrient management, salinity management, stormwater management, and sediment and erosion control to achieve compliance with this Order, **and identification of specific methods used, and described in the Farm Plan consistent with Order Provision 44.g., for the purposes of assessing the effectiveness of management practices implemented and the outcomes of such assessments;**

h. ~~Nitrate concentration of irrigation water~~ **Average nitrogen concentration in irrigation water during the annual reporting period, reported as total nitrogen in mg/L applied for each farm/ranch or nitrate loading risk unit, and also the calculated or estimated nitrogen load in lbs/acre;**

i. Identification of the application of any fertilizers, pesticides, fumigants or other chemicals through an irrigation system (e.g. fertigation or chemigation) and proof of proper backflow prevention devices;

j. Description of method and location of chemical applications relative to surface water;

k. Nitrate Loading Risk factors in Table 4 or Nitrate Groundwater Pollution Hazard Index input and Nitrate Loading Risk level;

l. Proof of approved California Department of Fish and Game (CDFG) Streambed Alteration Agreement, as required by CDFG for any work proposed within the bed, bank or channel of a lake or stream, including riparian areas, that has the potential to result in erosion and discharges of waste to waters of the State;

**Tier 3 Dischargers with farms/ranches that contain or are adjacent to a waterbody impaired for temperature, turbidity or sediment:**

m. Photo monitoring to document condition of streams, riparian, and wetland area habitat and the presence of bare soil within the riparian habitat area that is vulnerable to erosion;<sup>4</sup>

n. Water Quality Buffer Plan or alternative<sup>5,4</sup>;

**Tier 3 Dischargers with farms/ranches that have High Nitrate Loading Risk:**

**Either:**

**Method 1 (by field or management block):**

o. ~~Total nitrogen applied per acre to each farm/ranch or nitrate loading risk unit~~ **in lbs/acre per crop for each field or management block and identification of the crop type.** ~~(in units of nitrogen, in~~ **Total nitrogen applied includes** ~~any product, form,~~ <sup>1</sup> ~~or concentration),~~ <sup>1</sup> including, but not limited to, organic and inorganic fertilizers, slow release products, compost, compost teas, manure, **and** ~~extracts.~~ **The discharger shall also identify the underlying basis for the determination of the amount of total nitrogen applied. The discharger may report more than one basis;** ~~nitrogen present in the soil, and nitrate in irrigation water~~ <sup>5,6</sup> <sub>7</sub>

**p. Total nitrogen present in the soil in lbs/acre for each field or management block prior to the first application of fertilizer to the crop;**<sup>6</sup>

p. Specific elements of the INMP (e.g., Proof of certification, Crop Nitrogen Uptake Values, Nitrogen Balance Ratio, Estimate of Nitrate Loading to Groundwater, Estimate of Reduction in Nitrate Loading to Groundwater)<sup>6</sup>;

**or**

**Method 2 (by nitrate loading risk unit):**

**q. Total acres of each nitrate loading risk unit;**

**r. Total nitrogen applied (sum of all applications) to each nitrate loading risk unit during the annual reporting period in lbs. Total nitrogen applied includes any product, form, or concentration including, but not limited to, organic and inorganic fertilizers, slow release products, compost, compost teas, manure, and extracts. The discharger shall also identify the underlying basis for the determination of the amount of total nitrogen applied. The discharger may report more than one basis;**

**s. Total acres of each crop type grown within the nitrate loading risk unit during the annual reporting period;**

**t. Total nitrogen present in the soil in lbs/acre for each field within the nitrate loading risk unit, measured once per annual reporting period prior to the first application of fertilizer to the first crop in rotation.**

**and**

**qu. INMP Effectiveness Report.**<sup>7</sup>

<sup>3</sup>Items reported in the Annual Compliance Form are due by October 1, 2012 and annually thereafter, unless otherwise specified.

<sup>4</sup>**Reporting due by October 1, 2014 and October 1, 2017.**

<sup>5</sup>Due by October 1, 2016

<sup>6</sup>Due by October 1, 2014 and annually thereafter by October 1

<sup>6</sup>Due by October 1, 2015

<sup>7</sup>Due by October 1, 2016

Additionally, the Executive Officer of the Central Coast Water Board is directed to revise the Annual Compliance Form consistent with the revisions made to Part 3 of the Tier 2 and Tier 3 MRPs as well as consistent with revisions made to all other sections of the Agricultural Order. We note again that, with the adoption of this Order, the Stay Order has no further effect. During the stay proceedings, the petitioners and Central Coast Water Board staff met with State Water Board staff to come to agreement on which provisions of the Annual Compliance Form would be revised or removed to make the form consistent with the Stay Order. Since the Stay Order has no further effect, the Central Coast Water Board may now restore all requirements of the Annual Compliance Form that are consistent with this Order. The Central Coast Water Board has provided a redline/strikeout of the Annual Compliance Form showing revisions made to the form as a result of the Stay Order. To prevent any confusion that

may arise as to the effect of the dissolution of the stay on the Annual Compliance Form, we take official notice of the submission<sup>120</sup> and attach it to this Order as [Exhibit 1](#). We find that the Annual Compliance Form may be restored to its original language with the exception (1) that Section B require reporting of the nitrate concentration in irrigation water as the annual average concentration and the estimated nitrogen loading consistent with the revisions above, and (2) that the Section K photo monitoring deadline reflect the new deadline of June 1, 2014, with the requirement to report on photo monitoring optional until October 1, 2014. We also expect the Central Coast Water Board to further revise the Annual Compliance Form prior to October 1, 2014, to include the requirements for high nitrate loading risk dischargers to report total nitrogen applied and nitrogen present in the soil consistent with our revisions,<sup>121</sup> and as otherwise necessary to reflect the requirements in the Agricultural Order as revised by this Order. For the October 1, 2013 reporting deadline, dischargers shall use the existing Annual Compliance Form prepared by the Central Coast Water Board following the stay, due to the short time frame between adoption of this Order and the deadline. The Annual Compliance Form shall be revised after October 1, 2013, to include Provision 68's requirement that Tier 2 and Tier 3 dischargers report the nitrate loading risk factors and overall Nitrate Loading Risk level by January 15, 2014.

**M. Time Schedules, Order Tables 3 and 4, Table 5 of Tier 2 MRP, and Table 6 of Tier 3 MRP**

We make additional edits to several tables in the Agricultural Order consistent with our amendments elsewhere in this Order.

We shall amend Tables 3 and 4, Table 5 of the Tier 2 MRP, and Table 6 of the Tier 3 MRP as follows:

**Table 3. Additional Time Schedule for Compliance with Conditions Tier 2 and Tier 3 Dischargers**

CONDITIONS	COMPLIANCE DATE
<b><i>Tier 2 and Tier 3:</i></b>	
Submit electronic Annual Compliance Form	October 1, 2012, and updated annually thereafter by October 1.

<sup>120</sup> Cal. Code Regs., tit. 23, §648.2.

<sup>121</sup> The Central Coast Water Board should work with the other regional water boards to develop a format for reporting total nitrogen applied and nitrogen present in the soil that can be used statewide.

Submit photo documentation of riparian or wetland area habitat (if farm/ranch contains or is adjacent to a waterbody impaired for temperature, turbidity, or sediment)	<del>October 1, 2012</del> , <b>June 1, 2014, June 1, 2017</b> , and every four years thereafter by <del>October 1</del> . <b>June 1</b> .
Calculate Nitrate Loading Risk level and report in electronic Annual Compliance Form	<del>October 1, 2012</del> , <b>January 15, 2014</b> , and annually thereafter by October 1.
Submit total nitrogen applied in electronic Annual Compliance Form (if discharge has High Nitrate Loading Risk)	October 1, 2014, and annually thereafter by October 1.
<b>Only Tier 3:</b>	
Initiate individual surface water discharge monitoring	<del>October</del> <b>December</b> 1, 2013
<del>Determine Crop Nitrogen Uptake (if discharge has High Nitrate Loading Risk)</del>	<del>October 1, 2013</del>
Submit individual surface water discharge monitoring data	March 15, 2014, October 1, 2014 and annually thereafter by October 1
<del>Submit INMP elements in electronic Annual Compliance Form (if discharge has High Nitrate Loading Risk), including Nitrogen Balance Ratio</del>	<del>October 1, 2015, and annually thereafter by October 1</del>
<del>Submit progress towards Nitrogen Balance Ratio target equal to one (1) for crops in annual rotation (e.g., cool season vegetables) or alternative, (if discharge has High Nitrate Loading Risk)</del>	October 1, 2015
<del>Submit progress towards Nitrogen Balance Ratio target equal to 1.2 for annual crops occupying the ground for the entire year (e.g., strawberries or raspberries) or alternative, (if discharge has High Nitrate Loading Risk)</del>	
Submit Water Quality Buffer Plan or alternative (if farm/ranch contains or is adjacent to a waterbody impaired for temperature, turbidity, or sediment)	October 1, 2016
Submit INMP Effectiveness Report (if discharge has High Nitrate Loading Risk)	October 1, 2016

**Table 4. Time Schedule for Milestones**

MILESTONES <sup>1</sup>	DATE
<b>Tier 1, Tier 2 and Tier 3:</b>	
Measurable progress towards water quality standards in waters of the State or of the United States <sup>1</sup> , or	Ongoing
Water quality standards met in waters of the State or of the United States.	October 1, 2016



<b>Only Tier 3:</b>	
<u>Pesticide and Toxic Substances Waste Discharges to Surface Water</u>  - One of two individual surface water discharge monitoring samples is not toxic  - Two of two individual surface water discharge monitoring samples are not toxic	October 1, 2014  October 1, 2015
<u>Sediment and Turbidity Waste Discharges to Surface Water</u>  - Four individual surface water discharge monitoring samples are collected and analyzed for turbidity.  - 75% reduction in turbidity or sediment load in individual surface water discharge relative to October 1, 2012 load (or meet water quality standards for turbidity or sediment in individual surface water discharge)	October 1, 2014  October 1, 2015
<u>Nutrient Waste Discharges to Surface Water</u>  - Four individual surface water discharge monitoring samples are collected and analyzed  - 50% load reduction in nutrients in individual surface water discharge relative to October 1, 2012 load (or meet water quality standards for nutrients in individual discharge)  - 75% load reduction in nutrients in individual surface water discharge relative to October 1, 2012 load (or meet water quality standards for nutrients in individual surface water discharge)	October 1, 2014  October 1, 2015  October 1, 2016
<u>Nitrate Waste Discharges to Groundwater</u>  - Achieve annual reduction in nitrogen loading to groundwater based on Irrigation and Nutrient Management Plan effectiveness and load evaluation	October 1, 2016 and annually thereafter

<i>-Achieve Nitrogen Balance Ratio equal to one (1) for crops in annual rotation (e.g., cool season vegetables) or alternative, (if discharge has High Nitrate Loading Risk)</i>	October 1, 2015
<i>-Achieve Nitrogen Balance Ratio equal to 1.2 for annual crops occupying the ground for the entire year (e.g., strawberries or raspberries) or alternative, (if discharge has High Nitrate Loading Risk)</i>	

<sup>1</sup> Indicators of progress towards milestones includes, but is not limited to data and information related to a) management practice implementation and effectiveness, b) treatment or control measures, c) individual discharge monitoring results, d) receiving water monitoring results, and e) related reporting.

**Table 5. Tier 2 - Time Schedule for Key Monitoring and Reporting Requirements**

REQUIREMENT	TIME SCHEDULE <sup>1</sup>
Submit Quality Assurance Project Plan and Sampling And Analysis Plan for Surface Receiving Water Quality Monitoring (individually or through cooperative monitoring program)	Within three months
Initiate surface receiving water quality monitoring (individually or through cooperative monitoring program)	Within six months
Submit surface receiving water quality monitoring data (individually or through cooperative monitoring program)	Within nine months, quarterly thereafter (January 1, April 1, July 1, and October 1)
Submit surface receiving water quality Annual Monitoring Report (individually or through cooperative monitoring program)	Within one year, annually thereafter by January 1
Initiate monitoring of groundwater wells	Within one year
<b><i>Tier 2 Dischargers with farms/ranches that contain or are adjacent to a waterbody impaired for temperature, turbidity or sediment:</i></b> Conduct photo monitoring of riparian or wetland area habitat	<del>October 1, 2012</del> <b>June 1, 2014,</b> <b>June 1, 2017,</b> and every four years thereafter by <del>October 1,</del> <b>June 1.</b>
Submit electronic Annual Compliance Form	October 1, 2012, and updated annually thereafter by October 1
Submit groundwater monitoring results	October 1, 2013
<b><i>Tier 2 Dischargers with farms/ranches that have High Nitrate Loading Risk:</i></b> Report total nitrogen applied per acre to each <del>farm/ranch or nitrate loading risk unit</del> <b>field or management block or nitrate loading risk unit</b> , in electronic Annual Compliance Form	October 1, 2014, and annually thereafter by October 1.

<sup>1</sup> Dates are relative to adoption of this Order or enrollment date for Dischargers enrolled after the adoption of this Order, unless otherwise specified.

**Table 6. Tier 3 - Time Schedule for Key Monitoring and Reporting Requirements**

REQUIREMENT	TIME SCHEDULE <sup>1</sup>
Submit Quality Assurance Project Plan and Sampling And Analysis Plan for Surface Receiving Water Quality Monitoring (individually or through cooperative monitoring program)	Within three months
Initiate surface receiving water quality monitoring (individually or through cooperative monitoring program)	Within six months
Submit surface receiving water quality monitoring data (individually or through cooperative monitoring program)	Within nine months, quarterly thereafter (January 1, April 1, July 1, and October 1)
Submit surface receiving water quality Annual Monitoring Report (individually or through cooperative monitoring program)	Within one year, annually thereafter by January 1
Initiate monitoring of groundwater wells	Within one year
Submit individual surface water discharge Sampling and Analysis Plan	March 15, 2013
Initiate individual surface water discharge monitoring	<del>October</del> <b>December 1, 2013</b>
Submit individual surface water discharge monitoring data	March 15, 2014, October 1, 2014 and annually thereafter by October 1
Submit electronic Annual Compliance Form	October 1, 2012, and updated annually thereafter by October 1
Submit groundwater monitoring results	October 1, 2013
<b><i>Tier 3 Dischargers with farms/ranches that contain or are adjacent to a waterbody impaired for temperature, turbidity or sediment:</i></b>	
Conduct photo monitoring of riparian or wetland area habitat	<del>October 1, 2012</del> <b>June 1, 2014, June 1, 2017</b> , and every four years thereafter by <del>October 1</del> <b>June 1</b> .
Submit Water Quality Buffer Plan or alternative	October 1, 2016
<b><i>Tier 3 Dischargers with farms/ranches that have High Nitrate Loading Risk:</i></b>	
Report total nitrogen applied per acre to each farm/ranch or nitrate loading risk unit <b>field or management block or nitrate loading risk unit</b> , in electronic Annual Compliance Form	October 1, 2014, and annually thereafter by October 1.
Determine Crop Nitrogen Uptake	October 1, 2013
Submit INMP elements in electronic Annual Compliance Form	October 1, 2015, and annually thereafter by October 1
Submit indication of progress towards Nitrogen Balance Ratio milestone equal to one (1) for crops in annual rotation (e.g. cool season vegetables) or alternative;	October 1, 2015
Submit indication of progress towards Nitrogen Balance Ratio milestone equal to 1.2 for annual crops occupying the ground for the entire year (e.g. strawberries or raspberries) or alternative	
Submit INMP Effectiveness Report	October 1, 2016

<sup>1</sup> Dates are relative to adoption of this Order, unless otherwise specified.

**N. Water Code Section 106.3's Human Right to Water and Antidegradation**

We now turn to the two remaining legal assertions made by the Environmental Justice Groups in their July 16, 2013, comment letter that have been opposed by Grower-Shipper in a Motion to Strike.

**1. Water Code Section 106.3**

Water Code section 106.3 requires all relevant state agencies, including the State Water Board, when revising or adopting polices, regulations, and criteria, to consider "that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes." The Environmental Justice Groups argue that section 106.3 applies to the State Water Board's action in reviewing and revising the Agricultural Order. Grower-Shipper objects to consideration of section 106.3 on grounds that the law was not in effect at the time of adoption of the Agricultural Order by the Central Coast Water Board. We understand the Environmental Justice Groups to be asserting not that the Central Coast Water Board should have considered section 106.3, but that the State Water Board should now consider it in adopting this Order.

The Environmental Justice Groups did not file a petition in this action and none of the petitioners raised consistency with section 106.3 as an issue in their petitions, presumably because Assembly Bill 685 had not yet become law. With regard to our action in adopting this Order, section 106.3, by its terms, does not apply to the issuance of a water quality order.<sup>122</sup> Nonetheless, we recognize the important, basic human right expressed in Water Code section 106.3, subdivision (a), and the importance of this Order to a large number of residents throughout the Central Coast Region. We find that it is appropriate to address the human right to water established by section 106.3 in adopting the Order.

In considering this basic human right, we have considered this Order's requirements and its intent to protect beneficial uses, such as drinking water supplies. We find that this Order is consistent with advancing the human right to safe, clean, affordable, and accessible water, adequate for human consumption, cooking, and sanitary purposes. The Order, in conjunction with the Agricultural Order, advances the human right expressed in Water Code section 106.3 because it (1) requires implementation of management practices to reduce discharge of waste to groundwater and to assess the effectiveness of such practices for the purposes of protecting beneficial uses, including drinking water supplies; (2) requires monitoring

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<sup>122</sup> Wat. Code, § 106.3, subd. (b).

of all on-farm wells that are or may be used for drinking water and are at risk of exceeding the MCL for nitrate; (3) requires reporting to users of any exceedances of the MCL for nitrate; (4) requires reporting of total nitrogen application to fields in a manner that will allow the Central Coast Water Board to identify excessive application and follow up to help reduce such application; and (5) requires avoidance of discharges of waste from containment structures that cause or contribute to exceedances of water quality standards in surface water or groundwater.

## **2. Antidegradation**

The Environmental Justice Groups additionally argue that the Agricultural Order fails to meet antidegradation requirements as laid out in State Water Board Resolution No. 68-16 (Antidegradation Policy)<sup>123</sup> and as recently interpreted by the Court of Appeal in *Asociacion de Gente Unida por el Agua v. Central Valley Regional Water Quality Control Board* (2012) 210 Cal.App.4<sup>th</sup> 1255 (AGUA decision).<sup>124</sup> The Antidegradation Policy sets requirements regarding waters that are “high quality.” High quality waters are those that have a baseline water quality better than required by water quality control plans and policies. The Antidegradation Policy requires that high quality waters be maintained unless it can be demonstrated that any change in water quality (1) will be consistent with maximum benefit to the people of the state; (2) will not unreasonably affect present or probable future beneficial uses of such water; and (3) will not result in water quality less than prescribed in water quality control plans or policies. Further, discharges to high quality waters must meet waste discharge requirements which result in the best practicable treatment or control (BPTC) necessary to assure that no pollution or nuisance will occur and the highest water quality consistent with the maximum benefit to the people of the State will be maintained.<sup>125</sup> The Environmental Justice Groups argue that the Central Coast Water Board failed to make the necessary findings and demonstrations in support of the conditions of the Agricultural Order.

Grower-Shipper has asked us to disregard the antidegradation argument on grounds that the Environmental Justice Groups should have raised the issue in comments before the Central Coast Water Board and further should have filed a petition with the State Water Board raising the argument. With regard to antidegradation arguments directed at the Agricultural Order as adopted by the Central Coast Water Board, we agree with Grower-

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<sup>123</sup> State Water Board Resolution No. 68-16, Statement of Policy with Respect to Maintaining High Quality of Waters in California (1968).

<sup>124</sup> See also 40 C.F.R. §131.12.

<sup>125</sup> *Ibid.* See also AGUA, 210 Cal.App.4<sup>th</sup> 1255.

Shipper. By raising antidegradation claims only through comments on the June 6, 2013, Draft Order, and not before the Central Coast Water Board and through a timely filed petition, the Environmental Justice Groups failed to exhaust their administrative remedies.<sup>126</sup> Raising the issue before the Central Coast Water Board would allow that board to consider the arguments, allow other parties to address the arguments, provide an appropriate record, and create a suitable foundation for our review. Challenging the Agricultural Order's compliance with the Antidegradation Policy in a comment letter on our draft Order circumvents the petition process, prevents the Central Coast Water Board from considering the issue in the first instance, and forecloses other parties from properly responding to the issue. As a result, the issue is not properly before us.

To the extent the Environmental Justice Groups are arguing that the State Water Board's incremental action in revising the Agricultural Order has failed to comply with the Antidegradation Policy, we will consider the issue. Ultimately, however, we reject that argument on the merits. The incremental changes made to the Agricultural Order by the State Water Board do not alter the fundamental water quality protections and will not independently lead to any increases in volume or severity of the discharges already authorized by the Agricultural Order or any lowering of water quality. The most significant revisions are those that eliminate calculation and reporting of nitrogen balance ratios, and making progress toward certain balance ratio targets; however those revisions reflect our conclusions that the provisions related to the balance ratios are unlikely to yield reliable data in support of water quality improvements. We have substituted expanded total nitrogen reporting for reporting of the balance ratios to provide an alternative mechanism for the Central Coast Water Board to identify excessive nitrogen application. Further, we have retained all monitoring necessary to detect and track any degradation in surface water and groundwater, and, as a result, the Central Coast Water Board can require more stringent management practices where it determines that degradation is in fact occurring. Therefore, we are not obligated to make any additional findings regarding antidegradation in this Order.

While we decline to make any changes to the Agricultural Order or this Order based on antidegradation claims, we are cognizant of the important mandate to carry out an appropriate antidegradation analysis prior to water boards' regulatory actions. We previously

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<sup>126</sup> See. Wat. Code, § 13320; Cal. Code Regs., tit. 23, § 2050, subd. (a)(9). See generally, *Abelleira v. District Court of Appeal, Third Dist.* (1941) 17 Cal.2d 280, 293 (discussing the origin and jurisdictional nature of the exhaustion doctrine).

commenced a review of the Antidegradation Policy. Following the *AGUA* decision, we understand the need to provide better tools for the regional water boards to conduct an appropriate analysis, consistent with the interpretation of the Antidegradation Policy in the *AGUA* decision. The State Water Board staff has already begun working on this effort, in conjunction with staff of the regional water boards. Interested persons will have an opportunity to weigh in on this important issue. We will use this process to provide specific tools to assist the regional water boards in conducting antidegradation analyses for agricultural discharges, among other types of discharges. These resources will be available to the Central Coast Water Board as it develops its next iteration of the Agricultural Order. Further, to the extent the Central Coast Water Board determines it necessary or appropriate to revisit its antidegradation analysis consistent with the new analytical tools, we have previously noted that it may reopen and make revisions to the Agricultural Order.<sup>127</sup>

### III. CONCLUSION

Based on the above discussion, the State Water Board concludes that:

1. An expert panel shall be convened to provide a more thorough analysis and long-term statewide recommendations regarding many of the issues implicated in the Agricultural Order, including indicators and methodologies for determining risk to surface and groundwater quality, targets for measuring reductions in risk, and the use of monitoring to evaluate practice effectiveness.
2. The Central Coast Water Board did not violate any due process rights, ex parte communication rules, or notice and comment procedures when it included Provision 11, which authorizes the approval of third party approaches. As described above, however, Provision 11 should be amended to expand the scope of allowable third party approaches and to provide for Central Coast Water Board review of an Executive Officer decision to approve or disapprove a third party project or program.
3. Water Code sections 13141 and 13241 do not apply to the Central Coast Water Board's adoption of the Agricultural Order.
4. The tiered discharger classification scheme adopted by the Central Coast Water Board is a reasonable, interim approach based on the evidence in the record. As described above, however, the procedures for approving revisions to the applicable tiers should

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<sup>127</sup> See footnote 9, *ante*.

be amended to provide for Central Coast Water Board review of an Executive Officer decision to approve or disapprove a new tier determination for a single discharger, and to provide that the decision to approve or disapprove a new tier determination for members of a sustainable agricultural program shall be taken by the Central Coast Water Board in the first instance.

5. A new provision 87.5 is added to the Agricultural Order to make clear the Central Coast Water Board's intent that dischargers will comply with provisions requiring compliance with water quality standards and Central Coast Basin Plan provisions, as well as the provisions requiring dischargers to effectively control certain pollutant discharges, by (1) implementing management practices that prevent or reduce discharges of waste that are causing or contributing to exceedances of water quality standards; and (2) to the extent practice effectiveness evaluation or reporting, monitoring data, or inspections indicate that the implemented management practices have not been effective in preventing the discharges from causing or contributing to exceedances of water quality standards, implementing improved management practices.

6. Provision 33, which deals with containment structures, should be amended to make it clear that dischargers are required to avoid discharges of waste from containment structures to groundwater or surface water that cause or contribute to exceedances of water quality standards, and further to identify various potential methods of compliance. A reference to Provision 33 is also added to Provision 87.5 to clarify that dischargers will comply with the requirement to avoid discharges of waste from containment structures that cause or contribute to exceedances of water quality standards by engaging in the process of management practice implementation set out in Provision 87.5.

7. Provision 44, which deals with Farm Plans, should be amended as described above to clarify that dischargers are expected to rely upon standard practices, such as visual inspections and record keeping, in assessing practice effectiveness.

8. The Agricultural Order includes an adequate process based on existing statutory protections for dischargers to identify sensitive information that the dischargers assert should be exempt from disclosure to the public.

9. The groundwater monitoring provisions are appropriate and do not impose unreasonable costs in light of the human health and groundwater characterization benefits to be derived from the monitoring. The cooperative groundwater monitoring provisions should be amended to require cooperative groundwater monitoring work to prioritize drinking water evaluation. Any cooperative groundwater monitoring program must, at a minimum, achieve (1) direct sampling; (2) submission of appropriate existing data; or (3) statistically valid



projection of groundwater quality for all wells that are or may be used for drinking water, with direct sampling, and, as specified, repeat sampling, required where the well is at risk of exceeding the MCL for nitrate. Further, a provision is added to require individuals or third parties conducting groundwater monitoring to timely notify the Central Coast Water Board of exceedances of any MCLs, and for the discharger or the Central Coast Water Board to timely notify users of the well.

10. The Central Coast Water Board did not fully follow the State Water Board's directive in the Stay Order to allow aerial and high vantage point photo monitoring methods. Provision 69, which deals with photo monitoring, should be amended as described above to expressly authorize aerial and high vantage point photography, and to allow additional time to comply for those dischargers who would like to use these methods.

11. The individual surface water discharge monitoring requirements are generally acceptable as an interim approach, but the requirements should be amended as described above to eliminate the requirements to monitor sheet flow discharges and to monitor water contained in tailwater ponds and other surface containment structures if the water is reused as irrigation water.

12. The provisions addressing nitrogen application are generally appropriate as an interim approach, but the requirements should be amended as described above to allow additional time for Tier 2 and Tier 3 dischargers to calculate and report their nitrate loading risk factors and to revise the types of data that must be reported.

13. The requirement to calculate and report certain elements of the Irrigation and Nutrient Management Plan is unreasonable in light of the fact that the underlying data and the calculations for these elements are inexact and speculative. For the same reasons, the requirements to make progress toward certain nitrogen balance ratios are unreasonable.

14. The requirement to have the Irrigation and Nutrient Management Plan certified by a qualified professional is appropriate.

15. The requirement to evaluate and report the effectiveness of the Irrigation and Nutrient Management Plan is appropriate, but should be amended as discussed above to clarify that the evaluation may be carried out by dischargers, as opposed to qualified professionals, based on data collected under other provisions of the Agricultural Order.

16. The Water Quality Buffer Plan requirements for Tier 3 dischargers adjacent to an impaired water body are appropriate.

17. The Annual Compliance Form should be amended to be consistent with the remainder of this Order.

18. The time schedule tables should be amended to be consistent with the remainder of this Order.

19. This Order is consistent with Water Code section 106.3's directive to advance the human right to safe, clean, affordable, and accessible water, adequate for human consumption, cooking, and sanitary purposes, and with the Antidegradation Policy.

20. Consistent with the discussion above, the following provisions shall be deleted from the Agricultural Order:

- a. Provisions 74, 76, 77, and 78, and
- b. Section B.1 of Part 6 of the Tier 3 MRP.

#### IV. ORDER

IT IS HEREBY ORDERED that the Agricultural Order is hereby amended as described above in this Order. The Central Coast Water Board is directed to prepare a complete version of the Agricultural Order (including any necessary non-substantive conforming corrections), post the conformed Agricultural Order on its website, and distribute it as appropriate.

#### CERTIFICATION

The undersigned, Clerk to the Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held September 24, 2013.

AYE: Chair Felicia Marcus  
Vice Chair Frances Spivy-Weber  
Board Member Steven Moore  
Board Member Dorene D'Adamo

NAY: None

ABSENT: None

ABSTAIN: Board Member Tam M. Doduc (recused)



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Jeanine Townsend  
Clerk to the Board

# **Exhibit G**

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## Central Coast Regional Water Quality Control Board

### AGRICULTURAL ORDER NO. R3-2012-0011 ITEMS FOR DISCRETIONARY REVIEW Updated June 5, 2014

On March 15, 2012, the Central Coast Water Board adopted a Conditional Waiver of Waste Discharge Requirements (Agricultural Order No. R3-2012-0011). On September 24, 2013, the State Water Resources Control Board adopted Order WQ 2013-0101 which upheld the Agricultural Order with modifications. State Board Order WQ-2013-0101 identified specific items for which interested persons may seek discretionary review by the Regional Board. These items include the following:

1. Executive Officer's Determination to Approve or Deny Tier Changes;
2. Executive Officer's Determination to Require a Transfer to a Higher Tier;
3. Approval or Denial of a Cooperative Groundwater Monitoring Program;
4. Approval or Denial of A Third Party Project or Program;

This document provides information regarding discretionary review items that occurred after the adoption of the State Board Order on September 24, 2013. Interested Parties will be allowed 30 days from the date identified above to seek discretionary review by the Regional Board on any of the items identified below. Interested Parties seeking discretionary review of the above items must send their request to:

**Central Coast Regional Water Quality Control Board  
Attention: Board Chair (c/o Executive Officer)  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401**

#### **Executive Officer's Determination to Approve or Deny Tier Changes; or Require a Transfer to a Higher Tier**

Tables 1 and 2 below identify actions by the Executive Officer to approve an individual farm/ranch transfer to a lower tier; and actions by the Executive Officer to require an individual farm/ranch to transfer to a higher tier.

#### **Approval or Denial of a Cooperative Groundwater Monitoring Program**

In July 2013, the Executive Officer approved two cooperative groundwater monitoring programs: the Central Coast Groundwater Coalition (CCGC) and the Santa Rosa Creek Valley Cooperative Groundwater Monitoring Program. The May and July 2013 Board Meetings included information items to discuss the review and approval of the cooperative groundwater monitoring programs. On December 17 and December 18, 2013, the Executive Officer approved a revised CCGC workplan for the northern region and a workplan for the southern

region, respectively. The approved workplans and approved Monitoring and Reporting Programs R3-2012-0011(-01,-02,-03) are available on the Water Board's website at:  
[http://www.waterboards.ca.gov/centralcoast/water\\_issues/programs/ag\\_waivers/index.shtml](http://www.waterboards.ca.gov/centralcoast/water_issues/programs/ag_waivers/index.shtml)

### **Approval or Denial of a Third Party Project or Program**

The Water Board has not received any third-party water quality improvement projects or programs for review.

### **For More Information**

If you have any questions regarding the Discretionary Review Items, please contact Water Board staff at (805) 549-3147 or via email at [AgNOI@waterboards.ca.gov](mailto:AgNOI@waterboards.ca.gov). If you wish to receive future correspondence regarding these discretionary items please subscribe to the email distribution list for "Agricultural Order – Discretionary Items" at the link below:  
[http://www.waterboards.ca.gov/resources/email\\_subscriptions/reg3\\_subscribe.shtml](http://www.waterboards.ca.gov/resources/email_subscriptions/reg3_subscribe.shtml)

**Table 1. Executive Officer Determinations to Approve or Deny Tier Changes**

Last Updated: May 30, 2014

	TIER REVIEW REQUEST DATE	AW #	OPERATION NAME	GLOBAL ID	RANCH NAME	RANCH CITY	ACREAGE	REQUESTED TIER	DETERMINED TIER	STATUS
1	09/30/2013	AW0379	OSR Enterprises, Inc.	AGL020003869	Battles	Santa Maria	186	2	2	Approved
2	10/07/2013	AW0699	Top Flavor Farms Inc.	AGL020002664	Firestone/Anderson-Fowler	Salinas	742	2	3	Denied
3	10/17/2013	AW0544	Westland Floral Company, Inc.	AGL020007798	Westland Floral Company, Inc.	Carpinteria	16	1	1	Approved
4	12/27/2013	AW1467	Kitayama Brothers Inc.	AGL020001227	KB West	Watsonville	31	1	1	Approved
5	01/06/2014	AW1651	Gill Ranch Co. LLC	AGL020002574	Wilson East	King City	347.9	2	2	Approved
6	01/24/2014	AW1579	Paradise Christmas Tree Farm	AGL020000700	Paradise Christmas Tree Farm	Morgan Hill	4	1	2	Denied
7	02/07/2014	AW3475	Scurich Berry Farms	AGL020004322	Cooper	Salinas	78	2	2	Approved
8	03/13/2014	AW3207	Evans Orchard	AGL020008842	Evans Orchard	Hollister	4.5	1	1	Approved
9	03/20/2014	AW3758	Quail Spring Farm	AGL020020462	Quail Spring Farm	Morro Bay	9	1	2	Denied
10	04/28/2014	AW3475	Scurich Berry Farms	AGL020004322	Cooper	Salinas	78	2	2	Approved
11	04/30/2014	AW3472	San Benito Farms LLC	AGL020003561	Overfelt	San Juan Bautista	20	1	Pending	Pending
12	04/30/2014	AW1556	Reiter Berry Farms/Aptos Berry	AGL020003338	Borina	Watsonville	30	2	Pending	Pending
13	05/06/2014	AW3121	Central Valley Seeds, Inc.	AGL020007890	Avila Ranch	Salinas	6	2	2	Approved
14	05/21/2014	AW0734	Al Bonturi Ranch	AGL020007575	Al Bonturi	Hollister	28.02	1	Pending	Pending

**Table 2. Executive Officer Determinations to Require a Higher Tier**

Last Updated: May 30, 2014

	DATE TIER REQUIRED	AW #	OPERATION NAME	GLOBAL ID	RANCH NAME	RANCH CITY	ACREAGE	INITIAL TIER	REQUIRED TIER	STATUS
1	05/30/2014	AW1353	Headstart Nursery, Inc.	AGL020001485	Headstart Nursery	Gilroy	18	1	2	Required

# **Exhibit H**

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

**ORDER NO. R3-2012-0011  
AS MODIFIED BY ORDER WQ-2013-0101**

**CONDITIONAL WAIVER OF WASTE DISCHARGE REQUIREMENTS  
FOR  
DISCHARGES FROM IRRIGATED LANDS**

**The California Regional Water Quality Control Board, Central Coast Region finds that:**

1. The Central Coast Region has approximately 435,000 acres of irrigated land and approximately 3000 agricultural operations, which may be generating wastewater that falls into the category of discharges of waste from irrigated lands.
2. The Central Coast Region has more than 17,000 miles of surface waters (linear streams/rivers) and approximately 4000 square miles of groundwater basins that are, or may be, affected by discharges of waste from irrigated lands.
3. The State Water Resources Control Board (State Water Board) and Regional Water Quality Control Boards (Regional Water Boards) are the principal state agencies with primary responsibility for the coordination and control of water quality pursuant to the Porter-Cologne Water Quality Control Act (Porter-Cologne Act, codified in Water Code Division 7). The legislature, in the Porter-Cologne Act, directed the Water Board to exercise its full power and jurisdiction to protect the quality of the waters in the State from degradation, considering precipitation, topography, population, recreation, agriculture, industry, and economic development (Water Code § 13000).
4. On July 9, 2004, the Central Coast Regional Water Quality Control Board (Central Coast Water Board) adopted Resolution No. R3-2004-0117 establishing a Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands (2004 Agricultural Order). In the 2004 Agricultural Order, the Central Coast Water Board found that the discharge of waste from irrigated lands has impaired and polluted the waters of the State and of the United States within the Central Coast Region, has impaired the beneficial uses, and has caused nuisance. The 2004 Agricultural Order expired on July 9, 2009, and the Central Coast Water Board renewed it for a term of one year until July 10, 2010 (Order No. R3-2009-0050). On July 8, 2010, the Central Coast Water Board renewed the 2004 Agricultural Order



again for an additional eight months until March 31, 2011 (Order No. R3-2010-0040). The Central Coast Water Board did not have a quorum to take action to adopt a renewal of the 2004 Agricultural Order with modifications by the March 31, 2011 termination date. On March 29, 2011, the Executive Officer signed Executive Officer Order No. R3-2011-0208 to extend the 2004 Agricultural Order again for an additional six months, with a September 30, 2011 termination date. The Central Coast Water Board did not have a quorum to take action to adopt a renewal of the 2004 Agricultural Order with modifications by the September 30, 2011 termination date. On September 30, 2011, the Executive Officer issued Executive Officer Order No. R3-2011-0017 to extend the 2004 Agricultural Order again for an additional year, with a September 30, 2012 termination date. Executive Officer Order No. R3-2011-0017 also required dischargers to implement an updated Monitoring and Reporting Program No. R3-2011-0018. This *Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands*, Order No. R3-2012-0011 (Order) renews and revises the 2004 Agricultural Order as set forth herein.

5. Since the issuance of the 2004 Agricultural Order, the Central Coast Water Board has compiled additional and substantial empirical data demonstrating that water quality conditions in agricultural areas of the region continue to be severely impaired or polluted by waste discharges from irrigated agricultural operations and activities that impair beneficial uses, including drinking water, and impact aquatic habitat on or near irrigated agricultural operations. The most serious water quality degradation is caused by fertilizer and pesticide use, which results in runoff of chemicals from agricultural fields into surface waters and percolation into groundwater. Runoff and percolation include both irrigation water and stormwater. Every two years, the Water Board is required by Section 303(d) of the federal Clean Water Act to assess water quality data for California's waters to determine if they contain pollutants at levels that exceed protective water quality criteria and standards. This Order prioritizes conditions to control pollutant loading in areas where water quality impairment is documented in the 2010 Clean Water Act section 303(d) List of Impaired Waterbodies (hereafter referred to as 2010 List of Impaired Waterbodies). As new Clean Water Act section 303(d) Lists of Impaired Waterbodies are adopted, the Central Coast Water Board will consider such lists for inclusion in tiering criteria and conditions for this and subsequent Orders.
6. Nitrate pollution of drinking water supplies is a critical problem throughout the Central Coast Region. Studies indicate that fertilizer from irrigated agriculture is the largest primary source of nitrate pollution in drinking water wells and that significant loading of nitrate continues as a result of agricultural fertilizer practices<sup>1</sup>. Researchers estimate that tens of millions of pounds of nitrate leach into groundwater in the Salinas Valley alone each year. Studies indicate that irrigated

<sup>1</sup> Carle, S.f., B.K. Esser, J.E. Moran, High-Resolution Simulation of Basin-Scale Nitrate Transport Considering Aquifer System Heterogeneity, *Geosphere*, June 2006, v.2, no. 4, pg. 195-209.

agriculture contributes approximately 78 percent of the nitrate loading to groundwater in agricultural areas<sup>2</sup>. Hundreds of drinking water wells serving thousands of people throughout the region have nitrate levels exceeding the drinking water standard<sup>3</sup>. This presents a significant threat to human health as pollution gets substantially worse each year, and the actual numbers of polluted wells and people affected are unknown. Protecting public health and ensuring safe drinking water is among the highest priorities of this Order. This Order prioritizes conditions to control nitrate loading to groundwater and impacts to public water systems. In the case where further documentation indicates nitrate impacts to small water systems and/or private domestic wells, the Central Coast Water Board will consider proximity to impacted small water systems and private domestic wells for inclusion in tiering criteria.

7. Agricultural use rates of pesticides in the Central Coast Region and associated toxicity are among the highest in the State<sup>4</sup>. Agriculture-related toxicity studies conducted on the Central Coast since 1999 indicate that toxicity resulting from agricultural discharges of pesticides has severely impacted aquatic life in Central Coast streams<sup>5,6,7</sup>. Some agricultural drains have shown toxicity nearly every time the drains are sampled. Twenty-two sites in the region, 13 of which are located in the lower Salinas/Tembladero watershed area, and the remainder in the lower Santa Maria area, have been toxic in 95% (215) of the 227 samples evaluated. This Order prioritizes conditions to address pesticides that are known sources of toxicity and sources of a number of impairments on the 2010 List of Impaired Waterbodies, specifically chlorpyrifos and diazinon. In the case where further documentation indicates that additional pesticides are a primary source of toxicity and impairments in the Central Coast region, the Central Coast Water Board will consider such pesticides for inclusion in tiering criteria.
8. Existing and potential water quality impairment from agricultural waste discharges takes on added significance and urgency, given the impacts on public health, limited

<sup>2</sup> Monterey County Flood Control and Water Conservation District, "Report of the Ad Hoc Salinas Valley Nitrate Advisory Committee." Zidar, Snow, and Mills. November 1990.

<sup>3</sup> California Department of Public Health Data obtained using GeoTracker GAMA (Groundwater Ambient Monitoring and Assessment) online database, <http://geotracker.waterboards.ca.gov/gama/>.

<sup>4</sup> Starner, K., J. White, F. Spurlock and K. Kelley. Pyrethroid Insecticides in California Surface Waters and Bed Sediments: Concentrations and Estimated Toxicities. California Department of Pesticide Regulation. 2006.

<sup>5</sup> Anderson, B.S., J.W. Hunt, B.M. Phillips, P.A. Nicely, V. De Vlaming, V. Connor, N. Richard, R.S. Tjeerdema. Integrated assessment of the impacts of agricultural drainwater in the Salinas River (California, USA). *Environmental Pollution* 124, 523 - 532. 2003.

<sup>6</sup> Anderson B.S., B.M. Phillips, J.W. Hunt, V. Connor, N. Richard, R.S. Tjeerdema. "Identifying primary stressors impacting macroinvertebrates in the Salinas River (California, USA): Relative effects of pesticides and suspended particles" *Environmental Pollution* 141(3):402-408. 2006a.

<sup>7</sup> Anderson, B.S., B.M. Phillips, J.W. Hunt, N. Richard, V. Connor, K.R. Worcester, M.S. Adams, R.S. Tjeerdema. Evidence of pesticide impacts in the Santa Maria River Watershed (California, USA). *Environmental Toxicology and Chemistry*, 25(3):1160 - 1170. 2006b.

sources of drinking water supplies and proximity of the region's agricultural lands to critical habitat for species of concern.

9. This Order regulates discharges of waste<sup>8</sup> from irrigated lands by requiring individuals subject to this Order to comply with the terms and conditions set forth herein to ensure that such discharges do not cause or contribute to the exceedance of any Regional, State, or Federal numeric or narrative water quality standard (hereafter referred to as exceedance of water quality standards) in waters of the State and of the United States.
10. This Order requires compliance with water quality standards. Dischargers must implement, and where appropriate update or improve, management practices, which may include local or regional control or treatment practices and changes in farming practices to effectively control discharges, meet water quality standards and achieve compliance with this Order. Consistent with the Water Board's Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program (NPS Policy, 2004), dischargers comply by implementing and improving management practices and complying with the other conditions, including monitoring and reporting requirements. This Order requires the discharger to address impacts to water quality by evaluating the effectiveness of management practices (e.g., waste discharge treatment and control measures), and taking action to improve management practices to reduce discharges. If the discharger fails to address impacts to water quality by taking the actions required by this Order, including evaluating the effectiveness of their management practices and improving as needed, the discharger may then be subject to progressive enforcement and possible monetary liability. The Discharger has the opportunity to present their case to the Central Coast Water Board before any monetary liability may be assessed.
11. The Central Coast Water Board encourages Dischargers to coordinate the effective implementation of cooperative water quality improvement efforts, local or regional scale water quality protection and treatment strategies (such as managed aquifer recharge projects), and cooperative monitoring and reporting efforts to lower costs, maximize effectiveness, and achieve compliance with this Order. In cases where Dischargers are participating in effective local or regional treatment strategies, and individual on-farm discharges continue to cause exceedances of water quality standards in the short term, the Executive Officer will take into consideration such participation in the local or regional treatment strategy and progress made towards compliance with water quality standards in evaluating compliance with this Order. In cases where cooperative water quality improvement efforts, or local or regional treatment strategies, coordinated by a third-party group (e.g., watershed group,

<sup>8</sup> This Order regulates discharge of "waste" as defined in Water Code section 13050 and "pollutants" as defined in the Clean Water Act. For simplicity, the term "waste" or "wastes" is used throughout. The term "waste" is very broad and includes "pollutants" as defined in the Clean Water Act.

water quality coalition, or other similar cooperative effort) or by a group of Dischargers, necessitate alternative water quality monitoring or a longer time schedule to achieve compliance than required by this Order, Dischargers may submit an alternative water quality monitoring and reporting plan or time schedule for approval by the Executive Officer. Groups of Dischargers and/or third party groups (e.g., a watershed group or water quality coalition) may submit to the Executive Officer for approval alternative water quality monitoring and reporting programs. An alternative monitoring and reporting program must include collection of data that will provide indicators of water quality improvement or pollution load reduction, and aggregate monitoring and reporting must be on a scale sufficient to track progress in small sub-basins and be sufficiently representative of conditions. Aggregate monitoring may apply to surface and groundwater. The Executive Officer will evaluate the alternative monitoring and reporting programs on a case-by-case basis considering the potential effectiveness of the aggregate or alternative monitoring (e.g., request to conduct aggregate monitoring for a certain timeframe to give new practices or treatment time to maximize effectiveness, and other factors such as whether the farms are currently significantly contributing to impaired surface water or ground water with drinking water wells, or whether farms are in compliance with other provisions such as enrollment, or submittal of annual compliance information). Dischargers who participate in an alternative monitoring and reporting program maintain individual responsibility to comply with this Order's conditions.

Dischargers may continue to implement alternative treatment or monitoring programs approved by the Executive Officer as long as they demonstrate continuous improvement and sufficient progress towards water quality improvement based upon measurable indicators of pollutant load reduction. Dischargers may seek review of Executive Officer decisions by the Water Board.

12. The Central Coast Water Board encourages Dischargers to coordinate the implementation of management practices with other Dischargers discharging to common tile drains, including efforts to develop regional salt and nutrient management plans. The Executive Officer may require additional monitoring and reporting for discharges to tile drains as necessary to evaluate compliance with this Order.
13. The Central Coast Water Board encourages Dischargers to participate in regional or local groundwater monitoring efforts conducted as part of existing or anticipated groundwater monitoring programs, including efforts related to regional and local salt and nutrient management plans, integrated regional water management (IRWM) plans, or the State Water Board's Groundwater Ambient Monitoring and Assessment (GAMA) Program.
14. Dischargers have the option of complying with surface receiving water quality monitoring conditions identified in MRP Order No. R3-2012-0011, either individually

or through a cooperative monitoring program. The Central Coast Water Board encourages Dischargers to participate in a cooperative monitoring program to comply with surface receiving water quality monitoring conditions. In the development of any cooperative monitoring program fee schedule, the Central Coast Water Board encourages Dischargers to scale the assessment of fees based on relative level of waste discharge and threat to water quality.

15. The Central Coast Water Board will evaluate various types of information to determine compliance with this Order such as, a) management practice implementation and effectiveness, b) treatment or control measures, c) individual discharge monitoring results, d) receiving water monitoring results, and e) related reporting.
16. Many owners and operators of irrigated lands within the Central Coast Region have taken actions to protect water quality. In compliance with the 2004 Agricultural Order, most owners and operators enrolled in the 2004 Agricultural Order, implemented the Cooperative Monitoring Program (CMP), participated in farm water quality education, developed farm water quality management plans and implemented management practices as required in the 2004 Agricultural Order. The 2004 Agricultural Order did not include conditions that allowed for determining individual compliance with water quality standards or the level of effectiveness of actions taken to protect water quality, such as individual discharge monitoring or evaluation of water quality improvements. This Order includes new or revised conditions to allow for such evaluations.
17. Water Code section 13260(a) requires that any person discharging waste or proposing to discharge waste that could affect the quality of the waters of the State, other than into a community sewer system, shall file with the appropriate Regional Board a report of waste discharge (ROWD) containing such information and data as may be required by the Central Coast Water Board, unless the Central Coast Water Board waives such requirement.
18. Water Code section 13263 requires the Central Coast Water Board to prescribe waste discharge requirements (WDRs), or waive WDRs, for the discharge. The WDRs must implement relevant water quality control plans and the Water Code.
19. Water Code section 13269(a) provides that the Central Coast Water Board may waive the requirement to obtain WDRs for a specific discharge or specific type of discharge, if the Central Coast Water Board determines that the waiver is consistent with any applicable water quality control plan and such waiver is in the public interest, provided that any such waiver of WDRs is conditional, includes monitoring conditions designed to support the development and implementation of the waiver program, including, but not limited to verifying the adequacy and effectiveness of the

waiver's conditions, unless waived, does not exceed five years in duration, and may be terminated at any time by the Central Coast Water Board.

20. As authorized by Water Code section 13269, this Order conditionally waives the requirement to obtain WDRs for Dischargers who comply with the terms of this Order. See Attachment A to this Order for additional findings related to legal and regulatory considerations, and rationale for this Order.

21. Pursuant to Water Code section 13267, the Executive Officer may require Dischargers to locate (inventory) and conduct monitoring of private domestic wells in or near agricultural areas with high nitrate in groundwater and submit technical reports evaluating the monitoring results. In addition, in compliance with Water Code section 13304, the Central Coast Water Board may require Dischargers to provide alternative water supplies or replacement water service, including wellhead treatment, to affected public water suppliers or private domestic well owners.

### **SCOPE OF ORDER NO. R3-2012-0011**

#### Irrigated Lands and Agricultural Discharges Regulated Under this Order

22. This Order regulates (1) discharges of waste from irrigated lands, including, but not limited to, land planted to row, vineyard, field and tree crops where water is applied for producing commercial crops; (2) discharges of waste from commercial nurseries, nursery stock production, and greenhouse operations with soil floors that do not have point-source type discharges and are not currently operating under individual WDRs; and (3) discharges of waste from lands that are planted to commercial crops that are not yet marketable, such as vineyards and tree crops.

23. Discharges from irrigated lands regulated by this Order include discharges of waste to surface water and groundwater, such as irrigation return flows, tailwater, drainage water, subsurface drainage generated by irrigating crop land or by installing and operating drainage systems to lower the water table below irrigated lands (tile drains), stormwater runoff flowing from irrigated lands, stormwater runoff conveyed in channels or canals resulting from the discharge from irrigated lands, runoff resulting from frost control, and/or operational spills. These discharges can contain wastes that could affect the quality of waters of the State and impair beneficial uses.

#### Dischargers Regulated Under this Order

24. This Order regulates both landowners and operators of irrigated lands on or from which there are discharges of waste that could affect the quality of any surface water or groundwater (Dischargers). Dischargers are responsible for complying with the

conditions of this Order. The Central Coast Water Board will hold both the landowner and the operator liable for noncompliance with this Order.

25. The Central Coast Water Board recognizes that due to different types of operations and/or locations, discharges of waste from irrigated lands may have the potential for different levels of impacts on waters of the State or of the United States. This Order establishes three tiers of regulation to take into account the variation, including different regulatory conditions for the three tiers.
26. Dischargers who have not enrolled to comply with a previous order must submit to the Central Coast Water Board a completed electronic Notice of Intent (NOI) to comply with the conditions of this Order to comply with the Water Code.
27. Dischargers who have submitted a completed electronic NOI to the Central Coast Water Board to comply with a previous order must update their NOI to reflect current operation and farm/ranch information.
28. Landowners and operators of irrigated lands who obtain a pesticide use permit from a local County Agricultural Commissioner and that have a discharge of waste that could affect surface water or groundwater, must submit to the Central Coast Water Board, a completed electronic NOI to comply with the conditions of this Order to comply with the Water Code.
29. The NOI serves as a report of waste discharge (ROWD) for the purposes of this Order.
30. The Central Coast Water Board recognizes that certain limited resource farmers (as defined by the U.S. Dept. of Agriculture) may have difficulty achieving compliance with this Order. The Central Coast Water Board will prioritize assistance for these farmers, including but not limited to technical assistance, grant opportunities, and necessary flexibility to achieve compliance with this Order (e.g., adjusted monitoring, reporting, or time schedules).

Agricultural Discharges Not Covered Under this Order and Who Must Apply for Individual Waste Discharge Requirements

31. This Order does not waive WDRs for commercial nurseries, nursery stock production and greenhouse operations that have point-source type discharges, and fully contained greenhouse operations (those that have no groundwater discharge due to impervious floors). These operations must eliminate all such discharges of wastes or submit a ROWD to apply for individual WDRs as set forth in Water Code section 13260.

## **PUBLIC PARTICIPATION PROCESS**

32. The Central Coast Water Board notified interested persons that the Central Coast Water Board will consider the adoption of this Order, which conditionally waives individual WDRs and establishes conditions for the control of discharges of waste from irrigated lands to waters of the State, and provided several opportunities for public input.
33. In December 2008, the Central Coast Water Board invited members of the public to participate in development of this Order and provide recommendations to Central Coast Water Board staff. In particular, the Central Coast Water Board requested the assistance of an agricultural advisory panel in developing appropriate milestones, timetables, and verification monitoring programs to resolve water quality problems and achieve compliance with the Basin Plan. Additionally, in early 2009, the Central Coast Water Board notified all water purveyors, water districts and municipalities that staff was developing recommendations for this Order.
34. In December 2009, the Central Coast Water Board encouraged any interested person who wanted to present alternative recommendations to this Order to provide those recommendations in writing by April 1, 2010.
35. On February 1, 2010, the Central Coast Water Board publicly released a preliminary report and preliminary draft order for the regulation of discharges from irrigated lands and accepted comments on the preliminary draft order through June 4, 2010.
36. The Central Coast Water Board held two public workshops (May 12, 2010, and July 8, 2010) to discuss the preliminary draft order, public comments, and alternative recommendations.
37. The Central Coast Water Board released a Draft Agricultural Order and staff report on November 19, 2010, for public review and comment, and held an additional public workshop on February 3, 2011. The Central Coast Water Board released further revised versions of the Draft Agricultural Order in March, July, and August 2011 and held an additional public workshop on February 1, 2012.
38. Between November 2009 and February 2012, Central Coast Water Board staff attended more than 60 meetings and conferences to describe the process for developing the Draft Agricultural Order, discuss options, and hear public input regarding the Draft Agricultural Order. These events included numerous stakeholders representing the agricultural industry and its technical assistance providers, environmental and environmental justice organizations, local and state government agencies and other members of the public.



39. Interested persons were notified that the Central Coast Water Board will consider adoption of an Order, which conditionally waives WDRs for discharges of waste from irrigated lands, as described in this Order, and were provided an opportunity for a public hearing and an opportunity to submit written comments.

### **CALIFORNIA ENVIRONMENTAL QUALITY ACT**

40. For purposes of adoption of this Order, the Central Coast Water Board is the lead agency pursuant to the California Environmental Quality Act (CEQA) (Pub. Res. Code §§ 21100 et seq.).

41. In 2004, the Central Coast Water Board adopted the 2004 Agricultural Order and a Negative Declaration prepared in compliance with CEQA. CEQA Guidelines state that no subsequent environmental impact report (SEIR) shall be prepared when an EIR has been certified or negative declaration adopted for a project unless the lead agency determines based on substantial evidence in light of the whole record, one or more of the following:

*(1) if substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified effects; or,*

*(2) if substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental impacts or a substantial increase in the severity of previously identified significant effects; or*

*(3) if new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, becomes available.*

(Cal. Code Regs., tit. 14, § 15162(a).)

This regulation applies if there is a modification of a previous project. In this case, the Central Coast Water Board is proposing to renew the 2004 Agricultural Order, which is the previous project, with clarifications and new conditions. To assist in determining whether an SEIR would be necessary, the Central Coast Water Board staff held a CEQA scoping meeting on August 16, 2010, to receive input from interested persons and public agencies on potentially significant environmental effects of the proposed project. Staff also accepted written comments regarding

scoping up until August 27, 2010, in order to allow for comments from those who were unable to attend the meeting and/or for those who wished to submit additional comments. Members of the public and representatives of public agencies provided comments regarding their views on significant environmental effects associated with the adoption of a renewed Agricultural Order. As described in Findings 30 - 37 and prior to the scoping meeting in August 2010, significant public participation activities had occurred.

In preparing the Draft SEIR, Central Coast Water Board staff reviewed the 2004 Negative Declaration, including the Initial Study (Environmental Checklist), considered the comments received during the public participation process with respect to renewal of the 2004 Agricultural Order, including evidence in the record, written and oral comments, proposed alternatives, and information provided at and following the August 16, 2010 scoping meeting, and comments received on the Draft SEIR. Review of this information did not result in identification of any new environmental effects that had not already been evaluated in the 2004 Negative Declaration. Staff identified two areas included on the Environmental Checklist where there was a potential for an increase in the severity of environmental effects previously identified. These areas are (1) the potential for more severe impacts on agricultural resources due to the potential for an increase in the use of vegetated buffer strips and economic impacts due to new requirements that could take some land out of direct agricultural use and (2) the potential for more severe impacts on biological resources due to the potential for a reduction in water flows in surface waters.

The Central Coast Water Board issued a Notice of Availability on October 25, 2010, and provided the public with 45 days to submit written comments on the Draft SEIR. The Water Board received 12 written comment letters. Responses to the comments are in Section 7 of the Final SEIR. In response to comments, the Central Coast Water Board staff revised the Draft SEIR and prepared a draft Final SEIR for the Central Coast Water Board's certification. The 2004 Negative Declaration and the Final SEIR constitute the environmental analysis under CEQA for this Order.

42. With respect to Agricultural Resources, the Final SEIR concludes that adoption of the proposed alternative could result in some economic or social changes but that there was insufficient evidence to conclude that the economic changes would result in adverse physical changes to the environment. Commenters speculated that the economic impacts would be so large as to result in large scale end to agriculture and that land would be sold for other uses that would result in impacts on the environment. No significant information was provided to justify that concern. As described in Section 2.4 of this Final SEIR, the draft 2012 Agricultural Order would impose additional conditions on approximately 100 to 300 of the estimated 3000 owners or operators currently enrolled in the 2004 Agricultural Order. CEQA states that economic or social effects of a project shall not be treated as significant effects on the environment. (Pub.

Res. Code § 21083.) The Final SEIR concludes that due to some new conditions, particularly the requirement that some dischargers may be required to implement vegetated buffer strips, could result in loss of land for agricultural production since the buffer strips would generally not produce crops and some land could be converted to other uses. This impact was found to be less than significant and that mitigation could reduce impacts further. The Central Coast Water Board may not generally specify the manner of compliance and therefore, dischargers may choose among many ways to comply with the requirement to control discharges of waste to waters of the State. Even if all dischargers who could be subject to the condition to use vegetated buffers or some other method to control discharges in the draft 2012 Agricultural Order (Tier 3 dischargers) chose to use vegetated buffers or converted to other uses, the total acreage is quite small compared to the total amount of acreage used for farming and was, therefore, found to be less than significant. In addition, since the land would be used as a vegetated buffer to comply with the Order, this would result in beneficial impacts on the environment, not adverse impacts.

With respect to Biological Resources, the Final SEIR concludes that wide scale water conservation could result in lower flows into surface water resulting in impacts on aquatic life. The Central Coast Water Board may not specify the manner of compliance so it has insufficient information to evaluate the extent to which dischargers would choose to use water conservation to comply and to evaluate potential physical changes to the environment that could result. Reduction in toxic runoff may offset impacts due to the reduced flows that could occur. In addition, reduction in water use could result in increased groundwater levels that would also result in more clean water to surface water.

Based on this information, the Final SEIR concludes that the environmental effects associated with the draft 2012 Agricultural Order may be significant with respect to biological resources. However, given the uncertainty associated with evaluating the available information, it is possible that the effects may turn out to be less than significant. In Resolution R3-2012-0012, the Central Coast Water Board has made findings consistent with the CEQA Guidelines (Cal. Code Regs., tit. 14, § 15091) and a statement of overriding considerations (Cal. Code Regs., tit. 14, § 15093) with respect to biological resources.

### **ADDITIONAL FINDINGS**

43. Attachment A to this Order, incorporated herein, includes additional findings that further describe a) the Water Board's legal and regulatory authority, b) the rationale for this Order, c) a description of the environmental and agricultural resources in the Central Coast Region, and d) impacts to water quality from agricultural discharges. Attachment A also identifies applicable plans and policies adopted by the State Water Board and the Central Coast Water Board that contain regulatory condition

that apply to the discharge of waste from irrigated lands. Attachment A also includes definitions of terms for purposes of this Order.

**IT IS HEREBY ORDERED that:**

1. Pursuant to Water Code sections 13260, 13263, 13267, and 13269, Dischargers must comply with the terms and conditions of this Order to meet the provisions contained in Water Code Division 7 and regulations and plans and policies adopted there under.
2. This Order shall not create a vested right to discharge, and all discharges of waste are a privilege, not a right, as provided for in Water Code section 13263(g).
3. Dischargers must not discharge any waste not specifically regulated by this Order except in compliance with the Water Code.
4. Pursuant to Water Code section 13269, the Central Coast Water Board waives the requirement that Dischargers obtain WDRs pursuant to Water Code section 13263(a) for discharges of waste from irrigated lands, if the Discharger enrolls in and complies with this Order, including Attachments and Monitoring and Reporting Program (MRP) Order No. R3-2012-0011.
5. Pursuant to Water Code section 13269, this action waiving the issuance of WDRs for certain specific types of discharges: 1) is conditional; 2) may be terminated by the Central Coast Water Board at any time; 3) may be superseded if the State Water Board or Central Coast Water Board adopts specific WDRs or general WDRs for this type of discharge or any individual discharger; 4) does not permit any illegal activity; 5) does not preclude the need for permits which may be required by other local or governmental agencies; 6) does not preclude the Central Coast Water Board from requiring WDRs for any individual discharger or from administering enforcement remedies (including civil liability) pursuant to the Water Code; and 7) includes conditions for the performance of individual, group, and watershed-based monitoring in the form of monitoring requirements designed to support the development and implementation of the waiver program, including, but not limited to, verifying the adequacy and effectiveness of the waiver's conditions.
6. Dischargers or groups of Dischargers seeking regulatory requirements tailored to their specific operation, farm/ranch, geographic area, or commodity may submit an ROWD to obtain individual or general orders for a specific discharge or type of discharge (e.g., commodity-specific general order). This Order remains applicable until such individual or general orders are adopted by the Central Coast Water Board.

7. The Executive Officer may propose, and the Water Board may adopt, individual WDRs for any Discharger at any time.
8. The Central Coast Water Board or the Executive Officer may, at any time, terminate applicability of this Order with respect to an individual Discharger upon written notice to the Discharger.
9. Dischargers are defined in this Order as both the landowner and operator of irrigated cropland, and both must comply with this Order.
10. Dischargers may comply with this Order by participating in third-party groups (e.g., watershed group, or water quality coalition, or other similar cooperative effort) approved by the Executive Officer or Central Coast Water Board. In this case, the third-party group will assist individual growers in achieving compliance with this Order, including implementing water quality improvement projects and required monitoring and reporting programs as described in MRP Order No. R3-2012-0011-01, MRP Order No. R3-2012-0011-02, and MRP Order No. R3-2012-0011-03, or alternative monitoring and reporting programs as provided in Condition 11 below. Consistent with the Water Board's Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program (NPS Policy, 2004), the ineffectiveness of a third-party group through which a Discharger participates in nonpoint source control efforts cannot be used as an excuse for lack of individual discharger compliance. Individual Dischargers continue to be responsible for complying with this Order.
11. Dischargers may form third party groups to develop and implement alternative water quality improvement projects or programs or cooperative monitoring and reporting programs to comply with this Order. At the discretion of the Executive Officer, Dischargers that are a participant in a third party group that implements Executive Officer-approved water quality improvement projects or programs or Executive Officer-approved alternative monitoring and reporting programs may be moved to a lower Tier (e.g., Tier 3 to Tier 2, Tier 2 to Tier 1) and/or provided alternative project or program-specific requirements timelines, and/or milestones.

To qualify for Tier changes or alternative requirements, timelines, and/or milestones, third party water quality improvement projects and programs will be evaluated for, among other elements:

- Project or Program Description. Description must include identification of participants, methods, and time schedule for implementation.
- Purpose. Proposal must state desired outcomes or goals of the project or program (e.g., pollutants to be addressed, amount of pollution load to be reduced, water quality improvement expected).
- Scale. Solutions must be scaled to address impairment.

- **Chance of Success.** Projects or programs must demonstrate a reasonable chance of improving water quality and/or reducing pollutant loading.
- **Long term solutions and contingencies.** Proposals must address what new actions will be taken if the project or program does not meet goals and how the project or program will be sustained through time.
- **Accountability.** Proposals must set milestones that indicate progress towards goals stated as above in “purpose.”
- **Project or program monitoring and reporting.** Description of monitoring and measuring methods, and information to be provided to the Water Board. Monitoring points must be representative but may not always be at the edge-of-farm so long as monitoring results provide indicators of water quality improvement and/or pollutant load reductions and the efficacy of a project or program. The monitoring and reporting may be a third party monitoring and reporting program consistent with the requirements in the next paragraph.

To qualify for Tier changes or alternative requirements, timelines, and/or milestones, third party monitoring and reporting programs will be evaluated for, among other elements:

- **Program Description:** Description of monitoring methodologies, schedule and reporting.
- **Purpose:** Third party monitoring and reporting programs must include collection of data that will provide indicators of water quality improvement and/or pollutant load reduction and aggregate monitoring and reporting must be on a scale sufficient to track progress in small sub-basins and be sufficiently representative of conditions in the sub-basins.

Third party water quality improvement project or program and third party monitoring and reporting program proposals will be evaluated by a Technical Advisory Committee (TAC) comprised of: Two researchers or academics skilled in agricultural practices and/or water quality, one farm advisor (e.g., from Natural Resources Conservation Service or local Resource Conservation Districts), one grower representative, one environmental representative, one environmental justice or environmental health representative, and one Regional Board staff. The TAC must have a minimum of five members to evaluate project or program proposals and make recommendations to the Executive Officer. The Executive Officer has discretion to approve any third party water quality improvement project or program or third party monitoring and reporting program after receiving project or program evaluation results and recommendations from the committee. The Executive Officer may waive the requirement for TAC review of a project or program if the Executive Officer determines that three or more of the seven specified representatives are unavailable for serving on a TAC. The Executive

Officer shall document efforts to convene representatives from each category. Third party projects or programs specifically allowed elsewhere in this Order, such as cooperative receiving water monitoring and cooperative groundwater monitoring, are subject to the specific provisions authorizing such third party projects and programs, rather than the requirements of Provision 11.

An interested person may seek discretionary review by the Regional Board of the Executive Officer's approval or denial of a third party project or program. As stated in the NPS Policy, management practice implementation is not a substitute for compliance with water quality requirements. If the project is not effective in achieving water quality standards, additional management practices by individual Dischargers or the third party group will be necessary.

12. Dischargers who are subject to this Order shall implement management practices, as necessary, to improve and protect water quality and to achieve compliance with applicable water quality standards.

#### **Part A. Tiers**

13. Dischargers are classified into a tier based upon criteria that define the risk to water quality and the level of waste discharge. The Central Coast Water Board may update the criteria, as necessary.
14. Dischargers must determine the tier that applies to the individual farm(s)/ranch(es) at their operation or lands when they enroll or update their Notice of Intent (NOI), via electronic submittal. See Part D. Submittal of Technical Reports.
15. **Tier 1** – Applies to all Dischargers whose individual farm/ranch meets all of the criteria described in **(1a), (1b), and (1c)**, or whose individual farm/ranch is certified in a sustainable agriculture program identified in **(1d)** that requires and verifies effective implementation of management practices that protect water quality:
  - 1a. Discharger does not use chlorpyrifos or diazinon at the farm/ranch, which are documented to cause toxicity in surface waters in the Central Coast Region;
  - 1b. Farm/ranch is located more than 1000 feet from a surface waterbody listed for toxicity, pesticides, nutrients, turbidity or sediment on the 2010 List of Impaired Waterbodies<sup>9</sup> (Table 1);

<sup>9</sup> The 2010 List of Impaired Waterbodies is available on the Water Board's Impaired Water Bodies website at [http://www.waterboards.ca.gov/water\\_issues/programs/tmdl/integrated2010.shtml](http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml).

- 1c. If the Discharger grows crop types with high potential to discharge nitrogen to groundwater (as defined in Attachment A) at the farm/ranch, and the farm/ranch total irrigated acreage is *less than* 50 acres, and is *not* within 1000 feet of a well that is part of a public water system (as defined by the California Health and Safety Code, section 116275) that exceeds the maximum contaminant level (MCL) for nitrate, nitrite, or nitrate + nitrite<sup>10</sup>;
- 1d. Sustainability in Practice (SIP, certified by the Central Coast Vineyard Team) or other certified programs approved by the Central Coast Water Board.
16. **Tier 2** – Applies to all Dischargers whose individual farm/ranch does not meet the Tier 1 or Tier 3 criteria. In general, a Tier 2 Discharger's farm/ranch meets at least one of the characteristics described in **(2a), (2b), or (2c)**:
- 2a. Discharger applies chlorpyrifos or diazinon at the farm/ranch, which are documented to cause toxicity in surface waters in the Central Coast Region;
- 2b. Farm/ranch is located within 1000 feet of a surface waterbody listed for toxicity, pesticides, nutrients, turbidity or sediment on the 2010 List of Impaired Waterbodies<sup>9</sup> (see Table 1);
- 2c. Discharger grows crop types with high potential to discharge nitrogen to groundwater (as defined in Attachment A) at the farm/ranch, and the farm/ranch total irrigated acreage is greater or equal to 50 acres and *less than* 500 acres, or the farm/ranch is *within* 1000 feet of a well that is part of a public water system (as defined by the California Health and Safety Code, section 116275) that exceeds the maximum contaminant level (MCL) for nitrate, nitrite, or nitrate + nitrite<sup>10</sup>;
17. **Tier 3** – Applies to all Dischargers whose individual farm/ranch meets one of the following sets of criteria **(3a) or (3b)**:

<sup>10</sup> California Department of Health Services (CDPH) has determined that public water system well location records are confidential and exempt from disclosure to the public. Until such time that public water system well location records become available to the public, the Central Coast Water Board will identify Dischargers who are within 1000 feet of a public water system well that exceeds the maximum contaminant level (MCL) for nitrate, nitrite, or nitrate + nitrite. Dischargers should evaluate their tier for the purposes of this Order based on all information available. In the case where a Discharger should be placed into a different tier based on proximity to a public water system well, the Central Coast Water Board will provide appropriate notice to the Discharger. Approximate locations for public water system wells are available on the Water Board's GeoTracker GAMA website at <http://geotracker.waterboards.ca.gov/gama/>.



- 3a. Discharger grows crop types with high potential to discharge nitrogen to groundwater (as defined in Attachment A) at the farm/ranch, and farm/ranch total irrigated acreage is *greater than or equal to* 500 acres;
- 3b. Discharger applies chlorpyrifos or diazinon at the farm/ranch, and the farm/ranch discharges irrigation or stormwater runoff to a waterbody listed for toxicity or pesticides on the 2010 List of Impaired Waterbodies<sup>9</sup> (Table 1);
18. Dischargers may submit a request to the Executive Officer to approve transfer to a lower tier. The Discharger must provide information to demonstrate a lower level of waste discharge and a lower threat to water quality, including site-specific operational and water quality information to characterize the waste discharge and resulting effect on water quality. Dischargers remain in the tier determined by the criteria above and must meet all conditions for that tier until the Executive Officer approves the request to transfer to a lower tier. At a minimum, information provided by Dischargers requesting transfer to a lower tier must include the following:
- a. Farm/ranch maps(s) identifying discharge points and any water quality sampling locations;
  - b. Schematic showing the flow of irrigation and stormwater runoff, including where it leaves the farm/ranch and where the discharge enters receiving water;
  - c. Description of the volume of discharges and when the discharge is present;
  - d. Description of type of chemicals applied (e.g., pesticide and fertilizer use);
  - e. Description of estimated pollutant loading to groundwater;
  - f. Description and results of any individual discharge water quality sampling information available (e.g., irrigation runoff and stormwater sampling, lysimeter sampling);

If the Executive Officer approves a transfer to a lower tier, any interested person may request that the Central Coast Water Board conduct a discretionary review of the Executive Officer's determination.

19. The Executive Officer may elevate Tier 1 or Tier 2 Dischargers to a higher tier if the Discharger poses a higher threat to water quality based on information submitted as part of the NOI, MRP, or information observed upon inspection of a ranch/farm, or any other appropriate evidence that indicates the ranch/farm meets the criteria for a higher tier. If the Executive Officer requires a transfer to a higher tier, any interested person may request that the Central Coast Water Board conduct a discretionary review of the Executive Officer's determination.
20. The Executive Officer may require Dischargers to enroll irrigated land with similar characteristics (e.g., same landowner or operator), and proximal, adjacent, or contiguous location, as a single operation or farm/ranch.

21. Unless otherwise specified, the conditions of this Order apply to all Dischargers, including Tier 1, Tier 2, and Tier 3.

**Part B. General Conditions and Provisions for All Dischargers - Tier 1, Tier 2, and Tier 3**

Water Quality Standards-

22. Dischargers shall not cause or contribute to exceedances of applicable water quality standards, as defined in Attachment A, shall protect the beneficial uses of waters of the State and shall prevent nuisance as defined in Water Code section 13050.
23. Dischargers must comply with applicable provisions of the Central Coast Region Water Quality Control Plan (Basin Plan) and all other applicable water quality control plans as identified in Attachment A.
24. Dischargers must comply with applicable Total Maximum Daily Loads (TMDLs), including any plan of implementation for the TMDL, commencing with the effective date or other date for compliance stated in the TMDL. A list of TMDLs adopted by the Central Coast Water Board is available on the Central Coast Water Board website at:  
[http://www.waterboards.ca.gov/centralcoast/water\\_issues/programs/tmdl/index.shtml](http://www.waterboards.ca.gov/centralcoast/water_issues/programs/tmdl/index.shtml).
25. Discharges shall not discharge any waste not specifically regulated by the Order described herein, unless the Discharger complies with Water Code section 13260(a) by submitting a ROWD and the Central Coast Water Board either issues WDRs pursuant to Water Code section 13263 or an individual waiver pursuant to Water Code section 13269, or the conditions specified in Water Code section 13264(a) must be met by the Discharger. Waste specifically qualifying for conditional discharge under this Waiver includes earthen materials, including soil, silt, sand clay, rock; inorganic materials (such as metals, salts boron, selenium, potassium, nitrogen, etc.); organic materials; and pesticides that may enter or threaten to enter into waters of the State. Examples of wastes not qualifying for conditional discharge under this Order include hazardous waste and human waste.
26. Dischargers shall not discharge any waste at a location or in a manner different from that described in the NOI.
27. Dischargers shall not discharge chemicals such as fertilizers, fumigants or pesticides down a groundwater well casing.

28. Dischargers shall not discharge chemicals used to control wildlife (such as bait traps or poison) directly into surface waters, or place the chemicals in a location where they may be discharged to surface waters.
29. Dischargers shall not discharge agricultural rubbish, refuse, irrigation tubing or tape, or other solid wastes into surface waters, or place such materials where they may contact or may eventually be discharged to surface waters.
30. This Order does not authorize persons to discharge pollutants from point sources to waters of the United States, including wetlands, where the Discharger is required to obtain an NPDES permit under Clean Water Act section 402 (NPDES), or a dredge and fill permit under Clean Water Act section 404 (dredge and fill), except as authorized by an NPDES permit or section 404 permit. An area is considered a wetland, subject to Clean Water Act section 404, if it meets the United States Army Corps of Engineers' definition as described in the Code of Federal Regulations and associated wetland delineation procedures, or relevant Water Board definitions.

Waste Discharge Control-

31. **By March 1, 2013**, Dischargers that apply fertilizers, pesticides, fumigants or other chemicals through an irrigation system must have functional and properly maintained back flow prevention devices installed at the well or pump to prevent pollution of groundwater or surface water, consistent with any applicable DPR requirements or local ordinances. Back flow prevention devices used to protect water quality must be those approved by USEPA, DPR, CDPH, or the local public health or water agency.
32. **By October 1, 2015**, Dischargers must properly destroy all abandoned groundwater wells, exploration holes or test holes, as defined by Department of Water Resources (DWR) Bulletin 74-81 and revised in 1988, in such a manner that they will not produce water or act as a conduit for mixing or otherwise transfer groundwater or waste constituents between permeable zones or aquifers. Proper well abandonment must be consistent with any applicable DWR requirements or local ordinances.
33. Dischargers who utilize containment structures (such as retention ponds or reservoirs) to achieve treatment or control of the discharge of wastes must manage, construct, and maintain such containment structures to avoid discharges of waste to groundwater and surface water that cause or contribute to exceedances of water quality standards. Dischargers may choose the method of compliance appropriate for the individual farm, which may include, but is not limited to:
  - implementing chemical treatment (e.g., enzymes);

- implementing biological treatment (e.g., wood chips);
  - recycling or reusing contained water to minimize infiltration or discharge of waste;
  - minimizing volume of water in the containment structure to minimize percolation of waste;
  - minimizing percolation of waste via a synthetic, concrete, clay, or low permeability soil liner;
34. Dischargers must implement proper handling, storage, disposal and management of pesticides, fertilizer, and other chemicals to prevent or control the discharge of waste to waters of the State that causes or contributes to exceedances of water quality standards.
35. Upon request, Dischargers must submit information regarding compliance with any Department of Pesticide Regulation (DPR) adopted or approved surface water or groundwater protection requirements.
36. Dischargers must implement water quality protective management practices (e.g., source control or treatment) to prevent erosion, reduce stormwater runoff quantity and velocity, and hold fine particles in place.
37. Dischargers must minimize the presence of bare soil vulnerable to erosion and soil runoff to surface waters and implement erosion control, sediment, and stormwater management practices in non-cropped areas, such as unpaved roads and other heavy use areas.
38. Dischargers must comply with any applicable stormwater permit.
39. Dischargers must a) maintain existing, naturally occurring, riparian vegetative cover (such as trees, shrubs, and grasses) in aquatic habitat areas as necessary to minimize the discharge of waste; and b) maintain riparian areas for effective streambank stabilization and erosion control, stream shading and temperature control, sediment and chemical filtration, aquatic life support, and wildlife support to minimize the discharge of waste;
40. In the case where disturbance of aquatic habitat is necessary for the purposes of water quality improvement, restoration activities, or other permitted activities, Dischargers must implement appropriate and practicable measures to avoid, minimize, and mitigate erosion and discharges of waste, including impacts to aquatic habitat.
41. Upon request, where required by California Fish and Game Code, Dischargers must submit proof of an approved Streambed Alteration Agreement from the California Department of Fish and Game (CDFG) for any work conducted within

the bed, bank or channel of a lake or stream, including riparian areas, that has the potential to result in erosion and discharges of waste to waters of the State.

42. Upon request, where required by California Forest Practice Rules, Dischargers must submit proof of California Department of Forestry and Fire Protection authorization, and enrollment in the Central Coast Water Board's General Conditional Waiver of WDRs – Timber Harvest Activities in the Central Coast Region, for any commercial harvesting of timber that has the potential to result in erosion and discharges of waste to waters of the State.
43. Upon request, where required by Clean Water Act Section 404, Dischargers must submit proof of a dredge and fill permit from the United States Army Corps of Engineers (USACOE) for any work that has the potential to discharge wastes considered "fill," such as sediment, to wetlands.
44. **By October 1, 2012**, Dischargers must develop a farm water quality management plan (Farm Plan), or update the Farm Plan as necessary, and implement it to achieve compliance with this Order. Farm Plans must be kept current, kept on the farm, and a current copy must be made available to Central Coast Water Board staff, upon request. At a minimum, Farm Plans must include:
  - a. Copy of this Order and a copy of the Notice of Intent (NOI) submitted to the Central Coast Water Board for reference by operating personnel and inspection by Central Coast Water Board staff;
  - b. Date the Farm Plan was last updated;
  - c. Farm/ranch maps(s) identifying irrigation and stormwater runoff discharge locations where irrigation and stormwater runoff leaves or may leave the farm/ranch and where the discharge enters or may enter receiving water;
  - d. Description of the typical volume of discharges and when the discharge is typically present;
  - e. Description of type of chemicals applied (e.g., pesticide and fertilizer use);
  - f. Description and time schedule for any farm water quality management practices, treatment and/or control measures implemented to comply with this Order. This includes, but is not limited to, management practices related to irrigation efficiency and management, pesticide management, nutrient management, salinity management, sediment and erosion control (including stormwater management), and aquatic habitat protection to achieve compliance with this Order. In addition, Farm Plans must describe tile drain discharges and the management measures Dischargers have implemented or will implement to minimize impacts to water quality;
  - g. A description of the method and schedule for assessing the effectiveness of each management practice, treatment, and control measure identified in accordance with subsection(f). Such methods for assessing effectiveness are expected to be based on standard practices such as, but not limited

to: visual inspections, photographs, soil nutrient testing, soil moisture measurements, and recordkeeping. Dischargers may also choose more advanced methods for assessing effectiveness, such as water quality sampling, modeling software, calculated reductions in pollutant loading, toxicity testing, biological indicators evaluations, and other measurement types that prove useful to determining the effectiveness of a management practice. The use of advanced methods is not required.

45. Dischargers must obtain appropriate farm water quality education and technical assistance necessary to achieve compliance with this Order. Education should focus on meeting water quality standards by identifying on-farm water quality problems, implementing pollution prevention strategies and implementing practices designed to protect water quality and resolve water quality problems to achieve compliance with this Order.

Other Provisions and Conditions-

46. Pursuant to Water Code section 13267(c), the Central Coast Water Board staff or its authorized representatives may investigate the property of persons subject to this Order to ascertain whether the purposes of the Porter-Cologne Act are being met and whether the Discharger is complying with the conditions of this Order. The inspection shall be made with the consent of the owner or possessor of the facilities, or if consent is withheld, with a duly issued warrant pursuant to the procedure set forth in Title 13 Code of Civil Procedure Part 3 (commencing with Section 1822.50). However, in the event of an emergency affecting the public health or safety, an inspection may be performed without consent or the issuance of a warrant.
47. This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code Sections 2050 to 2097) or the federal Endangered Species Act (16 U.S.C.A. Sections 1531 to 1544). If a "take" will result from any act authorized under this Order, the Dischargers must obtain authorization for an incidental take prior to taking action. Dischargers must be responsible for meeting all requirements of the applicable Endangered Species Act for the discharge authorized by this Order.
48. Dischargers must pay a fee to the State Water Resources Control Board in compliance with the fee schedule contained in Title 23 California Code of Regulations.
49. Dischargers must pay any relevant monitoring fees (e.g., Cooperative Monitoring Program) necessary to comply with monitoring and reporting conditions of this Order or comply with monitoring and reporting requirements individually.

### **Part C. Monitoring Conditions for All Dischargers- Tier 1, Tier 2, and Tier 3**

50. Dischargers must comply with MRP Order No. R3-2012-0011, as ordered by the Executive Officer or alternative monitoring and reporting programs approved by Executive Officer as set forth in Finding 11 and Condition 11.

Monitoring and reporting conditions are different for each tier, based on level of waste discharge and affect on water quality. Attached to this Order are three specific MRPs, one for each tier:

- a. Tier 1 Dischargers must comply with monitoring and reporting conditions specified in MRP Order No. R3-2012-0011-01;
- b. Tier 2 Dischargers must comply with monitoring and reporting conditions specified in MRP Order No. R3-2012-0011-02;
- c. Tier 3 Dischargers must comply with monitoring and reporting conditions specified in MRP Order No. R3-2012-0011-03;

51. Tier 1, Tier 2, and Tier 3 Dischargers must conduct groundwater monitoring and reporting in compliance with MRP Order No. R3-2012-0011-01, MRP Order No. R3-2012-0011-02, and MRP Order No. 2012-0011-03, or alternative monitoring and reporting programs approved by Executive Officer as set forth in Finding 11 and Condition 11, so that the Central Coast Water Board can evaluate groundwater conditions in agricultural areas, identify areas at greatest risk for waste discharge and nitrogen loading and exceedance of drinking water standards, and identify priority areas for nutrient management.

52. Tier 1, Tier 2, and Tier 3 Dischargers must conduct surface receiving water quality monitoring and reporting in compliance with MRP Order No. R3-2012-0011-01, MRP Order No. R3-2012-0011-02, and MRP Order No. 2012-0011-03, either individually or through a cooperative monitoring program, or alternative monitoring and reporting programs approved by Executive Officer as set forth in Finding 11 and Condition 11.

53. For Dischargers who choose to participate in a cooperative monitoring program, failure to pay cooperative monitoring program fees voids a selection or notification of the option to participate in a cooperative monitoring and hence requires individual monitoring report submittal per MRP Order No. R3-2012-0011, MRP Order No. R3-2012-0011-02, and MRP Order No. 2012-0011-03.

#### **Part D. Submittal of Technical Reports for All Dischargers- Tier 1, Tier 2, Tier 3**

##### Notice of Intent (NOI) to Enroll under the Order for All Dischargers in Tier 1, Tier 2 and Tier 3

54. Submittal of the electronic NOI is required pursuant to Water Code section 13260. Submittal of all other technical reports pursuant to this Order is required pursuant to Water Code section 13267. Failure to submit technical reports or the attachments in accordance with schedules established by this Order or MRP, or failure to submit a complete technical report (i.e., of sufficient technical quality to be acceptable to the Executive Officer), may subject the Discharger to enforcement action pursuant to Water Code sections 13261, 13268, or 13350. Dischargers must submit technical reports in the format specified by the Executive Officer.
55. Dischargers seeking authorization to discharge under this Order must submit a completed electronic NOI form to the Central Coast Water Board. Dischargers already enrolled in the 2004 Agricultural Order and who have submitted their NOI electronically are not required to submit a new NOI. Upon submittal of an accurate and complete electronic NOI, the Discharger is enrolled under the Order, unless otherwise informed by the Executive Officer.
- a. In the case where an operator may be operating for a period of less than 12 months, the landowner must submit the electronic NOI.
  - b. **Within 60 days** of the adoption of this Order, any Discharger who did not enroll in the 2004 Agricultural Order must submit an electronic NOI, unless otherwise directed by the Executive Officer.
  - c. **Prior to any discharge or commencement of activities that may cause a discharge**, including land preparation prior to crop production, any Discharger proposing to control or own a new operation or farm/ranch that has the potential to discharge waste that could directly or indirectly reach waters of the State and affect the quality of any surface water or groundwater must submit an electronic NOI.
  - d. Dischargers must submit any updates to the electronic NOI by **October 1, 2012 and annually thereafter by October 1**, to reflect changes to operation or ranch/farm information.
  - e. **Within 60 days**, in the event of a change in control or ownership of an operation, farm/ranch, or land presently owned or controlled by the Discharger, the Discharger must notify the succeeding owner and operator of



the existence of this Order by letter, and forward a copy of the letter to the Executive Officer.

- f. **Within 60 days** of acquiring control or ownership of an operation or farm/ranch, any Discharger acquiring control or ownership of an existing operation or farm/ranch must submit an electronic NOI.
56. Dischargers must submit all the information required in the electronic NOI form including, but not limited to, the following information for the operation and individual farm/ranch:
- a. Identification of each property covered by enrollment,
  - b. Tier applicable to each farm/ranch,
  - c. Landowner(s),
  - d. Operator(s),
  - e. Contact information,
  - f. Option selected to comply with surface receiving water quality monitoring conditions (cooperative monitoring or individual),
  - g. Option selected to comply with groundwater monitoring conditions (cooperative monitoring or individual),
  - h. Location of operation, including specific farm(s)/ranch(es),
  - i. Farm/ranch map with discharge locations and groundwater wells identified,
  - j. Total and irrigated acreage,
  - k. Crop type,
  - l. Irrigation type,
  - m. Discharge type,
  - n. Chemical use,
  - o. Presence and location of any perennial, intermittent, or ephemeral streams or riparian or wetland area habitat.
57. Dischargers must submit a statement of understanding of the conditions of the Order and MRP signed by the Discharger (landowner or operator) with the electronic NOI form. If the operator signs and submits the electronic NOI, the operator must provide a copy of the completed NOI form to the landowner(s).
58. Dischargers must identify in the electronic NOI if the farm/ranch is a Tier 1, Tier 2, or Tier 3 and provide complete and accurate information in the NOI that allows the Central Coast Water Board to confirm the appropriate tier. For Dischargers who do not provide adequate information for the Water Board to confirm or determine the appropriate tier, the Executive Officer will place the farm/ranch in the appropriate tier based upon information submitted in the Notice of Intent or further communication with the Discharger.
59. Coverage under this Order is not transferable to any person except after submittal of an updated electronic NOI and approval by the Executive Officer.

60. For Dischargers who do not enroll in the Order in a timely manner as specified in this Order, the Executive Officer may require submittal of an ROWD, and the Discharger may be subject to WDRs.

Notice of Termination (NOT) for All Dischargers

61. **Immediately**, if a Discharger wishes to terminate coverage under the Order for the operation or an individual farm/ranch, the Discharger must submit a completed Notice of Termination (NOT). Termination from coverage is the date specified in the NOT, unless specified otherwise. All discharges, as defined in Attachment A, must cease before the date of termination, and any discharges on or after the date of termination shall be considered in violation of the Order, unless covered by other waivers of WDRs, general WDRs, or individual WDRs cover the discharge.

Monitoring and General Technical Reports for All Dischargers

62. Dischargers must submit monitoring reports in compliance with MRP Order No. R3-2012-0011, or alternative monitoring and reporting programs approved by Executive Officer as set forth in Finding 11 and Condition 11, electronically in a format specified by the Executive Officer.
63. Any laboratory data submitted to the Central Coast Water Board by Dischargers must be submitted by, or under the direction of, a State registered professional engineer, registered geologist, State certified laboratory or other similarly qualified professional. Surface water quality data must be submitted electronically, in a format that is compatible with the Central Coast Ambient Monitoring Program (CCAMP), the State's Surface Water Assessment Program (SWAMP) or as directed by the Executive Officer. Groundwater quality data must be submitted in a format compatible with the electronic deliverable format (EDF) used by the State Water Board's GeoTracker data management system, or as directed by the Executive Officer.
64. Dischargers must submit technical reports that the Executive Officer may require to determine compliance with this Order as authorized by Water Code section 13267, electronically in a format specified by the Executive Officer.
65. If the Discharger asserts that all or a portion of a report submitted pursuant to this Order is subject to an exemption from public disclosure (e.g., trade secrets or secret processes), the Discharger must provide an explanation of how those portions of the reports are exempt from public disclosure. Also, the Discharger must clearly indicate on the cover of the report (typically an electronic submittal) that the Discharger asserts that all or a portion of the report is exempt from public disclosure, submit a complete report with those portions that are asserted to be

exempt in redacted form, submit separately (in a separate electronic file) unredacted pages (to be maintained separately by staff). The Central Coast Water Board staff will determine whether any such report or portion of a report qualifies for an exemption from public disclosure. If the Central Coast Water Board staff disagrees with the asserted exemption from public disclosure, the Central Coast Water Board staff will notify the Discharger prior to making such report or portions of such report available for public inspection. In the interest of public health and safety, the Central Coast Water Board will not make available for public inspection, the precise location of any groundwater well monitored in compliance with this Order. Consistent with the reporting of groundwater wells on GeoTracker, groundwater well location and data will only be referenced within a one-half mile radius of the actual well location.

66. Dischargers or a representative authorized by the Discharger must sign technical reports submitted to comply with the Order. Any person signing a report submitted as required by this Order must make the following certification:

*"In compliance with Water Code section 13267, I certify under penalty of perjury that this document and all attachments were prepared by me, or under my direction or supervision, following a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. To the best of my knowledge and belief, this document and all attachments are true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."*

## **Part E. Additional Conditions that Apply to Tier 2 and Tier 3 Dischargers**

### Annual Compliance Reporting for Tier 2 and Tier 3 Dischargers

67. By **October 1, 2012, and updated by October 1 annually thereafter**, Tier 2 and Tier 3 Dischargers must submit an Annual Compliance Form electronically, in a format specified by the Executive Officer that includes all the information requested, per MRP Order No. R3-2012-0011-02 and MRP Order No. R3-2012-0011-03, respectively. The purpose of the electronic Annual Compliance Form is to provide up-to-date information to the Central Coast Water Board to assist in the evaluation of affect on water quality from agricultural waste discharges and evaluate progress towards compliance with this Order, including implementation of management practices, treatment or control measures, or changes in farming practices.
68. **By January 15, 2014**, Tier 2 and Tier 3 Dischargers must determine nitrate loading risk factor(s) in accordance with MRP Order No. R3-2012-0011-02 and MRP Order No. R3-2012-0011-03 and report the nitrate loading risk factors and

overall Nitrate Loading Risk level calculated for each ranch/farm or nitrate loading risk unit in the Annual Compliance Form, electronically (or in a format specified by the Executive Officer).

Photo Monitoring for Tier 2 and Tier 3 Dischargers with farms/ranches *adjacent to or containing* a waterbody identified on the 2010 List of Impaired Waterbodies as impaired for temperature, turbidity, or sediment

69. **By June 1, 2014, and by June 1, 2017, and every four years thereafter**, Tier 2 and Tier 3 Dischargers with farms/ranches adjacent to or containing a waterbody identified on the 2010 List of Impaired Waterbodies as impaired for temperature, turbidity, or sediment (identified in Table 1) must conduct photo monitoring per MRP Order No. R3-2012-0011-02 and MRP Order No. R3-2012-0011-03, respectively. Photo monitoring must document the condition of perennial, intermittent, or ephemeral streams and riparian and wetland area habitat, and demonstrate compliance with Basin Plan erosion and sedimentation requirements (see Part F. 80 of this Order), including the presence of bare soil vulnerable to erosion and relevant management practices and/or treatment and control measures implemented to address impairments. Aerial photography and photography from an elevated vantage point are permitted methodologies for photo monitoring. Photo documentation must be maintained in the Farm Plan and must be submitted upon request of the Executive Officer.

Total Nitrogen Reporting for Tier 2 and Tier 3 Dischargers with farms/ranches with High Nitrate Loading Risk

70. **By October 1, 2014 and by October 1 annually thereafter**, Tier 2 and Tier 3 Dischargers with a farm/ranch with High Nitrate Loading Risk must record and report total nitrogen applied in the Annual Compliance Form, electronically in a format specified by the Executive Officer, per MRP Order No. R3-2012-0011-02 and MRP Order No. R3-2012-0011-03, respectively.
71. As an alternative to reporting total nitrogen applied in the electronic Annual Compliance Form, Tier 2 and Tier 3 Dischargers with a farm/ranch with High Nitrate Loading Risk may propose an individual discharge groundwater monitoring and reporting program (GMRP) plan for approval by the Executive Officer. The GMRP plan must evaluate waste discharge to groundwater from each ranch/farm or nitrate loading risk unit with a High Nitrate Loading Risk.

**Part F. Additional Conditions that Apply to Tier 3 Dischargers**

72. **By December 1, 2013**, Tier 3 Dischargers must initiate individual surface water discharge monitoring per MRP Order No. R3-2012-0011-03 or alternative

monitoring and reporting programs approved by Executive Officer as set forth in Finding 11 and Condition 11.

73. **By March 15, 2014, October 1, 2014** and annually thereafter by October 1, Tier 3 Dischargers must submit individual surface water discharge monitoring data and reports per MRP Order No. R3-2012-0011-03, electronically, in a format specified by the Executive Officer, or alternative monitoring and reporting programs approved by Executive Officer as set forth in Finding 11 and Condition 11 .

Irrigation and Nutrient Management Plan for Tier 3 Dischargers with farms/ranches with High Nitrate Loading Risk

74. Tier 3 Dischargers with High Nitrate Loading Risk farms/ranches must develop and initiate implementation of an Irrigation and Nutrient Management Plan (INMP) certified by a Professional Soil Scientist, Professional Agronomist, or Crop Advisor certified by the American Society of Agronomy, or similarly qualified professional, per MRP Order No. R3-2012-0011-03.
75. **By October 1, 2016**, Tier 3 Dischargers with High Nitrate Loading Risk farms/ranches must verify the overall effectiveness of the INMP per MRP Order No. R3-2012-0011-03. Dischargers must identify the methods used to verify effectiveness and include the results as a report with the Annual Compliance Form, submitted electronically in a format specified by the Executive Officer.

Water Quality Buffer Plan for Tier 3 Dischargers with farms/ranches adjacent to or containing a waterbody identified on the 2010 List of Impaired Waterbodies as impaired for temperature, turbidity, or sediment

76. **By October 1, 2016**, Tier 3 Dischargers with farms/ranches adjacent to or containing a waterbody identified on the 2010 List of Impaired Waterbodies as impaired for temperature, turbidity, or sediment (see Table 1) must develop a Water Quality Buffer Plan per MRP Order No. R3-2012-0011-03 that protects the listed waterbody and its associated perennial and intermittent tributaries, including adjacent wetlands as defined by the Clean Water Act. Dischargers must submit the Water Quality Buffer Plan as a report with the Annual Compliance Form, submitted electronically in a format specified by the Executive Officer. The purpose of the Water Quality Buffer Plan is to control discharges of waste that cause or contribute to exceedances of water quality standards in waters of the State or United States in compliance with this Order and the following Basin Plan requirement:
- a. Basin Plan (Chapter 5, p. V-13, Section V.G.4 – Erosion and Sedimentation, *“A filter strip of appropriate width, and consisting of undisturbed soil and riparian vegetation or its equivalent, shall be maintained, wherever possible,*

*between significant land disturbance activities and watercourses, lakes, bays, estuaries, marshes, and other water bodies. For construction activities, minimum width of the filter strip shall be thirty feet, wherever possible. ..”*

- b. As an alternative to the development and implementation of a Water Quality Buffer Plan, Tier 3 Dischargers may submit evidence to the Executive Officer to demonstrate that any discharge of waste is sufficiently treated or controlled such that it is of sufficient quality that it will not cause or contribute to exceedances of water quality standards in waters of the State or of the United States.

77. Tier 3 Dischargers with farms/ranches adjacent to or containing a waterbody identified on the 2010 List of Impaired Waterbodies as impaired for temperature, turbidity, or sediment must implement the Water Quality Buffer Plan immediately upon submittal, unless the plan requests a time extension that is approved by the Executive Officer. If the Executive Officer determines the Water Quality Buffer Plan is not in compliance with this Order, the Executive Officer will notify the Discharger and the Discharger must make necessary modifications accordingly.

## **Part G. TIME SCHEDULE**

78. Time schedules for compliance with conditions are identified in Conditions 80 – 83, and described in Table 2 (all Dischargers) and Table 3 (Tier 2 and Tier 3 Dischargers). Milestones are identified in Table 4. Dischargers must comply with Order Conditions by dates specified in Tables 2 and 3 in accordance with the MRP. The Water Board will consider the following information in determining the extent to which the Discharger is effectively controlling individual waste discharges and compliance with this Order:

- a) compliance with the time schedules;
- b) effectiveness of management practice implementation;
- c) effectiveness of treatment or control measures (including cooperative water quality improvement efforts, and local and regional treatment strategies);
- d) results of individual discharge monitoring (Tier 3);
- e) results of surface receiving water monitoring downstream of the point where the individual discharge enters the receiving water body;
- f) other information obtained by Water Board staff during inspections at operations or farms/ranches, or submitted in response to Executive Officer orders;

79. The Executive Officer may require additional monitoring and reporting as authorized by Water Code section 13267 in cases where Dischargers fail to demonstrate adequate progress towards compliance as indicated by milestones and compliance with other Conditions of the Order.

80. **By October 1, 2014**, Tier 3 Dischargers must effectively control individual waste discharges of pesticides and toxic substances to waters of the State and of the United States.
81. **By October 1, 2015**, Tier 3 Dischargers must effectively control individual waste discharges of sediment and turbidity to surface waters of the State or of the United States.
82. **By October 1, 2016**, Tier 3 Dischargers must effectively control individual waste discharges of nutrients to surface waters of the State or of the United States.
83. **By October 1, 2016**, Tier 3 Dischargers must effectively control individual waste discharges of nitrate to groundwater.
- 83.5. To comply with Provisions 22, 23, 33, and 80 - 83 of this Order. Dischargers must (1) implement management practices that prevent or reduce discharges of waste that are causing or contributing to exceedances of water quality standards: and (2) to the extent practice effectiveness evaluation or reporting, monitoring data, or inspections indicate that the implemented management practices have not been effective in preventing the discharges from causing or contributing to exceedances of water quality standards, the Discharger must implement improved management practices.
84. This Order becomes effective on March 15, 2012 and expires on March 14, 2017, unless rescinded or renewed by the Central Coast Water Board.

I, Kenneth A. Harris, Jr., Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order and Attachments adopted by the California Regional Water Quality Control Board, Central Coast Region, on March 15, 2012 and as modified by the State Water Resources Control Board Order WQ-2013-0101 on September 24, 2013 .



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Kenneth A. Harris, Jr.  
Executive Officer

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January 16, 2014  
Date

**Table 1. 2010 Clean Water Act Section 303(d) List of Impaired Waterbodies Impaired for Toxicity, Pesticides, Nutrients, Temperature, Turbidity, or Sediment**

<b>Waterbody Name</b>	<b>Impairment(s)<sup>1</sup></b>
Alisal Creek (Monterey Co.) <sup>3</sup>	Toxicity, Nutrients
Aptos Creek <sup>2</sup>	Sediment
Arana Gulch <sup>3</sup>	Pesticides
Arroyo Paredon <sup>3</sup>	Toxicity, Pesticides, Nutrients
Beach Road Ditch <sup>2</sup>	Nutrients, Turbidity
Bean Creek <sup>2</sup>	Sediment
Bear Creek (Santa Cruz Co.) <sup>2</sup>	Sediment
Bell Creek (Santa Barbara Co.) <sup>3</sup>	Toxicity, Nutrients
Blanco Drain <sup>2,3</sup>	Pesticides, Nutrients, Turbidity
Blosser Channel	Toxicity, Nutrients
Boulder Creek <sup>2</sup>	Sediment
Bradley Canyon Creek <sup>2,3</sup>	Toxicity, Nutrients, Turbidity
Bradley Channel <sup>3</sup>	Toxicity, Pesticides, Nutrients
Branciforte Creek <sup>2,3</sup>	Pesticides, Sediment
Carbonera Creek <sup>2</sup>	Nutrients, Sediment
Carnadero Creek	Nutrients, Turbidity
Carneros Creek (Monterey Co.) <sup>2</sup>	Nutrients, Turbidity
Carpinteria Creek <sup>3</sup>	Pesticides
Carpinteria Marsh (El Estero Marsh)	Nutrients
Casmalia Canyon Creek <sup>2</sup>	Sediment
Chorro Creek <sup>2</sup>	Nutrients, Sediment
Chualar Creek <sup>2,3</sup>	Toxicity, Pesticides, Nutrients, Turbidity, Temperature
Corralitos Creek <sup>2</sup>	Turbidity
Elkhorn Slough <sup>2,3</sup>	Pesticides, Sediment
Esperanza Creek	Nutrients
Espinosa Lake <sup>3</sup>	Pesticides
Espinosa Slough <sup>2,3</sup>	Toxicity, Pesticides, Nutrients, Turbidity
Fall Creek <sup>2</sup>	Sediment
Franklin Creek (Santa Barbara Co.) <sup>3</sup>	Pesticides, Nutrients
Furlong Creek <sup>2,3</sup>	Pesticides, Nutrients, Turbidity
Gabilan Creek <sup>2,3</sup>	Toxicity, Nutrients, Turbidity
Glen Annie Canyon <sup>3</sup>	Toxicity, Nutrients



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Greene Valley Creek (Santa Barbara Co.) <sup>2,3</sup>	Toxicity, Pesticides, Nutrients, Turbidity, Temperature
Kings Creek <sup>2</sup>	Sediment
Little Oso Flaco Creek <sup>3</sup>	Toxicity, Nutrients
Llagas Creek (below Chesbro Reservoir) <sup>2,3</sup>	Pesticides, Nutrients, Sediment, Turbidity
Lompico Creek <sup>2</sup>	Nutrients, Sediment
Los Berros Creek	Nutrients
Los Carneros Creek	Nutrients
Los Osos Creek <sup>2</sup>	Nutrients, Sediment
Love Creek <sup>2</sup>	Sediment
Main Street Canal <sup>2,3</sup>	Toxicity, Pesticides, Nutrients, Turbidity
McGowan Ditch	Nutrients
Merrit Ditch <sup>2,3</sup>	Toxicity, Nutrients, Turbidity
Millers Canal <sup>2,3</sup>	Pesticides, Turbidity, Temperature
Mission Creek (Santa Barbara Co.) <sup>3</sup>	Toxicity
Monterey Harbor <sup>3</sup>	Toxicity
Moro Cojo Slough <sup>2,3</sup>	Pesticides, Nutrients, Sediment
Morro Bay <sup>2</sup>	Sediment
Moss Landing Harbor <sup>2,3</sup>	Toxicity, Pesticides, Sediment
Mountain Charlie Gulch <sup>2</sup>	Sediment
Natividad Creek <sup>2,3</sup>	Toxicity, Nutrients, Turbidity, Temperature
Newell Creek (Upper) <sup>2</sup>	Sediment
Nipomo Creek <sup>3</sup>	Toxicity, Nutrients
North Main Street Channel	Nutrients
Old Salinas River Estuary <sup>3</sup>	Pesticides, Nutrients
Old Salinas River <sup>2,3</sup>	Toxicity, Pesticides, Nutrients, Turbidity
Orcutt Creek <sup>2,3</sup>	Toxicity, Pesticides, Nutrients, Turbidity, Temperature
Oso Flaco Creek <sup>3</sup>	Toxicity, Nutrients
Oso Flaco Lake <sup>3</sup>	Pesticides, Nutrients
Pacheco Creek <sup>2</sup>	Turbidity
Pacific Ocean (Point Ano Nuevo to Soquel Point) <sup>3</sup>	Pesticides
Pajaro River <sup>2,3</sup>	Pesticides, Nutrients, Sediment, Turbidity
Prefumo Creek <sup>2</sup>	Nutrients, Turbidity
Quail Creek <sup>2,3</sup>	Toxicity, Pesticides, Nutrients, Turbidity, Temperature
Rider Creek <sup>2</sup>	Sediment
Rincon Creek <sup>2,3</sup>	Toxicity, Turbidity
Rodeo Creek Gulch <sup>2</sup>	Turbidity

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Salinas Reclamation Canal <sup>2,3</sup>	Toxicity, Pesticides, Nutrients, Turbidity
Salinas River (lower, estuary to near Gonzales Rd crossing, watersheds 30910 and 30920) <sup>2,3</sup>	Toxicity, Pesticides, Nutrients, Turbidity
Salinas River (middle, near Gonzales Rd crossing to confluence with Nacimiento River) <sup>2,3</sup>	Toxicity, Pesticides, Turbidity, Temperature
Salinas River Lagoon (North) <sup>3</sup>	Pesticides, Nutrients
Salinas River Refuge Lagoon (South) <sup>2</sup>	Turbidity
Salsipuedes Creek (Santa Cruz Co.) <sup>2</sup>	Turbidity
San Antonio Creek (below Rancho del las Flores Bridge at Hwy 135) <sup>3</sup>	Pesticides, Nutrients
San Benito River <sup>2,3</sup>	Toxicity, Sediment
San Juan Creek (San Benito Co.) <sup>2,3</sup>	Toxicity, Nutrients, Turbidity
San Lorenzo River <sup>2,3</sup>	Pesticides, Nutrients, Sediment
San Luis Obispo Creek (below Osos St.) <sup>3</sup>	Pesticides, Nutrients
San Simeon Creek	Nutrients
San Vicente Creek (Santa Cruz Co.) <sup>2</sup>	Sediment
Santa Maria River <sup>2,3</sup>	Toxicity, Pesticides, Nutrients, Turbidity
Santa Rita Creek (Monterey Co.) <sup>2</sup>	Nutrients, Turbidity
Santa Ynez River (below city of Lompoc to Ocean) <sup>2</sup>	Nutrients, Sediment, Temperature
Santa Ynez River (Cachuma Lake to below city of Lompoc)	Sediment, Temperature
Schwan Lake	Nutrients
Shingle Mill Creek <sup>2</sup>	Nutrients, Sediment
Shuman Canyon Creek <sup>2</sup>	Sediment
Soda Lake	Nutrients
Soquel Creek <sup>2</sup>	Turbidity
Soquel Lagoon <sup>2</sup>	Sediment
Tembladero Slough <sup>2,3</sup>	Toxicity, Pesticides, Nutrients, Turbidity
Tequisquita Slough <sup>2</sup>	Turbidity
Uvas Creek (below Uvas Reservoir) <sup>2</sup>	Turbidity
Valencia Creek <sup>2</sup>	Sediment
Warden Creek	Nutrients
Watsonville Creek	Nutrients
Watsonville Slough <sup>2,3</sup>	Pesticides, Turbidity
Zayante Creek <sup>2,3</sup>	Pesticides, Sediment

<sup>1</sup>Dischargers with farms/ranches located within 1000 feet of a surface waterbody listed for toxicity, pesticides, nutrients, turbidity or sediment on the 2010 List of Impaired Waterbodies are included as Tier 2 or Tier 3;

<sup>2</sup>Tier 2 and Tier 3 Dischargers with farms/ranches adjacent to or containing a waterbody identified on the 2010 List of Impaired Waterbodies as impaired for temperature, turbidity, or sediment must conduct photo monitoring, and Tier 3 Dischargers must also implement a Water Quality Buffer Plan.

<sup>3</sup>Dischargers who apply chemicals known to cause toxicity to surface water to a farm/ranch that discharges to a waterbody on the 2010 303(d) List of Impaired Waterbodies for toxicity or pesticides must meet conditions in this Order for Tier 3.

**Table 2. Time Schedule for Compliance with Conditions for All Dischargers (Tier 1, Tier 2, and Tier 3)**

CONDITIONS	COMPLIANCE DATE <sup>1</sup>
Submit Notice of Intent (NOI)	Within 60 days of adoption of Order or Within 60 days acquiring ownership/ control, and prior to any discharge or commencement of activities that may cause discharge.
Submit Update to NOI	Within 60 days, upon adoption of Order and upon change of control or ownership
Submit Notice of Termination	Immediately, when applicable
Submit Monitoring Reports per MRP	Per date in MRP
Implement, and update as necessary, management practices to achieve compliance with this Order.	Ongoing
Protect existing aquatic habitat to prevent discharge of waste	Immediately
Submit surface receiving water quality monitoring annual report	Within one year, and annually thereafter by January 1
Develop/update and implement Farm Plan	October 1, 2012
Install and maintain adequate backflow prevention devices.	March 1, 2013
Submit groundwater monitoring results and information	October 1, 2013
Properly destroy abandoned groundwater wells.	October 1, 2015

**Table 3. Additional Time Schedule for Compliance with Conditions Tier 2 and Tier 3 Dischargers**

CONDITIONS	COMPLIANCE DATE
<b><i>Tier 2 and Tier 3:</i></b>	
Submit electronic Annual Compliance Form	October 1, 2012, and updated annually thereafter by October 1.
Submit photo documentation of riparian or wetland area habitat (if farm/ranch contains or is adjacent to a waterbody impaired for temperature, turbidity, or sediment)	June 1, 2014. June 1, 2017, and every four years thereafter by June 1.
Calculate Nitrate Loading Risk level and report in electronic Annual Compliance Form	,January 15, 2014 and annually thereafter by October 1.
Submit total nitrogen applied in electronic Annual Compliance Form (if discharge has High Nitrate Loading Risk)	October 1, 2014, and annually thereafter by October 1.
<b><i>Only Tier 3:</i></b>	
Initiate individual surface water discharge monitoring	December 1, 2013
Submit individual surface water discharge monitoring data	March 15, 2014, October 1, 2014 and annually thereafter by October 1
Submit Water Quality Buffer Plan or alternative (if farm/ranch contains or is adjacent to a waterbody impaired for temperature, turbidity, or sediment)	October 1, 2016
Submit INMP Effectiveness Report (if discharge has High Nitrate Loading Risk)	October 1, 2016

**Table 4. Time Schedule for Milestones**

MILESTONES <sup>1</sup>	DATE
<b><i>Tier 1, Tier 2 and Tier 3:</i></b>	
<p>Measurable progress towards water quality standards in waters of the State or of the United States<sup>1</sup>, or</p> <p>Water quality standards met in waters of the State or of the United States.</p>	<p>Ongoing</p> <p>October 1, 2016</p>
<b><i>Only Tier 3:</i></b>	
<p><u>Pesticide and Toxic Substances Waste Discharges to Surface Water</u></p> <p>- One of two individual surface water discharge monitoring samples is not toxic</p> <p>- Two of two individual surface water discharge monitoring samples are not toxic</p>	<p>October 1, 2014</p> <p>October 1, 2015</p>
<p><u>Sediment and Turbidity Waste Discharges to Surface Water</u></p> <p>- Four individual surface water discharge monitoring samples are collected and analyzed for turbidity.</p> <p>- 75% reduction in turbidity or sediment load in individual surface water discharge relative to October 1, 2012 load (or meet water quality standards for turbidity or sediment in individual surface water discharge)</p>	<p>October 1, 2014</p> <p>October 1, 2015</p>
<p><u>Nutrient Waste Discharges to Surface Water</u></p> <p>- Four individual surface water discharge monitoring samples are collected and analyzed</p> <p>- 50% load reduction in nutrients in individual surface water discharge relative to October 1, 2012 load (or meet water quality standards for nutrients in individual discharge)</p>	<p>October 1, 2014</p> <p>October 1, 2015</p>

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<p><i>- 75% load reduction in nutrients in individual surface water discharge relative to October 1, 2012 load (or meet water quality standards for nutrients in individual surface water discharge)</i></p>	<p><i>October 1, 2016</i></p>
<p><u>Nitrate Waste Discharges to Groundwater</u></p> <p><i>- Achieve annual reduction in nitrogen loading to groundwater based on Irrigation and Nutrient Management Plan effectiveness and load evaluation</i></p>	<p><i>October 1, 2016 and annually thereafter</i></p>

<sup>1</sup> Indicators of progress towards milestones includes, but is not limited to data and information related to a) management practice implementation and effectiveness, b) treatment or control measures, c) individual discharge monitoring results, d) receiving water monitoring results, and e) related reporting.

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

**ORDER No. R3-2012-0011  
ATTACHMENT A**

**ADDITIONAL FINDINGS, APPLICABLE WATER QUALITY CONTROL PLANS AND  
DEFINITIONS  
FOR  
CONDITIONAL WAIVER OF WASTE DISCHARGE REQUIREMENTS  
FOR  
DISCHARGES FROM IRRIGATED LANDS**

Order No. R3-2012-0011 (Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands) requires Dischargers to comply with applicable state plans and policies and applicable state and federal water quality standards and to prevent nuisance. Water quality standards are set forth in state and federal plans, policies, and regulations. The California Regional Water Quality Control Board Central Coast Region's (Central Coast Water Board) Water Quality Control Plan contains specific water quality objectives, beneficial uses, and implementation plans that are applicable to discharges of waste and/or waterbodies that receive discharges of waste from irrigated lands. The State Water Resources Control Board (State Water Board) has adopted plans and policies that may be applicable to discharges of waste and/or surface waterbodies or groundwater that receive discharges of waste from irrigated lands. The United States Environmental Protection Agency (USEPA) has adopted the *National Toxics Rule* and the *California Toxics Rule*, which constitute water quality criteria that apply to waters of the United States.

The specific waste constituents required to be monitored and the applicable water quality standards that protect identified beneficial uses for the receiving water are set forth in Monitoring and Reporting Program (MRP) Order No. R3-2012-0011-01, MRP Order No. R3-2012-0011-02, and MRP Order No. R3-2012-0011-03.

This Attachment A lists additional findings (Part A), relevant plans, policies, regulations (Part B), and definitions of terms (Part C) used in Order No. R3-2012-0011.

## **PART A. ADDITIONAL FINDINGS**

**The California Regional Water Quality Control Board, Central Coast Region additionally finds that:**

1. The Central Coast Water Board is the principal state agency in the Central Coast Region with primary responsibility for the coordination and control of water quality. (Cal. Wat. Code § 13001, Legislative Intent) The purpose of this Order is to focus on the highest water quality priorities and maximize water quality protection to ensure the long-term reliability and availability of water resources of sufficient supply and quality for all present and future beneficial uses, including drinking water and aquatic life. Given the magnitude and severity of water quality impairment and impacts to beneficial uses caused by irrigated agriculture and the significant cost to the public, the Central Coast Water Board finds that it is reasonable and necessary to require specific actions to protect water quality.
2. The Central Coast Water Board recognizes that Dischargers may not achieve immediate compliance with all requirements. Thus, this Order provides reasonable schedules for Dischargers to reach full compliance over many years by implementing management practices and monitoring and reporting programs that demonstrate and verify measurable progress annually. This Order includes specific dates to achieve compliance with this Order and milestones that will reduce pollutant loading or impacts to surface water and groundwater in the short term (e.g., a few years) and achieve water quality standards in surface water and groundwater in the longer term (e.g., decades); some compliance dates extend beyond the term of this Order. The focus of this Order is non-tile drain discharges, although Tier 3 tile drain discharges on individual farms/ranches must be monitored. Dischargers with tile drains must also describe management practices used or proposed to be used to attain water quality standards or minimize exceedances in receiving waters while making progress to attain water quality standards. The Executive Officer will evaluate any proposed longer timeframes to address tile-drain discharges.
3. According to California Water Code Section 13263(g), the discharge of waste to waters of the State is a privilege, not a right. It is the responsibility of dischargers of waste from irrigated lands to comply with the Water Code by seeking waste discharge requirements (WDRs) or by complying with a waiver of WDRs. This Order waiving the requirement to obtain WDRs provides a mechanism for dischargers of waste from irrigated lands to meet their responsibility to comply with the Water Code and to prevent degradation of waters of the State, prevent nuisance, and to protect the beneficial uses. Dischargers are responsible for the quality of surface waters and ground waters that have received discharges of waste from their irrigated lands.



4. In the Central Coast Region, nearly all agricultural, municipal, industrial, and domestic water supply comes from groundwater. Groundwater supplies approximately 90 percent of the drinking water on the Central Coast. Currently, more than 700 municipal public supply wells in the Central Coast Region provide drinking water to the public. In addition, based on 1990 census data, there are more than 40,000 permitted private wells in the Region, most providing domestic drinking water to rural households and communities from shallow sources. The number of private domestic wells has likely significantly increased in the past 20 years due to population growth.
5. In the Salinas, Pajaro, and Santa Maria groundwater basins, agriculture accounts for approximately 80 to 90 percent of groundwater pumping (MCWRA, 2007; PVWMA, 2002; Luhdorff and Scalmanini Consulting Engineers. April 2009).
6. The Central Coast Region supports some of the most significant biodiversity of any temperate region in the world and is home to the last remaining population of the California sea otter, three sub-species of threatened or endangered steelhead (*Oncorhynchus mykiss*) and one sub-species of endangered coho salmon (*Oncorhynchus kisutch*). The endangered marsh sandwort (*Arenaria paludicola*), Gambel's watercress (*Nasturtium rorippa gambelii*), California least tern (*Sterna antillarum browni*), and threatened red-legged frog (*Rana aurora*) are present in the region.
7. Several watersheds drain into Monterey Bay National Marine Sanctuary, one of the largest marine sanctuaries in the world. Elkhorn Slough is one of the largest remaining tidal wetlands in the United States and one of the National Oceanic and Atmospheric Administration (NOAA) designated National Estuarine Research Reserves. The southern portion includes the Morro Bay National Estuary and its extensive salt marsh habitat.
8. The two endangered plants, marsh sandwort and Gambel's watercress, are critically imperiled and their survival depends upon the health of the Oso Flaco watershed. The last remaining known population of marsh sandwort and one of the last two remaining known populations of Gambel's watercress occur in Oso Flaco Lake (United States Department of the Interior Fish and Wildlife Service, 2007).
9. The Central Coast of California is one of the most productive and profitable agricultural regions in the nation, reflecting a gross production value of more than six billion dollars in 2008 and contributing to more than 14 percent of California's agricultural economy. The region produces many high value specialty crops including lettuce, strawberries, raspberries, artichokes, asparagus, broccoli, carrots, cauliflower, celery, fresh herbs, mushrooms, onions, peas, spinach, wine

grapes, tree fruit and nuts. An adequate water supply of sufficient quality is critical to supporting the agricultural industry on the Central Coast.

### LEGAL AND REGULATORY CONSIDERATIONS

10. This Attachment A to Order No. R3-2012-0011 identifies applicable plans and policies adopted by the State Water Board and the Central Coast Water Board that contain regulatory requirements that apply to the discharge of waste from irrigated lands. This Attachment A also provides definitions of terms for purposes of this Order.
11. The Water Code grants authority to the State Water Board with respect to State water rights and water quality regulations and policy, and establishes nine Regional Water Boards with authority to regulate discharges of waste that could affect the quality of waters of the State and to adopt water quality regulations and policy.
12. As further described in the Order, discharges from irrigated lands affect the quality of the waters of the State depending on the quantity of the waste discharge, quantity of the waste, the quality of the waste, the extent of treatment, soil characteristics, distance to surface water, depth to groundwater, crop type, implementation of management practices and other site-specific factors. Discharges from irrigated lands have impaired and will continue to impair the quality of the waters of the State within the Central Coast Region if such discharges are not controlled.
13. Water Code Section 13267(b)(1) authorizes the Central Coast Water Board to require dischargers to submit technical reports necessary to evaluate Discharger compliance with the terms and conditions of this Order and to assure protection of waters of the State. The Order, this Attachment A, and the records of the Water Board provide the evidence demonstrating that discharges of waste from irrigated lands have degraded and/or polluted the waters of the state. Persons subject to this Order discharge waste from irrigated lands that impacts the quality of the waters of the state. Therefore it is reasonable to require such persons to prepare and submit technical reports.
14. Water Code Section 13269 provides that the Central Coast Water Board may waive the requirement in Water Code section 13260(a) to obtain WDRs. Water Code section 13269 further provides that any such waiver of WDRs shall be conditional, must include monitoring requirements unless waived, may not exceed five years in duration, and may be terminated at any time by the Central Coast Water Board or Executive Officer.

15. Water Code Section 13269(a)(4)(A) authorizes the Central Coast Water Board to include as a condition of a conditional waiver the payment of an annual fee established by the State Water Board. California Code of Regulations, Title 23, Division 3, Chapter 9, Article 1, Section 2200.3 sets forth the applicable fees. The Order requires each Discharger to pay an annual fee to the State Water Board in compliance with the fee schedule.
16. The Water Quality Control Plan for the Central Coast Basin (Basin Plan) designates beneficial uses, establishes water quality objectives, contains programs of implementation needed to achieve water quality objectives, and references the plans and policies adopted by the State Water Board. The water quality objectives are required to protect the beneficial uses of waters of the State identified in this Attachment A.
17. The Order is consistent with the Basin Plan because it requires Dischargers to comply with applicable water quality standards, as defined in this Attachment A, and requires terms and conditions, including implementation of management practices. The Order also requires monitoring and reporting as defined in MRP Order No. R3-2012-0011-01, MRP Order No. R3-2012-0011-02, and MRP Order No. R3-2012-0011-03 to determine the effects of discharges of waste from irrigated lands on water quality, verify the adequacy and effectiveness of this Order's terms and conditions, and to evaluate individual Discharger's compliance with this Order.
18. Water Code Section 13246 requires boards, in carrying out activities that affect water quality to comply with State Water Board policy for water quality control. This Order requires compliance with applicable State Water Board policies for water quality control.
19. This Order is consistent with the requirements of the *Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program* (NPS Policy) adopted by the State Water Board in May 2004. The NPS Policy requires, among other key elements, that an NPS control implementation program's ultimate purpose shall be explicitly stated and that the implementation program must, at a minimum, address NPS pollution in a manner that achieves and maintains water quality objectives and beneficial uses, including any applicable anti-degradation requirements. The NPS Policy improves the State's ability to effectively manage NPS pollution and conform to the requirements of the Federal Clean Water Act and the Federal Coastal Zone Act Reauthorization Amendments of 1990. The NPS Policy provides a bridge between the State Water Board's January 2000 *NPS Program Plan* and its 2010 *Water Quality Enforcement Policy*. The NPS Policy's five key elements are:

- a. Key Element #1 - Addresses NPS pollution in a manner that achieves and maintains water quality objectives and beneficial uses
  - b. Key Element #2 - Includes an implementation program with descriptions of the Management Practices (MPs) and other program elements and the process to be used to ensure and verify proper MP implementation
  - c. Key Element #3 - Includes a specific time schedule and corresponding quantifiable milestones designed to measure progress toward reaching the specified requirements
  - d. Key Element #4 - Contains monitoring and reporting requirements that allow the Water Board, dischargers, and the public to determine that the program is achieving its stated purpose(s) and/or whether additional or different MPs or other actions are required
  - e. Key Element #5 - Clearly discusses the potential consequences for failure to achieve the NPS control implementation program's stated purposes
20. Consistent with the NPS Policy, management practice implementation assessment may, in some cases, be used to measure nonpoint source control progress. However, management practice implementation never may be a substitute for meeting water quality requirements.
21. This Order is consistent with provisions of State Water Resources Control Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California." Regional boards, in regulating the discharge of waste, must maintain high quality waters of the State until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in the Regional Board's policies. The Order will result in improved water quality throughout the region. Dischargers must comply with all applicable provisions of the Basin Plan, including water quality objectives, and implement best management practices to prevent pollution or nuisance and to maintain the highest water quality consistent with the maximum benefit to the people of the State. The conditions of this waiver will protect high quality waters and restore waters that have already experienced some degradation.
22. This Order is consistent with State Water Board Resolution 68-16. This Order requires Dischargers to 1) comply with the terms and conditions of the Order and meet applicable water quality standards in the waters of the State; 2) develop and implement management practices, treatment or control measures, or change farming practices, when discharges are causing or contributing to exceedances of applicable water quality standards; 3) conduct activities in a manner to prevent nuisance; and 4) conduct activities required by MRP Order No. R3-2012-0011-01, MRP Order No. R3-2012-0011-02, and MRP Order No. R3-2012-0011-03, and revisions thereto.

RATIONALE FOR THIS ORDER

23. On April 15, 1983, the Central Coast Water Board approved a policy waiving WDRs for 26 categories of discharges, including irrigation return flows and non-NPDES stormwater runoff. Pursuant to Water Code Section 13269, these waivers terminated on January 1, 2003.
24. On July 9, 2004, the Central Coast Water Board adopted Resolution No. R3-2004-0117 establishing the 2004 Agricultural Order.
25. Dischargers enrolled in the 2004 Agricultural Order established the Cooperative Monitoring Program (CMP) in compliance with monitoring requirements. The CMP collected and analyzed data for 15 to 20 parameters from 50 sites in multiple watersheds and identified severe surface water quality impairments resulting from agricultural land uses and discharges. CMP did not attempt to identify the individual farm operations that are causing the surface water quality impairments. The lack of discharge monitoring and reporting, the lack of verification of on-farm water quality improvements, and the lack of public transparency regarding on-farm discharges, are critical limitations of the 2004 Agricultural Order, especially given the scale and severity of the surface water and groundwater impacts and the resulting costs to society. The Order addresses these limitations.
26. The Central Coast Water Board extended the 2004 Agricultural Order multiple times. The 2004 Agricultural Order expires on September 30, 2012.
27. The Central Coast Water Board reviewed all available data, including information collected in compliance with the 2004 Agricultural Order, and determined that discharges of waste from irrigated lands continue to result in degradation and pollution of surface water and groundwater, and impairment of beneficial uses, including drinking water and aquatic habitat, and determined that additional conditions are necessary to ensure protection of water quality and to measure the effectiveness of implementation of the Order.
28. It is appropriate to adopt a waiver of WDRs for this category of discharges because, as a group, the discharges have the same or similar waste from the same or similar operations and use the same or similar treatment methods and management practices (e.g., source control, reduced agricultural surface runoff, reduced chemical use, holding times, cover crops, etc.).
29. It is appropriate to regulate discharges of waste from irrigated lands under a conditional waiver rather than individual WDRs in order to simplify and streamline the regulatory process. Water Board staff estimate that there are more than 3000 individual owners and/or operators of irrigated lands who discharge waste from

irrigated lands; therefore, it is not an efficient use of resources to adopt individual WDRs for all Dischargers within a reasonable time.

30. This Order is in the public interest because:

- a. The Order was adopted in compliance with Water Code Sections 13260, 13263, and 13269 and other applicable law;
- b. The Order requires compliance with water quality standards;
- c. The Order includes conditions that are intended to eliminate, reduce and prevent pollution and nuisance and protect the beneficial uses of the waters of the State;
- d. The Order contains more specific and more stringent conditions for protection of water quality compared to the 2004 Agricultural Order;
- e. The Order contains conditions that are similar to the conditions of municipal stormwater NPDES permits, including evaluation and implementation of management practices to meet applicable water quality standards and a more specific MRP;
- f. The Order focuses on the highest priority water quality issues and most severely impaired waters;
- g. The Order provides for an efficient and effective use of Central Coast Water Board resources, given the magnitude of the discharges and number of persons who discharge waste from irrigated lands;
- h. The Order provides reasonable flexibility for the Dischargers who seek coverage under this Order by providing them with a reasonable time schedule and options for complying with the Water Code.

31. This Order waives the requirement for Dischargers to obtain WDRs for discharges of waste from irrigated lands if the Dischargers are in compliance with the Order. This Order is conditional, may be terminated at any time, does not permit any illegal activity, does not preclude the need for permits that may be required by other State or local government agencies, and does not preclude the Central Coast Water Board from administering enforcement remedies (including civil liability) pursuant to the Water Code.

32. The Central Coast Water Board may consider issuing individual WDRs to some Dischargers because of their actual or potential contribution to water quality impairments, history of violations, or other factors.

### IMPACTS TO WATER QUALITY FROM AGRICULTURAL DISCHARGES

#### *Impacts to Groundwater – Drinking Water and Human Health*

33. Nitrate pollution of drinking water supplies is a critical problem throughout the Central Coast Region. Studies indicate that fertilizer from irrigated agriculture is

the primary source of nitrate pollution of drinking water wells and that significant loading of nitrate continues as a result of agricultural fertilizer practices (Carle, S.F., et al., June 2006).

34. Groundwater pollution from nitrate severely impacts public drinking water supplies in the Central Coast Region. A Department of Water Resources (DWR, 2003) survey of groundwater quality data collected between 1994 and 2000 from 711 public supply wells in the Central Coast Region found that 17 percent of the wells (121 wells) detected a constituent at concentrations above one or more California Department of Public Health (CDPH) drinking water standards or primary maximum contaminant levels (MCLs). Nitrate caused the most frequent MCL exceedances (45 mg/L nitrate as nitrate or 10 mg/L nitrate as nitrogen), with approximately 9 percent of the wells (64 wells) exceeding the drinking water standard for nitrate. According to data reported by the State Water Resources Control Board's Groundwater Ambient Monitoring and Assessment Program (GAMA) GeoTracker website (<http://www.waterboards.ca.gov/gama/>), recent impacts to public supply wells are greatest in portions of the Salinas Valley (up to 20 percent of wells exceeding MCLs) and Santa Maria (approximately 17 percent) groundwater basins. In the Gilroy-Hollister Groundwater Basin, 12.5 percent of the public supply wells exceed MCLs (data obtained using the GeoTracker DPH Public Supply Well Search Tool for nitrate for wells located in the Gilroy-Hollister groundwater basin. The well data includes Department of Public Health data for well sampling information ranging from 2006 until 2009). CDPH identified over half of the drinking water supply wells as vulnerable to discharges from agricultural-related activities in that basin. This information is readily tracked and evaluated because data are collected on a regular frequency, made publicly available, and public drinking water supplies are regulated by CDPH as required by California law.
35. Groundwater pollution from nitrate severely impacts shallow domestic wells in the Central Coast Region resulting in unsafe drinking water in rural communities. Domestic wells (wells supplying one to several households) are typically drilled in relatively shallow groundwater, and as a result exhibit higher nitrate concentrations than deeper public supply wells. Water quality monitoring of domestic wells is not generally required and water quality information is not readily available; however, based on the available data, the number of domestic wells that exceed the nitrate drinking water standard is likely in the range of hundreds or thousands. Private domestic well water quality is not regulated and rural residents are likely drinking water from these impaired sources without treatment and without knowing the quality of their drinking water.
36. In the northern Salinas Valley, 25 percent of 352 wells sampled (88 wells) had concentrations above the nitrate drinking water standard. In other portions of the Salinas Valley, up to approximately 50 percent of the wells surveyed had

concentrations above the nitrate drinking water standard, with average concentrations nearly double the drinking water standard and the highest concentration of nitrate approximately nine times the drinking water standard (Monterey County Water Resources Agency [MCWRA], 1995). Nitrate exceedances in the Gilroy-Hollister and Pajaro groundwater basins reflect similar severe impairment, as reported by local water agencies/districts for those basins (SCVWD, 2001; SWRCB, 2005; San Benito County Water District, 2007; Kennedy/Jenks Consultants, 2008).

37. Local county and water district reports indicate that in the Pajaro River watershed, the highest recent nitrate concentration (over 650 mg/L nitrate, more than 14 times the drinking water standard) occurred in shallow wells in the eastern San Juan subbasin under intense agricultural production. High values of nitrate concentration in groundwater (greater than 500 mg/L nitrate) have also been reported in the Llagas subbasin and the lower Pajaro coastal aquifer.
38. The costs of groundwater pollution and impacts to beneficial uses caused by irrigated agriculture are transferred to the public. Public drinking water systems expend millions of dollars in treatment and replacement costs and private well owners must invest in expensive treatment options or find new sources. Rural communities, those least able to buy alternative water sources, have few options to replace the contaminated water in their homes. This Order addresses groundwater pollution to ensure protection of beneficial uses and public health.
39. Excessive concentrations of nitrate or nitrite in drinking water are hazardous to human health, especially for infants and pregnant women. The United States Environmental Protection Agency (USEPA) established a nitrate drinking water standard of 45 mg/L nitrate as nitrate (10 mg/L nitrate as nitrogen). While acute health effects from excessive nitrate levels in drinking water are primarily limited to infants (methemoglobinemia or "blue baby syndrome"), research evidence suggests there may be adverse health effects (i.e., increased risk of non-Hodgkin's, diabetes, Parkinson's disease, alzheimers, endocrine disruption, cancer of the organs) among adults as a result of long-term consumption exposure to nitrate (Sohn, E., 2009; Pelley, J., 2003; Weyer, P., et. al., 2001, Ward, M.H., et. al., 1996).
40. Nitrogen compounds are known to cause cancer. University of Iowa research found that up to 20 percent of ingested nitrate is transformed in the body to nitrite, which can then undergo transformation in the stomach, colon, and bladder to form N-nitroso compounds that are known to cause cancer in a variety of organs in more than 40 animal species, including primates (Weyer, P., et. al., 2001).
41. In many cases, whole communities that rely on groundwater for drinking water are threatened due to nitrate pollution, including the community of San Jerardo and



other rural communities in the Salinas Valley. Local agencies and consumers have reported impacts to human health resulting from nitrate contaminated groundwater likely due to agricultural land uses, and spent significant financial resources to ensure proper drinking water treatment and reliable sources of safe drinking water for the long-term (CCRWQCB, 2009).

42. Current strategies for addressing nitrate in groundwater to achieve levels protective of human health typically include avoidance (abandoning impacted wells or re-drilling to a deeper zone), groundwater treatment to remove nitrate (i.e., dilution using blending, ion exchange, reverse osmosis, biological denitrification, and distillation), or developing additional water supplies (i.e., percolation ponds, surface water pipelines, reservoirs) to dilute nitrate-impacted sources (Lewandowski, A.M., May 2008; Washington State Department of Health, 2005).
43. The costs to treat and clean up existing nitrate pollution to achieve levels that are protective of human health are very expensive to water users (e.g., farmers, municipalities, domestic well users). Research indicates that the cost to remove nitrate from groundwater can range from hundreds of thousands to millions of dollars annually for individual municipal or domestic wells (Burge and Halden, 1999; Lewandowski, May 2008). Wellhead treatment on a region-wide scale is estimated to cost billions of dollars. Similarly, the cost to actively clean up nitrate in groundwater on a region wide scale would also cost billions of dollars, and would be logistically difficult. If the nitrate loading due to agricultural activities is not significantly reduced, these costs are likely to increase significantly.
44. Many public water supply systems are required to provide well-head treatment or blending of drinking water sources, at significant cost, to treat nitrate before delivery to the drinking water consumer due to elevated concentrations of nitrate in groundwater. The community of San Jerardo (rural housing cooperative of primarily low-income farmworker families with approximately 250 residents) initially installed well-head treatment to treat groundwater contaminated with nitrate and other chemicals at significant cost, with on-going monthly treatment costs of approximately \$17,000. Monterey County public health officials determined that the community of San Jerardo requires a new drinking water well to ensure safe drinking water quality protective of public health at an approximate cost of more than \$4 million. The City of Morro Bay uses drinking water supplies from Morro and Chorro groundwater basins. Study results indicate that agricultural activities in these areas, predominantly over-application of fertilizer, have impacted drinking water supplies resulting in nitrate concentrations more than four times the drinking water standard (Cleath and Associates, 2007). The City of Morro Bay must blend or provide well-head treatment to keep nitrate concentrations at levels safe for drinking water at significant cost (City of Morro Bay, 2006). The City of Santa Maria public supply wells are also impacted by nitrate (in some areas nearly twice

the drinking water standard) and must also blend sources to provide safe drinking water (City of Santa Maria, 2008).

*Impacts to Groundwater – Nitrate and Salts*

45. Groundwater pollution due to salts is also one of the most significant and critical problems in the Central Coast Region. Agricultural activities are a significant cause of salt pollution (Monterey County Flood Control and Water Conservation District, 1990). Salt increases in irrigated agricultural coastal basins are primarily due to the following:
  - a. Seawater intrusion within the coastal basins (e.g., Salinas and Pajaro groundwater basins) caused primarily by excessive agricultural pumping (MCWRA, 2007).
  - b. Agricultural pumping/recycling of groundwater that concentrates salts in the aquifers.
  - c. Agricultural leaching of salts from the root zone.
  - d. The importation of salts into the basin from agricultural soil amendments and domestic/municipal wastewater discharges.
46. Based on the high proportion of groundwater extractions, agricultural pumping of groundwater contributes to saltwater intrusion into the Salinas and Pajaro groundwater basins, which is causing increasing portions of the groundwater basins to be unusable for agriculture and municipal supply (MCWRA, 2008 and Pajaro Valley Water Resource Agency, 2002).
47. Agricultural activities contribute significant loading of nitrates into groundwater from the following sources (Monterey County Flood Control and Water Conservation District, 1988):
  - a. Intensive fertilizer applications on permeable soils.
  - b. Liquid fertilizer hookups on well pump discharge lines lacking backflow prevention devices.
  - c. Groundwater wells that are screened through multiple aquifers, thereby acting as conduits for pollution transport into deeper groundwater.
  - d. Spills and/or uncontrolled wash water or runoff from fertilizer handling and storage operations.
48. Agricultural waste discharges contribute to pollution of groundwater basins most vulnerable to waste migration, including major portions of the Santa Maria, Salinas, and Gilroy-Hollister groundwater basins. However, any groundwater basin, including those that are confined (pressured), are susceptible to downward waste migration through improperly constructed, operated (e.g., fertigation or chemigation without backflow prevention), or abandoned wells. Additionally, land with

permeable soils and shallow groundwater are susceptible to downward waste migration. Such areas of groundwater vulnerability often overlap with important recharge areas that serve to replenish drinking water supplies.

49. Agricultural discharges of fertilizer are the main source of nitrate pollution to shallow groundwater based on nitrate loading studies conducted in the Llagas subbasin and the lower Salinas groundwater basin (Carle, S.F., et al., June 2006). In 2007, the California Department of Food and Agriculture (CDFA) reported that approximately 56 million pounds of nitrogen were purchased as fertilizer in Monterey County. A 1990 Monterey County study of nitrate sources leaching to soil and potentially groundwater in Santa Cruz and Monterey Counties indicated that irrigated agriculture contributes approximately 78 percent of the nitrate loading to groundwater in these areas (Monterey County Flood Control and Water Conservation District, November 1990).
50. A groundwater study in the Llagas subbasin indicates that nitrate pollution in groundwater is elevated in the shallow aquifer because it is highly vulnerable due to high recharge rates and rapid transport, and that the dominant source of nitrate is synthetic fertilizers. Groundwater age data in relation to nitrate concentration indicate that the rate of nitrate loading to the shallow aquifer is not yet decreasing in the areas sampled. In areas east of Gilroy, groundwater nitrate concentrations more than double the drinking water standard correspond to younger groundwater ages (less than seven years old and in some cases less than two years old), indicating that the nitrate pollution is due to recent nitrate loading and not legacy farming practices (Moran et al., 2005).
51. The University of California Center for Water Resources (WRC) developed the Nitrate Groundwater Pollution Hazard Index (Nitrate Hazard Index) in 1995. The Nitrate Hazard Index identifies agricultural fields with the highest vulnerability for nitrate pollution to groundwater, based on soil, crop, and irrigation practices. Based on the Nitrate Hazard Index, the following crop types present the greatest risk for nitrate loading to groundwater: Beet, Broccoli, Cabbage, Cauliflower, Celery, Chinese Cabbage (Napa), Collard, Endive, Kale, Leek, Lettuce, Mustard, Onion, Spinach, Strawberry, Pepper, and Parsley.

#### *Impacts to Groundwater – Pesticides*

52. The Department of Pesticide Regulation (DPR) has identified two Groundwater Protection Areas that are vulnerable to pesticide contamination in San Luis Obispo County (south of Arroyo Grande, west of Nipomo Mesa, and north of the Santa Maria River) and Monterey County (Salinas area).
53. Based on a 2007 DPR report, pesticide detections in groundwater are rare in the Central Coast region. Of 313 groundwater wells sampled in the Central Coast

region, six wells (1.9%) had pesticide detections in less than two samples (considered unverified detections).

54. A review of DPR data collected from 1984 – 2009 indicates that the three pesticides/pesticide degradates with the highest detection frequency in groundwater were chlorthal-dimethyl and degradates (total), TPA (2,3,5,6-tetrachloroterephthalic acid) and carbon disulfide. Compounds reported by DPR above a preliminary health goal (PHG) or drinking water standard include (by county): ethylene dibromide (2002), atrazine (1993), and dinoseb (1987) Monterey; heptachlor (1989), ethylene dibromide (1989) Santa Barbara; benzene (various dates 1994-2007), 1,2,4-trichlorobenzene (1991) Santa Cruz; ethylene dibromide (1994, 2008, 2009) San Luis Obispo; and 1,1,2,2-tetrachloroethane (1998) Santa Clara.
55. Results from pesticide analyses conducted as part of the Groundwater Ambient Monitoring and Assessment Program (GAMA) studies in the Central Coast region (Kulongoski, 2007; Mathany 2010) indicate a significant presence of pesticides in groundwater. GAMA achieved ultra-low detection levels of between 0.004 and 0.12 micrograms per liter (generally less than .01 micrograms per liter). Out of 54 wells sampled in groundwater basins in the south coast range study unit (bounded by the Santa Lucia and San Luis Ranges, and San Raphael Mountains to the north and east, and the Santa Ynez mountains to the south), 28 percent of the wells had 11 pesticides or pesticide degradates detected in groundwater samples, with the three most abundant detections being deethylatrazine (18.5 percent), atrazine (9.3 percent), and simazine (5.6 percent). Twenty-eight percent of 97 wells sampled in the Monterey Bay and Salinas Valley Basins had pesticide detections, including 18 percent for simazine, 11 percent for deethylatrazine, and 5 percent for atrazine. None of the pesticides detected as part of the GAMA program exceeded any drinking water standard or health-based threshold value.

#### *Impacts to Surface Water*

56. The 2010 Clean Water Act Section 303(d) List of Impaired Waterbodies for the Central Coast Region (2010 List of Impaired Waterbodies) identified surface water impairments for approximately 700 waterbodies related to a variety of pollutants (e.g. salts, nutrients, pesticides/toxicity, and sediment/turbidity). Sixty percent of the surface water listings identified agriculture as one of the potential sources of water quality impairment.
57. The impact from agricultural discharges on surface water quality is or has been monitored by various monitoring programs, including:
  - a. The Central Coast Water Board's Ambient Monitoring Program: Over the past 10 years, the Central Coast Ambient Monitoring Program (CCAMP) has

- collected and analyzed water quality data to address 25 conventional water quality parameters from 185 sites across the Central Coast Region to assess surface water quality. To support analysis of conventional water quality data CCAMP has collected bioassessment data from 100 of the 185 sites, water toxicity data from 134 of the 185 sites, and sediment toxicity from 57 of the 185 sites. CCAMP data show widespread toxicity and pollution in agricultural areas.
- b. Cooperative Monitoring Program (CMP): Over the last five years, the CMP has focused on assessing agricultural water quality for the 2004 Agricultural Order, and collected and analyzed data for 15 to 20 parameters from 50 sites in multiple watersheds. CMP data show widespread toxicity and pollution in agricultural areas.
58. Data from CCAMP and CMP indicate that surface waterbodies are severely impacted in the lower Salinas and Santa Maria watersheds due to the intensive agricultural activity in these areas, and water quality in these areas are the most severely impaired in the Central Coast Region.

*Impacts to Surface Water – Nutrients*

59. Nitrate pollution in surface water is widespread in the Central Coast Region, with 46 waterbodies listed as impaired for this pollutant on the 2010 List of Impaired Waterbodies List. Seventy percent of these nitrate listings occur in the three major agricultural watersheds: Salinas area (16 waterbodies), Pajaro River (5 waterbodies) and Santa Maria River (12 waterbodies). Other significant nitrate listings fall in small drainages in areas of intensive agriculture or greenhouse activity along the south coast, including Arroyo Paredon, Franklin Creek, Bell Creek, Los Carneros and Glen Annie creeks (CCRWQCB, 2009a)
60. The California Department of Public Health (CDPH) drinking water standard is 10 mg/L nitrate as N. The drinking water standard is not intended to protect aquatic life and Water Board staff estimates that 1 mg/L nitrate is necessary to protect aquatic life beneficial uses from biostimulation based on an evaluation of CCAMP data (CCRWQCB, 2009b). Water Board staff used this criteria to evaluate surface water quality impairment to aquatic life beneficial uses in the 2010 Impaired Waterbodies List.
61. In a broadly scaled analysis of land uses, nitrate pollution is associated with row crop agriculture. In addition, discharge from even a single agricultural operation can result in adjacent creek concentrations exceeding the drinking water standard and the much lower limits necessary to protect aquatic life. Many heavily urbanized creeks show only slight impacts from nitrate, with most urban impact associated with wastewater discharges. (CCAMP, 2010a).

62. Agricultural discharges result in significant nitrate pollution in the major agricultural areas of the Central Coast Region (CCAMP, 2010a). More than sixty percent of all sites from CCAMP and CMP combined datasets have average nitrate concentrations that exceed the drinking water standard and limits necessary to protect aquatic life (CCAMP, 2010b). Ten percent of all sites have average nitrate concentrations that exceed the drinking water standard by five-fold or more. Some of the most seriously polluted waterbodies include the following:
- a. Tembladero Slough system (including Old Salinas River, Alisal Creek, Alisal Slough, Espinosa Slough, Gabilan Creek and Natividad Creek),
  - b. Pajaro River (including Llagas Creek, San Juan Creek, and Furlong Creek),
  - c. Lower Salinas River (including Quail Creek, Chualar Creek and Blanco Drain),
  - d. Lower Santa Maria River (including Orcutt-Soloman Creek, Green Valley Creek, and Bradley Channel),
  - e. Oso Flaco watershed (including Oso Flaco Lake, Oso Flaco Creek, and Little Oso Flaco Creek).
63. Dry season flows decreased over the last five years in some agricultural areas that have large amounts of tailwater runoff. Detailed flow analysis by the CMP showed that 18 of 27 sites in the lower Salinas and Santa Maria watersheds had statistically significant decreases in dry season flow over the first five years of the program. Some sites that show increasing concentrations of nitrate have coincident declining trends in flow, possibly due to reductions in tailwater (CCWQP, 2009a). CCAMP monitoring has detected declining flows at other sites elsewhere in the Region through the end of 2009 (CCAMP, 2010a), likely because of drought.
64. Some statistically significant changes in nitrate concentration are evident in CCAMP and CMP data. Several drainages are improving in water quality in the Santa Barbara area (such as Bell Creek, which supports agricultural activities) and on Pacheco Creek in the Pajaro watershed. However, in some of the most polluted waters (Old Salinas River, Orcutt Creek, Santa Maria River mouth), nitrate concentrations are getting worse (CCAMP, 2010a). In the lower Salinas and Santa Maria watersheds, flow volumes are declining at some sites (CCWQP, 2009a; CCAMP, 2010a).
65. Nitrate concentrations in Oso Flaco Lake exceed the levels that support aquatic life beneficial uses, threatening remaining populations of two endangered plants, marsh sandwort and Gambel's watercress. In 25 water samples taken from Oso Flaco Lake in 2000-2001 and 2007, levels of nitrate/nitrite (as N) averaged 30.5 mg/L with a minimum of 22.0 mg/L and a maximum of 37.1 mg/L (CCAMP, 2010a). Biostimulation in Oso Flaco Lake has caused the rapid and extreme growth of

common wetland species, which are now crowding out sensitive species that have not become similarly vigorous (United States Department of the Interior Fish and Wildlife Service, 2010).

66. Agricultural discharges result in un-ionized ammonia concentrations at levels that are toxic to salmonids at some sites in areas dominated by agricultural activity (USEPA, 1999). The waterbodies where these sites are located are on the 2010 List of Impaired Waterbodies due to un-ionized ammonia, particularly in the lower Salinas and Santa Maria river areas (CCRWQCB, 2009).

*Impacts to Surface Water – Toxicity and Pesticides*

67. The Basin Plan general objective for toxicity states the following: “All waters shall be maintained free of toxic substances in concentrations which are toxic to, or which produce detrimental physiological responses in human, plant, animal or aquatic life.” The Basin Plan general objective for pesticides states the following: “No individual pesticide or combination of pesticides shall reach concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life.”
68. Based on CCAMP, CMP, and other monitoring data, multiple pesticides and herbicides have been detected in Central Coast surface waterbodies (identified below). The Basin Plan general objective for pesticides states that no individual pesticide or combination of pesticides shall reach concentrations that adversely affect beneficial uses, and no increase in pesticide concentrations shall be found in bottom sediments or aquatic life. Many currently applied pesticides have not been tested for, and staff is only recently aware of data showing several relatively new fungicides (azoxystrobin, pyraclostrobin and boscalid) in fish tissue and sediment of lagoons in the Central Coast Region.<sup>1</sup> This is a violation of the Basin Plan general objective for pesticides. Additional monitoring for individual pesticides is needed to identify changes in pesticide loading and to identify concentrations of toxic and/or bioaccumulating substances not previously identified.

2,4-D	esfenvalerate	oryzalin
Alachlor	ethalfuralin	oxadiazon
Aldicarb	ethoprop	oxamyl
Atrazine	fenamiphos	oxyfluorfen

<sup>1</sup> “Watershed-scale Evaluation of Agricultural BMP Effectiveness in Protecting Critical Coastal Habitats: Final Report on the Status of Three Central California Estuaries” (Anderson et al, 2010).  
<http://www.ccamp.org/ccamp/documents/EstuariesFinalReport022311.pdf>.

ATTACHMENT A.  
 ORDER NO. R3-2012-0011  
 CONDITIONAL WAIVER OF  
 WASTE DISCHARGE REQUIREMENTS  
 FOR DISCHARGES FROM IRRIGATED LANDS

azinphos-methyl		
Azoxystrobin	fenoxycarb	paraquat dichloride
Benefin	fenpropathrin	pendimethalin
bentazon, sodium salt	fipronil	permethrin
Bifenthrin		
Boscalid	glyphosate	phorate
Bromacil	hexazinone	phosmet
bromoxynil octanoate	hydramethylnon	prodiamine
butylate	imidacloprid	prometon
Carbaryl	lambda cyhalothrin	prometryn
Carbofuran	linuron	propanil
Chlorpyrifos	malathion	propargite
chlorthal-dimethyl	MCPA	propiconazole
cycloate	MCPA, dimethylamine salt	propoxur
Cyfluthrin	metalaxyl	propyzamide
		Pyriproxyfen
Cypermethrin	methidathion	pyraclostrobin
DDVP	methiocarb	S.S.S-tributyl phosphorotrithioate
Deltamethrin	methomyl	siduron
Diazinon	methyl isothiocyanate	simazine
Dicamba	methyl parathion	tebuthiuron
Dicofol	metolachlor	terbuthylazine
Dimethoate	metribuzin	tetrachlorvinphos
Disulfoton	molinate	thiobencarb
Diuron	naled	triallate
Endosulfan	napropamide	triclopyr
EPTC	norflurazon	trifluralin

69. Multiple studies, including some using Toxicity Identification Evaluations (TIEs), have shown that organophosphate pesticides and pyrethroid pesticides in Central Coast waters are likely causing toxicity to fish and invertebrate test organisms (CCAMP, 2010a, CCWQP, 2008a; CCWQP, 2009; CCWQP, 2010a; CCWQP, 2010d (in draft); Hunt et al., 2003, Anderson, et al. 2003; Anderson et al., 2006b. This is a violation of the Basin Plan general objective for toxicity.
70. Agricultural use rates of pesticides in the Central Coast Region and associated toxicity is among the highest in the State. In a statewide study of four agricultural areas conducted by the Department of Pesticide Regulation (DPR), the Salinas study area had the highest percent of surface water sites with pyrethroid pesticides detected (85 percent), the highest percent of sites that exceeded levels expected



to be toxic and lethal to aquatic life (42 percent), and the highest rate (by three-fold) of active ingredients applied (113 lbs/acre) (Starner, et al. 2006).

71. Agriculture-related toxicity studies conducted on the Central Coast since 1999 indicated that toxicity resulting from agricultural waste discharges of pesticides has caused declining aquatic insect and macroinvertebrate populations in Central Coast streams (Anderson et al., 2003; Anderson et al., 2006a; Anderson et al., 2006b; Anderson et al., 2010). This is a violation of the Basin Plan general objective for toxicity.
72. The breakdown products of organophosphate pesticides are more toxic to amphibians than are the products themselves (Sparling and Fellers, 2007).
73. The lower Salinas and Santa Maria areas have more overall water column invertebrate toxicity than other parts of the Central Coast Region, with much of the toxicity explained by elevated diazinon and chlorpyrifos concentrations (CCAMP, 2010a, CCWQP, 2008a; CCWQP, 2009; Hunt et al., 2003, Anderson, et al. 2003; Anderson et al., 2006a). Some agricultural drains have shown toxicity nearly every time the drains are sampled (CCAMP, 2010a).
74. Fish and sand crabs from the Salinas, Pajaro, and Santa Maria estuaries had detectable levels of currently applied fungicides, herbicides, and legacy pesticides like DDT based on a recently completed study of these central coast lagoons Anderson et al. (2010). Multiple samples from the Santa Maria Estuary, the most impacted of the three estuaries, also contained chlorpyrifos, diazinon, and malathion (organophosphate pesticides) and bifenthrin and cyfluthrin (pyrethroid pesticides). Department of Public Health human consumption guideline levels for these pesticides in fish tissue are not available. This is the first study in this Region documenting these currently applied pesticides in fish tissue. The Basin Plan requires that “there shall be no increase in pesticide concentrations found in bottom sediments or **aquatic life** (emphasis added)”.
75. The National Oceanic Atmospheric Administration National Marine Fisheries Service (NMFS) issued a Biological Opinion that concluded that US EPA’s registration of pesticides containing chlorpyrifos, diazinon, and malathion is likely to jeopardize the continued existence of 27 endangered and threatened Pacific salmonids and is likely to destroy or adversely modify designated critical habitat for 25 threatened and endangered salmonids because of adverse effects on salmonid prey and water quality in freshwater rearing, spawning, migration, and foraging areas (NMFS, 2008)
76. Three court-ordered injunctions impose limitations on pesticide use (including chlorpyrifos, diazinon, and malathion) within certain proximity of waterbodies to protect endangered species (DPR, 2010).

77. Creek bottom sediments are most consistently toxic in the lower Salinas and Santa Maria watersheds, areas dominated by intensive agricultural activity. Seventy percent of sites sampled for sediment in the Central Coast region have been toxic at least once (although sites selected for sediment toxicity sampling typically represent higher risk areas) (CCAMP, 2010a).
78. A CMP follow-up study on sediment toxicity (CCWQP, 2010d, in draft) showed pyrethroid pesticides to be the most prevalent and severe source of toxicity to sediments. Santa Maria area sites averaged 7.5 toxic units (TUs) from pyrethroid pesticides and 1.3 TUs from chlorpyrifos. One TU is sufficient to kill 50% of the test organisms in a toxicity test). All Santa Maria area sites were toxic to test organisms. Second highest pesticide levels were found in Salinas tributaries and the Salinas Reclamation canal, averaging 5.4 TUs pyrethroids and 0.8 TUs chlorpyrifos. Organochlorine pesticides were present, but not at levels sufficient to cause toxicity.
79. Peer-reviewed research has also shown pyrethroid pesticides are a major source of sediment toxicity in agricultural areas of the Central Coast Region (Ng et al., 2008; Anderson et al., 2006a, Phillips et al., 2006; Starner et al., 2006).
80. Agricultural sources of metals are particulate emissions, irrigation water, pesticides, biosolids, animal manure, and fertilizer applied directly to the soil (Chang et al, 2004). Metals, including arsenic, boron, cadmium, copper, lead, nickel, and zinc are common active ingredients in many pesticides (Fishel, 2008; Nesheim, 2002; Holmgren, 1998; Reigert and Roberts, 1999). Metals can be present in subsurface drainage discharge and may be associated with sediment in tailwater discharge. Some phosphate fertilizers contain cadmium, which can lead to an increase in the concentration of cadmium in soil. Past studies have found soils containing high concentrations of cadmium and lead in major vegetable production areas of the Salinas Valley (Chang et al, 2004; Page et al, 1987; USEPA, 1978; Jelinek and Braude, 1978).
81. The Basin Plan contains the following general objective for Phenols, 0.1 mg/L or 100 µg/L. Phenols are components or breakdown products of a number of pesticide formulations, including 2,4 D, MCPA, carbaryl, propoxur, carbofuran, and fenthion (Crespin, et al., 2001, Agrawal, et al., 1999). Phenolic compounds can cause odor and taste problems in fish tissue, some are directly toxic to aquatic life, and some are gaining increasing notice as endocrine disruptors (e.g., bisphenol A and nonylphenol). The original water quality standards were developed in response to concerns about odor and taste and direct toxicity.
82. One phenolic compound of known concern in Central Coast waters is nonylphenol. Agricultural sources of nonylphenol and the related nonylphenol

ethoxylates include pesticide products as “inert” ingredients and as adjuvants added by the pesticide user. Adjuvant ingredients are not reported in California’s Pesticide Use Database. Adjuvants enhance a chemical’s effect. Nonylphenol and related compounds are used as surfactants to make the pesticide product more potent and effective (Cserhati, 1995). Nonylphenol and its ethoxylates are acutely toxic to a wide variety of animals, including aquatic invertebrates and fish. In some cases, the nonylphenol is more toxic to aquatic species than the pesticide itself (National Research Council of Canada, 1982). Concern exists about these adverse effects of nonylphenol and its ethoxylates increases because these compounds also bioaccumulate in algae, mussels, shrimp, fish, and birds (Ahel et al, 1993; Ekelund (1990).

83. The San Luis Obispo Science and Ecosystem Alliance (SLOSEA) at California Polytechnic State University has found nonylphenol in elevated concentrations in fish tissue and has linked the occurrence to gonadal abnormalities and liver damage in fish in Morro Bay and other Central Coast locations. The Basin Plan standard of 100 µg/L for phenols is relatively protective for direct toxicity of nonylphenol to rainbow trout, which have an LC50 (lethal concentration impacting 50% of test organisms) of 194 µg/L. However, this limit is not protective for endocrine disruption purposes, which for rainbow trout is estimated at an EC50 (estrogenic concentration impacting 50% of test organisms) of 14.14 µg/L (Lech, 1996). Regardless of the limitations of the Basin Plan standard, it is important to assess this chemical in areas that are heavily influenced by agricultural activity.

#### *Impacts to Surface Water – Turbidity and Temperature*

84. Turbidity is a cloudy condition in water due to suspended silt or organic matter. Waters that exceed 25 nephelometric turbidity units (NTUs) can reduce feeding ability in trout (Sigler et al., 1984). Elevated turbidity during the dry season is an important measure of discharge across bare soil, and thus can serve as an indicator of systems with heavy irrigation runoff to surface waters.
85. The Basin Plan requires that “Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses” (CCRWQCB, 1994).
86. Most CCAMP sites outside of agricultural areas have a median turbidity level less than 5 NTUs (CCAMP, 2010a). Many sampling sites that include significant agricultural discharge have turbidity levels that exceed 100 NTUs as a median value (CCAMP, 2010a).
87. Agricultural discharges cause and contribute to sustained turbidity throughout the dry season at many sampling sites dominated by agricultural activities. Resulting turbidity greatly exceeds levels that impact the ability of salmonids to feed. Many

of these sites are located in the lower Santa Maria and Salinas-Tembladero watersheds. The CMP detected some increasing trends in turbidity on the main stem of the Salinas River (CCRWQCB, 2009a; CCAMP, 2010a; CCWQP, 2009a).

88. Agricultural discharges and vegetation removal along riparian areas cause and contribute to water temperatures that exceed levels that are necessary to support salmonids at some sites in areas dominated by agricultural activity. Several of these sites are in major river corridors that provide rearing and/or migration habitat for salmonids. A good example of this is Orcutt Creek (CCAMP, 2010a), where upstream shaded areas are cooler than downstream exposed areas, in spite of lower upstream flows. Tailwater discharge and removal of riparian vegetation in downstream areas cause temperatures to rise above levels safe for trout. Several locations impacted by temperature are in major river corridors that provide rearing and/or migration habitat for salmonids. These include the Salinas, Santa Maria, and Santa Ynez rivers (CCAMP, 2010a).
89. Biological sampling shows that benthic biota are impaired in the lower Salinas and Santa Maria watersheds, and also shows that several measures of habitat quality, such as in-stream substrate and canopy cover, are poor compared to the upper watersheds and to other high quality streams in the Central Coast Region (CCWQP, 2009b; CCWQP, 2009c, CCWQP, 2009d; CCWQP, 2009e; CCAMP, 2010b)
90. Agricultural land use practices, such as removal of vegetation and stream channelization, and discharges from agricultural fields, can cause the deposition of fine sediment and sand over stream bottom substrate (Waters, 1995). This problem is especially prevalent in areas dominated by agricultural activity (lower Salinas and Santa Maria rivers) (CCWQP, 2009b; CCWQP, 2009c, CCWQP, 2009d; CCWQP, 2009e; CCAMP, 2010b). This deposition of fine sediment and sand in streams causes major degradation of aquatic life beneficial uses by eliminating pools and by clogging gravel where fish eggs, larvae, and benthic invertebrates that serve as a food source typically live (CCAMP, 2010b; Waters, 1995). Effective erosion control and sediment control management practices include but are not limited to cover crops, filter strips, and furrow alignment to reduce runoff quantity and velocity, hold fine particles in place, and increase filtration to minimize the impacts to water quality (USEPA, 1991).
91. Orchards, vineyards, and row crops have the greatest erosion rates in irrigated agriculture, especially those that are managed with bare soil between tree or vine rows (ANR, 2006). A vegetative filter strip offers one way to control erosion rates and discharge of sediment rather than letting it be carried off site in drainage water. A vegetative filter strip is an area of vegetation that is planted intentionally to help remove sediment and other pollutants from runoff water (Dillaha et al., 1989) Vegetative filter strips intercept surface water runoff and trap as much as 75 to 100

percent of the water's sediment. They capture nutrients in runoff, both through plant uptake through adsorption to soil particles. They promote degradation and transformation of pollutants into less-toxic forms, and they remove over 60% of certain pathogens from the runoff. (ANR, 2006).

*Impacts to the Marine Environment*

92. The marine environment in the Central Coast Region is impacted by runoff from irrigated agriculture and other sources. Legacy pesticides have impacted the marine environment and are still found in sediment and tissue at levels of concern today (CCLEAN, 2007; Miller et al., 2007; Dugan, 2005, BPTCP, 1998). Currently applied pesticides are persistent in the aquatic environment, but initial testing has not found them in offshore areas of Monterey Bay (CCAMP, 2010b).
93. Two Marine Protected Areas (MPAs), Elkhorn Slough and Moro Cojo Slough, are heavily impacted by agricultural chemicals and activities in the vicinity. The Elkhorn Slough and Moro Cojo Slough MPAs are at very high to extremely high risk for additional degradation of beneficial uses. Other MPAs that are relatively near shore in agricultural areas are at medium risk for degradation of beneficial uses; these include the South Santa Ynez River MPA, and the two Monterey Bay MPAs. Other MPAs that are not near agricultural areas are at medium to low risk from agricultural discharges (CCAMP, 2010b).
94. Nitrate loading from the Pajaro and Salinas Rivers to Monterey Bay has been found to be a potential driver of plankton blooms during certain times of year. Research shows a clear onshore to offshore gradient in nitrate load influence from rivers, and also shows overall increasing trends in loading from rivers, whereas nitrate loading from upwelling shows no trends (Lane, 2009; Lane et al., in review). Using infrared remote sensing, Monterey Bay Aquarium Research Institute researchers have documented bloom initiation immediately following "first flush" events just offshore Moss Landing and Pajaro River discharges, that then evolved into very large red tides that killed many sea birds (Ryan, 2009; Jessup et al., 2009). These bloom initiation events were documented in 2007 and 2008.

*Impacts to Aquatic Habitat and Riparian and Wetland Areas*

95. Riparian and wetland areas play an important role in protecting several of the beneficial uses designated in the Basin Plan. Agricultural activities have degraded, and threaten to degrade, these beneficial uses related to aquatic habitat, which include, but are not limited to:
  - a. Ground Water Recharge;
  - b. Fresh Water Replenishment;
  - c. Warm Fresh Water Habitat;

- d. Cold Fresh Water Habitat;
  - e. Inland Saline Water Habitat;
  - f. Estuarine Habitat;
  - g. Marine Habitat;
  - h. Wildlife Habitat;
  - i. Preservation of Biological Habitats of Special Significance;
  - j. Rare, Threatened or Endangered Species;
  - k. Migration of Aquatic Organisms;
  - l. Spawning, Reproduction and/or Early Development;
  - m. Areas of Special Biological Significance;
96. The Basin Plan contains requirements to protect aquatic habitat, including, but not limited to, Chapter 2, Section II Water Quality Objectives to Protect Beneficial Uses, and Chapter 5, Page V-13, V.G. Erosion and Sedimentation: A filter strip of appropriate width, and consisting of undisturbed soil and riparian vegetation or its equivalent, shall be maintained, wherever possible, between significant land disturbance activities and watercourses, lakes, bays, estuaries, marshes, and other water bodies. For construction activities, minimum width of the filter strip shall be thirty feet, wherever possible.
97. Riparian and wetland areas play an important role in achieving several water quality objectives established to protect specific beneficial uses. These include, but are not limited to, those water quality objectives related to natural receiving water temperature, dissolved oxygen, suspended sediment load, settleable material concentrations, chemical constituents, and turbidity.
98. The 2004 Agricultural Order required protection of beneficial uses including aquatic and wildlife habitat. This Order includes that requirement to achieve protection of aquatic life beneficial uses and to address water quality degradation that has occurred, in part, as a result of encroachment by agricultural land uses on riparian and wetland areas.
99. In particular, seasonal and daily water temperatures are strongly influenced by the amount of solar radiation reaching the stream surface, which is influenced by riparian vegetation (Naiman, 1992; Pierce's Disease/Riparian Habitat Workgroup (PDRHW), 2000.). Removal of vegetative canopy along surface waters threatens maintenance of temperature water quality objectives, which in turn negatively affects dissolved oxygen related water quality objectives, which in turn negatively affects the food web (PDRHW, 2000).
100. Riparian and wetland areas function to retain and recycle nutrients (National Research Council (NRC), 2002; Fisher and Acreman, 2004), thereby reducing nutrient loading directly to surface water or groundwater. Riparian and wetland areas trap and filter sediment and other wastes contained in agricultural runoff

(NRC, 2002; Flosi et al., 1998; PDRHW, 2000; Palone and Todd, 1998), and reduce turbidity (USEPA, 2009). Riparian and wetland areas temper physical hydrologic functions, protecting aquatic habitat by dissipating stream energy and temporarily allowing the storage of floodwaters (Palone and Todd, 1998), and by maintaining surface water flow during dry periods (California Department of Water Resources, 2003). Riparian and wetland areas regulate water temperature and dissolved oxygen, which must be maintained within healthy ranges to protect aquatic life (PDRHW, 2000). In the absence of human alteration, riparian areas stabilize banks and supply woody debris (NRC 2002), having a positive influence on channel complexity and in-stream habitat features for fish and other aquatic organisms (California Department of Fish and Game 2003).

101. Riparian areas are critical to the quality of in-stream habitat. Riparian vegetation provides woody debris, shade, food, nutrients and habitat important for fish, amphibians and aquatic insects (California Department of Fish and Game 2003). Riparian areas help to sustain broadly based food webs that help support a diverse assemblage of wildlife (NRC, 2002). More than 225 species of birds, mammals, reptiles, and amphibians depend on California's riparian habitats (Riparian Habitat Joint Venture, 2004).
102. Riparian vegetation provides important temperature regulation for instream resources. In shaded corridors of the Central Coast region, temperatures typically stay under 20 degrees Celsius or 68 degrees F (within optimum temperature ranges for salmonids), but can rapidly increase above 20 degrees Celsius when vegetation is removed. Orcutt Creek in the lower Santa Maria watershed is an example where upstream shaded areas remain cooler than downstream exposed areas, in spite of lower upstream flows (CCAMP, 2010a).
103. Land management and conservation agencies describe three vegetated zones within a riparian buffer that can provide water quality protection (NRCS, 2006; Welsch, 1991, Tjaden and Weber). These zones are described below:
  - a. Zone 1 – The goal for this zone is to control temperature and turbidity discharges by establishing a mix of trees and shrubs that provide shade and streambank stability. A mix of native woody species that vary from large tree species as they mature to understory trees and shrubs will provide canopy cover and shading next to the water.
  - b. Zone 2 – The goal for this zone is to establish a mix of trees and shrubs that will absorb and treat waterborne nutrients and other pollutants and allow water to infiltrate into the soil.
  - c. Zone 3 – The goal for this zone is to act as a transitional zone between cropland and zones 1 and 2, serving to slow flows, disperse flows out into more diffuse, sheet flow, and promote sediment deposition. The use of stiff multi-stemmed grasses and forbs are preferred and will help disperse concentrated flows.

104. CCAMP and CMP bioassessment data show that streams in areas of heavy agricultural use are typically in poor condition with respect to benthic community health and that habitat in these areas is often poorly shaded, lacking woody vegetation, and heavily dominated by fine sediment. Heavily sedimented stream bottoms can result from the immediate discharge of sediment from nearby fields, the loss of stable, vegetated stream bank habitat, the channelization of streams and consequent loss of floodplain, and from upstream sources.
105. Up to approximately 43 percent of the federally threatened and endangered species rely directly or indirectly on wetlands for their survival (United States Environmental Protection Agency, 2008). Of all the states, California has the greatest number of at-risk animal species (15) and, by far, the greatest number of at-risk plant species (104) occurring within isolated wetlands (Comer et al., 2005).
106. California has lost an estimated 91 percent of its historic wetland acreage, the highest loss rate of any state. Similarly, California has lost between 85 and 98 percent of its historic riparian areas (State Water Resources Control Board, 2008). Landowners and operators of agricultural operations historically removed riparian and wetland areas to plant cultivated crops (Braatne et al., 1996; Riparian Habitat Joint Venture, 2004).
107. The California Wetlands Conservation Policy (Executive Order W-59-93), also known as "the No Net Loss Policy," adopted by Governor Wilson in 1993, established the State's intent to develop and adopt a policy framework and strategy to protect California's unique wetland ecosystems. One of the goals of this policy is to ensure no overall net loss and achieve a long-term net gain in the quantity, quality, and permanence of wetlands acreage and values in California in a manner that fosters creativity, stewardship and respect for private property.
108. Real and/or perceived incompatible demands between food safety and environmental protection are a major issue in the Central Coast Region. Technical Assistance Providers have reported that growers have removed vegetated management practices intended to protect water quality (in some cases, after receiving substantial public funds to install vegetated management practices).
109. According to a spring 2007 survey by the Resource Conservation District of Monterey County (RCDMC), 19 percent of 181 respondents said that their buyers or auditors had suggested they remove non-crop vegetation from their ranches to prevent pollution from pathogens such as the O157:H7 bacteria. In response to pressures by auditors and/or buyers, approximately 15 percent of all growers surveyed indicated that they had removed or discontinued use of previously adopted management practices used for water quality protection. Grassed waterways, filter or buffer strips, and trees or shrubs were among the management



practices removed (RCDMC, 2007). According to a follow-up spring 2009 survey by RCDMC, growers are being told by their auditors and/or buyers that wetland or riparian plants are a risk to food safety (RCDMC, 2009). To assist in the co-management of water quality protection and food safety, the RCDMC has developed a handbook of agricultural conservation practices, photos, and descriptions with food safety considerations (RCDMC, 2009).

110. The Food Safety Modernization Act (FSMA) was signed into law on January 4, 2011 giving the U.S Food and Drug Administration (FDA) a mandate to pursue a farm to table system that is based on science and addresses food safety hazards. The law requires FDA to apply sound science to any requirements that might impact wildlife and wildlife habitat on and near farms, and take into consideration conservation and environmental practice standards and policies.
111. Riparian vegetation and vegetated buffer zones are critically important to prevent the transport of sediment and bacteria, which may include the downstream transport of O157:H7 bacteria. Tate et al. (2006) tested vegetated buffers on cattle grazing lands and found that they are a very effective way to reduce inputs of waterborne E. coli into surface waters. Data indicates that the major source of O157:H7 bacteria are cattle, not wildlife (RCDMC, 2006). In many agricultural areas of the Central Coast Region, cattle operations are located upstream of irrigated agricultural fields. Therefore, the removal of riparian and wetland vegetation and their buffer zones increases the transport of pathogens such as O157:H7 and the risk of food contamination. The removal of riparian and wetland vegetation for food safety purposes is not warranted, is not supported by the literature, and may increase the risk of food contamination.
112. Agriculture near surface waterbodies can lead to removal or reduction of riparian vegetation and the impairment of its ecological functions (ANR, 2007). Once riparian vegetation is removed, it no longer serves to shade water, provide food for aquatic organisms, maintain stream banks, provide a source of large woody debris, or slow or filter runoff to streams. The result is degraded water quality and fish habitat (ANR, 2007). For these reasons, maintenance of riparian vegetation is a critical element of any type of land use (ANR, 2007).
113. Buffer strips are areas of vegetation left beside a stream or lake to protect against land use impacts (ANR, 2007). Whether or not harvesting is permitted within the buffer strip, well-designed and managed buffers can contribute significantly to the maintenance of aquatic and riparian habitat and the control of pollution. Riparian buffer strips protect aquatic and riparian plants and animals from upland sources of pollution by trapping or filtering sediments, nutrients, and chemicals from forestry, agricultural and residential activities. (ANR, 2007).

114. Vegetated riparian areas provide greater environmental value than unvegetated floodplains or cropped fields. Riparian forests provide as much as 40 times the water storage of a cropped field and 15 times that of grass turf (Palone and Todd, 1998). Agricultural floodplains are approximately 80 to 150 percent more erodible than riparian forest floodplains (Micheli et al., 2004) and riparian forest floodplains serve a valuable function by trapping sediment from agricultural fields (National Resource Council, 2002; Flosi and others, 1998; PDRHW 2000; Palone and Todd 1998).
115. Riparian and wetland areas are an effective tool in improving agricultural land management. Wide riparian areas act as buffers to debris that may wash onto fields during floods, thereby offsetting damage to agricultural fields and improving water quality (Flosi et al., 1998; PDRHW, 2000).
116. Exotic plant species exclude native riparian and wetland vegetation by out-competing native species for habitat. Additionally, exotic plants do not support the same diversity of wildlife native to riparian forests, often use large amounts of water, and can exist as monocultural stands of grass. Grass habitat is very different from the complex habitat structure provided by a diversity of riparian trees and shrubs, and results in habitat changes that affect the aquatic based food web (California Department of Fish and Game, 2003).

#### MANAGEMENT PRACTICE IMPLEMENTATION

117. Commercial agriculture is an intensive use of land. Relatively sophisticated agronomic and engineering approaches are available and necessary to minimize the discharge of waste from irrigated lands, including sediment, nutrients, and pesticides that impact water quality and beneficial uses of waters of the State. Traditionally, conservation practices available to Dischargers were developed for irrigation efficiency or for erosion control, and not necessarily for water quality protection. To achieve water quality protection and improvement, Dischargers are responsible for selecting and effectively implementing management strategies to resolve priority water quality problems associated with the specific operation and receiving water, utilize proper management practice design and maintenance, and implement effectiveness monitoring.
118. The Central Coast Water Board recognizes efforts to maximize water quality improvement using innovative and effective local or regional treatment strategies and it is the Central Coast Water Board's intent to provide flexibility in the implementation of this Order to encourage discharger participation in such efforts. The Central Coast Water Board will evaluate proposed local or regional treatment strategies based upon the anticipated effectiveness, time schedule for implementation, and proposed verification monitoring and reporting to measure progress towards water quality improvement and compliance with this Order.

119. The Central Coast Water Board recognizes efforts to improve recharge conditions and restore groundwater recharge function that have been lost due to urbanization and agricultural development. Managed aquifer recharge (MAR) has been successfully applied in areas of the Central Coast region, improving both water supply and water quality in the basin (Racz et al., in review). Water applied to percolation basins for MAR projects often have a high quality relative to that in underlying aquifers in many locations, despite exceedances of water quality standards. Recharging this water into the ground is important for improving and maintaining water quality in critical aquifers. In addition, considerable improvement in water quality can be achieved during percolation of surface water because of beneficial microbial and filtering processes that occur (Schmidt et al., in review). The Central Coast Water Board encourages MAR efforts, which will result in improving both water supply and water quality.
120. Dischargers are responsible for implementing management measures to achieve water quality improvement, including practices and projects at the scale of a single farm, or cooperatively among multiple farms in a watershed or sub watershed.
121. The Farm Plan is an effective tool to identify the management practices that have been or will be implemented to protect and improve water quality in compliance with this Order. Elements of the Farm Plan include irrigation management, pesticide management, nutrient management, salinity management, sediment and erosion control, and aquatic habitat protection. Farm Plans also contain a schedule for implementation of practices and an evaluation of progress in achieving water quality improvement. The development and implementation of Farm Plans was a requirement of the 2004 Agricultural Order. This Order renews the requirement to prepare the Farm Plan, and adds new conditions requiring each Discharger to verify the effective implementation of management practices focused on resolving water quality issues and for a subset of Dischargers considered a higher threat to water quality to conduct individual discharge monitoring to verify the effective implementation of management practices.
122. Dischargers can significantly reduce the potential impact from agricultural discharges by the effective implementation of management practices identified in Farm Plans focused on priority water quality issues related to the specific operation and watershed.
123. Individual on-farm water quality monitoring is critical to adaptively manage and effectively implement practices to protect water quality. The data and reporting will inform the Discharger, the Water Board, and the public regarding compliance with this Order, and increases the potential success in adapting management practices to address priority water quality issues. Dischargers participating in on-farm water quality monitoring have reported, in some cases, significant reduction or

elimination of their discharge of waste through effective and adaptive management practice implementation.

124. Agricultural discharges, especially surface irrigation runoff, have the potential to transport sediments and associated waste constituents that exceed water quality standards. Minimizing irrigation runoff is an effective way to minimize and/or eliminate agricultural discharges of waste to waters of the State.
125. Agricultural water quality research identifies the importance of minimizing the amount of water runoff coming from farms. Irrigation runoff occurs when the application rate of the irrigation system exceeds the infiltration rate of the soil due to numerous factors, including poor irrigation efficiency. The percent of applied water lost to runoff may start off low, and increase towards the end of longer irrigations, or with frequent irrigation where soil is saturated. Fields with soils susceptible to low infiltration rates may lose 5 percent to 30 percent or more of their applied water to runoff.
126. Applying fertilizer, soil amendments, or agricultural products directly through an irrigation system (fertigation) increases nitrate levels in irrigation water. Runoff from fertigations is likely to be extremely high in nitrate concentrations. Agricultural research conducted in the Pajaro Valley and Salinas Valley watersheds has identified nitrate values in agricultural tailwater and drainage ditches exceeding 100 mg/L nitrate as N in some cases (more than ten times the drinking water standard, and likely more than 100 times the level necessary to protect aquatic life) (Anderson, 2003).
127. Agricultural studies document the common over-application of fertilizers, and fertilizer and animal manure are the most dominant and widespread nitrate sources to groundwater (Harter, 2009; Kitchen, 2008; Lawrence Livermore National Lab GAMA Studies Llagas subbasin, 2005). Effective irrigation and nutrient management practices to reduce the concentration of nutrients in irrigation runoff, deep percolation, and stormwater include but are not limited to, irrigation efficiency to reduce runoff and deep percolation, nutrient budgeting to optimize fertilizer application and eliminate excessive nutrient applications, and techniques to trap nutrients between crop growing seasons and during intense periods of rainfall.
128. Agricultural studies and practices demonstrate that minimizing the production of polluted tailwater through irrigation efficiency and nutrient management practices and keeping runoff from leaving the farm is cost effective (Meals, 1994). Improving irrigation water application according to real time soil moisture data has resulted in some of the lowest concentrations of nutrients in percolating waters, confirming that irrigation efficiency is a key factor in reducing leaching of nutrients (United Water Conservation District, 2007).

129. Nitrate in water leaving subsurface drain (“tile”) systems often exceeds drinking water standards and contributes to low-oxygen in marine environments. Denitrification, including the use of wood-chip bioreactor treatment systems, is an effective method of removing nitrate from soil water before it enters subsurface drains (Jaynes, et al., 2006; Starrett, 2009).
130. Agricultural land uses can disrupt the natural vegetation-soil cycles and biota diversity, keeping the soil surface unprotected and vulnerable to erosive forces (wind and rain), which increases the amount of sediments dispersed and transported from agricultural lands into surface water (USEPA, 2003).
131. Agricultural mechanization and tillage of soil and land for bed preparation, crop maintenance and pest control, can destroy the soil structure and degrade the land, which increases the amount of sediment and associated waste constituents discharged into surface water (Fawcett, 2005).
132. Managing uncropped areas, minimizing and protecting bare soil and heavy use areas and unpaved road from concentrated flows of water, and implementing practices to detain or filter sediment and runoff before it leaves agricultural operations are effective ways to reduce soil erosion and capture sediment before it enters waterways, where it can cause water quality impairments downstream (ANR Publications 8124 and 8071).
133. Stormwater runoff from irrigated lands often results in significant erosion and the discharge of sediment, nutrients, and pesticides. Effective erosion control and sediment control management practices include but are not limited to cover crops, filter strips, and furrow alignment to reduce runoff quantity and velocity, hold fine particles in place, and increase filtration to minimize the impacts to water quality (USEPA, 1991). Crops grown using impervious plastic can be particularly problematic as they often result in significantly increased irrigation runoff volumes and velocities in agricultural furrows and ditches that may drain to waters of the State.
134. Education and technical assistance is an important tool in advancing the implementation of new effective management practices that protect and enhance water quality.
135. There are many technical resources available to the agricultural industry to assist farmers in pollution prevention and addressing water quality problems associated with irrigated agriculture. The United States Department of Agriculture - Natural Resources Conservation Service (NRCS), Resource Conservation Districts (RCD), and University of California Cooperative Extension (UCCE) provide non-regulatory technical services and research to promote conservation and address natural resource problems. There are also many non-profit agricultural and commodity-

specific organizations and initiatives that promote sustainable agriculture, and provide education and technical support. Private consulting companies and individual professionals working in the field of environmental and engineering sciences, investigations, site remediation and corrective actions, treatment system design, sampling, and reporting are available to assist the agricultural industry in water quality improvement and achieving compliance with this Order.

136. The State and Regional Water Boards have made over \$600 Million of public grant funds available to address agricultural water quality issues from approximately 2000 – 2011. These funds came from Bond Propositions 13, 40, 50, and 84, and addressed a myriad of water quality projects, watershed protection, and nonpoint source pollution control throughout California. In addition, the State Water Board, in coordination with USEPA, also allocates approximately \$4.5 Million per year in 319(h) program funding to address nonpoint source pollution. The amount of Water Board public grant funds recently awarded in the Central Coast Region for agricultural related projects is more than \$55 Million.

#### AGRICULTURAL REGULATORY PROGRAM IMPLEMENTATION

137. The Central Coast Water Board is maximizing regulatory effectiveness by identifying and prioritizing actions that address the most significant agricultural water quality problems in the Central Coast Region, including nitrate in groundwater from discharge related to excess fertilizer application, the discharge of waste in agricultural tailwater, surface water toxicity resulting from pesticides, surface water nutrients from fertilizer, increasing salinity, sediment discharge, and degradation of aquatic habitat.
138. The Central Coast Water Board is addressing priority agricultural water quality issues, on a watershed basis in coordination with other Water Board programs and efforts, focused in the most intensive agricultural areas of the region including the Salinas, Pajaro, and Santa Maria watersheds. In addition, Central Coast Water Board staff will assess and track progress towards specific measures of water quality improvement, and adapt to the feedback the tracking provides.
139. The Central Coast Water Board will evaluate compliance of individual Dischargers with the terms and conditions of this Order based on enrollment information, threat of water quality impairment, content of technical reports (including Annual Compliance Document, Farm Plan, Irrigation and Nutrient Management Plan, and Water Quality Buffer Plan), prioritized inspections, and water quality monitoring data. Failure to comply with enrollment requirements may result in enforcement action for individual landowners and operators. In addition to the determination of noncompliance and water quality impairment, the Central Coast Water Board will enforce the conditions of this Order in a manner similar to enforcement of WDRs

and consistent with the State Water Board's Enforcement Policy, focusing on the highest priority water quality issues and most severely impaired waters.

140. The Central Coast Water Board will consider the history of compliance and violations and progress made toward compliance and water quality improvement demonstrated by individual Dischargers when determining potential enforcement actions. In some cases, the Central Coast Water Board may terminate coverage under this Order and require the Discharger to submit a ROWD and comply with the Water Code pursuant to individual WDRs.

## **PART B. RELEVANT PLANS, POLICIES, AND REGULATIONS**

### **Water Quality Control Plan**

The *Water Quality Control Plan for the Central Coast Region* (Basin Plan) was adopted by the Central Coast Water Board in 1975 and is periodically revised. Tables 1A and 1B include a summary of Narrative and Numeric Water Quality Objectives. The Basin Plan is available by contacting the Central Coast Water Board at (805) 549-3147 or by visiting the Central Coast Water Board's website at: [http://www.waterboards.ca.gov/centralcoast/publications\\_forms/publications/basin\\_plan/](http://www.waterboards.ca.gov/centralcoast/publications_forms/publications/basin_plan/)

### **Other Relevant Plans, Policies, and Regulations**

State Water Resources Control Board, Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California*, October 1968.

State Water Resources Control Board, *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California*, June 1972.

State Water Resources Control Board, Resolution No. 74-43, *Water Quality Control Policy for the Enclosed Bays and Estuaries of California*, May 1974.

State Water Resources Control Board, Resolution No. 88-63, *Sources of Drinking Water Policy*, May 1988. Amended February 1, 2006.

State Water Resources Control Board, *Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program*, May 2004.

State Water Resources Control Board, Resolution No. 2004-0063, *Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List*, December 13, 2004.

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State Water Resources Control Board, *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP)*, February 2005

“State Water Resources Control Board, Resolution No. 2008-0070, *Water Quality Control Plan for Enclosed Bays and Estuaries - Part 1 Sediment Quality*, August 25, 2009.

State Water Resources Control Board, *Water Quality Control Plan for Ocean Waters of California (CA Ocean Plan)*, September 2009.

State Water Resources Control Board, Resolution No. 2009-0011, *Recycled Water Policy*, May 20, 2010.

State Water Resources Control Board, *Water Quality Enforcement Policy*, May 20, 2010.

US EPA, *National Toxics Rule*, 40 CFR 131.36, 57 FR 60848, December 1992.

US EPA, *California Toxics Rule*, 40 CFR 131.38, 65 FR 31682, May 2000.



**Table 1A. Narrative and Numeric Water Quality Objectives for Surface Water.**

<p style="text-align: center;"><b>SURFACE WATER QUALITY OBJECTIVE</b>  <i>(Source of WQO-Page in Basin Plan)</i>            (Objectives are numeric unless labeled "narrative")</p>	<p style="text-align: center;"><b>BENEFICIAL USE</b></p>
<b>TOXICITY</b>	
<p><b>Toxicity</b>  <i>(BPGO, III-4)</i></p> <p><i>Narrative Objective:</i>            All waters shall be maintained free of toxic substances in concentrations which are toxic to, or which produce detrimental physiological responses in, human, plant, animal, or aquatic life.</p> <p><i>Indicators of Narrative Objective:</i>            Chemical concentrations in excess of toxic levels for aquatic life including but not limited to the following:            Chlorpyrifos 0.025 ug/L            Diazinon 0.14 ug/L</p> <p><i>(Source: Sipmann and Finlayson 2000)</i></p>	<p>All Surface Waters</p>
<b>TOXICANTS</b>	
<b>Nutrients</b>	
<p><b>Ammonia, Total (N)</b>  <i>(BPSO, Table 3.3)</i></p> <p>&gt;30 mg/L NH<sub>4</sub>-N</p>	<p>AGR</p>
<p><b>Ammonia, Un-ionized</b>  <i>(BPGO, III-4)</i></p> <p>0.025 mg/L NH<sub>3</sub> as N</p>	<p>All Surface Waters</p>
<p><b>Nitrate</b>  <i>(a. BPSO, Table 3-2            b. BPSO, Table 3-3)</i></p> <p>a. 10 mg/L NO<sub>3</sub>-N            b. &gt;30 mg/L NO<sub>3</sub>-N</p>	<p>a. MUN            b. AGR</p>
<b>Organics</b>	
<p><b>Chemical Constituents</b>  <i>(BPSO, III-5 and            Table 3-2)</i></p> <p>Waters shall not contain concentrations of chemical constituents in excess of the limits specified in California Code of Regulations, Title 22, Article 4, Chapter 15,</p>	<p>MUN</p>

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 CONDITIONAL WAIVER OF  
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 FOR DISCHARGES FROM IRRIGATED LANDS

<p style="text-align: center;"><b>SURFACE WATER QUALITY OBJECTIVE</b>  <i>(Source of WQO-Page in Basin Plan)</i>            (Objectives are numeric unless labeled "narrative")</p>	<p style="text-align: center;"><b>BENEFICIAL USE</b></p>
<p>Section 64435, Tables 2 and 3 as listed in Table 3-2.</p>	
<p><b>Chemical Constituents</b>  <i>(BPSO, III-5 and Table 3-3)</i></p> <p>Waters shall not contain concentrations of chemical constituents in amounts which adversely affect the agricultural beneficial use. Interpretation of adverse effect shall be as derived from the University of California Agricultural Extension Service guidelines provided in Table 3-3.</p> <p>In addition, waters used for irrigation and livestock watering shall not exceed concentrations for those chemicals listed in Table 3-4</p>	<p>AGR</p>
<p><b>Chemical Constituents</b>  <i>(BPSO, III-10, Table 3-5, Table 3-6)</i></p> <p>Waters shall not contain concentrations of chemical constituents known to be deleterious to fish or wildlife in excess of the limits listed in Table 3-5 or Table 3-6.</p>	<p>COLD, WARM, MAR</p>
<p><b>Oil and Grease</b>  <i>(BPGO, III-3)</i></p> <p><i>Narrative Objective:</i>            Waters shall not contain oils, greases, waxes, or other similar materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise adversely affect beneficial uses.</p>	<p>All Surface Waters</p>
<p><b>Organic Chemicals</b>  <i>(BPSO, III-5 and Table 3-1)</i></p> <p>All inland surface waters, enclosed bays, and estuaries shall not contain concentrations of organic chemicals in excess of the limiting concentrations set forth in California Code of Regulations, Title 22, Chapter 15, Article 5.5, Section 64444.5, Table 5 and listed in Table 3-1.</p>	<p>MUN</p>
<p><b>Other Organics</b>  <i>(BPGO, III-3)</i></p> <p><b>Phenol</b>  <i>(BPSO, III-5)</i></p> <p>Waters shall not contain organic substances in concentrations greater than the following:</p>	<p>All Surface Waters</p>

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<b>SURFACE WATER QUALITY OBJECTIVE</b> <i>(Source of WQO-Page in Basin Plan)</i> (Objectives are numeric unless labeled "narrative")	<b>BENEFICIAL USE</b>
Methylene Blue Activated Substances < 0.2 mg/L Phenols < 0.1 mg/L Phenol (MUN) ≤ 1.0 µg/L PCBs < 0.3 µg/L Phthalate Esters < 0.002 µg/L	
<b>Metals</b>	
<b>Chromium</b> <i>(BOSP, III-12)</i>  ≤ 0.01 mg/L	SHELL
<b>Cadmium</b> <i>(BPGO, III-11)</i>  ≤ 0.03 mg/L in hard water or ≤ 0.004 mg/L in soft water (Hard water is defined as water exceeding 100 mg/L CaCO <sub>3</sub> ).	COLD, WARM
<b>Chromium</b> <i>(BPGO, III-11)</i>  ≤ 0.05 mg/L	COLD, WARM
<b>Copper</b> <i>(BPGO, III-11)</i>  ≤ 0.03 mg/L in hard water or ≤ 0.01 mg/L in soft water (Hard water is defined as water exceeding 100 mg/L CaCO <sub>3</sub> ).	COLD, WARM
<b>Lead</b> <i>(BPGO, III-11)</i>  ≤ 0.03 mg/L	COLD, WARM
<b>Mercury</b> <i>(BPGO, III-11)</i>  ≤ 0.0002 mg/L	COLD, WARM
<b>Nickel</b> <i>(BPGO, III-11)</i>  ≤ 0.4 mg/L in hard water or	COLD, WARM

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<p style="text-align: center;"><b>SURFACE WATER QUALITY OBJECTIVE</b>  <i>(Source of WQO-Page in Basin Plan)</i>  (Objectives are numeric unless labeled "narrative")</p>	<p style="text-align: center;"><b>BENEFICIAL USE</b></p>
<p>≤0.1 mg/L in soft water  (Hard water is defined as water exceeding 100 mg/L CaCO<sub>3</sub>).</p>	
<p><b>Zinc</b>  <i>(BPGO, III-11)</i></p> <p>≤ 0.2 mg/L in hard water or  ≤0.004 mg/L in soft water  (Hard water is defined as water exceeding 100 mg/L CaCO<sub>3</sub>).</p>	<p>COLD, WARM</p>
<b>CONVENTIONALS</b>	
<p><b>Biostimulatory Substances</b>  <i>(BPGO, III-3)</i></p> <p><i>Narrative Objective:</i> Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.</p> <p><i>Indicators of Narrative Objective:</i>  Indicators of biostimulation include chlorophyll-a, dissolved oxygen, phosphorous, and nitrate.</p> <p><i>(Source: Central Coast Water Board. April 2009. Central Coast Ambient Monitoring Program Technical Paper: Interpreting Narrative Objectives for Biostimulatory Substances Using the Technical Approach for Developing California Nutrient Numeric Endpoints)</i></p>	<p>All Surface Waters</p>
<p><b>Boron</b>  <i>(BPSO, III-13)</i></p> <p>Waterbody specific. Median values, shown in Table 3-7 for surface waters. Sub-Basins Objectives range from 0.2 – 0.5 mg/L.</p>	<p>Specific Surface Waters</p>
<p><b>Chloride</b>  <i>(BPSO, III-13)</i></p> <p>Waterbody specific. Median values, shown in Table 3-7 for surface waters. Sub-Basins Objectives range from 150-1400 mg/L.</p>	<p>Specific Surface Waters</p>
<p><b>Color</b>  <i>(BPGO, III-3)</i></p> <p>Waters shall be free of coloration that causes nuisance or adversely affects beneficial uses. Coloration attributable to materials of waste origin shall not be greater than 15 units or 10 percent above natural background color, whichever is</p>	<p>All Surface Waters</p>

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<p style="text-align: center;"><b>SURFACE WATER QUALITY OBJECTIVE</b>  <i>(Source of WQO-Page in Basin Plan)</i>            (Objectives are numeric unless labeled "narrative")</p>	<p style="text-align: center;"><b>BENEFICIAL USE</b></p>
greater.	
<p><b>Conductivity</b>  <i>(BPSO, III-8, Table 3-3)</i></p> <p>&gt;3.0 mmho/cm</p>	AGR
<p><b>Dissolved Oxygen (DO)</b>  <i>(BPGO, III-2)</i></p> <p>Mean annual DO <math>\geq</math> 7.0 mg/L            Minimum DO <math>\geq</math> 5.0 mg/L</p>	All Ocean Waters
<p><b>Dissolved Oxygen</b>  <i>(BPGO, III-4)</i></p> <p>For waters not mentioned by a specific beneficial use:            DO <math>\geq</math> 5.0 mg/L            DO Median values <math>\geq</math> 85 percent saturation</p>	All Surface Waters
<p><b>Dissolved Oxygen</b>  <i>(BPSO, III-10)</i></p> <p>DO <math>\geq</math> 7.0 mg/L</p>	COLD, SPWN
<p><b>Dissolved Oxygen</b>  <i>(BPSO, III-10)</i></p> <p>DO <math>\geq</math> 5.0 mg/L</p>	WARM
<p><b>Floating Material</b>  <i>(BPGO, III-3)</i></p> <p><i>Narrative Objective:</i>            Waters shall not contain floating material, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses.</p>	All Surface Waters
<p><b>pH</b>  <i>(BPSO, III-10)</i></p> <p>The pH value shall not be depressed below 7.0 nor above 8.5.</p> <p>Changes in normal ambient pH levels shall not exceed 0.5 in fresh waters.</p>	COLD, WARM,
<p><b>pH</b>  <i>(BPSO, III-10)</i></p>	MAR

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<p style="text-align: center;"><b>SURFACE WATER QUALITY OBJECTIVE</b>  <i>(Source of WQO-Page in Basin Plan)</i>  (Objectives are numeric unless labeled "narrative")</p>	<p style="text-align: center;"><b>BENEFICIAL USE</b></p>
<p>The pH value shall not be depressed below 7.0 or raised above 8.5<sup>2</sup>.  Changes in normal ambient pH levels shall not exceed 0.2 units.</p>	
<p><b>pH</b>  <i>(BPSO, III-5)</i></p> <p>The pH value shall not be depressed below 6.5 nor above 8.3.</p>	<p>MUN, REC-1,  REC-2, AGR</p>
<p><b>Settleable Material</b>  <i>(BPGO, III-3)</i></p> <p><i>Narrative Objective:</i>  Waters shall not contain settleable material in concentrations that result in deposition of material that causes nuisance or adversely affects beneficial uses.</p>	<p>All Surface Waters</p>
<p><b>Sediment</b>  <i>(BPGO, III-3)</i></p> <p><i>Narrative Criteria:</i>  The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses.</p>	<p>All Surface Waters</p>
<p><b>Sodium</b>  <i>(BPSO, III-13)</i></p> <p>Waterbody specific. Median values, shown in Table 3-7 for surface waters. Sub-Basins Objectives range from 20-250 mg/L.</p>	
<p><b>Sulfate</b>  <i>(BPSO, III-13)</i></p> <p>Waterbody specific. Median values, shown in Table 3-7 for surface waters. Sub-Basins Objectives range from 10-700 mg/L.</p>	
<p><b>Suspended Material</b>  <i>(BPGO, III-3)</i></p> <p><i>Narrative Criteria:</i>  Waters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses.</p>	<p>All Surface Waters</p>
<p><b>Taste and Odor</b>  <i>(BPGO, III-3)</i></p>	<p>All Surface Waters</p>

<p style="text-align: center;"><b>SURFACE WATER QUALITY OBJECTIVE</b>  <i>(Source of WQO-Page in Basin Plan)</i>            (Objectives are numeric unless labeled "narrative")</p>	<p style="text-align: center;"><b>BENEFICIAL USE</b></p>
<p><i>Narrative Criteria:</i>            Waters shall not contain taste or odor-producing substances in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, that cause nuisance, or that adversely affect beneficial uses.</p>	
<p><b>Temperature</b>  <i>(BPGO, III-3)</i></p> <p><i>Narrative Criteria:</i>            Natural receiving water temperature of intrastate waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Board that such alteration in temperature does not adversely affect beneficial uses.</p>	<p>All Surface Waters</p>
<p><b>Temperature</b>  <i>(BPGO, III-4)</i></p> <p><i>Narrative Objective:</i>            Natural receiving water temperature of intrastate waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Board that such alteration in temperature does not adversely affect beneficial uses.</p> <p><i>a) Indicators of Narrative Objective for COLD Habitat:</i></p> <p><b>Coho</b>            December - April    48-54 °F 7-DAM<sup>3</sup>                                             56-58 °F 1-DAM</p> <p>May – November    57-63 °F 7-DAM                                             68-70 °F 1-DAM</p> <p><b>Steelhead</b>            December - April    55-57 °F 7-DAM                                             56-58 °F 1-DAM</p> <p>May – November    56-63 °F 7-DAM                                             70-73 °F 1-DAM</p> <p><i>(Source: Hicks 2000)</i></p> <p><i>b) Indicators of Narrative Objective for WARM Habitat:</i></p> <p><b>Stickleback</b>            Upper optimal limit = 75 °F (This temperature is also the low end of the upper</p>	<p>All Surface Waters</p> <p>a) COLD</p> <p>b) WARM</p>

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<p style="text-align: center;"><b>SURFACE WATER QUALITY OBJECTIVE</b>  <i>(Source of WQO-Page in Basin Plan)</i>            (Objectives are numeric unless labeled "narrative")</p>	<p style="text-align: center;"><b>BENEFICIAL USE</b></p>
<p>lethal limit for steelhead)  <i>(Source: Moyle 1976)</i></p> <p>Note:            7-DAM refers to the rolling arithmetic average of seven consecutive daily maximum temperatures.            1-DAM refers to the highest daily maximum temperature.</p>	
<p><b>Temperature</b>  <i>(BPSO, III-10)</i></p> <p>At no time or place shall the temperature be increased by more than 5°F above natural receiving water temperature.</p>	<p>COLD,            WARM</p>
<p><b>Total Dissolved Solids (TDS)</b>  <i>(BPSO, III-13)</i></p> <p>Waterbody specific. Median values, shown in Table 3-7 for surface waters. Sub-Basins Objectives range from 10-250 mg/L.</p>	
<p><b>Turbidity</b>  <i>(BPGO, III-3)</i></p> <p><i>Narrative Objective:</i>            Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses.</p> <p><i>Indicators of Narrative Objective:</i>            Turbidity greater than 25 NTU's causes reduction in juvenile salmonid growth due to interference with their ability to find food.</p> <p><i>(Source: Central Coast Water Board. April 2009. Clean Water Act Sections 305(b) and 303(d) Integrated Report for the Central Coast Region; Sigler et al. 1984. Effects of chronic turbidity on density and growth of steelheads and coho salmon. Transactions of the American Fisheries Society 113:142-150)</i></p>	<p>All Surface Waters</p>
<p><b>PATHOGEN INDICATORS</b></p>	
<p><b>Fecal Coliform</b>  <i>(BOSP, III-5)</i></p> <p>Log mean 200 MPN/100mL.            Max 400 MPN/100mL.</p>	<p>REC-1</p>
<p><b>Fecal Coliform</b>  <i>(BOSP, III-10)</i></p>	<p>REC-2</p>



<b>SURFACE WATER QUALITY OBJECTIVE</b> <i>(Source of WQO-Page in Basin Plan)</i> (Objectives are numeric unless labeled “narrative”)	<b>BENEFICIAL USE</b>
Log mean 2000 MPN/100mL. Max 4000 MPN/100mL.	
<b><i>E. coli</i></b> <i>(USEPA)</i>  Max 235 MPN/100 mL	REC-1
<b>Total Coliform</b> <i>(BOSP, III-12)</i>  Median $\leq$ 70/100 MPN/100mL Max 230 MPN/100 mL	SHELL

**Table 1B. Narrative and Numeric Water Quality Objectives for Groundwater.**

<b>GROUNDWATER QUALITY OBJECTIVE</b> <i>(Source of WQO-Page in BP)</i> (Objectives are numeric unless labeled “narrative”)	<b>BENEFICIAL USE</b>
<b>TOXICANTS</b>	
<b>Chemical Constituents</b> <i>(BPSO, III-14)</i>  Groundwaters shall not contain concentrations of chemical constituents in excess of federal or state drinking water standards.	MUN
<b>Chemical Constituents</b> <i>(BPSO, III-14 and Tables 3-3 and 3-4)</i>  Groundwaters shall not contain concentrations of chemical constituents in amounts that adversely affect such beneficial use. Interpretation of adverse effect shall be as derived from the University of California Agricultural Extension Service guidelines provided in Table 3-3.  In addition, water used for irrigation and livestock watering shall not exceed the concentrations for those chemicals listed in Table 3-4.	AGR
<b>Total Nitrogen</b> <i>(BPSO, III-15 and Table 3-8)</i>  Groundwater Basin Objectives for Median values range from	Specific Groundwater Basins

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<b>GROUNDWATER QUALITY OBJECTIVE</b> <i>(Source of WQO-Page in BP)</i> (Objectives are numeric unless labeled "narrative")	<b>BENEFICIAL USE</b>
1-10 mg/L as N.	
<b>CONVENTIONALS</b>	
<b>Total Dissolved Solids (TDS)</b> <i>(BPSO, III-15)</i>  Groundwater Basin Objectives for median values range from 100-1500 mg/L TDS.	Specific Groundwater Basins
<b>Chloride (Cl)</b> <i>(BPSO, III-15)</i>  Groundwater Basin Objectives for median values range from 20-430 mg/L Cl.	Specific Groundwater Basins
<b>Sulfate (SO<sub>4</sub>)</b> <i>(BPSO, III-15)</i>  Groundwater Basin Objectives for median values range from 10-1025 mg/L SO <sub>4</sub> .	Specific Groundwater Basins
<b>Boron (B)</b> <i>(BPSO, III-15)</i>  Groundwater Basin Objectives for median values range from 0.1-2.8 mg/L B.	Specific Groundwater Basins
<b>Sodium (Na)</b> <i>(BPSO, III-15)</i>  Groundwater Basin Objectives for median values range from 10-730 mg/L.	Specific Groundwater Basins

Acronyms:

BP = Basin Plan or Water Quality Control Plan for the Central Coast Region  
 BPGO = Basin Plan General Objective  
 BPSO = Basin Plan Specific Objective related to a designated beneficial use  
 TMDL = Specific Objective related to an adopted Total Maximum Daily Load  
 WDR = Waste Discharge Requirements  
 SB = State Board established guideline  
 USEPA = US Environmental Protection Agency  
 CCAMP = Central Coast Ambient Monitoring Program  
 SWAMP = Surface Water Ambient Monitoring Program

MCL = Maximum Contaminant Level, California drinking water standards set forth in California Code of Regulations, Title 22.

NTU = Nephelometric Turbidity Unit

mg/L = milligram/Liter

MPN = Most Probable Number

## **PART C. DEFINITIONS**

The following definitions apply to Order No. R3-2012-0011 and MRP Order No. R3-2012-0011-01, MRP Order No. R3-2012-0011-02, and MRP Order No. R3-2012-0011-03 as related to discharges of waste from irrigated lands. The terms are arranged in alphabetical order. All other terms not explicitly defined for the purposes of this Order and Monitoring and Reporting Program shall have the same definitions as prescribed by California Water Code Division 7 or are explained within the Order or the MRP documents.

1. Anti-degradation. The State Water Board established a policy to maintain high quality waters of the State - Resolution 68-16 "*Statement of Policy with Respect to Maintaining High Quality Waters in California*." Resolution 68-16 requires existing high quality water to be maintained until it has been demonstrated that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of water, and will not result in water quality less than that prescribed in the policies. Regional Water Boards are required to ensure compliance with Resolution 68-16. The Central Coast Water Board must require discharges to be subject to *best practicable treatment or control* of the discharge necessary to avoid pollution or nuisance and to maintain the highest water quality consistent with maximum benefit to the people of the State. Resolution 68-16 has been approved by the USEPA to be consistent with the federal anti-degradation policy.
2. Aquatic Habitat. The physical, chemical, and biological components and functions of streams and lakes, including riparian areas and wetlands and their buffer zones.
3. Aquifer. A geologic formation, group of formations, or part of a formation capable of yielding a significant amount of groundwater to wells or springs. (see also uppermost aquifer).
4. Back flow Prevention. Back flow prevention devices are installed at the well or pump to prevent contamination of groundwater or surface water when fertilizers, pesticides, fumigants, or other chemicals are applied through an irrigation system. Back flow prevention devices used to comply with this Order must be those approved by USEPA, DPR, CDPH, or the local public health or water agency.

5. Basin Plan. The Basin Plan is the Central Coast's Region Water Quality Control Plan. The Basin Plan describes how the quality of the surface and groundwater in the Central Coast Region should be managed to provide the highest water quality reasonably possible. The Basin Plan includes beneficial uses, water quality objectives, and a program of implementation.
6. Beneficial Uses. The Basin Plan establishes the beneficial uses to be protected in the Central Coast Region. Beneficial uses for surface water and groundwater are divided into twenty-four standard categories identified below. The following beneficial uses have been identified in waterbodies within the Region:
  - agricultural supply (AGR)
  - aquaculture (AQUA)
  - areas of special biological significance (ASBS)
  - cold freshwater habitat (COLD)
  - commercial and sportfishing (COMM)
  - estuarine habitat (EST)
  - freshwater replenishment (FRESH)
  - groundwater recharge (GWR)
  - hydropower generation (POW)
  - industrial process supply (PRO)
  - industrial service supply (IND)
  - inland saline water habitat (SAL)
  - marine habitat (MAR)
  - municipal and domestic supply (MUN)
  - migration of aquatic organisms (MIGR)
  - navigation (NAV)
  - non-contact recreation (REC2)
  - preservation of biological habitats of special significance (BIOL)
  - rare, threatened or endangered species (RARE)
  - shellfish harvesting (SHELL)
  - spawning, reproduction, and development (SPWN)
  - warm freshwater habitat (WARM)
  - water contact recreation (REC1)
  - wildlife habitat (WILD)
7. Chemigation. The application of pesticides, fertilizers, fumigants or other chemicals through an irrigation system.
8. Commercial. Irrigated lands producing commercial crops are those operations that have one or more of the following characteristics:
  - a. The landowner or operator holds a current Operator Identification Number/Permit Number for pesticide use reporting;
  - b. The crop is sold, including but not limited to (1) an industry cooperative, (2) harvest crew/company, or (3) a direct marketing location, such as Certified Farmers Markets;.
  - c. The federal Department of Treasury Internal Revenue Service form 1040 Schedule F Profit or Loss from Farming is used to file federal taxes.
9. Concentration. The relative amount of a substance mixed with another substance. An example is 5 parts per million (ppm) of nitrogen in water or 5 mg/L.

10. Crop Types with High Potential to Discharge Nitrogen to Groundwater. Based on the Groundwater Pollution Nitrate Hazard Index developed by the University of California Division of Agriculture and Natural Resources (UCANR), the following crop types present the greatest risk for nitrogen loading to groundwater: beet, broccoli, cabbage, cauliflower, celery, Chinese cabbage (napa), collard, endive, kale, leek, lettuce (leaf and head), mustard, onion (dry and green), spinach, strawberry, pepper (fruiting), and parsley.
11. Discharge. A release of a waste to waters of the State, either directly to surface waters or through percolation to groundwater. Wastes from irrigated agriculture include but are not limited to earthen materials (soil, silt, sand, clay, and rock), inorganic materials (metals, plastics, salts, boron, selenium, potassium, nitrogen, phosphorus, etc.) and organic materials such as pesticides.
12. Discharger. The owner and operator of irrigated lands that discharge or have the potential to discharge waste that could directly or indirectly reach waters of the State and affect the quality of any surface water or groundwater. See also Responsible Party.
13. Discharges of Waste from Irrigated Lands. Surface water and groundwater discharges, such as irrigation return flows, tailwater, drainage water, subsurface drainage generated by irrigating crop land or by installing and operating drainage systems to lower the water table below irrigated lands (tile drains), stormwater runoff flowing from irrigated lands, stormwater runoff conveyed in channels or canals resulting from the discharge from irrigated lands, runoff resulting from frost control, and/or operational spills containing waste.
14. Ephemeral Stream. A channel that holds water during and immediately after rain events.
15. Erosion. The wearing away of land surface by wind or water, intensified by land-clearing practices related to farming, residential or industrial development, road building, or logging.
16. Erosion and Sediment Control Practices. Practices used to prevent and reduce the amount of soil and sediment entering surface water in order to protect or improve water quality.
17. Environmental Justice. Providing equal and fair access to a healthy environment for communities of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies; and proactive efforts to take into account existing

environmental injustices and to protect from new or additional environmental hazards and inequitable environmental burdens;

18. Exceedance. A reading using a field instrument or a detection by a California State-certified analytical laboratory where the detected result is above an applicable water quality standard for the parameter or constituent. For toxicity tests, an exceedance is a result that is statistically lower than the control sample test result.
19. Farm or Ranch. For the purposes of this Order, a tract of land where commercial crops are produced or normally would have been produced. Individual farms/ranches typically have a similar farm/ranch manager, operator or landowner(s) and are categorized by farm size, primary output(s), and/or geographic location.
20. Farm Water Quality Management Plan (Farm Plan). The Farm Plan is a document that contains, at a minimum, identification of management practices that are being or will be implemented to protect and improve water quality by addressing irrigation management, pesticide management, nutrient management, salinity management, sediment and erosion control, and aquatic habitat protection. Farm Plans also contain a schedule for the effective implementation of management practices and verification monitoring to determine compliance with the requirements of this Order (schedules, milestones, effluent limits, etc.). Consistent with the Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands adopted by the Board in July 2004 (Order No. R3-2004-0117), this Order requires Dischargers to develop and implement a Farm Plan focused on the priority water quality issues associated with a specific operation and the priority water quality issues associated with a specific watershed or subwatershed.
21. Fertigation. The application of fertilizers through an irrigation system.
22. Freshwater Habitat. Uses of water that support cold or warm water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.
23. Groundwater. The supply of water found beneath the earth's surface, usually in aquifers, which supply wells and springs.
24. Groundwater Protection Practices. Management practices designed to reduce or eliminate transport of nitrogen, pesticides, and other waste constituents into groundwater.
25. Integrated Pest Management Program (IPM). A pest management strategy that focuses on long-term prevention or suppression of pest problems through a

combination of techniques such as encouraging biological control, use of resistant varieties, or adoption of alternative cultivating, pruning, or fertilizing practices or modification of habitat to make it incompatible with pest development. Pesticides are used only when careful field monitoring indicates they are needed according to pre-established guidelines or treatment thresholds.

26. Intermittent Stream. A stream that holds water during wet portions of the year.
27. Irrigated Lands. For the purpose of this Order, irrigated lands include lands where water is applied for the purpose of producing commercial crops and include, but are not limited to, land planted to row, vineyard, field and tree crops as well as commercial nurseries, nursery stock production and greenhouse operations with soil floors, that do not have point-source type discharges, and are not currently operating under individual Waste Discharge Requirements (WDRs). Lands that are planted to commercial crops that are not yet marketable, such as vineyards and tree crops, must also obtain coverage under this Order.
28. Irrigation. Applying water to land areas to supply the water and nutrient needs of plants.
29. Irrigation Management Practices. Management practices designed to improve irrigation efficiency and reduce the amount of irrigation return flow or tailwater, and associated degradation or pollution of surface and groundwater caused by discharges of waste associated with irrigated lands.
30. Irrigation Runoff or Return Flow. Surface and subsurface water that leaves the field following application of irrigation water. See also, Tailwater.
31. Irrigation System Distribution Uniformity. Irrigation System Distribution Uniformity is a measure of how uniformly irrigation water is applied to the cropping area, expressed as a percentage. A nonuniform distribution can deprive portions of the crop of sufficient irrigation water, and can result in the excessive irrigation leading to water-logging, plant injury, salinization, irrigation runoff and transport of chemicals to surface water and groundwater.
32. Landowner. An individual or entity who has legal ownership of a parcel(s) of land. For the purposes of this Order, the landowner is responsible for ensuring compliance with this Order and for any discharge of waste occurring on or from the property.
33. Limited Resource Farmer. A Limited Resource Farmer is defined by the U.S. Dept. of Agriculture (USDA) as:

- a. A person with direct or indirect gross farm sales not more than the current indexed value (determined by USDA) in each of the previous 2 years, and
- b. A person who has a total household income at or below the national poverty level for a family of four, or less than 50 percent of county median household income in each of the previous 2 years.

The USDA's Limited Resource Farmer "Self Determination Tool" is available at:  
<http://www.lrftool.sc.egov.usda.gov/DeterminationTool.aspx?fyYear=2012>

34. Load. The concentration or mass of a substance discharged over a given amount of time, for example 10 mg/day or 5 Kg/day, respectively.
35. Monitoring. Sampling and analysis of receiving water quality conditions, discharge water quality, aquatic habitat conditions, effectiveness of management practices, and other factors that may affect water quality conditions to determine compliance with this Order or other regulatory requirements. Monitoring includes but is not limited to: surface water or groundwater sampling, on-farm water quality monitoring undertaken in connection with agricultural activities, monitoring to identify short and long-term trends in in-stream water quality or discharges from sites, inspections of operations, management practice implementation and effectiveness monitoring, maintenance of on-site records and management practice reporting.
36. Nitrate Hazard Index. In 1995, the University of California Center for Water Resources (WRC) developed the Nitrate Groundwater Pollution Hazard Index (Nitrate Hazard Index) (Wu, 2005). The purpose of the Nitrate Hazard Index is to identify agricultural fields with the highest vulnerability for nitrate pollution to groundwater, based on soil, crop, and irrigation practices. The hazard index number can range from 1 through 80 with the hazard increasing with increasing hazard index number. The WRC states that an index number greater than 20 indicates greater risk for nitrate pollution to groundwater and should receive careful attention.  
  
[http://ucanr.org/sites/wrc/Programs/Water\\_Quality/Nitrate\\_Groundwater\\_Pollution\\_Hazard\\_Index/](http://ucanr.org/sites/wrc/Programs/Water_Quality/Nitrate_Groundwater_Pollution_Hazard_Index/)
37. Nitrate Loading Risk Factor. A measure of the relative risk of loading nitrate to groundwater based on the following criteria a) Nitrate Hazard Index Rating by Crop Type, b) Irrigation System Type, and c) Irrigation Water Nitrate Concentration.
38. Non-point Source Pollution (NPS). Diffuse pollution sources that are generally not subject to NPDES permitting. The wastes are generally carried off the land by runoff. Common non-point sources are activities associated with agriculture, timber harvest, certain mining, dams, and saltwater intrusion.



39. Non-Point Source Management Measures. To combat NPS pollution, the State Water Board NPS Program adopted management measures as goals for the reduction of polluted runoff generated from five major categories, including agriculture. Management measures address the following components for agriculture: Erosion and sediment control; facility wastewater and runoff from confined animal facilities; nutrient management; pesticide management; irrigation water management; grazing management, and groundwater protection.
40. Non-Point Source Management Practices. Methods or practices selected by entities managing land and water to achieve the most effective, practical means of preventing or reducing pollution from diffuse sources, such as wastes carried off the landscape via urban runoff, excessive hill, slope or streambed and bank erosion, etc. Management Practices include, but are not limited to, structural and nonstructural controls and operation and maintenance procedures. Management Practices can be applied before, during, and after pollution-causing activities to prevent, reduce, or eliminate the introduction of wastes into receiving waters.
41. Nutrient. Any substance assimilated by living things that promotes growth.
42. Nutrient Management Practices. Management practices designed to reduce the nutrient loss from agricultural lands, which occur through edge-of-field runoff or leaching from the root zone.
43. Operator. Person responsible for or otherwise directing farming operations in decisions that may result in a discharge of waste to surface water or groundwater, including, but not limited to, a farm/ranch manager, lessee or sub-lessee. The operator is responsible for ensuring compliance with this Order and for any discharge of waste occurring on or from the operation.
44. Operation. A distinct farming business, generally characterized by the form of business organization, such as a sole proprietorship, partnership, corporation, and/or cooperative. A farming operation may be associated with one to many individual farms/ranches.
45. Operational Spill. Irrigation water that is diverted from a source such as an irrigation well or river, but is discharged without being delivered to or used on an individual field.
46. Perennial Stream. A stream that holds water throughout the year.
47. Pesticide Management Practices. Management practices designed to reduce or eliminate pesticide runoff into surface water and groundwater.

48. Point Source. Any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which wastes are or may be discharged.
49. Pollutant. The man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water, including dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water.
50. Public Water System. A system for the provision of water for human consumption through pipes or other constructed conveyances that has 15 or more service connections or regularly serves at least 25 individuals daily at least 60 days out of the year. A public water system includes the following: (1) Any collection, treatment, storage, and distribution facilities under control of the operator of the system which are used primarily in connection with the system; (2) Any collection or pretreatment storage facilities not under, the control of the operator that are used primarily in connection, with the system; (3) Any water system that treats water on behalf of one or more public water systems for the purpose of rendering it safe for human consumption.
51. Quality of the Water. The “chemical, physical, biological, bacteriological, radiological, and other properties and characteristics of water which affect its use” as defined in the California Water Code Sec. 13050(g).
52. Receiving Waters. Surface waters or groundwater that receive or have the potential to receive discharges of waste from irrigated lands.
53. Requirements of Applicable Water Quality Control Plans. Water quality objectives, prohibitions, Total Maximum Daily Load (TMDL) Implementation Plans, or other requirements contained in the Basin Plan, as adopted by the Central Coast Water Board and approved according to applicable law.
54. Responsible Party. The owner and operator of irrigated lands that discharge or have the potential to discharge waste that could directly or indirectly reach waters of the State and affect the quality of any surface water or groundwater. See also Discharger.
55. Riparian Area. Vegetation affected by the surface water or groundwater of adjacent perennial or intermittent streams, lakes or other waterbodies. Vegetation species are distinctly different from adjacent areas or are similar to adjacent areas

but exhibit more vigorous or robust growth forms indicative of increased soil moisture. Riparian areas may also include floodplains. Floodplains are critical areas for retaining floodwaters, allowing for sediment deposition and the natural movement of riparian areas, as well as space for colonization of new riparian and wetland vegetation necessary due to natural meandering. (Dall et. al. 1997, p.3)

56. Source of Drinking Water. Any water designated as municipal or domestic supply (MUN) in a Regional Water Board Basin Plan and/or as defined in SWRCB Resolution No. 88-63.
57. Stormwater. Stormwater runoff, snow melt runoff, and surface runoff and drainage, as defined in 40 CFR 122.26(b)(13).
58. Subsurface Drainage. Water generated by installing drainage systems to lower the water table below irrigated lands. The drainage can be generated by subsurface drainage systems, deep open drainage ditches or drainage wells.
59. Surface Runoff. Precipitation, snow melt, or irrigation water in excess of what can infiltrate the soil surface and be stored in small surface depressions; a major transporter of non-point source wastes in rivers, streams, and lakes.
60. Tailwater. Runoff of irrigation water from the lower end of an irrigated field. See also, Irrigation Runoff or Return Flow.
61. Tile Drains. Subsurface drainage which removes excess water from the soil profile, usually through a network of perforated tile tubes installed 2 to 4 feet below the soil surface. This lowers the water table to the depth of the tile over the course of several days. Drain tiles allow excess water to leave the field. Once the water table has been lowered to the elevation of the tiles, no more water flows through the tiles. The Central Coast Water Board anticipates evaluating longer timeframes necessary to address tile-drain discharges, for inclusion in a subsequent Agricultural Order.
62. Total Maximum Daily Load (TMDL). The condition of an impaired surface waterbody (on the List of Impaired Waterbodies) that limits the amount of pollution that can enter the waterbody without adversely affecting its beneficial uses, usually expressed as a concentration (e.g., mg/L) or mass (e.g., kg); TMDLs are proportionally allocated among dischargers to the impaired surface waterbody.
63. Total Nitrogen Applied. Total nitrogen applied includes nitrogen in any product, form or concentration) including, but not limited to, organic and inorganic fertilizers, slow release products, compost, compost teas, manure, extracts, nitrogen present in the soil, and nitrate in irrigation water; Reported in units of nitrogen per crop, per acre for each farm/ranch or nitrate loading risk unit;

64. Uppermost Aquifer. The geologic formation nearest the natural ground surface that is an aquifer, as well as lower aquifers that are hydraulically interconnected with this aquifer.
65. 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” as defined in the California Water Code Sec. 13050(d). “Waste” includes irrigation return flows and drainage water from agricultural operations containing materials not present prior to use. Waste from irrigated agriculture includes *earthen materials* (such as soil, silt, sand, clay, rock), *inorganic materials* (such as metals, salts, boron, selenium, potassium, nitrogen, phosphorus), and *organic materials* such as pesticides.
66. Water Quality Buffer. A water quality protection zone surrounding perennial or intermittent channels, including adjacent wetlands (as defined by the Clean Water Act), with riparian vegetation and/or riparian functions that support beneficial uses and protect water quality.
67. Water Quality Control. The “regulation of any activity or factor which may affect the quality of the waters of the State and includes the prevention and correction of water pollution and nuisance” as defined in the California Water Code Sec. 13050(i).
68. Water Quality Criteria. Levels of water quality required under Sec. 303(c) of the Clean Water Act that are expected to render a body of water suitable for its designated uses. Criteria are based on specific levels of pollutants that would make the water harmful if used for drinking, swimming, farming, fish production, or industrial processes. The *California Toxics Rule* adopted by USEPA in April 2000, sets numeric Water Quality Criteria for non-ocean waters of California for a number of pollutants. See also, Water Quality Objectives.
69. Water Quality Objectives. “Limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specified area,” as defined in Sec. 13050(h) of the California Water Code. Water Quality Objectives may be either numerical or narrative and serve as Water Quality Criteria for purposes of Section 303 of the Clean Water Act. Specific Water Quality Objectives relevant to this Order are identified in this Appendix A in Tables 1A and 1B.
70. Water Quality Standard. Provisions of State or Federal law that consist of the beneficial designated uses or uses of a waterbody, the numeric and narrative

water quality criteria that are necessary to protect the use or uses of that particular waterbody, and an anti-degradation statement. Water quality standards includes water quality objectives in the Central Coast Water Board's Basin Plan, water quality criteria in the California Toxics Rule and National Toxics Rule adopted by USEPA, and/or water quality objectives in other applicable State Water Board plans and policies. For groundwater with the beneficial use of municipal or domestic water supply, the applicable drinking water standards are those established by the United States Environmental Protection Agency (USEPA) or California Department of Public Health (CDPH), whichever is more stringent. Under Sec. 303 of the Clean Water Act, each State is required to adopt water quality standards.

71. Waters of the State. "Any surface water or groundwater, including saline waters, within the boundaries of the State" as defined in the California Water Code Sec. 13050(e), including all waters within the boundaries of the State, whether private or public, in natural or artificial channels, and waters in an irrigation system.
72. Wetland. Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas (40 CFR 230.3(t)).
73. Wildlife Habitat. Uses of water that support terrestrial or wetland ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats or wetlands, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.

# **Exhibit I**



June 10, 2104

***Via Electronic Mail Only***

Mr. Ken Harris  
Central Coast Water Board  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401  
[Ken.harris@waterboards.ca.gov](mailto:Ken.harris@waterboards.ca.gov)

Re: Central Coast Groundwater Coalition Response to Request for Additional Member Information

Dear Mr. Harris:

The Central Coast Groundwater Coalition (CCGC) submits this letter in response to your requests for grower specific notification letters, as well as grower specific information with respect to follow-up actions that are being taken by growers if domestic well results indicate that the nitrate drinking standard has been exceeded. You and your staff have specifically asked us to provide you with our explanation as to how the approach taken by the CCGC is consistent with the law, program approvals, and the Central Coast Regional Water Quality Control Board's (Central Coast Water Board) purposes of the program. As requested, we do so here.

As a preliminary matter, we find it necessary to challenge the Central Coast Water Board staff's position that reporting and notification requirements for growers in a coalition must be equal to those that are imposed on individuals. Such a position defeats the purpose of having coalitions altogether. Further, we find such a position to be contrary to the State Water Resources Control Board's (State Board) stated reasons for supporting third-party, or coalition type programs. When it adopted State Board Order WQ 2013-0101,<sup>1</sup> the State Board specifically addressed the use of third-parties as part of addressing agricultural discharges. And while the State Board cautions against reporting that is too generalized, it does not mandate or imply that third-party reporting must be "equal" to that which is required for individuals.

“... we believe it is important here for us to express our support of third party approaches generally. There are a number of advantages to utilizing a third party approach to regulation of agricultural discharges. From a resource perspective, third parties allow a regional water board to leverage limited regulatory staff by

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<sup>1</sup> *In the Matter of Review of Conditional Waiver of Waste Discharge Requirements Order No. R3-2012-0011 For Discharges from Irrigated Lands* (Order WQ 2013-0101), adopted by the State Board on September 24, 2013.

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acting as intermediaries between the regional water board staff and the growers, freeing regional water board resources to focus on problem areas or actors. . . . We recognize the need to be wary of third party programs that report compliance at too high a level of generality. As a result, we expect the Central Coast Water Board to review proposals carefully to ensure consistency with legal requirements to verify the adequacy and effectiveness of waiver conditions and provide sufficient feedback mechanisms for determination of whether the required controls are achieving the Agricultural Order's stated purposes. However, we also expect the Central Coast Water Board to give fair and due consideration to proposed third party projects and programs and work with third party groups in good faith to develop viable alternatives. (State Board, Order WQ 2013-0101, pp. 13-14.)

In consideration of the State Board's direction, we must determine what constitutes "sufficient" feedback to ensure that the provisions as adopted by the Central Coast Water Board, and as revised by the State Water Board are achieved. As explained in this communication, the CCGC contends that its current program and level of reporting to the Central Coast Water Board is beyond sufficient, and that providing individual notification letters is not required by law or necessary for the Central Coast Water Board to ensure that the Agricultural Order's stated purposes are being achieved. Further, such requirements will undermine the intent and purpose of a third-party program, and will provide no greater protection for water quality.

The Central Coast Water Board also needs to fully understand the significant administrative burden that the CCGC has taken on to further the goals of this program. The CCGC and its consultants spend hundreds of hours in compiling sampling results, preparing notification letters, answering individual member questions, and preparing reports for submittal to the Central Coast Water Board and for uploading on GeoTracker. All of the work done by the CCGC benefits the Central Coast Water Board, and allows the Central Coast Water Board to focus its limited staff resources on individuals that are not participating in the CCGC's cooperative monitoring program. This provides the Central Coast Water Board with a significant advantage in managing its workload.

## **I. Overview of CCGC Accomplishments to Date**

Before specifically discussing the two pending notification issues, the CCGC wants to remind the Central Coast Water Board of the extraordinary work that the CCGC has been able to accomplish in such a short time period. In addition to the hundreds of administrative hours mentioned above, the CCGC has completed a significant amount of domestic well monitoring over a relatively short period of time. Specifically, and in accordance with workplans approved in July 2013 and December 2013, the CCGC has accomplished the following:

- Submission of the groundwater characterization technical memorandum for Salinas Valley on May 1, 2014;



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- Sampled 889 wells as of June 5, 2014 in Santa Cruz, Monterey, Santa Clara, San Benito, San Luis Obispo, Santa Barbara, and Ventura counties, of which almost 600 wells are used for domestic drinking water purposes;<sup>2</sup>
- In the process of resampling approximately 535 wells in Santa Cruz, Monterey, Santa Clara, San Benito, San Luis Obispo, Santa Barbara, and Ventura counties;
- Sent via overnight mail 157 exceedance notifications to members with domestic wells above the drinking water standard;
- Submitted timely reports to the Central Coast Water Board on well locations for sampling, well analysis results, and summaries of exceedance notifications;
- Uploaded more than 650 well results to the regulatory side of GeoTracker (as of June 1).

CCGC has also worked closely with staff to ensure the reports were accurate and used formatting that is clear and organized for easy review. By way of comparison, and to truly understand the level of effort that has been accomplished in such a short time period, the Central Coast Water Board's website includes reference to a similar domestic well monitoring effort being conducted by the United States Geological Survey (USGS). (See, [www.waterboards.ca.gov/centralcoast/water\\_issues/programs/gap](http://www.waterboards.ca.gov/centralcoast/water_issues/programs/gap).) According to the website, the USGS sampled 90 domestic wells between October 2012 through May 2013. In other words, the CCGC well monitoring program (almost 600 wells used for domestic purposes) has sampled 6 times the number of wells that the USGS sampled during a similar period of time. Moreover, the CCGC expects to collect a second sample on 500 plus domestic wells over the next three months.

Above and beyond the monitoring and notification requirements identified in the approved workplans, and in the interest of public health, the CCGC also determined it appropriate to obtain information from its members with respect to follow-up actions that have been taken if a domestic well is found to exceed the nitrate drinking water standard. Because such information is not required by the Conditional Waiver or Order WQ 2013-0101, the CCGC's request for such information specifically noted that providing this information was voluntary, and that the CCGC would submit such information to the Central Coast Water Board in a summary/aggregated format. Specifically, we asked members to confirm notifications to occupants of residences where nitrate levels were above the drinking water standard, and to report follow-up actions taken, including but not limited to supplying replacement bottled water or installing treatment systems for the residences. Based on responses received to date, the CCGC is pleased to state that all growers/landowners that had domestic well exceedances have reported that notifications were properly provided and that appropriate follow-up action was taken to ensure that public health is protected.

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<sup>2</sup> The numbers here represent the number of wells sampled by the Coalition as well as individual fall and spring sampling conducted by members based in the south as of June 5, 2014.

Based on this brief overview, one can clearly see that the CCGC is working hard to fulfill its obligations to the Central Coast Water Board, achieve the purposes of the Conditional Waiver and Order WQ 2013-0101, and protect public health all while maintaining its commitments to its members. The results of the CCGC program to date clearly show that it is able to achieve all of these purposes.

## **II. Request for Individual Notification Letters**

One issue of concern for the CCGC is the Central Coast Water Board's request for copies of *all* individual notification letters sent by CCGC to its members notifying them of an exceedance(s) of the nitrate drinking water standard if monitoring results indicate that such an exceedance exists in a domestic drinking water well. We understand that the Central Coast Water Board staff believes it has the authority to request such information because its December 17, 2013 approval letter includes the following statement as a "condition" of approval: "The Coalition must also provide copies of the individual notification letters sent to Coalition members informing them of the exceedance of the drinking water standards, upon request of the Central Coast Water Board." For the reasons discussed below, the CCGC believes that the Central Coast Water Board does not have the authority to request copies of Coalition issued individual notification letters, regardless of the language contained in the December 17, 2013 letter. Further, and as will be explained, the CCGC contends that its current level of reporting and availability of documents to the Central Coast Water Board provides for a sufficient level of information to ensure that the objectives of the Conditional Waiver and the State Board Order are achieved. Finally, the CCGC's understanding of what the Central Coast Water Board staff meant with respect to the terms "upon request" do not comport with staff's pending action of requesting *all* individual notification letters.

### **A. CCGC Complies With Existing Orders and Provides the Central Coast Water Board With Sufficient Feedback**

The Central Coast Water Board's general authority for protecting water quality derives from the Porter-Cologne Water Quality Control Act (Porter-Cologne), as adopted by the California Legislature in 1969. The fundamental purpose and objective of Porter-Cologne is to provide the state with authority to have a statewide program for the control of the quality of all waters of the state, and that the "state must be prepared to exercise its full power and jurisdiction to protect the quality of waters in the state from degradation." (Wat. Code, § 13000.) To accomplish such goals, Porter-Cologne provides the state, and in this case the Central Coast Water Board, with the authority to adopt water quality control plans, which consist of the beneficial uses to be protected, water quality objectives, and a program of implementation needed to achieve water quality objectives. (Wat. Code, § 13000.) The Central Coast Water Board also has the authority to control discharges of wastes through a variety of different mechanisms. (Wat. Code § 13260 et seq.) Finally, the Central Coast Water Board is authorized to order clean up and abatement actions, and may require responsible parties to provide replacement water under Water Code section 13304. The issuance of a clean up and abatement

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order is an enforcement order, and as such, is subject to certain due process requirements under the law. (See Cal. Code of Regs., tit. 23, § 648 et seq.)

In general, the Central Coast Water Board's actions being taken here fall under its authority to regulate discharges of waste to waters of the state and fall under Chapter 4, Article 4 of Porter-Cologne. No one disputes that the Central Coast Water Board has adopted a Conditional Waiver that allows for a cooperative groundwater monitoring program. Further, no one disputes the fact that the State Board added new and additional requirements to the Conditional Waiver in its adoption of State Board Order WQ 2013-0101. The individual notification requirements at issue here relate to changes made by State Board Order WQ 2013-0101. The new requirement specifically states:

If a discharger conducting individual groundwater monitoring or a third party conducting cooperative groundwater monitoring determines that water in any well that is used or may be used for drinking water exceeds or is projected to exceed 45 mg/L of nitrate as NO<sub>3</sub> (or 10 mg/L of nitrate + nitrite as N), the discharger or third party must provide notice to the Central Coast Water Board within 24 hours of learning of the exceedance or projected exceedance. For wells on a Discharger's farm/ranch, the Central Coast Water Board will require that the Discharger notify the users within 10 days. For all other wells, the Central Coast Water Board will notify the users promptly. (Order WQ 2013-0101, p. 34.)

The CCGC's current reporting program complies with and is consistent with this new mandate, which was added to the Conditional Waiver by State Board Order WQ 2013-0101. Specifically, the CCGC has promptly provided the Central Coast Water Board with exceedance information within 24 hours of receiving and validating groundwater sample results of domestic wells monitored by the CCGC. Further, the CCGC ensures that dischargers are complying with the 10-day notification to users of such domestic wells by promptly notifying its members with such wells within 36 hours of learning about exceedances, by providing its members with explicit direction regarding the need to notify users within 10 days, and by providing its members with notification information for their use that is consistent with directives contained in State Board Order WQ 2013-0101. The Central Coast Water Board has met its burden of requiring dischargers to notify users within 10 days because it is a condition of approval in the December 17, 2013 approval letter, and this condition is consistent with State Board Order WQ 2013-0101. (See Condition #2, p. 2 ["Within 48 hours of learning of the exceedance or projected exceedance of the drinking water standard, notify Coalition members that they are required by the Central Coast Water Board to notify the landowner and well users of the exceedance within 10 days. The content of the notifications must be consistent with that described in State Board Order WQ 2013-0101."].) There is no dispute that these reporting and notification requirements are now part of the Conditional Waiver that was issued under Water Code section 13269, as revised by the State Board under its own motion review authority. (See, e.g., Wat. Code, § 13320.) Further, there is no dispute that the CCGC program meets and complies with these requirements.

**B. Central Coast Water Board Does Not Have the Legal Authority to Request All Individual Notification Letters**

The CCGC disputes the Central Coast Water Board's alleged authority to require the CCGC to provide the Central Coast Water Board with all copies of individual notification letters sent to Coalition members, upon Board staff's request. Including this requirement in the December 17, 2013, approval letter does not independently create the authority for such a request. Rather, the Executive Officer's authority for issuing specific conditions and requesting the information identified must be legally based on authority that otherwise exists under the law. First, this requirement was not part of the Conditional Waiver as adopted by the Central Coast Water Board in March 2012, nor was such a requirement included in revisions to the Conditional Waiver as mandated by State Board Order WQ 2013-0101. Since reporting of individual notification letters is *not* required by the Conditional Waiver or State Board Order WQ 2013-0101,<sup>3</sup> we must then consider if the Executive Officer has other independent authority to require such information outside of such a requirement being adopted as part of the Conditional Waiver. The CCGC contends that no such authority exists for the requirement to provide individual notification letters as is being requested, and as is included in the December 17, 2013 letter.

It is our understanding that Central Coast Water Board staff are taking the position that they do have such authority under Water Code section 13267, which is titled, "Investigation of water quality; reports; inspection of facilities." Based on a plain reading of this statutory section, we find it difficult to see how requests for individual notification letters falls within this authority. The primary objective of Water Code section 13267 is that it provides regional boards with the authority to investigate the *quality of waters* of the state within its region. (Wat. Code, § 13267(a).) The statute then states that in conducting an investigation specified in subsection (a) (i.e., an investigation associated with "quality of waters of the state") that a regional board may require a discharger to provide technical or monitoring program reports. Copies of individual notification letters sent to growers by the CCGC are not relevant with respect to an investigation of water quality. The information that is associated with water quality are the sampling results from the CCGC's monitoring activities, and this information is being provided to Central Coast Water Board staff in a timely fashion. However, as stated, a letter of notification is not directly related to investigation of water quality and, thus, the Central Coast Water Board has no legal justification under Water Code section 13267 for mandating that such letters be provided as a condition of approval of the CCGC's workplan. We know of no other legal authority that would provide the Executive Officer with the authority to mandate that the CCGC must provide the Central Coast Water Board with copies of individual notification letters.

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<sup>3</sup> The CCGC does not discuss here if the Central Coast Water Board or the State Board could require such notification as part of a Conditional Waiver, and in fact the CCGC questions if such a requirement could be made. Regardless, the CCGC focuses its current comments here on the fact that such notification is *not* required under the Conditional Waiver as adopted, or as amended by the State Board.

### **C. CCGC's Understanding of December 17, 2013, Conditions And Sufficiency of Current Reporting Requirements**

The CCGC believes it important to clarify its understanding of the terms and conditions contained in the December 17, 2013 approval letter. During the approval process, CCGC representatives had several conversations with Central Coast Water Board staff regarding the terms of approval. In fact, in an earlier draft version of the approval letter, staff proposed to automatically require all individual notification letters. After hearing concerns expressed by CCGC representatives as to why such a requirement was not appropriate, Central Coast Water Board staff changed the language to include the term "upon request." Based on the tenor of conversations at the time, CCGC representatives understood this to mean that such notification letters could be requested by Central Coast Water Board staff for review and verification, but did not believe that it meant Central Coast Water Board staff could wait several months and then just request all notification letters for no apparent reason. Otherwise, why would staff have included the terms "upon request" after hearing and understanding the CCGC's concerns, and understanding one of the central tenants of the CCGC's program includes not providing individual member information that specifically ties domestic well exceedances with individual growers, companies, or landowners in a manner that would then be public.

Further, the CCGC fails to see how copies of individual notification letters provides the Central Coast Water Board with any more information than that which is already being provided. At this time, the CCGC provides the Central Coast Water Board with a template of the notification letter, sample results, the date the notification packets are mailed to members, as well as the delivery confirmation date if the well is a domestic well with an exceedance of the nitrate drinking water standard. All of this information combined, along with the ability of staff to review CCGC program documents at anytime, clearly provides an appropriate level of reporting that ensures that agricultural order objectives and purposes are being achieved.

### **III. Direct Grower Information Related to Follow-up Actions**

In recent communications, Central Coast Water Board staff have indicated that they intend to require the CCGC to provide them with individual grower information related to follow-up actions taken if a domestic well had an exceedance of the nitrate drinking water standard. Their reasoning for such a requirement is primarily that they believe they need to have the third-party program provide reporting equivalent to the individual program. However, such a reason does not constitute legal authority and, further, inclusion of this requirement in the individual program does not make it legal either. Similar to our concerns expressed above, the CCGC does not believe it appropriate or legal for Central Coast Water Board staff to mandate that the CCGC provide this information.

First, the CCGC's request for follow-up action from its members is not required by any order, was not included in the CCGC's workplan, and this information was obtained solely for the purpose of providing the Central Coast Water Board with additional information to illustrate that CCGC members are taking appropriate actions to protect public health. There is no existing

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legal mandate that provides the Central Coast Water Board with authority to request such information from individuals, or from the CCGC on behalf of its members. The Central Coast Water Board's authority associated with mandating replacement water, or in this case mandating reporting of follow-up actions, is limited to the authority given to it under Water Code section 13304. Unless the Central Coast Water Board brings a clean up and abatement order and can show that the grower in question is a responsible party for creating a condition of pollution or nuisance, no other authority exists for it to mandate that growers and/or landowners take follow-up actions. While the CCGC and its members recognize that it is imperative for public health purposes that such actions occur, and in fact the CCGC is able to show that all its members have taken appropriate action to ensure that users of the domestic well in question are provided with safe drinking water, doing the "right thing" does not equate to legal authorization for mandating that individuals report on the "right thing" that was done voluntarily.

Further, Central Coast Water Board staff look to create "new" liability for failing to report follow-up actions, when in fact such action cannot be mandated unless a clean up and abatement order is issued. For example, to require this information from individuals, or the CCGC on behalf of its members, the Central Coast Water Board would need to rely on Water Code section 13267. Assuming *arguendo* that 13267 would even apply to this information since it is not related to investigating the quality of water of the state, any person failing to report information once requested under Water Code section 13267 is guilty of a misdemeanor and may be liable civilly. (Wat. Code, § 13268.) Under this scenario, a grower or landowner that fails to report its voluntary follow-up action could be held civilly liable. The CCGC contends that such a result seems contrary to the rules of general fairness. Moreover, such a result would greatly disincentivize voluntary actions that are being taken to further public health.

Second, the December 17, 2013 letter itself only requests that the CCGC provide a summary of follow-up actions taken by its members. Nowhere does the December 17, 2013 letter state that the CCGC must provide a list of individual members with identification of specific follow-up actions taken by individuals. With respect to requiring a list of Coalition members that have not provided follow-up action information or who have not taken follow-up actions, the CCGC contends that release of such information is inappropriate because all of this information is being provided voluntarily. Further, and for the same legal reasons discussed above, there is no legal authority for the Central Coast Water Board to mandate that the CCGC provide this information.

#### **IV. The CCGC's Proposed Next Steps**

Even though the CCGC contends that the Central Coast Water Board cannot mandate reporting of the type of information identified, the CCGC does propose the following actions in an effort to cooperate with the Central Coast Water Board and to further the purposes and objectives of the agricultural orders.

Mr. Ken Harris

Re: CCGC Response to Request for Additional Member Information

June 10, 2014

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1. The CCGC, as already stated, is willing to provide Central Coast Water Board staff the opportunity to review and audit all information submitted to the CCGC at the CCGC's home offices, or at another location agreed upon by the parties. Central Coast Water Board staff may not copy or take with them confidential documents, but they may review and audit the documents to verify the authenticity of the information provided to them from the CCGC.

2. The CCGC is willing to add a penalty of perjury statement to all of its submittals to the Central Coast Water Board. Although the CCGC contends that all information submitted is accurate and true to the best of its knowledge, the CCGC is willing to take the extra step and submit information that is currently being reported accompanied with the following statement:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel or represented Members properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for knowingly submitting false information, including the possibility of fine and imprisonment for violations.

3. The CCGC will work directly with the various county health departments to provide them with the appropriate level of information that is needed to ensure protection of public health.

The CCGC believes that the proposed additional actions described above provide the Central Coast Water Board with more than sufficient information to ensure that program objectives are being met. To reiterate, the CCGC clearly states that it is not willing to provide the Central Coast Water Board with copies of individual notification letters, nor with individual follow-up action information. However, the CCGC Board of Directors has recently determined it appropriate to survey its membership to see if they are willing to have the CCGC convey similar individual information in a table format that identifies individuals only by their CCGC field point name if they are in the north, and by their global identification number if they are in the south. Examples of the table formats are provided for discussion purposes only. (Attachment 1.)

It is imperative that the Central Coast Water Board clearly understands that the CCGC is not willing to provide this information in the draft table format unless and until it learns from its members that they support such an approach. As indicated, we provide the draft table here only for purposes of preliminary discussions, and it does not reflect a willingness or commitment to provide the information accordingly.

Mr. Ken Harris  
Re: CCGC Response to Request for Additional Member Information  
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In conclusion, the CCGC has serious concerns with the Central Coast Water Board's request for individual notification letters, and individual follow-up action information. We do not believe that the legal authority exists for the Central Coast Water Board to mandate reporting of this information. Regardless, the CCGC is willing to provide Central Coast Water Board staff with an opportunity to audit all documents, and the CCGC is willing to submit its current reports and information subject to a "penalty of perjury" statement. Accordingly, the CCGC's current level of reporting, with these additional safeguards, provides the Central Coast Water Board with more than sufficient information to ensure that the purposes and objectives of the agricultural orders are met.

Please contact me at (831) 240-9533 if you have further questions.

Sincerely,



Parry Klassen  
Executive Director

Attachment

cc (via email only): Tim Borel ([tborel@foxyproduce.com](mailto:tborel@foxyproduce.com))  
Abby Taylor-Silva ([abby@growershipper.com](mailto:abby@growershipper.com))  
Hector Hernandez ([hector.hernandez@waterboards.ca.gov](mailto:hector.hernandez@waterboards.ca.gov))  
John Robertson ([john.robertson@waterboards.ca.gov](mailto:john.robertson@waterboards.ca.gov))  
Angela Schroeter ([angela.schroeter@waterboards.ca.gov](mailto:angela.schroeter@waterboards.ca.gov))  
Theresa Dunham ([tdunham@somachlaw.com](mailto:tdunham@somachlaw.com))



Table 1. List of nitrate results from wells monitored [DATE], 2014 for Coalition monitoring ([VALLEY]).

Field Point Name	Field Point Class	Sample Date	Nitrate as NO3 Result (mg/L)	NO3_WQO	Notification Date	Notification Confirmation Date*	Replacement Water Action	Date Initiated	Date Reported	User Notification Date	Manner of Notification
CCGC_0000	PRIW	12/Mar/2014	25	Does not exceed WQO	5/2/2014						
CCGC_0000	PRIW	14/Mar/2014	6	Does not exceed WQO	5/2/2014						
CCGC_0000	PRIW	14/Mar/2014	14	Does not exceed WQO	5/2/2014						
CCGC_0000	PRIW	11/Mar/2014	Non-Detect	Does not exceed WQO	5/2/2014						
CCGC_0000	PRIW	11/Mar/2014	4	Does not exceed WQO	5/2/2014						
CCGC_0000	PRIW	13/Mar/2014	Non-Detect	Does not exceed WQO	5/2/2014						
CCGC_0000	PRIW	13/Mar/2014	35	Does not exceed WQO	5/2/2014						
CCGC_0000	PRIW	13/Mar/2014	6	Does not exceed WQO	5/2/2014						
CCGC_0000	PRIW	12/Mar/2014	56	Exceeds WQO	5/2/2014	5/5/2014					
CCGC_0000	PRIW	12/Mar/2014	Non-Detect	Does not exceed WQO	5/2/2014						
CCGC_0000	PRIW	12/Mar/2014	13	Does not exceed WQO	5/2/2014						
CCGC_0000	PRIW	10/Mar/2014	26	Does not exceed WQO	5/2/2014						
CCGC_0000	PRIW	12/Mar/2014	59	Exceeds WQO	5/2/2014	5/5/2014					
CCGC_0000	PRIW	12/Mar/2014	102	Exceeds WQO	5/2/2014	5/5/2014					
CCGC_0000	PRIW	12/Mar/2014	286	Exceeds WQO	5/2/2014	5/5/2014					
CCGC_0000	PRIW	12/Mar/2014	89	Exceeds WQO	5/2/2014	5/5/2014					
CCGC_0000	PRIW	12/Mar/2014	153	Exceeds WQO	5/2/2014	5/5/2014					
CCGC_0000	PRIW	12/Mar/2014	40	Exceeds 80 Pct WQO	5/2/2014						
CCGC_0000	PRIW	11/Mar/2014	65	Exceeds WQO	5/2/2014	5/5/2014					
CCGC_0000	PRIW	11/Mar/2014	Non-Detect	Does not exceed WQO	5/2/2014						
CCGC_0000	PRIW	11/Mar/2014	179	Exceeds WQO	5/2/2014	5/5/2014					
CCGC_0000	PRIW	11/Mar/2014	154	Exceeds WQO	5/2/2014	5/5/2014					
CCGC_0000	PRIW	11/Mar/2014	Non-Detect	Does not exceed WQO	5/2/2014						
CCGC_0000	PRIW	12/Mar/2014	Non-Detect	Does not exceed WQO	5/2/2014						
CCGC_0000	PRIW	13/Mar/2014	32	Does not exceed WQO	5/2/2014						
CCGC_0000	PRIW	13/Mar/2014	96	Exceeds WQO	5/2/2014	5/3/2014					
CCGC_0000	PRIW	13/Mar/2014	124	Exceeds WQO	5/2/2014	5/3/2014					
CCGC_0000	PRIW	13/Mar/2014	19	Does not exceed WQO	5/2/2014						
CCGC_0000	PRIW	13/Mar/2014	145	Exceeds WQO	5/2/2014	5/3/2014					

CCGC Exceedance Report Replacement Water Follow Up- Submitted [DATE], 2014  
Coalition Monitoring [Valley] Sample Dates: [DATE], 2014

Table 1. List of nitrate results from well monitored [DATE], 2014 for fall individual monitoring. AGIR - irrigation supply well. PRIW - domestic supply well or combination of irrigation and domestic supply. Sorted by GlobalID.

GlobalID	AW #	Field Point Class	Sample Date	Nitrate as NO3 Result (mg/L)	NO3_WQO	Notification Date	Confirmation Date*	Replacement Water Action	Date Initiated	Date Reported	User Notification Date	Manner of Notification
AGL020000000	AW0000	AGIR	1/23/2014	5	Does not exceed WQO							
AGL020000000	AW0000	AGIR	1/23/2014	2	Does not exceed WQO							
AGL020000000	AW0000	PRIW	1/23/2014	19	Does not exceed WQO							
AGL020000000	AW0000	AGIR	1/23/2014	15	Does not exceed WQO							
AGL020000000	AW0000	PRIW	1/23/2014	9	Does not exceed WQO							
AGL020000000	AW0000	AGIR	1/23/2014	6	Does not exceed WQO							
AGL020000000	AW0000	PRIW	1/23/2014	12	Does not exceed WQO							
AGL020000000	AW0000	AGIR	1/23/2014	25	Does not exceed WQO							
AGL020000000	AW0000	AGIR	1/23/2014	4	Does not exceed WQO							
AGL020000000	AW0000	AGIR	1/21/2014	112	Exceeds WQO							
AGL020000000	AW0000	AGIR	1/21/2014	137	Exceeds WQO							
AGL020000000	AW0000	AGIR	1/23/2014	45	Exceeds 80 Pct WQO							
AGL020000000	AW0000	AGIR	1/23/2014	97	Exceeds WQO							
AGL020000000	AW0000	PRIW	1/21/2014	420	Exceeds WQO	3/11/2014	3/12/2014					
AGL020000000	AW0000	AGIR	1/21/2014	76	Exceeds WQO							
AGL020000000	AW0000	AGIR	1/21/2014	197	Exceeds WQO							
AGL020000000	AW0000	AGIR	1/23/2014	231	Exceeds WQO							
AGL020000000	AW0000	PRIW	1/22/2014	58	Exceeds WQO	3/11/2014	3/12/2014					
AGL020000000	AW0000	AGIR	1/22/2014	166	Exceeds WQO							
AGL020000000	AW0000	AGIR	1/21/2014	100	Exceeds WQO							
AGL020000000	AW0000	AGIR	1/21/2014	324	Exceeds WQO							
AGL020000000	AW0000	AGIR	1/20/2014	168	Exceeds WQO							
AGL020000000	AW0000	PRIW	1/20/2014	170	Exceeds WQO	3/11/2014	3/12/2014					
AGL020000000	AW0000	AGIR	1/20/2014	241	Exceeds WQO							
AGL020000000	AW0000	AGIR	1/20/2014	94	Exceeds WQO							
AGL020000000	AW0000	AGIR	1/20/2014	84	Exceeds WQO							
AGL020000000	AW0000	AGIR	1/20/2014	79	Exceeds WQO							

CCGC Exceedance Report Replacement Water Follow Up- Submitted [DATE], 2014  
 Spring Individual Monitoring Sample Dates: [DATE], 2014

# **Exhibit J**

## Central Coast Regional Water Quality Control Board

March 21, 2014

Mr. Parry Klassen  
Executive Director  
Central Coast Groundwater Coalition  
P.O. Box 828  
Salinas, CA 93902

Dear Mr. Klassen:

### **IRRIGATED LANDS REGULATORY PROGRAM – BOARD DIRECTIVE TO ENSURE IMPLEMENTATION OF CONSISTENT DRINKING WATER NOTIFICATION AND FOLLOW-UP REPORTING PROCESSES**

At the Central Coast Water Board meeting on January 30, 2014, the Central Coast Water Board directed staff to make the Central Coast Groundwater Coalition's (Coalition) reporting of maximum contaminant level (MCL) exceedances and follow-up reporting equivalent to our non-coalition process. The Board also directed staff to document (maintain a written record) drinking water follow up actions and to require ongoing reporting regarding the adequacy of replacement water and continued use of contaminated water wells. Accordingly, we will be revising our non-coalition process and we understand that the Coalition is also currently revising its notification and documentation process. This letter provides the Coalition with the changes we expect to require the Coalition to make to its notification, documentation, and reporting process such that the two processes are aligned and credible. We provide this information to facilitate this alignment, to offer guidance, and to minimize the number of changes that the Coalition makes as it brings its process into alignment. We also provide this information in advance of our next meeting on March 26<sup>th</sup>, such that we can collectively discuss these proposed changes to better document notification, replacement water, and verification/follow up while establishing a formal written record with the Water Board as described in this letter.

Changes to the Coalition process are necessary to maintain a formal written record and tracking process at the Water Board office that demonstrates we are protecting human health and the drinking water beneficial use. Additionally, this level of documentation will provide credibility to both the Water Board's and the Coalition's notification processes in terms of documenting that timely notification and ongoing and adequate replacement water actions are taking place. The Water Board cannot delegate this responsibility to maintain a written record, or its authority to protect public health, to a third party. The Water Board also cannot rely on anecdotal, aggregated, or anonymous information or records regarding this public health/drinking water issue. Water Board staff must maintain and frequently access appropriate written records, as we currently do in our process for non-coalition farmers. While we understand this is a sensitive issue for growers, the real public health risk component of this issue outweighs the desire for privacy. Additionally, information provided through this documentation will assist Water Board staff in identifying and informing domestic well users for wells that are not on properties enrolled under the Ag Order in areas where well water can be reasonably predicted to be unsafe.

DR. JEAN-PIERRE WOLFF, CHAIR | KENNETH A. HARRIS JR., EXECUTIVE OFFICER

895 Aerovista Place, Suite 101, San Luis Obispo, CA 93401 | [www.waterboards.ca.gov/centralcoast](http://www.waterboards.ca.gov/centralcoast)

Note also that the notification process we are using for non-coalition farmers is well established and is working well. We have issued over 60 notification letters to non-coalition growers and the vast majority responded promptly and provided the necessary information. A copy of our non-coalition notification template letter, revised per Board direction, is attached for your reference (Attachment 1).

To ensure that our respective notification and follow up reporting processes are equivalent, we anticipate requiring the Coalition to revise its Drinking Water Notification (DWN) process as follows:

1. Each DWN letter shall be addressed to the Coalition "member" with a copy sent to the local public health agency, water well owner (property owner) and enrollee of the irrigated cropland (operator), if not the same as the member. The Agricultural Order defines both the property owner and operator as "Dischargers" and therefore as responsible parties. The Coalition's DWN letter shall be revised as follows:
  - a) The DWN letter shall include the farm/ranch Global Identification Number (i.e. AGL#), well name and analytical results, and the Assessor's Parcel Number (APN) in the subject line or header. This information is necessary to properly identify the specific ranch/farm and well associated with the DWN.
  - b) The DWN letter shall incorporate the following specific language:

***"Please alert all persons using the private domestic water supply well and post notifications within 10 days indicating the water poses a human health risk due to elevated nitrate concentration. The notice should include a warning against the use of this water for drinking or cooking. It may also be necessary to provide the well users with either appropriately treated drinking water or an alternative drinking water supply (e.g. bottled water). In addition, provide written notification to all new well users (e.g. tenants and owners) indicating the water poses a human health risk due to elevated nitrate concentration. Verify that treatment or alternative drinking water supplies are provided to new water well users.***

**PLEASE PROVIDE THE FOLLOWING INFORMATION IN WRITING TO THE CENTRAL COAST GROUNDWATER COALITION WITHIN 30 DAYS OF THE DATE OF THIS LETTER:** 1) Confirmation that you have notified the domestic well users, property owner of impacted well(s), posted the appropriate public health notification, provided the Water Board's nitrate guidance document (English, Spanish or Chinese versions, as appropriate), 2) Identification of contaminated well(s) used for drinking water supply and the number of people served, 3) A description of any treatment method or alternative drinking water supplies provided, both long-term and short-term, to ensure safe drinking water (e.g. bottled water, treatment system installation - stating type of treatment, well shut off, etc.) if applicable.

*Attached is a general guide regarding nitrate in drinking water, including the potential health effects associated with drinking water containing elevated levels of nitrate and general recommendations for private domestic well owners/users. This document also includes a list of resources and contacts where you can obtain additional information. For specific questions regarding the safety of your*

*private domestic well, please contact your local public health agency. Please distribute the nitrate guide to all persons using the domestic well.”*

- c) The Coalition’s DWN letter must be sent electronically to the Water Board when it is issued. Please send to Hector Hernandez at [Hector.Hernandez@Waterboard.ca.gov](mailto:Hector.Hernandez@Waterboard.ca.gov).
- d) The Coalition’s DWN letter must also include the Water Board’s nitrate guidance document (Attachment 2 to this letter) in either English, Spanish or Chinese versions, as appropriate, or comparable information that is first approved by the Water Board’s Executive Officer.
- e) The Coalition’s DWN letter must exclude using the following (or similar) language:

*“If you choose to share that information with us, we will provide it to the Regional Board, aggregated, anonymously, with information provided by others, in an effort to help them understand that there is no drinking water concern with this well. We may also note this information anecdotally and anonymously in our materials.”*

**2. Within 30-days of completing notification, the Coalition must:**

- a) Upload a list of Coalition DWN letters sent out each month, including addresses (owner and operator) Global Identification Number (i.e. AGL#), farm name, farm address, analytical results, and APN to the Coalition’s GeoTracker site on the State Water Resources Control Board’s GeoTracker database using existing Responsible Party/Consultant document upload protocol.
- b) Upload each individual Coalition DWN letter, attachments, and written response from operator (responsible parties) to the Coalition’s GeoTracker site. Please use consistent letter Title/Description: e.g. “DWN-AGL#####” and Document type: “Correspondence”. Each upload shall be for an individual DWN letter and response with specific Global Identification Number indicated in the Title/Description.
- c) Provide a list of Coalition members and/or property owners who have not provided information about notification, follow-up actions, or who have not taken actions to provide treatment or alternative drinking water supplies for well users affected by drinking water exceedances. The Central Coast Water Board staff will contact these members directly.

The anticipated requirements and modifications to the Coalition’s existing drinking water notification and follow up reporting protocol, as detailed above, are necessary to provide clarity and ensure that our respective drinking water notification protocols are as credible and transparent as possible, given the significance of this human health issue. These changes provide both documentation and confidence that all appropriate initial actions have been taken to protect public health for wells with drinking water exceedances, as required by State Board Order WQ-2013-0101. Additionally, implementation of these changes will ensure that the Coalition’s drinking water notification process is consistent with the notification process that is presently followed by the Central Coast Water Board staff for growers who comply with individual groundwater monitoring requirements, as well as consistent with the direction provided by the Water Board itself.

Mr. Parry Klassen

- 4 -

March 21, 2014

We look forward to discussing these anticipated changes in the notification and follow up reporting process at our meeting on March 26 as well as working with the Coalition to ensure safe drinking water throughout the region.

If you have any questions concerning this letter, please contact **Hector Hernandez at (805) 542-4641** or via e-mail at [Hhernandez@waterboards.ca.gov](mailto:Hhernandez@waterboards.ca.gov), or Angela Schroeter at (805) 542-4644 or via e-mail at: [Aschroeter@waterboards.ca.gov](mailto:Aschroeter@waterboards.ca.gov).

Sincerely,



Digitally signed by Kenneth A Harris Jr.  
DN: cn=Kenneth A Harris Jr., o=Central  
Coast Regional Water Quality Control  
Board, ou=Executive Officer,  
email=Ken.Harris@waterboards.ca.gov,  
c=US  
Date: 2014.03.21 12:16:30 -0700'

Kenneth A. Harris Jr.  
Executive Officer

**Attachments:**

1. Template - Drinking Water Notification Letter (Non-Coalition)
2. Resources for Growers Regarding Nitrate in Drinking Water (English, Spanish and Chinese versions)

cc:

Mr. Parry Klassen  
Central Coast Groundwater Coalition  
[pklassen@unwiredbb.com](mailto:pklassen@unwiredbb.com)

Mr. Tim Borel  
Central Coast Groundwater Coalition  
[tborel@foxyproduce.com](mailto:tborel@foxyproduce.com)

Ms. Kara Stuart  
Central Coast Groundwater Coalition  
[karamstuart@gmail.com](mailto:karamstuart@gmail.com)

Ms. Claire Wineman  
Grower-Shipper Association  
[claire.wineman@grower-shipper.com](mailto:claire.wineman@grower-shipper.com)

Ms. Abby Taylor-Silva  
Grower-Shipper Association of Central California  
[abby@growershipper.com](mailto:abby@growershipper.com)

Mr. Michael L. Johnson, LLC  
[mjohnson@mlj-llc.com](mailto:mjohnson@mlj-llc.com)

Mr. Steve Deverel  
Project Manager, HydroFocus, Inc.  
[sdeverel@hydrofocus.com](mailto:sdeverel@hydrofocus.com)

Ms. Mellissa Turner  
Project QA Officer, MLJ-LLC  
[mturner@mlj-llc.com](mailto:mturner@mlj-llc.com)

Mr. Michael Thomas  
[Mthomas@waterboards.ca.gov](mailto:Mthomas@waterboards.ca.gov)

Mr. John Robertson  
[John.Robertson@waterboards.ca.gov](mailto:John.Robertson@waterboards.ca.gov)

Mr. Hector Hernandez  
[Hhernandez@waterboards.ca.gov](mailto:Hhernandez@waterboards.ca.gov)

# **Exhibit K**



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

**MONITORING AND REPORTING PROGRAM  
ORDER NO. R3-2012-0011-01  
AS MODIFIED BY ORDER WQ-2013-0101**

**TIER 1**

**DISCHARGERS ENROLLED UNDER  
THE CONDITIONAL WAIVER OF WASTE DISCHARGE REQUIREMENTS FOR  
DISCHARGES FROM IRRIGATED LANDS**

This Monitoring and Reporting Program Order No. R3-2012-0011-01 (MRP) is issued pursuant to California Water Code (Water Code) section 13267 and 13269, which authorize the California Regional Water Quality Control Board, Central Coast Region (hereafter Central Coast Water Board) to require preparation and submittal of technical and monitoring reports. Water Code section 13269 requires a waiver of waste discharge requirements to include as a condition, the performance of monitoring and the public availability of monitoring results. The Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands Order No. R3-2012-0011 (Order) includes criteria and requirements for three tiers. This MRP sets forth monitoring and reporting requirements for **Tier 1 Dischargers** enrolled under the Order. A summary of the requirements is shown below.

**SUMMARY OF MONITORING AND REPORTING REQUIREMENTS FOR TIER 1:**

Part 1: Surface Receiving Water Monitoring and Reporting (*cooperative or individual*);  
Part 2: Groundwater Monitoring and Reporting;

Pursuant to Water Code section 13269(a)(2), monitoring requirements must be designed to support the development and implementation of the waiver program, including, but not limited to, verifying the adequacy and effectiveness of the waiver's conditions. The monitoring and reports required by this MRP are to evaluate effects of discharges of waste from irrigated agricultural operations and individual farms/ranches on waters of the state and to determine compliance with the Order.

**MONITORING AND REPORTING BASED ON TIERS**

The Order and MRP includes criteria and requirements for three tiers, based upon those characteristics of individual farms/ranches at the operation that present the highest level of waste discharge or greatest risk to water quality. Dischargers must

meet conditions of the Order and MRP for the appropriate tier that applies to their land and/or the individual farm/ranch. Within a tier, Dischargers comply with requirements based on the specific level of discharge and threat to water quality from individual farms/ranches. The lowest tier, Tier 1, applies to dischargers who discharge the lowest level of waste (amount or concentration) or pose the lowest potential to cause or contribute to an exceedance of water quality standards in waters of the State or of the United States. The highest tier, Tier 3, applies to dischargers who discharge the highest level of waste or pose the greatest potential to cause or contribute to an exceedance of water quality standards in waters of the State or of the United States. Tier 2 applies to dischargers whose discharge has a moderate threat to water quality. Water quality is defined in terms of Regional, State, or Federal numeric or narrative water quality standards. Per the Order, Dischargers may submit a request to the Executive Officer to approve transfer to a lower tier. **If the Executive Officer approves a transfer to a lower tier, any interested person may request that the Central Coast Water Board conduct a discretionary review of the Executive Officer's determination.**

## **PART 1. SURFACE RECEIVING WATER MONITORING AND REPORTING REQUIREMENTS**

Monitoring and reporting requirements for surface receiving water identified in Part 1.A. and Part 1.B. apply to Tier 1 Dischargers. Surface receiving water refers to water flowing in creeks and other surface waters of the State. Surface receiving water monitoring may be conducted through a **cooperative monitoring program**, or Dischargers may choose to conduct surface receiving water monitoring and reporting individually. Key monitoring and reporting requirements for surface receiving water are shown in Tables 1 and 2. Time schedules are shown in Table 4.

### **A. Surface Receiving Water Quality Monitoring**

1. Dischargers must elect a surface receiving water monitoring option (cooperative monitoring program or individual receiving water monitoring) to comply with surface receiving water quality monitoring requirements, and identify the option selected on the Notice of Intent (NOI).
2. Dischargers are encouraged to choose participation in a cooperative monitoring program (e.g., the existing Cooperative Monitoring Program or a similar program) to comply with receiving water quality monitoring requirements. Dischargers not participating in a cooperative monitoring program must conduct surface receiving water quality monitoring individually that achieves the same purpose.
3. Dischargers (individually or as part of a cooperative monitoring program) must conduct surface receiving water quality monitoring to a) assess the impacts of waste discharges from irrigated lands to receiving water, b) assess the status of receiving water quality and beneficial use protection

in impaired waterbodies dominated by irrigated agricultural activity, c) evaluate status, short term patterns and long term trends (five to ten years or more) in receiving water quality, d) evaluate water quality impacts resulting from agricultural discharges (including but not limited to tile drain discharges), e) evaluate stormwater quality, f) evaluate condition of existing perennial, intermittent, or ephemeral streams or riparian or wetland area habitat, including degradation resulting from erosion or agricultural discharges of waste, and g) assist in the identification of specific sources of water quality problems.

#### Surface Receiving Water Quality Sampling and Analysis Plan

4. **Within three months** of adoption of the Order, Dischargers (individually or as part of a cooperative monitoring program) must submit a surface receiving water quality Sampling and Analysis Plan and Quality Assurance Project Plan (QAPP). Dischargers (or a third party cooperative monitoring program) must develop the Sampling and Analysis Plan to describe how the proposed monitoring will achieve the objectives of the MRP and evaluate compliance with the Order. The Sampling and Analysis Plan may propose alternative monitoring site locations, adjusted monitoring parameters, and other changes as necessary to assess the impacts of waste discharges from irrigated lands to receiving water. The Executive Officer must approve the Sampling and Analysis Plan and QAPP.
5. The Sampling and Analysis Plan must include the following minimum required components:
  - a. Monitoring strategy to achieve objectives of the Order and MRP;
  - b. Map of monitoring sites with GIS coordinates;
  - c. Identification of known water quality impairments and impaired waterbodies per the 2010 Clean Water Act 303(d) List of Impaired Waterbodies (List of Impaired Waterbodies);
  - d. Identification of beneficial uses and applicable water quality standards;
  - e. Identification of applicable Total Maximum Daily Loads;
  - f. Monitoring parameters;
  - g. Monitoring schedule, including description and frequencies of monitoring events;
  - h. Description of data analysis methods;
6. The QAPP must include receiving water and site-specific information, project organization and responsibilities, and quality assurance components of the MRP. The QAPP must also include the laboratory and field requirements to be used for analyses and data evaluation. The QAPP must contain adequate detail for project and Water Board staff to

identify and assess the technical and quality objectives, measurement and data acquisition methods, and limitations of the data generated under the surface receiving water quality monitoring. All sampling and laboratory methodologies and QAPP content must be consistent with U.S. EPA methods, State Water Board's Surface Water Ambient Monitoring Program (SWAMP) protocols and the Central Coast Water Board's Central Coast Ambient Monitoring Program (CCAMP). Following U.S. EPA guidelines<sup>1</sup> and SWAMP templates<sup>2</sup>, the receiving water quality monitoring QAPP must include the following minimum required components:

- a. Project Management. This component addresses basic project management, including the project history and objectives, roles and responsibilities of the participants, and other aspects.
  - b. Data Generation and Acquisition. This component addresses all aspects of project design and implementation. Implementation of these elements ensures that appropriate methods for sampling, measurement and analysis, data collection or generation, data handling, and quality control activities are employed and are properly documented. Quality control requirements are applicable to all the constituents sampled as part of the MRP, as described in the appropriate method.
  - c. Assessment and Oversight. This component addresses the activities for assessing the effectiveness of the implementation of the project and associated QA and QC activities. The purpose of the assessment is to provide project oversight that will ensure that the QA Project Plan is implemented as prescribed.
  - d. Data Validation and Usability. This component addresses the quality assurance activities that occur after the data collection, laboratory analysis and data generation phase of the project is completed. Implementation of these elements ensures that the data conform to the specified criteria, thus achieving the MRP objectives.
7. The Central Coast Water Board may conduct an audit of contracted laboratories at any time in order to evaluate compliance with the QAPP.

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<sup>1</sup> USEPA. 2001 (2006) USEPA Requirements for Quality Assurance Project Plans (QA/R-5) Office of Environmental Information, Washington, D.C. USEPA QA/R-5

<sup>2</sup> [http://waterboards.ca.gov/water\\_issues/programs/swamp/tools.shtml#qa](http://waterboards.ca.gov/water_issues/programs/swamp/tools.shtml#qa)

8. The Sampling and Analysis Plan and QAPP, and any proposed revisions are subject to approval by the Executive Officer. The Executive Officer may also revise the Sampling and Analysis Plan, including adding, removing, or changing monitoring site locations, changing monitoring parameters, and other changes as necessary to assess the impacts of waste discharges from irrigated lands to receiving water.

#### Surface Receiving Water Quality Monitoring Sites

9. The Sampling and Analysis Plan must, at a minimum, include monitoring sites to evaluate waterbodies identified in Table 1, unless otherwise approved by the Executive Officer. The Sampling and Analysis Plan must include sites to evaluate receiving water quality impacts most directly resulting from areas of agricultural discharge (including areas receiving tile drain discharges). Site selection must take into consideration the existence of any long term monitoring sites included in related monitoring programs (e.g. CCAMP and the existing CMP). Sites may be added or modified, subject to prior approval by the Executive Officer, to better assess the pollutant loading from individual sources or the impacts to receiving waters caused by individual dischargers. Any modifications must consider sampling consistency for purposes of trend evaluation.

#### Surface Receiving Water Quality Monitoring Parameters

10. The Sampling and Analysis Plan must, at a minimum, include the following types of monitoring and evaluation parameters listed below and identified in Table 2:
  - a. Flow Monitoring;
  - b. Water Quality (physical parameters, metals, nutrients, pesticides);
  - c. Toxicity (water and sediment);
  - d. Assessment of Benthic Invertebrates;
11. All analyses must be conducted at a laboratory certified for such analyses by the State Department of Public Health (CDPH) or at laboratories approved by the Executive Officer. Unless otherwise noted, all sampling, sample preservation, and analyses must be performed in accordance with the latest edition of *Test Methods for Evaluating Solid Waste*, SW-846, U.S. EPA, and analyzed as specified herein by the above analytical methods and reporting limits indicated. Certified laboratories can be found at the web link:<http://www.cdph.ca.gov/certlic/labs/Documents/ELAPLablist.xls>
12. Water quality and flow monitoring is used to assess the sources, concentrations, and loads of waste discharges from individual

farms/ranches and groups of Dischargers to surface waters, to evaluate impacts to water quality and beneficial uses, and to evaluate the short term patterns and long term trends in receiving water quality. Monitoring data must be compared to existing numeric and narrative water quality objectives.

13. Toxicity testing is to evaluate water quality relative to the narrative toxicity objective. Water column toxicity analyses must be conducted on 100% (undiluted) sample. At sites where persistent unresolved toxicity is found, the Executive Officer may require concurrent toxicity and chemical analyses and a Toxicity Identification Evaluation (TIE) to identify the individual discharges causing of the toxicity.

#### Surface Receiving Water Quality Monitoring Frequency and Schedule

14. The Sampling and Analysis Plan must include a schedule for sampling. Timing, duration, and frequency of monitoring must be based on the land use, complexity, hydrology, and size of the waterbody. Table 2 includes minimum monitoring frequency and parameter lists. Agricultural parameters that are less common may be monitored less frequently. Modifications to the receiving water quality monitoring parameters, frequency, and schedule may be submitted for Executive Officer consideration and approval. At a minimum, the Sampling and Analysis Plan schedule must consist of monthly monitoring of common agricultural parameters in major agricultural areas, including two major storm events during the wet season (October 1 – April 30).
15. Storm event monitoring must be conducted within 18 hours of storm events, preferably including the first flush run-off event that results in significant increase in stream flow. For purposes of this MRP, a storm event is defined as precipitation producing onsite runoff (surface water flow) capable of creating significant ponding, erosion or other water quality problem. A significant storm event will generally result in greater than 1-inch of rain within a 24-hour period.
16. **Within six months** of adoption of the Order, Dischargers (individually or as part of a cooperative monitoring program) must initiate receiving water quality monitoring per the Sampling and Analysis Plan and QAPP approved by the Executive Officer.

## **B. Surface Receiving Water Quality Reporting**

### Surface Receiving Water Quality Data Submittal

1. **Within nine months** of adoption of this Order and quarterly thereafter (by January 1, April 1, July 1, and October 1), Dischargers (individually or as part of a cooperative monitoring program) must submit water quality monitoring data to the Central Coast Water Board electronically, in a format specified by the Executive Officer and compatible with SWAMP/CCAMP electronic submittal guidelines.

### Surface Receiving Water Quality Monitoring Annual Report

2. **By July 1, 2014**, and annually thereafter, Dischargers (individually or as part of a cooperative monitoring program) must submit an Annual Report electronically, in a format specified by the Executive Officer, including the following minimum elements:
  - a. Signed Transmittal Letter;
  - b. Title Page;
  - c. Table of Contents;
  - d. Executive Summary;
  - e. Summary of Exceedance Reports submitted during the reporting period;
  - f. Monitoring objectives and design;
  - g. Monitoring site descriptions and rainfall records for the time period covered;
  - h. Location of monitoring sites and map(s);
  - i. Tabulated results of all analyses arranged in tabular form so that the required information is readily discernible;
  - j. Summary of water quality data for any sites monitored as part of related monitoring programs, and used to evaluate receiving water as described in the Sampling and Analysis Plan.
  - k. Discussion of data to clearly illustrate compliance with the Order and water quality standards;
  - l. Discussion of short term patterns and long term trends in receiving water quality and beneficial use protection;
  - m. Evaluation of pesticide and toxicity analyses results, and recommendation of candidate sites for Toxicity Identification Evaluations (TIEs);
  - n. Identification of the location of any agricultural discharges observed discharging directly to surface receiving water;
  - o. Electronic data submitted in a SWAMP/CCAMP comparable format;
  - p. Sampling and analytical methods used;
  - q. Copy of chain-of-custody forms;
  - r. Field data sheets, signed laboratory reports, laboratory raw data;

- s. Associated laboratory and field quality control samples results;
- t. Summary of Quality Assurance Evaluation results;
- u. Specify the method used to obtain flow at each monitoring site during each monitoring event;
- v. Electronic or hard copies of photos obtained from all monitoring sites, clearly labeled with site ID and date;
- w. Conclusions;

## **PART 2. GROUNDWATER MONITORING AND REPORTING REQUIREMENTS**

Monitoring and reporting requirements for groundwater identified in Part 2.A. and Part 2.B. apply to Tier 1 Dischargers. Key monitoring and reporting requirements for groundwater are shown in Table 3. Time schedules are shown in Table 4.

### **A. Individual Groundwater Monitoring**

1. **Within one year** of adoption of the Order, Dischargers must initiate sampling of private domestic drinking water and agricultural groundwater wells on their farm/ranch to evaluate groundwater conditions in agricultural areas, identify areas at greatest risk for nitrogen loading and exceedance of drinking water standards, and identify priority areas for follow up actions.
2. Dischargers must sample at least one groundwater well for each farm/ranch on their operation. For farms/ranches with multiple groundwater wells, Dischargers must sample the primary irrigation well and all wells that are used or may be used for drinking water purposes. Groundwater monitoring parameters must include well screen interval depths (if available), general chemical parameters, and general cations and anions listed in Table 3.
3. Dischargers must conduct two rounds of monitoring groundwater wells, one sample collected during fall (**September - December**) and one collected during spring (**March - June**). The first round of monitoring must be completed by December 2012. These two rounds of monitoring must be repeated every 5 years. As an alternative to groundwater monitoring requirements, where existing groundwater data is available, Dischargers may submit the following for Executive Officer approval:
  - a. Existing groundwater quality data for individual farms/ranches that meet the following criteria: 1) at least one groundwater well for an individual farm/ranch, 2) a minimum of two samples collected for each well within the last five years, and 3) samples analyzed for nitrate using U.S. EPA approved analytical methods.
  - b. Reference or citation of local groundwater quality monitoring study that includes data collected within the last 5 years and



documents that local groundwater quality in the uppermost aquifer does not exceed drinking water standards.

4. Groundwater samples must be collected by a qualified third-party (e.g., consultant, technician, person conducting cooperative monitoring) using proper sampling methods, chain-of-custody, and quality assurance/quality control protocols. Groundwater samples must be collected at or near the well head before the pressure tank and prior to any well head treatment. In cases where this is not possible, the water sample must be collected from a sampling point as close to the pressure tank as possible, or from a cold-water spigot located before any filters or water treatment systems.
5. Laboratory analyses for groundwater samples must be conducted by a State certified laboratory according to U.S. EPA approved methods; unless otherwise noted, all monitoring, sample preservation, and analyses must be performed in accordance with the latest edition of *Test Methods for Evaluating Solid Waste*, SW-846, United States Environmental Protection Agency, and analyzed as specified herein by the above analytical methods and reporting limits indicated. Certified laboratories can be found at the web link : <http://www.cdph.ca.gov/certlic/labs/Documents/ELAPLablist.xls>
6. In lieu of conducting individual groundwater monitoring, Dischargers may participate in a cooperative groundwater monitoring effort to help minimize costs and to develop an effective groundwater monitoring program. Qualifying cooperative groundwater monitoring and reporting programs may include, but are not limited to, regional or subregional groundwater programs developed for other purposes as long as the proposed cooperative groundwater monitoring program meets the Central Coast Water Board's general purpose of characterizing groundwater quality and ensuring the protection of drinking water sources. An interested person may seek discretionary review by the Regional Board of the Executive Officer's approval or denial of a cooperative groundwater monitoring program. At a minimum, the cooperative groundwater monitoring effort must include sufficient monitoring to adequately characterize the groundwater aquifer(s) in the local area of the participating Dischargers, characterize the groundwater quality of the uppermost aquifer, and identify and evaluate groundwater used for domestic drinking water purposes.
  - a. Proposals for cooperative groundwater monitoring efforts, including the use of other regional or subregional groundwater monitoring programs, must be approved by the Executive Officer.
  - b. Cooperative groundwater monitoring efforts must comply with the requirements for sampling protocols and laboratory analytical methods identified in this MRP, including parameters listed in

Table 3, or propose a functional equivalent that meets the same objectives and purposes as individual groundwater monitoring.

- c. The cooperative groundwater monitoring program must report results consistent with individual groundwater reporting defined in part 2.B, or report results in a manner that is consistent with that approved by the Executive Officer in his or her approval of the cooperative groundwater monitoring proposal.
- d. Dischargers electing to participate in a cooperative groundwater monitoring effort must convey this election to the Central Coast Water Board **by August 1, 2012**, and the individual groundwater monitoring requirements shall not apply as long as a cooperative groundwater monitoring proposal for that Discharger's area is submitted within one (1) year of adoption of this Order. If no cooperative groundwater monitoring proposal for that Discharger's area is submitted within one (1) year of adoption of this Order, then the individual groundwater monitoring provisions shall apply and the Discharger shall have two (2) years from the adoption of this Order to comply with the provisions identified in Part 2. Notwithstanding the foregoing, cooperative groundwater monitoring proposals may be submitted between September 24, 2013, and November 1, 2013. Dischargers who have not joined a cooperative groundwater monitoring group prior to September 24, 2013, may participate in an approved cooperative groundwater monitoring program, provided they have completed two rounds of monitoring as required under individual groundwater monitoring requirements.
- e. Dischargers electing to participate in an approved cooperative groundwater monitoring program must convey this election to the administrator of the cooperative monitoring program **within 60 days of Executive Officer approval of the cooperative groundwater monitoring proposal**.
- f. The administrator of an approved groundwater monitoring program must provide the Executive Officer with a list of participants **by September 1, 2013**.
- g. Dischargers who participate in a cooperative groundwater monitoring program approved by the Executive Officer are responsible for the successful implementation of that program. This individual discharger responsibility has two consequences if the cooperative monitoring program is not successfully implemented:

- 1) The Water Board or Executive Officer will require individual dischargers to conduct individual monitoring per the requirements of the Ag Order.
  - 2) The Water Board may take enforcement action against individual dischargers. The failure of a third-party group to successfully implement an approved program cannot be used as an excuse for lack of individual discharger compliance.
- h. Because drinking water evaluation is a very high priority, the cooperative groundwater monitoring proposals must, at a minimum, include one or more of the following approaches for each of the participating Dischargers' wells that is or may be used for drinking water purposes; (1) direct sampling; (2) submission of existing data for the well if it has been sampled and analyzed for nitrate using U.S. EPA approved methods at least twice within the last five years; or (3) a statistically valid projection of groundwater quality at the location of the well. In addition, each of the participating Dischargers' wells that is or may be used for drinking water that is projected to have a nitrate concentration between 22.5 and 45 mg/L nitrate as NO<sub>3</sub> (or between 5 and 10 mg/L nitrate + nitrite as N) must be individually sampled. Each of the participating Dischargers' wells that is or may be used for drinking water that has a nitrate concentration between 36 and 45 mg/L nitrate as NO<sub>3</sub> (or between 8 and 10 mg/L nitrate + nitrite as N) must have a repeat sample taken within 12 months and must be sampled annually thereafter unless an alternate sampling schedule based on trending data for the well is approved by the Executive Officer. Consideration shall be given to the timing of all sampling so that potential seasonal fluctuations and other variables are accounted for, in order that the wells are sampled at the highest potential nitrate value to the extent practicable. Cooperative groundwater monitoring program work must be scheduled so as to make drinking water evaluation the first priority. Drinking water quality information must be reported as it becomes available, and all of the requirements of this paragraph, with the exception of any repeat sampling, must be completed by December 1, 2014.
7. If a discharger conducting individual groundwater monitoring or a third party conducting cooperative groundwater monitoring determines that water in any well that is used or may be used for drinking water exceeds or is projected to exceed 45 mg/L of nitrate as NO<sub>3</sub> (or 10 mg/L of nitrate + nitrite as N), the discharger or third party must provide notice to the

Central Coast Water Board within 24 hours of learning of the exceedance or projected exceedance. For wells on a Discharger's farm/ranch, the Central Coast Water Board will require that the Discharger notify the users within 10 days. For all other wells, the Central Coast Water Board will notify the users promptly.

## **B. Individual Groundwater Reporting**

1. **By October 1, 2013**, Dischargers must submit groundwater monitoring results and information, electronically, in a format specified by the Executive Officer. Dischargers must include the following information:
  - a. Signed transmittal letter;
  - b. Number of groundwater wells present at each farm/ranch;
  - c. Identification of any groundwater wells abandoned or destroyed (including method destroyed) in compliance with the Order;
  - d. Owner-assigned well identification;
  - e. State identification number, if available;
  - f. Well location (latitude and longitude);
  - g. Water-use category (e.g., domestic drinking water, agricultural);
  - h. Identification of primary irrigation well;
  - i. Well construction information (e.g., total depth, screened intervals, depth to water), as available;
  - j. Use for fertigation or chemigation;
  - k. Presence and type of back flow prevention devices;
  - l. Photo-documentation of well condition and back flow prevention device (**photos must be maintained in the Farm Plan and submitted upon request of the Executive Officer**);
  - m. Identification of wells sampled to comply with the Order and MRP;
  - n. Laboratory data must be compatible with the Water Board's Groundwater Ambient Monitoring and Assessment (GAMA) Program, and GeoTracker electronic deliverable format (EDF).

**Note: The above information (a-n) is reported electronically in the Notice of Intent and groundwater reporting to the GeoTracker data management system. It is not necessary for Dischargers to prepare and submit a separate technical report that includes this information.**

## **PART 3. GENERAL MONITORING AND REPORTING REQUIREMENTS**

### **A. Submittal of Technical Reports**

1. Dischargers must submit reports in a format specified by the Executive Officer. A transmittal letter must accompany each report, containing the

following penalty of perjury statement signed by the Discharger or the Discharger's authorized agent:

*"In compliance with Water Code §13267, I certify under penalty of perjury that this document and all attachments were prepared by me, or under my direction or supervision following a system designed to assure that qualified personnel properly gather and evaluate the information submitted. To the best of my knowledge and belief, this document and all attachments are true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment".*

2. If the Discharger asserts that all or a portion of a report submitted pursuant to this Order is subject to an exemption from public disclosure (e.g. trade secrets or secret processes), the Discharger must provide an explanation of how those portions of the reports are exempt from public disclosure. The Discharger must clearly indicate on the cover of the report (typically an electronic submittal) that the Discharger asserts that all or a portion of the report is exempt from public disclosure, submit a complete report with those portions that are asserted to be exempt in redacted form, submit separately (in a separate electronic file) unredacted pages (to be maintained separately by staff). The Central Coast Water Board staff will determine whether any such report or portion of a report qualifies for an exemption from public disclosure. If the Central Coast Water Board staff disagrees with the asserted exemption from public disclosure, the Central Coast Water Board staff will notify the Discharger prior to making such report or portions of such report available for public inspection. In the interest of public health and safety, the Central Coast Water Board will not make available for public inspection, the precise location of any groundwater well monitored in compliance with this Order. Consistent with the reporting of groundwater wells on GeoTracker, groundwater well location and data will only be referenced within a one-half mile radius of the actual well location.

## **B. Enforcement and Violations**

1. Monitoring reports are required pursuant to Section 13267 of the California Water Code. Pursuant to Section 13268 of the Water Code, a violation of a request made pursuant to Section 13267 may subject you to civil liability assessment of up to \$1000 per day.

## **C. Executive Officer Authority**

1. The Executive Officer revised this MRP consistent with the State Water Resources Control Board Order WQ-2013-0101 adopted on September 24, 2013.

2. The Executive Officer may revise this MRP as necessary, and Dischargers must comply with the MRP as revised by the Executive Officer. Specifically, the Executive Officer may increase monitoring and reporting requirements where monitoring results, pesticide use patterns, or other indicators suggest that the increase is warranted due to an increased threat to water quality. Additionally, the Executive Officer can reduce monitoring and reporting requirements, including adjusting time schedules, where growers are coordinating efforts at watershed or subwatershed scales or where regional treatment facilities are implemented, or other indicators suggest that the reduction is warranted due to a reduced threat to water quality.



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Kenneth A. Harris, Jr.  
Executive Officer

June 5, 2014

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Date

**Table 1. Major Waterbodies in Agricultural Areas<sup>1</sup>**

Hydrologic SubArea	Waterbody Name	Hydrologic SubArea	Waterbody Name
30510	Pajaro River	30920	Quail Creek
30510	Salsipuedes Creek	30920	Salinas Reclamation Canal
30510	Watsonville Slough	31022	Chorro Creek
30510	Watsonville Creek <sup>2</sup>	31023	Los Osos Creek
30510	Beach Road Ditch <sup>2</sup>	31023	Warden Creek
30530	Carnadero Creek	31024	San Luis Obispo Creek
30530	Furlong Creek <sup>2</sup>	31024	Prefumo Creek
30530	Llagas Creek	31031	Arroyo Grande Creek
30530	Miller's Canal	31031	Los Berros Creek
30530	San Juan Creek	31210	Bradley Canyon Creek
30530	Tesquisquita Slough	31210	Bradley Channel
30600	Moro Cojo Slough	31210	Green Valley Creek
30910	Alisal Slough	31210	Main Street Canal
30910	Blanco Drain	31210	Orcutt Solomon Creek
30910	Old Salinas River	31210	Oso Flaco Creek
30910	Salinas River (below Gonzales Rd.)	31210	Little Oso Flaco Creek
30920	Salinas River (above Gonzales Rd. and below Nacimiento R.)	31210	Santa Maria River
30910	Santa Rita Creek <sup>2</sup>	31310	San Antonio Creek <sup>2</sup>
30910	Tembladero Slough	31410	Santa Ynez River
30920	Alisal Creek	31531	Bell Creek
30920	Chualar Creek	31531	Glenn Annie Creek
30920	Espinosa Slough	31531	Los Carneros Creek <sup>2</sup>
30920	Gabilan Creek	31534	Arroyo Paredon Creek
30920	Natividad Creek	31534	Franklin Creek

<sup>1</sup> At a minimum, sites must be included for these waterbodies in agricultural areas, unless otherwise approved by the Executive Officer. Sites may be proposed for addition or modification to better assess the impacts of waste discharges from irrigated lands to surface water. Dischargers choosing to comply with surface receiving water quality monitoring, individually (not part of a cooperative monitoring program) must only monitor sites for waterbodies receiving the discharge.

<sup>2</sup> These creeks are included because they are newly listed waterbodies on the 2010 303(d) list of Impaired Waters that are associated with areas of agricultural discharge.

**Table 2. Surface Receiving Water Quality Monitoring Parameters**

Parameters and Tests	RL <sup>3</sup>	Monitoring Frequency <sup>1</sup>
<b>Photo Monitoring</b>		
Upstream and downstream photographs at monitoring location		With every monitoring event
<b>WATER COLUMN SAMPLING</b>		
<b>Physical Parameters and General Chemistry</b>		
Flow (field measure) (CFS) following SWAMP field SOP <sup>9</sup>	25	Monthly, including 2 stormwater events
pH (field measure)	0.1	"
Electrical Conductivity (field measure) (uS/cm)	2.5	"
Dissolved Oxygen (field measure) (mg/L)	0.1	"
Temperature (field measure) (°C)	0.1	"
Turbidity (NTU)	0.5	"
Total Dissolved Solids (mg/L)	10	"
Total Suspended Solids (mg/L)	0.5	"
<b>Nutrients</b>		
Total Nitrogen (mg/L)	0.5	Monthly, including 2 stormwater events
Nitrate + Nitrite (as N) (mg/L)	0.1	"
Total Ammonia (mg/L)	0.1	"
Unionized Ammonia (calculated value, mg/L)		"
Total Phosphorus (as P) (mg/L)	-	"
Soluble Orthophosphate (mg/L)	0.01	"
Water column chlorophyll a (mg/L)	0.002	"
Algae cover, Floating Mats, % coverage	-	"
Algae cover, Attached, % coverage	-	"
<b>Water Column Toxicity Test</b>		
Algae - <i>Selenastrum capricornutum</i> , 4 day	-	Twice in dry season, twice in wet season
Water Flea – <i>Ceriodaphnia</i> (7-day chronic)	-	"
Fathead Minnow - <i>Pimephales promelas</i> (7-day chronic)	-	"
Toxicity Identification Evaluation (TIE)	-	As directed by Executive Officer
<b>Pesticides<sup>2</sup> (ug/L)</b>		
<b>Carbamates</b>		
Aldicarb	0.05	4 times, concurrent with water toxicity monitoring, in second or third year of Order term <sup>10, 11</sup>
Carbaryl	0.05	"



MRP NO. R3-2012-0011-01 (TIER 1)  
 CONDITIONAL WAIVER OF  
 WASTE DISCHARGE REQUIREMENTS  
 FOR DISCHARGES FROM IRRIGATED LANDS

Parameters and Tests	RL <sup>3</sup>	Monitoring Frequency <sup>1</sup>
Carbofuran	0.05	"
Methiocarb	0.05	"
Methomyl	0.05	"
Oxamyl	0.05	"
<b>Organophosphate Pesticides</b>		
Azinphos-methyl	0.02	"
Chlorpyrifos	0.005	"
Diazinon	0.005	"
Dichlorvos	0.01	"
Dimethoate	0.01	"
Dimeton-s	0.005	"
Disulfoton (Disyton)	0.005	"
Malathion	0.005	"
Methamidophos	0.02	"
Methidathion	0.02	"
Parathion-methyl	0.02	"
Phorate	0.01	"
Phosmet	0.02	"
<b>Herbicides</b>		
Atrazine	0.05	"
Cyanazine	0.20	"
Diuron	0.05	"
Glyphosate	2.0	"
Linuron	0.1	"
Paraquat	0.02	"
Simazine	0.05	"
Trifluralin	0.05	"
<b>Metals (ug/L)</b>		
Arsenic (total) <sup>5,7</sup>	0.3	4 times, concurrent with water toxicity monitoring, in second or third year of Order term <sup>10, 11</sup>
Boron (total) <sup>6,7</sup>	10	"
Cadmium (total & dissolved) <sup>4,5,7</sup>	0.01	"
Copper (total and dissolved) <sup>4,7</sup>	0.01	"
Lead (total and dissolved) <sup>4,7</sup>	0.01	"
Nickel (total and dissolved) <sup>4,7</sup>	0.02	"
Molybdenum (total) <sup>7</sup>	1	"
Selenium (total) <sup>7</sup>	0.30	"
Zinc (total and dissolved) <sup>4,5,7</sup>	0.10	"
<b>Other (ug/L)</b>		
Total Phenolic Compounds <sup>8</sup>	10	4 times, concurrent with water toxicity monitoring, in second or third year of Order term <sup>10, 11</sup>
Hardness (mg/L as CaCO <sub>3</sub> )	1	"
Total Organic Carbon (ug/L)	0.6	"

Parameters and Tests	RL <sup>3</sup>	Monitoring Frequency <sup>1</sup>
<b>SEDIMENT SAMPLING</b>		
Sediment Toxicity - Hyalella azteca 10-day		Annually
Benthic Invertebrate and associated Physical Habitat Assessment	SWAMP SOP	Once during the second or third year of Order concurrent with sediment toxicity sampling <sup>10</sup>
<b>Pyrethroid Pesticides in Sediment (ug/kg)</b>		
Gamma-cyhalothrin	2	Once during second or third year of Order, concurrent with sediment toxicity sampling <sup>10</sup>
Lambda-cyhalothrin	2	"
Bifenthrin	2	"
Beta-cyfluthrin	2	"
Cyfluthrin	2	"
Esfenvalerate	2	"
Permethrin	2	"
Cypermethrin	2	"
Danitol	2	"
Fenvalerate	2	"
Fluvalinate	2	"
<b>Organochlorine Pesticides in Sediment</b>		
DCCA	10	"
Dicofol	2	"
<b>Other Monitoring in Sediment<sup>6</sup></b>		
Chlorpyrifos (ug/kg)	2	"
Total Organic Carbon	0.01%	"
Sulfide		"
Sediment Grain Size Analysis	1%	"

<sup>1</sup>Monitoring is ongoing through all five years of the Order, unless otherwise specified. Monitoring frequency may be used as a guide for developing alternative Sampling and Analysis Plan.

<sup>2</sup>Pesticide list may be modified based on specific pesticide use in Central Coast Region. Analytes on this list must be reported, at a minimum.

<sup>3</sup>Reporting Limit, taken from SWAMP where applicable.

<sup>4</sup>Holmgren, Meyer, Cheney and Daniels, 1993. Cadmium, Lead, Zinc, Copper and Nickel in Agricultural Soils of the United States. J. of Environ. Quality 22:335-348.

<sup>5</sup>Sax and Lewis, ed. 1987. Hawley's Condensed Chemical Dictionary. 11<sup>th</sup> ed. New York: Van Nostrand Reinhold Co., 1987. Zinc arsenate is an insecticide.

<sup>6</sup><http://www.coastalagro.com/products/labels/9%25BORON.pdf>; Boron is applied directly or as a component of fertilizers as a plant nutrient.

<sup>7</sup>Madramootoo, Johnston, Willardson, eds. 1997. Management of Agricultural Drainage Water Quality. International Commission on Irrigation and Drainage. U.N. FAO. SBN 92-6-104058.3.

<sup>8</sup><http://cat.inist.fr/?aModele=afficheN&cpsid=14074525>; Phenols are breakdown products of herbicides and pesticides. Phenols can be directly toxic and cause endocrine disruption.

<sup>9</sup>See SWAMP field measures SOP, p. 17

mg/L – milligrams per liter; ug/L – micrograms per liter; ug/kg – micrograms per kilogram;

NTU – Nephelometric Turbidity Units; CFS – cubic feet per second;

<sup>10</sup>Enhanced monitoring (for pesticides and metals) in sediment and water chemistry may be conducted in either the second or the third year of the Order term, but at any given site all enhanced monitoring must be done in the same

year.<sup>11</sup> One of the four rounds of enhanced water sampling should be conducted concurrently with bioassessment and sediment monitoring if possible.

**Table 3. Groundwater Sampling Parameters**

Parameter	RL	Analytical Method <sup>3</sup>	Units
pH	0.1	Field or Laboratory Measurement EPA General Methods	pH Units
Specific Conductance	2.5		µS/cm
Total Dissolved Solids	10		mg/L
Total Alkalinity as CaCO <sub>3</sub>		EPA Method 310.1 or 310.2	
Calcium	0.05	General Cations <sup>1</sup> EPA 200.7, 200.8, 200.9	
Magnesium	0.02		
Sodium	0.1		
Potassium	0.1		
Sulfate (SO <sub>4</sub> )	1.0	General Anions EPA Method 300 or EPA Method 353.2	
Chloride	0.1		
Nitrate + Nitrite (as N) <sup>2</sup> or Nitrate as NO <sub>3</sub>	0.1		

<sup>1</sup>General chemistry parameters (major cations and anions) represent geochemistry of water bearing zone and assist in evaluating quality assurance/quality control of groundwater monitoring and laboratory analysis.

<sup>2</sup>The MRP allows analysis of "nitrate plus nitrite" to represent nitrate concentrations. The "nitrate plus nitrite" analysis allows for extended laboratory holding times and relieves the Discharger of meeting the short holding time required for nitrate. Dischargers may also analyze for Nitrate as NO<sub>3</sub>.

<sup>3</sup>Dischargers may use alternative analytical methods approved by EPA.

RL – Reporting Limit; µS/cm – micro siemens per centimeter

**Table 4. Tier 1 - Time Schedule for Key Monitoring and Reporting Requirements**

REQUIREMENT	TIME SCHEDULE <sup>1</sup>
Submit Quality Assurance Project Plan and Sampling And Analysis Plan for Surface Receiving Water Quality Monitoring ( <i>individually or through cooperative monitoring program</i> )	Within three months
Initiate surface receiving water quality monitoring ( <i>individually or through cooperative monitoring program</i> )	Within six months
Submit surface receiving water quality monitoring data ( <i>individually or through cooperative monitoring program</i> )	Within nine months, quarterly thereafter (January 1, April 1, July 1, and October 1)
Submit surface receiving water quality Annual Monitoring Report ( <i>individually or through cooperative monitoring program</i> )	By July 1 2014; annually thereafter by July 1
Initiate monitoring of groundwater wells	Within one year
Submit groundwater monitoring results	October 1, 2013

<sup>1</sup>Dates are relative to adoption of this Order, unless otherwise specified.

# **Exhibit L**

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

**MONITORING AND REPORTING PROGRAM  
ORDER NO. R3-2012-0011-02  
AS MODIFIED BY ORDER WQ-2013-0101**

**TIER 2**

**DISCHARGERS ENROLLED UNDER  
THE CONDITIONAL WAIVER OF WASTE DISCHARGE REQUIREMENTS FOR  
DISCHARGES FROM IRRIGATED LANDS**

This Monitoring and Reporting Program Order No. R3-2012-0011-02 (MRP) is issued pursuant to California Water Code (Water Code) section 13267 and 13269, which authorize the California Regional Water Quality Control Board, Central Coast Region (hereafter Central Coast Water Board) to require preparation and submittal of technical and monitoring reports. Water Code section 13269 requires a waiver of waste discharge requirements to include as a condition, the performance of monitoring and the public availability of monitoring results. The Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands Order No. R3-2012-0011 (Order) includes criteria and requirements for three tiers. This MRP sets forth monitoring and reporting requirements for **Tier 2 Dischargers** enrolled under the Order. A summary of the requirements is shown below.

**SUMMARY OF MONITORING AND REPORTING REQUIREMENTS FOR TIER 2:**

- Part 1: Surface Receiving Water Monitoring and Reporting (*cooperative or individual*);
- Part 2: Groundwater Monitoring and Reporting;  
Nitrate Loading Risk Factor Determination and Total Nitrogen Reporting  
(*required for subset of Tier 2 Dischargers if farm/ranch has high nitrate loading risk to groundwater*);
- Part 3: Annual Compliance Form;
- Part 4: Photo Monitoring  
(*required for subset of Tier 2 Dischargers if farm/ranch contains or is adjacent to a waterbody impaired for temperature, turbidity or sediment*);

Pursuant to Water Code section 13269(a)(2), monitoring requirements must be designed to support the development and implementation of the waiver program, including, but not limited to, verifying the adequacy and effectiveness of the waiver's conditions. The monitoring and reports required by this MRP are to evaluate effects of discharges of waste from irrigated agricultural operations and individual farms/ranches on waters of the state and to determine compliance with the Order.

## **MONITORING AND REPORTING BASED ON TIERS**

The Order and MRP includes criteria and requirements for three tiers, based upon those characteristics of the individual farms/ranches at the operation that present the highest level of waste discharge or greatest risk to water quality. Dischargers must meet conditions of the Order and MRP for the appropriate tier that applies to their land and/or the individual farm/ranch. Within a tier, Dischargers comply with requirements based on the specific level of discharge and threat to water quality from individual farms/ranches. The lowest tier, Tier 1, applies to dischargers who discharge the lowest level of waste (amount or concentration) or pose the lowest potential to cause or contribute to an exceedance of water quality standards in waters of the State or of the United States. The highest tier, Tier 3, applies to dischargers who discharge the highest level of waste or pose the greatest potential to cause or contribute to an exceedance of water quality standards in waters of the State or of the United States. Tier 2 applies to dischargers whose discharge has a moderate threat to water quality. Water quality is defined in terms of Regional, State, or Federal numeric or narrative water quality standards. Per the Order, Dischargers may submit a request to the Executive Officer to approve transfer to a lower tier. **If the Executive Officer approves a transfer to a lower tier, any interested person may request that the Central Coast Water Board conduct a discretionary review of the Executive Officer's determination.**

### **PART 1. SURFACE RECEIVING WATER MONITORING AND REPORTING REQUIREMENTS**

Monitoring and reporting requirements for surface receiving water identified in Part 1.A. and Part 1.B. apply to Tier 2 Dischargers. Surface receiving water refers to water flowing in creeks and other surface waters of the State. Surface receiving water monitoring may be conducted through a **cooperative monitoring program**, or Dischargers may choose to conduct surface receiving water monitoring and reporting individually. Key monitoring and reporting requirements for surface receiving water are shown in Tables 1 and 2. Time schedules are shown in Table 5.

#### **A. Surface Receiving Water Quality Monitoring**

1. Dischargers must elect a surface receiving water monitoring option (cooperative monitoring program or individual receiving water monitoring) to comply with surface receiving water quality monitoring requirements, and identify the option selected on the Notice of Intent (NOI).
2. Dischargers are encouraged to choose participation in a cooperative monitoring program (e.g. the existing Cooperative Monitoring Program or a similar program) to comply with receiving water quality monitoring requirements. Dischargers not participating in a cooperative monitoring

program must conduct surface receiving water quality monitoring individually that achieves the same purpose.

3. Dischargers (individually or as part of a cooperative monitoring program) must conduct surface receiving water quality monitoring to a) assess the impacts of waste discharges from irrigated lands to receiving water, b) assess the status of receiving water quality and beneficial use protection in impaired waterbodies dominated by irrigated agricultural activity, c) evaluate status, short term patterns and long term trends (five to ten years or more) in receiving water quality, d) evaluate water quality impacts resulting from agricultural discharges (including but not limited to tile drain discharges), e) evaluate stormwater quality, f) evaluate condition of existing perennial, intermittent, or ephemeral streams or riparian or wetland area habitat, including degradation resulting from erosion or agricultural discharges of waste, and g) assist in the identification of specific sources of water quality problems.

#### Surface Receiving Water Quality Sampling and Analysis Plan

4. **Within three months** of adoption of the Order, Dischargers (individually or as part of a cooperative monitoring program) must submit a surface receiving water quality Sampling and Analysis Plan and Quality Assurance Project Plan (QAPP). Dischargers (or a third party cooperative monitoring program) must develop the Sampling and Analysis Plan to describe how the proposed monitoring will achieve the objectives of the MRP and evaluate compliance with the Order. The Sampling and Analysis Plan may propose alternative monitoring site locations, adjusted monitoring parameters, and other changes as necessary to assess the impacts of waste discharges from irrigated lands to receiving water. The Executive Officer must approve the Sampling and Analysis Plan and QAPP.
5. The Sampling and Analysis Plan must include the following minimum required components:
  - a. Monitoring strategy to achieve objectives of the Order and MRP;
  - b. Map of monitoring sites with GIS coordinates;
  - c. Identification of known water quality impairments and impaired waterbodies per the 2010 Clean Water Act 303(d) List of Impaired Waterbodies (List of Impaired Waterbodies);
  - d. Identification of beneficial uses and applicable water quality standards;
  - e. Identification of applicable Total Maximum Daily Loads;
  - f. Monitoring parameters;
  - g. Monitoring schedule, including description and frequencies of monitoring events;

h. Description of data analysis methods;

6. The QAPP must include receiving water and site-specific information, project organization and responsibilities, and quality assurance components of the MRP. The QAPP must also include the laboratory and field requirements to be used for analyses and data evaluation. The QAPP must contain adequate detail for project and Water Board staff to identify and assess the technical and quality objectives, measurement and data acquisition methods, and limitations of the data generated under the surface receiving water quality monitoring. All sampling and laboratory methodologies and QAPP content must be consistent with U.S. EPA methods, State Water Board's Surface Water Ambient Monitoring Program (SWAMP) protocols and the Central Coast Water Board's Central Coast Ambient Monitoring Program (CCAMP). Following U.S. EPA guidelines<sup>1</sup> and SWAMP templates<sup>2</sup>, the receiving water quality monitoring QAPP must include the following minimum required components:
  - a. Project Management. This component addresses basic project management, including the project history and objectives, roles and responsibilities of the participants, and other aspects.
  - b. Data Generation and Acquisition. This component addresses all aspects of project design and implementation. Implementation of these elements ensures that appropriate methods for sampling, measurement and analysis, data collection or generation, data handling, and quality control activities are employed and are properly documented. Quality control requirements are applicable to all the constituents sampled as part of the MRP, as described in the appropriate method.
  - c. Assessment and Oversight. This component addresses the activities for assessing the effectiveness of the implementation of the project and associated QA and QC activities. The purpose of the assessment is to provide project oversight that will ensure that the QA Project Plan is implemented as prescribed.
  - d. Data Validation and Usability. This component addresses the quality assurance activities that occur after the data collection, laboratory analysis and data generation phase of the project is completed. Implementation of these elements ensures that the

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<sup>1</sup> USEPA. 2001 (2006) USEPA Requirements for Quality Assurance Project Plans (QA/R-5) Office of Environmental Information, Washington, D.C. USEPA QA/R-5

<sup>2</sup> [http://waterboards.ca.gov/water\\_issues/programs/swamp/tools.shtml#qa](http://waterboards.ca.gov/water_issues/programs/swamp/tools.shtml#qa)



data conform to the specified criteria, thus achieving the MRP objectives.

7. The Central Coast Water Board may conduct an audit of contracted laboratories at any time in order to evaluate compliance with the QAPP.
8. The Sampling and Analysis Plan and QAPP, and any proposed revisions are subject to approval by the Executive Officer. The Executive Officer may also revise the Sampling and Analysis Plan, including adding, removing, or changing monitoring site locations, changing monitoring parameters, and other changes as necessary to assess the impacts of waste discharges from irrigated lands to receiving water.

#### Surface Receiving Water Quality Monitoring Sites

9. The Sampling and Analysis Plan must, at a minimum, include monitoring sites to evaluate waterbodies identified in Table 1, unless otherwise approved by the Executive Officer. The Sampling and Analysis Plan must include sites to evaluate receiving water quality impacts most directly resulting from areas of agricultural discharge (including areas receiving tile drain discharges). Site selection must take into consideration the existence of any long term monitoring sites included in related monitoring programs (e.g. CCAMP and the existing CMP). Sites may be added or modified, subject to prior approval by the Executive Officer, to better assess the pollutant loading from individual sources or the impacts to receiving waters caused by individual discharges. Any modifications must consider sampling consistency for purposes of trend evaluation.

#### Surface Receiving Water Quality Monitoring Parameters

10. The Sampling and Analysis Plan must, at a minimum, include the following types of monitoring and evaluation parameters listed below and identified in Table 2:
  - a. Flow Monitoring;
  - b. Water Quality (physical parameters, metals, nutrients, pesticides);
  - c. Toxicity (water and sediment);
  - d. Assessment of Benthic Invertebrates;
11. All analyses must be conducted at a laboratory certified for such analyses by the State Department of Public Health (CDPH) or at laboratories approved by the Executive Officer. Unless otherwise noted, all sampling, sample preservation, and analyses must be performed in accordance with the latest edition of *Test Methods for Evaluating Solid Waste*, SW-846, U.S.

EPA, and analyzed as specified herein by the above analytical methods and reporting limits indicated. Certified laboratories can be found at the web link:<http://www.cdph.ca.gov/certlic/labs/Documents/ELAPLablist.xls>

12. Water quality and flow monitoring is used to assess the sources, concentrations, and loads of waste discharges from individual farms/ranches and groups of dischargers to surface waters, to evaluate impacts to water quality and beneficial uses, and to evaluate the short term patterns and long term trends in receiving water quality. Monitoring data must be compared to existing numeric and narrative water quality objectives.
13. Toxicity testing is to evaluate water quality relative to the narrative toxicity objective. Water column toxicity analyses must be conducted on 100% (undiluted) sample. At sites where persistent unresolved toxicity is found, the Executive Officer may require concurrent toxicity and chemical analyses and a Toxicity Identification Evaluation (TIE) to identify the individual discharges causing the toxicity.

#### Surface Receiving Water Quality Monitoring Frequency and Schedule

14. The Sampling and Analysis Plan must include a schedule for sampling. Timing, duration, and frequency of monitoring must be based on the land use, complexity, hydrology, and size of the waterbody. Table 2 includes minimum monitoring frequency and parameter lists. Agricultural parameters that are less common may be monitored less frequently. Modifications to the receiving water quality monitoring parameters, frequency, and schedule may be submitted for Executive Officer consideration and approval. At a minimum, the Sampling and Analysis Plan schedule must consist of monthly monitoring of common agricultural parameters in major agricultural areas, including two major storm events during the wet season (October 1 – April 30).
15. Storm event monitoring must be conducted within 18 hours of storm events, preferably including the first flush run-off event that results in significant increase in stream flow. For purposes of this MRP, a storm event is defined as precipitation producing onsite runoff (surface water flow) capable of creating significant ponding, erosion or other water quality problem. A significant storm event will generally result in greater than 1-inch of rain within a 24-hour period.
16. **Within six months** of adoption of the Order, Dischargers (individually or as part of a cooperative monitoring program) must initiate receiving water quality monitoring per the Sampling and Analysis Plan and QAPP approved by the Executive Officer.

## **B. Surface Receiving Water Quality Reporting**

### Surface Receiving Water Quality Data Submittal

1. **Within nine months** of adoption of this Order and quarterly thereafter (by January 1, April 1, July 1, and October 1), Dischargers (individually or as part of a cooperative monitoring program) must submit water quality monitoring data to the Central Coast Water Board electronically, in a format specified by the Executive Officer and compatible with SWAMP/CCAMP electronic submittal guidelines.

### Surface Receiving Water Quality Monitoring Annual Report

2. **By July 1, 2014**, and annually thereafter, Dischargers (individually or as part of a cooperative monitoring program) must submit an Annual Report, electronically, in a format specified by the Executive Officer including the following minimum elements:
  - a. Signed Transmittal Letter;
  - b. Title Page;
  - c. Table of Contents;
  - d. Executive Summary;
  - e. Summary of Exceedance Reports submitted during the reporting period;
  - f. Monitoring objectives and design;
  - g. Monitoring site descriptions and rainfall records for the time period covered;
  - h. Location of monitoring sites and map(s);
  - i. Tabulated results of all analyses arranged in tabular form so that the required information is readily discernible;
  - j. Summary of water quality data for any sites monitored as part of related monitoring programs, and used to evaluate receiving water as described in the Sampling and Analysis Plan.
  - k. Discussion of data to clearly illustrate compliance with the Order and water quality standards;
  - l. Discussion of short term patterns and long term trends in receiving water quality and beneficial use protection;
  - m. Evaluation of pesticide and toxicity analyses results, and recommendation of candidate sites for Toxicity Identification Evaluations (TIEs);
  - n. Identification of the location of any agricultural discharges observed discharging directly to surface receiving water;
  - o. Laboratory data submitted electronically in a SWAMP/CCAMP comparable format;
  - p. Sampling and analytical methods used;

- q. Copy of chain-of-custody forms;
- r. Field data sheets, signed laboratory reports, laboratory raw data;
- s. Associated laboratory and field quality control samples results;
- t. Summary of Quality Assurance Evaluation results;
- u. Specify the method used to obtain flow at each monitoring site during each monitoring event;
- v. Electronic or hard copies of photos obtained from all monitoring sites, clearly labeled with site ID and date;
- w. Conclusions;

## **PART 2. GROUNDWATER MONITORING AND REPORTING REQUIREMENTS**

Monitoring and reporting requirements for groundwater identified in Part 2.A., Part 2.B., and Part 2.C. apply to Tier 2 Dischargers. Key monitoring and reporting requirements for groundwater are shown in Table 3. Time schedules are shown in Table 5.

### **A. Individual Groundwater Monitoring**

1. **Within one year** of adoption of the Order, Dischargers must initiate sampling of private domestic drinking water and agricultural groundwater wells on their farm/ranch to evaluate groundwater conditions in agricultural areas, identify areas at greatest risk for nitrogen loading and exceedance of drinking water standards, and identify priority areas for follow up actions.
2. Dischargers must sample at least one groundwater well for each farm/ranch on their operation. For farms/ranches with multiple groundwater wells, Dischargers must sample the primary irrigation well and all wells that are used or may be used for drinking water purposes. Groundwater monitoring parameters must include well screen interval depths (if available), general chemical parameters, and general cations and anions listed in Table 3.
3. Dischargers must conduct two rounds of monitoring groundwater wells over a period of one year, one sample collected during fall (**September-December**) and one collected during spring (**March - June**). The first round of monitoring must be completed by December 2012. These two rounds of sampling must be repeated every 5 years. As an alternative to groundwater monitoring requirements, where existing groundwater data is available, Dischargers may submit the following for Executive Officer approval:
  - a. Existing groundwater quality data for individual farms/ranches that meet the following criteria: 1) at least one groundwater well for an individual farm/ranch, 2) a minimum of two samples collected for

- each well within the last five years, and 3) samples analyzed for nitrate using U.S. EPA approved analytical methods.
- b. Reference or citation of local groundwater quality monitoring study that includes data collected within the last 5 years and documents that local groundwater quality in the uppermost aquifer does not exceed drinking water standards.
4. Groundwater samples must be collected by a qualified third-party (e.g., consultant, technician, person conducting cooperative monitoring) using proper sampling methods, chain-of-custody, and quality assurance/quality control protocols. Groundwater samples must be collected at or near the well head before the pressure tank and prior to any well head treatment. In cases where this is not possible, the water sample must be collected from a sampling point as close to the pressure tank as possible, or from a cold-water spigot located before any filters or water treatment systems.
  5. Laboratory analyses for groundwater samples must be conducted by a State certified laboratory according to U.S. EPA approved methods; unless otherwise noted, all monitoring, sample preservation, and analyses must be performed in accordance with the latest edition of *Test Methods for Evaluating Solid Waste*, SW-846, United States Environmental Protection Agency, and analyzed as specified herein by the above analytical methods and reporting limits indicated. Certified laboratories can be found at the web link below: <http://www.cdph.ca.gov/certlic/labs/Documents/ELAPLablist.xls>
  6. In lieu of conducting individual groundwater monitoring, Dischargers may participate in a cooperative groundwater monitoring effort to help minimize costs and to develop an effective groundwater monitoring program. Qualifying cooperative groundwater monitoring and reporting programs may include, but are not limited to, regional or subregional groundwater programs developed for other purposes as long as the proposed cooperative groundwater monitoring program meets the Central Coast Water Board's general purpose of characterizing groundwater quality and ensuring the protection of drinking water sources. An interested person may seek discretionary review by the Regional Board of the Executive Officer's approval or denial of a cooperative groundwater monitoring program. At a minimum, the cooperative groundwater monitoring effort must include sufficient monitoring to adequately characterize the groundwater aquifer(s) in the local area of the participating Dischargers, characterize the groundwater quality of the uppermost aquifer, and identify and evaluate groundwater used for domestic drinking water purposes.
    - a. Proposals for cooperative groundwater monitoring efforts, including the use of other regional or subregional groundwater monitoring programs must be approved by the Executive Officer.

- b. Cooperative groundwater monitoring efforts must comply with the requirements for sampling protocols and laboratory analytical methods identified in this MRP, including parameters listed in Table 3, or propose a functional equivalent that meets the same objectives and purposes as individual groundwater monitoring.
- c. The cooperative groundwater monitoring program must report results consistent with individual groundwater reporting defined in part 2.B, or report results in a manner that is consistent with that approved by the Executive Officer in his or her approval of the cooperative groundwater monitoring proposal.
- d. Dischargers electing to participate in a cooperative groundwater monitoring effort must convey this election to the Central Coast Water Board **by August 1, 2012**, and the individual groundwater monitoring requirements shall not apply as long as a cooperative groundwater monitoring proposal for that Discharger's area is submitted within one (1) year of adoption of this Order. If no cooperative groundwater monitoring proposal for that Discharger's area is submitted within one (1) year of adoption of this order, then the individual groundwater monitoring provisions shall apply and the Discharger shall have two (2) years from the adoption of this Order to comply with the provisions identified in Part 2. Notwithstanding the foregoing, cooperative groundwater monitoring proposals may be submitted between September 24, 2013, and November 1, 2013. Dischargers who have not joined a cooperative groundwater monitoring group prior to September 24, 2013, may participate in an approved cooperative groundwater monitoring program, provided they have completed two rounds of monitoring as required under individual groundwater monitoring requirements.
- e. Dischargers electing to participate in an approved cooperative groundwater monitoring program must convey this election to the administrator of the cooperative monitoring program **within 60 days of Executive Officer approval of the cooperative groundwater monitoring proposal**.
- f. The administrator of an approved groundwater monitoring program must provide the Executive Officer with a list of participants **by September 1, 2013**.
- g. Dischargers who participate in a cooperative groundwater monitoring program approved by the Executive Officer are responsible for the successful implementation of that program. This individual discharger

responsibility has two consequences if the cooperative monitoring program is not successfully implemented:

- 1) The Water Board or Executive Officer will require individual dischargers to conduct individual monitoring per the requirements of the Ag Order.
  - 2) The Water Board may take enforcement action against individual dischargers. The failure of a third-party group to successfully implement an approved program cannot be used as an excuse for lack of individual discharger compliance.
- h. Because drinking water evaluations a very high priority, the cooperative groundwater monitoring proposals must, at a minimum, include one or more of the following approaches for each of the participating Dischargers' wells that is or may be used for drinking water purposes; (1) direct sampling; (2) submission of existing data for the well if it has been sampled and analyzed for nitrate using U.S. EPA approved methods at least twice within the last five years; or (3) a statistically valid projection of groundwater quality at the location of the well. In addition, each of the participating Dischargers' wells that is or may be used for drinking water that is projected to have a nitrate concentration between 22.5 and 45 mg/L nitrate as NO<sub>3</sub> (or between 5 and 10 mg/L nitrate + nitrite as N) must be individually sampled. Each of the participating Dischargers' wells that is or may be used for drinking water that has a nitrate concentration between 36 and 45 mg/L nitrate as NO<sub>3</sub> (or between 8 and 10 mg/L nitrate+ nitrite as N) must have a repeat sample taken within 12 months and must be sampled annually thereafter unless an alternate sampling schedule based on trending data for the well is approved by the Executive Officer. Consideration shall be given to the timing of all sampling so that potential seasonal fluctuations and other variables are accounted for, in order that the wells are sampled at the highest potential nitrate value to the extent practicable. Cooperative groundwater monitoring program work must be scheduled so as to make drinking water evaluation the first priority. Drinking water quality information must be reported as it becomes available, and all of the requirements of this paragraph, with the exception of any repeat sampling, must be completed by December 1, 2014.
7. If a discharger conducting individual groundwater monitoring or a third party conducting cooperative groundwater monitoring determines that water in any well that is used or may be used for drinking water exceeds or is projected to exceed 45 mg/L of nitrate as NO<sub>3</sub> (or 10 mg/L of nitrate + nitrite as N), the discharger or third party must provide notice to the Central Coast Water Board within 24 hours of learning of the exceedance or projected exceedance. For wells on a Discharger's farm/ranch, the Central Coast

Water Board will require that the Discharger notify the users within 10 days. For all other wells, the Central Coast Water Board will notify the users promptly.

## **B. Individual Groundwater Reporting**

1. **By October 1, 2013**, Dischargers must submit groundwater sampling results and information, electronically, in a format specified by the Executive Officer. Dischargers must include the following information:
  - a. Signed transmittal letter;
  - b. Number of groundwater wells present at each farm/ranch;
  - c. Identification of any groundwater wells abandoned or destroyed (including method destroyed) in compliance with the Order;
  - d. Owner-assigned well identification;
  - e. State identification number, if available;
  - f. Well location (latitude and longitude);
  - g. Water-use category (e.g., domestic drinking water, agricultural);
  - h. Identification of primary irrigation well;
  - i. Well construction information (e.g., total depth, screened intervals, depth to water), as available;
  - j. Use for fertigation or chemigation;
  - k. Presence and type of back flow prevention devices;
  - l. Photo-documentation of well condition and back flow prevention device (**photos must be maintained in the Farm Plan and submitted upon request of the Executive Officer**);
  - m. Identification of wells sampled to comply with the Order and MRP;
  - n. Laboratory data must be compatible with the Water Board's Groundwater Ambient Monitoring and Assessment (GAMA) Program, and GeoTracker electronic deliverable format (EDF).

**Note: The above information (a-n) is reported electronically in the Notice of Intent and groundwater reporting to the GeoTracker data management system. It is not necessary for Dischargers to prepare and submit a separate technical report that includes this information.**

## **C. Nitrate Loading Risk Factor Determination and Total Nitrogen Reporting**

1. Tier 2 Dischargers must calculate the nitrate loading risk factor for each ranch/farm included in their operations. The nitrate loading risk factor is a measure of the relative risk of loading nitrate to groundwater. Tier 2 Dischargers must determine the nitrate loading risk factor for each ranch/farm, based on the highest risk activity existing at each ranch/farm. For example, if a Discharger uses both sprinkler and drip irrigation on the



same crop, they must use the irrigation type “sprinkler” in the nitrate loading risk calculation. To calculate nitrate loading risk, Tier 2 Dischargers must use the criteria and methodology described in Table 4 of this MRP, or use the Nitrate Groundwater Pollution Hazard Index developed by University of California Division of Agriculture and Natural Resources (UCANR).

2. Tier 2 Dischargers may choose to subdivide the ranch/farm into "nitrate loading risk units," based on the variability of ranch/farm conditions for the purposes of complying with this Order. A nitrate loading risk unit is a subdivided unit of the ranch/farm . Factors that a discharger may consider in subdividing the farm into nitrate loading risk units include but are not limited to irrigation system type, crop type, nitrate concentration in the irrigation water, soil type, number and size of management blocks that would have to otherwise be reported under Method 1 in subsection C.5 below. The nitrate loading risk unit may be the total ranch, a number of blocks, or an individual block. If a Discharger chooses to subdivide the ranch/farm into individual nitrate loading risk units, the Discharger must maintain individual record keeping, and conduct monitoring and reporting for each nitrate loading risk unit.
3. Tier 2 Dischargers who choose to evaluate nitrate loading risk using the Table 4 criteria and methodology must calculate the ranch/farm or nitrate loading risk unit’s nitrate loading risk level (low, moderate, or high), as described in Table 4. Dischargers must report Nitrate Loading Risk factors and level in the electronic Annual Compliance Form.
  - a. LOW - Nitrate loading risk is less than 10;
  - b. MODERATE – Nitrate loading risk is between 10 and 15;
  - c. HIGH – Nitrate loading risk is more than 15;
4. Tier 2 Dischargers who choose to evaluate nitrate loading risk using the Nitrate Groundwater Pollution Hazard Index must characterize the soil type for the individual farm(s), including any variability in soil type, and utilize the index tool at the Internet link below. Soil types may vary across individual fields, and this variability must be accounted for when using the Nitrate Groundwater Pollution Hazard Index. If the soil type is unknown or if the soil type is not included in the UCANR Nitrate Groundwater Pollution Hazard Index tool, Dischargers must use the Table 4 criteria and methodology described above. Dischargers must provide documentation of input to the index for crop type, soil type, irrigation type, and deep rip. A resulting Nitrate Groundwater Pollution Hazard Index number greater than or equal to 20 indicates a High Nitrate Loading Risk.

[http://ucanr.org/sites/wrc/Programs/Water\\_Quality/Nitrate\\_Groundwater\\_Pollution\\_Hazard\\_Index/](http://ucanr.org/sites/wrc/Programs/Water_Quality/Nitrate_Groundwater_Pollution_Hazard_Index/)

5. Tier 2 Dischargers with individual farms/ranches or nitrate loading risk units that have a HIGH nitrate loading risk must report application of nitrogen annually using Method 1 or 2:

Method 1 (by field or management block):

- a. Total nitrogen applied in lbs/acre<sup>1</sup> per crop for each field or management block and identification of the crop type<sup>2</sup>. Total nitrogen applied includes any product, form or concentration including, but not limited to, organic and inorganic fertilizers, slow release products, compost, compost teas, manure, and extracts. The discharger shall also identify the underlying basis for the amount of total nitrogen that the discharger decided to apply. The discharger may report more than one basis.
- b. Average nitrogen concentration in irrigation water during the annual reporting period, reported as total nitrogen in mg/L, applied to each farm/ranch or nitrate loading risk unit, and also the calculated or estimated nitrogen load in lbs/acre for each field or management block.
- c. Total nitrogen present in the soil in lbs/acre for each field or management block prior to the first application of fertilizer to the crop, or at an alternative time when it is most effective to determine nitrogen present in the soil that is available for the next crop and to minimize nitrate leaching to groundwater.

Method 2 (by nitrate loading risk unit):

- a. Total acres of each nitrate loading risk unit.
- b. Total nitrogen applied (sum of all applications) to each nitrate loading risk unit during the annual reporting period in lbs<sup>1</sup>. Total nitrogen applied includes any product, form or concentration including, but not limited to, organic and inorganic fertilizers, slow release products, compost, compost teas, manure, and extracts. The discharger shall also identify the underlying basis for the amount of total nitrogen that the discharger decided to apply. The discharger may report more than one basis.
- c. Average nitrogen concentration in irrigation water during the annual reporting period, reported as total nitrogen in mg/L. applied to each farm/ranch or nitrate loading risk unit, and also the calculated or estimated nitrogen load in lbs/acre.

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<sup>1</sup>This reporting requirement is for nitrogen content of fertilizer in lbs and not the total lbs of fertilizer. For example, if 100 lbs/acre of nitrogen is applied with 12 percent nitrogen, 12 lbs/acre of nitrogen is reported.

<sup>2</sup> In order to report on a field basis, the entire field must be planted with the same crop and receive the same fertilizer inputs. A management block is any portion of a discharger's land that is planted with the same crop and receives the same fertilizer inputs. Management blocks may consist of multiple fields and/or divisions of a single field.

- d. Total acres of each crop type grown<sup>1</sup> within the nitrate loading risk unit during the annual reporting period.
- e. Total nitrogen present in the soil in lbs/acre for each field within the nitrate loading risk unit, measured once per annual reporting period prior to the first application of fertilizer to the first crop in rotation, or at an alternative time when it is most effective to determine nitrogen present in the soil that is available for the next crop and to minimize nitrate leaching to groundwater.

### **PART 3. ANNUAL COMPLIANCE FORM**

Tier 2 Dischargers must submit annual compliance information, electronically, in a format specified by the Executive Officer. The purpose of the electronic Annual Compliance Form is to provide information to the Central Coast Water Board to assist in the evaluation of threat to water quality from individual agricultural discharges of waste and measure progress towards water quality improvement and verify compliance with the Order and MRP. Time schedules are shown in Table 5.

#### **A. Annual Compliance Form**

1. **By October 1, 2012 and updated annually thereafter by October 1**, Tier 2 Dischargers must submit an Annual Compliance Form electronically, in a format specified by the Executive Officer. The electronic Annual Compliance Form includes, but is not limited to the following minimum requirements<sup>2</sup>:
  - a. Signed transmittal letter;
  - b. Verification that any change in general operation or farm/ranch information (e.g., crop type, irrigation type, discharge type) is reported on update to Notice of Intent (NOI);
  - c. Verification of compliance with monitoring requirements, including any cooperative monitoring fees;
  - d. Verification of completed Farm Plan and date of last update;
  - e. Information regarding type and characteristics of discharge (e.g., number of discharge points, estimated flow/volume, number of tailwater days);
  - f. Identification of any direct agricultural discharges to a stream, lake, estuary, bay, or ocean;
  - g. Identification of specific farm water quality management practices completed, in progress, and planned to address water quality impacts caused by discharges of waste including irrigation management, pesticide management, nutrient management,

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<sup>1</sup> If a crop type is grown in more than one rotation during the annual reporting period, the total acres of the crop type equals the sum of the acres planted in each rotation.

<sup>2</sup> Items reported in the Annual Compliance Document are due by October 1, 2012 and annually thereafter, unless otherwise specified.

- salinity management, stormwater management, and sediment and erosion control to achieve compliance with this Order; and identification of specific methods used, and described in the Farm Plan consistent with Order Provision 44.g., for the purposes of assessing the effectiveness of management practices implemented and the outcomes of such assessments;
- h. Average nitrogen concentration in irrigation water during the annual reporting period, reported as total nitrogen in mg/L applied for each farm/ranch or nitrate loading risk unit, and also the calculated or estimated nitrogen load in lbs/acre;
  - i. Identification of the application of any fertilizers, pesticides, fumigants or other chemicals through an irrigation system (e.g. fertigation or chemigation) and proof of proper backflow prevention devices;
  - j. Description of method and location of chemical applications relative to surface water;
  - k. Nitrate Loading Risk factors in Table 4 or Nitrate Groundwater Pollution Hazard Index input and Nitrate Loading Risk level;
  - l. Proof of approved California Department of Fish and Game (CDFG) Streambed Alteration Agreement, as required by CDFG for any work proposed within the bed, bank or channel of a lake or stream, including riparian areas, that has the potential to result in erosion and discharges of waste to waters of the State;

*Tier 2 Dischargers with farms/ranches that contain or are adjacent to a waterbody impaired for temperature, turbidity or sediment:*

- m. Photo monitoring to document condition of streams, riparian, and wetland area habitat and the presence of bare soil within the riparian habitat area that is vulnerable to erosion;<sup>1</sup>

*Tier 2 Dischargers with farms/ranches that have High Nitrate Loading Risk:*<sup>2</sup>

Either:

Method 1 (by field or management block):

- n. Total nitrogen applied in lbs/acre per crop for each field or management block and identification of the crop type Total nitrogen applied includes any product, form or concentration) including, but not limited to, organic and inorganic fertilizers, slow release products, compost, compost teas, manure, and extracts. The discharger shall also identify the underlying basis for the determination of the amount of total nitrogen applied. The discharger may report more than one basis;

<sup>1</sup> Reporting due by October 1, 2014 and October 1, 2017.

<sup>2</sup> Due by October 1, 2014 and annually thereafter by October 1.

- o. Total nitrogen present in the soil in lbs/acre for each field or management block prior to the first application of fertilizer to the crop, or at an alternative time when it is most effective to determine nitrogen present in the soil that is available for the next crop and to minimize nitrate leaching to groundwater.

or

Method 2 (by nitrate loading risk unit):

- p. Total acres of each nitrate loading risk unit;
- q. Total nitrogen applied (sum of all applications) to each nitrate loading risk unit during the annual reporting period in lbs. Total nitrogen applied includes any product, form or concentration including, but not limited to, organic and inorganic fertilizers, slow release products, compost, compost teas, manure, and extracts. The discharger shall also identify the underlying basis for the determination of the amount of total nitrogen applied. The discharger may report more than one basis;
- r. Total acres of each crop type grown within the nitrate loading risk unit during the annual reporting period;
- s. Total nitrogen present in the soil in lbs/acre for each field within the nitrate loading risk unit, measured once per annual reporting period prior to the first application of fertilizer to the first crop in rotation or at an alternative time when it is most effective to determine nitrogen present in the soil that is available for the next crop and to minimize nitrate leaching to groundwater.

#### **PART 4. PHOTO MONITORING AND REPORTING REQUIREMENTS**

Photo monitoring and reporting requirements identified in Part 4.A. apply to Tier 2 Dischargers that have farms/ranches that contain or are adjacent to a waterbody identified on the List of Impaired Waterbodies as impaired for temperature, turbidity or sediment (see Order Table 1). Time schedules are shown in Table 5.

##### **A. Photo Monitoring and Reporting**

1. **By October 1, 2012**, Tier 2 Dischargers that have farms/ranches that contain or are adjacent to a waterbody *impaired for temperature, turbidity or sediment* must conduct photo monitoring to do the following:
  - a. Document the existing condition of perennial, intermittent or ephemeral streams (wet or dry), riparian or wetland area habitat; Photo monitoring of existing conditions must be repeated every four years.

2. Tier 2 Dischargers must conduct photo monitoring consistent with protocol established by the Executive Officer. Dischargers must include date of photo, photo location and point of reference in the photo. Photos must be accompanied by explanations and descriptions of the management practices demonstrated in the photos to meet the Basin Plan requirements specified below and must include estimated widths of riparian areas from top of bank.

Basin Plan (Chapter 5, p. V-13, Section V.G.4 – Erosion and Sedimentation, *“A filter strip of appropriate width, and consisting of undisturbed soil and riparian vegetation or its equivalent, must be maintained, wherever possible, between significant land disturbance activities and watercourses, lakes, bays, estuaries, marshes, and other water bodies. For construction activities, minimum width of the filter strip must be thirty feet, wherever possible....”*

3. Tier 2 Dischargers must maintain photos in the Farm Plan and submit upon request of the Executive Officer.

## **PART 5. GENERAL MONITORING AND REPORTING REQUIREMENTS**

### **A. Submittal of Technical Reports**

1. Dischargers must submit reports in a format specified by the Executive Officer. A transmittal letter must accompany each report, containing the following penalty of perjury statement signed by the Discharger or the Discharger’s authorized agent:

*“In compliance with Water Code §13267, I certify under penalty of perjury that this document and all attachments were prepared by me, or under my direction or supervision following a system designed to assure that qualified personnel properly gather and evaluate the information submitted. To the best of my knowledge and belief, this document and all attachments are true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment”.*

2. If the Discharger asserts that all or a portion of a report submitted pursuant to this Order is subject to an exemption from public disclosure (e.g. trade secrets or secret processes), the Discharger must provide an explanation of how those portions of the reports are exempt from public disclosure. The Discharger must clearly indicate on the cover of the report (typically an electronic submittal) that the Discharger asserts that all or a portion of the report is exempt from public disclosure, submit a complete report with those

portions that are asserted to be exempt in redacted form, submit separately (in a separate electronic file) unredacted pages (to be maintained separately by staff). The Central Coast Water Board staff will determine whether any such report or portion of a report qualifies for an exemption from public disclosure. If the Central Coast Water Board staff disagrees with the asserted exemption from public disclosure, the Central Coast Water Board staff will notify the Discharger prior to making such report or portions of such report available for public inspection. In the interest of public health and safety, the Central Coast Water Board will not make available for public inspection, the precise location of any groundwater well monitored in compliance with this Order. Consistent with the reporting of groundwater wells on GeoTracker, groundwater well location and data will only be referenced within a one-half mile radius of the actual well location.

## **B. Enforcement and Violations**

1. Monitoring reports are required pursuant to Section 13267 of the California Water Code. Pursuant to Section 13268 of the Water Code, a violation of a request made pursuant to Section 13267 may subject you to civil liability assessment of up to \$1000 per day.

## **C. Executive Officer Authority**

1. The Executive Officer revised this MRP consistent with the State Water Resources Control Board Order WQ-2013-0101 adopted on September 24, 2014.
2. The Executive Officer may revise this MRP as necessary, and Dischargers must comply with the MRP as revised by the Executive Officer. Specifically, the Executive Officer may increase monitoring and reporting requirements where monitoring results, pesticide use patterns, or other indicators suggest that the increase is warranted due to an increased threat to water quality. Additionally, the Executive Officer can reduce monitoring and reporting requirements, including adjusting time schedules, where growers are coordinating efforts at watershed or subwatershed scales or where regional treatment facilities are implemented, or other indicators suggest that the reduction is warranted due to a reduced threat to water quality.



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Kenneth A. Harris, Jr.  
Executive Officer

June 5, 2013

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Date

**Table 1. Major Waterbodies in Agricultural Areas<sup>1</sup>**

Hydrologic SubArea	Waterbody Name	Hydrologic SubArea	Waterbody Name
30510	Pajaro River	30920	Quail Creek
30510	Salsipuedes Creek	30920	Salinas Reclamation Canal
30510	Watsonville Slough	31022	Chorro Creek
30510	Watsonville Creek <sup>2</sup>	31023	Los Osos Creek
30510	Beach Road Ditch <sup>2</sup>	31023	Warden Creek
30530	Carnadero Creek	31024	San Luis Obispo Creek
30530	Furlong Creek <sup>2</sup>	31024	Prefumo Creek
30530	Llagas Creek	31031	Arroyo Grande Creek
30530	Miller's Canal	31031	Los Berros Creek
30530	San Juan Creek	31210	Bradley Canyon Creek
30530	Tesquisquita Slough	31210	Bradley Channel
30600	Moro Cojo Slough	31210	Green Valley Creek
30910	Alisal Slough	31210	Main Street Canal
30910	Blanco Drain	31210	Orcutt Solomon Creek
30910	Old Salinas River	31210	Oso Flaco Creek
30910	Salinas River (below Gonzales Rd.)	31210	Little Oso Flaco Creek
30920	Salinas River above Gonzales Rd. and below Nacimiento R.)	31210	Santa Maria River
30910	Santa Rita Creek <sup>2</sup>	31310	San Antonio Creek <sup>2</sup>
30910	Tembladero Slough	31410	Santa Ynez River
30920	Alisal Creek	31531	Bell Creek
30920	Chualar Creek	31531	Glenn Annie Creek
30920	Espinosa Slough	31531	Los Carneros Creek <sup>2</sup>
30920	Gabilan Creek	31534	Arroyo Paredon Creek
30920	Natividad Creek	31534	Franklin Creek

<sup>1</sup> At a minimum, sites must be included for these waterbodies in agricultural areas, unless otherwise approved by the Executive Officer. Sites may be proposed for addition or modification to better assess the impacts of waste discharges from irrigated lands to surface water. Dischargers choosing to comply with surface receiving water quality monitoring, individually (not part of a cooperative monitoring program) must only monitor sites for waterbodies receiving the discharge.

<sup>2</sup> These creeks are included because they are newly listed waterbodies on the 2010 303(d) list of Impaired Waters that are associated with areas of agricultural discharge.



**Table 2. Surface Receiving Water Quality Monitoring Parameters**

Parameters and Tests	RL <sup>3</sup>	Monitoring Frequency <sup>1</sup>
<b>Photo Monitoring</b>		
Upstream and downstream photographs at monitoring location		With every monitoring event
<b><u>WATER COLUMN SAMPLING</u></b>		
<b>Physical Parameters and General Chemistry</b>		
Flow (field measure) (CFS) following SWAMP field SOP <sup>9</sup>	.25	Monthly, including 2 stormwater events
pH (field measure)	0.1	"
Electrical Conductivity (field measure) (uS/cm)	2.5	"
Dissolved Oxygen (field measure) (mg/L)	0.1	"
Temperature (field measure) (°C)	0.1	"
Turbidity (NTU)	0.5	"
Total Dissolved Solids (mg/L)	10	"
Total Suspended Solids (mg/L)	0.5	"
<b>Nutrients</b>		
Total Nitrogen (mg/L)	0.5	Monthly, including 2 stormwater events
Nitrate + Nitrite (as N) (mg/L)	0.1	"
Total Ammonia (mg/L)	0.1	"
Unionized Ammonia (calculated value, mg/L)		"
Total Phosphorus (as P) (mg/L)	-	"
Soluble Orthophosphate (mg/L)	0.01	"
Water column chlorophyll a (mg/L)	0.002	"
Algae cover, Floating Mats, % coverage	-	"
Algae cover, Attached, % coverage	-	"
<b>Water Column Toxicity Test</b>		
Algae - <i>Selenastrum capricornutum</i> , 4 day	-	Twice in dry season, twice in wet season
Water Flea – <i>Ceriodaphnia</i> (7-day chronic)	-	"
Fathead Minnow - <i>Pimephales promelas</i> (7-day chronic)	-	"
Toxicity Identification Evaluation (TIE)	-	As directed by Executive Officer
<b>Pesticides<sup>2</sup> (ug/L)</b>		
<b>Carbamates</b>		
Aldicarb	0.05	4 times, concurrent with water toxicity monitoring, in second or third year of Order term <sup>10, 11</sup>

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Parameters and Tests	RL <sup>3</sup>	Monitoring Frequency <sup>1</sup>
Carbaryl	0.05	"
Carbofuran	0.05	"
Methiocarb	0.05	"
Methomyl	0.05	"
Oxamyl	0.05	"
<b>Organophosphate Pesticides</b>		
Azinphos-methyl	0.02	"
Chlorpyrifos	0.005	"
Diazinon	0.005	"
Dichlorvos	0.01	"
Dimethoate	0.01	"
Dimeton-s	0.005	"
Disulfoton (Disyton)	0.005	"
Malathion	0.005	"
Methamidophos	0.02	"
Methidathion	0.02	"
Parathion-methyl	0.02	"
Phorate	0.01	"
Phosmet	0.02	"
<b>Herbicides</b>		
Atrazine	0.05	"
Cyanazine	0.20	"
Diuron	0.05	"
Glyphosate	2.0	"
Linuron	0.1	"
Paraquat	0.20	"
Simazine	0.05	"
Trifluralin	0.05	"
<b>Metals (ug/L)</b>		
Arsenic (total) <sup>5,7</sup>	0.3	4 times, concurrent with water toxicity monitoring, in second or third year of Order term <sup>10, 11</sup>
Boron (total) <sup>6,7</sup>	10	"
Cadmium (total & dissolved) <sup>4,5,7</sup>	0.01	"
Copper (total and dissolved) <sup>4,7</sup>	0.01	"
Lead (total and dissolved) <sup>4,7</sup>	0.01	"
Nickel (total and dissolved) <sup>4,7</sup>	0.02	"
Molybdenum (total) <sup>7</sup>	1	"
Selenium (total) <sup>7</sup>	0.30	"
Zinc (total and dissolved) <sup>4,5,7</sup>	0.10	"
<b>Other (ug/L)</b>		
Total Phenolic Compounds <sup>8</sup>	10	4 times, concurrent with water toxicity monitoring, in second or third year of Order term <sup>10, 11</sup>
Hardness (mg/L as CaCO <sub>3</sub> )	1	"
Total Organic Carbon (ug/L)	0.6	"

Parameters and Tests	RL <sup>3</sup>	Monitoring Frequency <sup>1</sup>
<b>SEDIMENT SAMPLING</b>		
Sediment Toxicity - Hyalella azteca 10-day		Annually
Benthic Invertebrate and associated Physical Habitat Assessment	SWAMP SOP	Once during the second or third year of Order concurrent with sediment toxicity sampling <sup>10</sup>
<b>Pyrethroid Pesticides in Sediment (ug/kg)</b>		
Gamma-cyhalothrin	2	Once during second or third year of Order, concurrent with sediment toxicity sampling <sup>10</sup>
Lambda-cyhalothrin	2	
Bifenthrin	2	"
Beta-cyfluthrin	2	"
Cyfluthrin	2	"
Esfenvalerate	2	"
Permethrin	2	"
Cypermethrin	2	"
Danitol	2	"
Fenvalerate	2	"
Fluvalinate	2	"
<b>Organochlorine Pesticides in Sediment</b>		
DCPA	10	"
Dicofol	2	"
<b>Other Monitoring in Sediment</b>		
Chlorpyrifos (ug/kg)	2	"
Total Organic Carbon	0.01%	"
Sulfide		"
Sediment Grain Size Analysis	1%	"

<sup>1</sup>Monitoring is ongoing through all five years of the Order, unless otherwise specified. Monitoring frequency may be used as a guide for developing alternative Sampling and Analysis Plan.

<sup>2</sup>Pesticide list may be modified based on specific pesticide use in Central Coast Region. Analytes on this list must be reported, at a minimum.

<sup>3</sup>Reporting Limit, taken from SWAMP where applicable.

<sup>4</sup>Holmgren, Meyer, Cheney and Daniels. 1993. Cadmium, Lead, Zinc, Copper and Nickel in Agricultural Soils of the United States. J. of Environ. Quality 22:335-348.

<sup>5</sup>Sax and Lewis, ed. 1987. Hawley's Condensed Chemical Dictionary. 11<sup>th</sup> ed. New York: Van Nostrand Reinhold Co., 1987. Zinc arsenate is an insecticide.

<sup>6</sup><http://www.coastalagro.com/products/labels/9%25BORON.pdf>; Boron is applied directly or as a component of fertilizers as a plant nutrient.

<sup>7</sup>Madramootoo, Johnston, Willardson, eds. 1997. Management of Agricultural Drainage Water Quality. International Commission on Irrigation and Drainage. U.N. FAO. SBN 92-6-104058.3.

<sup>8</sup><http://cat.inist.fr/?aModele=afficheN&cpsid=14074525>; Phenols are breakdown products of herbicides and pesticides. Phenols can be directly toxic and cause endocrine disruption.

<sup>9</sup>See SWAMP field measures SOP, p. 17

mg/L – milligrams per liter; ug/L – micrograms per liter; ug/kg – micrograms per kilogram;

NTU – Nephelometric Turbidity Units; CFS – cubic feet per second;

<sup>10</sup> Enhanced monitoring (for pesticides and metals) in sediment and water chemistry may be conducted in either the second or the third year of the Order term, but at any given site all enhanced monitoring must be done in the same year,

<sup>11</sup> One of the four rounds of enhanced water sampling should be conducted concurrently with bioassessment and sediment monitoring if possible.

**Table 3. Groundwater Monitoring Parameters**

Parameter	RL	Analytical Method <sup>3</sup>	Units
pH	0.1	Field or Laboratory Measurement EPA General Methods	pH Units
Specific Conductance	2.5		µS/cm
Total Dissolved Solids	10		mg/L
Total Alkalinity as CaCO <sub>3</sub>	1	EPA Method 310.1 or 310.2	
Calcium	0.05	General Cations <sup>1</sup> EPA 200.7, 200.8, 200.9	
Magnesium	0.02		
Sodium	0.1		
Potassium	0.1		
Sulfate (SO <sub>4</sub> )	1.0	General Anions EPA Method 300 or EPA Method 353.2	
Chloride	0.1		
Nitrate + Nitrite (as N) <sup>2</sup> or Nitrate as NO <sub>3</sub>	0.1		

<sup>1</sup>General chemistry parameters (major cations and anions) represent geochemistry of water bearing zone and assist in evaluating quality assurance/quality control of groundwater sampling and laboratory analysis.

<sup>2</sup>The MRP allows analysis of “nitrate plus nitrite” to represent nitrate concentrations. The “nitrate plus nitrite” analysis allows for extended laboratory holding times and relieves the Discharger of meeting the short holding time required for nitrate. Dischargers may also analyze for Nitrate as NO<sub>3</sub>.

<sup>3</sup>Dischargers may use alternative analytical methods approved by EPA.

RL – Reporting Limit; µS/cm – micro siemens per centimeter

**Table 4. Nitrate Loading Risk Factor Criteria and Risk Level Calculation**

<p><b>A. Crop Type Nitrate Hazard Index Rating</b></p> <p>1 - Bean, Grapes, Olive.</p> <p>2 - Apple, Avocado, Barley, Blackberry, Blueberry, Carrot, Chicory, Citrus, Lemon Oat, Orange, Peach, Pear, Pistachio, Raspberry, Walnut, Wheat.</p> <p>3 - Artichoke, Bean, Brussel Sprout, Corn, Cucumber, Daikon, Peas, Radish, Squash, Summer, Tomato, Turnip, Squash, Rutabaga, Pumpkin, Potato.</p> <p>4 – Beet, Broccoli, Cabbage, Cauliflower, Celery, Chinese Cabbage (Napa), Collard, Endive, Kale, Leek, Lettuce, Mustard, Onion, Parsley, Pepper, Spinach, Strawberry.</p> <p>(Based on UC Riverside Nitrate Hazard Index)</p>
<p><b>B. Irrigation System Type Rating</b></p> <p>1 - Micro-irrigation year round (drip and micro-sprinklers) and no pre-irrigation;</p>

- 2 - Sprinklers used for pre-irrigation only and then micro-irrigation;
- 3 - Sprinklers used for germination or at any time during growing season;
- 4 - Surface irrigation systems (furrow or flood) at any, and/or in combination with any other irrigation system type;

(Based on UC Riverside Nitrate Hazard Index, Adapted for the Central Coast Region)

**C. Irrigation Water Nitrate Concentration Rating**

- 1 – Nitrate concentration 0 to 45 mg/liter Nitrate NO<sub>3</sub>
- 2 - Nitrate concentration 46 to 60 mg/liter Nitrate NO<sub>3</sub>
- 3 - Nitrate concentration 61to 100 mg/liter Nitrate NO<sub>3</sub>
- 4 - Nitrate concentration > 100 mg/l Nitrate NO<sub>3</sub>

**D. Nitrate Loading Risk Level Calculation = A x B x C**

- LOW - Nitrate loading risk is less than 10;
- MODERATE – Nitrate loading risk is between 10 and 15;
- HIGH – Nitrate loading risk is more than 15;

*Note: Dischargers must determine the nitrate loading risk factor for each ranch/farm, based on the criteria associated with the highest risk activity existing at each ranch/farm. For example, the ranch/farm is assigned the highest risk factor, based on the single highest risk crop in the rotation, on one block under furrow irrigation, or on one well with high nitrate concentration. As an alternative to the nitrate loading risk level calculation described in Table 4, Dischargers may use the Groundwater Pollution Nitrate Hazard Index developed by UCANR, where a resulting Nitrate Hazard Index score equal or greater or equal to 20 indicates a HIGH nitrate loading risk to groundwater.*

**Table 5. Tier 2 - Time Schedule for Key Monitoring and Reporting Requirements**

REQUIREMENT	TIME SCHEDULE <sup>1</sup>
Submit Quality Assurance Project Plan and Sampling And Analysis Plan for Surface Receiving Water Quality Monitoring (individually or through cooperative monitoring program)	Within three months
Initiate surface receiving water quality monitoring (individually or through cooperative monitoring program)	Within six months
Submit surface receiving water quality monitoring data (individually or through cooperative monitoring program)	Within nine months, quarterly thereafter (January 1, April 1, July 1, and October 1)
Submit surface receiving water quality Annual Monitoring Report (individually or through cooperative monitoring program)	By July 1 2014: annually thereafter by July 1
Initiate monitoring of groundwater wells	Within one year
<b>Tier 2 Dischargers with farms/ranches that contain or are adjacent to a waterbody impaired for temperature, turbidity or sediment:</b> Conduct photo monitoring of riparian or wetland area habitat	June 1, 2014. June 1, 2017 and every four years thereafter by June 1.
Submit electronic Annual Compliance Form	October 1, 2012, and updated annually thereafter by October 1
Submit groundwater monitoring results	October 1, 2013

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<p><b><i>Tier 2 Dischargers with farms/ranches that have High Nitrate Loading Risk:</i></b> Report total nitrogen applied per acre to each field or management block or nitrate loading risk in electronic Annual Compliance Form</p>	<p>October 1, 2014, and annually thereafter by October 1.</p>
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<sup>1</sup>Dates are relative to adoption of this Order or enrollment date for Dischargers enrolled after the adoption of this Order, unless otherwise specified.

# **Exhibit M**

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

**MONITORING AND REPORTING PROGRAM  
ORDER No. R3-2012-0011-03  
AS MODIFIED BY ORDER WQ-2013-0101**

**TIER 3**

**DISCHARGERS ENROLLED UNDER  
THE CONDITIONAL WAIVER OF WASTE DISCHARGE REQUIREMENTS FOR  
DISCHARGES FROM IRRIGATED LANDS**

This Monitoring and Reporting Program Order No. R3-2012-0011-03 (MRP) is issued pursuant to California Water Code (Water Code) section 13267 and 13269, which authorize the California Regional Water Quality Control Board, Central Coast Region (hereafter Central Coast Water Board) to require preparation and submittal of technical and monitoring reports. Water Code section 13269 requires a waiver of waste discharge requirements to include as a condition, the performance of monitoring and the public availability of monitoring results. The Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands Order No. R3-2012-0011 (Order) includes criteria and requirements for three tiers. This MRP sets forth monitoring and reporting requirements for **Tier 3 Dischargers** enrolled under the Order. A summary of the requirements is shown below.

**SUMMARY OF MONITORING AND REPORTING REQUIREMENTS FOR TIER 3:**

- Part 1: Surface Receiving Water Monitoring and Reporting (*cooperative or individual*);
- Part 2: Groundwater Monitoring and Reporting;  
Nitrate Loading Risk Factor Determination and Total Nitrogen Reporting  
(*required for subset of Tier 3 Dischargers if farm/ranch has high nitrate loading risk to groundwater*);
- Part 3: Annual Compliance Form;
- Part 4: Photo Monitoring (*required for subset of Tier 3 Dischargers if farm/ranch contains or is adjacent to a waterbody impaired for temperature, turbidity or sediment*);
- Part 5: Individual Surface Water Discharge Monitoring and Reporting;
- Part 6: Irrigation and Nutrient Management Plan (*required for subset of Tier 3 Dischargers if farm/ranch has High Nitrate Loading Risk*);
- Part 7: Water Quality Buffer Plan (*required for subset of Tier 3 Dischargers if farm/ranch contains or is adjacent to a waterbody impaired for temperature, turbidity or sediment*);

Pursuant to Water Code section 13269(a)(2), monitoring requirements must be designed to support the development and implementation of the waiver program, including, but not limited to, verifying the adequacy and effectiveness of the waiver's



conditions. The monitoring and reports required by this MRP are to evaluate effects of discharges of waste from irrigated agricultural operations and individual farms/ranches on waters of the state and to determine compliance with the Order.

## **MONITORING AND REPORTING BASED ON TIERS**

The Order and MRP includes criteria and requirements for three tiers, based upon those characteristics of the individual farms/ranches at the operation that present the highest level of waste discharge or greatest risk to water quality. Dischargers must meet conditions of the Order and MRP for the appropriate tier that applies to their land and/or the individual farm/ranch. Within a tier, Dischargers comply with requirements based on the specific level of discharge and threat to water quality from individual farms/ranches. The lowest tier, Tier 1, applies to dischargers who discharge the lowest level of waste (amount or concentration) or pose the lowest potential to cause or contribute to an exceedance of water quality standards in waters of the State or of the United States. The highest tier, Tier 3, applies to dischargers who discharge the highest level of waste or pose the greatest potential to cause or contribute to an exceedance of water quality standards in waters of the State or of the United States. Tier 2 applies to dischargers whose discharge has a moderate threat to water quality. Water quality is defined in terms of Regional, State, or Federal numeric or narrative water quality standards. Per the Order, Dischargers may submit a request to the Executive Officer to approve transfer to a lower tier. If the Executive Officer approves a transfer to a lower tier, any interested person may request that the Central Coast Water Board conduct a discretionary review of the Executive Officer's determination.

## **PART 1. SURFACE RECEIVING WATER MONITORING AND REPORTING REQUIREMENTS**

Monitoring and reporting requirements for surface receiving water identified in Part 1.A. and Part 1.B. apply to Tier 3 Dischargers. Surface receiving water refers to water flowing in creeks and other surface waters of the State. Surface receiving water monitoring may be conducted through a **cooperative monitoring program**, or Dischargers may choose to conduct surface receiving water monitoring and reporting individually. Key monitoring and reporting requirements for surface receiving water are shown in Tables 1 and 2. Time schedules are shown in Table 6.

### **A. Surface Receiving Water Quality Monitoring**

1. Dischargers must elect a surface receiving water monitoring option (cooperative monitoring program or individual receiving water monitoring) to comply with surface receiving water quality monitoring requirements, and identify the option selected on the Notice of Intent (NOI).

2. Dischargers are encouraged to choose participation in a cooperative monitoring program (e.g., the existing Cooperative Monitoring Program or a similar program) to comply with receiving water quality monitoring requirements. Dischargers not participating in a cooperative monitoring program must conduct surface receiving water quality monitoring individually that achieves the same purpose.
3. Dischargers (individually or as part of a cooperative monitoring program) must conduct surface receiving water quality monitoring to a) assess the impacts of their waste discharges from irrigated lands to receiving water, b) assess the status of receiving water quality and beneficial use protection in impaired waterbodies dominated by irrigated agricultural activity, c) evaluate status, short term patterns and long term trends (five to ten years or more) in receiving water quality, d) evaluate water quality impacts resulting from agricultural discharges (including but not limited to tile drain discharges), e) evaluate stormwater quality, f) evaluate condition of existing perennial, intermittent, or ephemeral streams or riparian or wetland area habitat, including degradation resulting from erosion or agricultural discharges of waste, and g) assist in the identification of specific sources of water quality problems.

#### Surface Receiving Water Quality Sampling and Analysis Plan

4. **Within three months** of adoption of the Order, Dischargers (individually or as part of a cooperative monitoring program) must submit a surface receiving water quality Sampling and Analysis Plan and Quality Assurance Project Plan (QAPP). Dischargers (or a third party cooperative monitoring program) must develop the Sampling and Analysis Plan to describe how the proposed monitoring will achieve the objectives of the MRP and evaluate compliance with the Order. The Sampling and Analysis Plan may propose alternative monitoring site locations, adjusted monitoring parameters, and other changes as necessary to assess the impacts of waste discharges from irrigated lands to receiving water. The Executive Officer must approve the Sampling and Analysis Plan and QAPP.
5. The Sampling and Analysis Plan must include the following minimum required components:
  - a. Monitoring strategy to achieve objectives of the Order and MRP;
  - b. Map of monitoring sites with GIS coordinates;
  - c. Identification of known water quality impairments and impaired waterbodies per the 2010 Clean Water Act 303(d) List of Impaired Waterbodies (List of Impaired Waterbodies);
  - d. Identification of beneficial uses and applicable water quality standards;

- e. Identification of applicable Total Maximum Daily Loads;
  - f. Monitoring parameters;
  - g. Monitoring schedule, including description and frequencies of monitoring events;
  - h. Description of data analysis methods;
6. The QAPP must include receiving water and site-specific information, project organization and responsibilities, and quality assurance components of the MRP. The QAPP must also include the laboratory and field requirements to be used for analyses and data evaluation. The QAPP must contain adequate detail for project and Water Board staff to identify and assess the technical and quality objectives, measurement and data acquisition methods, and limitations of the data generated under the surface receiving water quality monitoring. All sampling and laboratory methodologies and QAPP content must be consistent with U.S. EPA methods, State Water Board's Surface Water Ambient Monitoring Program (SWAMP) protocols and the Central Coast Water Board's Central Coast Ambient Monitoring Program (CCAMP). Following U.S. EPA guidelines<sup>1</sup> and SWAMP templates<sup>2</sup>, the receiving water quality monitoring QAPP must include the following minimum required components:
- a. Project Management. This component addresses basic project management, including the project history and objectives, roles and responsibilities of the participants, and other aspects.
  - b. Data Generation and Acquisition. This component addresses all aspects of project design and implementation. Implementation of these elements ensures that appropriate methods for sampling, measurement and analysis, data collection or generation, data handling, and quality control activities are employed and are properly documented. Quality control requirements are applicable to all the constituents sampled as part of the MRP, as described in the appropriate method.
  - c. Assessment and Oversight. This component addresses the activities for assessing the effectiveness of the implementation of the project and associated QA and QC activities. The purpose of the assessment is to provide project oversight that will ensure that the QA Project Plan is implemented as prescribed.

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<sup>1</sup> USEPA. 2001 (2006) USEPA Requirements for Quality Assurance Project Plans (QA/R-5) Office of Environmental Information, Washington, D.C. USEPA QA/R-5

<sup>2</sup> [http://waterboards.ca.gov/water\\_issues/programs/swamp/tools.shtml#qa](http://waterboards.ca.gov/water_issues/programs/swamp/tools.shtml#qa)

- d. Data Validation and Usability. This component addresses the quality assurance activities that occur after the data collection, laboratory analysis and data generation phase of the project is completed. Implementation of these elements ensures that the data conform to the specified criteria, thus achieving the MRP objectives.
7. The Central Coast Water Board may conduct an audit of contracted laboratories at any time in order to evaluate compliance with the QAPP.
  8. The Sampling and Analysis Plan and QAPP, and any proposed revisions are subject to approval by the Executive Officer. The Executive Officer may also revise the Sampling and Analysis Plan, including adding, removing, or changing monitoring site locations, changing monitoring parameters, and other changes as necessary to assess the impacts of waste discharges from irrigated lands to receiving water.

#### Surface Receiving Water Quality Monitoring Sites

9. The Sampling and Analysis Plan must, at a minimum, include monitoring sites to evaluate waterbodies identified in Table 1, unless otherwise approved by the Executive Officer. The Sampling and Analysis Plan must include sites to evaluate receiving water quality impacts most directly resulting from areas of agricultural discharge (including areas receiving tile drain discharges). Site selection must take into consideration the existence of any long term monitoring sites included in related monitoring programs (e.g. CCAMP and the existing CMP). Sites may be added or modified, subject to prior approval by the Executive Officer, to better assess the pollutant loading from individual sources or the impacts to receiving waters caused by individual discharges. Any modifications must consider sampling consistency for purposes of trend evaluation.

#### Surface Receiving Water Quality Monitoring Parameters

10. The Sampling and Analysis Plan must, at a minimum, include the following types of monitoring and evaluation parameters listed below and identified in Table 2:
  - a. Flow Monitoring;
  - b. Water Quality (physical parameters, metals, nutrients, pesticides);
  - c. Toxicity (water and sediment);
  - d. Assessment of Benthic Invertebrates;

11. All analyses must be conducted at a laboratory certified for such analyses by the State Department of Public Health (CDPH) or at laboratories approved by the Executive Officer. Unless otherwise noted, all sampling, sample preservation, and analyses must be performed in accordance with the latest edition of *Test Methods for Evaluating Solid Waste*, SW-846, U.S. EPA, and analyzed as specified herein by the above analytical methods and reporting limits indicated. Certified laboratories can be found at the web link: <http://www.cdph.ca.gov/certlic/labs/Documents/ELAPLablist.xls>
12. Water quality and flow monitoring is used to assess the sources, concentrations, and loads of waste discharges from individual farms/ranches and groups of Dischargers to surface waters, to evaluate impacts to water quality and beneficial uses, and to evaluate the short term patterns and long term trends in receiving water quality. Monitoring data must be compared to existing numeric and narrative water quality objectives.
13. Toxicity testing is to evaluate water quality relative to the narrative toxicity objective. Water column toxicity analyses must be conducted on 100% (undiluted) sample. At sites where persistent unresolved toxicity is found, the Executive Officer may require concurrent toxicity and chemical analyses and a Toxicity Identification Evaluation (TIE) to identify the individual discharges causing the toxicity.

#### Surface Receiving Water Quality Monitoring Frequency and Schedule

14. The Sampling and Analysis Plan must include a schedule for sampling. Timing, duration, and frequency of monitoring must be based on the land use, complexity, hydrology, and size of the waterbody. Table 2 includes minimum monitoring frequency and parameter lists. Agricultural parameters that are less common may be monitored less frequently. Modifications to the receiving water quality monitoring parameters, frequency, and schedule may be submitted for Executive Officer consideration and approval. At a minimum, the Sampling and Analysis Plan schedule must consist of monthly monitoring of common agricultural parameters in major agricultural areas, including two major storm events during the wet season (October 1 – April 30).
15. Storm event monitoring must be conducted within 18 hours of storm events, preferably including the first flush run-off event that results in significant increase in stream flow. For purposes of this MRP, a storm event is defined as precipitation producing onsite runoff (surface water flow) capable of creating significant ponding, erosion or other water quality problem. A significant storm event will generally result in greater than 1-inch of rain within a 24-hour period.

16. **Within six months** of adoption of the Order, Dischargers (individually or as part of a cooperative monitoring program) must initiate receiving water quality monitoring per the Sampling and Analysis Plan and QAPP approved by the Executive Officer.

## **B. Surface Receiving Water Quality Reporting**

### Surface Receiving Water Quality Data Submittal

1. **Within nine months** of adoption of this Order and quarterly thereafter (by January 1, April 1, July 1, and October 1), Dischargers (individually or as part of a cooperative monitoring program) must submit water quality monitoring data to the Central Coast Water Board electronically, in a format specified by the Executive Officer and compatible with SWAMP/CCAMP electronic submittal guidelines.

### Surface Receiving Water Quality Monitoring Annual Report

2. **By July 1, 2014**, and annually thereafter, Dischargers (individually or as part of a cooperative monitoring program) must submit an Annual Report, electronically, in a format specified by the Executive Officer including the following minimum elements:
  - a. Signed Transmittal Letter;
  - b. Title Page;
  - c. Table of Contents;
  - d. Executive Summary;
  - e. Summary of Exceedance Reports submitted during the reporting period;
  - f. Monitoring objectives and design;
  - g. Monitoring site descriptions and rainfall records for the time period covered;
  - h. Location of monitoring sites and map(s);
  - i. Tabulated results of all analyses arranged in tabular form so that the required information is readily discernible;
  - j. Summary of water quality data for any sites monitored as part of related monitoring programs, and used to evaluate receiving water as described in the Sampling and Analysis Plan.
  - k. Discussion of data to clearly illustrate compliance with the Order and water quality standards;
  - l. Discussion of short term patterns and long term trends in receiving water quality and beneficial use protection;
  - m. Evaluation of pesticide and toxicity analyses results, and recommendation of candidate sites for Toxicity Identification Evaluations (TIEs);

- n. Identification of the location of any agricultural discharges observed discharging directly to surface receiving water;
- o. Laboratory data submitted electronically in a SWAMP/CCAMP comparable format;
- p. Sampling and analytical methods used;
- q. Copy of chain-of-custody forms;
- r. Field data sheets, signed laboratory reports, laboratory raw data;
- s. Associated laboratory and field quality control samples results;
- t. Summary of Quality Assurance Evaluation results;
- u. Specify the method used to obtain flow at each monitoring site during each monitoring event;
- v. Electronic or hard copies of photos obtained from all monitoring sites, clearly labeled with site ID and date;
- w. Conclusions;

## **PART 2. GROUNDWATER MONITORING AND REPORTING REQUIREMENTS**

Monitoring and reporting requirements for groundwater identified in Part 2.A., Part 2.B., and Part 2.C. apply to Tier 3 Dischargers. Key monitoring and reporting requirements for groundwater are shown in Table 3. Time schedules are shown in Table 6.

### **A. Individual Groundwater Monitoring**

1. **Within one year of adoption of the Order**, Dischargers must initiate sampling of private domestic drinking water and agricultural groundwater wells on their farm/ranch to evaluate groundwater conditions in agricultural areas, identify areas at greatest risk for nitrogen loading and exceedance of drinking water standards, and identify priority areas for follow up actions.
2. Dischargers must sample at least one groundwater well for each farm/ranch on their operation. For farms/ranches with multiple groundwater wells, Dischargers must sample the primary irrigation well and all wells that are used or may be used for drinking water purposes. Groundwater monitoring parameters must include well screen interval depths (if available), general chemical parameters, and general cations and anions listed in Table 3.
3. Tier 3 Dischargers must initially conduct two rounds of monitoring of groundwater wells during the first year, one sample collected during fall (**September - December**) and one collected during spring (**March - June**), and once annually thereafter. The first round of monitoring must be completed by December 2012. The annual monitoring must be conducted during the quarter when nitrate concentration was at its maximum, based on initial groundwater monitoring.

4. Groundwater samples must be collected by a qualified third-party (e.g., consultant, technician, person conducting cooperative monitoring) using proper sampling methods, chain-of-custody, and quality assurance/quality control protocols. Groundwater samples must be collected at or near the well head before the pressure tank and prior to any well head treatment. In cases where this is not possible, the water sample must be collected from a sampling point as close to the pressure tank as possible, or from a cold-water spigot located before any filters or water treatment systems.
5. Laboratory analyses for groundwater samples must be conducted by a State certified laboratory according to U.S. EPA approved methods; unless otherwise noted, all monitoring, sample preservation, and analyses must be performed in accordance with the latest edition of *Test Methods for Evaluating Solid Waste*, SW-846, United States Environmental Protection Agency, and analyzed as specified herein by the above analytical methods and reporting limits indicated. Certified laboratories can be found at the web link below: <http://www.cdph.ca.gov/certlic/labs/Documents/ELAPLablist.xls>
6. In lieu of conducting individual groundwater monitoring, Dischargers may participate in a cooperative groundwater monitoring effort to help minimize costs and to develop an effective groundwater monitoring program. Qualifying cooperative groundwater monitoring and reporting programs may include, but are not limited to, regional or subregional groundwater programs developed for other purposes as long as the proposed cooperative groundwater monitoring program meets the Central Coast Water Board's general purpose of characterizing groundwater quality and ensuring the protection of drinking water sources. An interested person may seek discretionary review by the Regional Board of the Executive Officer's approval or denial of a cooperative groundwater monitoring program. At a minimum, the cooperative groundwater monitoring effort must include sufficient monitoring to adequately characterize the groundwater aquifer(s) in the local area of the participating Dischargers, characterize the groundwater quality of the uppermost aquifer, and identify and evaluate groundwater used for domestic drinking water purposes.
  - a. Proposals for cooperative groundwater monitoring efforts, including the use of other regional or subregional groundwater monitoring programs, must be approved by the Executive Officer.
  - b. Cooperative groundwater monitoring efforts must comply with the requirements for sampling protocols and laboratory analytical methods identified in this MRP, including parameters listed in Table 3, or propose a functional equivalent that meets the same objectives and purposes as individual groundwater monitoring.



- c. The cooperative groundwater monitoring program must report results consistent with individual groundwater reporting defined in Part 2.B., or report results in a manner that is consistent with that approved by the Executive Officer in his or her approval of the cooperative groundwater monitoring proposal.
- d. Dischargers electing to participate in a cooperative groundwater monitoring effort must convey this election to the Central Coast Water Board **by August 1, 2012**, and the individual groundwater monitoring requirements shall not apply as long as a cooperative groundwater monitoring proposal for that Discharger's area is submitted within one (1) year of adoption of this Order. If no cooperative groundwater monitoring proposal for that Discharger's area is submitted within one (1) year of adoption of this Order, then the individual groundwater monitoring provisions shall apply and the Discharger shall have two (2) years from the adoption of this Order to comply with the provisions identified in Part 2. Notwithstanding the foregoing, cooperative groundwater monitoring proposals may be submitted between September 24, 2013, and November 1, 2013. Dischargers who have not joined a cooperative groundwater monitoring group prior to September 24, 2013, may participate in an approved cooperative groundwater monitoring program, provided they have completed two rounds of monitoring as required under individual groundwater monitoring requirements.
- e. Dischargers electing to participate in an approved cooperative groundwater monitoring program must convey this election to the administrator of the cooperative monitoring program **within 60 days of Executive Officer approval of the cooperative groundwater monitoring proposal**.
- f. The administrator of an approved groundwater monitoring program must provide the Executive Officer with a list of participants **by September 1, 2013**.
- g. Dischargers who participate in a cooperative groundwater monitoring program approved by the Executive Officer are responsible for the successful implementation of that program. This individual discharger responsibility has two consequences if the cooperative monitoring program is not successfully implemented:
  - 1) The Water Board or Executive Officer will require individual dischargers to conduct individual monitoring per the requirements of the Ag Order.

2) The Water Board may take enforcement action against individual dischargers. The failure of a third-party group to successfully implement an approved program cannot be used as an excuse for lack of individual discharger compliance.

- h. Because drinking water evaluation is a very high priority, the cooperative groundwater monitoring proposals must, at a minimum, include one or more of the following approaches for each of the participating Dischargers' wells that is or may be used for drinking water purposes: (1) direct sampling; (2) submission of existing data for the well if it has been sampled and analyzed for nitrate using U.S. EPA approved methods at least twice within the last five years; or (3) a statistically valid projection of groundwater quality at the location of the well. In addition, each of the participating Dischargers' wells that is or may be used for drinking water that is projected to have a nitrate concentration between 22.5 and 45 mg/L nitrate as NO<sub>3</sub> (or between 5 and 10 mg/L nitrate + nitrite as N) must be individually sampled. Each of the participating Dischargers' wells that is or may be used for drinking water that has a nitrate concentration between 36 and 45 mg/L nitrate as NO<sub>3</sub> (or between 8 and 10 mg/L nitrate + nitrite as N) must have a repeat sample taken within 12 months and must be sampled annually thereafter unless an alternate sampling schedule based on trending data for the well is approved by the Executive Officer. Consideration shall be given to the timing of all sampling so that potential seasonal fluctuations and other variables are accounted for, in order that the wells are sampled at the highest potential nitrate value to the extent practicable. Cooperative groundwater monitoring program work must be scheduled so as to make drinking water evaluation the first priority. Drinking water quality information must be reported as it becomes available, and all of the requirements of this paragraph, with the exception of any repeat sampling, must be completed by December 1, 2014.
7. If a discharger conducting individual groundwater monitoring or a third party conducting cooperative groundwater monitoring determines that water in any well that is used or may be used for drinking water exceeds or is projected to exceed 45 mg/L of nitrate as NO<sub>3</sub> (or 10 mg/L of nitrate + nitrite as N), the discharger or third party must provide notice to the Central Coast Water Board within 24 hours of learning of the exceedance or projected exceedance. For wells on a Discharger's farm/ranch, the Central Coast Water Board will require that the Discharger notify the users within 10 days. For all other wells, the Central Coast Water Board will notify the users promptly.

## **B. Individual Groundwater Reporting**

1. **By October 1, 2013 and annually thereafter by October 1**, Tier 3 Dischargers must submit groundwater monitoring results and information, electronically, in a format specified by the Executive Officer. Dischargers must include the following information:
  - a. Signed transmittal letter;
  - b. Number of groundwater wells present at each farm/ranch;
  - c. Identification of any groundwater wells abandoned or destroyed (including method destroyed) in compliance with the Order;
  - d. Owner-assigned well identification;
  - e. State identification number, if available;
  - f. Well location (latitude and longitude);
  - g. Water-use category (e.g., domestic drinking water, agricultural);
  - h. Identification of primary irrigation well;
  - i. Well construction information (e.g., total depth, screened intervals, depth to water), as available;
  - j. Use for fertigation or chemigation;
  - k. Presence and type of back flow prevention devices;
  - l. Photo-documentation of well condition and back flow prevention device (**photos must be maintained in the Farm Plan and submitted upon request of the Executive Officer**);
  - m. Identification of wells sampled to comply with the Order and MRP;
  - n. Laboratory data must be compatible with the Water Board's Groundwater Ambient Monitoring and Assessment (GAMA) Program, and GeoTracker electronic deliverable format (EDF).

**Note: The above information (a-n) is reported electronically in the Notice of Intent and groundwater reporting to the GeoTracker data management system. It is not necessary for Dischargers to prepare and submit a separate technical report that includes this information.**

## **C. Nitrate Loading Risk Factor Determination and Total Nitrogen Reporting**

1. Tier 3 Dischargers must calculate the nitrate loading risk factor for each ranch/farm included in their operations. The nitrate loading risk factor is a measure of the relative risk of loading nitrate to groundwater. Tier 3 Dischargers must determine the nitrate loading risk factor for each ranch/farm, based on the highest risk activity existing at each ranch/farm. For example, if a Discharger uses both sprinkler and drip irrigation on the same crop, they must use the irrigation type "sprinkler" in the nitrate loading risk calculation. To calculate nitrate loading risk, Tier 3 Dischargers must use the criteria and methodology described in Table 4 of this MRP, or use

the Nitrate Groundwater Pollution Hazard Index developed by University of California Division of Agriculture and Natural Resources (UCANR).

2. Tier 3 Dischargers may choose to subdivide the ranch/farm into "nitrate loading risk units," based on the variability of ranch/farm conditions for the purposes of complying with this Order. A nitrate loading risk unit is a subdivided unit of the ranch/farm . Factors that a discharger may consider in subdividing the farm into nitrate loading risk units include but are not limited to irrigation system type, crop type, nitrate concentration in the irrigation water, soil type, number of management blocks that would have to otherwise be reported under Method 1 in subsection C.5 below. The nitrate loading risk unit may be the total ranch, a number of blocks, or an individual block. If a Discharger chooses to subdivide the ranch/farm into individual nitrate loading risk units, the Discharger must maintain individual record keeping, and conduct monitoring and reporting for each nitrate loading risk unit.
3. Tier 3 Dischargers who choose to evaluate nitrate loading risk using the Table 4 criteria and methodology must calculate the ranch/farm or nitrate loading risk unit's nitrate loading risk level (low, moderate, or high), as described in Table 4. Dischargers must report Nitrate Loading Risk factors and level in the electronic Annual Compliance Form.
  - a. LOW - Nitrate loading risk is less than 10;
  - b. MODERATE – Nitrate loading risk is between 10 and 15;
  - c. HIGH – Nitrate loading risk is more than 15;
4. Tier 3 Dischargers who choose to evaluate nitrate loading risk using the Nitrate Groundwater Pollution Hazard Index must characterize the soil type for the individual farm(s), including any variability in soil type, and utilize the index tool at the Internet link below. Soil types may vary across individual fields, and this variability must be accounted for when using the Nitrate Groundwater Pollution Hazard Index. If the soil type is unknown or if the soil type is not included in the UCANR Nitrate Groundwater Pollution Hazard Index tool, Dischargers must use the Table 4 criteria and methodology described above. Dischargers must provide documentation of input to the index for crop type, soil type, irrigation type, and deep rip. A resulting Nitrate Groundwater Pollution Hazard Index number greater than or equal to 20 indicates a High Nitrate Loading Risk.

[http://ucanr.org/sites/wrc/Programs/Water\\_Quality/Nitrate\\_Groundwater\\_Pollution\\_Hazard\\_Index/](http://ucanr.org/sites/wrc/Programs/Water_Quality/Nitrate_Groundwater_Pollution_Hazard_Index/)
5. Tier 3 Dischargers with individual farms/ranches or nitrate loading risk units that have a HIGH nitrate loading risk must report application of nitrogen annually using Method 1 or 2:

Method 1 (by field or management block):

- a. Total nitrogen applied in lbs/acre<sup>1</sup> per crop for each field or management block and identification of the crop type<sup>2</sup>. Total nitrogen applied includes any product, form or concentration including, but not limited to, organic and inorganic fertilizers, slow release products, compost, compost teas, manure, and extracts. The discharger shall also identify the underlying basis for the amount of total nitrogen that the discharger decided to apply. The discharger may report more than one basis.
- b. Average nitrogen concentration in irrigation water during the annual reporting period, reported as total nitrogen in mg/L, applied to each farm/ranch or nitrate loading risk unit, and also the calculated or estimated nitrogen load in lbs/acre for each field or management block.
- c. Total nitrogen present in the soil in lbs/acre for each field or management block prior to the first application of fertilizer to the crop, or at an alternative time when it is most effective to determine nitrogen present in the soil that is available for the next crop and to minimize nitrate leaching to groundwater.

Method 2 (by nitrate loading risk unit):

- a. Total acres of each nitrate loading risk unit.
- b. Total nitrogen applied (sum of all applications) to each nitrate loading risk unit during the annual reporting period in lbs<sup>3</sup>. Total nitrogen applied includes any product, form, or concentration including, but not limited to, organic and inorganic fertilizers, slow release products, compost, compost teas, manure, and extracts. The discharger shall also identify the underlying basis for the amount of total nitrogen that the discharger decided to apply. The discharger may report more than one basis.
- c. Average nitrogen concentration in irrigation water during the annual reporting period, reported as total nitrogen in mg/L, applied to each farm/ranch or nitrate loading risk unit, and also the calculated or estimated nitrogen load in lbs/acre.

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<sup>1</sup> This reporting requirement is for nitrogen content of fertilizer in lbs and not the total lbs of fertilizer. For example, if 100 lbs/acre of nitrogen is applied with 12 percent nitrogen, 12 lbs/acre of nitrogen is reported.

<sup>2</sup> In order to report on a field basis, the entire field must be planted with the same crop and receive the same fertilizer inputs. A management block is any portion of a discharger's land that is planted with the same crop and receives the same fertilizer inputs. Management blocks may consist of multiple fields and/or divisions of a single field.

<sup>3</sup> This reporting requirement is for nitrogen content of fertilizer in lbs and not the total lbs of fertilizer. For example, if 100 lbs/acre of nitrogen is applied with 12 percent nitrogen, 12 lbs/acre of nitrogen is reported.

- d. Total acres of each crop type grown<sup>1</sup> within the nitrate loading risk unit during the annual reporting period.
- e. Total nitrogen present in the soil in lbs/acre for each field within the nitrate loading risk unit, measured once per annual reporting period prior to the first application of fertilizer to the first crop in rotation, or at an alternative time when it is most effective to determine nitrogen present in the soil that is available for the next crop and to minimize nitrate leaching to groundwater.

### **PART 3. ANNUAL COMPLIANCE FORM**

Tier 3 Dischargers must submit annual compliance information, electronically, in a format specified by the Executive Officer. The purpose of the electronic Annual Compliance Form is to provide information to the Central Coast Water Board to assist in the evaluation of threat to water quality from individual agricultural discharges of waste and measure progress towards water quality improvement and verify compliance with the Order and MRP. Time schedules are shown in Table 6.

#### **A. Annual Compliance Form**

1. **By October 1, 2012 and updated annually thereafter by October 1**, Tier 3 Dischargers must submit an Annual Compliance Form electronically, in a format specified by the Executive Officer. The electronic Annual Compliance Form includes, but is not limited to the following minimum requirements<sup>2</sup>:
  - a. Signed transmittal letter;
  - b. Verification that any change in general operation or farm/ranch information (e.g., crop type, irrigation type, discharge type) is reported on update to Notice of Intent (NOI);
  - c. Verification of compliance with monitoring requirements, including any cooperative monitoring fees;
  - d. Verification of completed Farm Plan and date of last update;
  - e. Information regarding type and characteristics of discharge (e.g., number of discharge points, estimated flow/volume, number of tailwater days);
  - f. Identification of any direct agricultural discharges to a stream, lake, estuary, bay, or ocean;
  - g. Identification of specific farm water quality management practices completed, in progress, and planned to address water quality impacts caused by discharges of waste including irrigation

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<sup>1</sup> If a crop type is grown in more than one rotation during the annual reporting period, the total acres of the crop type equals the sum of the acres planted in each rotation.

<sup>2</sup> Items reported in the Annual Compliance Form are due by October 1, 2012 and annually thereafter, unless otherwise specified.

management, pesticide management, nutrient management, salinity management, stormwater management, and sediment and erosion control to achieve compliance with this Order; and identification of specific methods used, and described in the Farm Plan consistent with Order Provision 44.g., for the purposes of assessing the effectiveness of management practices implemented and the outcomes of such assessments:

- h. Average nitrogen concentration in irrigation water during the annual reporting period, reported as total nitrogen in mg/L applied for each farm/ranch or nitrate loading risk unit, and also the calculated or estimated nitrogen load in lbs/acre;
- i. Identification of the application of any fertilizers, pesticides, fumigants or other chemicals through an irrigation system (e.g. fertigation or chemigation) and proof of proper backflow prevention devices;
- j. Description of method and location of chemical applications relative to surface water;
- k. Nitrate Loading Risk factors in Table 4 or Nitrate Groundwater Pollution Hazard Index input and Nitrate Loading Risk level;
- l. Proof of approved California Department of Fish and Game (CDFG) Streambed Alteration Agreement, as required by CDFG for any work proposed within the bed, bank or channel of a lake or stream, including riparian areas, that has the potential to result in erosion and discharges of waste to waters of the State;

*Tier 3 Dischargers with farms/ranches that contain or are adjacent to a waterbody impaired for temperature, turbidity or sediment:*

- m. Photo monitoring to document condition of streams, riparian, and wetland area habitat and the presence of bare soil within the riparian habitat area that is vulnerable to erosion<sup>1</sup>;
- n. Water Quality Buffer Plan or alternative<sup>2</sup>;

*Tier 3 Dischargers with farms/ranches that have High Nitrate Loading Risk:*<sup>3</sup>

Either:

Method 1 (by field or management block):

- o. Total nitrogen applied in lbs/acre per crop for each field or management block and identification of the crop type. Total nitrogen applied includes any product, form or concentration including, but not limited to, organic and inorganic fertilizers, slow release products, compost, compost teas, manure, and extracts.

<sup>1</sup> Reporting due by October 1, 2014 and October 1, 2017.

<sup>2</sup> Due by October 1, 2016

<sup>3</sup> Due by October 1, 2014 and annually thereafter by October 1.

The discharger shall also identify the underlying basis for the determination of the amount of total nitrogen applied. The discharger may report more than one basis;

- p. Total nitrogen present in the soil in lbs/acre for each field or management block prior to the first application of fertilizer to the crop, or at an alternative time when it is most effective to determine nitrogen present in the soil that is available for the next crop and to minimize nitrate leaching to groundwater.

*or*

Method 2 (by nitrate loading risk unit):

- q. Total acres of each nitrate loading risk unit;
- r. Total nitrogen applied (sum of all applications) to each nitrate loading risk unit during the annual reporting period in lbs. Total nitrogen applied included any product, form, or concentration including, but not limited to, organic and inorganic fertilizers, slow release products, compost, compost teas, manure, and extracts. The discharger shall also identify the underlying basis for the determination of the amount of total nitrogen applied. The discharger may report more than one basis;
- s. Total acres of each crop type grown within the nitrate loading risk unit during the annual reporting period;
- t. Total nitrogen present in the soil in lbs/acre for each field within the nitrate loading risk unit, measured once per annual reporting period prior to the first application of fertilizer to the first crop in rotation, or at an alternative time when it is most effective to determine nitrogen present in the soil that is available for the next crop and to minimize nitrate leaching to groundwater.

*and*

- u. INMP Effectiveness Report.<sup>1</sup>

#### **PART 4. PHOTO MONITORING AND REPORTING REQUIREMENTS**

Photo monitoring and reporting requirements identified in Part 4.A. apply to Tier 3 Dischargers that have farms/ranches that contain or are adjacent to a waterbody identified on the List of Impaired Waterbodies as impaired for temperature, turbidity or sediment (see Order Table 1). Time schedules are shown in Table 6.

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<sup>1</sup> Due by October 1, 2016



### **A. Photo Monitoring and Reporting**

1. **By October 1, 2012**, Tier 3 Dischargers that have farms/ranches that contain or are adjacent to a waterbody *impaired for temperature, turbidity or sediment* must conduct photo monitoring to do the following:
  - a. Document the existing condition of perennial, intermittent or ephemeral streams (wet or dry), riparian or wetland area habitat; Photo monitoring of existing conditions must be repeated every four years.
2. Tier 3 Dischargers must conduct photo monitoring consistent with protocol established by the Executive Officer. Dischargers must include date of photo, photo location and point of reference in the photo. Photos must be accompanied by explanations and descriptions of the management practices demonstrated in the photos to meet the Basin Plan requirements specified in Part 7.A. and must include estimated widths of riparian areas from top of bank.
3. Tier 3 Dischargers must maintain photos in the Farm Plan and submit upon request of the Executive Officer.

## **PART 5. INDIVIDUAL SURFACE WATER DISCHARGE MONITORING AND REPORTING REQUIREMENTS**

Monitoring and reporting requirements for individual surface water discharge identified in Part 5.A. and Part 5.B. apply to Tier 3 Dischargers with irrigation water or stormwater discharges to surface water from an outfall. Outfalls are locations where irrigation water and stormwater exit a farm/ranch, or otherwise leave the control of the discharger, after being conveyed by pipes, ditches, constructed swales, tile drains, containment structures, or other discrete structures or features that transport the water. Discharges that have commingled with discharges from another farm/ranch are considered to have left the control of the discharger. Key monitoring and reporting requirements for individual surface water discharge are shown in Tables 5A and 5B. Time schedules are shown in Table 6.

### **A. Individual Surface Water Discharge Monitoring**

1. Tier 3 Dischargers must conduct individual surface water discharge monitoring to a) evaluate the quality of individual waste discharges, including concentration and load of waste (in kilograms per day) for appropriate parameters, b) evaluate effects of waste discharge on water quality and beneficial uses, and c) evaluate progress towards compliance with water quality improvement milestones in the Order.

### Individual Sampling and Analysis Plan

2. **By March 15, 2013**, Tier 3 Dischargers must submit an individual surface water discharge Sampling and Analysis Plan and QAPP to monitor individual discharges of irrigation water and stormwater that leaves their farm/ranch from an outfall. The Sampling and Analysis Plan and QAPP must be submitted to the Executive Officer.
3. The Sampling and Analysis Plan must include the following minimum required components to monitor irrigation water and stormwater discharges:
  - a. Number and location of outfalls (identified with latitude and longitude or on a scaled map);
  - b. Number and location of monitoring points;
  - c. Description of typical irrigation runoff patterns;
  - d. Map of discharge and monitoring points;
  - e. Sample collection methods;
  - f. Monitoring parameters;
  - g. Monitoring schedule and frequency of monitoring events;
4. The QAPP must include appropriate methods for sampling, measurement and analysis, data collection or generation, data handling, quality control activities, and documentation.
5. The Sampling and Analysis Plan and QAPP, and any proposed revisions are subject to approval by the Executive Officer. The Executive Officer may require modifications to the Sampling and Analysis Plan or Tier 3 Dischargers may propose Sampling and Analysis Plan modifications for Executive Officer approval, when modifications are justified to accomplish the objectives of the MRP.

### Individual Surface Water Discharge Monitoring Points

6. Tier 3 Dischargers must select monitoring points to characterize at least 80% of the estimated maximum irrigation run-off discharge volume from each farm/ranch based on that farm's/ranch's typical discharge patterns<sup>1</sup>, including tailwater discharges and discharges from tile drains. Sample must be taken when irrigation activity is causing maximal run-off. Load estimates

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<sup>1</sup> The requirement to select monitoring points to characterize at least 80% of the estimated maximum irrigation run-off based on typical discharge patterns is for the purposes of attempting to collect samples that represent a majority of the volume of irrigation run-off discharged; however the Board recognizes that predetermining these locations is not always possible and that sampling results may vary. The MRP does not specify the number or location of monitoring points to provide maximum flexibility for growers to determine how many sites necessary and exact locations are given the anticipated site-specific conditions.

will be generated by multiplying flow volume of discharge by concentration of contaminants. Tier 3 Dischargers must include at least one monitoring point from each farm/ranch which drains areas where chlorpyrifos or diazinon are applied, and monitoring of runoff or tailwater must be conducted within one week of chemical application. If discharge is not routinely present, Discharger may characterize typical run-off patterns in the Annual Report. See Table 5A for additional details.

7. Tier 3 Dischargers must also monitor storage ponds and other terminal surface water containment structures that collect irrigation and stormwater runoff, unless the structure is (1) part of a tail-water return system where a major portion of the water in such structure is reapplied as irrigation water, or (2) the structure is primarily a sedimentation pond by design with a short hydraulic residence time (96 hours or less) and a discharge to surface water when functioning. If multiple ponds are present, sampling must cover at least those structures that would account for 80% of the maximum storage volume of the containment features. See Table 5B for additional details. Where water is reapplied as irrigation water. Dischargers shall document reuse in the Farm Plan.

#### Individual Surface Water Discharge Monitoring Parameters, Frequency, and Schedule

8. Tier 3 Dischargers must conduct monitoring for parameters, laboratory analytical methods, frequency and schedule described in Tables 5A and 5B. Dischargers may utilize in-field water testing instruments/equipment as a substitute for laboratory analytical methods if the method is approved by U.S. EPA, meets reporting limits (RL) and practical quantitation limits (PQL) specifications in the MRP, and appropriate sampling methodology and quality assurance checks can be applied to ensure that QAPP standards are met to ensure accuracy of the test.
9. **By December 1, 2013**, Tier 3 Dischargers must initiate individual surface water discharge monitoring per the Sampling and Analysis Plan and QAPP, unless otherwise directed by the Executive Officer.

#### **B. Individual Surface Water Discharge Reporting**

##### Individual Surface Water Discharge Monitoring Data Submittal

**By March 15, 2014**, October 1, 2014, and annually thereafter by October 1, Tier 3 Dischargers must submit individual surface water discharge monitoring data and information to the Central Coast Water Board electronically, in a pdf format, containing at least the following items, or as otherwise approved by the Executive Officer:

##### **a. Electronic laboratory data**

- All reports of results must contain Ranch name and Global ID, site name(s), project contact, and date.
  - Electronic laboratory data reports of chemical results shall include analytical results, as well as associated quality assurance data including method detection limits, reporting limits, matrix spikes, matrix spike duplicates, laboratory blanks, and other quality assurance results required by the analysis method.
  - Electronic laboratory data reports of toxicity results shall include summary results comparable to those required in a CEDEN file delivery, including test and control results. For each test result, the mean, associated control performance, calculated percent of control, statistical test results and determination of toxicity, must be included. Test results must specify the control ID used to calculate statistical outcomes.
  - Field data results, including temperature, pH, conductivity, turbidity and flow measurements, any field duplicates or blanks, and field observations.
  - Calculations of un-ionized ammonia concentrations
  - Calculations of total flow and pollutant loading (for nitrate, pesticides if sampled, total ammonia, and turbidity) (include formulas);
- b. Narrative description of typical irrigation runoff patterns;**
- c. Location of sampling sites and map(s);**
- d. Sampling and analytical methods used;**
- e. Specify the method used to obtain flow at each monitoring site during each monitoring event;**
- f. Photos obtained from all monitoring sites, clearly labeled with location and date;**
- g. Sample chain-of-custody forms do not need to be submitted but must be made available to Central Coast Water Board staff, upon request.**

## **PART 6. IRRIGATION AND NUTRIENT MANAGEMENT PLAN**

Monitoring and reporting requirements related to the Irrigation and Nutrient Management Plan (INMP) identified in Part 6.A., 6.B., and 6.C. apply to Tier 3 Dischargers that have farms/ranches with high nitrate loading risk. Time schedules are shown in Table 6.

### **A. Irrigation and Nutrient Management Plan Monitoring**

1. Tier 3 Dischargers with High Nitrate Loading Risk must develop and initiate implementation of an Irrigation and Nutrient Management Plan (INMP) certified by a Professional Soil Scientist, Professional Agronomist, or Crop Advisor certified by the American Society of Agronomy, or similarly qualified professional.

2. The purpose of the INMP is to budget and manage the nutrients applied to each farm/ranch or nitrate loading risk unit considering all sources of nutrients, crop requirements, soil types, climate, and local conditions in order to minimize nitrate loading to surface water and groundwater in compliance with this Order.
3. The professional certification of the INMP must indicate that the relevant expert has reviewed all necessary documentation and testing results, evaluated total nitrogen applied relative to typical crop nitrogen uptake and nitrogen removed at harvest, with consideration to potential nitrate loading to groundwater, and conducted field verification to ensure accuracy of reporting.
4. Tier 3 Dischargers with High Nitrate Loading Risk must include the following elements in the INMP. The INMP is not submitted to the Central Coast Water Board, with the exception of the INMP Effectiveness Report:
  - a. Proof of INMP certification;
  - b. Map locating each farm/ranch or nitrate loading risk unit;
  - c. Identification of nitrate loading risk factors or input to the Groundwater Pollution Nitrate Hazard Index and overall Nitrate Loading Risk level calculation for each ranch/farm or nitrate loading risk unit;
  - d. Identification of crop nitrogen uptake values for use in nutrient balance calculations;
  - e. Record keeping annually by either Method 1 or Method 2:

Method 1 (by field or management block):

- i. The total nitrogen applied in lbs/acre per crop, for each field or management block and identification of the crop type. Total nitrogen applied includes any product, form or concentration including, but not limited to, organic and inorganic fertilizers, slow release products, compost, compost teas, manure and extracts. The discharger shall also identify the underlying basis for the amount of total nitrogen that the discharger decided to apply. The discharger may report more than one basis.
- ii. Average nitrogen concentration in irrigation water during the annual reporting period, reported as total nitrogen in mg/L, applied to each farm/ranch or nitrate loading risk unit, and also the calculated or estimated nitrogen load in lbs/acre for each field or management block.
- iii. Total nitrogen present in the soil in lbs/acre for each field or management block prior to the first application of fertilizer to the crop, or at an alternative time when it is most effective to determine nitrogen present in the soil that

is available for the next crop and to minimize nitrate leaching to groundwater.

Method 2 (by nitrate loading risk unit):

- i. Total acres of each nitrate loading risk unit.
  - ii. Total nitrogen applied (sum of all applications) to each nitrate loading risk unit during the annual reporting period in lbs. Total nitrogen applied includes any product, form, or concentration including, but not limited to, organic and inorganic fertilizers, slow release products, compost, compost teas, manure, and extracts. The discharger shall also identify the underlying basis for the determination of the amount of total nitrogen applied. The discharger may report more than one basis.
  - iii. Average nitrogen concentration in irrigation water during the annual reporting period, reported as total nitrogen in mg/L, applied to each farm/ranch or nitrate loading risk unit, and also the calculated or estimated nitrogen load in lbs/acre.
  - iv. Total acres of each crop type grown within the nitrate loading risk unit during the annual reporting period.
  - v. Total nitrogen present in the soil in lbs/acre for each field within the nitrate loading risk unit, measured once per annual reporting period prior to the first application of fertilizer to the first crop in rotation, or at an alternative time when it is most effective to determine nitrogen present in the soil that is available for the next crop and to minimize nitrate leaching to groundwater.
- f. To meet the requirement to record total nitrogen in the soil in 4.e. dischargers may take a nitrogen soil sample (e.g. laboratory analysis or nitrate quick test) or use an alternative method to evaluate nitrogen content in soil, prior to planting or seeding the field or prior to the time of pre-sidedressing, or at an alternative time when it is most effective to determine nitrogen present in the soil that is available for the next crop and to minimize nitrate leaching to groundwater. The amount of nitrogen remaining in the soil must be accounted for as a source of nitrogen when budgeting, and the soil sample or alternative method results must be maintained in the INMP.
- g. Identification of irrigation and nutrient management practices in progress (identify start date), completed (identify completion date), and planned (identify anticipated start date) to reduce nitrate loading to groundwater to achieve compliance with this Order.

- h. Description of methods Discharger will use to verify overall effectiveness of the INMP.
5. Tier 3 Dischargers must evaluate the effectiveness of the INMP. Irrigation and Nutrient Management Plan effectiveness monitoring must evaluate reductions in loading based on reduced fertilizer use and improved irrigation and nutrient management practices in order to minimize nitrate loading to surface water and groundwater. Evaluation methods used may include, but are not limited to analysis of groundwater well monitoring data or soil sample data, or analysis of trends in nitrogen application data.

## **B. Irrigation and Nutrient Management Plan Reporting**

1. **By October 1, 2016**, Tier 3 Dischargers that have farms/ranches with high nitrate loading risk to groundwater must submit an INMP Effectiveness Report to evaluate reductions in nitrate loading to surface water and groundwater based on the implementation of irrigation and nutrient management practices. Dischargers in the same groundwater basin or subbasin may choose to comply with this requirement as a group by submitting a single report that evaluates the overall effectiveness of the broad scale implementation of irrigation and nutrient management practices identified in individual INMPs to protect groundwater. Group efforts must use data from each farm/ranch (e.g., data from individual groundwater wells, soil samples, or nitrogen application). The INMP Effectiveness Report must include a description of the methodology used to evaluate and verify effectiveness of the INMP.

## **PART 7. WATER QUALITY BUFFER PLAN**

Monitoring and reporting requirements related to the Water Quality Buffer Plan identified in Part 7.A. and Part 7.B. apply to Tier 3 Dischargers that have farms/ranches that contain or are adjacent to waterbody identified on the List of Impaired Waterbodies as impaired for temperature, turbidity, or sediment). Time schedules are shown in Table 6.

### **A. Water Quality Buffer Plan;**

1. **By October 1, 2016**, Tier 3 Dischargers adjacent to or containing a waterbody identified on the List of Impaired Waterbodies as impaired for temperature, turbidity or sediment must submit a Water Quality Buffer Plan to the Executive Officer that protects the listed waterbody and its associated perennial and intermittent tributaries. The purpose of the Water Quality Buffer Plan is to prevent waste discharge, comply with water quality standards (e.g., temperature, turbidity, sediment), and protect beneficial

uses in compliance with this Order and the following Basin Plan requirement:

Basin Plan (Chapter 5, p. V-13, Section V.G.4 – Erosion and Sedimentation, *“A filter strip of appropriate width, and consisting of undisturbed soil and riparian vegetation or its equivalent, must be maintained, wherever possible, between significant land disturbance activities and watercourses, lakes, bays, estuaries, marshes, and other water bodies. For construction activities, minimum width of the filter strip must be thirty feet, wherever possible....”*

2. The Water Quality Buffer Plan must include the following or the functional equivalent, to address discharges of waste and associated water quality impairments:
  - a. A minimum 30 foot buffer (as measured horizontally from the top of bank on either side of the waterway, or from the high water mark of a lake and mean high tide of an estuary);
  - b. Any necessary increases in buffer width to adequately prevent the discharge of waste that may cause or contribute to any excursion above or outside the acceptable range for any Regional, State, or Federal numeric or narrative water quality standard (e.g., temperature, turbidity);
  - c. Any buffer less than 30 feet must provide equivalent water quality protection and be justified based on an analysis of site-specific conditions and be approved by the Executive Officer;
  - d. Identification of any alternatives implemented to comply with this requirement, that are functionally equivalent to described buffer;
  - e. Schedule for implementation;
  - f. Maintenance provisions to ensure water quality protection;
  - g. Annual photo monitoring;

## **PART 8. GENERAL MONITORING AND REPORTING REQUIREMENTS**

### **A. Submittal of Technical Reports**

1. Dischargers must submit reports in a format specified by the Executive Officer (reports will be submitted electronically, unless otherwise specified by the Executive Officer). A transmittal letter must accompany each report, containing the following penalty of perjury statement signed by the Discharger or the Discharger’s authorized agent:

*“In compliance with Water Code §13267, I certify under penalty of perjury that this document and all attachments were prepared by me, or under my*



*direction or supervision following a system designed to assure that qualified personnel properly gather and evaluate the information submitted. To the best of my knowledge and belief, this document and all attachments are true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment”.*

2. If the Discharger asserts that all or a portion of a report submitted pursuant to this Order is subject to an exemption from public disclosure (e.g. trade secrets or secret processes), the Discharger must provide an explanation of how those portions of the reports are exempt from public disclosure. The Discharger must clearly indicate on the cover of the report (typically an electronic submittal) that the Discharger asserts that all or a portion of the report is exempt from public disclosure, submit a complete report with those portions that are asserted to be exempt in redacted form, submit separately (in a separate electronic file) unredacted pages (to be maintained separately by staff). The Central Coast Water Board staff will determine whether any such report or portion of a report qualifies for an exemption from public disclosure. If the Central Coast Water Board staff disagrees with the asserted exemption from public disclosure, the Central Coast Water Board staff will notify the Discharger prior to making such report or portions of such report available for public inspection. In the interest of public health and safety, the Central Coast Water Board will not make available for public inspection, the precise location of any groundwater well monitored in compliance with this Order. Consistent with the reporting of groundwater wells on GeoTracker, groundwater well location and data will only be referenced within a one-half mile radius of the actual well location.

## **B. Enforcement and Violations**

1. Monitoring reports are required pursuant to Section 13267 of the California Water Code. Pursuant to Section 13268 of the Water Code, a violation of a request made pursuant to Section 13267 may subject you to civil liability assessment of up to \$1000 per day.

## **C. Executive Officer Authority**

1. The Executive Officer revised this MRP consistent with the State Water Resources Control Board Order WQ-2013-0101 adopted on September 24, 2013.
2. The Executive Officer may revise this MRP as necessary, and Dischargers must comply with the MRP as revised by the Executive Officer. Specifically, the Executive Officer may increase monitoring and reporting requirements where monitoring results, pesticide use patterns, or other indicators suggest

that the increase is warranted due to an increased threat to water quality. Additionally, the Executive Officer can reduce monitoring and reporting requirements, including adjusting time schedules, where growers are coordinating efforts at watershed or subwatershed scales or where regional treatment facilities are implemented, or other indicators suggest that the reduction is warranted due to a reduced threat to water quality.



Digitally signed by Kenneth A Harris Jr.  
DN: cn=Kenneth A Harris Jr., o=Central Coast  
Regional Water Quality Control Board,  
ou=Executive Officer,  
email=Ken.Harris@waterboards.ca.gov, c=US  
Date: 2014.07.01 15:20:59 -0700'

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Kenneth A. Harris, Jr.  
Executive Officer

July 1, 2014

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Date

**Table 1. Major Waterbodies in Agricultural Areas<sup>1</sup>**

Hydrologic SubArea	Waterbody Name	Hydrologic SubArea	Waterbody Name
30510	Pajaro River	30920	Quail Creek
30510	Salsipuedes Creek	30920	Salinas Reclamation Canal
30510	Watsonville Slough	31022	Chorro Creek
30510	Watsonville Creek <sup>2</sup>	31023	Los Osos Creek
30510	Beach Road Ditch <sup>2</sup>	31023	Warden Creek
30530	Carnadero Creek	31024	San Luis Obispo Creek
30530	Furlong Creek <sup>2</sup>	31024	Prefumo Creek
30530	Llagas Creek	31031	Arroyo Grande Creek
30530	Miller's Canal	31031	Los Berros Creek
30530	San Juan Creek	31210	Bradley Canyon Creek
30530	Tesquisquita Slough	31210	Bradley Channel
30600	Moro Cojo Slough	31210	Green Valley Creek
30910	Alisal Slough	31210	Main Street Canal
30910	Blanco Drain	31210	Orcutt Solomon Creek
30910	Old Salinas River	31210	Oso Flaco Creek
30910	Salinas River (below Gonzales Rd.)	31210	Little Oso Flaco Creek
30920	Salinas River (above Gonzales Rd. and below Nacimiento R.)	31210	Santa Maria River
30910	Santa Rita Creek <sup>2</sup>	31310	San Antonio Creek <sup>2</sup>
30910	Tembladero Slough	31410	Santa Ynez River
30920	Alisal Creek	31531	Bell Creek
30920	Chualar Creek	31531	Glenn Annie Creek
30920	Espinosa Slough	31531	Los Carneros Creek <sup>2</sup>
30920	Gabilan Creek	31534	Arroyo Paredon Creek
30920	Natividad Creek	31534	Franklin Creek

<sup>1</sup> At a minimum, sites must be included for these waterbodies in agricultural areas, unless otherwise approved by the Executive Officer. Sites may be proposed for addition or modification to better assess the impacts of waste discharges from irrigated lands to surface water. Dischargers choosing to comply with surface receiving water quality monitoring, individually (not part of a cooperative monitoring program) must only monitor sites for waterbodies receiving the discharge.

<sup>2</sup> These creeks are included because they are newly listed waterbodies on the 2010 303(d) list of Impaired Waters that are associated with areas of agricultural discharge.

**Table 2. Surface Receiving Water Quality Monitoring Parameters**

Parameters and Tests	RL <sup>3</sup>	Monitoring Frequency <sup>1</sup>
<b>Photo Monitoring</b>		
Upstream and downstream photographs at monitoring location		With every monitoring event
<b><u>WATER COLUMN SAMPLING</u></b>		
<b>Physical Parameters and General Chemistry</b>		
Flow (field measure) (CFS) following SWAMP field SOP <sup>9</sup>	.25	Monthly, including 2 stormwater events
pH (field measure)	0.1	"
Electrical Conductivity (field measure) (uS/cm)	2.5	"
Dissolved Oxygen (field measure) (mg/L)	0.1	"
Temperature (field measure) (°C)	0.1	"
Turbidity (NTU)	0.5	"
Total Dissolved Solids (mg/L)	10	"
Total Suspended Solids (mg/L)	0.5	"
<b>Nutrients</b>		
Total Nitrogen (mg/L)	0.5	Monthly, including 2 stormwater events
Nitrate + Nitrite (as N) (mg/L)	0.1	"
Total Ammonia (mg/L)	0.1	"
Unionized Ammonia (calculated value, mg/L)		"
Total Phosphorus (as P) (mg/L)	-	"
Soluble Orthophosphate (mg/L)	0.01	"
Water column chlorophyll a (mg/L)	0.002	"
Algae cover, Floating Mats, % coverage	-	"
Algae cover, Attached, % coverage	-	"
<b>Water Column Toxicity Test</b>		
Algae - <i>Selenastrum capricornutum</i> , 4 day	-	Twice in dry season, twice in wet season
Water Flea – <i>Ceriodaphnia</i> (7-day chronic)	-	"
Fathead Minnow - <i>Pimephales promelas</i> (7-day chronic)	-	"
Toxicity Identification Evaluation (TIE)	-	As directed by Executive Officer
<b>Pesticides<sup>2</sup> (ug/L)</b>		
<b>Carbamates</b>		
Aldicarb	0.05	4 times, concurrent with water toxicity monitoring, in second or third year of Order term <sup>10, 11</sup>

MRP NO. R3-2012-0011-03 (TIER 3)  
 CONDITIONAL WAIVER OF  
 WASTE DISCHARGE REQUIREMENTS  
 FOR DISCHARGES FROM IRRIGATED LANDS

Parameters and Tests	RL <sup>3</sup>	Monitoring Frequency <sup>1</sup>
Carbaryl	0.05	"
Carbofuran	0.05	"
Methiocarb	0.05	"
Methomyl	0.05	"
Oxamyl	0.05	"
<b>Organophosphate Pesticides</b>		
Azinphos-methyl	0.02	"
Chlorpyrifos	0.005	"
Diazinon	0.005	"
Dichlorvos	0.01	"
Dimethoate	0.01	"
Dimeton-s	0.005	"
Disulfoton (Disyton)	0.005	"
Malathion	0.005	"
Methamidophos	0.02	"
Methidathion	0.02	"
Parathion-methyl	0.02	"
Phorate	0.01	"
Phosmet	0.02	"
<b>Herbicides</b>		
Atrazine	0.05	"
Cyanazine	0.20	"
Diuron	0.05	"
Glyphosate	2.0	"
Linuron	0.1	"
Paraquat	0.20	"
Simazine	0.05	"
Trifluralin	0.05	"
<b>Metals (ug/L)</b>		
Arsenic (total) <sup>5,7</sup>	0.3	4 times, concurrent with water toxicity monitoring, in second or third year of Order term <sup>10, 11</sup>
Boron (total) <sup>6,7</sup>	10	"
Cadmium (total & dissolved) <sup>4,5,7</sup>	0.01	"
Copper (total and dissolved) <sup>4,7</sup>	0.01	"
Lead (total and dissolved) <sup>4,7</sup>	0.01	"
Nickel (total and dissolved) <sup>4,7</sup>	0.02	"
Molybdenum (total) <sup>7</sup>	1	"
Selenium (total) <sup>7</sup>	0.30	"
Zinc (total and dissolved) <sup>4,5,7</sup>	0.10	"
<b>Other (ug/L)</b>		
Total Phenolic Compounds <sup>8</sup>	10	4 times, concurrent with water toxicity monitoring, in second or third year of Order term <sup>10, 11</sup>
Hardness (mg/L as CaCO <sub>3</sub> )	1	"
Total Organic Carbon (ug/L)	0.6	"

Parameters and Tests	RL <sup>3</sup>	Monitoring Frequency <sup>1</sup>
<b>SEDIMENT SAMPLING</b>		
Sediment Toxicity - Hyalella azteca 10-day		Annually
Benthic Invertebrate and associated Physical Habitat Assessment	SWAMP SOP	Once during the second or third year of Order concurrent with sediment toxicity sampling <sup>10</sup>
<b>Pyrethroid Pesticides in Sediment (ug/kg)</b>		
Gamma-cyhalothrin	2	Once during second or third year of Order, concurrent with sediment toxicity sampling <sup>10</sup>
Lambda-cyhalothrin	2	“
Bifenthrin	2	“
Beta-cyfluthrin	2	“
Cyfluthrin	2	“
Esfenvalerate	2	“
Permethrin	2	“
Cypermethrin	2	“
Danitol	2	“
Fenvalerate	2	“
Fluvalinate	2	“
<b>Organochlorine Pesticides in Sediment</b>		
DCPA	10	“
Dicofol	2	“
<b>Other Monitoring in Sediment</b>		
Chlorpyrifos (ug/kg)	2	“
Total Organic Carbon	0.01%	“
Sulfide		“
Sediment Grain Size Analysis	1%	“

<sup>1</sup>Monitoring is ongoing through all five years of the Order, unless otherwise specified. Monitoring frequency may be used as a guide for developing alternative Sampling and Analysis Plan.

<sup>2</sup>Pesticide list may be modified based on specific pesticide use in Central Coast Region. Analytes on this list must be reported, at a minimum.

<sup>3</sup>Reporting Limit, taken from SWAMP where applicable.

<sup>4</sup>Holmgren, Meyer, Cheney and Daniels. 1993. Cadmium, Lead, Zinc, Copper and Nickel in Agricultural Soils of the United States. J. of Environ. Quality 22:335-348.

<sup>5</sup>Sax and Lewis, ed. 1987. Hawley's Condensed Chemical Dictionary. 11<sup>th</sup> ed. New York: Van Nostrand Reinhold Co., 1987. Zinc arsenate is an insecticide.

<sup>6</sup><http://www.coastalagro.com/products/labels/9%25BORON.pdf>; Boron is applied directly or as a component of fertilizers as a plant nutrient.

<sup>7</sup>Madramootoo, Johnston, Willardson, eds. 1997. Management of Agricultural Drainage Water Quality. International Commission on Irrigation and Drainage. U.N. FAO. SBN 92-6-104058.3.

<sup>8</sup><http://cat.inist.fr/?aModele=afficheN&cpsid=14074525>; Phenols are breakdown products of herbicides and pesticides. Phenols can be directly toxic and cause endocrine disruption.

<sup>9</sup>See SWAMP field measures SOP, p. 17

mg/L – milligrams per liter; ug/L – micrograms per liter; ug/kg – micrograms per kilogram;

NTU – Nephelometric Turbidity Units; CFS – cubic feet per second;

<sup>10</sup>Enhanced monitoring (for pesticides and metals) in sediment and water chemistry may be conducted in either the second or the third year of the Order term, but at any given site all enhanced monitoring must be done in the same

year,<sup>11</sup> One of the four rounds of enhanced water sampling should be conducted concurrently with bioassessment and sediment monitoring if possible.

**Table 3. Groundwater Monitoring Parameters**

Parameter	RL	Analytical Method <sup>3</sup>	Units
pH	0.1	Field or Laboratory Measurement EPA General Methods	pH Units
Specific Conductance	2.5		µS/cm
Total Dissolved Solids	10		mg/L
Total Alkalinity as CaCO <sub>3</sub>	1	EPA Method 310.1 or 310.2	
Calcium	0.05	General Cations <sup>1</sup> EPA 200.7, 200.8, 200.9	
Magnesium	0.02		
Sodium	0.1		
Potassium	0.1		
Sulfate (SO <sub>4</sub> )	1.0	General Anions EPA Method 300 or EPA Method 353.2	
Chloride	0.1		
Nitrate + Nitrite (as N) <sup>2</sup> or Nitrate as NO <sub>3</sub>	0.1		

<sup>1</sup>General chemistry parameters (major cations and anions) represent geochemistry of water bearing zone and assist in evaluating quality assurance/quality control of groundwater monitoring and laboratory analysis.

<sup>2</sup>The MRP allows analysis of “nitrate plus nitrite” to represent nitrate concentrations. The “nitrate plus nitrite” analysis allows for extended laboratory holding times and relieves the Discharger of meeting the short holding time required for nitrate. Dischargers may also analyze for Nitrate as NO<sub>3</sub>.

<sup>3</sup>Dischargers may use alternative analytical methods approved by EPA.

RL – Reporting Limit; µS/cm – micro siemens per centimeter

**Table 4. Nitrate Loading Risk Factor Criteria and Risk Level Calculation**

<p><b>A. Crop Type Nitrate Hazard Index Rating</b></p> <p>1 - Bean, Grapes, Olive.</p> <p>2 - Apple, Avocado, Barley, Blackberry, Blueberry, Carrot, Chicory, Citrus, Lemon Oat, Orange, Peach, Pear, Pistachio, Raspberry, Walnut, Wheat.</p> <p>3 - Artichoke, Bean, Brussel Sprout, Corn, Cucumber, Daikon, Peas, Radish, Squash, Summer, Tomato, Turnip, Squash, Rutabaga, Pumpkin, Potato.</p> <p>4 – Beet, Broccoli, Cabbage, Cauliflower, Celery, Chinese Cabbage (Napa), Collard, Endive, Kale, Leek, Lettuce, Mustard, Onion, Parsley, Pepper, Spinach, Strawberry.</p> <p>(Based on UC Riverside Nitrate Hazard Index)</p>
<p><b>B. Irrigation System Type Rating</b></p> <p>1 - Micro-irrigation year round (drip and micro-sprinklers) and no pre-irrigation;</p> <p>2 - Sprinklers used for pre-irrigation only and then micro-irrigation;</p> <p>3 - Sprinklers used for germination or at any time during growing season;</p> <p>4 - Surface irrigation systems (furrow or flood) at any, and/or in combination with any other irrigation system type;</p>

(Based on UC Riverside Nitrate Hazard Index, Adapted for the Central Coast Region)

**C. Irrigation Water Nitrate Concentration Rating**

- 1 – Nitrate concentration 0 to 45 mg/liter Nitrate NO<sub>3</sub>
- 2 - Nitrate concentration 46 to 60 mg/liter Nitrate NO<sub>3</sub>
- 3 - Nitrate concentration 61to 100 mg/liter Nitrate NO<sub>3</sub>
- 4 - Nitrate concentration > 100 mg/l Nitrate NO<sub>3</sub>

**D. Nitrate Loading Risk Level Calculation = A x B x C**

- LOW - Nitrate loading risk is less than 10;
- MODERATE – Nitrate loading risk is between 10 and 15;
- HIGH – Nitrate loading risk is more than 15;

*Note: Dischargers must determine the nitrate loading risk factor for each ranch/farm, based on the criteria associated with the highest risk activity existing at each ranch/farm. For example, the ranch/farm is assigned the highest risk factor, based on the single highest risk crop in the rotation, on one block under furrow irrigation, or on one well with high nitrate concentration. As an alternative to the nitrate loading risk level calculation described in Table 4, Dischargers may use the Groundwater Pollution Nitrate Hazard Index developed by UCANR, where a resulting Nitrate Hazard Index score equal or greater or equal to 20 indicates a HIGH nitrate loading risk to groundwater.*

**Table 5A. Individual Discharge Monitoring for Tailwater, Tile drain, and Stormwater Discharges**

Parameter	Analytical Method <sup>1</sup>	Maximum PQL	Units	Min Monitoring Frequency
Discharge Flow or Volume	Field Measure	---	CFS	(a) (d)
Approximate Duration of Flow	Calculation	---	hours/month	
Temperature (water)	Field Measure	0.1	° Celsius	
pH	Field Measure	0.1	pH units	
Electrical Conductivity	Field Measure	100	µS/cm	
Turbidity	SM 2130B, EPA 180.1	1	NTUs	
Nitrate + Nitrite (as N)	EPA 300.1, EPA 353.2	0.1	mg/L	
Ammonia	SM 4500 NH <sub>3</sub> , EPA 350.3	0.1	mg/L	
Chlorpyrifos <sup>2</sup>	EPA 8141A, EPA 614	0.02	ug/L	(b) (c) (d)
Diazinon <sup>2</sup>				
Ceriodaphnia Toxicity (96-hr acute)	EPA-821-R-02-012	NA	% Survival	
Hyalella Toxicity in Water (96-hr acute)	EPA-821-R-02-012	NA	% Survival	

<sup>1</sup> In-field water testing instruments/equipment as a substitute for laboratory analysis if the method is approved by EPA, meets RL/PQL specifications in the MRP, and appropriate sampling methodology and quality assurance checks can be applied to ensure that QAPP standards are met to ensure accuracy of the test.

<sup>2</sup> If chlorpyrifos or diazinon is used at the farm/ranch, otherwise does not apply. The Executive Officer may require monitoring of other pesticides based on results of downstream receiving water monitoring.



- (a) Two times per year during primary irrigation season for farms/ranches less than or equal to 500 acres, and four times per year during primary irrigation season for farms/ranches greater than 500 acres. Executive Officer may reduce sampling frequency based on water quality improvements.
- (b) Once per year during primary irrigation season for farms/ranches less than or equal to 500 acres, and two times per year during primary irrigation season for farms/ranches greater than 500 acres.
- (c) Sample must be collected within one week of chemical application, if chemical is applied on farm/ranch;
- (d) Once per year during wet season (October – March) for farms/ranches less than or equal to 500 acres, and two times per year during wet season for farms/ranches greater than 500 acres, within 18 hours of major storm events;
- CFS – Cubic feet per second; NTU – Nephelometric turbidity unit; PQL – Practical Quantitation Limit;  
 NA – Not applicable

**Table 5B. Individual Discharge Monitoring for Tailwater Ponds and other Surface Containment Features**

Parameter	Analytical Method <sup>1</sup>	Maximum PQL	Units	Minimum Monitoring Frequency
Volume of Pond	Field Measure	1	Gallons	(a) (d)
Nitrate + Nitrite (as N)	EPA 300.1, EPA 353.2	50	mg/L	

<sup>1</sup> In-field water testing instruments/equipment as a substitute for laboratory analysis if the method is approved by EPA, meets RL/PQL specifications in the MRP, and appropriate sampling methodology and quality assurance checks can be applied to ensure that QAPP standards are met to ensure accuracy of the test.

(a) Four times per year during primary irrigation season; Executive Officer may reduce monitoring frequency based on water quality improvements.

(d) Two times per year during wet season (October – March, within 18 hours of major storm events)

**Table 6. Tier 3 - Time Schedule for Key Monitoring and Reporting Requirements**

REQUIREMENT	TIME SCHEDULE <sup>1</sup>
Submit Quality Assurance Project Plan and Sampling And Analysis Plan for Surface Receiving Water Quality Monitoring (individually or through cooperative monitoring program)	Within three months
Initiate surface receiving water quality monitoring (individually or through cooperative monitoring program)	Within six months
Submit surface receiving water quality monitoring data (individually or through cooperative monitoring program)	Within nine months, quarterly thereafter (January 1, April 1, July 1, and October 1)
Submit surface receiving water quality Annual Monitoring Report (individually or through cooperative monitoring program)	By July 1 2014; annually thereafter by July 1
Initiate monitoring of groundwater wells	Within one year
Submit individual surface water discharge Sampling and Analysis Plan	March 15, 2013
Initiate individual surface water discharge monitoring	December 1, 2013
Submit individual surface water discharge monitoring data	March 15, 2014, October 1, 2014 and annually thereafter by October 1
Submit electronic Annual Compliance Form	October 1, 2012, and updated annually thereafter by October 1
Submit groundwater monitoring results	October 1, 2013

MRP NO. R3-2012-0011-03 (TIER 3)  
 CONDITIONAL WAIVER OF  
 WASTE DISCHARGE REQUIREMENTS  
 FOR DISCHARGES FROM IRRIGATED LANDS

<b><i>Tier 3 Dischargers with farms/ranches that contain or are adjacent to a waterbody impaired for temperature, turbidity or sediment:</i></b>	
Conduct photo monitoring of riparian or wetland area habitat	June 1, 2014. June 1, 2017, and every four years thereafter by June 1.
Submit Water Quality Buffer Plan or alternative	October 1, 2016
<b><i>Tier 3 Dischargers with farms/ranches that have High Nitrate Loading Risk:</i></b>	
Report total nitrogen applied per acre to each field or management block or nitrate loading risk unit, in electronic Annual Compliance Form	October 1, 2014, and annually thereafter by October 1.
Submit INMP Effectiveness Report	October 1, 2016

<sup>1</sup> Dates are relative to adoption of this Order, unless otherwise specified.

# **Exhibit N**



Central Coast Regional Water Quality Control Board

Enter date

ENTER REQUIRED INFORMATION AS DESCRIBED WHERE HIGHLIGHTED AND REMOVE HIGHLIGHTS

IRRIGATED LANDS REGULATORY PROGRAM
ID NUMBER: AWXXXX

Si necesita ayuda en español llame al (805) 549-3881

Enter Operator name
Address, from Operation Info Sec. I eNOI
City, CA, Zip

如果協助必要用中文, 請叫 (805) 542-4648

Don't include email address here, place on cc: list, first address.

DRINKING WATER NOTIFICATION

Dear Operator name:

DOMESTIC SUPPLY WELL EXCEEDS THE DRINKING WATER STANDARD FOR NITRATE: OPERATION NAME, RANCH NAME, RANCH ADDRESS, COUNTY (AGLXXXXXXXXXX)

The purpose of this letter is to provide you with important information about your water analysis results for the private domestic well located on the above referenced farm, and to request additional information from you. Based on the water analysis results submitted pursuant to Agricultural Order R3-2012-0011, your private domestic well exceeds the drinking water standard for either nitrate (as nitrate) or nitrate (as nitrogen), and presents a health risk to those who may be drinking the water. Nitrate is a regulated drinking water contaminant in California and drinking water standards are established by the California Department of Public Health (CDPH) for public drinking water supplies. The safe drinking water standard or maximum contaminant level (MCL) is 45 milligrams per liter (mg/L) as nitrate or 10 mg/L as nitrogen1. The additional information we are requesting from you is described below.

Results from your Groundwater Monitoring

Groundwater monitoring data collected on enter date sampled from your domestic well "enter well name" show a nitrate concentration of enter lab result mg/L as nitrate (or replace with "as nitrogen", as applicable), which is above the drinking water standard of 45 mg/L as nitrate

1 The CDPH MCL for nitrate or nitrogen applies to public drinking water supplies. However, under California Water Code section 13304(a), the Central Coast Water Board may issue a cleanup and abatement order requiring the provision of, or payment for, uninterrupted replacement water service to private well owners. The water boards consistently use the MCLs established by CDPH as the basis for a requirement to provide replacement water. See In the matter of Petitions of Olin Corp. and Standard Fusee, Inc. Order WQ 2005-0007, ps. 4-6.

(or replace with "10 mg/L as nitrogen", as applicable). For a copy of your groundwater monitoring results, you should contact the laboratory that sampled your well.

**Please alert all persons using the private domestic water supply well and post notifications within 10 days indicating the water poses a human health risk due to elevated nitrate concentration.** The notice should include a warning against the use of this water for drinking or cooking. It may also be necessary to provide the well users with either appropriately treated drinking water or an alternative drinking water supply (e.g. bottled water).

In addition, provide written notification to any new well users (e.g. tenants and employees with access to the effected well), whenever there is a change in occupancy, explaining that the water poses a human health risk.

**Please provide the following information in writing to this office within 30 days of the date of this letter:**

1. Confirmation that you notified the domestic well users, farm operators, and land owners of the contaminated well(s).
2. Confirmation that you posted the appropriate public health notification, and provided the Water Board's Nitrate Guidance Document (English, Spanish or Chinese versions, as appropriate, attached).
3. Identification of contaminated well(s) used for drinking water supply and the number of people served.
4. A description of any treatment method or alternative drinking water supplies provided, both long-term and short-term, to ensure safe drinking water (e.g. bottled water, drinking water treatment system installation, well shut off, etc.).

Central Coast Water Board staff will evaluate groundwater quality information regarding your farm and follow-up with you regarding management practices and other actions necessary to reduce nitrate pollution from your operations and protect water quality. In addition, since your farm is in an area where groundwater is impacted by nitrate, the Central Coast Water Board may require you in the future to submit technical reports evaluating whether discharge of waste from your operation has caused or contributed to nitrate pollution, pursuant to Water Code section 13267. If the Central Coast Water Board finds that a discharge from your operation has caused or contributed to pollution, the Executive Officer may require you to develop a plan to provide alternative drinking water supplies pursuant to Water Code section 13304.

**For More Information**

Attached is a general guide regarding nitrate in drinking water, including the potential health effects associated with drinking water containing elevated levels of nitrate and general recommendations for private domestic well owners/users. This document also includes a list of resources and contacts where you can obtain additional information. For specific questions regarding the safety of your private domestic well, please contact your local public health agency. Please distribute the nitrate guide to all persons using the domestic well.

If you have any questions regarding this letter, please contact **Staff name and phone number (805) XXX-XXXX or at XXXXX@waterboards.ca.gov** or Angela Schroeter at (805) 542-4644 or at [aschroeter@waterboards.ca.gov](mailto:aschroeter@waterboards.ca.gov). For general information about the Irrigated Lands Regulatory Program please visit the Central Coast Water Board's website at:

[http://www.waterboards.ca.gov/centralcoast/water\\_issues/programs/aq\\_waivers/index.shtml](http://www.waterboards.ca.gov/centralcoast/water_issues/programs/aq_waivers/index.shtml)

Addressee/Ranch Name

- 3 -

Date

Sincerely,

*For*  
Michael Thomas  
Assistant Executive Officer

**Enclosure:** Resources for Growers - Regarding Nitrate in Drinking Water (English) (Spanish)  
or (Chinese) as applicable  
Drinking Water Notification Insert – Non English

P:\Ag - ILRP\8 - Drinking Water Notifications\Revised-Template.doc

cc:

Enter Operator name  
Operation Name  
Email from Operation Info Sec. I eNOI

(Enter appropriate local agency information  
from reference list)

**Landowner(s):**

Enter Landowner Name  
Address, from Sec. IX eNOI  
City, State, Zip  
(Concerning APN: XXX-XXX-XXX)

**Water Board Watershed Lead Staff:**

Enter Staff name  
Central Coast Water Board  
[XXXXXX@waterboards.ca.gov](mailto:XXXXXX@waterboards.ca.gov)

Enter Landowner Name  
Email, if available, from Sec. IX eNOI

Enter Staff DWN Coordinator (Enter Corey  
Walsh information)  
Central Coast Water Board  
[XXXXXX@waterboards.ca.gov](mailto:XXXXXX@waterboards.ca.gov)

**Local Public Health Agency Contact:**

# **Exhibit O**



# CALIFORNIA RURAL LEGAL ASSISTANCE, INC.

March 3, 2014

*Via electronic; return receipt requested*

Central Coast Regional Water Quality Control Board  
Attention: Public Records Act Request  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401

**RE: California Public Records Act Request (CA Government Code §6250 et seq.)**

To Whom It May Concern:

Pursuant to the California Public Records Act (CPRA), Government Code §6250 et seq., California Rural Legal Assistance, Inc. respectfully requests that the Central Coast Regional Water Quality Control Board (Regional Water Board) please provide:

- 1) Groundwater Nitrate Loading Risk Determination reporting submitted by all Tier 2 and Tier 3 farm and ranches to this date, March 3, 2014, pursuant to State Water Resources Control Board Order WQ 2013-0101;
- 2) Drinking Water Notification letters issued by Regional Board to growers and landowners through the Irrigated Lands Regulatory Program who have one or more domestic drinking water wells which have exceeded the drinking water standard through February 28;
- 3) Applicable written confirmations from above growers who have received exceedance notifications, that these growers have notified domestic well users of the nitrate exceedance, posted an appropriate public health notification, and identified any treatment method or alternative drinking water supplies provided to ensure safe drinking water; and
- 4) Staff inspection reports of nine farms/ranches conducted in December 2013 pursuant to the Irrigated Lands Regulatory Program.

Please be aware that the documents requested should include, but not be limited to, all inter- and intra-departmental memos, correspondence and email communications. "Public records" includes any "writing containing information relating to the conduct of the public's business prepared, owned, used, or retained by any state or local agency regardless of physical form or characteristics." (Gov. Code § 6252(e)). "Writing" means "any handwriting, typewriting, printing, photostating, photographing, photocopying, transmitting by electronic mail or facsimile, and every other means of recording upon any tangible thing any form of communication or representation...regardless of the manner in which the record has been stored." *Id.* § 6252(g).

Please provide a response within ten days as required by law, Gov't. Code § 6253, via email to [pan@crla.org](mailto:pan@crla.org) or mail to:



Pearl Kan  
California Rural Legal Assistance, Inc.  
3 Williams Road  
Salinas, CA 93905

To the extent that your office claims the right to withhold any record, or a portion of any record, we request written determination of the denial, pursuant to section 6255 (b) of the California Government Code. If any portion of a document is exempt by law, please delete or black out those portions of the records and provide us with the remainder of the document. If any such deletions are made, please identify the general nature of the material deleted and the legal basis for the deletions.

The Organization requesting these documents, California Rural Legal Assistance, Inc. is a nonprofit organization that provides free legal assistance to low-income clients. No part of the information obtained will be sold or distributed for profit. Accordingly, we request that you waive any fees that would normally be applicable to this CPRA request or provide the records electronically. If you are unable to do so, please notify me at (831) 757-5221 x 324 immediately of any payments required prior to copying.

Thank you in advance for your prompt attention to this matter.

Sincerely,

/s/ YPK

Pearl Kan  
Staff Attorney

# **Exhibit P**

---

## Central Coast Regional Water Quality Control Board

April 10, 2014

Ms. Pearl Kan  
California Rural Legal Assistance, Inc.  
3 Williams Road  
Salinas, CA 93905  
[pkan@crla.org](mailto:pkan@crla.org)

*Via Electronic Mail Only*

### **RESPONSE TO PUBLIC RECORDS ACT REQUEST REGARDING DOCUMENTS PERTAINING TO GROUNDWATER NITRATE LOADING RISK DETERMINATION; DRINKING WATER NOTIFICATIONS AND GROWER RESPONSES; AND STAFF INSPECTIONS**

Dear Ms. Kan:

The Central Coast Regional Water Quality Control Board (Central Coast Water Board) received your request dated March 3, 2014, requesting information pursuant to the California Public Records Act (CPRA). You requested information related to files or records maintained by the Central Coast Water Board for Irrigated Agricultural Operations. In particular, you requested the following information:

- Groundwater Nitrate Loading Risk Determination reporting submitted by all Tier 2 and Tier 3 farm and ranches to this date, March 3, 2014, pursuant to State Water Resources Control Board Order WQ 2013-0101;
- Drinking Water Notification letters issued by Regional Board to growers and landowners through the Irrigated Lands Regulatory Program who have one or more domestic drinking water wells which have exceeded the drinking water standard through February 28;
- Applicable written confirmations from above growers who have received exceedance notifications, that these growers have notified domestic well users of the nitrate exceedance, posted an appropriate public health notification, and identified any treatment method or alternative drinking water supplies provided to ensure safe drinking water; and
- Staff inspection reports of nine farms/ranches conducted in December 2013 pursuant to the Irrigated Lands Regulatory Program.

The Central Coast Water Board has documents that are responsive to your request and is providing them electronically with this letter (see attachments). The Board has some other records that Water Board Counsel has determined are exempt from disclosure under CPRA under the balancing test in Government Code 6255. These are draft documents related to the staff inspections and water well location data.

If you have any questions, please contact Central Coast Water Board staff, Corey Walsh at [cwalsh@waterboards.ca.gov](mailto:cwalsh@waterboards.ca.gov) or (805) 542-4781, or Angela Schroeter at [Angela.Schroeter@waterboards.ca.gov](mailto:Angela.Schroeter@waterboards.ca.gov) or (805) 542-4644, or Jessica Jahr at [Jessica.Jahr@waterboards.ca.gov](mailto:Jessica.Jahr@waterboards.ca.gov) or (916) 341-5168.

Sincerely,

Angela

Schroeter

for

Kenneth A. Harris, Jr.  
Executive Officer

Digitally signed by Angela  
Schroeter  
DN: cn=Angela Schroeter, o=  
Central Coast Regional  
Water Quality Control Board,  
email=aschroeter@waterboards.  
ca.gov, c=US  
Date: 2014.04.09 13:02:04 -0700'

**Attachments:**

1. Nitrate Loading Risk Information data exported from GeoTracker on March 12, 2014
2. Drinking Water Notification letters and responses through April 9, 2014
3. Documents related to farm/ranch inspections conducted in December 2013

cc:

Corey Walsh

[cwalsh@waterboards.ca.gov](mailto:cwalsh@waterboards.ca.gov)

Angela Schroeter

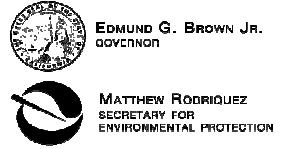
[ASchroeter@waterboards.ca.gov](mailto:ASchroeter@waterboards.ca.gov)

Lisa McCann

[Lisa.McCann@waterboards.ca.gov](mailto:Lisa.McCann@waterboards.ca.gov)

Jessica Jahr

[Jessica.Jahr@waterboards.ca.gov](mailto:Jessica.Jahr@waterboards.ca.gov)



EDMUND G. BROWN JR.  
GOVERNOR

MATTHEW RODRIGUEZ  
SECRETARY FOR  
ENVIRONMENTAL PROTECTION

**Central Coast Regional Water Quality Control Board**

August 20, 2013

AGRICULTURAL REGULATORY PROGRAM  
ID NUMBER: **AW0882**

Mr. Carl Holloway  
Holloway's Christmas Trees  
561 S. Oakglen Ave.  
Nipomo, CA 93444

Si necesita ayuda en español llame al  
(805) 549-3881

如果協助必要用中文，請叫  
(805) 542-4648

**DRINKING WATER NOTIFICATION**

Dear Mr. Holloway:

**DOMESTIC SUPPLY WELL EXCEEDS THE DRINKING WATER STANDARD FOR NITRATE/NITROGEN: HOLLOWAY'S CHRISTMAS TREES - HOLLOWAY'S FARM; 561 S. OAKGLEN AVENUE, NIPOMO, SAN LUIS OBISPO COUNTY (AGL020003109)**

The purpose of this letter is to provide you with important information about your domestic well and to request additional information from you. Based on the data you submitted pursuant to Agricultural Order R3-2012-0011 (Agricultural Order), your domestic well exceeds the drinking water standard for either nitrate or nitrogen, and presents a health risk to those who may be drinking the water. Nitrate and nitrogen are regulated drinking water contaminants in California and drinking water standards are established by the California Department of Public Health (CDPH) for public drinking water supplies. The safe drinking water standard or maximum contaminant level (MCL) is 45 milligrams per liter (mg/L) as nitrate, or 10 mg/L as nitrogen<sup>1</sup>. The additional information we are requesting from you is described below.

**Results From Your Groundwater Monitoring**

Groundwater monitoring data collected on October 9, 2012 and April 4, 2013 from your domestic well "Well 1" shows a concentration of 11.3 mg/L and 10.5 mg/L nitrogen, which is above the public drinking water standard of 10 mg/L. For a copy of your groundwater monitoring results, you should contact the laboratory that sampled your well.

**Please immediately alert all persons using the domestic water supply well and post notifications that the water poses a human health risk due to an elevated nitrate/nitrogen concentration.** The notice should include a warning against the use of this water for drinking or

<sup>1</sup> The CDPH MCL for nitrates or nitrogen applies to public drinking water supplies. However, under California Water Code section 13304(a), the Central Coast Water Board may issue a cleanup and abatement order requiring the provision of, or payment for, uninterrupted replacement water service to private well owners. The water boards consistently use the MCLs established by CDPH as the basis for a requirement to provide replacement water. See *In the matter of Petitions of Olin Corp. and Standard Fusee, Inc.* Order WQ 2005-0007, ps. 4-6.

cooking. In addition, it may also be necessary to provide the well users with either appropriately treated groundwater or an alternative drinking water supply (e.g. bottled water). **Please provide the following information to the Central Coast Water Board within 30 days of the date of this letter: 1) Confirmation that you have notified the domestic well users and posted the appropriate public health notification, and 2) Identification of any treatment method or alternative drinking water supplies provided to ensure safe drinking water, if applicable.**

Central Coast Water Board staff will evaluate groundwater quality information regarding your farm and follow-up with you regarding management practices and other actions necessary to reduce nitrate/nitrogen pollution from fertilizers and protect water quality.

In addition, since your farm is in an area where groundwater is impacted by nitrate/nitrogen, the Central Coast Water Board may require you in the future to submit technical reports evaluating whether discharge of waste from your operation has caused or contributed to nitrate pollution, pursuant to Water Code section 13267. If the Central Coast Water Board finds that a discharge from your operation has caused or contributed to pollution, the Executive Officer may require you to develop a plan to and/or provide alternative drinking water supplies pursuant to Water Code section 13304.

#### **For More Information**

Attached is a general guide regarding nitrate/nitrogen in drinking water, including the potential health effects associated with drinking water containing elevated levels of nitrate/nitrogen and general recommendations for private well owners/users. This document also includes a list of resources and contacts where you can obtain additional information. Please distribute the nitrate/nitrogen guide to all persons using the domestic well.

For specific questions regarding the safety of your domestic well and more information concerning human health risks associated with drinking water containing elevated levels of nitrate/nitrogen, please contact the local public and environmental health contacts included in the attached general guidance document.

If you have any questions regarding this letter, please contact **Corinne Huckaby at (805) 549-3504** or at [chuckaby@waterboards.ca.gov](mailto:chuckaby@waterboards.ca.gov) or Angela Schroeter at (805) 542-4644 or at [aschroeter@waterboards.ca.gov](mailto:aschroeter@waterboards.ca.gov). For general information about the Agricultural Regulatory Program and groundwater monitoring requirements, please visit the Water Board's website at: [http://www.waterboards.ca.gov/centralcoast/water\\_issues/programs/ag\\_waivers/index.shtml](http://www.waterboards.ca.gov/centralcoast/water_issues/programs/ag_waivers/index.shtml)

Sincerely,

*for*  
Michael Thomas  
Assistant Executive Officer

**Enclosures:** Resources for Growers - Nitrate in Drinking Water (English)

cc: Next page

Landowner(s)

Mr. Carl Holloway  
Holloway's Christmas Trees  
[holloways3@sbcglobal.net](mailto:holloways3@sbcglobal.net)  
(Concerning APNs: 090-171-005; 092-153-001, -002, & -012)

Local Public Health Agency Contacts San Luis County

Dr. Penny Borenstein, M.D., M.P.H.  
Public Health Officer  
2191 Johnson Ave.  
San Luis Obispo, CA 93401

Mr. Curt Batson  
Director Environmental Health  
San Luis Obispo County Division of  
Environmental Health  
[cbatson@co.slo.ca.us](mailto:cbatson@co.slo.ca.us)

Mr. Richard Lichtenfels  
County of San Luis Obispo Health Services  
[rlichten@co.slo.ca.us](mailto:rlichten@co.slo.ca.us)

Water Board Watershed Lead Staff:

Ms. Corinne Huckaby  
Central Coast Water Board  
[chuckaby@waterboards.ca.gov](mailto:chuckaby@waterboards.ca.gov)

## Huckaby, Corinne@Waterboards

---

**From:** Huckaby, Corinne@Waterboards  
**Sent:** Wednesday, August 28, 2013 9:06 AM  
**To:** Carl & Debbie Holloway  
**Subject:** RE: Drinking Water Notification

Thanks for your quick response to our letter.

We don't have standard language to post or a specific format. You can do a sign yourself and perhaps laminate for weather protection. We can't recommend anyone in particular, however, a couple of others growers have used these companies for signage: CCI/Central Coast Industires (800) 633-6966, 2250 Hutton Rd Nipomo, CA 93444 and this company:

<http://iisupplyinc.com/cart/accuform-signs-c-1942/safety-signs-tags-and-labels-p-8457.html>

Regarding your last question below: notify us if and when the nitrate levels become acceptable in the future. We will determine what additional steps to take if any. Corinne

---

**From:** Carl & Debbie Holloway [holloways3@sbcglobal.net]  
**Sent:** Monday, August 26, 2013 5:26 PM  
**To:** Huckaby, Corinne@Waterboards  
**Subject:** Drinking Water Notification

Corinne,

We have received the Drinking Water Notification from the Water Board; and, as requested, would like to provide you with the following information:

- 1) The "domestic well" is the water for our home and is used only by our family and one rental (a detached studio unit next to our house).
- 2) We will notify our tenant and provide them with bottled water for drinking and cooking, but we assume we can make our own choice for our own home.
- 3) We will post the necessary signage; however, we would like to know if you provide these signs or if there is a place where we can obtain them. If not, and we are expected to come up with something on our own, please provide us with the specific wording you want used on the sign.
- 4) As a fall back option, we are also able to divert our water usage to the "big well" which has acceptable readings for the nitrate/nitrogen. For now, however, we will deal with this issue by #'s 1 through 3.

And, one last question . . . Since our domestic well is only slightly elevated in it's nitrate reading, if it should become "acceptable" in the future, what steps do we take at that time -- throw everything out & start over again only if necessary?

Appreciate your getting back to us -- thanks for your assistance.







March 13 , 2014

To : Corinne Huckaby  
CCRWQCB

This is written in response to your letter dated 2-7-14 about a domestic supply well located at 1450 West Main , Santa Maria , Ca.

We gave the person using the well , who is the owner's son , a copy of your letter and advised him not to use the water for drinking or cooking .

We are using the well for fire water only . We connected the house to another well . We also drilled another well and are waiting for the results of the new well.

Thank you for your help and patience .

Sincerely ,

Fred Keller , Jr.

1635 North Blosser Road, Santa Maria CA 93458  
Office (805) 614-6100, Fax (805) 614-6177

# **Exhibit Q**

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

**STAFF REPORT FOR REGULAR MEETING OF – NOVEMBER 13-14, 2014**  
Prepared on October 21, 2014

**ITEM NUMBER:** 15

**SUBJECT:** **Irrigated Lands Regulatory Program: Water Board Review of Central Coast Groundwater Coalition's Drinking Water Notification Process**

**STAFF CONTACT:** Angela Schroeter 805/542-4644, [Angela.Schroeter@waterboards.ca.gov](mailto:Angela.Schroeter@waterboards.ca.gov)  
John Robertson 805/542-4630, [John.Robertson@waterboards.ca.gov](mailto:John.Robertson@waterboards.ca.gov)

**KEY INFORMATION:**

Location: Region-Wide  
Type of Discharge: Irrigated Lands Runoff / Leaching to Groundwater  
Existing Orders: Order No. RB3-2012-0011 and WQ 2013-0101

**THIS ACTION:** **Continuation of July 2014 Board Meeting Item 13 - Board Review Regarding the Central Coast Groundwater Coalition's Disclosure of Individual Notification Letters and Individual Follow-Up Action Information**

**SUMMARY**

Item 15 is a discussion item for the Board regarding the Central Coast Groundwater Coalition's (CCGC's) drinking water notification process. This item is a continuation of the July 2014 Board Meeting Item 13. The staff report for the July 2014 Board Meeting Item 13 is available at: [http://www.waterboards.ca.gov/centralcoast/board\\_info/agendas/2014/july/item13/index.shtml](http://www.waterboards.ca.gov/centralcoast/board_info/agendas/2014/july/item13/index.shtml).

Specifically, the purpose of Item 15 is to:

1. Present staff's evaluation and recommendation concerning the CCGC's proposal for sharing drinking water notification information that will allow the Central Coast Water Board staff to verify such notification.
2. Present staff's response and recommendations regarding California Rural Legal Assistance's (CRLA's) request for discretionary review of the CCGC's drinking water notification process. In letters dated July 3, 2014 and July 28, 2014, CRLA requests that the Board bring the coalition's notification process in alignment with the Regional Board's individual monitoring notification process.

As individual growers and the CCGC implement the groundwater monitoring requirements of the Agricultural Order, results indicate that many domestic drinking water wells exceed the safe drinking water standard for nitrate. Due to the potential severity and urgency of the health issues associated with drinking groundwater with high concentrations of nitrate, the process to effectively notify well users of these exceedances has become an important aspect of the Irrigated Lands Regulatory Program.

The Agricultural Order (as modified by State Water Resources Control Board Order WQ 2013-0101) states that in cases where there are drinking water exceedances, the Central Coast Regional Water Quality Control Board (Water Board) will require that the grower or landowner notify the users within 10 days. As acknowledged in the July 2014 Board meeting, staff could not verify that notification actions have been completed for domestic wells with unsafe levels of nitrate that were sampled by CCGC. As a result of this fact, staff worked with CCGC representatives to develop an acceptable resolution to sharing drinking water notification information that will enable staff to verify that proper drinking water notification has occurred in compliance with the Agricultural Order. CCGC has agreed to provide the required information.

Separately, staff evaluated CRLA's request for discretionary review of the CCGC's drinking water notification process such that it aligns with the notification method used for individual monitoring. Staff finds that the information submitted by CCGC provides a functional equivalent to the individual monitoring notification process.

Based on the above, staff recommends no change to the existing CCGC Work Plan (work plan) approval conditions, and to accept the CCGC's proposal for providing drinking water notification information to the Water Board. The rationale for staff's recommendation is discussed below.

## DISCUSSION

### CCGC Proposal for Providing Drinking Water Notification Information

As follow-up to several discussions with staff, on October 9, 2014, CCGC submitted a proposal for providing specific drinking water notification information (**Attachment 1**). To ensure that Water Board staff can efficiently and effectively identify the landowner/operator associated with the wells included in exceedance reports and verify that proper well user notification has occurred, the CCGC agreed to submit a supplemental list of information, which will include the ranch-specific Global ID and the associated Field Point Name (CCGC well identification) for all groundwater wells sampled in compliance with Agricultural Order. Additionally, the CCGC will amend its exceedance reports to include a brief description of follow up actions by individual well (e.g. response actions taken by the grower or landowner to ensure safe drinking water such as treatment or bottled water). A sample revised exceedance report is included in **Attachment 2**.

Ranch-specific Global IDs are associated with each individual grower enrolled in the Agricultural Order (on the eNOI in the GeoTracker database) and are used to associate submittals and evaluate compliance, including for groundwater monitoring requirements. The CCGC's submittal of a list of all wells monitored under the CCGC Work Plan and the associated ranch specific Global ID enables staff to quickly and efficiently relate any well nitrate concentration to an individual ranch, landowner/operator and address. Thus, staff can verify that proper notification has occurred and conduct follow-up, if necessary, similar to individually-monitored domestic wells that exceed the nitrate drinking water standard.

The CCGC indicates that this proposal provides Water Board staff with the necessary information in an appropriate format to allow staff to efficiently associate domestic wells with landowner/operators so that staff can verify compliance with Agricultural Order groundwater monitoring and related notification requirements. Further, CCGC indicates that providing the information to the Water Board using the proposed approach allows for a certain level of protection to alleviate security and privacy concerns expressed by CCGC members.

### Water Board Staff's Evaluation of CCGC Proposal

Staff finds the CCGC proposal acceptable and therefore recommends no change to the existing work plan approval conditions. The work plan does affirm the Executive Officer's authority to require the submittal of individual drinking water notification letters upon request. The CCGC proposal does not change this authority. However, staff does not anticipate requiring the submittal of individual drinking water notification letters, except under certain circumstances. For example, situations where the Water Board may require submittal of individual drinking water notification letters include where information suggests that proper notification may not have occurred or staff has a need to follow-up with well users to evaluate risks to public health or to ensure safe drinking water, cases where there is a specific complaint concerning the exceedance and replacement water situation, or the CCGC member does not respond or the response is unclear. While the Water Board staff will not routinely receive copies of individual drinking water notification letters and do not anticipate requesting these letters excepting in unusual circumstances like those cited above, CCGC does agree to provide Water Board staff access to all documents at CCGC/Water Board coordination meetings and at CCGC's home office or other agreed upon times and locations. This provides staff the opportunity to audit & review all documents associated with CCGC notification process. Table 1 summarizes the drinking water notification information that CCGC will provide to the Water Board.

**Table 1. Summary of Drinking Water Information CCGC Provides to Water Board**

<b>Information Provided by CCGC</b>	<b>Description</b>
Farm/Ranch Identification	Farm/Ranch GeoTracker Global ID
Well Identification	CCGC Field Point Name
Well Location	Latitude and Longitude <i>(precise information to Water Board, obscured to the public with a .5 mile blur)</i>
Well Type	Field Point Class <i>(e.g., private drinking water well or irrigation well)</i>
Sample Date	Date
Sample (Nitrate) Result	Laboratory Analytical Result
Exceedance Identification	Yes or No
Notification Date	Date CCGC member was notified
Date of Well User Notification	Date well user(s) were notified of exceedance
Description of Response Action Taken	Specific replacement water action or other response taken, if applicable <i>(e.g., bottled water, RO unit, etc.)</i>

### **CRLA'S REQUEST FOR DISCRETIONARY REVIEW OF CCGC'S NOTIFICATION PROCESS**

On July 3, 2014, CRLA submitted a request for discretionary review by the Water Board on 1) CCGC's notification process for wells that have exceeded the nitrate Maximum Contaminant Level (MCL) and 2) the manner in which the groundwater testing results of CCGC will be disclosed to the public. A copy of CRLA's July 3, 2014 letter is available on the Water Board website at this link: [CRLA July 3, 2014 letter](#) and at the Central Coast Water Board's website for the July 2014 meeting. This item addresses only the first portion of CRLA's discretionary review request; the second requested review will be considered at a Board meeting in the early portion of 2015.

As discussed at the July 2014 Board Meeting, CRLA's request for discretionary review of CCGC's drinking water notification process is related to staff's evaluation of CCGC's proposal for providing drinking water notification information to the Water Board. Thus, it is appropriate for staff to also respond to CRLA's request for discretionary review of the CCGC's drinking water notification process as part of this Board Item.

In response to CRLA's request for discretionary review, staff evaluated the CCGC drinking water notification process and CRLA's specific concerns regarding written confirmation of notification and the identification of particular wells that have a nitrate exceedance. As part of this evaluation, staff compared the drinking water notification process for growers who comply with individual groundwater monitoring requirements, to the notification process for CCGC members who comply with the cooperative groundwater monitoring requirements. The comparison is summarized in Table 2 below.

**Table 2. Summary of Drinking Water Notification Process**

<b>Drinking Water Notification Action Taken</b>	<b>Individual</b>	<b>CCGC</b>
Report all groundwater monitoring data to the Water Board in GeoTracker	YES	YES
Identify all drinking water exceedances and provide list to the Water Board.	YES	YES
Send Drinking Water Notification letter to Grower and Landowner in 10 Days	YES	YES
Drinking Water Notification letter copied to local Environmental Health Agency	YES	(No)
Requires Posting of Unsafe Drinking Water	YES	YES
Requires notification of all well users, letter includes Nitrate Resource Document (multi-lingual).	YES	YES
Requires written notification to any new well users (e.g. new tenants and employees with access to the affected well), whenever there is a change in occupancy.	YES	YES
Requires grower or landowner to respond within 30 days to confirm notification and posting, includes Penalty of Perjury Statements	YES	YES
Require grower or landowner to provide description of response action (e.g. treatment method or alternative drinking water supplies provided)	YES	YES
Individual Notification Letters Available to Water Board	YES	(Upon request)
Individual Notification Letters Available to the Public	YES	(No, unless the Water Board requests them)

In order to effectively verify compliance with groundwater monitoring and related drinking water notification requirements for CCGC members and in order to conduct any necessary follow-up, staff must have access to and review specific information. At the July 2014 Board Meeting, Board Members requested that staff continue efforts to work with CCGC to develop a process that enables Water Board staff to verify drinking water notifications by identifying the landowners/operators (based on eNOI information) in a transparent and efficient manner, while recognizing that some CCGC members desire a certain level of protection to alleviate security

and privacy concerns. Board Members also requested that staff discuss the process with CRLA as they also conduct follow-up related to drinking water exceedances. CRLA's position is that it is critical for water users to readily access information regarding possible contamination of their potable water supply and that the Water Board should prioritize the public's access to this information using the most direct and efficient means.

One of the primary differences between the individual and CCGC drinking water notification processes is that the individual drinking water notification letters are generally available to the public, and the CCGC drinking water notification letters only become available to the public when the Water Board requests them. An additional difference is that the CCGC notification letters are not copied to the local environmental health agencies. Since March 2012, the Central Coast Water Board has copied the appropriate local environmental health agencies on all drinking water notification letters. In discussions with several county staff, Water Board staff understands that county staff finds this documentation useful and timely and have encouraged the Water Board staff to continue this practice. In addition, Water Board staff is also discussing additional methods for sharing water quality and GIS data with the local environmental health agencies. CCGC has indicated that while they do not directly copy any agencies on drinking water notification letters, they are coordinating with Monterey County staff to discuss sharing nitrate exceedance information.

After completing the evaluation of CRLA's stated concerns related to the CCGC drinking water notification, staff concluded that the information provided in CCGC's proposal enables Water Board staff to verify drinking water notifications by identifying the landowners/operators (based on eNOI information) associated with individual drinking water exceedances in a transparent and efficient manner, and that the CCGC drinking water notification process does provide written confirmation that well users have been properly notified that the domestic well does not meet safe drinking water standards.

## CONCLUSION

As individual growers and the CCGC implement the groundwater monitoring requirements of the Agricultural Order, the potential severity and urgency of the health issues associated with drinking water with high concentrations of nitrate continues to be a high priority for the Central Coast Water Board. Consequently, the process to effectively notify well users of these conditions has become an important aspect of the Irrigated Lands Regulatory Program.

In conclusion, with regards to the CCGC drinking water notification process, three options are available to Water Board staff:

1. **Maintain the status quo:** As presently constructed, the information that the CCGC submits does not allow staff to verify that notification has occurred for domestic wells that exceed the drinking water standard for nitrate.
2. **Require CCGC to provide all notification letters:** This option allows for Water Board staff to verify notification has taken place, but does not factor in concerns of some CCGC members regarding privacy and security.
3. **Require additional information that allows Water Board staff to associate CCGC Field Point Name with Ranch-specific Global ID:** This option provides staff sufficient information to verify that notification has taken place, while providing consideration for CCGC member concerns as stated above.

Option 3 allows Water Board staff to verify CCGC member compliance with the Agricultural Order for domestic wells that exceed the nitrate drinking water standard by providing staff with sufficient information to audit notification process. As such, Water Board staff finds that



CCGC's drinking water notification process is functionally equivalent to the Water Board's drinking water notification process for individual growers. Water Board staff has discussed these issues with both CCGC and CRLA. Additionally, staff concludes that sufficient information is available in the case that the Water Board has a need to follow-up on a particular drinking water exceedance.

Discussion of this item and subsequent direction from the Board satisfies the CLRA request for discretionary review of the CCGC groundwater monitoring program and the Executive Officer's approval letter as it relates to this issue.

## **RECOMMENDATION**

Water Board staff recommends no change to the existing CCGC Work Plan approval conditions. Unless otherwise directed by the Board, the Executive Officer plans to respond to the CCGC in writing approving their proposal submitted on October 9, 2014 and requiring the submittal of the information described in Table 2.

## **ATTACHMENTS**

- |              |   |
|--------------|---|
| Attachment 1 | CCGC Letter Dated October 9, 2014 - Central Coast Groundwater Coalition Proposal for Providing Member Information to the Central Coast Regional Water Quality Control Board |
| Attachment 2 | Sample CCGC Drinking Water Exceedance Report  |

# **Exhibit R**



# CALIFORNIA RURAL LEGAL ASSISTANCE, INC.

December 11, 2014

*Via electronic mail; return receipt requested*

Central Coast Regional Water Quality Control Board  
Attention: Public Records Act Request  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401

RE: California Public Records Act Request

To Whom It May Concern:

Pursuant to the California Public Records Act (CPRA), Government Code section 6250 *et seq.*, California Rural Legal Assistance, Inc. respectfully requests that the Central Coast Regional Water Quality Control Board please provide:

- (1) CCGC relational key submitted to Central Coast Regional Water Quality Board on December 15, 2014 pursuant to Executive Officer's December 8, 2014 approval letter
  - a. If CCGC fails to provide relational key on December 15, 2014, please provide a letter indicating that CCGC did not provide relational key on that date.
- (2) All Drinking Water Notification letters issued by the CCGC to its members who are regulated under the Agricultural Order who have one or more domestic drinking water wells which have exceeded the nitrate drinking water standard through December 11, 2014.
- (3) Written confirmations from CCGC members who have received exceedance notifications -- that these growers have notified domestic well users of the nitrate exceedance, posted an appropriate public health notification, and identified any treatment method or alternative drinking water supplies provided to ensure safe drinking water.

Please provide a response within ten days and indicate the date and time I should expect to receive the requested documents, as required by Government Code section 6253(c). Your response can be emailed to [pkan@crla.org](mailto:pkan@crla.org).

To the extent that your office claims the right to withhold any record, or a portion of any record, we request written determination of the denial, pursuant to Government Code section 6255(b). Thank you in advance for your prompt attention to this matter.

Very truly yours,

/s/ YPK

Pearl Kan  
Attorney | [pkan@crla.org](mailto:pkan@crla.org)

# **Exhibit S**

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## Central Coast Regional Water Quality Control Board

December 19, 2014

Pearl Kan  
California Rural Legal Assistance, Inc.  
3 Williams Road  
Salinas, CA 93905  
[pkan@crla.org](mailto:pkan@crla.org)

***Via Electronic Mail Only***

Dear Ms. Kan:

### **RESPONSE TO PUBLIC RECORDS ACT REQUEST FOR CENTRAL COAST GROUNDWATER COALITION (CCGC) DOCUMENTS RECEIVED BY CENTRAL COAST WATER BOARD**

The Central Coast Regional Water Quality Control Board (Central Coast Water Board) received your request on December 12, 2014, requesting information pursuant to the Public Records Act (PRA). This letter is in response to your PRA request.

We understand that you are requesting information related to files or records maintained by the Central Coast Water Board for information provided by the Central Coast Groundwater Coalition (CCGC) concerning drinking water exceedances associated with CCGC members. In particular, you requested the following documents:

- (1) CCGC relational key submitted to Central Coast Regional Water Quality Board on December 15, 2014 pursuant to Executive Officer's December 8, 2014 approval letter.
- (2) All Drinking Water Notification letters issued by the CCGC to its members who are regulated under the Agricultural Order who have one or more domestic drinking water wells which have exceeded the nitrate drinking water standard through December 11, 2014.
- (3) Written confirmations from CCGC members who have received exceedance notifications -- that these growers have notified domestic well users of the nitrate exceedance, posted an appropriate public health notification, and identified any treatment method or alternative drinking water supplies provided to ensure safe drinking water.

For your information, Government Code section 6253 requires our agency to specify within ten days of the request whether it has disclosable public records. The Central Coast Water Board does have documents responsive to your request and is providing them electronically with this letter (see attachments). Specifically, the Central Coast Water Board is providing you the following documents:

**Attachment 1:** CCGC's relational key provided by the Central Coast Groundwater Coalition via e-mail on December 5, 2014 and titled *"Table 1. CCGC Northern Counties Work Plan – supplemental information linking CCGC Field Point Name to member's Global ID."*

**Attachment 2:** Exceedance Reports provide by the CCGC. These reports include a summary of responses regarding treatment or alternative drinking water supplies for wells affected by drinking water exceedances of the nitrate water quality objective. Also included are several tables, which include lists of nitrate results from well monitoring for individual compliance and CCGC Northern Counties Work Plan Characterization monitoring. The tables include columns indicating “Notification Date” and “Notification Confirmation Date” for wells that exceed the water quality objective. Central Coast Water Board has required CCGC to provide more detailed exceedance report concerning the documented exceedances and will provide these documents once they are received and available for distribution.

The Central Coast Water Board does not have any documents responsive to your request for Drinking Water Notification letters issued by the CCGC to its members. These documents are available to the Central Coast Water Board upon request and we have not requested any as of the date of this letter.

If you have any questions, please contact Central Coast Water Board staff, **Hector Hernandez** at [hhernandez@waterboards.ca.gov](mailto:hhernandez@waterboards.ca.gov), or at (805) 542-4641, or **Angela Schroeter** at (805) 542-4644.

Sincerely,

Angela Schroeter



Digitally signed by Angela Schroeter  
DN: cn=Angela Schroeter, o=ou,  
email=angela.schroeter@waterboards.ca.gov, c=US  
Date: 2014.12.19 16:45:14 -08'00'

for  
Kenneth A. Harris, Jr.  
Executive Officer

Attachment 1: CCGC’s relational key titled, “*Table 1. CCGC Northern Counties Work Plan – supplemental information linking CCGC Field Point Name to member’s Global ID.*”

Attachment 2: Exceedance Reports Provided by CCGC

cc:

Jessica Jahr  
[Jessica.Jahr@waterboards.ca.gov](mailto:Jessica.Jahr@waterboards.ca.gov)

John Robertson  
[John.Robertson@waterboards.ca.gov](mailto:John.Robertson@waterboards.ca.gov)

Tamarin Austin  
[Tamarin.Austin@waterboards.ca.gov](mailto:Tamarin.Austin@waterboards.ca.gov)

Chris Rose  
[Chris.Rose@waterboards.ca.gov](mailto:Chris.Rose@waterboards.ca.gov)

Lori Okun  
[Lori.Okun@waterboards.ca.gov](mailto:Lori.Okun@waterboards.ca.gov)

Angela Schroeter  
[Angela.Schroeter@waterboards.ca.gov](mailto:Angela.Schroeter@waterboards.ca.gov)

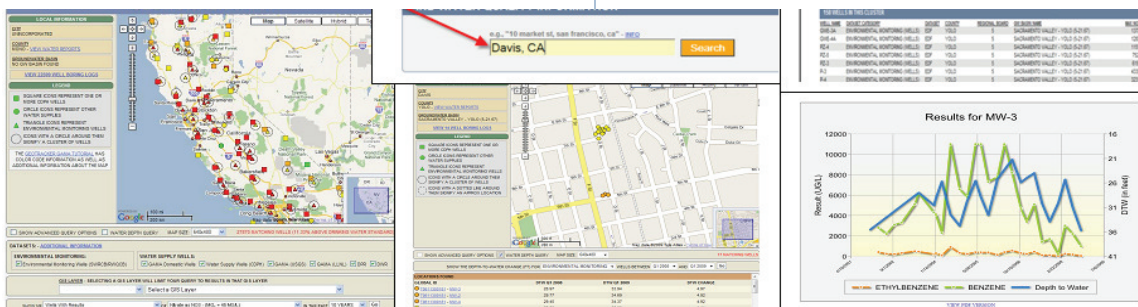
Hector Hernandez  
[hector.hernandez@waterboards.ca.gov](mailto:hector.hernandez@waterboards.ca.gov)

# **Exhibit T**

**GeoTracker GAMA** integrates and geographically displays water quality data from multiple sources through public and secure password-protected web access portals. It has analytical tools and reporting features to assess groundwater quality and identify potential groundwater issues in relationship to roads, satellite imagery, and terrain using Google maps filtered by county, legislative district, groundwater basin, and others. There are a number of reports that allow users to see hits above chemical contaminant thresholds and water level data are also displayed. These data can be exported for use in other software programs.

**GeoTracker GAMA** infrastructure is flexible to integrate and report on large, complex, scientific datasets from public agencies and private parties. It continues to receive datasets for groundwater quality information as well as potential contaminant sources using GeoTracker's secure Electronic Submission of Information (ESI) module for reporting of laboratory data and reports. Current groundwater quality data sets include, from largest to smallest:

- Groundwater quality data and information sources include over 175 million records.



**GeoTracker GAMA** is the data management system envisioned by the Groundwater Quality Monitoring Act - AB 599 (Chapter 522, Statutes of 2001) which found that the lack of information about groundwater contamination greatly impairs the ability of regulators and the public to protect the state's groundwater. AB 599 requires the State Board to design a database capable of making groundwater quality information from multiple sources available to the public. GeoTracker GAMA is to also include information on groundwater quality and potential sources of contamination, such as USTs, military facilities, industrial sites, landfills, dairies, and POTWs.

- 60 million standardized analytical test results from over 200,000 wells (sampling locations).
- Simple queries across multiple groundwater data sources as a result of data standardization.
- Online source for more than 2.5 Million of depth to water measurements from Water Boards cleanup sites and DWR water data library.



# **Exhibit U**

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## Central Coast Regional Water Quality Control Board

July 11, 2013

**Sent via Hard Copy and Electronic Mail**

Northern Central Coast Groundwater Task Force  
Abby Taylor-Silva  
Vice President, Policy and Communications  
Grower-Shipper Association of Central California  
512 Pajaro St.  
Salinas, CA 93901  
[abby@growershipper.com](mailto:abby@growershipper.com)

Dear Ms. Taylor-Silva:

### **AGRICULTURAL REGULATORY PROGRAM - APPROVAL OF CENTRAL COAST COOPERATIVE GROUNDWATER PROGRAM (CCCGP)**

On May 31, 2013, you submitted a final workplan titled “*Northern Central Coast Cooperative Groundwater Program*” (workplan) to the Central Coast Regional Water Quality Control Board (Central Coast Water Board). The stated purpose of this document was to set forth the workplan for a Northern Central Coast Cooperative Groundwater Program that satisfies the groundwater monitoring requirements in Order No. R3-2012-0011 Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands (Agricultural Order) and the associated Monitoring and Reporting Program Orders (MRPs) for participating landowners and growers in Monterey, Santa Cruz, Santa Clara, and San Benito Counties. On July 9, 2013, you submitted a slightly revised workplan with clarifications.

I am pleased to grant approval of the cooperative program as described in the July 9, 2013 workplan, with the following specific conditions and comments described below. These conditions are important and required to clarify and confirm our expectations about how you will comply with the Agricultural Order and the associated MRPs on behalf of individual landowners and growers who participate in your cooperative program. I find these conditions to be flexible and responsive to your concerns, as well as reasonable given the severity of groundwater quality conditions and impacts to drinking water in agricultural areas. We appreciate the effort you’ve made to create this workplan and recognize the significant progress that you have made in improving the workplan since our initial meeting in January 2013.

### **BACKGROUND**

The Central Coast Water Board adopted the Agricultural Order and associated MRPs on March 15, 2012. The Agricultural Order and the MRPs specify that enrolled landowners and growers have the option to comply with groundwater monitoring requirements by either monitoring groundwater individually on their agricultural operations, or by joining a groundwater cooperative monitoring program. The workplan states that the cooperative program will implement two

related technical tasks: locating and sampling domestic supply wells on participant owned/leased/operated land, and characterizing groundwater aquifers in the cooperative program area with a focus on the quality of shallow groundwater.

We recognize that cooperative third party approaches may provide a number of short and long-term advantages. For example, third parties may have the expertise to provide a high level of technical assistance and training to growers to achieve measureable water quality improvement. In addition, cooperative efforts provide leadership and can bring participants together to better understand the severity of groundwater quality impairment related to irrigated agriculture and maximize regional efforts toward improving water quality.

## CONDITIONS

### Phased Approach

1. As previously discussed, use of a phased approach provides additional time and flexibility to implement the cooperative program. The phased approach also requires multiple “phased” approvals and therefore comes with some risks, as an approval of the phased workplan does not obligate me or any future Executive Officer to approve any subsequent section or part when details are submitted for approval in the future.
2. If the Executive Officer makes a final determination that any section or part of the phased workplan is not approved or if the cooperative program fails to implement any part of the workplan as approved (including approved time schedule or a deliverable), growers become individually responsible for implementing the MRP and may be subject to enforcement.
3. Implementation begins upon approval of the workplan. All phases of the workplan must be completed by March 15, 2015, including submittal of all deliverables to the Central Coast Water Board.

### Third-Party Organization

4. The workplan indicates that you will form a non-profit organization to direct and administer the workplan and that the organization will be formed immediately after approval of the workplan (p. 21). Within 30 days of this letter, you must provide the Central Coast Water Board with an update on the status of the non-profit organization.
5. The workplan indicates that by September 1, 2013, you will provide the list of participating landowners and growers and quarterly thereafter, you will provide a list of newly participating landowners and growers (p. 21). As a modification to these deliverables, on September 1, 2013, you must submit the list of participating landowners and growers. The subsequent quarterly submittals must also provide a complete list of participating landowners and growers, clearly identifying those that are new. In addition, the quarterly submittals must also provide a list of any landowners and growers who are no longer participating in the cooperative program and the date of their termination.

Domestic Drinking Water Wells

6. The workplan indicates that you will conduct sampling of domestic drinking water wells in three phases, with sampling to begin by September 1, 2013 and complete by September 1, 2014. As previously discussed, the sampling of domestic drinking water wells is the Central Coast Water Board's highest priority for the cooperative programs. Failure to provide well lists, conduct sampling, or upload data to GeoTracker according to the schedules described in Tables 3, 4, and 5 of the workplan (p. 11-13) is a violation of the Agricultural Order and MRP, and grounds for immediate disapproval/termination of the cooperative program.
7. The workplan indicates that the initial list of wells to be sampled will be submitted on September 1, 2013, along with a sampling schedule. The workplan also indicates that well sampling will start on the same date (September 1, 2013) and that a final list of wells to be sampled will be submitted on November 1, 2013. The latter well list will include justification for selected wells and for those that are excluded.
8. As discussed on April 26, 2013 and described in our May 20, 2013 letter, the cooperative program must sample all domestic drinking water wells on participant owned/leased/operated land, unless an acceptable technical rationale is provided for sampling a representative subset in specific areas. In Tables 3, 4, and 5 of the workplan, you indicate that you will submit a list of all wells on participant owned/leased/operated land. This list serves to describe the universe of all domestic drinking water wells available for sampling prior to selection. The list of all wells must include the actual well location (latitude and longitude), along with all available information regarding construction details for each well (i.e., screen interval, total depth, lithology/stratigraphy in screened portion, etc.).
9. The workplan presents criteria to prioritize wells for sampling (including well log availability, depth/screened interval, and condition of well head and seal) (p. 8). The Central Coast Water Board's highest priority is to evaluate domestic drinking water well water quality and minimize exposure to unsafe drinking water, regardless of whether or not the well log is available or the depth/screened interval is precisely known. Staff recognizes that use of known well construction information as a sampling criteria is common for groundwater assessments, that the lack of this type of information may affect the use of these specific data for the overall groundwater characterization, and that as a result additional wells may be needed for groundwater characterization.

You must sample all domestic drinking water wells on participant owned/leased/operated land; unless an acceptable technical rationale is provided for sampling a representative subset in specific areas. The absence of well construction details or a well log is not an appropriate criterion/rationale to justify not sampling a domestic drinking water well, especially if that well potentially serves unsafe drinking water. Sufficient technical rationale must provide evidence that groundwater quality from the well not sampled is represented by other wells sampled with reasonable certainty, based on factors such as close proximity, same aquifer, and similar well depth and screened interval. Technical rationale will be carefully evaluated especially in areas of known or likely exceedance of safe drinking water standards. The proposed list of wells for sampling and any technical

rationale for sampling a subset must be evaluated by Water Board staff and approved by the Executive Officer prior to implementation.

#### Adequacy of Sampling Locations and Density, Contour Maps

10. The workplan indicates that you will determine the adequacy of the number of wells for characterizing domestic drinking water well water quality based on the spatial variability of groundwater nitrate concentrations at various depths and geostatistical methods. You must also consider the hydrogeologic variability to determine if the sampling density is sufficient to represent domestic drinking water quality on and near participant owned/leased/operated land within reasonable certainty. The sampling density, resolution and scale must be sufficient such that individual domestic well owners that reside in agricultural areas within the cooperative groundwater monitoring program boundary can make informed decisions related to their drinking water quality and potential health exposure to nitrate.

In follow-up discussions, your consultant Mr. Michael Johnson indicated that once the samples are collected, analyzed, and you have conducted a proper statistical analysis, you will then re-evaluate the numbers of wells and need to collect additional samples to estimate the concentrations in any given area within an acceptable confidence interval, with the intent of achieving the highest confidence interval possible using all publicly available well samples and integrating the wells sampled by the program. The Groundwater Cooperative Program analysis will be performed to achieve the highest level of certainty possible with the wells that are selected for sampling, and that the analysis will explicitly provide the confidence value for any location on the map. If you determine that there are more wells that may be sampled in order to achieve a higher confidence interval, you must immediately inform the Executive Officer and present a plan, including schedule, for additional sampling as appropriate, to be approved by the Executive Officer.

11. The workplan indicates that you will prepare a Technical Memo on nitrate concentration and also produce contour maps. In our discussions, you indicated that these deliverables are intended to be the primary tool for providing summary information and displaying water quality information to the public. For the purposes of determining the adequacy of the number and density of well sampling, as well as for the purposes of producing contour maps of nitrate concentration, proper geostatistical methods must be utilized (e.g. copulas<sup>1</sup> or similar method). Contour maps should use the State Drinking Water Standard of 45 mg/L Nitrate as NO<sub>3</sub> and the initial contour intervals must be approximately every 10 mg/L Nitrate as NO<sub>3</sub>. After reaching the 45 mg/L Nitrate as NO<sub>3</sub> contour, you may increase the size of the contour interval, if appropriate. Any contour maps produced must include the confidence interval for estimated values, and the quality assurance project plan (QAPP) must include additional sampling for use as a validation data set to confirm adequacy of contours. Contour maps must be reviewed by Water Board staff and approved by the Executive Officer prior to acceptance for display on GeoTracker. If the Executive Officer determines that the contour map does not

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<sup>1</sup> Bardossy, Andras and Jing Li. Geostatistical interpolation using copulas, (July 2008). Water Resources Research, V.44 No.7; Summary citation from AGRICOLA online catalog of the National Agricultural Library (NAL) <http://openagricola.nal.usda.gov/Record/IND44120067>

present the data within an adequate confidence interval that is acceptable for providing reliable information to the public, the Executive Officer may not approve the use of the contour map on GeoTracker.

12. Contour maps for the cooperative program must be developed by, or under the review of a registered Professional Geologist or Professional Engineer based on a sampling design that is statistically defensible given the spatial variability of the aquifer (i.e., hydrogeological heterogeneity, etc.) and specific local conditions. The sampling density, resolution and scale must be approved by the Executive Officer, in advance of contour map preparation, to avoid the problem of not having sufficient data to produce an acceptable contour map. Contour maps must be provided as a geographic information systems (GIS) shapefile according the time scheduled identified in Table 3 though Table 6.
13. The Technical Memo(s) you submit with the contour maps must clearly describe the method used to contour the groundwater monitoring data, the associated confidence intervals and the areas of uncertainty. In addition, the Technical Memo(s) must include the list of wells specifically used in the development of the contour map and also describe any wells excluded from the contour map development (i.e. outliers) along with rationale for exclusion. The Technical Memo must also include identification and discussion of areas of insufficient data or data gaps as well as recommendations for resolving data gaps.

#### Timeframe for Sampling

The workplan does not include any sampling to evaluate the temporal variability (i.e., capturing seasonal or land-use variability, etc.) in groundwater quality in the wells sampled. The cooperative program commits to the Central Coast Water Board to perform additional sampling after the initial sampling outlined in this program is completed to determine temporal variability in wells determined by the cooperative program and the Central Coast Board to be high priority.

#### Deliverables

14. The following deliverable is identified in the workplan but not included in Table 8: Quality Assurance Project Plan (QAPP) due August 15, 2013 (p.19). The Executive Officer must approve the QAPP prior to initiating sampling activities.
15. Deliverables must be submitted in accordance with the schedule identified in Tables 3 through 8 of the workplan. In cases where the identified due date is not a business day, the deliverable is due on the next business day. The Executive Officer must approve deliverables prior to implementation or acceptance for display. In addition, Water Board staff review and Executive Officer approval of planning deliverables (including QAPP, lists of wells, number of wells selected, sampling density, and sampling schedule) are intended to inform adequacy and readiness to proceed with the next steps of workplan implementation.

Reporting and Public Disclosure of Information

16. All data must be uploaded as unique monitoring points with all relevant well location, well construction information (as available), water quality data, and appropriate quality assurance/quality control information to the regulatory side of GeoTracker within 30 days of sample delivery to the laboratory.
17. As previously discussed, it is the policy of the Central Coast Water Board to provide all members of the public with broad and convenient access to its records and to promptly make the fullest possible disclosure of its records. Therefore, upon receipt of a Public Records Act Request (PRAR), the Central Coast Water Board will provide information to the requestor except for that information that is exempt from disclosure under the California Public Records Act (CPRA).
18. In response to concerns related to public health and safety, the Central Coast Water Board will not disclose the precise location of any groundwater well sampled as part of the cooperative program in response to a PRAR. Consistent with the same protocol and standard care implemented to protect locations of public drinking water supply wells regulated by the California Department of Public Health (CDPH), I will recommend to the Central Coast Water Board or the State Water Resources Control Board that they revise the Agricultural Order and MRP to indicate that "Consistent with the display of public supply wells regulated by CDPH on GeoTracker, groundwater well location and data will only be referenced within a one-mile square of the actual well location." Any public use of well location data such as reports and public presentation by the Central Coast Water Board will follow the same protocols to protect the locations of wells.

Internet Display of Information on GeoTracker

19. We understand that the cooperative program participants have significant concerns and objections to displaying individual well locations to the public on maps available on the Internet using GeoTracker. The Central Coast Water Board agrees to display cooperative program data as contour maps on GeoTracker after January 1, 2015<sup>2</sup>, as long as 1) the contour maps meet the conditions described in Conditions 10 through 13 above and are approved by the Executive Officer, and 2) the State Water Resources Control Board makes the necessary modifications to GeoTracker so that it can properly display the contour maps with other existing data currently in GeoTracker.

If by January 1, 2015, the functionality does not exist in GeoTracker to properly display the approved contour maps, the cooperative program has the option to submit static images (e.g. pdf, bitmap) of the contour maps by March 15, 2015; If the cooperative program does not choose to submit static images of the contour maps or if the cooperative program does not submit contour maps that meet Conditions 10 through 13 above, then the data will be displayed as individual wells on GeoTracker and the well location and data will only be referenced within a one-mile square of the actual well location, using the existing mapping functionality for CDPH wells in GeoTracker.

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<sup>2</sup> Note that the delay of display of data on GeoTracker until January 1, 2015 does not affect the immediate availability of information to the public in response to a PRAR.

20. Withholding the display of individual well information on maps on the public side of GeoTracker limits the Central Coast Water Board's ability to provide all members of the public with broad and convenient access to its records and to promptly make the fullest possible disclosure of its records. Therefore, I do not agree to withhold the cooperative program individual well data from maps on the public side of GeoTracker in perpetuity unless reviewed and approved by the Central Coast Water Board as they evaluate and adopt future irrigated lands orders or similar order for discharges of waste from irrigated agricultural operations applying to this program's participants. Doing so affects the Central Coast Water Board's ability to adapt in the future to changing needs, and may have unanticipated consequences on the Central Coast Water Board's ability to readily provide information to the public in cases where there is an acute and imminent threat to public health or safety, or to address issues related to consistency between regions and regulatory programs.

I will agree to withhold the display of individual wells sampled by the cooperative program on maps on the public side of GeoTracker for at least the term of the Agricultural Order, which expires on March 14, 2017. The decision to maintain cooperative program data on the regulatory-only side of GeoTracker would be an issue for Regional Board review as part of a renewed Waiver, or other similar order for discharges of waste from irrigated agricultural operations. Further, if the existing Waiver expires prior to adoption of renewed Waiver or other similar order, this data would remain on the regulatory-only side of GeoTracker until such time that a renewed Waiver or other similar order is adopted. If moved to the public side of GeoTracker during the term of this Agricultural Order, any well data point locations will be shown with an uncertainty to at least one (1) mile squared.

21. The agreement to withhold the display of individual wells sampled by the cooperative program on maps on the public side of GeoTracker for the term of the Agricultural Order only pertains to the display of individual wells on maps. It does not affect the ability of the Water Board to provide groundwater quality data for individual wells to the public using available reports in GeoTracker (e.g. tabulated results in response to public queries). Additionally, it does not affect the Water Board's ability to publish, present or use individual well data in any reports or presentations. In all cases, the Central Coast Water Board would show with an uncertainty the precise locations of groundwater wells by one mile squared as described above.

#### Future Monitoring Needs

22. Groundwater monitoring programs like that described in the workplan evolve through time as the initial monitoring data is evaluated and the conceptual model of the basin is subsequently revised in an iterative manner. As part of this evolving understanding of the basins, new wells may prove: 1) beneficial to cover areas poorly understood or to monitor key groundwater flow paths, 2) cost-effective, by reducing the number of wells necessary to represent an area from both hydrogeological and water quality perspectives, and 3) necessary in future orders to address gaps in data and our understanding of groundwater quality in agricultural areas. I recommend that you work closely with your consultants and my staff as we seek to optimize the monitoring system going forward, and as unanticipated issues arise.



## RECOMMENDATIONS

In addition to conducting the required groundwater monitoring, we appreciate your efforts to focus on finding solutions to address groundwater quality problems from existing agricultural practices and in communicating both the significance of the impairments and the necessary actions to quantify and address these water quality problems. We recognize that the cooperative program participants have made the commitment to address groundwater quality problems, especially related to drinking water sources. The workplan indicates that in cases where results indicate the exceedance of the safe drinking water standard, the cooperative program will make the landowner/tenant/operator aware so that they may take immediate steps to address the problem and minimize exposure to unsafe drinking water. At that time, the cooperative program will request permission of the landowner/tenant/operator to inform the Central Coast Water Board if replacement drinking water is currently begin provided to well users. We also recommend that the cooperative program consider providing resources or other assistance to limited resource individuals and disadvantaged communities affected by nitrate contamination who may need assistance in resolving water quality problems and ensuring safe drinking water.

The workplan also indicates that you will inform landowners and growers about their responsibility to use farming practices that are protective of groundwater resources. We recognize that this type of outreach is critical to improve water quality. We encourage the cooperative program and participants to take a leadership role in demonstrating urgency and innovation to implement practices that will reduce nitrate loading to groundwater and protect drinking water.

## ACCEPTANCE OF CONDITIONS

The above described conditions are required for my approval of the workplan. Based on our discussions, you have indicated to me that you agree to these conditions.

In closing, I want to emphasize that Central Coast Water Board staff recognize that cooperative third party approaches may provide a number of short and long-term advantages that can bring participants together to maximize regional efforts toward understanding and improving water quality. We appreciate your efforts to work together to develop an effective cooperative program, and we find the conditions for approval described in this letter to be flexible and responsive to your concerns, as well as reasonable given the severity of groundwater quality conditions and impacts to drinking water in agricultural areas. We understand that the cooperative program participants are committed to improving water quality and we sincerely hope your efforts to implement the program are successful.

If you have any questions, please contact **Angela Schroeter at (805) 542-4644 or [Aschroeter@waterboards.ca.gov](mailto:Aschroeter@waterboards.ca.gov)** or John Robertson at (805) 542-4630 or **[JRobertson@waterboards.ca.gov](mailto:JRobertson@waterboards.ca.gov)**.

Sincerely,



Digitally signed by Kenneth A Harris Jr  
DN: cn=Kenneth A Harris Jr, o=CCRWQCB,  
ou=Interim Executive Officer,  
email=kharris@waterboards.ca.gov, c=US  
Date: 2013.07.11 16:42:05 -07'00'

Kenneth A. Harris Jr.  
Interim Executive Officer

cc:

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# **Exhibit V**

**POLICY FOR IMPLEMENTATION AND ENFORCEMENT OF THE  
NONPOINT SOURCE POLLUTION CONTROL PROGRAM**

State Water Resources Control Board

California Environmental Protection Agency

May 20, 2004

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# **POLICY FOR IMPLEMENTATION AND ENFORCEMENT OF THE NONPOINT SOURCE POLLUTION CONTROL PROGRAM**

## **Guidance for Developing An Integrated Program for Implementing and Enforcing the “Plan for California’s Nonpoint Source Pollution Control Program”**

### **I. INTRODUCTION**

In December 1999, the State Water Resources Control Board (SWRCB), in its continuing efforts to control nonpoint source (NPS) pollution in California, adopted the *Plan for California’s Nonpoint Source Pollution Control Program* (NPS Program Plan) (SWRCB, 1999). The NPS Program Plan upgraded the State’s first *Nonpoint Source Management Plan* adopted by the SWRCB in 1988 (1988 Plan) (SWRCB, 1988). Upgrading the 1988 Plan with the NPS Program Plan brought the State into compliance with the requirements of section 319 of the Clean Water Act (CWA) and section 6217 of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA). This document, the SWRCB *Policy for the Implementation and Enforcement of the Nonpoint Source Pollution Control Program* (NPS Implementation and Enforcement Policy), explains how the NPS Program Plan will be implemented and enforced and, in so doing, fulfills the requirements of California Water Code (CWC) section 13369 (a)(2)(B).

To continue receiving federal funds to implement the State’s NPS pollution control program, the State was required to obtain approval of the NPS Program Plan from the U. S. Environmental Protection Agency and the National Oceanic and Atmospheric Administration. Federal approval required the SWRCB to provide assurances that it has the legal authority to implement and enforce the NPS Program Plan. In providing these assurances, the SWRCB cited the mandates and authorities granted it and the Regional Water Quality Control Boards (RWQCBs) by the Porter-Cologne Water Quality Control Act (Porter-Cologne Act). The Porter-Cologne Act designates the SWRCB and RWQCBs as the State agencies with primary responsibility for water quality control in California and obligates them to address all discharges of waste that could affect the quality of the waters of the State, including potential nonpoint sources of pollution. To carry out this mandate, the Porter-Cologne Act has provided the SWRCB and RWQCBs with:

- Planning authority to designate beneficial uses of the waters of the State, establish water quality objectives to protect those uses, and develop implementation programs to meet water quality objectives and maintain and/or restore designated beneficial uses;
- Administrative permitting authority in the form of waste discharge requirements (WDRs), waivers of WDRs, and basin plan prohibitions; and
- Enforcement options to ensure that dischargers comply with permitting requirements.

This NPS Implementation and Enforcement Policy explains how these Porter-Cologne Act mandates and authorities, delegated to the SWRCB and RWQCBs by the California Legislature, will be used to implement and enforce the NPS Program Plan. The policy also provides a bridge between the NPS Program Plan and the *SWRCB Water Quality Enforcement Policy* (Enforcement Policy) (SWRCB, 2002).

The information provided in this policy is designed to assist all responsible and/or interested parties in understanding how the State's NPS water quality control requirements will be implemented and enforced. The parties involved include the SWRCB and the RWQCBs, federal, state and local agencies, individual dischargers, designated third-party representatives and any other interested public and private parties.

In addition to using the Porter-Cologne Act's planning, permitting, and enforcement authorities to prevent and control nonpoint sources of pollution, the SWRCB and RWQCBs have implemented a broad program of outreach, education, technical assistance and financial incentives. This program is supplemented by collaborative efforts with other agencies and non-governmental organizations (NGOs) to help implement and coordinate the use of their programs that contribute to NPS control. The goal is to provide an integrated statewide approach to controlling nonpoint sources of pollution. In structuring this document, a review of the Porter-Cologne Act is provided in Section II, including an overview of the Act related to planning requirements and administrative permitting authorities; Section III provides history and background on development of the State's NPS pollution control program; Section IV discusses the structure of the NPS implementation program including statewide implementation, and the mandatory five key elements of an NPS implementation program. Sections V and VI discuss RWQCB compliance assurance, implementation success, and future considerations.

## **II. STATUTORY AND REGULATORY BACKGROUND**

### **A. Overview of the Porter-Cologne Water Quality Control Act**

The Porter-Cologne Act is the principal law governing water quality control in California. It establishes a comprehensive program to protect water quality and the beneficial uses of waters of the State. The Porter-Cologne Act applies broadly to all State waters, including surface waters, wetlands, and ground water; it covers waste discharges to land as well as to surface and groundwater, and applies to both point and nonpoint sources of pollution.<sup>i</sup>

The Legislature has declared that it is the policy of the State that:

1. The quality of all the waters of the State shall be protected;
2. All activities and factors that could affect the quality of State waters shall be regulated to attain the highest water quality that is reasonable; and
3. The State must be prepared to exercise its full power and jurisdiction to protect the quality of water in the State from degradation.<sup>ii</sup>

The Porter-Cologne Act is administered regionally, within a framework of statewide coordination and policy involving both the SWRCB and RWQCBs.<sup>iii</sup> The SWRCB adopts State policy for water quality control and statewide water quality control plans in addition to regulations that are binding on the RWQCBs. The RWQCBs each govern one of the nine hydrologic regions into which California is divided, adopting regional water quality control plans (basin plans) for their respective regions.<sup>iv</sup> Basin plans are reviewed and updated on a triennial basis. The SWRCB must approve basin plans, or any amendments thereto, before they become effective.<sup>v</sup> Statewide plans adopted by the SWRCB supersede any RWQCB-adopted plans to the extent of any conflict. The RWQCBs also issue permits and waivers to implement basin plan water quality requirements and, when necessary, take enforcement actions.<sup>vi</sup> The SWRCB adopts statewide general permits.<sup>vii</sup> The SWRCB also reviews RWQCB decisions on petitions for review.<sup>viii</sup> The primary point of contact for dischargers and other interested parties to receive information regarding the laws, regulations and programs related to NPS pollution control is at the regional level.

## **B. Porter-Cologne Act Water Quality Control Act Planning Requirements**

Planning authority under the Porter-Cologne Act extends to any activity or factor that may affect water quality.<sup>ix</sup> For example, factors that affect water quality include not only waste discharges, but also saline intrusion, reduction of waste assimilative capacity caused by reduction in water quantity, hydrogeologic modifications, watershed management projects, and land use.<sup>x</sup>

Water quality control plans designate beneficial uses of water, establish water quality objectives to protect those uses, and provide a program to implement the objectives.<sup>xi</sup> The beneficial use designations and water quality objectives, together with the State's antidegradation policy,<sup>xii</sup> constitute water quality standards for purposes of the CWA.<sup>xiii</sup> The water quality control plan implementation programs are required to describe the nature of actions that are necessary to meet water quality objectives, including recommendations for action by both private and public entities.<sup>xiv</sup> Implementation programs also must include a time schedule and describe proposed monitoring activities to assess compliance with water quality objectives.<sup>xv</sup>

## **C. The Porter-Cologne Water Quality Control Act and Waste Discharge Regulation**

The Porter-Cologne Act provides that "All discharges of waste into the waters of the State are privileges, not rights."<sup>xvi</sup> Furthermore, all dischargers are subject to regulation under the Porter-Cologne Act including both point and NPS dischargers.<sup>xvii</sup> In obligating the SWRCB and RWQCBs to address all discharges of waste that can affect water quality, including nonpoint sources, the legislature provided the SWRCB and RWQCBs with administrative permitting authority in the form of administrative tools (waste discharge requirements [WDRs], waivers of WDRs, and basin plan prohibitions) to address ongoing and proposed waste discharges. Hence, all current and proposed NPS discharges must be regulated under WDRs, waivers of WDRs, or a basin plan prohibition, or some combination of these administrative tools.



The SWRCB and RWQCBs use their permitting authorities to implement the requirements of applicable State policies and state and regional water quality control plans. Permits take into consideration the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance, and the provisions of CWC section 13241.<sup>xviii</sup>

With the exception of persons discharging into community sewer systems, any person discharging or proposing to discharge waste that could affect water quality must file a report of waste discharge (RoWD) with the appropriate RWQCB, unless the RWQCB waives the filing.<sup>xix</sup> A RoWD also is required if a discharger proposes a material change in the character, volume, or location of a discharge.<sup>xx</sup> The RWQCB must then determine the appropriate action to take, either issuing WDRs to the discharger, or conditionally waiving the requirements.<sup>xxi</sup> WDRs can prohibit the discharge of waste or certain types of waste, either under specific conditions or in specified areas. As an alternative, the RWQCB may prohibit the discharge of waste or certain types of waste in a water quality control plan.<sup>xxii</sup>

Because a RWQCB may choose to use the basin planning process to adopt some of these administrative approaches, there is some overlap between the planning and administrative processes. A categorical waiver of waste discharge requirements, for instance, could be adopted as a RWQCB basin plan amendment. The SWRCB and RWQCBs have broad discretion in how they use the administrative tools provided by the Porter-Cologne Act.

## **1. Waste Discharge Requirements**

The RWQCBs have primary responsibility for issuing WDRs. The RWQCBs may issue individual WDRs to cover individual discharges or general WDRs to cover a category of discharges.<sup>xxiii</sup> WDRs may include effluent limitations or other requirements that are designed to implement applicable water quality control plans, including designated beneficial uses and the water quality objectives established to protect those uses and prevent the creation of nuisance conditions. As in a basin plan prohibition, a WDR may specify certain conditions under which, or areas where, the discharge of waste or certain types of waste will not be permitted. Dischargers operating under a WDR must submit an annual fee to the appropriate RWQCB to cover administrative costs. The fee schedule is determined by the SWRCB, based upon factors such as total flow, volume, number of animals or area involved, etc. These fees help provide the SWRCB and the RWQCBs with resources to administer the WDR program.

The SWRCB also can issue general WDRs under specific conditions.<sup>xxiv</sup> Violations of WDRs may be addressed, for example, by issuing Cleanup and Abatement Orders (CAOs) or Cease and Desist Orders (CDOs), assessing administrative civil liability or seeking imposition of judicial civil liability or judicial injunctive relief.

## **2. Waivers of Waste Discharge Requirements**

The requirements for a discharger to submit a RoWD or for a RWQCB to issue WDRs may be waived by the RWQCB or SWRCB for a specific discharge or a specific type of discharge if the SWRCB or RWQCB determines, after a public meeting, that the waiver is consistent with any applicable State or regional water quality control plan and is in the public interest.<sup>xxv</sup> All waivers are conditional and may be terminated at any time. Except for waivers for discharges that the SWRCB or a RWQCB determines do not pose a significant threat to water quality, waiver conditions must include, but need not be limited to, individual, group or watershed-based monitoring.<sup>xxvi</sup> Waivers may not exceed five years in duration, but may be renewed. Prior to renewing a waiver, the SWRCB or RWQCB must determine whether the discharge in question should be subject to general or individual WDRs.

CWC section 13269(e) provides that “the regional boards and the state board shall require compliance with the conditions pursuant to which waivers are granted....” Therefore, even where the RWQCBs decide to waive the requirement to submit a RoWD for general WDRs, the RWQCBs are encouraged to have an enrollment process for coverage under the waiver of WDRs so that the RWQCBs can identify the dischargers who are required to comply with the general waiver of WDRs. Although the RWQCBs retain their prosecutorial discretion to decide how to ensure compliance with their conditional waivers, the language of section 13269(e), makes it clear that the legislature intends that the RWQCBs allocate some of their resources to ensuring that dischargers are in compliance. Following SWRCB adoption of a fee schedule, RWQCBs are authorized to collect annual administrative fees to establish and implement waivers of WDRs.<sup>xxvii</sup>

There are many different ways for the RWQCBs to ensure compliance. In the event of noncompliance, a RWQCB could rescind a waiver, or terminate its applicability to individual dischargers, and issue WDRs in its place. If the waiver leaves significant discretion with the discharger to determine how to comply with the waiver’s conditions, the RWQCB could adopt a new waiver that is more directive in terms of the actions that the dischargers must take in order to comply with the waiver. In order to be enforceable, waiver conditions should be clearly specified.

Potential enforcement actions include issuance of a notice of violation (NOV), an informal enforcement action which notifies the discharger of the violation of the waiver condition and the reasonably expeditious time within which compliance must be achieved to avoid proposed adoption of WDRs. Other formal enforcement actions that may be taken include CAOs, CDOs, notices to comply (NTC), and time schedule orders.

## **3. Prohibitions**

Pursuant to CWC section 13243, RWQCBs may prohibit discharges of waste or types of waste either through WDRs or through waste discharge prohibitions specified in a

basin plan. A RWQCB may amend a basin plan to prohibit a particular discharge or a particular type of discharge or to conditionally prohibit a discharge. A conditional prohibition may include specific conditions under which application or enforcement of the prohibition for a particular discharge or particular type of discharge may be waived. In some cases, RWQCBs may waive application of the prohibition for the planning and permitting period of projects or activities. RWQCBs may also use conditional basin plan prohibitions as the primary administrative tool for implementation programs - for example, in cases where a RWQCB desires to prohibit discharges unless certain procedural or substantive conditions are met. Basin plan prohibitions are extremely useful because, once adopted, they allow a RWQCB to take direct and immediate enforcement action by issuing CAOs or CDOs, or assessing civil liabilities, even in the absence of WDRs. Therefore, they allow RWQCBs to respond in a timely manner where NPS pollution generated by certain activities is creating an emergency or a problem that is not otherwise being remedied in an adequate or timely manner.

#### **D. Porter-Cologne Act Enforcement Options**

Just as the RWQCBs are obligated to address all NPS discharges of waste through one or more of the available administrative tools, they also are obligated to take steps to ensure that their NPS pollution control requirements are met. The SWRCB Enforcement Policy clearly defines the enforcement options available to a RWQCB. These options range from informal NOV's to formal actions defined in the Porter Cologne Act. Formal actions range from NTCs to civil administrative remedies, and can include referrals for criminal penalties. Both the Enforcement Policy and common RWQCB practice recognize the merit of progressive enforcement---that is, initially taking whatever level of enforcement is appropriate, considering the RWQCB workload and the circumstances of the case, and applying increasingly severe remedies where necessary to correct a problem.

### **III. DEVELOPING THE STATE'S NPS POLLUTION CONTROL PROGRAM**

The State's NPS Program has been developed in conformance with the CWA, CZARA, and the Porter-Cologne Act. The CWA requires the SWRCB to develop and implement an NPS pollution control program and provides funding for this purpose. The NPS Program Plan was the State's response to this requirement, as well as to additional federal requirements for the inclusion of management measures (MMs) consistent with the *CZARA Guidance Specifying Management Measures for Sources of Nonpoint Source Pollution to Coastal Waters* (USEPA, 1993). As described above, the Porter-Cologne Act provides the SWRCB and RWQCBs with the authority and administrative tools to implement the CWA and CZARA requirements.

The Porter-Cologne Act also provides the definition of "waste" that is integral to understanding the SWRCB's and RWQCBs' NPS pollution control authorities and responsibilities. "Waste" is broadly defined to include 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”.<sup>xxviii</sup> This definition includes all Attorney General interpretations of the terms “sewage”, “industrial waste”, and “other wastes” under the Porter-Cologne Act’s predecessor legislation.<sup>xxix</sup> The Attorney General has interpreted the latter terms to include wastes from a wide variety of activities. As a result, it is clear that “discharges of waste” are not limited to discharges resulting from waste disposal activities, but also include releases of pollutants as part of other activities, including all nonpoint sources of waste.<sup>xxx</sup>

In the Porter Cologne Act, the term “discharge of waste” includes all discharges, point and nonpoint, including agricultural return flows and storm water discharges. The CWA, however, distinguishes between point and nonpoint sources of pollution. Under the CWA, a point source is identified as a discernible, confined, and discrete conveyance, such as a pipe, ditch, or channel. Irrigated agricultural return flows and agricultural storm water runoff are excluded. Nonpoint pollution sources generally are sources of water pollution that do not meet the definition of a point source as defined by the CWA and the CWA requires the State to control nonpoint sources of pollution.

NPS pollution typically results from contact between pollutants and land runoff, precipitation, atmospheric deposition, drainage, seepage, or hydrologic modification. Consequently, the most successful control of nonpoint sources is achieved by prevention or by minimizing the generation of NPS discharges. Most NPS management programs typically depend, at least in part, upon discharger implementation of management practices (MPs) to control nonpoint sources of pollution. As originally used in the CWA and its implementing regulations, the term “BMP” officially referred only to practices that had been formally adopted by the SWRCB through its continuing planning program. However, informally, prior to adoption of the NPS Program Plan, the term became used generally to refer to any type of practice for NPS control, whether formally approved or not. To prevent further misunderstanding, in this policy, the term “MP” has replaced the formerly used term “BMP” when referencing practices that have not been formally adopted by the SWRCB.

MPs may include, but are not limited to, structural and non-structural (operational) controls. They may be applied before, during and after pollution producing activities to eliminate or reduce the generation of NPS discharges and the introduction of pollutants into receiving waters. Successful MP implementation typically requires: (1) adaptation to site-specific or regional-specific conditions; (2) monitoring to assure that practices are properly applied and are effective in attaining and maintaining water quality standards; (3) immediate mitigation of a problem where the practices are not effective; and (4) improvement of MP implementation or implementation of additional MPs when needed to resolve a deficiency. MP implementation, however, may not be substituted for actual compliance with water quality requirements. The U.S. Court of Appeals for the Ninth Circuit, in *Northwest Indian Cemetery Protective Ass’n v. Peterson*, held that BMPs [MPs] in a certified water quality management plan were not “...standards in and of themselves. Adherence to the BMPs [MPs] does not automatically assure compliance ...the federal statute [CWA] contemplates that any activity conducted pursuant to a BMP [MP] can be terminated or modified if the conducted activity resulted in a violation of water quality standards.”<sup>xxxii</sup>

There are many programs provided by state and federal agencies, as well as NGOs, to assist dischargers. These programs can help dischargers understand how their operations can cause NPS pollution and help them choose and implement MPs to prevent or control NPS pollution. In addition, many of the programs provide financial as well as technical assistance.

Since the early 1990s, using CWA § 319(h) funds, the SWRCB and RWQCBs have reached out to dischargers with technical and educational information and financial support to assist with MP implementation. Other informal RWQCB programs have encouraged development of watershed groups to facilitate NPS pollution control efforts. Additional technical expertise and/or financial assistance are provided through the grant and loan sources of other state and federal agencies. These include resource conservation districts (RCDs), University of California Cooperative Extension and the Natural Resources Conservation Service. In addition, there are State agencies, other than the SWRCB and RWQCBs, with programs and authorities related to NPS control that help implement the NPS Program Plan by coordinating their programs and activities. Under the leadership of the SWRCB and the California Coastal Commission (CCC), an Interagency Coordinating Committee (IACC) meets regularly to actively promote and coordinate inter-agency NPS pollution control activities.<sup>xxxii</sup>

#### **IV. STRUCTURING AN NPS POLLUTION CONTROL IMPLEMENTATION PROGRAM TO ACHIEVE WATER QUALITY OBJECTIVES**

An NPS pollution control implementation program is a program developed to comply with SWRCB or RWQCB WDRs, waivers of WDRs, or basin plan prohibitions. Implementation programs for NPS pollution control may be developed by a RWQCB, the SWRCB, an individual discharger or by or for a coalition of dischargers in cooperation with a third-party representative, organization, or government agency. The latter programs are collectively known as “third-party” programs and the third-party role is restricted to entities that are not actual dischargers under RWQCB/SWRCB permitting and enforcement jurisdiction. These may include NGOs, citizen groups, industry groups, including discharger groups, watershed coalitions, government agencies, or any mix of the above. Although a third-party program may be comprised solely of dischargers, the reason it is a third-party program is because the entity that represents the dischargers is not an actual discharger.

##### **A. Challenges of Statewide NPS Pollution Control**

The challenges to implementing statewide prevention and control of NPS pollution discharges are significant. The RWQCBs have primary responsibility for ensuring that appropriate NPS control implementation programs are in place throughout the State. RWQCB responsibilities include, but are not limited to, issuing WDRs or a waiver of WDRs for individual discharges or a category of NPS discharges, or adopting a basin plan amendment that addresses NPS discharges.

Given the extent and diversity of NPS pollution discharges, the RWQCBs need to be as creative and efficient as possible in devising approaches to prevent or control NPS pollution. This policy provides guidelines for development of third-party NPS control programs. A primary advantage of the development of third-party programs is their ability to reach multiple numbers of dischargers who individually may be unknown to the RWQCB.

A RWQCB may use whatever mix of organizational approaches it deems appropriate. Coalitions of dischargers may differentiate themselves in many ways: regionally, sub-regionally, by watershed, discharge characteristics, discharger community type, or through participation in some other publicly or privately developed program. Though dischargers participate in third-party programs, organizationally, the programs must be managed by someone other than a discharger. For example, there are organizations or entities already involved in NPS management programs. RWQCBs have had experience working with industry groups, both formally and informally, to develop education and self-regulation within a particular industry. Other organizations have become active in NPS pollution prevention and land restoration efforts through CWA §319(h) grants, State bond grants, or the State Revolving Fund loan program. Many of the partnerships formed to take advantage of these financial resources have developed into self-sustaining third-party organizations. Some are affiliated with RCDs or have developed as part of the Coordinated Resource Management Planning approach; others are watershed groups or have developed their own organizational structure based on other geographic or industry-specific factors. In some situations, the organizations accomplish their goals through a mix of public and private partnership efforts.

RWQCBs are not required to endorse or approve any specific program or type of program. Each program brought before a RWQCB or SWRCB must be individually judged on its merits. The scale against which it will be measured will assess its potential to result in the implementation of actions to successfully prevent or control discharges of nonpoint sources of pollution. The ultimate goal of any NPS control implementation program must be to protect the beneficial uses of the State's waters.

#### **B. Third-Party Programs Administered by State Agencies Other than the SWRCB or RWQCBs**

There are agencies, in addition to the SWRCB and RWQCBs, with the authority to implement programs to meet water quality objectives and protect beneficial uses. Several of these agencies are formally linked to the RWQCBs and SWRCB through memoranda of understanding (MOUs) or management agency agreements (MAAs). MOUs and MAAs are important for NPS regulation because they delineate the roles and responsibilities of individual agencies in the State's efforts to control NPS pollution sources. In all cases, agencies with regulatory power act in accordance with their own authorities and processes.

There are two general types of MOUs: (1) cooperative agreements made with other agencies or organizations that are able to provide information or technical or financial assistance to further the State's goal of preventing or controlling nonpoint sources of pollution; and (2) cooperative agreements made with land management agencies with authority to control NPS discharges through inclusion of MPs in their land lease agreements.

With an MAA, the SWRCB may designate another agency as a management agency to take the lead in implementing NPS pollution control. The actions taken by these agencies are taken under their own authorities and using their own regulatory processes. The fundamental purpose of the SWRCB/RWQCBs, when using the management agency approach, is to achieve, through the capabilities of a management agency, at least the same degree of control over NPS pollution as could be attained through direct regulation under SWRCB/RWQCB authority, but to do so more efficiently.

The SWRCB and RWQCBs may not delegate their NPS authorities and responsibilities to another agency, and may not indefinitely defer taking necessary action if another agency is not properly addressing a NPS problem. However, where another agency is constructively involved in NPS efforts, the SWRCB and RWQCB should seek to take those efforts into account and, where appropriate, take advantage of these third-party efforts. Not only does this avoid unnecessary duplication of effort, it can leverage the SWRCB's and RWQCBs' limited staffing and financial resources. Another agency's actions pursuant to an MOU or MAA do not fulfill the RWQCBs' obligation to use its administrative tools to address the relevant NPS discharges. However, another agency's actions can serve, for example, as the basis, in part or in whole, for a RWQCB waiver of WDRs for the activities covered in these agreements.

If water quality problems persist, the RWQCBs may not indefinitely defer enforcement action to other agencies. While the RWQCBs cannot directly enforce another agency's requirements against a discharger who is out of compliance, the RWQCB can ask the agency to enforce its own requirements. In addition, a RWQCB can enforce the conditions or requirements contained in the waiver, WDR, or prohibition that addresses the underlying discharge of waste. Consistent with a particular MAA, the lead agency under an MAA may be given an opportunity to achieve compliance before the RWQCBs take necessary action.

The RWQCBs also have developed partnerships with other agencies that are in a position to take quick and decisive enforcement action. The California Department of Fish and Game, for instance, may take action against a problem discharger under its own laws and regulations, working with either the local county district attorney's office or the attorney general's office.

The RWQCBs have broad flexibility and discretion in using their administrative tools to fashion NPS management programs, and are encouraged to be as innovative and creative as possible, and, as appropriate, to build upon Third-Party Programs. The State Board, in

turn, is encouraged to establish a program that recognizes and honors successful and outstanding third-party efforts.

### **C. The Key Elements of an NPS Pollution Control Implementation Program**

Before approving or endorsing a specific NPS pollution control implementation program, a RWQCB must determine that there is a high likelihood the implementation program will attain the RWQCB's stated water quality objectives. This includes consideration of the MPs to be used and the process for ensuring their proper implementation, as well as assessment of MP effectiveness. Depending on the program, it also may include other factors such as the level of discharger participation. NPS dischargers have had and will continue to have many opportunities to take advantage of the available technical and financial assistance programs administered through the SWRCB, in addition to the assistance offered by other programs. A first step in the education process offered by these programs often consists of discharger assessment of their lands or operations to determine NPS problems, followed by development of a plan to correct those problems. It is important to recognize that development of a plan is only the first step in developing an implementation program that addresses a discharger's NPS pollution discharges. Implementation of the plan, including any necessary iterative steps to adjust and improve the plan and/or implementation must follow the planning stage.

Prior to developing an NPS control implementation program or recognizing an implementation program developed by dischargers or third-parties as sufficient to meet RWQCB obligations to protect water quality, a RWQCB shall ensure that the program meets the requirements of the five key structural elements described below. While the RWQCBs are free to use the administrative tool(s) that they determine to be most appropriate for a particular implementation program, all implementation programs will have the five structural elements in common. Development of Elements 1 and 2 are the primary responsibility of those who are developing the implementation program. Elements 3 and 4 may require consultation with the appropriate RWQCB. Element 5 shall be developed by the RWQCB

For implementation programs developed by non-regulatory parties, factors such as availability of funding, a demonstrated track record or commitment to NPS control implementation, and a level of organization and group cohesion that facilitates NPS control implementation are among the critical factors that must be taken into account. For regulatory programs, the availability of staff resources to administer the implementation may be a major concern.

NPS control implementation programs shall include the following five key elements:

KEY ELEMENT 1: An NPS control implementation program's ultimate purpose shall be explicitly stated. Implementation programs must, at a minimum, address NPS



pollution in a manner that achieves and maintains water quality objectives and beneficial uses, including any applicable antidegradation requirements.

Existing and potential beneficial uses of the waters of the State are identified through a public process. RWQCBs establish water quality objectives to protect those uses, and a program to implement the objectives. The State also is required to adopt and implement an antidegradation policy designed to protect water quality that is higher than that necessary to protect the designated beneficial uses. For purposes of this policy, the term “water quality requirements” is used to include water quality objectives established to protect beneficial uses and any higher level of water quality needed to comply with the State’s antidegradation policy.

An NPS control implementation program must be specific as to the water quality requirements it is designed to meet. For example, if the program relies upon dischargers’ use of MPs, there should be a strong correlation between the specific MPs implemented and the relevant water quality requirements. The program also should provide other information as required by the RWQCB, including but not limited to the identification of participant dischargers. The RWQCB must be able to ensure that all the significant sources of the NPS discharges of concern are addressed.

KEY ELEMENT 2: An NPS control implementation program shall include a description of the MPs and other program elements that are expected to be implemented to ensure attainment of the implementation program’s stated purpose(s), the process to be used to select or develop MPs, and the process to be used to ensure and verify proper MP implementation.

A RWQCB must be able to determine that there is a high likelihood that the program will attain water quality requirements. This will include consideration of the MPs to be used and the process for ensuring their proper implementation. It also will include other factors such as the level of discharger participation and the effectiveness of the MPs implemented.

MPs must be tailored to a specific site and circumstances, and justification for the use of a particular category or type of MP must show that the MP has been successfully used in comparable circumstances. If an MP has not previously been used, documentation to substantiate its efficacy must be provided by the discharger. A RWQCB must be convinced there is a high likelihood the MP will be successful. A schedule assuring MP implementation and assessment, as well as adaptive management provisions must be provided. We recognize that in the earlier stages of some pollution control programs, water quality changes may not be immediately apparent, even with the implementation of pollution control actions. Although MP implementation never may be a substitute for meeting water quality requirements, MP implementation assessment may, in some cases, be used to measure nonpoint source control progress.

KEY ELEMENT 3: Where a RWQCB determines it is necessary to allow time to achieve water quality requirements, the NPS control implementation program shall include a specific time schedule, and corresponding quantifiable milestones designed to measure progress toward reaching the specified requirements.

The Porter-Cologne Act (CWC §13242[b] and § 13263[c]), the NPS Program Plan, and the NPS Implementation and Enforcement Policy recognize that there are instances where it will take time to achieve water quality requirements. The effort may involve all or some of various processes, including: identification of measurable long term and interim water quality goals; a timeline for achieving these goals; identification and implementation of pollution control MPs; provision for maintenance of the implementation actions; provision for additional actions if initial actions are inadequate; and, in the case of third-party organizations, identification of a responsible third-party to lead the efforts.

In considering approval of specific interim goals and the time necessary to achieve those goals, a RWQCB may consider such factors as the necessity of providing for significant capital outlays for MP implementation, the presence of a severely degraded waterbody, and whether or not an NPS control implementation program is a component of a larger TMDL implementation program. The time schedule may not be longer than that which is reasonably necessary to achieve an NPS implementation program's water quality objectives. Preliminary development of the time schedule shall be undertaken by the party responsible for developing the NPS control implementation program. The RWQCB may amend and must approve the time schedule. If the RWQCB later determines that additional time is necessary to complete the program, it may make further amendments to the time schedule or issue an enforcement order that contains a compliance schedule.

KEY ELEMENT 4: An NPS control implementation program shall include sufficient feedback mechanisms so that the RWQCB, dischargers, and the public can determine whether the program is achieving its stated purpose(s), or whether additional or different MPs or other actions are required.

Verification measures to determine whether an NPS control implementation program is meeting its stated purpose is a key element of all NPS control implementation programs. In addition to verification of proper MP implementation (Key Element 2), feedback mechanisms are needed to clearly indicate whether and when additional or different MPs or MP implementation measures must be used, or other actions taken. Designing the appropriate types and frequency of verification and feedback measures (e.g. reporting, inspection, monitoring, etc.) is an integral part of implementation program development and success.

In all cases the NPS control implementation program should describe the measures, protocols, and associated frequencies that will be used to verify the degree to which the MPs are being properly implemented and are achieving the program's objectives, and/or to provide feedback for use in adaptive management. These efforts are

necessary to determine whether the program is on time and on track in achieving its goals.

Depending on the water quality problem, the cause, the beneficial uses at risk, and the purpose for which the monitoring will be used (e.g. adaptive management or regulatory purposes) the appropriate type(s) of monitoring should be used. Some monitoring approaches include photo monitoring; assessing residual dry matter on rangelands; various indicators of healthy instream habitat; riparian and wetland habitat structure, density and cover; and bioassessment. Some programs may involve collecting and reporting ambient water quality monitoring data. Those programs should be consistent with the SWRCB Surface Water Ambient Monitoring Program (SWAMP) Data Quality Management Plan (DQM), which provides for more than one level of data quality. The DQM approach to data quality recognizes that the rigor needed to monitor for regulatory purposes may not be necessary for other purposes. Consequently, the SWAMP DQM provides data quality and reporting objectives for both regulatory and screening studies. Regardless of which approach is used, all monitoring programs should be reproducible, provide a permanent/documented record and be available to the public.

KEY ELEMENT 5: Each RWQCB shall make clear, in advance, the potential consequences for failure to achieve an NPS control implementation program's stated purposes.

A RWQCB action to approve or endorse an NPS control implementation program shall contain a general description of the course of action or actions to be taken if verification/feedback mechanisms indicate or demonstrate that the program is failing to achieve its stated objectives. Although not binding on the RWQCB, this element should be written with the objective of creating clear expectations and reinforcing the obligations that dischargers, third parties, and other agencies, in addition to the RWQCBs, have accepted in agreeing to implement an NPS control implementation program. This element also has the advantage of requiring the examination of proposed programs with respect to options for enforcement should the program not proceed as well as expected.

Clear expectations regarding potential RWQCB responses to inadequate or ineffective programs, including but not limited to adopting a revised program or the taking of an enforcement action, provides dischargers and the public with greater certainty regarding the process. RWQCB options will vary significantly, depending on the structure of the program. (e.g., which administrative tool or tools are being utilized, whether third-party regulatory or land use agencies, or private entities are coordinating the dischargers' efforts, etc.) While not all programs need be directly enforceable, any enforcement limitations that might be encountered should be well understood by the RWQCB prior to approving or endorsing an NPS control implementation program.

In cases of individual noncompliance, selective enforcement actions may be taken. In cases of third-party noncompliance, an effort to revise the third-party program is an alternative. Generally, prior to initiating major revisions to a program, informal contact with dischargers, group representatives, or other third parties, if any, will be attempted in order to redirect unsuccessful efforts. However, although the direction and efforts of a particular third-party program are being undertaken as a group effort, with group designated or accepted leadership, if the group or third-party fails to follow through on their commitments, any RWQCB enforcement action taken will be against individual dischargers, not the third-party.

## **V. RWQCB Compliance Assurance**

Typically, the RWQCBs have regulated individual dischargers, rather than groups of dischargers who are represented by or coordinated through third parties. Individual dischargers, including both landowners and operators, continue to bear ultimate responsibility for complying with a RWQCB's water quality requirements and orders. Generally, under the Porter-Cologne Act, the RWQCBs cannot take enforcement actions directly against non-discharger third parties. As part of the fifth element described above, the RWQCBs will need to explain how significant non-compliance can be addressed in Third-Party Programs. This explanation should include information as to the criteria for measuring program success, what constitutes failure, and the actions that may be taken in response to failure. Individual dischargers need to be informed as to what individual discharger actions or inactions will lead to individual enforcement. This explanation is necessary so that participating dischargers understand the ramifications of non-compliance, even if that non-compliance is by a third party they have selected as their representative. Options short of individual enforcement actions could include RWQCB actions such as changing a program to remove some autonomy, or developing sequential enforcement phases related to triggering events built into the program. Ultimately, the ineffectiveness of a group through which a discharger participates in NPS control efforts cannot be used as an excuse for lack of individual discharger compliance.

The SWRCB Enforcement Policy clearly defines the enforcement options available to a RWQCB. Both the Enforcement Policy and common RWQCB practice also recognize the merit of progressive enforcement. With progressive enforcement, a RWQCB implements enforcement through an "...escalating series of actions that allows for the efficient and effective use of enforcement resources to: (1) assist cooperative dischargers in achieving compliance; (2) compel compliance for repeat violations and recalcitrant violators; and (3) provide a disincentive for noncompliance."

## **VI. IMPLEMENTATION SUCCESS AND FUTURE CONSIDERATIONS**

This policy provides a template for NPS pollution control in California. However, the ability of the SWRCB and RWQCB to aggressively implement and enforce the State's NPS Program in a reasonable timeframe is directly linked to the resources available—both staff and

budget—to carry out the program. The SWRCB recognizes that it needs to provide strong support for the RWQCBs' efforts through available technical and financial oversight and assistance. Statewide, a diverse array of parties participate in various ways to implement NPS pollution control measures. However, in most situations, the primary participants are the RWQCBs and NPS dischargers. The RWQCBs are expected to develop their own priorities and schedules for addressing the specific types of NPS pollution present within their regions. Successful implementation of the NPS Program largely depends on two factors: the ability of the RWQCBs to use their administrative authorities and limited resources in creative and efficient ways, and the willingness of dischargers to implement MPs and other strategies that effectively prevent or control NPS discharges. To help accomplish this goal, dischargers are urged to take advantage of the many technical and financial assistance programs available to assist them. These are described earlier in this document.

Current land use management practices that have resulted in NPS pollution have a long and complicated physical, economic and political history. In addition to the need for resources, forging a new history of pollution control will take time and commitment, as well as a willingness to examine the use of practices that have resulted in current NPS pollution discharges and the barriers to change. Therefore, it is expected that it will take a significant amount of time for the RWQCBs to approve or endorse NPS control implementation programs throughout their regions, and even longer for those programs to achieve their objectives.

A rigorous dedication to periodic evaluation of all aspects of the program and an adaptive management approach will facilitate the road to success. Statewide implementation of the NPS program is predicated not only on individual NPS discharger actions to adopt and adapt alternative MPs, but upon the development and adaptation of self-determined management structures that encourage and support these changes. Much is known about the MPs that most effectively prevent and control polluted runoff. Less is understood about the alternative alliances and management structures - the third-party programs - that most efficiently and effectively will result in the watershed or industry-wide actions needed to control NPS pollution statewide. In addition to the public and private financial resources dedicated to this purpose, this effort will require a conscious willingness to experiment, evaluate and adapt management approaches that will support and bring us closer to our ultimate goal -- controlling NPS pollution to protect the quality of waters of the State in accordance with the mandates of the Porter-Cologne Act.

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SWRCB, 1999. Plan for California's Nonpoint Source Pollution Control Program. Division of Water Quality, Sacramento, CA. December 1999.

SWRCB, 2002. Water Quality Enforcement Policy. Office of Statewide Initiatives, Sacramento, CA. February 2002.

USEPA, 1993. Guidance Specifying Management Measures for Sources of Nonpoint Source Pollution in Coastal Waters. January 1993.

## END NOTES

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- i. CWC 13050[e], 13260[a], 13263[a], 13376, 13377. See also *Lake Madrone Water District v. State Water Resources Control Board* (1989) 209 Cal.App.3d 163, 171-175, 256 Cal.Rptr. 894 (Lake Madrone); *Tahoe-Sierra Preservation Council v. State Water Resources Control Board* (1989) 210 Cal.App.3d 1421, 1435, 259 Cal.Rptr. 132; 63 Ops.Cal.Atty.Gen. 51, 53-359 (1980) (Tahoe-Sierra).
  - ii. See Water Code section 13000
  - iii. See Water Code section 13000
  - iv. (CWC sections 13200, 13201)
  - v. (CWC section 13245)
  - vi. (CWC sections 13168, 186)
  - vii. (CWC sections 13263(i), 13377; 40 Code of Federal Regulations [CFR] section 122.28; Cal. Code of Regulations [CCR] Title 23, section 2235.2)
  - viii. (CWC section 13320; CCR, Title 23, sections 2050-2068)
  - ix. (CWC sections 13000, 13050(i), 13140, 13142, 13241)
  - x. See discussion in Chief Counsel's Statement for the State Nonpoint Source Management Program Administered by the State Water Board and the Regional Water Boards (October 1988), pp. C-1 through C-2. See also *Recommended Changes in Water Quality Control, Final Report of the Study Panel to the California State Water Resources Control Board, Study Project, Water Quality Control Program*, pp. 3-4 (1969).
  - xi. (CWC section 13050[j], 13241) The State Water Resources Control Board and the Regional Water Quality Control Board must consider the factors specified in CWC section 13241 when adopting or revising water quality objectives.
  - xii. The federal antidegradation policy is contained in 40 C.F.R. sec. 131.12. The state is required to adopt and implement an antidegradation policy consistent with the federal policy. The federal policy establishes three tiers of water quality protection. The first tier establishes a minimum requirement that existing instream uses and the level of water quality necessary to protect those uses be maintained and protected. The second tier is designed to protect high quality waters by establishing prerequisites for allowing degradation of these waters. The third tier addresses outstanding national resource waters.
  - xiii. (See 33 U.S.C. sec. 1313(c); 40 CFR sections 131.3[i], 131.6)
  - xiv. (CWC section 13242)
  - xv. (CWC section 13242)
  - xvi. CWC section 13263[g]
  - xvii. CWC section 13260
  - xviii. CWC section 13263[a]
  - xix. (CWC sections 13260, 13269)
  - xx. (CWC section 13264)
  - xxi. (CWC sections 13263, 13269)
  - xxii. (CWC section 13243)
  - xxiii. (CWC section 13263[a] and [i])
  - xxiv. (CWC section 13263[i])
  - xxv. CWC section 13269(a)(1)
  - xxvi. CWC section 13269 (a)(2)
  - xxvii. CWC section 13269(a)(4)(A)
  - xxviii. (CWC section 13050[d])
  - xxix. *Lake Madrone*, supra, fn. 1, 209 Cal.App. 3d at 169, 256 Cal.Rptr. 894; see *Recommended Changes in Water Quality Control, Final Report of the Study Panel to the California State Water Resources Control Board, Study Project, Water Quality Control Program* (1969) (Final Report), App. A, p. 23.
  - xxx. See e.g., *Lake Madrone*, supra, fn. 1 (release of accumulated sediment from a dam held a discharge of waste). See also discussion in *Sawyer, State Regulation of Groundwater Pollution Caused by Changes in Groundwater Quantity or Flow* (1988) Pacific L.J. 1267, 1273-1275.
  - xxxi. *Northwest Indian Cemetery Protective Association vs. Peterson*, (Ninth Circuit 1986) 795 F.2d 688, 697, revised on other grounds (1988) *Lung vs. Northwest Indian Cemetery Protective Association* 485 U.S. 439 [108 S.Ct. 1319.99 L.Ed.2d.
  - xxxii. Statewide information about IACC agencies and their activities is currently available at <http://www.swrcb.ca.gov/nps/iacc.html>.

# **Exhibit W**



# Distribution of Groundwater Nitrate Concentrations Salinas Valley, California, April 30, 2014

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Prepared for the Central Coast Groundwater Coalition

by

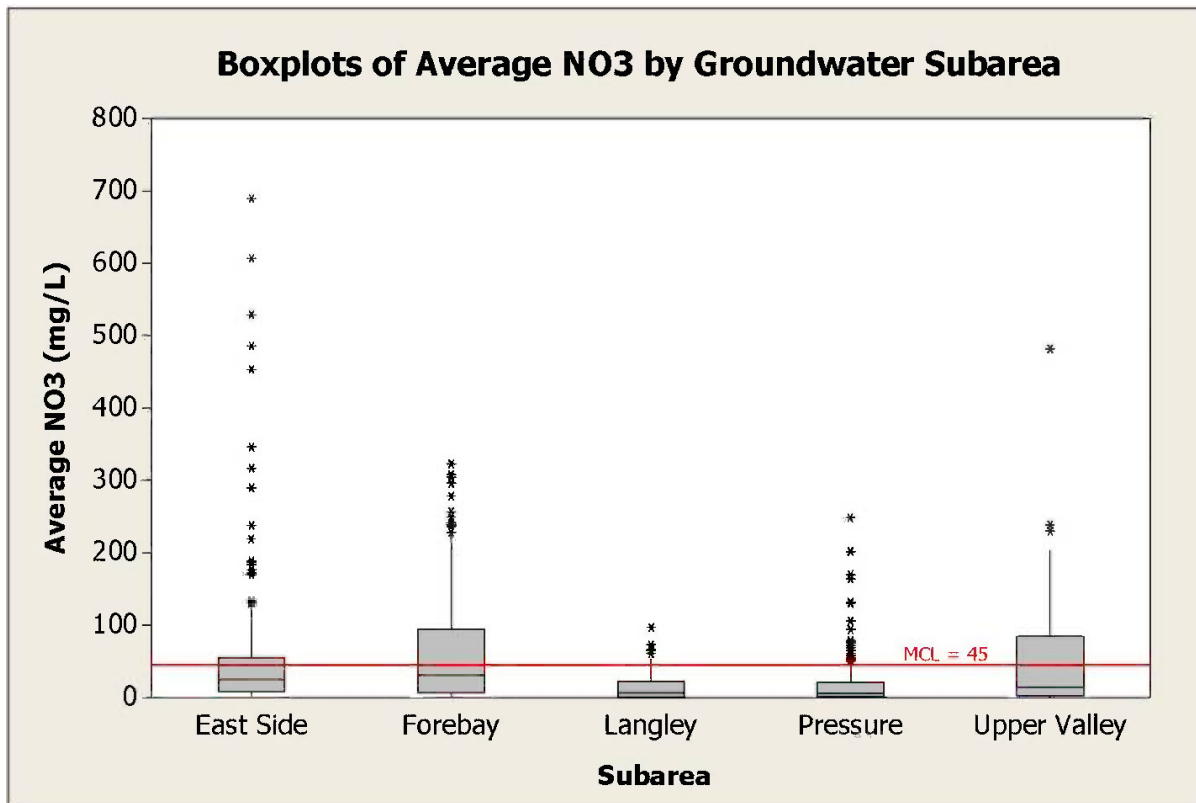
HydroFocus, Inc., Davis, CA

# Distribution of Groundwater Nitrate Concentrations, Salinas Valley, California, April 30, 2014

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**Figure 5. Boxplots showing medians and ranges for average nitrate concentrations for the five subareas. The grey rectangle represents the inner quartile range of the data. The horizontal line in the rectangle represents the median. Vertical lines represent 90 % of the data. Asterisks represent values beyond 90 % of the data.**

Figure 6 shows areal distribution of groundwater nitrate concentrations and the kriging results in the Salinas Valley<sup>26</sup>. In the Appendix, we provide a modified version of Figure 6 with posted values for the wells or well clusters. Mapped groundwater nitrate concentrations in the Pressure subarea are generally less than one-half of the MCL due to widespread distribution of a large number of low nitrate concentrations. Exceptions include localized areas east and northeast of Castroville where concentrations range from less than detection to over the MCL. Similarly, there are areas of concentrations over the MCL southwest and southeast of Chualar and northwest and west of Gonzales. In the Langley subarea, mapped groundwater nitrate concentrations are generally less than one-half of the MCL. Exceptions include small areas in the northwestern, northern, southwestern and southern parts of the subarea.

<sup>26</sup> The locations of CCGC member wells were obfuscated to protect member privacy. The locations of CCGC member wells shown on Figure 4 were randomly adjusted up to 1 mile in both the east-west and north-south directions. The wells are plotted within a 4 mi<sup>2</sup> block centered over the actual well location. The actual locations were used when kriging the nitrate concentration surface.

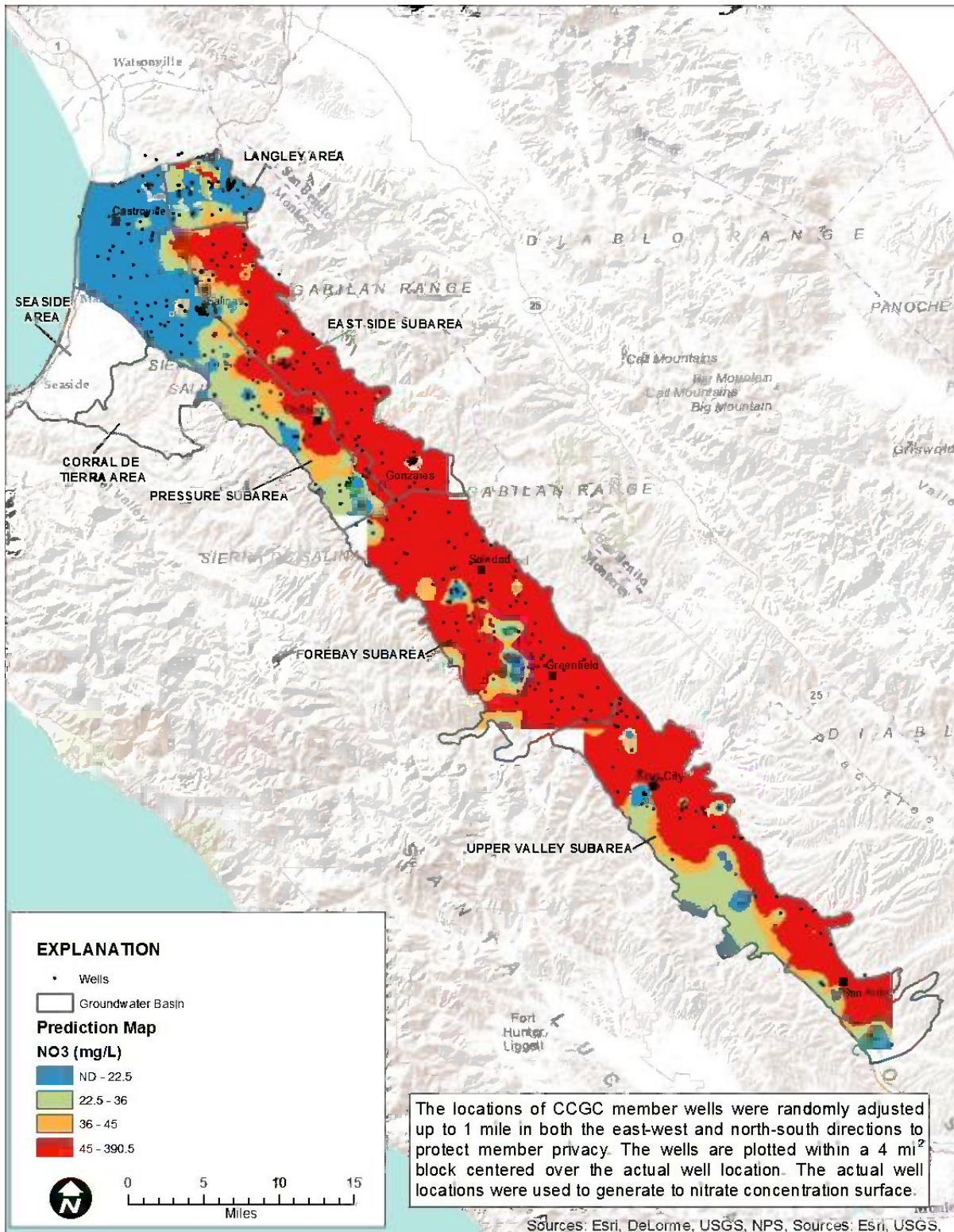


Figure 6. Kriged nitrate concentrations and delineation of areas with varying concentration ranges.

# **Exhibit X**

# Groundwater Nitrate, Salinas Valley, California, Technical Memorandum

December 10, 2014

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Prepared for the Central Coast Groundwater Coalition  
by  
HydroFocus, Inc., Davis, CA



A handwritten signature in black ink that reads "Steven Deverel".

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# Distribution of Groundwater Nitrate Concentrations, Salinas Valley, California, December 5, 2014

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Figure 20 shows the distribution of concentrations accounting for the standard deviation of the estimated nitrate concentrations shown in Figure 12. The map of standard deviations of the estimated concentrations (Figure 13) shows that the standard deviations are less in the Forebay Subarea than they are in the Pressure, Langley, East Side, and Upper Valley subareas. Therefore, the differences in concentrations between those shown in Figure 12 and those shown in Figure 20 are less in the Forebay Subarea than in the other subareas. At the 66% confidence level, the area estimated to have a concentration above the MCL is slightly smaller than shown in Figure 12 (Figure 21). In the East Side subarea this is most noticeable in the area northeast of Salinas and east of Gonzalez. In the Pressure Subarea this is most noticeable northwest of Chualar. In the Forebay Subarea this is most noticeable west of Greenfield and in the Upper Valley Subarea it is most noticeable in the areas near King City and San Ardo (Figure 21). In all subareas, the areas mapped as having concentrations less than 22.5 mg/L is greater at the 66% confidence level than shown in Figure 12.

At the 95% confidence level, the effect is more pronounced. The areas shown to have a concentration above the MCL are even smaller and the areas shown to have a concentration less than 22.5 mg/L are even larger. In the East Side Subarea, the northern half of the Forebay Subarea, and isolated areas near King City and San Ardo in the Upper Valley Subarea much of the area is shown as having an estimated concentration greater than 36 mg/L in Figure 12, but area shown as greater than 36 mg/L in these areas is less at the 95% confidence level.

Figure 21 shows the comparison of Figure 12 with Figure 20 for the area mapped as exceeding the MCL. Specifically, hatched areas represent the area exceeding the MCL in Figure 12 in Figure 21. At the 66% confidence level (Figure 21a) the hatched area generally matches the orange and red areas delineating those areas where concentrations are mapped as greater than the MCL. There are small differences north of Salinas and south and southwest of Chualar and north of Gonzales. Within the Forebay Subarea, the match is almost identical. There are small discrepancies in the Upper Valley Subarea. At the 95% confidence level, the differences are more pronounced in the Eastside and Pressure subareas as indicated by the yellow areas. In the Pressure area there are small differences in the northern part of the Subarea and near Soledad. There are also differences in the Upper Valley Subarea around the orange and red areas.

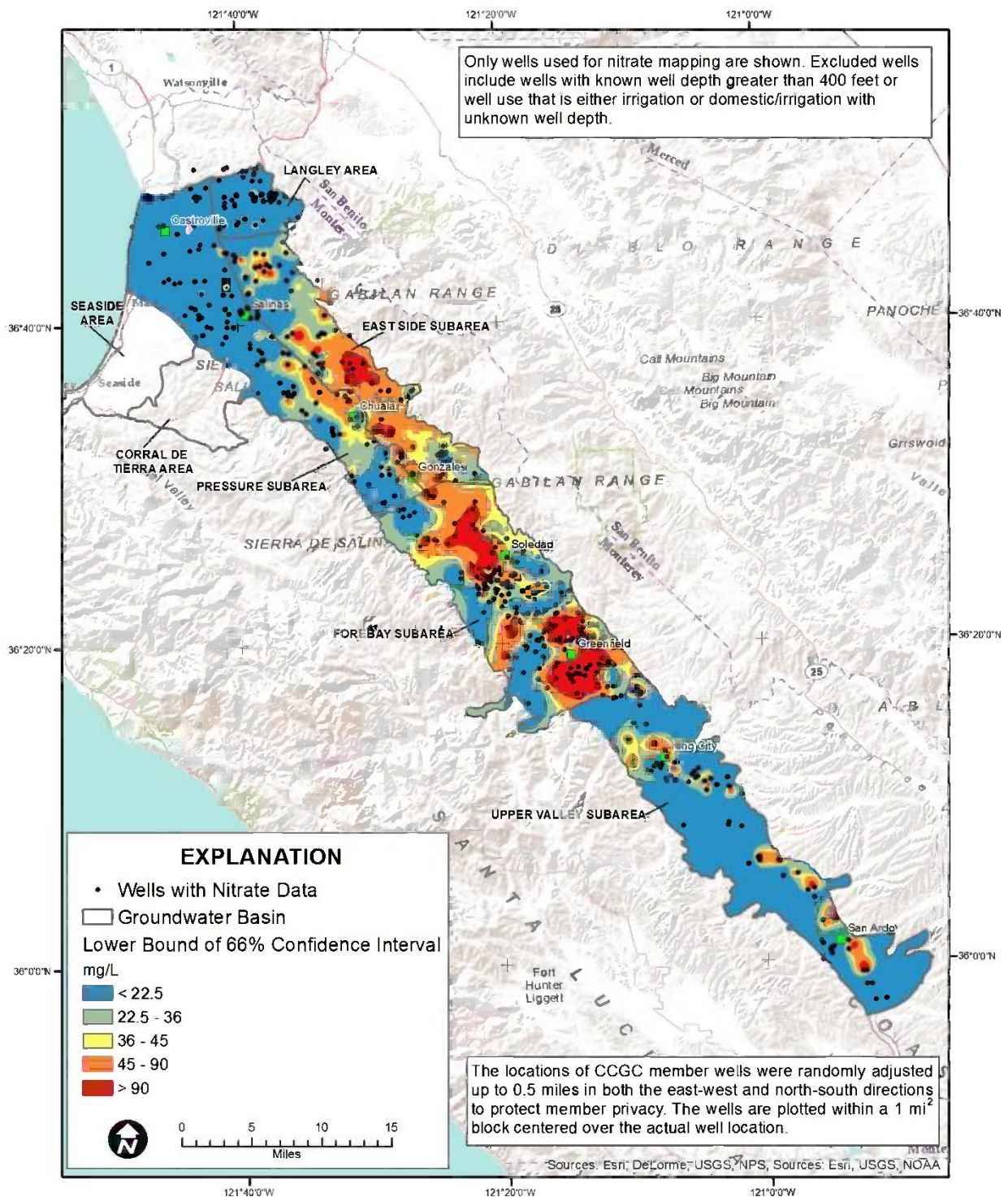


Figure 20a. Distribution of concentrations of nitrate at the 66 % confidence interval.

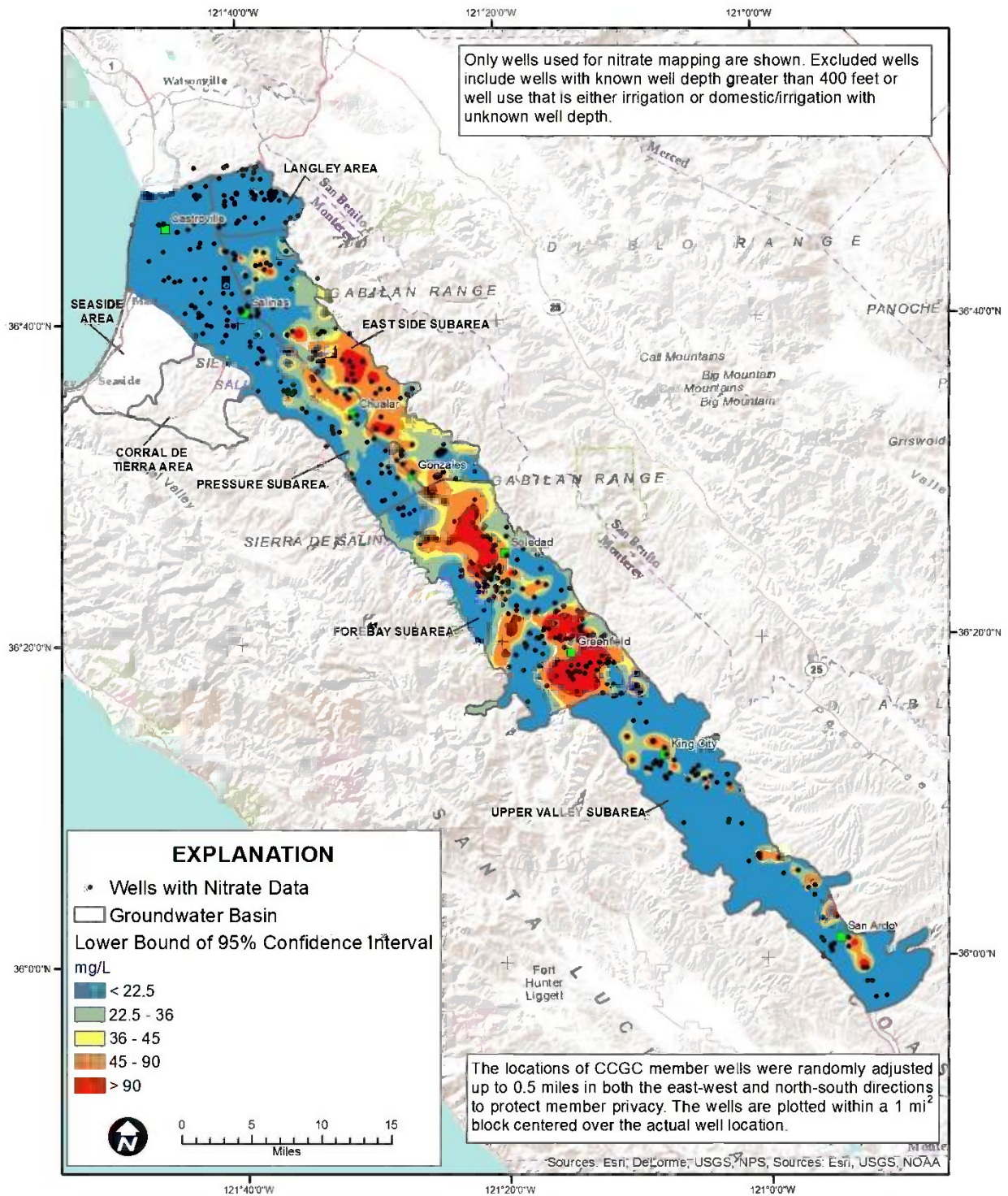


Figure 20b. Distribution of concentrations of nitrate at the 95 % confidence interval.

# **Exhibit Y**



**PUBLIC ACCESSIBILITY TO INFORMATION  
ABOUT GROUNDWATER CONDITIONS**

**STATE WATER RESOURCES CONTROL BOARD  
REPORT TO THE LEGISLATURE**

**Pursuant to Chapter 670, Statutes of 2008**

**December 2010**



STATE WATER RESOURCES CONTROL BOARD  
REGIONAL WATER QUALITY CONTROL BOARDS



**STATE OF CALIFORNIA**

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**CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY**

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## **EXECUTIVE SUMMARY AND RECOMMENDATIONS**

Californians want to know the answers to these groundwater questions: “How much is there?” “How clean is it?” “How long will it last?” Our ability to understand groundwater is only as good as the data we collect from wells. Data from wells is collected during drilling as shown on well completion reports (well logs), and during collection of water level information and soil and groundwater testing. These data must be collected, interpreted, and explained in a way that the public can understand the information.

Chapter 522, Statutes of 2001, (AB 599, Liu)--the Groundwater Quality Monitoring Act of 2001-- required the State Water Resources Control Board (State Water Board) to establish a comprehensive statewide groundwater quality monitoring program to provide the public with a better understanding of groundwater quality. In accordance with Chapter 522/2001, the State Water Board developed and implemented the Groundwater Ambient Monitoring and Assessment (GAMA) Program, which historically has been funded from a combination of bond funds and fees. To ensure the continued success of the GAMA Program, Chapter 670, Statutes of 2008, (AB 2222, Caballero) requires the State Water Board to identify and recommend to the Legislature funding options that would extend the GAMA Program until January 1, 2024, and to make recommendations to enhance the public accessibility of information on groundwater conditions. This report is being submitted in accordance with the requirements of Chapter 670/2008.

The GAMA Program shares groundwater quality information primarily through its GeoTracker GAMA information management system accessible through the State Water Board’s website. Californians now have access to a Google map-based database that readily provides a wealth of groundwater information including results of water quality testing, water level information, copies of environmental monitoring well logs as well as links to published reports for a specific area of interest. Millions of records of data come from the State Water Board and Regional Water Quality Control Boards (Regional Water Boards) (collectively referred to as “the Water Boards”), the California Department of Public Health (CDPH), the Department of Water Resources (DWR), the Department of Pesticide Regulation (DPR), the U.S. Geological Survey (USGS), and Lawrence Livermore National Laboratory (LLNL). Scientists, regulators, water managers, educators and the public can currently use these data, and as more data are shared through GeoTracker GAMA, the groundwater quality picture for California becomes clearer.

In addition to GeoTracker GAMA, the GAMA Program has three projects that help to answer the question of “How clean is our groundwater?” by testing water quality in wells and provide the information to related stakeholders. As of May 2009, GAMA Program projects have sampled nearly 4,000 wells, for hundreds of chemicals, throughout the state. This has resulted in improved comprehensive groundwater quality monitoring for California and has enhanced our understanding of groundwater conditions. Advanced monitoring techniques, like age-dating and ultra low-level detection limits for chemicals of emerging concern have helped, and continue to help, assess groundwater conditions in the state. The GAMA Program requires outreach by the State Water Board to thousands



of well owners through personal contact and public meetings with public agencies and organizations dedicated to advancing groundwater knowledge.

The report includes recommendations that the Legislature:

1. Continue GAMA Program funding at the level of effort necessary to implement Chapter 522/2001 for \$7.5 million annually. Current funding comes from annual waste discharge fees (\$2.1 million) and from Proposition 50 bond funds which, when expended, will need to be replaced by another fund source for \$5.4 million annually.

Bond funds will need to be replaced in FY 2012-13 in the amount of \$0.4 million for staff costs; in FY 2013-14 in the amount of \$3.3 million for contracts and staff costs; and in FY 2014-15 and annually thereafter in the amount of \$5.4 million (\$5 million in contracts and \$0.4 million for staff costs).

Several potential funding sources could be pursued, all requiring actions outside the State Water Board's authority, including:

- New bond funding;
  - Additional funding from the Waste Discharge Permit Fund, either by increasing the fee or imposing the fee on those not currently paying a fee;
  - Funding from the assessment of a new fee on groundwater use;
  - General Fund moneys; and
  - Federal funds.
2. Appropriate funding to the Department of Water Resources (DWR) to make electronic copies of the remaining hundreds of thousands of paper well logs. The information from well logs will be included in the State Water Board's online GeoTracker GAMA information management system. These data will help improve the availability of information needed to interpret groundwater quality data, and will be available for confidential use as required by statute.

In addition, to enhance public accessibility of information on groundwater conditions, the State Water Board will continue to work cooperatively with other state agencies, water purveyors and other interested parties in continuing the following actions:

1. Support implementation of AB 599 plan through the GAMA Program.
2. Implement the GAMA Program's information sharing through data management and stakeholder coordination by:
  - Supporting GeoTracker GAMA as the system that makes available to the public information on California's groundwater quality and related information;
  - Populating GeoTracker GAMA with groundwater quality and related information, working with the Interagency Task Force (ITF) agencies and other interested parties;
  - Sharing information with the public, ITF and other agencies with a role in groundwater, including continued consultation with the Chapter 670/2008-appointed public advisory committee (PAC).

- Using the groundwater information now being provided by GAMA in planning and other strategic functions to protect groundwater by better understanding its health and challenges to that health.

If replacement funds are not appropriated to replace Proposition 50 bond funds according to the schedule described above, the GAMA Program cannot implement the critical aspects of the GAMA Program implementing Chapter 522/2001, and will only run a minimal program. A minimal GAMA Program will not provide a continuous statewide assessment of groundwater quality, which is needed to better inform decision makers on how to better plan, manage, and regulate waste discharges, and improve groundwater quality. The GAMA Program is needed in the future for the following reasons:

- Many portions of California's groundwater basins are contaminated by man-made and naturally occurring chemicals. California increasingly relies on groundwater for nearly half its water. Many disadvantaged communities rely on it entirely. The GAMA Program was created to document and assess the result of man-made chemicals in groundwater. GAMA studies have also found that both man-made and naturally occurring chemicals have caused significant impacts on groundwater needed for drinking water.
- GAMA groundwater age-dating tests and water quality trend monitoring are critical to understanding the movement of shallow groundwater to deeper groundwater and to determining how to prevent further groundwater degradation.
- GAMA monitoring is essential to the success of current efforts to assess the impacts of contaminated groundwater on California communities including legislatively-mandated studies pursuant to Chapter 1, Statutes of the Second Extraordinary Session of 2008 for nitrate in the Tulare Basin and Salinas Valley and Chapter 670/2008 for a statewide assessment of all contaminants.
- GAMA results are used in studies initiated by industries that affect groundwater quality, by communities solving their water supply problems, and by regulatory case managers determining best technical approaches to prevent or cleanup pollution. In fact, schools are using GAMA data, information, and its geospatial display on the internet-accessible GeoTracker GAMA system to learn about human impacts on the environment.
- GAMA is providing groundwater assessments so that technical and policy decisions can be reliably pursued. The environment and state's economy rely on a stable and clean water supply. The GAMA Program provides a vital link for the public and decision makers to effectively monitor, assess, and communicate groundwater quality information.

# CHAPTER 1 – IMPROVING PUBLIC ACCESSIBILITY TO INFORMATION ABOUT GROUNDWATER CONDITIONS

## A. Introduction

The importance of understanding groundwater conditions continues to increase. Over 40 percent of water used in California comes from pumping groundwater wells. Nearly 70 percent of Californians drink groundwater. Groundwater is the sole source of water for many high population areas, such as the San Gabriel and San Fernando Valleys. Californians use groundwater for private and public drinking water supply, and also for industrial and agricultural uses. Reliance on groundwater grows with increased municipal, agricultural and industrial demand. Drought and climate change could further increase groundwater use.

Human activities can and have degraded groundwater quality. (Examples of human activities include municipal and industrial wastewater disposal, industrial and commercial chemical uses and associated accidental chemical releases, fuel releases from aboveground and underground storage tanks, urban and agricultural pesticide use, urban and agricultural application of nitrogen fertilizers, septic tank use, and salt accumulation associated with water importation and use). A review of public drinking water well data shows that thousands of public drinking water wells have been shut down since 1980, many due to both naturally occurring constituents like arsenic and man-made chemicals like nitrate, perchlorate, solvents, and the gasoline additive methyl tert-butyl ether (MTBE). Consequently, there are growing concerns regarding groundwater quality in California, and whether decreases in quality will affect its availability for use.

Our ability to observe and understand groundwater and groundwater quality is limited to the information obtained from water wells. Data are collected during well installation as shown on well completion reports (well logs), and during collection of water level information and soil and groundwater sampling and laboratory testing. These data must be collected, interpreted, and explained so it can be understood by the public in order to answer the questions: “How clean is it?” “How much is there?” “How long will it last?”

Chapter 522/2001, the Groundwater Quality Monitoring Act of 2001, added Section 10781 to the Water Code to provide the public a better understanding of groundwater quality. The State Water Board’s GAMA Program implements Chapter 522/2001. The GAMA Program focuses on answering the question of “How clean is our groundwater?” for the public.

To ensure the continued success of the GAMA Program, Chapter 670/2008 added Section 10782 to the Water Code and requires the State Water Board to (1) make recommendations to enhance the public accessibility of information on groundwater conditions and (2) identify and recommend to the Legislature funding options that

would extend until January 1, 2024, the comprehensive groundwater quality monitoring program developed under Chapter 522/2001. This report to the Legislature is being submitted pursuant to the requirements of Chapter 670/2008. (Appendix A). A copy of Chapter 522/2001 is also provided in Appendix B.

## **B. Development of Information on Groundwater Conditions and Public Accessibility**

Groundwater information is accessible to the public from a number of public agencies and other organizations. Chapter 522/2001 focuses on access to groundwater quality information. The law required the State Water Board to establish a 13-person PAC and an ITF to provide input to the State Water Board in developing the plan which is documented in a 2003 Report to the Legislature.

The law required the State Water Board to develop a central information system to provide public information on groundwater quality. In implementing the law, the State Water Board website and its GeoTracker GAMA information system contains interactive links to many of the other groundwater organizations' websites as well as making millions of records of groundwater quality and related data available for integrated queries and reports.

Chapter 522/2001 also required the State Water Board to integrate existing monitoring programs and design new program elements to establish a comprehensive groundwater quality monitoring program capable of assessing each groundwater basin in the state. The monitoring and assessment of the groundwater quality are implemented through the GAMA Program under a number of unique, cutting-edge projects.

The plan is composed of two major efforts, the sharing of information and the development of the information. A description of these efforts as well as significant accomplishments and findings are summarized below as background to this report's recommendations.

### **Sharing Information: Public Information, Data Management, and Agency and Stakeholder Coordination**

The GAMA Program calls for increasing public accessibility to groundwater information and coordination among groundwater agencies and stakeholders. This is conducted primarily through sharing and displaying information using the internet-based information management system, GeoTracker GAMA, and through other outreach and collaboration efforts associated with the GAMA monitoring and assessment efforts.

The law called for development of an information management system compatible with GeoTracker which provides centralized access to multiple data sets and other information from various sources. GeoTracker GAMA was developed for the GAMA

Program to implement the law. The system became available to the public via the internet in July 2009. Californians now have access to a Google map-based database that readily provides a wealth of information including results of groundwater quality testing, groundwater level information as well as links to published reports for a specific area of interest.

The GAMA Program identifies a number of sources of groundwater quality and related information including federal, state, and local agencies, water purveyors, and well owners. GeoTracker GAMA hosts hundreds of millions of records of groundwater related data shared by DWR, CDPH, DPR, nine Regional Water Boards, the State Water Board, the USGS, and LLNL. GeoTracker GAMA can help investigate new sources of well contamination by looking at nearby contaminant sites. GeoTracker GAMA currently shares environmental data from over 14,000 regulated contaminant sites. Display of all these data, and posting of associated published reports, has shown that the more information provided through GeoTracker GAMA, the better the picture of groundwater quality conditions in California.

The State Water Board's website provides the portal to GeoTracker GAMA so that the public has access to introductory information about groundwater and groundwater quality prior to accessing the system. The State Water Board website leverages the resources of other agencies by providing direct links to specific information on the quality of groundwater in California. These links include the Water Boards' water quality regulatory programs and regulated contaminant site information; the GAMA Program; DWR information on groundwater basins including the Integrated Water Resources Information System (IWRIS); CDPH drinking water information on public supply wells; DPR pesticide testing information for private domestic wells; USEPA information on private domestic wells as well as information on public supply wells; and the USGS national water quality database.

The GAMA Program makes significant outreach and collaboration efforts associated with GAMA monitoring and assessment. In its sampling of nearly 4,000 wells as of May 2009, the GAMA Program has received permission to sample from thousands of well owners, and has shared information and coordinated with them as well as local agencies and water purveyors through personal contact and public meetings. Results of the GAMA Program are shared through publication of the analytical data as well as several reports that are available through the GeoTracker GAMA information system.

### **Developing Information Element: Monitoring and Assessment**

Our ability to observe and understand groundwater and groundwater quality is limited to the information obtained from water wells. Data are collected during well installation as shown on well completion reports (well logs), and during collection of water level information and soil and groundwater sampling and laboratory testing. Well logs can help us understand where water-bearing zones (in subsurface soil and rock) are found as well as interpreting the natural water quality that may be encountered. Although rock and soil types do not change, water levels, groundwater flow direction,

and water quality do change, often due to human activities. Therefore, the continued monitoring and assessment of groundwater are critical to providing information to the public about groundwater's baseline as well as changing conditions or trends.

Chapter 522/2001 requires a monitoring and assessment program that integrates existing programs and designs new program elements, as necessary, which is capable of assessing each groundwater basin in the state. The GAMA Program has sampled nearly 4,000 wells statewide as of May 2009. Over one quarter are privately owned domestic wells and about half are public water supply wells. Table 1 summarizes each of the GAMA Projects and work completed through May 2009.

### **GAMA Program Description**

The Domestic Well Project samples private domestic wells, and provides information about the shallow groundwater in California. The quality of water served from domestic wells is not regulated, and well monitoring data provides well owners with information about what they are drinking. Domestic wells tend to be shallower than public supply wells and are at higher risk of being polluted by adjacent septic tank systems and other nearby contaminating activities at the surface. Focusing on one county at a time, the Domestic Well Project sampled nearly 1,100 wells in five county focus areas, providing important information to well owners and local agencies and the public about the quality of the water being consumed as well as groundwater conditions. Sampling in Tulare County in particular found significant water quality problems. Over 60 percent of the 181 domestic wells sampled in Tulare County are tapping groundwater that exceeds drinking water standards that are applicable to public water supply. Over 40 percent tap groundwater that exceeds the nitrate drinking water standard. A more detailed description of the Domestic Well Project and findings to date is provided in Appendix C.

The Priority Basin Project is designed to evaluate the deeper groundwater that tends to be used for public supply. The Priority Basin Project is described in detail in the USGS report: *Framework for a Ground-Water Quality Monitoring and Assessment Program for California, 2003*. The Priority Basin Project tests nearly 3,000 representative wells statewide on a ten-year cycle and a subset of wells on a three-year cycle to help identify trends in groundwater quality. Well owner cooperation is voluntary and, as of May 2009, nearly 2,000 wells have been tested since 2004. A more detailed description of the Priority Basin Project is provided in Appendix D.

The Priority Basin Project is unique nationwide because on a statewide level it tests for hundreds of chemicals, many at very low detection levels, includes groundwater age-dating analysis, and some isotopic characterization to help determine sources of water and contaminants.

The Special Studies Project uses additional cutting-edge tools to investigate a series of groundwater quality issues – such as linking land uses to groundwater quality, assessing the fate and transport of certain contaminants moving downward to

groundwater, and developing new laboratory testing methods for constituents in groundwater. A more detailed description of the Special Studies Project is provided in Appendix E.

### **GAMA Program Significant Findings**

Appendix F provides a summary of significant findings and accomplishments for the GAMA Program. Following are highlights:

- Nitrate detections in domestic wells illustrate the high susceptibility of shallow groundwater to nitrate contamination and the need to better characterize this shallow groundwater resource.
- Coliform bacteria were the most frequently observed contaminant of public health concern in domestic wells, present in 26 percent of the sampled wells.
- Age-dating and low-level Volatile Organic Compound (VOC) testing, pioneered by GAMA, has helped to assess the susceptibility of public-supply drinking water wells to contamination.
- Age-dating results show that much of the groundwater pumped today has recharged after World War II (1945) - post urban and agricultural development.
- Low-level VOC results show that an aquifer's susceptibility to contamination can vary widely. Many deep coastal aquifers are free of VOCs and other contaminants. Central Valley shallow and deep aquifers tend to be more susceptible to surface contaminants.
- Significant attenuation (depletion) of most wastewater-associated "emerging" contaminants has been determined to happen during the groundwater recharge process.

### **GAMA Program Significant Accomplishments and Benefits**

Many portions of California's groundwater basins are contaminated by both man-made and naturally occurring chemical constituents. California increasingly relies on groundwater for nearly half its water. Many disadvantaged communities rely on it entirely.

GAMA was created to document and assess the result of man-made chemicals in groundwater. GAMA studies have found that both man-made and naturally occurring chemicals have caused significant impacts on groundwater needed for drinking water. A continuous statewide assessment of groundwater quality, like GAMA, is helping to inform decision makers on how to better plan, manage, and regulate waste discharges, and improve groundwater quality.

The GAMA Program is over half way through the first 10-year cycle of groundwater quality monitoring and assessment of the primary groundwater basins used for water supply. Nearly 4,000 wells, of which over 1,000 are private domestic wells, have been sampled. GAMA sampling efforts have provided many critical findings to help better understand groundwater conditions in California, and, in turn, make the information

available to the public. Trend sampling is ongoing in order to identify changes in groundwater quality for those basins that have been assessed. Much of the data collected is currently available through GeoTracker GAMA with more being added. Reports summarizing the groundwater quality in the basins are being prepared and posted on GeoTracker GAMA. The GAMA Program is finishing its baseline assessment of California's groundwater, and is monitoring groundwater changes through its trend monitoring.

The GAMA Program has innovated cutting-edge approaches and uses state-of-the-art tools to test groundwater and assess groundwater conditions. The GAMA Program is unique nationwide because on a statewide level it tests for hundreds of chemicals, many at very low detection levels, includes groundwater age-dating analysis, and some isotopic characterization to help determine sources of water and contaminants.

Groundwater age-dating analysis provides information that has many practical uses. Groundwater age shows if pumped groundwater has been recently recharged from ground surface, a nearby river, or from older underground sources.

GAMA Program implementation allows areas to be identified where groundwater supply is most at risk from over-extraction. Thousands of groundwater levels at environmental cleanup sites have been measured as required by Regional Water Boards and are shown on GeoTracker GAMA. To complement these data, the Priority Basin Project groundwater age dating allows water purveyors to gauge whether the groundwater resource being pumped is being replenished or is being over-pumped and thus reducing groundwater reserves. Age-dating information also shows where the groundwater is older than 50 years. In these areas younger water is not able to reach groundwater and recharge the supply. If groundwater is removed at high rates and not allowed to recharge sufficiently, then it is in danger of overdraft where the regional groundwater levels drop (i.e., wells go dry). The GAMA Program is also responsible for the development and use of new tracers that provide information for managing aquifer recharge. These tracers show both the length of time that reclaimed water resides in the subsurface prior to extraction for use and the water quality changes associated with artificial recharge.

Information developed through the GAMA Program, primarily age-dating and low-level detections, helps to identify the groundwater that is most vulnerable to contamination from land use activities. Areas where the groundwater is younger than 50 years can be at risk from contamination by land uses. These areas need greater protection from land use activities. GAMA was created to document and assess the result of man-made chemicals in groundwater.

GAMA studies have also found that naturally occurring chemicals have caused significant impacts on groundwater needed for drinking water, and these have increased in groundwater due to human activities. GAMA's groundwater age-dating tests and water quality trend monitoring are critical to understanding the movement of shallow groundwater to deeper groundwater and helping to determine how to prevent



further groundwater degradation and identify those management decisions that are likely to have success.

Many portions of California groundwater basins are contaminated. As a result, the Legislature has mandated reports pursuant to Chapter 1, Statutes of the Second Extraordinary Session of 2008 for Nitrate Project (Tulare Basin and Salinas Valley Pilot Projects) and Chapter 670/2008 for Statewide Contaminants Project to answer questions about contaminant occurrence, impacts on communities, associated costs and feasibility of options to provide potable water ranging from treating polluted groundwater for drinking, searching for cleaner groundwater, creating new systems to tap into scarce surface water supplies, and long-term efforts to reduce the rate of pollution. Without the GAMA Program information, these studies could not be implemented.

Other important water resources issues rely on GAMA results. GAMA results have been used in studies initiated by industries that affect groundwater quality, communities solving their water supply problems, regulatory case managers determining best technical approaches to prevent or cleanup pollution. In fact, schools are using GAMA data, information, and its geospatial display on the internet accessible GeoTracker GAMA system to learn about human impacts on the environment.

GAMA and its display through GeoTracker GAMA “ground-truths” perceptions about groundwater allowing decisions to be better supported by data. Without GAMA, these studies and technical and policy decisions could not be pursued with reliability. GAMA monitoring, assessment, and communication of this information are being used to support more effective and efficient use of public and private resources to protect the environment and continue a healthy economy.

### **C. Recommendations to Enhance the Public Accessibility of Information on Groundwater Conditions**

The State Water Board makes a number of recommendations, outlined below, to enhance public accessibility of information on groundwater conditions in California. The State Water Board also has outlined below recommended actions for the State Water Board, working cooperatively with other state agencies, water purveyors and interested parties, to further provide public accessibility of information on groundwater conditions in California.

#### **Recommendations to the Legislature:**

**Recommendation 1: Continue to fund the GAMA Program at the level of effort necessary to implement Chapter 522/2001 in the amount of \$7.5 million annually.**

The cost to implement the GAMA Program is \$7.5 million annually. However, long-term funding at this level has not been identified. Current funding comes from annual waste discharge fees (\$2.1 million) and from Proposition 50 bond funds which, when expended, will need to be replaced by another fund source in the amount of \$5.4 million annually. Timing and fund source options are described in Chapter 2 of the report.

If replacement funds are not appropriated to replace Proposition 50 bond funds according to the schedule described above, the GAMA Program will not be able to implement the critical aspects of the GAMA Program implementing Chapter 522/2001, and will only run a minimal program. A minimal GAMA Program will not provide a continuous statewide assessment of groundwater quality, which is needed to better inform decision makers on how to better plan, manage, and regulate waste discharges, and improve groundwater quality. The GAMA Program is needed in the future for the following reasons:

- Many portions of California's groundwater basins are contaminated by man-made and naturally occurring chemicals. California increasingly relies on groundwater for nearly half its water. Many disadvantaged communities rely on it entirely. The GAMA Program was created to document and assess the result of man-made chemicals in groundwater. GAMA studies have also found that naturally occurring chemicals have caused significant impacts on groundwater needed for drinking water, and these have increased in groundwater due to human activities. GAMA's groundwater age-dating tests and water quality trend monitoring are critical to understanding the movement of shallow groundwater to deeper groundwater.
- The Legislature has mandated reports pursuant to Chapter 1, Statutes of the Second Extraordinary Session of 2008 for Nitrate Project (Tulare Basin and Salinas Valley Pilot Projects) and Chapter 670/2008 for Statewide Contaminants Project to understand contaminant occurrence, evaluate impacts on communities, and estimate costs and feasibility of options to provide potable water. GAMA Program results are key to the success of these efforts.
- Other important water resources issues rely on GAMA results. GAMA results have been used in studies initiated by industries that affect groundwater quality, communities solving their water supply problems, regulatory case managers determining best technical approaches to prevent or cleanup pollution. In fact, schools are using GAMA data, information, and its geospatial display on the internet accessible GeoTracker GAMA system to learn about human impacts on the environment.
- The GAMA Program provides groundwater studies so technical and policy decisions can be reliably pursued. The environment and state's economy rely on a stable and clean water supply. The GAMA Program provides a vital link for the public and decision makers to effectively monitor, assess, and communicate groundwater quality information.

**Recommendation 2: Appropriate funding in the budget to DWR to make electronic copies of the remaining hundreds of thousands of paper well logs.**

Well logs for the million wells drilled in California provide information on the subsurface and are the primary basis for predicting naturally occurring water supply and water quality to agencies with access to this confidential information. Only a small percentage of well logs in southern California are electronically available to GeoTracker GAMA, since the logs have not been scanned due to lack of resources. DWR does not have the funds necessary to complete the scanning process. The cost of completing the scanning process is estimated at \$20,000, which does not include significant staff time to prepare the documents for efficient scanning and organization to match the rest of the state's scanned well logs.

**Actions for the State Water Board (working cooperatively with other state agencies, water purveyors and other interested parties):**

**State Water Board Action 1: Continue to support the GAMA Program's implementation of the AB 599 plan.**

The GAMA Program is designed to meet the goals of sharing groundwater quality information and improving groundwater quality monitoring in California. Information sharing occurs through public outreach and the roll-out and increasing use of GeoTracker GAMA system. Information is developed through data collection efforts of varied organizations that deal with groundwater, and most extensively over the last five years through the GAMA Program monitoring and assessment projects.

The GAMA Program is over halfway through the first 10-year cycle of groundwater quality monitoring and assessment of the primary groundwater basins used for water supply. Groundwater sampling has provided many critical findings to help better understand groundwater conditions in California, and, then make the information available to the public. Sampling the same wells every three years allows us to see changes in groundwater quality (trend sampling). Based on these data, reports summarizing the groundwater quality in the basins are prepared and posted on GeoTracker GAMA. These data, as well as data collected from several other sources, have been made available for the first time on the internet and shown on a map interface through GeoTracker GAMA with more added with each sampling event and each report completion. Continuation of all these efforts on a 10-year cycle will increasingly improve our understanding of groundwater conditions and how humans impact groundwater so that we can make informed decisions concerning sustained groundwater use and management in California.

The GAMA Program provides groundwater studies so technical and policy decisions can be reliably pursued. The environment and state's economy rely on a stable and clean water supply. The GAMA Program provides a vital link for the public and decision makers to effectively monitor, assess, and communicate groundwater quality information.

A monumental step forward has been made by GAMA in providing a wealth of information about groundwater conditions to the public. A California court recently determined that with GeoTracker GAMA “the public retain some ability ... to participate in efforts to protect the water quality of [public water supply] wells from contamination by land activities, and to participate in local land use planning decisions potentially affecting the wells. Researchers ... may ... study and assess groundwater and track toxic plumes ... and may define methods to mitigate contaminating land activities.”

Monitoring groundwater over time helps us to better understand groundwater and pollutant movement to groundwater supplies and into drinking water wells and helps in understanding which contaminating land uses cause groundwater problems and which are less significant in terms of real risk. For instance, tens of thousands of underground storage tanks at gas stations in California have leaked petroleum fuel and are being cleaned up; however, very few have caused wells to be shut down. However, nitrates in groundwater from wastewater and fertilizer have impacted hundreds of the state’s 18,000 water supply wells. This information is beginning to help prioritize planning and regulatory decisions (cleanup projects and waste discharge requirements). The ability to make informed prioritization decisions optimizes limited funding resources and maximizes groundwater protection.

Several water resources issues now rely on GAMA results. GAMA results are being used in studies initiated by the legislature, communities solving their water supply problems, industries that affect groundwater quality, and regulatory case managers determining best technical approaches to prevent or clean up pollution. In fact, schools are using GAMA data, information, and its geospatial display on the internet accessible GeoTracker GAMA system to learn about human impacts on the environment.

Finally, the information developed through the GAMA Program allows areas to be identified where groundwater supply is most at risk from over-extraction. Thousands of groundwater levels have been measured as required by Regional Water Boards. The data are shown geospatially on GeoTracker GAMA. To complement these data, the Priority Basin Project groundwater age dating shows where the groundwater is older than 50 years, which means that if this groundwater is used at high rates, then it is in danger of overdraft. If the age-dating shows older groundwater, then younger water is not able to reach groundwater and recharge the supply.

**State Water Board Action 2: Continue to implement the GAMA Program’s information sharing through data management and stakeholder coordination.**

- a. Continue to support GeoTracker GAMA as the system that makes available to the public information on California’s groundwater quality and related information.**

GeoTracker GAMA is an internet-accessible groundwater information system to help the public understand groundwater and groundwater quality in California. GeoTracker GAMA, like any such system, requires both routine maintenance as well as upgrading to incorporate new applications and tools.

**b. Continue to populate GeoTracker GAMA with groundwater quality and related information, working with the ITF agencies and other interested parties.**

Additional groundwater quality and related information would significantly increase and complement the information currently being submitted to GeoTracker GAMA. Groundwater information that is collected includes that required by state agencies (for example, for regulatory compliance), information paid for using public funds (for example, bond funded projects related to groundwater), and information collected by varied agencies and organizations in the business of managing or regulating groundwater. In its 2003 Report to the Governor and the Legislature regarding the GAMA Program, the State Water Board recommended that groundwater quality and related information be submitted electronically to GeoTracker GAMA, and Chapter 727, Statutes 2000 (AB 2886, Kuehl) specified the format and the content of the required data.

**c. Continue to share information with the public, the ITF and other agencies with a role in groundwater, including continuing consultation with the Chapter 522/2001-appointed PAC.**

Providing groundwater information to the public requires valuable feedback from the groundwater community. This community consists of a broad spectrum of interests including environmental groups, state and federal agencies, water purveyors and groundwater management agencies. The representation on the PAC provides the best model to continue for this forum since all of these groups are represented.

**Table 1 – Description of GAMA Projects, Summary of Work Completed and Current Status**

Project	Description	Summary of Work Completed through May 2009	Current Status
<p><b>California Aquifer Susceptibility (CAS)</b></p>	<ul style="list-style-type: none"> <li>Served as the foundation of the Priority Basin Project. Project duration 2000-2003</li> <li>Cutting edge monitoring using age-dating and very low contaminant detection limits to address the relative susceptibility of public drinking water wells to contamination.</li> <li>Evaluation of groundwater conditions in study areas showing contaminant movement from recharge water.</li> </ul>	<ul style="list-style-type: none"> <li>Tested groundwater samples at over 1,000 water supply wells.</li> <li>Twelve Focus Areas in high-use groundwater basins were studied.</li> <li>Two types of groundwater tests were performed: age-dating and low-level volatile organic compound analyses.</li> </ul>	<p>Complete</p>
<p><b>Priority Basin Project</b></p>	<ul style="list-style-type: none"> <li>Initiated in 2002. US Geological Survey as technical lead, with LLNL and State Water Board</li> <li>Provides an assessment of groundwater quality in groundwater basins prioritized based on groundwater use.</li> <li>Has divided 116 high-use groundwater basins into 35 “study units”.</li> <li>Uses advanced low detection level groundwater testing techniques to identify possible emerging contaminants and assist public and private groundwater well owners and users in managing resources.</li> </ul>	<ul style="list-style-type: none"> <li>50 public meetings held</li> <li>1,703 well owner reports mailed</li> <li>13 data reports published (5 pending)</li> <li>2 scientific Investigation reports in review</li> <li>1,986 wells sampled</li> <li>&gt;1,200 participants including: 208 water districts, 159 cities and 80 schools</li> </ul>	<p>Active, but significantly delayed due to Stop-Work Order in December 2008</p>
<p><b>Domestic Well Project</b></p>	<ul style="list-style-type: none"> <li>Initiated in 2002 provides private domestic well owners with information regarding their well water quality.</li> <li>Tests private domestic wells in county “Focus Areas”, one county at a time.</li> <li>Selection of county Focus Area is based on domestic well use, interest by participants, susceptibility of wells to contamination, and availability of well records.</li> <li>Tests for chemicals commonly found in well water, such as bacteria, nitrate, metals, and VOCs.</li> <li>Additional chemicals of concern for a selected Focus Area may also be tested, such as perchlorate, pesticides and radionuclides.</li> </ul>	<ul style="list-style-type: none"> <li>Five County Focus Areas have been sampled (Yuba, El Dorado, Tehama, Tulare and San Diego)</li> <li>1,067 domestic wells have been tested</li> <li>1,067 well owner reports have been mailed</li> <li>All data has been uploaded to GeoTracker GAMA</li> <li>Where sampling results have shown concentrations above drinking water standards, the State Water Board has recommended the well owner re-test the well water.</li> </ul>	<p>Active</p>

**Table 1 – Description of GAMA Projects, Summary of Work Completed and Current Status (cont.)**

<b>GAMA Project</b>	<b>Project Description</b>	<b>Summary of Work Completed through May 2009</b>	<b>Current Status</b>
<p><b>Special Studies Project</b></p>	<ul style="list-style-type: none"> <li>Initiated in 2002, LLNL conducts state-of-the-art research on nitrate sources to groundwater, wastewater indicators in recycled irrigation water, groundwater age, groundwater recharge and other areas of interest.</li> <li>Helps in understanding the source, fate and transport and occurrence of chemicals that can affect groundwater quality.</li> <li>Addresses important and emerging statewide groundwater quality issues using innovative, cutting-edge technology.</li> </ul>	<ul style="list-style-type: none"> <li>Several studies on nitrate in groundwater have been conducted using advanced isotopic techniques to determine the source of nitrogen in groundwater and to evaluate how nitrate in groundwater can transform (denitrify).</li> <li>Naturally occurring forms of helium and hydrogen in groundwater have been used to measure the age of groundwater to help evaluate drinking water supplies and their susceptibility.</li> <li>Groundwater recharge studies help determine the origin of groundwater and potential contributors to existing groundwater contamination.</li> <li>New analytical methods for detection of low-level organic chemicals (wastewater indicators, pharmaceuticals and endocrine disrupting chemicals) in groundwater have been developed.</li> </ul>	<p>Active</p>
<p><b>GeoTracker GAMA</b></p>	<ul style="list-style-type: none"> <li>Initiated in 2008, GeoTracker GAMA achieves the goal of Chapter 522/2001 to “design a database capable of supporting the monitoring program that is compatible with the State Water Board’s GeoTracker database”.</li> <li>An environmentally-innovative search engine that allows easy access to publicly available groundwater quality data and information.</li> <li>Makes searchable a number of groundwater quality databases.</li> <li>Provides links to other groundwater quality data sources and information.</li> </ul>	<ul style="list-style-type: none"> <li>The GeoTracker GAMA was released to the public in July 2009, allowing users to view groundwater quality data over the internet.</li> <li>The GeoTracker GAMA (Beta) website has been created by EcoInteractive as software as a service.</li> <li>Published reports and existing water quality and related data sets from the Water Boards, USGS, LLNL, CDPH, DWR, and DPR are served by GeoTracker GAMA on a Google maps format.</li> </ul>	<p>Active</p>

Note: Additional information regarding description of GAMA Projects and work conducted through May 2009 can be found in Appendices D through I.  
VOC = volatile organic compound  
USGS = United States Geological Survey  
CDPH = California Department of Public Health  
LLNL = Lawrence Livermore National Laboratories  
DWR = Department of Water Resources  
DPR = Department of Pesticides

## CHAPTER 2 – FUTURE FUNDING OPTIONS

### A. Current GAMA Program Funding

Chapter 670/2008 requires the State Water Board to identify and recommend to the Legislature funding options that would extend the GAMA Program implementing Chapter 522/2001 until January 1, 2024. Implementation of Chapter 522/2001 requires \$7.5 million annually. Funding for GAMA currently comes from two sources:

- Bond sales. Proposition 50 provided \$50 million specifically to fund implementation of the GAMA Program. The State Water Board has chosen to use Proposition 50 to fund primarily the Priority Basins Project. The Priority Basin Project, as defined in the 2003 Report to the Legislature, requires approximately \$5.4 million annually. Replacement funding will be needed when the Proposition 50 bond funds are expended. See discussion below regarding potential sources and timing of future GAMA Program funding needs.
- Annual fees (Waste Discharge Permit Fund – WDPF). The WDPF provides \$2.1 million annually that funds the remainder of the GAMA Program. A surcharge is assessed on the fee paid by those who have been issued waste discharge requirements to fund this part of the GAMA Program. The current surcharge is nearly ten percent.

The GAMA projects, regardless of funding, are primarily implemented through contracts but there are also State Water Board staff dedicated to GAMA Program implementation. Table 2 (below) summarizes the GAMA Program budget by fund source and project averaged over years of full funding. Work has continued uninterrupted on the remainder of GAMA Projects since their funding source is from the WDPF. However, Priority Basin Project work was interrupted for over ten months as result of the Governor's Executive Order to stop work on bond-funded projects between December 2008 and September 2009. The U.S. Geological Survey and Lawrence Livermore National Laboratory had to re-assign 39 staff dedicated to this statewide project for several months and project schedule and production of work products have been significantly delayed.



**Table 2 - GAMA Program Annualized Budget**

Project	Current Funding Sources	Current Approximate Annual Contract Budget	Approximate Annual Personal Services Budget	Total Current Annual Budget
Priority Basin Project	Proposition 50 Bond Sales	\$5.0M	\$0.39M	\$5.39M
Domestic Well Project	WDPF Fees (\$1.33M/year)	\$0.33M	\$0.77M	\$2.1M
Special Studies Project		\$0.75M		
GeoTracker GAMA		\$0.25M		
<b>Total</b>		<b>\$6.3M</b>	<b>\$1.16M</b>	<b>\$7.49M</b>

**B. Future GAMA Program Funding**

Both Chapter 522/2001 and Chapter 670/2008 require the State Water Board to identify long-term funding necessary to implement the law. Funding has not been identified for long-term implementation of the Priority Basin Project. Current funding comes from annual waste discharge fees (\$2.1 million) and from Proposition 50 bond funds which, when expended, will need to be replaced by another fund source in the amount of \$5.4 million annually. In order to fund the GAMA Program at its current level, bond funds will need to be replaced in FY 2012-13 in the amount of \$0.4 million for staff costs; in FY 2013-14 in the amount of \$3.3 million for contracts and staff costs; and in FY 2014-15 and annually thereafter in the amount of \$5.4 million (\$5 million in contracts and \$0.4 million for staff costs).

If no additional funds are appropriated to replace Proposition 50 bond funds, the GAMA Program will only be able to run a minimal program that will include the Domestic Well, Special Studies, and GeoTracker GAMA Projects. Consequences of discontinuing the Priority Basin Project include:

- Loss of basic data provided by a continuous statewide assessment essential to the success of current efforts to assess the impacts of contaminated groundwater on California communities including legislatively-mandated studies pursuant to Chapter 1, Statutes of the Second Extraordinary Session of 2008 for nitrate in the Tulare Basin and Salinas Valley and Chapter 670/2008 for a statewide assessment of all contaminants.
- Loss of ability to pursue studies initiated by industries that affect groundwater quality, by communities solving their water supply problems, schools, and regulatory case managers determining best technical approaches to prevent or cleanup pollution.

- Inability to identify areas where groundwater supply is most at risk from over-extraction. Comprehensive groundwater level data and age dating information provide an untapped resource of information for making better decisions about groundwater supply.
- Inability to provide groundwater assessments so that technical and policy decisions can be reliably made. The environment and state's economy rely on a stable and clean water supply. The GAMA Program provides a vital link for the public and decision makers to effectively monitor, assess, and communicate groundwater quality information.

### **Recommended Funding Options**

Five potential long-term funding options that could be pursued are:

- New bond funding. Bond funds would require legislation and approval by the voters.
- Additional funding from the Waste Discharge Permit Fund. Additional appropriation would require legislative approval as a part of the state budget process. Additional fee revenue could be generated in a number of ways, two of which are described below:
  - Increase the surcharge on the WDPF fee that currently funds a portion of the GAMA Program. The current surcharge on the annual fee from dischargers that have been issued waste discharge requirements would need to increase from 9.5 percent to 29.7 percent; or
  - Impose a fee on those dischargers that could affect groundwater and are not currently paying a fee.
- Funding from assessment of a new fee on groundwater use. Funds generated by assessing a new fee on groundwater use would require legislation that permits an assessment made on actual groundwater pumping or a tiered assessment on water purveyors that rely on groundwater. Developing a new fee that funds only the GAMA Program would result in substantial administrative costs. Such a fee may be more appropriate to fund a number of groundwater programs that have lost General Fund support or have never been sufficiently funded to protect groundwater quality.
- General Fund moneys. General Fund moneys would require an appropriation as part of the state budget process. The General Fund is limited at this time and therefore an unlikely alternative.
- Federal funds. Federal funds would rely on an appropriation by Congress. No federal funding has been identified to date that would be appropriate for GAMA Program funding.

Each of the potential funding options identified in this report would require action that is outside the State Water Board's authority.

## **Conclusion:**

The GAMA Program continues to be successful in providing the public a better understanding of groundwater quality. Californians now can access a Google map-based information system that readily provides a wealth of groundwater data including results of water quality testing, water level information, copies of environmental monitoring well logs as well as links to published reports for a specific area of interest.

This report recommends that the Legislature enhance public accessibility of information on groundwater conditions in California by continuing the GAMA Program at the level of effort necessary to implement Chapter 522/2001 at approximately \$7.5 million annually. Current funding comes from annual waste discharge fees (\$2.1 million) and from Proposition 50 bond funds which, when expended will need to be replaced by another fund source in the amount of \$5.4 million annually.

Bond funds will need to be replaced in FY 2012-13 in the amount of \$0.4 million for staff costs; in FY 2013-14 in the amount of \$3.3 million for contracts and staff costs; and in FY 2014-15 in the amount of \$5.4 million (\$5 million in contracts and \$0.4 million for staff costs).

If replacement funds are not appropriated to replace Proposition 50 bond funds according to the schedule described above, the GAMA Program will not be able to implement the critical aspects of the GAMA program implementing Chapter 522/2001, and will only be able to run a minimal program. A minimal GAMA Program will not provide a continuous statewide assessment of groundwater quality, which is needed to better inform decision makers on how to better plan, manage, and regulate waste discharges, and improve groundwater quality. The GAMA Program is needed in the future for the following reasons:

- Many portions of California's groundwater basins are contaminated by man-made and naturally occurring chemicals. California increasingly relies on groundwater for nearly half its water. Many disadvantaged communities rely on it entirely. The GAMA program was created to document and assess the result of man-made chemicals in groundwater. GAMA studies have also found that both man-made and naturally occurring chemicals have caused significant impacts on groundwater needed for drinking water.
- GAMA groundwater age-dating tests and water quality trend monitoring are critical to understanding the movement of shallow groundwater to deeper groundwater and to determine how to prevent further groundwater degradation.
- GAMA monitoring is essential to the success of current efforts to assess the impacts of contaminated groundwater on California communities including legislatively-mandated studies pursuant to Chapter 1, Statutes of the Second Extraordinary Session of 2008 for nitrate in the Tulare Basin and Salinas Valley and Chapter 670/2008 for a statewide assessment of all contaminants.
- GAMA results are used in studies initiated by industries that affect groundwater quality, by communities solving their water supply problems, and by regulatory case managers determining best technical approaches to prevent or cleanup pollution. In fact, schools are using GAMA data, information, and its geospatial display on the

internet-accessible GeoTracker GAMA system to learn about human impacts on the environment.

- GAMA is providing groundwater assessments so that technical and policy decisions can be reliably pursued. The environment and state's economy rely on a stable and clean water supply. The GAMA Program provides a vital link for the public and decision makers to effectively monitor, assess, and communicate groundwater quality information.

The report recommends that a source of funding be identified for continued funding of the GAMA Program. Several potential funding sources could be pursued, all requiring actions outside the State Water Board's authority, including:

- New bond funding;
- Additional funding from the Waste Discharge Permit Fund, either by increasing the fee or imposing the fee on those not currently paying a fee;
- Funding from the assessment of a new fee on groundwater use;
- General Fund moneys; and
- Federal funds.

Lastly, the State Water Board also recommends that the Legislature appropriate funding to the DWR to make electronic copies of the remaining hundreds of thousands of paper well logs. The well log information is to be included in the State Water Board's GeoTracker, the GAMA information management system accessible through the State Water Board website, in order to improve availability of information needed to interpret groundwater quality data, for confidential use as required by statute.

**Table 3 – GAMA Program Level-of-Effort Options for Contracts**

Option	Scope of Work	Pros	Cons	Contract Costs	Unmet Need
Minimal Program	<ul style="list-style-type: none"> <li>• No Priority Basin Project</li> <li>• GeoTracker GAMA will continue to be updated with groundwater quality and related data.</li> <li>• The Domestic Well Project will continue to collect domestic well data county by county.</li> <li>• The Special Studies Project will continue to conduct studies on emerging groundwater issues.</li> </ul>	<ul style="list-style-type: none"> <li>• GeoTracker GAMA will continue to receive and provide groundwater quality information to the public.</li> <li>• The GAMA Domestic Well and Special Studies Projects will continue to collect and report groundwater quality data.</li> </ul>	<ul style="list-style-type: none"> <li>• Very little of GAMA Program will be implemented.</li> <li>• All work on the Priority Basin Project will be stopped</li> <li>• No statewide systematic groundwater quality monitoring and assessment:</li> <li>• No trend monitoring every 3 years to identify changes in groundwater quality through time.</li> <li>• No re-assessment during next 10-year-cycle of groundwater conditions of previously assessed groundwater basins.</li> <li>• No assessment of lower-priority groundwater basins that had not yet been assessed for baseline groundwater quality conditions.</li> </ul>	Estimated \$1.3 million/year	None

**Table 3 – GAMA Program Level-of-Effort Options for Contracts (cont.)**

Option	Scope of Work	Pros	Cons	Contract Costs	Unmet Need
Medium Program	<p>The Minimal Program option <b>plus:</b></p> <ul style="list-style-type: none"> <li>• Trend-monitoring part of the Priority Basin Project which tests about 250 wells statewide to identify trends in water quality in the major groundwater aquifers being used in the high-priority groundwater basins.</li> </ul>	<ul style="list-style-type: none"> <li>• Trend monitoring information will be collected as part of the Priority Basin Project every 3 years to identify changes in groundwater quality through time.</li> <li>• Same as Minimal Program</li> </ul>	<ul style="list-style-type: none"> <li>• Only a small part of the GAMA Program and the Priority Basin Project will be implemented.</li> <li>• Minimal statewide systematic groundwater quality monitoring and assessment.</li> <li>• No re-assessment during next 10-year-cycle of groundwater conditions of previously assessed groundwater basins.</li> <li>• No assessment of lower-priority groundwater basins that had not yet been assessed for baseline groundwater quality conditions.</li> </ul>	Estimated \$3.8 million/year	Estimated \$2.5 million/year

**Table 3 – GAMA Program Level-of-Effort Options for Contracts (cont.)**

Option	Scope of Work	Pros	Cons	Contract Costs	Unmet Need
Full Program	<ul style="list-style-type: none"> <li>Existing GAMA Program and its current level of effort in implementing the plan outlined in the Report to the Governor and Legislature, including:                             <ul style="list-style-type: none"> <li>Minimal program <b>plus</b>:</li> <li>The next 10-year cycle implementing Priority Basin Project which includes:                                     <ul style="list-style-type: none"> <li>Re-assessment of groundwater conditions of previously assessed groundwater basins (over 2500 wells over 10 years).</li> </ul> </li> <li>Trend sampling analyses at 10% of each priority basin's wells will continue to be conducted every three years (over 250 wells over 10 years).</li> <li>Updated Data Summary Reports, Data Assessment Reports and Fact Sheets for each priority basin.</li> <li>Submittal to GeoTracker GAMA of all new groundwater quality data collected.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>A systematic statewide assessment of groundwater quality will continue to document changes to groundwater quality in California as originally outlined in the Report to the Legislature including all the GAMA Programs: Priority Basin Project, Domestic Well Project, Special Studies Project, and GeoTracker GAMA.</li> <li>Data will be collected regarding trends in selected groundwater basins and Fact Sheets will be made available to the public summarizing results of the groundwater basin sampling for all previously sampled basins.</li> <li>All collected groundwater quality data will be made available to GeoTracker GAMA and shared with interested public, federal, state and local agencies.</li> </ul>	<ul style="list-style-type: none"> <li>Higher cost option.</li> <li>No assessment of lower-priority groundwater basins that had not yet been assessed for baseline groundwater quality conditions.</li> </ul>	Estimated \$6.7million/year	Estimated \$5.4million/year

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## APPENDIX A – ASSEMBLY BILL 2222

### CHAPTER 670

An act to add Section 10782 to the Water Code, relating to groundwater.

[Approved by Governor September 30, 2008. Filed with  
Secretary of State September 30, 2008.]

Legislative Counsel's digest: AB 2222, Caballero. Groundwater quality: monitoring. The Groundwater Quality Monitoring Act of 2001 requires the State Water Resources Control Board to integrate existing monitoring programs and design new program elements, as necessary, to establish a comprehensive monitoring program capable of assessing each groundwater basin in the state through direct and other statistically reliable sampling approaches.

This bill would require the state board, on or before June 1, 2009, to identify and recommend to the Legislature funding options to extend the comprehensive monitoring program until January 1, 2024, and make recommendations to enhance public accessibility of information on groundwater conditions. The bill would require the state board, on or before January 1, 2012, in consultation with specified agencies, to submit to the Legislature a prescribed report. The bill would require the state board to provide an opportunity for public comment prior to finalizing the report and submitting it to the Legislature.

*The people of the State of California do enact as follows:*

SECTION 1. Section 10782 is added to the Water Code, to read:

10782. (a) On or before June 1, 2009, the state board shall do both of the following:

(1) Identify and recommend to the Legislature funding options to extend, until January 1, 2024, the comprehensive monitoring program established in accordance with Section 10781.

(2) Make recommendations to enhance the public accessibility of information on groundwater conditions.

(b) On or before January 1, 2012, the state board, in consultation with the State Department of Public Health, the Department of Water Resources, the Department of Pesticide Regulation, the Office of Environmental Health Hazard Assessment, and any other agencies as appropriate, shall submit to the Legislature a report that does all of the following:

(1) Identifies communities that rely on contaminated groundwater as a primary source of drinking water.

(2) Identifies in the groundwater sources for the communities described in paragraph (1) the principal contaminants and other constituents of concern, as identified by the state board, affecting that groundwater and contamination levels.

(3) Identifies potential solutions and funding sources to clean up or treat groundwater or to provide alternative water supplies to ensure the provision of safe drinking water to communities identified in paragraph (1).

(c) The state board shall provide an opportunity for public comment on the report required pursuant to subdivision (b), prior to finalizing the report and submitting it to the Legislature.

## APPENDIX B – ASSEMBLY BILL 599

### CHAPTER 522

An act to add Part 2.76 (commencing with Section 10780) to Division 6 of the Water Code, relating to water.

[Approved by Governor October 4, 2001. Filed with Secretary of State October 5, 2001.]

#### LEGISLATIVE COUNSEL'S DIGEST

AB 599, Liu. Groundwater contamination: quality monitoring program.

Existing law declares that groundwater is a valuable natural resource in the state and should be managed to ensure its safe production and its quality. Existing law authorizes specified local agencies to adopt and implement groundwater management plans.

This bill would require the State Water Resources Control Board to integrate existing monitoring programs and design new program elements, as necessary, for the purpose of establishing a comprehensive monitoring program capable of assessing each groundwater basin in the state through direct and other statistically reliable sampling approaches, and to create an interagency task force to identify actions necessary to establish the monitoring program and to identify measures that would increase coordination among state and federal agencies that collect groundwater contamination information. The bill would require the state board to convene a described advisory committee to the task force. The bill would require the state board, in consultation with other specified agencies, to submit to the Governor and the Legislature, on or before March 1, 2003, a report that includes a description of a comprehensive groundwater quality monitoring program for the state.

*The people of the State of California do enact as follows:*

SECTION 1. The Legislature finds and declares the following:

- (a) The importance of maintaining and monitoring a safe groundwater supply in this state for purposes of maintaining a healthy environment and a safe supply of drinking water cannot be minimized.
- (b) The lack of information about groundwater contamination greatly impairs the ability of regulators and the public to protect and restore the state's groundwater basins.
- (c) The Groundwater Quality Monitoring Act of 2001 enacted by this act is necessary to protect and restore groundwater as a valuable natural resource in California.

SEC. 2. Part 2.76 (commencing with Section 10780) is added to Division 6 of the Water Code, to read:

#### PART 2.76. GROUNDWATER QUALITY MONITORING

10780. This part shall be known and may be cited as the Groundwater Quality Monitoring Act of 2001.

10781. In order to improve comprehensive groundwater monitoring and increase the availability to the public of information about groundwater contamination, the state board, in consultation with other responsible agencies, as specified in this section, shall do all of the following:

(a) Integrate existing monitoring programs and design new program elements as necessary to establish a comprehensive monitoring program capable of assessing each groundwater basin in the state through direct and other statistically reliable sampling approaches. The interagency task force established pursuant to subdivision (b) shall determine the constituents to be included in the monitoring program. In designing the comprehensive monitoring program, the state board, among other things, shall integrate projects established in response to the Supplemental Report of the 1999 Budget Act, strive to take advantage of and incorporate existing data whenever possible, and prioritize groundwater basins that supply drinking water.

(b) (1) Create an interagency task force for all of the following purposes:

(A) Identifying actions necessary to establish the monitoring program.

(B) Identifying measures to increase coordination among state and federal agencies that collect information regarding groundwater contamination in the state.

(C) Designing a database capable of supporting the monitoring program that is compatible with the state board's geotracker database.

(D) Assessing the scope and nature of necessary monitoring enhancements.

(E) Identifying the cost of any recommended measures.

(F) Identifying the means by which to make monitoring information available to the public.

(2) The interagency task force shall consist of a representative of each of the following entities:

(A) The state board.

(B) The department.

(C) The State Department of Health Services.

(D) The Department of Pesticide Regulation.

(E) The Department of Toxic Substances Control.

(F) The Department of Food and Agriculture.

(c) Convene an advisory committee to the interagency task force, with a membership that includes all of the following:

(1) Two representatives of appropriate federal agencies, if those agencies wish to participate.

(2) Two representatives of public water systems, one of which shall be a representative of a retail water supplier.

(3) Two representatives of environmental organizations.

(4) Two representatives of the business community.

(5) One representative of a local agency that is currently implementing a plan pursuant to Part 2.75 (commencing with Section 10750).

(6) Two representatives of agriculture.

(7) Two representatives from groundwater management entities.

(d) (1) The members of the advisory committee may receive a per diem allowance for each day's attendance at a meeting of the advisory committee.

(2) The members of the advisory committee may be reimbursed for actual and necessary travel expenses incurred in connection with their official duties.

10782. On or before March 1, 2003, the state board, in consultation with the other task force agencies specified in Section 10781, shall report to the Governor and the Legislature. The multiagency report shall include all of the following:

- (a) A detailed description of a comprehensive groundwater quality monitoring program for California that accomplishes the goals and objectives of the act adding this part.
- (b) A description of how the program takes maximum advantage of existing information and an assessment of additional monitoring necessary to support the program.
- (c) A specific set of recommendations for coordinating and, as necessary, restructuring existing monitoring programs to efficiently achieve the goals of this part.
- (d) An estimate of funding necessary to implement the comprehensive program and the factual basis for the estimate.
- (e) Recommendations with regard to an ongoing source of funds to pay for the program.
- (f) A ranked list of actions that, if implemented independently, would increase the effectiveness of monitoring efforts.

10782.3. The state board shall use existing resources to carry out this part, and the operation of the program set forth in this part shall not supplant the operation of any other program required to be undertaken by the state board.

## **APPENDIX C – DOMESTIC WELL PROJECT DESCRIPTION**

Since 2002, the Domestic Well Project has provided domestic well owners with information on their well water quality. The State Water Board is the project lead. Domestic wells are for private use and consumption – typically for single family homeowners. Although domestic well water is not regulated by the State of California, the quality of that water is still a concern to local health and planning agencies, and to State agencies charged with maintaining water quality.

The GAMA Domestic Well Project samples domestic wells in County “Focus” Areas. The County Focus Area is selected in cooperation with the local environmental health agency, using available knowledge of water quality and land use. Factors in the selection of a County Focus Area include:

- Relative reliance on water wells for domestic consumption
- Interest from local focus area participants
- Susceptibility of wells to contamination
- Availability of well records

Once a County Focus Area is selected, a pamphlet is mailed to domestic well owners requesting their participation. After written permission is received from the well owners, groundwater samples are collected and are tested by a certified laboratory at no expense to the well owners. The GAMA Domestic Well Project tests for chemicals that can be found in well water and can be of concern such as:

- Bacteria (Total and Fecal Coliform)
- General minerals (e.g., sodium, bicarbonate, calcium)
- General chemistry parameters (e.g., pH, TDS)
- Inorganics, including metals (such as lead, arsenic) and nutrients (nitrate)
- Organics (e.g., MTBE, PCE, toluene, benzene, and others)

Additional chemicals of concern can occur in groundwater in some areas of California, including alpha and beta radioactivity, perchlorate and pesticides amongst others.

Laboratory results are shared with each individual well owner and are used by GAMA to evaluate the quality of shallow groundwater used by private well owners. Participation is voluntary and the names and addresses of well owners are kept confidential.

## **Domestic Well Project - Work Completed and Current Status**

Work is currently on-going as part of the Domestic Well Project. Since 2002, 1,067 domestic wells have been sampled in five County Focus Areas. Table C-1 summarizes the work that has been completed to date on the Domestic Well Project.

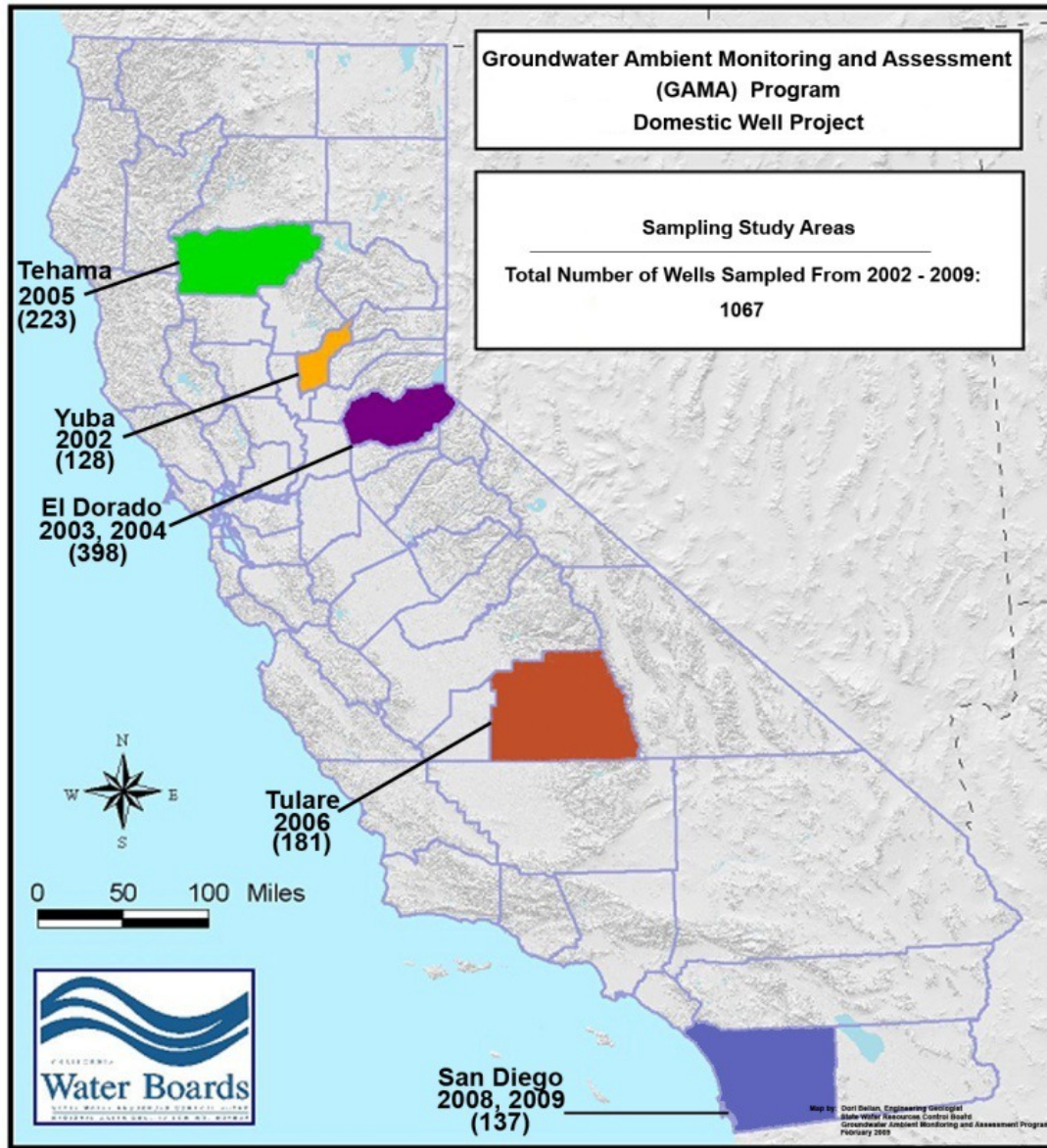
**Table C-1 Domestic Well Project 2002-2009**

<b>County Focus Area</b>	<b>Field Study Conducted</b>	<b>Sampling Status</b>	<b>Number of Wells Sampled</b>	<b>Data Verified and Uploaded to GeoTracker GAMA</b>	<b>Laboratory Analytical Reports Submitted to Well Owners</b>	<b>Data Summary Report Posted on GAMA Web Page</b>
Yuba	2002	Completed	128	Completed	Completed	In Progress
El Dorado	2003 - 2004	Completed	398	Completed	Completed	Completed
Tehama	2005	Completed	223	Completed	Completed	Completed
Tulare	2006	Completed	181	Completed	Completed	In Progress
San Diego	2008 - 2009	Completed	137	Completed	Completed	In Progress
<b>Summary</b>						
<b>5 County Focus Areas Sampled</b>	<b>2002 to 2009</b>	<b>In the Process of Selecting Next Focus Area</b>	<b>1067 Domestic Wells Sampled to Date</b>	<b>Completed</b>	<b>Completed</b>	<b>In Progress</b>

Figure C-1 shows the locations of the County Focus Areas sampled from 2002-2009. Sampling results were verified and entered into the GeoTracker GAMA database. All well owners received test results and documents explaining the results. Where sampling results showed concentrations above a drinking water standard, the State Water Board recommended that the owner re-test the well water and to test annually thereafter.

A summary of results for each focus area is included in Table C-2. The quality of sampled domestic well water is evaluated by comparing test results to drinking water standards established by CDPH for public water supplies. Because CDPH does not regulate private domestic well water quality, drinking water standards are used for comparison purposes only.

Figure C-1 - GAMA Domestic Well Project County Focus Areas Sampled





## **Significant findings for each County Focus Area:**

### Yuba County

The Domestic Well Project sampled 128 domestic wells in Yuba County in 2002. The most common chemicals detected above drinking water standards in those wells were total coliform bacteria (31 of 128 wells), manganese (above the secondary contaminant level (SMCL) in 39 of 128 wells), aluminum (above the maximum contaminant level (MCL) in 25 of 128 wells), and iron (above the SMCL in 21 of 128 wells).

### El Dorado County

The Domestic Well Project sampled 398 domestic wells in El Dorado County in 2003-04. The most common chemicals detected above drinking water standards those wells were total coliform bacteria (111 of 398 wells), iron (above the SMCL in 79 of 398 wells), and manganese (above the SMCL in 95 of 398 wells).

### Tehama County

The Domestic Well Project sampled 223 domestic wells in Tehama County in 2005. The most common chemicals detected above drinking water standards in those wells were total coliform bacteria (56 of 223 wells), arsenic (above the MCL in 30 of 223 wells), and iron (above the SMCL in 31 of 223 wells).

### Tulare County Focus

The Domestic Well Project sampled 181 domestic wells in Tulare County in 2006. The most common chemicals detected above drinking water standards those wells were nitrate (75 of 181 wells), total coliform bacteria (60 of 181 wells), fecal coliform bacteria (15 of 181 wells), vanadium (14 of 181 wells), and volatile organic compounds (10 of 181 wells). Tulare County had the highest percentage of any study area sampled to date, with concentrations of nitrate, total coliform bacteria, fecal coliform bacteria, and volatile organic compounds that exceeded CDPH health standards. Concentrations of nitrate exceeded the California MCL of 45 mg/L (as NO<sub>3</sub><sup>-</sup>) in over 40percent of the sampled wells. Dibromochloropropane (DBCP), a man-made pesticide, was detected in 22 of 181 samples (eight samples were above the MCL).

### San Diego County

The Domestic Well Project sampled 137 domestic wells in San Diego County in 2008 and 2009. The most common chemicals of concern detected above drinking water standards in those wells were total coliform (34 of 137 wells), nitrate (above the MCL in 25 of 137 wells), gross alpha activity (above the MCL in 19 of 54 wells), and uranium (above the MCL in 16 of 54 wells).

**Table C-2 GAMA Domestic Well Project Testing Results – Number of Samples Above CDPH Drinking Water Standards <sup>1</sup>**

<i>Compound</i>	<i>Drinking Water Standard</i>	Yuba (2002) 128 Wells	EI Dorado (2003-04) 398 Wells	Tehama (2005) 223 Wells	Tulare (2006) 181 Wells	San Diego (2008-09) 137 Wells	Cumulative Domestic Well Project Totals 1067 Wells
<b>BACTERIA INDICATORS</b>							
Total Coliform	Present <sup>3</sup>	31 (24%)	111 (28%)	56 (25%)	60 (33%)	34 (25%)	282 (26%)
Fecal Coliform	Present <sup>3</sup>	4 (3%)	14 (4%)	3 (1%)	15 (8%)	NAS <sup>2</sup>	35 (3%)
<b>GENERAL MINERALS &amp; IONS</b>							
Nitrate	45 mg/L <sup>3</sup>	2 (2%)	7 (2%)	2 (1%)	75 (41%)	25 (18%)	111 (10%)
Perchlorate	6 µg/L <sup>3</sup>	Not Sampled	Not Sampled	Not Sampled	2 of 30 (7%)	5 (4%)	7 of 167 (4%)
Chloride	500 mg/L <sup>4</sup>	NAS <sup>2</sup>	NAS <sup>2</sup>	NAS <sup>2</sup>	NAS <sup>2</sup>	2 (1%)	2 (<1%)
Sulfate	500 mg/L <sup>4</sup>	NAS <sup>2</sup>	NAS <sup>2</sup>	NAS <sup>2</sup>	NAS <sup>2</sup>	3 (2%)	3 (<1%)
Total Dissolved Solids	1,000 mg/L <sup>3</sup>	2 (2%)	5 (1%)	5 (2%)	4 (2%)	22 (16%)	41 (4%)
<b>METALS</b>							
Aluminum	1,000 µg/L <sup>3</sup>	25 (20%)	12 (3%)	6 (3%)	2 (1%)	NAS <sup>2</sup>	38 (4%)
Arsenic	10 µg/L <sup>4</sup>	7 (5%)	14 (4%)	30 (14%)	3 (2%)	3 (2%)	55 (5%)
Chromium	50 µg/L <sup>3</sup>	1 (<1%)	NAS <sup>2</sup>	1 (<1%)	2 (1%)	NAS <sup>2</sup>	4 (<1%)
Iron	300 µg/L <sup>4</sup>	21 (17%)	79 (20%)	31 (14%)	2 (1%)	NAS <sup>2</sup>	123 (12%)
Lead	15 µg/L <sup>5,6</sup>	2 (2%)	3 (<1%)	2 (1%)	NAS <sup>2</sup>	NAS <sup>2</sup>	6 (<1%)
Manganese	50 µg/L <sup>4</sup>	39 (30%)	95 (24%)	19 (9%)	2 (1%)	45 (33%)	178 (17%)
Vanadium	50 µg/L <sup>5</sup>	NAS <sup>2</sup>	NAS <sup>2</sup>	NAS <sup>2</sup>	14 (8%)	2 (1%)	16 (1%)
Zinc	5,000 µg/L <sup>4</sup>	NAS <sup>2</sup>	1 (<1%)	NAS <sup>2</sup>	1 (<1%)	2 (1%)	4 (<1%)
<b>ORGANICS</b>							
Volatile Organic Compounds	Varies by compound	NAS <sup>2</sup>	1 (<1%)	NAS <sup>2</sup>	10 (6%)	NAS <sup>2</sup>	11 (1%)
<i>Compound</i>	<i>Threshold Level</i>	Yuba (2002) 128 Wells	EI Dorado (2003-04) 398 Wells	Tehama (2005) 223 Wells	Tulare (2006) 181 Wells	San Diego (2008-09) 137 Wells	Cumulative Domestic Well Project Totals 1067 Wells
<b>RADIONUCLIDES</b>							
Gross Alpha	15 pCi/L <sup>3</sup>	Radionuclides not routinely sampled in these Focus Areas			3 of 13 wells	19 of 54 wells	22 of 67 (33%)
Radium 226+228	5 pCi/L <sup>3</sup>				1 of 13 wells	2 of 54 wells	3 of 67 (4%)
Uranium	20 pCi/L <sup>3</sup>				1 of 13 wells	16 of 54 wells	17 of 67 (25%)
Notes:							
1. Drinking water standards established by the California Department of Public Health (CDPH) are used for comparison purposes only, since domestic well water quality is not regulated. The MCL is the highest concentration of a contaminant allowed in public drinking water. "Primary" MCLs address health concerns. "Secondary" MCLs (SMCLs) address esthetics, such as taste and odor. Notification Levels (NLs) are health-based advisory levels for chemicals in public drinking water that have no regulatory standards.							
2. None Above Standard: Domestic wells were analyzed for this chemical – however, the chemical was not observed at a concentration greater than a CDPH Drinking Water Standard.							
3. MCL							
4. SMCL							
5. NL							
6. NL cannot be exceeded in more than 10% of samples at the tap.							

## **APPENDIX D – PRIORITY BASIN PROJECT DESCRIPTION**

The GAMA Priority Basin Project was initiated in 2002 and provides an assessment of groundwater quality in key groundwater basins throughout the state. The project prioritizes groundwater basins based on groundwater use. The United States Geological Survey (USGS) is the project technical lead.

GAMA Priority Basins are made up of 116 of the 472 Department of Water Resources (DWR) defined groundwater basins in the state. GAMA Priority Basins are defined as groundwater basins that account for:

- 95percent of all public supply wells
- 99percent of all municipal groundwater pumping
- 90percent of agricultural groundwater withdrawals
- 90percent of all leaking underground storage tank sites
- 90percent of all pesticide application in the state
- 60percent of the land area in California

Many groundwater sources are located outside the boundaries of a DWR-defined groundwater basin. To address these drinking water sources, the GAMA Priority Basin Project has included areas outside basins, such as the Sierra Nevada region.

The Priority Basin Project divided the state into 35 high-use groundwater basin groups called “study units” (Figure D-1). Groundwater collected in each study unit was tested for hundreds of analytes, including those that are regulated by the CDPH (Title 22) as well as unregulated chemicals. The analytes are tested at detection levels well below those achieved by most laboratories. Table D-1 shows the comparison of typical Title 22 analyte laboratory method detection limits and the lower detection limits used in the Priority Basin Project. The advanced monitoring techniques used in the GAMA Project help to reveal emerging contaminants, and in turn, assist groundwater users and well owners in managing their groundwater resources.

Chemical constituents sampled by the GAMA Priority Basin Project include:

- Low-level Volatile Organic Compounds (VOCs)
- Low-level pesticides
- Stable Isotopes of oxygen and hydrogen
- Emerging Contaminants (pharmaceuticals, perchlorate, chromium VI)
- Carbon isotopes
- Radon, radium, and gross alpha/beta radioactivity
- Major ions and elements (calcium, magnesium, bicarbonate, etc.)
- Nutrients – including nitrate, nitrite, and phosphates.
- Total and fecal coliform bacteria

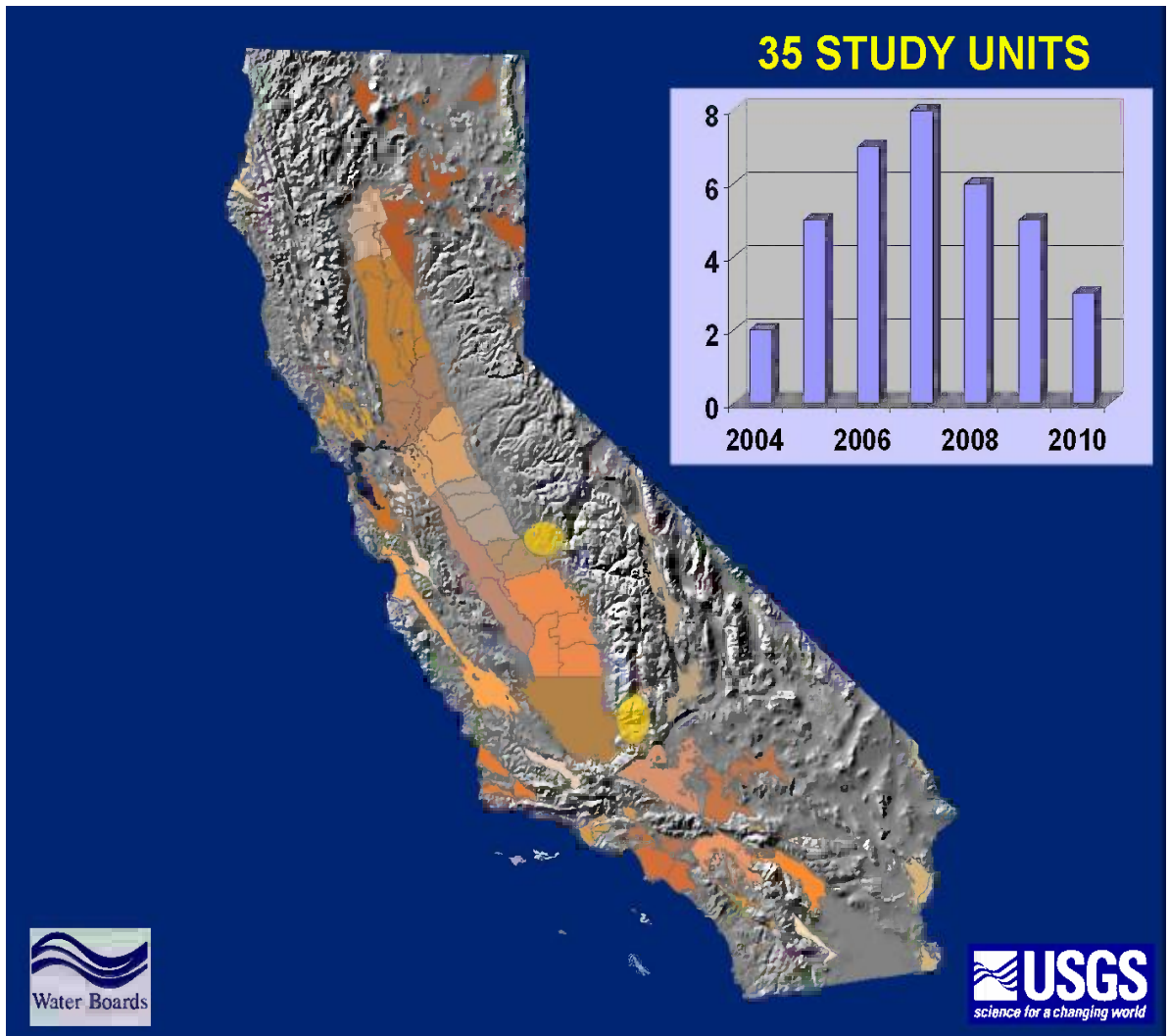


Figure D-1 GAMA Priority Basin Project Study Units

**Table D-1 Comparison of Title 22 and  
GAMA**

Constituent Class	DHS – Title 22		GAMA	
	Number of Compounds	Median DLR, µg/L	Number of Compounds	Median LRL, µg/L
<b>Volatile organic compounds</b>	<b>32</b>	<b>0.5</b>	<b>88</b>	<b>0.06</b>
<b>Pesticides plus NDMA, 1,2,3-TCP</b>	<b>34</b>	<b>1</b>	<b>142</b>	<b>0.012</b>
<b>Inorganic (no major ions)</b>	<b>28</b>	<b>5</b>	<b>28</b>	<b>0.02</b>
<b>Radionuclide</b>	<b>7</b>	<b>2*</b>	<b>7</b>	<b>1*</b>
<b>Pharmaceutical Constituents</b>	<b>–</b>	<b>–</b>	<b>10-20</b>	<b>0.021**</b>

\* Picocuries per liter

\*\* Method detection limit

**Priority Basin Project – Work Completed and Current Status**

Work was significantly delayed on the GAMA Priority Basin Project from December 2008 to Sept 2009, as a result of the stop-work order for bond funded projects.

As of mid-December, 2008 the Priority Basin Project completed the following:

- 50 public meetings held
- 1,703 well owner reports mailed
- 13 Data Reports Published (5 pending)
- 2 Scientific Investigation Reports in review (additional 4 are 80 percent complete)
- 1,986 wells sampled
- >1,200 participants including:
  - 208 districts
  - 159 cities
  - 80 schools

Table D-2 provides a summary of the work that has been completed, including sampling 27 study units located in 52 different counties and 83 different groundwater basins have been sampled. As of May 2009, two study units (Central Desert and Borrego) have been partially sampled due to the stop-work order. Sampling has not been conducted in 6 remaining study units. Figures D-2 and D-3 show the locations of the study units that were sampled to date (2002-2008). Figure D-4 shows the locations of the study units that have yet to be sampled.

**Table D-2 Summary of Sampling Conducted from 2004 to 2008, Priority Basin Project**

	Study Unit	Kickoff Meeting	Last Sample Collected	# Wells sampled	Well Owner Report	Wrap Up Meeting	Data Report Published	SIR Status	Trends (3 year resample)	# Wells sampled
1	San Diego	6/14/04	7/29/04	58	5/1/05	5/20/05	11/1/05		9/27/07	22
2	North San Francisco Bay	9/21/04	11/18/04	97	9/1/05	9/29/05	6/12/06	80%	11/16/07	28
3	Northern San Joaquin Basins	11/1/04	2/18/05	67	9/27/06	1/18/06	11/3/06	in review	4/3/08	5
4	Southern Sacramento Valley	3/3/05	6/15/05	96	4/1/06	4/19/06	1/30/08		4/10/08	7
5	Upper Los Angeles Basin	6/29/05	7/20/05	52	3/8/07	3/28/07	10/17/08		6/17/08	6
6	Salinas/Monterey	6/1/05	9/23/05	97	12/1/06	12/13/06	7/2/07		11/14/08	13
7	Southeast San Joaquin Valley	9/22/05	12/15/05	126	4/25/07	4/25/07	9/25/08	70%	11/4/08	13
8	Kern Basin	12/13/05	3/2/06	64	4/27/07	4/27/07	7/15/08			
9	Central Eastside San Joaquin Valley	2/1/06	6/11/06	79	5/9/07	5/23/07	4/16/08	in review		
10	Central Sierras	4/11/06	5/31/06	30	2/1/08	6/6/07	5/22/08			
11	Southern Sierras	5/31/06	6/30/06	50	5/22/07	6/12/07	10/24/07	80%		
12	Central Sacramento Valley	6/21/06	8/25/06	108	1/14/08	3/9/07	12/31/08			
13	Southern Cal Coastal Plain	7/10/06	11/16/06	69	7/13/07	7/25/07	12/5/08			
14	Owens	8/22/06	12/14/06	108	9/26/07	11/16/07	99%	80%		
15	Santa Ana	10/26/06	3/28/07	99	9/21/07	10/4/07	99%			
16	Coachella	2/13/07	3/29/07	35	11/29/07	11/29/07	99%			
17	Santa Clara River (Ventura)	3/1/07	6/7/07	54	12/4/07	1/31/08	99%	90%		
18	SF Bay	4/6/07	6/21/07	79	1/30/08	2/22/08	99%			
19	Tahoe	6/20/07	9/20/07	52	5/8/08	5/27/08				
20	Northern Sacramento Valley	9/26/07	1/17/08	66	7/14/08	9/16/08				
21	Colorado River	9/26/07	12/20/07	28	5/1/08	5/15/08				
22	Antelope Valley	1/9/08	4/10/08	57						
23	Mojave	1/10/08	4/2/08	59	8/22/08	12/10/08				
24	Madera-Chowchilla	3/25/08	5/22/08	35						
25	South Coast Ranges Coastal	4/30/08	11/19/08	70						
26	Sierra Regional	5/27/08	10/22/08	84						
27	South Coast Ranges Interior	8/6/08	11/17/08	54						
28	Central Desert, Borrego, Low-Use	12/3/08	SWO	19						
29	Western San Joaquin							13 Data Reports Published		
30	North Coast Ranges Coastal							2 SIR in review		
31	North Coast Ranges Interior									
32	Klamaths									
33	Cascades/Modoc									
34	Big Bear									
				<b>Wells Sampled:</b>	<b>1,892</b>					<b>Wells Sampled: 94</b>
						<b>Total Wells Sampled:</b>	<b>1,986</b>			

Figure D-2 GAMA Priority Basin Study Units Sampled from 2004-2006

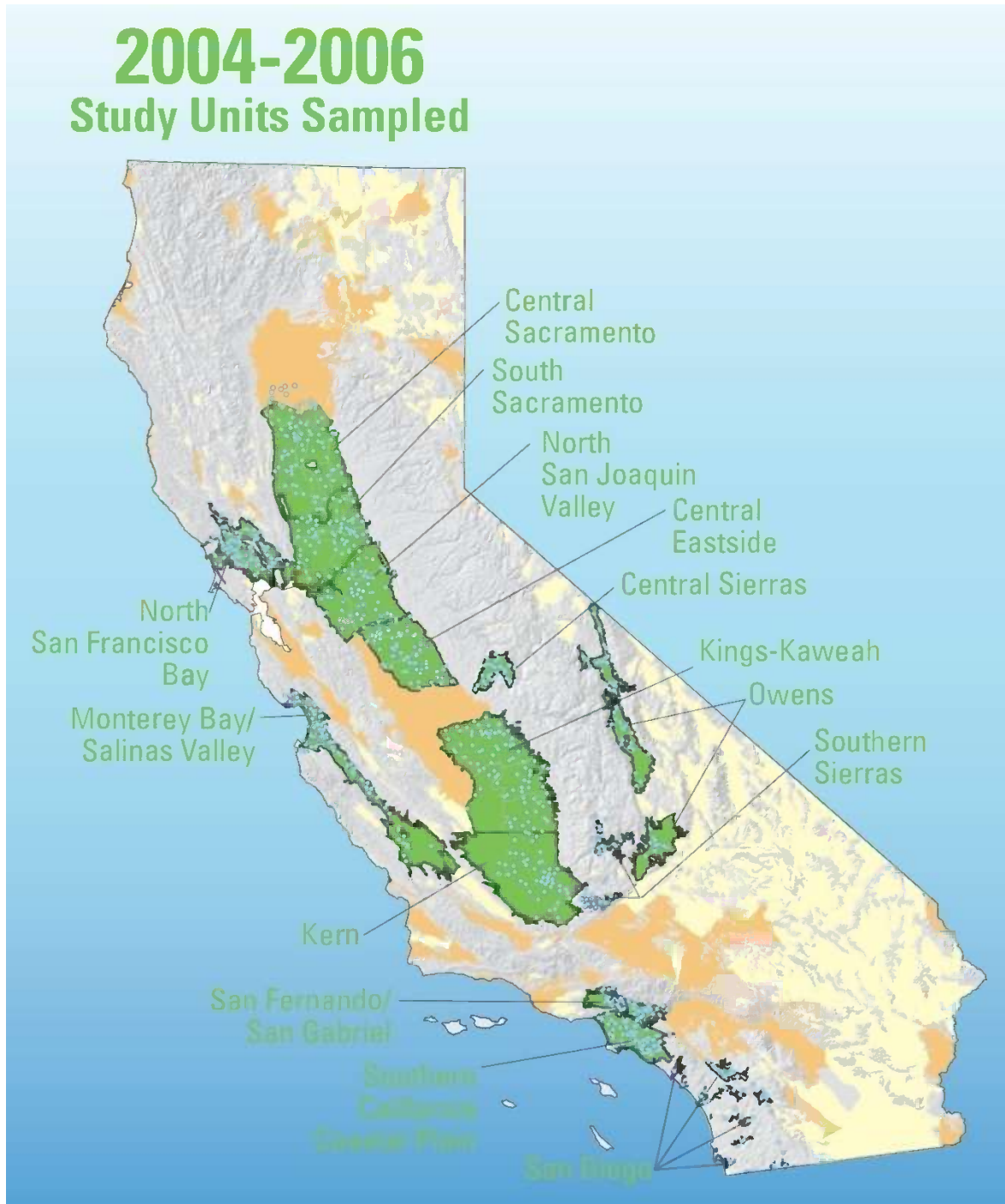


Figure D-3 GAMA Priority Basin Study Units Sampled from 2007-2008

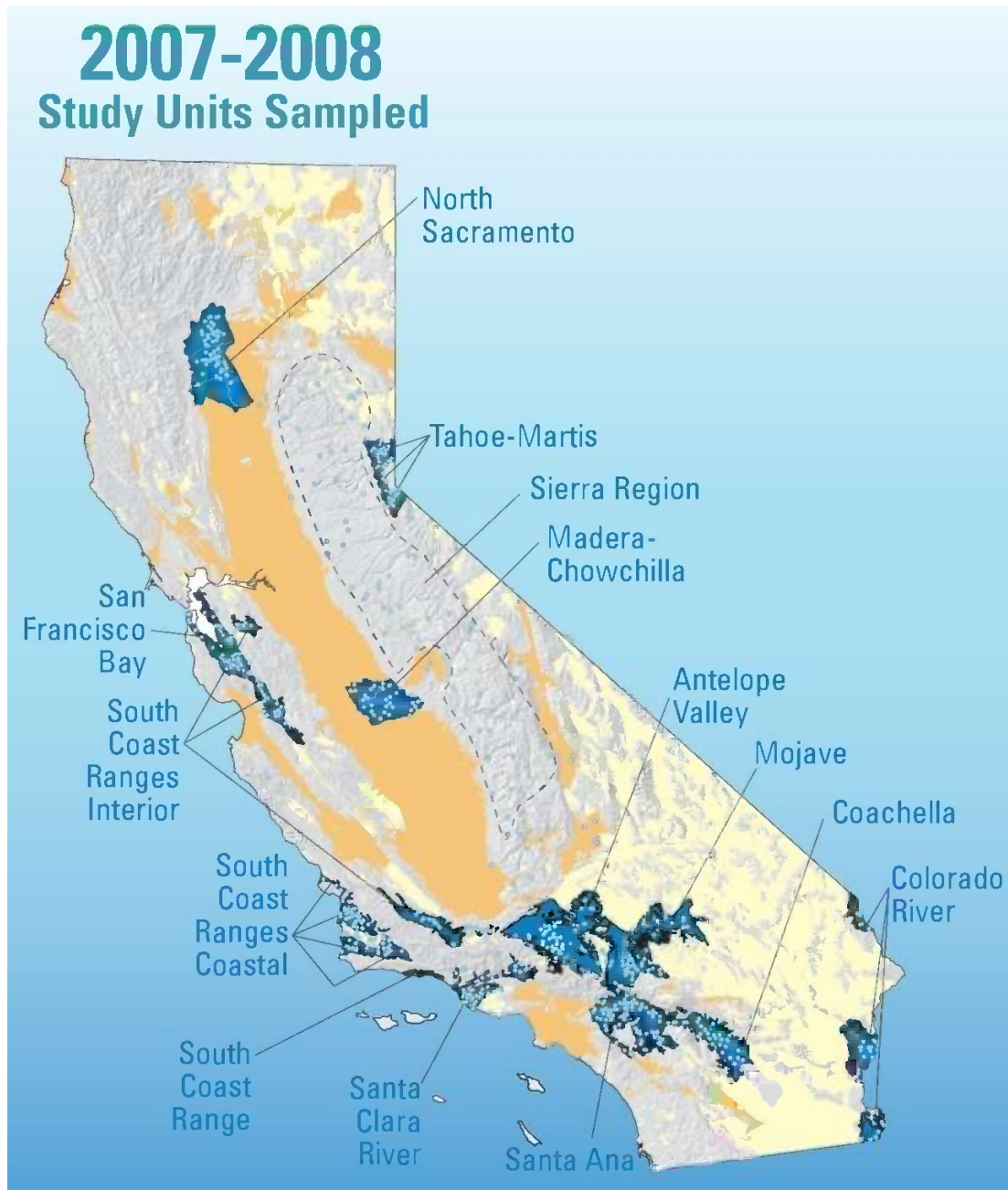
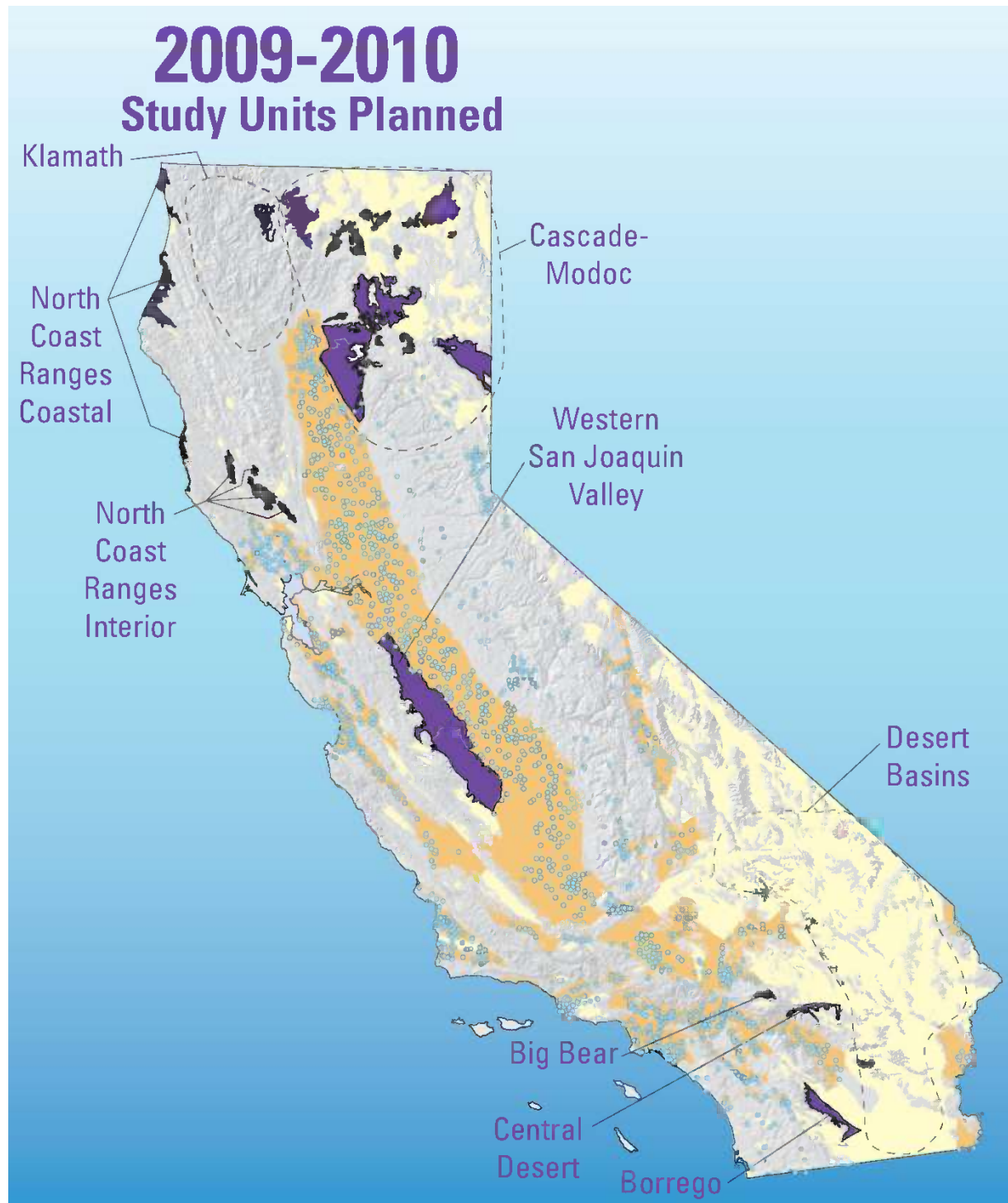




Figure D- 4 GAMA Priority Basin Study Units Planned to be sampled in 2009-2010



## **APPENDIX E – SPECIAL STUDIES PROJECT DESCRIPTION**

The GAMA Special Studies Project looks at several aspects of groundwater quality, and address the need for better groundwater characterization tools and the impacts of basin management decisions on groundwater quality. The State Water Board partners with Lawrence Livermore National Laboratory (LLNL) to conduct research on nitrate sources to groundwater, wastewater indicators in recycled irrigation water, groundwater age, groundwater recharge, and other areas of interest. As the project technical lead, LLNL conducted special studies that:

- Help our understanding in the source, fate and transport and occurrence of chemicals that can affect groundwater quality.
- Address important and emerging statewide groundwater quality issues using innovative, cutting-edge technology.
- Assess nitrate in groundwater, and include efforts to distinguish between natural, septic, fertilizer and dairy sources.
- Study wastewater indicators in recycled irrigation water and in domestic wells.

### **Special Studies Project - Work Completed and Current Status**

Work is currently on-going as part of the Special Studies Project. The stop-work order issued in mid December 2008 did not affect the scope of work or schedule.

Some of the Special Studies Projects that have been completed are highlighted below.

#### **Nitrate and Nitrogen**

LLNL has managed several studies on the behavior and effects of nitrate in groundwater. These studies have used advanced isotopic techniques to determine sources of nitrate in groundwater, and to evaluate how nitrate in groundwater can transform (denitrify) through time. Study subjects have included:

- Dairies and Nitrate
- Nitrate sources, fate, and transport
- Effects of nitrate management plans on groundwater quality; Llagas and Chico Basins
- Fate, transport, and relation to land use; Orange County and Livermore, CA
- Septic Systems and recycled water, Gilroy and Livermore, CA

### Groundwater Age Dating

Groundwater age dating helps evaluate whether drinking water supplies are susceptible to contamination. Younger groundwater is typically more susceptible to contamination than older groundwater. LLNL scientists use naturally occurring forms of helium and hydrogen in groundwater to measure the age of that groundwater.

### Groundwater Recharge

LLNL is currently investigating characteristics of groundwater recharge. These studies will help determine the origin of groundwater, when that groundwater first entered the ground and potential contributors to existing groundwater contamination.

### Endocrine Disruptor Analysis Development

Endocrine disruptors are chemicals that can mimic and interfere with hormones in animals. Endocrine disruptors have been detected at very low concentrations in some surface and groundwater in California. A team of UC Davis scientists are developing a method employing species of fish (*Medaka*) as a biologically-based screening tool that could be used to detect the presence of endocrine disruptors in water.

### **Future Special Studies Projects**

Currently proposed Special Studies projects include:

- Nitrate in California groundwater
- Surface water-groundwater interaction and nitrate in Central Coast streams
- Wastewater Indicators in Groundwater
- Development of new wastewater indicator methods
- Expanded support for Domestic Wells Project
- Groundwater Recharge and Transport (development of a new short-term tracer for managed aquifer recharge)
- Preparation of GAMA Special Studies Fact Sheets

## **APPENDIX F – GAMA PROGRAM SIGNIFICANT FINDINGS AND ACCOMPLISHMENTS**

### **Domestic Well Project**

- Nitrate detections in domestic wells illustrate the high susceptibility of shallow groundwater to nitrate contamination and the need to better characterize this shallow groundwater resource.
- Coliform bacteria were the most frequently observed contaminant in domestic wells, and were present in 26 percent of the sampled wells. Detection of coliform bacteria indicates a possible connection between surface activities, well construction issues (i.e., a poor or cracked surface seal), and water quality.
- Elevated detections of chemicals such as perchlorate, uranium and other radionuclides in domestic well water indicate a possible relationship between human-related surface activities and groundwater quality. Uranium and other radionuclides were frequently detected at levels greater than drinking water standards; however, these compounds can occur naturally.

### **Priority Basins and Special Studies Projects**

- The use of groundwater age-dating and low-level VOC occurrence has been pioneered by GAMA to assess the susceptibility of California's public-supply drinking water wells to contamination.
- Age dating results show that much of the groundwater pumped for California's public drinking water supply has recharged post urban and agricultural development after World War II (1945).
- Low-level VOC results show that an aquifer's susceptibility to contamination can vary widely. Many coastal aquifers are completely free of VOCs and other contaminants. Central Valley aquifers tend to be much more susceptible to surface contaminants.
- New analytical methods for detection of emerging contaminants in groundwater have been developed by GAMA (wastewater indicators, pharmaceuticals and endocrine disrupting chemicals).
- Significant attenuation (depletion) of most wastewater-associated emerging contaminants has been determined to happen during groundwater recharge and transport.
- Wastewater compounds have been identified that do not significantly attenuate (deplete) and will be useful as tracers of wastewater recharge in future studies.
- State-of-the-art tools have been used to assess nitrate in groundwater, including isotopic characterization of nitrate and water, quantification of denitrification, groundwater age dating and low-level detection of nitrate co-contaminants.
- Innovative tools for collecting, analyzing and interpreting dissolved gases in groundwater have been developed by GAMA. These tools are used to evaluate

groundwater recharge sources and mechanisms, and to quantify nitrate degradation in aquifers.

- New tracers for managing aquifer recharge have been developed by GAMA. These tracers allow better understanding of residence times of reclaimed water in the subsurface and of water quality changes associated with artificial recharge.
- Numerous public meetings have been held that involve GAMA scientists, public and private agencies, well owners and media. These meetings have helped to educate citizens of California about water quality and existing or potential threats to groundwater.

### **GeoTracker GAMA**

- One of the main goals of Chapter 522/2001 was achieved: “Design a database capable of supporting the monitoring program that is compatible with the State Board’s GeoTracker database”.
- The public internet site provides user-friendly access to several sources of groundwater quality information.
- Data sets from the California Department of Public Health, US Geological Survey, Lawrence Livermore National Laboratories, Department of Water Resources, Department of Pesticide Regulation, Regional Water Quality Control Boards and the State Water Board have been standardized into one searchable data set.
- Tools and tutorials have been developed to help analyze GeoTracker GAMA data. These tools include data querying based on chemical of interest within a region of interest and links to published water quality reports and relevant websites.
- Information and answers to groundwater quality have been provided by analyzing tens of millions of groundwater quality results that represent more than 100,000 well locations.

# **Exhibit Z**



# CALIFORNIA RURAL LEGAL ASSISTANCE, INC.

November 7, 2014

*Via electronic mail; return receipt requested*

Mr. Ken Harris  
Central Coast Regional Water Quality Control Board  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401

*Re: Agenda Item 15 – November 2014: Review of CCGC’s Drinking Water Notification Process*

Dear Mr. Harris:

We appreciate the Regional Board staff’s attention to CRLA’s request for discretionary review regarding alignment of CCGC’s notification process with the individual grower’s notification process.

In the staff report staff explains that unlike the individual monitoring program, CCGC’s coalition monitoring program is:

- (1) not obligated to provide a copy of exceedances to the local health department;
- (2) not obligated to submit a copy of the notification letter that CCGC sends to its members to the Regional Board.

These are two critical pieces of information necessary to directly verify that all regulated parties are performing their requirements under the Ag Order. It is critical that local health offices are notified about drinking water exceedances. Staff itself notes that “[i]n discussions with several county staff, Water Board staff understands that county staff finds this documentation useful and timely and have encouraged the Water Board staff to continue this practice.” (Staff Report Agenda Item No. 15 Nov 13 – 14, 2014) And yet, under the current coalition program, CCGC is not required to copy local health agency regarding drinking water exceedances.

We request the Regional Board to bring the CCGC’s monitoring program directly into alignment with the individual monitoring program by (1) requiring the CCGC to provide copies of drinking water notification letters to the Board and; (2) copying nitrate exceedances to the local health department.

## **I. Delegating Away Regulatory Power to Private Interests Without Public Accountability is Not Good Governance**

The Central Coast Water Board’s Conditioned Work Plan Approval letter to the Coalition, dated December 17, 2013 states the following:



## CALIFORNIA RURAL LEGAL ASSISTANCE, INC.

“The Coalition must [...] provide copies of the individual notification letters sent to Coalition members informing them of the exceedance of the drinking water standards, upon request of the Central Coast Water Board.”

CCGC’s October 9, 2014 letter to the Executive Officer states:

“We believe our offer to provide an off-site audit of [the drinking water notification documents] at Central Coast Water Board’s request . . . will negate the Central Coast Water Board’s need for these letters.”

From December of last year to the present, the Regional Board has gone from articulating the staff’s power to affirmatively obtain copies of drinking water notification letters from CCGC upon request; to actually requesting copies of drinking water notification letters; but now that the regulated party does not want to provide copies upon request, the Regional Board has conceded that it would be entirely satisfactory if the staff could simply audit the notification letters in the CCGC’s offices under extraordinary circumstances. This is simply not good policy and not good governance.

Obtaining copies of drinking water notifications sent by the CCGC to its members is the most straightforward and transparent manner to verify that the monitoring program conducted by the CCGC is occurring according to the workplan. Instead of moving forward with the most sensible and efficient manner of doing business, the Regional Board now has the option of creating a separate monitoring system for a private third party group that is *less* transparent than the individual monitoring program.

What we are dealing with here is a public health threat. Hundreds if not thousands of water users in the Salinas Valley alone may be at critical risk of consuming contaminated water. The Regional Board’s willingness to sacrifice its ability to ascertain with all due speed whether a water user might be drinking contaminated water or not in order to satisfy a private third party’s unsubstantiated privacy concerns is alarming.

### **II. It is Unlawful for a Third Party to Control the Disclosure of Information that Would Otherwise be Available to the Public**

“A state or local agency may not allow another party to control the disclosure of information that would otherwise be available to the public.” Cal. Gov. Code 6253.3.

A reading of the Staff Reports and related CCGC material posted for the July and November Board Meetings reveals that the CCGC is effectively dictating what information the Regional Water Board should require and on what terms, in an effort to control what information becomes publically available.





## CALIFORNIA RURAL LEGAL ASSISTANCE, INC.

The CCGC believed that providing the information using the proposed approach “allows for a certain level of protection to alleviate security and privacy concerns expressed by CCGC members.” (Oct. 9, 2014 CCGC letter). The proposal itself is couched in such terms:

“Our members concerns are specifically related to personal privacy and biosecurity issues as well as protection for individuals that work and/or live at member’s facilities. The CCGC proposes that this approach be used in lieu of submitting all exceedance notification letters to Central Coast Water Board.”

There are already procedures in place to protect legitimate privacy interests and biosecurity, including Public Records Act exemptions. The words of the State Water Board Oder 2013-0101 synthesizes the issue perfectly in an analogous, far more sensitive situation:

We must strike a balance between the need of the Central Coast Water Board to obtain information for compliance determination and the need of the public for transparency on the one hand, and the need of the agricultural community to innovate and compete on the other hand. *Given the significant water quality problems facing the Central Coast region due to agricultural discharges, we decline to strike that balance in a manner more protective of business information than that established by the Legislature in the Water Code and the Public Records Act.* The Central Coast Water Board has established an appropriate process in the Agricultural Order in Provision 65 for identifying information that is asserted to be exempt from disclosure. (emphasis added, p. 28)

The State Board itself has declined to strike a balance in a manner more protective of information than that which is established by Legislature in the Water Code and the Public Records Act. The Regional Board should not authorize measures that would compromise the public’s ability to access and understand the significant water quality problems facing the Central Coast region. For those dischargers who have a tangible and substantive privacy concern, the burden lies on that discharger to raise a claim of exemption for release of information that would otherwise be public.

Further, because Regional Board is delegating a task to the CCGC that would otherwise be performed by the Regional Board staff itself, the CCGC is essentially performing a public function. The Regional Board must be able to adequately verify the CCGC’s monitoring program by going to the source of the evidence directly, copies of the notification letter. Again, because the Regional Board is delegating essentially a public function to a private third party, the Board needs to ensure that they are accountable to the public. Aiding a private third party to control what would otherwise be public documents is against the spirit of the law and against the spirit of the Ag Order.

Further, hundreds of growers in the Individual Monitoring program already submit notifications letters. The disclosure of growers’ identity and the identity of users receiving the notices has not resulted in any catastrophe. In fact, the Individual Monitoring program is running smoothly, with no need for the agency to waste valuable staff time, energy and taxpayer dollars to assure compliance with a basic requirement.



### **III. Coalition Monitoring and Reporting is Not Functionally Equivalent to Individual Monitoring and Reporting Program**

As made clear in the staff report and the Oct. 9 CCGC letter, the Coalition's Proposal merely associates domestic wells with landowners/operators. That is not sufficient to "verify that proper drinking water notification has occurred in compliance to the Agricultural Order." Proper notification, according to the SWB Order, occurs when (1) discharger[s] notify the users within 10 days and (2) specific "minimum information" outlined in the State Board Order is included in the notification.

With such a widespread public health threat at issue, claims that notifications took place cannot substitute for concrete evidence that users have been notified that their water is contaminated. As with the Individual Monitoring Program, both the Regional Water Board and the Department of Health should verify and substantiate concrete evidence as soon as information becomes available.

CCGC's proposed auditing system that would allow the Regional Board to look through their records "under certain circumstances" inverts the relationship between regulator and regulated party. Why would the Regional Board allow for a situation where the Board is disempowering its own staff from properly regulating dischargers? CCGC, as a private third party, should not be allowed to control information -- notification letters -- that would otherwise be public. Now that the drinking water program has been transferred to the water boards, the Regional Board has all the more duty and obligation to control and verify information that would allow the Regional Board to both discern where drinking water problems lie and to make decisions about further actions.

An agency responsible for the protection of people's drinking water cannot allow a private regulated third party to dictate what is accessible to the public or not. Allowing what would otherwise be public records to be housed in private hands is not only inadequate under the State Water Board's Order requirement for notifications, but also a gross disregard for the health and well being of residents who may be consuming contaminated water.

### **IV. Conclusion**

The Regional Board has equal duty to both carry out the requirements of the Ag Order to its fullest extent and to be accountable to the public. There is no need or compelling reason to accommodate time consuming and special requests from private third party groups. Board members and staff regularly speak to the severity and urgency of the health issues associated with nitrate contamination and their commitment to help disadvantaged communities. And yet, the actions of the Regional Board do not reflect this asserted commitment. The Board should not permit a third party private monitoring group to control what information is available to the Regional Board itself and neither should the Board permit the coalition to control what would otherwise be public records.



## CALIFORNIA RURAL LEGAL ASSISTANCE, INC.

We respectfully request that the Regional Board require (1) CCGC to provide all notification letters to the Water Board; (2) copy the local health department regarding notification letters documenting nitrate exceedance; and finally (3) abide by the other provisions outlined in the March 21, 2014 letter from the Executive Officer to the CCGC.

Very truly yours,

/s/ Pearl Kan  
Attorney  
California Rural Legal Assistance, Inc.

/s/ Kenia Acevedo  
Attorney  
California Rural Legal Assistance, Inc.

cc:

John Robertson  
[john.robertson@waterboards.ca.gov](mailto:john.robertson@waterboards.ca.gov)

Chris Rose  
[chris.rose@waterboards.ca.gov](mailto:chris.rose@waterboards.ca.gov)

Angela Schroeter  
[angela.schroeter@waterboards.ca.gov](mailto:angela.schroeter@waterboards.ca.gov)

# **Exhibit AA**



# CALIFORNIA RURAL LEGAL ASSISTANCE, INC.

July 28, 2014

Attn: Tammie Olson  
Central Coast Regional Water Quality Control Board  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401

## **Re: Agenda Item Number 13, Irrigated Lands Regulatory Program: Water Board Review of Central Coast Groundwater Coalition's Drinking Water Notification Process**

Dear Central Coast Regional Water Quality Control Board:

This letter follows the original letter CRLA, Inc. submitted seeking discretionary review of the coalition's notification process. This letter supports the Central Coast Regional Water Quality Control Board ("Regional Board") staff's recommendation not to implement any changes in the existing Work Plan approval conditions for the cooperative groundwater monitoring program, and to require the CCGC ("coalition") to make its reporting of drinking water exceedances and associated follow up equivalent to the notification process growers conduct through the individual monitoring program.

- I. Cooperative groundwater monitoring reporting and follow-up procedures must be equivalent to the individual groundwater reporting and follow-up procedures.

Under the State Board Order, dischargers conducting individual groundwater monitoring and dischargers participating in cooperative groundwater monitoring programs are both held to the same standard with regards to notification requirements. (*See* State Board Order WQ 2013 – 0101, pg. 34) As was outlined by the Staff Report and by the Regional Board's own directive pursuant to the January 30, 2014 Board Meeting, any cooperative groundwater monitoring program's reporting of MCL exceedances and follow-up reporting must be equivalent to the individual groundwater monitoring program as well.

- II. The Regional Board should utilize reasonable and appropriate confirmation mechanisms incidental to its authority to both investigate potential dischargers and implement the monitoring and reporting program of the Agricultural Order.

The coalition's argument that the Regional Board has no authority to examine its notification letters to its members is lackluster for it attempts to construe examination of its notification letters as a separate legal issue from the monitoring requirements itself. The Regional Board's exercise of its authority to receive the notification letters sent by the coalition to its member dischargers is but a logical and logistical mechanism to ensure compliance with the requirements of the Agricultural Order and the corresponding MRPs.

If the Regional Board has (1) the authority to mandate that dischargers comply with the monitoring requirements of the Agricultural Order; (2) the authority to approve or disapprove of third party monitoring programs, and; (3) authority to investigate and inspect reports that implicate the "quality of any waters of the state within its region" under Porter-Cologne section



# CALIFORNIA RURAL LEGAL ASSISTANCE, INC.

13267(a), it does not follow that the Regional Board cannot obtain copies of notification letters from the regulated party to confirm that the regulated party did in fact carry out what it assured the Regional Board it would do in order to comply with the requirements of the both the Agricultural Order and the Work Plan.

The coalition's argument that "copies of individual notification letters sent to growers by the CCGC are not relevant with respect to an investigation of water quality" (CCGC Response Letter June 10, 2014, pg. 6) unsuccessfully attempts to segment the affirmative monitoring and reporting requirements apart from confirmation mechanisms that are incidental to the Regional Board's authority to implement investigations as well as the Agricultural Order itself.

The notification letter is directly related to investigation of water quality, as Water Board Staff Report indicates. Notification letters serve dual purposes: (1) prima facie evidence that water quality exceeds nitrate MCLs, and; (2) notification to water users that they are at risk of drinking contaminated water. Drinking water evaluation and evaluation of groundwater used for domestic drinking water purposes has been underscored as one of the most imperative goals for the implementation of the Agricultural Order and its corresponding MRPs. Drinking water quality is one of the highest water quality objectives for the region, and for the state, and so it follows that the Regional Board cannot delegate away its authority to confirm that dischargers are complying with the law.

### III. Withholding data from the Regional Board is not and should not be one of the main purposes behind cooperative groundwater monitoring programs.

In its letter to the Regional Board, the coalition writes that: "one of the central tenants [sic] of the CCGC program includes not providing individual member information that specifically ties domestic well exceedances with individual growers, companies, or landowners in a manner that would then be public." (CCGC Response Letter June 10, 2014, pg. 7)

The coalition's self-articulated tenet for the cooperative monitoring program— withholding member information—does not comport with the regulatory spirit behind allowing for cooperative monitoring programs as a cost effective alternative to individual monitoring.

The Regional Board Order "encourages Dischargers to coordinate the effective implementation of . . . cooperative monitoring and reporting efforts to lower costs, maximize effectiveness, and achieve compliance with this Order." (R3-2012-0011, Finding 11) The State Board Order underscores the potential cost effectiveness of cooperative groundwater monitoring programs: "[d]ischargers may participate in a cooperative groundwater monitoring effort to help minimize costs and to develop an effective groundwater monitoring program." (Order WQ 2013-0101, pg. 33)

Both the State Board Order and the Regional Board Order reason that cooperative monitoring efforts are worthwhile for their **ability to lower costs** and **maximize effectiveness in order to**



## CALIFORNIA RURAL LEGAL ASSISTANCE, INC.

**achieve compliance.** In contradistinction, the central tenet articulated by the coalition for cooperative monitoring efforts: withholding data, has no place in the regulatory scheme. If the Regional Board affords the coalition's reasoning for denying the Regional Board access to notification letters any serious consideration, it would erode the integrity of its monitoring program. The Regional Board should avoid creating a dual track system whereby electing to participate in a cooperative monitoring program would, in effect, allow a regulated discharger to evade its full suite of regulatory responsibilities under the Agricultural Order.

Respectfully,

/s/ YPK  
Pearl Kan

Attorney | Equal Justice Works Fellow  
California Rural Legal Assistance, Inc.  
pkan@crla.org

cc:

Kenia Acevedo (kacevedo@crla.org)  
Jeanette Pantoja (jpantoja@crla.org)  
John Robertson (john.robertson@waterboards.ca.gov)

# **Exhibit BB**





# CALIFORNIA RURAL LEGAL ASSISTANCE, INC.

November 18, 2014

*Via electronic; return receipt requested*

Central Coast Regional Water Quality Control Board  
Attention: Public Records Act Request  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401

RE: California Public Records Act Request

To Whom It May Concern:

Pursuant to the California Public Records Act (CPRA), Government Code section 6250 *et seq.*, California Rural Legal Assistance, Inc. respectfully requests that the Central Coast Regional Water Quality Control Board please provide:

- (1) Written correspondence sent from Regional Board staff in November 2014 to Central Coast Groundwater Coalition that provided comments and evaluation regarding CCGC's draft Technical Memoranda concerning Gilroy/Hollister; Pajaro Valley; Salinas Valley.

Please provide a response within ten days and indicate the date and time I should expect to receive the requested documents, as required by Government Code section 6253(c). Your response can be emailed to [pkan@crla.org](mailto:pkan@crla.org) or mailed to:

Pearl Kan  
California Rural Legal Assistance, Inc.  
3 Williams Road  
Salinas, CA 93905

To the extent that your office claims the right to withhold any record, or a portion of anyto Parr record, we request written determination of the denial, pursuant to Government Code section 6255(b).

California Rural Legal Assistance, Inc. is a nonprofit organization that provides free legal assistance to low-income clients. No part of the information obtained will be sold or distributed for profit. Accordingly, we request that you waive any fees that would normally be applicable to this CPRA request or provide the records electronically. If you are unable to do so, please notify me at (831) 757-5221 x 324 immediately of any payments required prior to copying.

Thank you in advance for your prompt attention to this matter.

Sincerely,

/s/ YPK

Pearl Kan  
Attorney  
[pkan@crla.org](mailto:pkan@crla.org)

# **Exhibit CC**



# CALIFORNIA RURAL LEGAL ASSISTANCE, INC.

October 1, 2014

*Via electronic; return receipt requested*

Central Coast Regional Water Quality Control Board  
Attention: Public Records Act Request  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401

RE: California Public Records Act Request (CA Government Code §6250 et seq.)

To Whom It May Concern:

Pursuant to the California Public Records Act (CPRA), Government Code §6250 et seq., California Rural Legal Assistance, Inc. respectfully requests that the Central Coast Regional Water Quality Control Board pursuant to MRP Order No. R3-2012-0011-03 for Tier 3, please provide:

- 1) Total Nitrogen Reporting for Tier 3 Dischargers that have a HIGH nitrate loading risk.
- 2) List of Tier 3 Dischargers that have submitted proposed individual discharger groundwater monitoring and reporting program (GMRP) plan in lieu of total nitrogen reporting AND each discharger's proposed GMRP plan as submitted to the EO.

Please provide a response within ten days as required by law, Gov't. Code § 6253, via email to pkan@crla.org or mail to:

Pearl Kan  
California Rural Legal Assistance, Inc.  
3 Williams Road  
Salinas, CA 93905

To the extent that your office claims the right to withhold any record, or a portion of any record, we request written determination of the denial, pursuant to section 6255 (b) of the California Government Code.

California Rural Legal Assistance, Inc. is a nonprofit organization that provides free legal assistance to low-income clients. No part of the information obtained will be sold or distributed for profit. Accordingly, we request that you waive any fees that would normally be applicable to this CPRA request or provide the records electronically. If you are unable to do so, please notify me at (831) 757-5221 x 324 immediately of any payments required prior to copying.

Thank you in advance for your prompt attention to this matter.

Sincerely,

/s/ YPK

Pearl Kan  
Attorney  
pkan@crla.org

# **Exhibit DD**



# CALIFORNIA RURAL LEGAL ASSISTANCE, INC.

January 5, 2015

*Via electronic mail; return receipt requested*

Central Coast Regional Water Quality Control Board  
Attention: Public Records Act Request  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401

RE: California Public Records Act Request

To Whom It May Concern:

Pursuant to the California Public Records Act (CPRA), Government Code section 6250 *et seq.*, California Rural Legal Assistance, Inc. respectfully requests that the Central Coast Regional Water Quality Control Board please provide:

- (1) Revised CCGC Technical Memorandum for Nitrate Concentrations in Groundwater for Salinas Valley, Submitted to Regional Board December 10, 2014.

Please provide a response within ten days and indicate the date and time I should expect to receive the requested documents, as required by Government Code section 6253(c). Your response can be emailed to [pkan@crla.org](mailto:pkan@crla.org).

To the extent that your office claims the right to withhold any record, or a portion of any record, we request written determination of the denial, pursuant to Government Code section 6255(b). Thank you in advance for your prompt attention to this matter.

Very truly yours,

/s/ YPK

Pearl Kan  
Attorney | [pkan@crla.org](mailto:pkan@crla.org)

# **Exhibit EE**

## Central Coast Regional Water Quality Control Board

December 18, 2013

Parry Klassen  
Executive Director  
Central Coast Groundwater Coalition  
512 Pajaro St.  
Salinas, CA 93901  
[pklassen@unwiredbb.com](mailto:pklassen@unwiredbb.com)

Dear Mr. Klassen:

### **IRRIGATED LANDS REGULATORY PROGRAM – APPROVAL OF CENTRAL COAST COALITION WORK PLAN FOR SAN LUIS OBISPO, SANTA BARBARA, AND VENTURA COUNTIES**

On November 1, 2013, the Central Coast Groundwater Coalition (Coalition) submitted a work plan titled “*Central Coast Coalition Work Plan for San Luis Obispo, Santa Barbara, and Ventura Counties*” (workplan) to the Central Coast Regional Water Quality Control Board (Central Coast Water Board). The purpose of the workplan is to set forth the cooperative groundwater monitoring activities and schedule for the southern region of the Coalition that satisfies the requirements in Agricultural Order No. R3-2012-0011, Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands and the associated Monitoring and Reporting Program Orders (MRPs), for participating landowners and growers in San Luis Obispo, Santa Barbara, and Ventura counties. The workplan was submitted in accordance with Order WQ 2013-0101, adopted by the State Water Resources Control Board (State Board) on September 24, 2013, which allowed growers and landowners to propose new or expand existing cooperative groundwater monitoring programs by November 1, 2013.

This letter is to approve the workplan for the San Luis Obispo, Santa Barbara, and Ventura counties with the specific conditions described below. Please note that the conditions identified in the Central Coast Water Board’s approval letter dated July 11, 2013 for the Coalition’s “Northern Central Coast Cooperative Groundwater Program” also apply to the relevant sections of this workplan. In addition, this letter also includes specific requirements related to drinking water notifications that are included as a condition of our approval of the workplan. These conditions are important and required to clarify and confirm our expectations about how you will comply with the Order No. R3-2012-0011 and associated MRPs on behalf of individual landowners and growers who participate in your cooperative program.

### **BACKGROUND**

The Central Coast Water Board adopted the Agricultural Order and associated MRPs on March 15, 2012. The Order and the MRPs specify that enrolled landowners and growers have the option to comply with groundwater monitoring requirements by either monitoring groundwater

individually on their agricultural operations, or by joining a groundwater cooperative monitoring program. In July 2013, the Central Coast Water Board did not approve a cooperative groundwater monitoring program for growers and landowners in San Luis Obispo, Santa Barbara, and Ventura counties. Thus, growers and landowners in these counties are required to comply with individual groundwater monitoring requirements specified in the Order and MRPs.

After a review of the Order and MRPs, the State Board issued Order WQ 2013-0101 allowing growers and landowners to propose new or expand existing cooperative groundwater monitoring programs by November 1, 2013. The State Board Order WQ 2013-0101 also specified that growers and landowners who had not joined a cooperative groundwater monitoring group prior to September 24, 2013, may participate in an approved cooperative groundwater monitoring program, provided they have completed two rounds of monitoring as required under individual groundwater monitoring requirements.

On November 1, 2013, the Coalition submitted a work plan titled "*Central Coast Coalition Work Plan for San Luis Obispo, Santa Barbara, and Ventura Counties*" (workplan) to the Central Coast Water Board. Similar to the Coalition's workplan for the Monterey, Santa Clara, Santa Cruz, and San Benito Counties, the subject workplan states that the southern cooperative program will implement two important technical tasks: locating and sampling domestic supply wells on participant owned/leased/operated land, and characterizing groundwater aquifers in the cooperative program area with a focus on the quality of shallow groundwater. Additionally, the workplan also includes activities related to drinking water notifications for situations where results for domestic drinking water wells indicate an exceedance for the drinking water standard for nitrate as NO<sub>3</sub> or nitrate+nitrite as nitrogen, per State Board Order WQ-2013-0101.

This letter is to approve the workplan with the following specific conditions.

## CONDITIONS

1. Implementation begins upon approval of the workplan. You must implement the workplan according to the schedule described in Tables 1, 3, 4 and 5. As described in Table 3, by December 1, 2014, you must complete all sampling activities and all phases of the workplan must be completed by June 30, 2015, including submittal of all deliverables to the Central Coast Water Board.
2. The Coalition's workplan for the northern counties includes a final report on the concentration of nitrate in domestic supply wells. This information is not explicitly identified in this workplan and must be included in the draft final report for the San Luis Obispo, Santa Barbara and Ventura Counties submitted to the Central Coast Water Board by April 15, 2015.
3. Data collected as part of this workplan must be included in contour maps developed by the Coalition. Contour maps must be provided as a geographic information systems (GIS) shapefile with the associated technical information with the draft final report by April 15, 2015 according to the conditions specified in the Central Coast Water Board's approval letter dated July 11, 2013 for the Coalition's "Northern Central Coast Cooperative Groundwater Program".



4. The State Board Order WQ 2013-0101 requires that growers and landowners who had not joined a cooperative groundwater monitoring group prior to September 24, 2013, may participate in an approved cooperative groundwater monitoring program, provided they have completed two rounds of monitoring as required under individual groundwater monitoring requirements. If the Coalition chooses to conduct individual groundwater monitoring and reporting on behalf of such growers, data must be uploaded to GeoTracker as individual farm data in compliance with individual groundwater monitoring and reporting requirements.

#### Drinking Water Notification

5. The workplan indicates that the Coalition has developed a notification system to identify wells that have a concentration of nitrate above the MCL and make sure that users of the water are notified and will comply with the notification requirements specified by State Board Order WQ 2013-0101. If the Coalition determines that water in any well that is used or may be used for drinking water exceeds or is projected to exceed the drinking water standard, the Coalition must do the following:
  - a) Within 24 hours of learning of the exceedance or projected exceedance of the drinking water standard, provide notice to the Central Coast Regional Water Quality Control Board (Central Coast Water Board);
  - b) Within 48 hours of learning of the exceedance or projected exceedance of the drinking water standard, notify Coalition members that they are required by the Central Coast Water Board to notify the landowner and well users of the exceedance within 10 days. The content of the notifications must be consistent with that described in State Board Order WQ-2013-0101.
  - c) Within 10 days of learning of the exceedance or projected exceedance of the drinking water standard, provide a copy of the template notification letter, list of members notified, and the date the member was notified to the Central Coast Water Board. Additionally, at that time, the Coalition must also provide the Central Coast Water Board with the names and contact information for any member not successfully notified by the Coalition. The Coalition must also provide copies of the individual notification letters sent to Coalition members informing them of the exceedance of the drinking water standards, upon request of the Central Coast Water Board.
  - d) Within 30 days of completing notifications for San Luis Obispo, Santa Barbara and Ventura Counties, the Coalition must provide to the Central Coast Water Board a summary of any follow-up actions taken by Coalition members to provide treatment or alternative drinking water supplies for well users affected by drinking water exceedances. In addition, upon request by the Central Coast Water Board, the Coalition must provide a list of Coalition members who have not provided information about follow-up actions or who have not taken actions to provide treatment or alternative drinking water supplies for well users affected by drinking water exceedances. The Central Coast Water Board will contact these members directly.

I appreciate the Coalition's efforts and progress made thus far to comply with the cooperative groundwater monitoring requirements. The above conditions are important and required to clarify and confirm our expectations related to how the Coalition will comply with the cooperative groundwater monitoring requirements on behalf of their members, and especially to ensure that

well users are notified in the case of drinking water exceedances, as required by State Board Order WQ-2013-0101. Additionally, implementation of these notification requirements will ensure that the Coalition's drinking water notification process is consistent with the notification process that is presently followed by the Central Coast Water Board for dischargers who comply with individual groundwater monitoring requirements.

If you have any questions concerning this letter, please contact Hector Hernandez of my staff at (805) 542-4641 or via e-mail at [Hhernandez@waterboards.ca.gov](mailto:Hhernandez@waterboards.ca.gov), or Angela Schroeter at (805) 542-4644 or via e-mail at: [Aschroeter@waterboards.ca.gov](mailto:Aschroeter@waterboards.ca.gov).

Sincerely,



Digitally signed by Kenneth A Harris Jr.  
DN: cn=Kenneth A Harris Jr., o=Central  
Coast Regional Water Quality Control  
Board, ou=Executive Officer,  
email=Ken.Harris@waterboards.ca.gov  
, c=US  
Date: 2013.12.18 09:36:44 -08'00'

Kenneth A. Harris Jr.  
Executive Officer

cc:

Tim Borel  
Chair, Board of Directors  
[tborel@foxyproduce.com](mailto:tborel@foxyproduce.com)

Ms. Abby Taylor-Silva  
Vice President, Policy & Communications  
Grower-Shipper Association of Central California  
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Claire Wineman  
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[claire.wineman@grower-shipper.com](mailto:claire.wineman@grower-shipper.com)

# **Exhibit FF**

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

**STAFF REPORT FOR REGULAR MEETING OF July 31 - August 1, 2014**

Prepared on July 17, 2014

**ITEM NUMBER:** 13

**SUBJECT:** Irrigated Lands Regulatory Program: Water Board Review of Central Coast Groundwater Coalition's Drinking Water Notification Process

**STAFF CONTACT:** Hector Hernandez 805/542-4641 or  
[hector.hernandez@waterboards.ca.gov](mailto:hector.hernandez@waterboards.ca.gov)

**KEY INFORMATION:**

Location: Region-Wide  
Type of Discharge: Irrigated Lands Runoff and Leaching To Groundwater  
Existing Orders: Order No. RB3-2012-0011 and WQ 2013-0101

**THIS ACTION:** Board Review Regarding the Central Coast Groundwater Coalition's Disclosure of Individual Notification Letters and Individual Follow-Up Action Information.

**ITEM ORGANIZATION/PREAMBLE**

This staff report summarizes the issues and differing views among interested parties regarding whether the Central Coast Groundwater Coalition (Coalition) must provide the Central Coast Regional Water Quality Control Board (Central Coast Water Board) with copies of notification letters their members send to users notifying them that the drinking water wells they are using exceed the nitrate drinking water standard. This staff report is broken up into two sections, 13A and 13B, due to two different proceedings on this topic. Although the staff report is separated into the two sections in order to respond to both the Coalition and California Rural Legal Assistance (CRLA), this issue is being heard as one item. The Central Coast Water Board will hear from staff, the Coalition, CRLA, and interested persons and may uphold the approved work plan or modify the approved work plan's requirements regarding the notification letters.

At the January 30, 2014 Central Coast Water Board meeting, the Central Coast Water Board directed staff to work with the Coalition to align the Drinking Water Notification processes to verify notification of individuals (current and future) dependent on domestic wells that exceed the nitrate drinking water standard. The first portion of this is staff report, referenced as 13A, covers the Central Coast Water Board's directive, Central Coast Water Board staff's subsequent actions and evaluation of the Coalition's response letter regarding aligning of drinking water notification processes.

On July 3, 2014, CRLA submitted a request for discretionary review by the Central Coast Water Board on 1) alignment of the Coalition's drinking water notification process with the Central Coast Water Board's individual monitoring notification process, and 2) making individual well information available (obscured to the one-half mile) on GeoTracker. CRLA's first discretionary review item, related to drinking water notification, would cover much of the same information related to 13A, and as such, Central Coast Water Board staff determined that hearing this in July as part of this item was the most efficient approach. Central Coast Water Board staff's

review and response to CRLA's letter are incorporated in this staff report in the portion referenced as 13B (starting on Page 14). The second portion of CRLA's request will be addressed at a future Central Coast Water Board meeting.

### **SUMMARY FOR 13A – ADDRESSING THE COALITION'S LETTER**

The purpose of this item is to discuss aligning the Central Coast Groundwater Coalition's (Coalition) drinking water notification processes with the Central Coast Regional Water Quality Control Board's (Central Coast Water Board) process for growers with domestic well exceedances that conduct individual monitoring, in follow up to the Central Coast Water Board's direction at the January 30, 2014 meeting. Central Coast Water Board staff currently verifies notification and provision of replacement water with growers conducting individual groundwater monitoring for domestic wells that exceed the nitrate drinking water standard. In response to the Executive Officer's request for a proposal for aligning the Coalition's drinking water notification process, the Coalition submitted a June 10, 2014 response letter (**Attachment 1**) disagreeing with conditions of the Work Plan Approval letters issued to the Coalition by the Executive Officer on December 17, 2013 (for the Northern Counties) and December 18, 2013 (for the Southern Counties) (**Attachments 2 and 3**). The Coalition's response letter specifically objected to a requirement allowing the Executive Officer to request copies of grower-specific drinking water notification letters that the Coalition sends to their members if the members' domestic well exceeds the drinking water standard for nitrate, and presents a health risk to those who may be drinking or using the water. The Coalition's response letter outlines reasons and associated justification for not complying with the conditions stated in the Work Plan Approval Letters, and proposes follow-up actions in lieu of providing evidentiary-level information.

This staff report presents Central Coast Water Board staff's evaluation and recommendation concerning the Coalition's response letter and proposed follow up actions. Central Coast Water Board staff recommends **No change to existing Work Plan approval conditions, and to require the Coalition to make its reporting of drinking water exceedances and associated follow up equivalent to the Water Board's notification process for growers that conduct individual monitoring and have domestic well nitrate exceedances.** The rationale for staff's recommendation is included below.

### **DISCUSSION**

First, Central Coast Water Board staff commends the accomplishments of the Coalition and its consultants in sampling and analyzing domestic and agricultural supply wells in groundwater basins throughout the region. The Coalition has achieved significant progress over the last sixteen months as it works towards meeting its members' regulatory obligations under the Agricultural Order, and complies with the approved work plans.

Background: At the Central Coast Water Board meeting on January 30, 2014, the Board directed staff to work with the Coalition to 1) verify that the Coalition's notification of maximum contaminant level (MCL) exceedances for drinking water wells and follow up actions and reporting are equivalent to the existing process for growers that conduct individual monitoring, 2) verify replacement water is being continuously provided and adequate, and 3) follow up with these locations to ensure adequacy through time as population/residency rates change.

To achieve these goals for growers conducting individual groundwater monitoring with domestic wells that exceed the drinking water nitrate MCL, Central Coast Water Board staff made minor revisions to the Drinking Water Notification (DWN) template letter (**Attachment 4**) that staff mail. The DWN letters outline:

- 1) Expectations for written notification to all users and well postings, indicating that water supply poses a human health risk, including notification for new users;
- 2) Provision of replacement water and verification that replacement water is provided to new users;
- 3) Written documentation to be submitted to the Central Coast Water Board as evidence of notification of users, posting of appropriate health notice, identification of contaminated well(s) and number of people served, and description of any treatment method or alternative drinking water supply provided (both long-term and short-term), as applicable.

The actions outlined above provide evidence (a written record) documenting that notification and replacement water actions are taking place. This record allows Central Coast Water Board staff to follow up with growers conducting individual groundwater monitoring with domestic wells that exceed the nitrate drinking water MCL to ensure proper notification, well posting, and replacement water continue to occur in the future and as residents change. The majority of these follow up components have been in place for approximately 18 months, although we have made some minor modifications through time. These follow up components are also consistent with Central Coast Water Board direction to staff at the January 2014 meeting. As of July 8, 2014, Central Coast Water Board staff has issued **102** drinking water well notification letters for **109** wells that exceed the nitrate MCL to growers that conduct individual groundwater monitoring. Of these, individual growers have provided documentation that notification of the well user has occurred in **100** cases and in **80** cases, replacement water has been provided (bottled or treatment). An additional 10 of these cases have indicated that they are looking to treatment, but did not indicate if they are providing replacement water in the interim. Central Coast Water Board staff greatly appreciate the efforts of these reporting growers to date, and will be following up with all of these cases to 1) ensure that human health is being protected (via either notification or well shut off), 2) monitor notification and replacement water conditions over time, and 3) determine the notification status of the remaining two cases.

On December 17, 2013 and December 18, 2013, the Central Coast Water Board issued conditioned Work Plan Approval letters (**Attachments 2 and 3**) to the Coalition, approving its Work Plans for the northern counties and southern counties, respectively. One of these approval conditions requires the Coalition to provide copies of letters associated with notification for drinking water wells that exceed the MCL, when requested by the Executive Officer. Although Coalition staff voiced discontent with this condition to Central Coast Water Board staff, the Coalition did not petition the approval within the petition window (approximately December 18, 2013 through January 18, 2014).

Central Coast Water Board staff also coordinated with the Coalition to assist in revisions to its notification and documentation process so that the process aligns as directed by the Central Coast Water Board, with the existing process for growers conducting individual monitoring. On March 21, 2014, the Central Coast Water Board sent a follow up letter to the Coalition (**Attachment 5**). The letter outlines expected notification process changes to ensure that the Coalition notification, documentation and reporting are aligned with the Central Coast Water Board's process for growers conducting individual groundwater monitoring. The letter also provides the supporting rationale for the requested changes to the Coalition drinking water notification process, including:

- Providing a written record documenting the Central Coast Water Board is protecting human health, the right to safe water, and the drinking water beneficial use;
- Enabling Central Coast Water Board staff ready access to information such that they can follow up on sites needing replacement water to determine ongoing sufficiency;

- Providing transparent credibility that both the Central Coast Water Board's and the Coalition's notification processes are documenting that timely notification and replacement water have occurred;
- Information provided by these records will assist Central Coast Water Board staff in identifying and informing domestic well users for wells that are not on properties enrolled under the Agricultural Order, nor tested, in areas where well water can be reasonably predicted to be unsafe; and
- Ensuring the Central Coast Water Board is not relying on anecdotal, aggregated, and/or anonymous information, however well intentioned, as the Central Coast Water Board cannot delegate its responsibility to maintain a written record, or its authority to protect public health, to a third party.

Subsequent to sending this letter, Central Coast Water Board staff communicated with Coalition staff multiple times to discuss and clarify our specific request, as outlined in the letter. As also noted in the letter, Central Coast Water Board staff appreciates the sensitivity of this issue, but the real public health risk component of this issue outweighs the desire for privacy.

#### **The Coalition's Response Letter, Reasons for Disagreeing with the Approved Work Plan, and Water Board Staff Response:**

1. In the June 10, 2014 letter (**Attachment 1**), the Coalition covers its accomplishments completed or in progress since its inception. The Coalition states its disagreement with the Central Coast Water Board's direction that reporting and notification requirements for members in a coalition must be equal to requirements imposed on individuals. The Coalition contends that the Central Coast Water Board's position is contrary to the State Water Resources Control Board's (State Board) stated reasons for supporting third-party, or coalition-type programs. It is the Coalition's position that the State Board does not mandate or imply that third-party reporting must be "equal" to that which is required for individuals.

#### Water Board Staff Response:

Central Coast Water Board staff agree with the Coalition that the State Board does not mandate reporting must be equal between Coalition growers and growers conducting individual monitoring. State Board has appropriately left this to the Central Coast Water Board and its Executive Officer, within his normal delegated authority (as is exercised in thousands of cases within the region in the various regulatory programs) to determine. Work plans are typically developed to establish the specifics of monitoring (i.e., specific analytical and sampling methods, specifics of what is reported and the content of what must be included in that reporting, etc.). Exercising normal delegated authority, the Executive Officer issued the Work Plan Approval letters with conditions as cited above in mid-December 2013. Additionally, The State Board clearly stated that third-party proposals must ensure "consistency with legal requirements to verify the adequacy and effectiveness of waiver conditions and provide sufficient feedback mechanisms for determination of whether the required controls are achieving the Agricultural Order's stated purposes."

#### Coalition comments:

2. The Coalition contends that providing individual notification letters is not required by the Agricultural Order or State Board's Order, or necessary for the Central Coast Water Board to ensure that the Agricultural Order's stated purposes are being achieved. The Coalition also states that such requirement will undermine the intent and purpose of a third-party program, and will provide no greater protection for water quality.

Water Board Staff Response:

As discussed above, details regarding what is specifically included within required groundwater monitoring reporting are typically outlined in either 1) approved work plans and/or conditioned work plan approval letters or 2) within Executive Officer-issued Monitoring and Reporting Programs (MRPs). In this case, many of the specifics associated with the Coalition's monitoring effort are detailed in its work plan and the aforementioned Work Plan Approval letters. Therefore, not seeing this requirement in either the Agricultural Order or the State Board's Order is consistent with normal practice.

The requirement for provision of information pertaining to notification is necessary, such that Central Coast Water Board staff can 1) establish that adequate actions have been taken to prevent human health exposures and 2) conduct follow up to evaluate replacement water adequacy through time. Third-party monitoring programs cannot exist solely for the protection of the members; rather, it must facilitate compliance for its members, consistent with prepared and approved work plans, and make information available such that those well users on properties not enrolled in the Coalition can determine if they are at risk. If the Coalition could not meet or abide by the requirements contained within the conditions of the Work Plan Approval letters, or believed them to be unreasonable, it could have requested that the Central Coast Water Board review these requirements, but it did not.

Providing notification letters creates evidentiary-level documentation (versus aggregated, anonymous results), in the form of a written record, and affords Central Coast Water Board staff the ability to follow up on sites to evaluate the adequacy of replacement water, well postings, etc. The State Water Board was clear in its order about not underserving the very serious health exposure issues related to unsafe drinking water from the discharge of nitrate to groundwater, dedicating many pages to the discussion of "The significant health and safety concerns..." The State Board Order states,

"Given the significant concerns with drinking water safety in the Central Coast Region, we find that any cooperative groundwater monitoring must still characterize drinking water at the level of the individual well if there is a concern that the nitrate concentration in the well may approach the MCL. The cooperative groundwater monitoring provision states that, 'at a minimum, the cooperative groundwater monitoring effort must include sufficient monitoring to identify and evaluate groundwater used for domestic drinking water purposes. The significant health and safety concerns in conjunction with widespread evidence of elevated nitrate levels in the Central Coast Region lead us to the conclusion that identification and evaluation should encompass monitoring of all at risk wells that are used or may be used for drinking water purposes.'" (Page 32)

This excerpt shows State Board's understanding and concern with the very real human health exposure issue associated with unsafe drinking water due to nitrate.

Central Coast Water Board staff disagrees with the Coalition's assertion that providing the notification letter information will provide no greater water quality protection. Central Coast Water Board staff will use the materials to follow up on the provision and adequacy of safe replacement water in addition to ongoing well postings and notification to protect users where the drinking water is unsafe - very real protection from unsafe water quality. Additionally, the Coalition does not mention other scenarios, such as what would become of exceedance information if an individual discontinued Coalition membership, or if the Coalition ceased to exist.



Central Coast Water Board staff also disagrees with the Coalition statement that providing notification letter information will undermine the need for coalitions. While providing notification letter information per the conditions of the approved work plans may conflict with assurances Coalition staff made to membership, many of the benefits of a coalition (cost sharing for sampling, reduced analytical cost, improved data collection quality, technical interpretive work cost sharing, etc.) will continue to make coalitions a likely reality in the future.

The State Board's Order WQ 2013-0101 (State Board's Order) states,

“...we expect the Central Coast Water Board to review proposals carefully to ensure consistency with legal requirements to verify the adequacy and effectiveness of waiver conditions and provide sufficient feedback mechanisms for determination of whether the required controls are achieving the Agricultural Orders stated purposes. However, we also expect the Central Coast Water Board to give fair and due consideration to proposed third party groups in good faith to develop viable alternatives.”

Central Coast Water Board staff has considered numerous data reporting and public access to data proposals from the Coalition over the last 18 months-plus. Many of these Coalition proposals have been approved or are in development, and many of these are substantially different from how data is reported and publicly available for all other Central Coast Water Board-regulated entities, regulatory programs, or growers that conduct individual groundwater monitoring. In light of these facts, the Central Coast Water Board staff have exhibited fairness and provided due consideration to this and other proposals, approaching Coalition proposals open-mindedly. However, the issue covered within this staff report pertains to human health, as significant an issue as the Water Boards deal with, and we must balance our decision-making with respect to privacy against the real human health exposure occurring within the region due to unsafe drinking water and the right to safe drinking water as assured in statute (per Section 106.3[a] of California Water Code).

Coalition comment:

3. The Coalition Complies With Existing Orders and Provides the Central Coast Water Board With Sufficient Feedback: “The Coalition’s current reporting program complies with and is consistent with this new mandate, which was added to the Conditional Waiver by State Board Order WQ 2013-0101. Specifically, CCGC has promptly provided the Central Coast Water Board with exceedance information within 24 hours of receiving and validating groundwater sample results of domestic wells monitored by the CCGC. Further, the CCGC ensures that dischargers are complying with the 10-day notification to users of such domestic wells by promptly notifying its members with such wells within 36 hours of learning about exceedances, by providing its members with explicit direction regarding the need to notify users within 10 days, and by providing its members with notification information for their use that is consistent with directives contained in State Board Order WQ 2013-0101.”

Water Board Staff Response:

The Central Coast Water Board has responsibilities that include:

1. Ensuring beneficial uses are protected (including the municipal and domestic drinking water beneficial use for groundwater),
2. Protecting human health – through notification and well posting, and ultimately, the provision of replacement water

The Central Coast Water Board's cannot delegate this authority to others. However well-intentioned third-party submittals of aggregated, anonymous information are, they cannot serve

as the replacement for a written record or evidentiary-level documentation regarding notification necessary for the Central Coast Water Board to independently evaluate compliance.

Coalition comments:

4. **“Central Coast Water Board Does Not Have the Legal Authority to Request All Individual Notification Letters.** The Executive Officer’s authority for issuing specific conditions and requesting the information identified must be legally based on authority that otherwise exists under the law.” “Since reporting of individual notification letters is *not* required by the Conditional Waiver or State Board Order WQ 2013-0101, we must consider if the Executive Officer has other independent authority to require such information outside of such a requirement being adopted as part of the Conditional Waiver. The CCGC contends that no such authority exists for the requirement to provide individual notification letter as is being requested, and as is included in the December 17, 2013 letter.”

“A letter of notification is not directly related to investigation of water quality and, thus, the Central Coast Water Board has no legal justification under Water Code section 13267 for mandating that such letters be provided as a condition of approval of the CCGC’s work plan.”

Water Board Staff Response:

The Central Coast Water Board staff disagrees with the Coalition’s assertions. The notification letters are directly related to investigations of water quality - unsafe drinking water quality - and these letters are the result of an investigation into unsafe nitrate concentrations in drinking water wells and the subsequent notification of the users drinking the water from those wells. The Executive Officer has the authority to require members of the Coalition to submit the notification letters. Further, as discussed above, the Coalition has a responsibility to submit the notification letters to comply with the conditions of its approved Work Plans.

Coalition comments:

5. **“CCGC’s Understanding of December 17, 2013, Conditions And Sufficiency of Current Reporting Requirements.”** “Based on the tenor of conversation at the time, CCGC representatives understood the term “upon request” to mean that such notification letters could be requested by Central Coast Water Board staff for review and verification, but did not believe that it meant Central Coast Water Board staff could wait several months and then just request all notification letters for no apparent reason. Otherwise, why would staff have included the terms “upon request” after hearing and understanding the Coalition’s concerns, and understanding one of the central tenants of the Coalition’s program includes not providing individual member information that specifically ties domestic well exceedances with individual growers, companies, or landowners in a manner that would then be public.”

“Further, the CCGC fails to see how copies of individual notification letters provide the Central Coast Water Board with any more information than that which is already being provided. At this time, the CCGC provides the Central Coast Water Board with a template of the notification letter, sample results, the date the notification packets are mailed to members, as well as the delivery confirmation date if the well is a domestic well with an exceedance of the nitrate drinking water standard. All of this information combined, along with the ability of staff to review CCGC program documents at any time, clearly provides an appropriate level of reporting that ensures that agricultural order objectives and purposes are being achieved.”

Water Board Staff Response:

Central Coast Water Board staff has been forthcoming in discussing intentions, planned directions, and expectations for the Coalition on this and other issues. As an example, the March 21, 2014 letter details the direction Central Coast water Board staff plans to take with anticipated requirements, and proposes discussing them at a forthcoming March 2014 meeting with the Coalition. Additionally, Central Coast Water Board staff has initiated regularly scheduled meetings with the Coalition to try to improve communication. It is counterproductive to the interests of the Central Coast Water Board to not be forthcoming on the “on demand” component of the Work Plan approval conditions associated with submittal of notification letters. If the Coalition were uncertain or even disapproving of the condition in its Work Plan Approval letters, it should have sent letters and or filed a petition with the State Board.

The Coalition’s states that Central Coast Water Board understood the tenant that no “individual member information specifically tying domestic well exceedances with individual growers, companies, or landowners in a manner” that would be provided to the Water Board or made public. Although this assurance may have been provided during member recruitment, Central Coast Water Board staff has consistently counseled that they cannot agree with the Coalition’s suggested strategy of assuring members complete confidentiality with respect to notification letters and follow up actions. This is documented in the March 21, 2014 letter (Attachment 5, Page 3, Item 1.c).

Responses for the comments pertaining to need for this information are covered in Central Coast Water Board staff responses to Coalition Comments Nos. 2 and 3, above.

Coalition comments:

6. **Direct Grower Information Related to Follow-up Actions.** “...the CCGC does not believe it appropriate or legal for Central Coast Water Board staff to mandate that the CCGC provide” individual grower information related to follow up actions taken if a domestic well had an exceedance of the nitrate drinking water standard. “The December 17, 2013 letter itself only requests that the CCGC provide a summary of follow-up actions taken by its members. Nowhere does the December 17, 2013 letter state that the CCGC must provide a list of individual members with identification of specific follow-up actions taken by individuals. With respect to requiring a list of Coalition members that have not provided follow-up action information or who have not taken follow-up actions, the Coalition contends that release of such information is inappropriate because all of this information is being provided voluntarily. Further, and for the same legal reasons discussed above, there is no legal authority for the Central Coast Water Board to mandate that the CCGC provide this information.”

Water Board Staff Response:

Central Coast Water Board staff does not agree with the Coalition’s assertion that releasing information on members that have taken no action is not required or appropriate. The Work Plan and the Work Plan Approval letters do not require individual grower details on follow up actions. The Central Coast Water Board agrees with the Coalition that all follow up actions are being taken voluntarily, but this does not mean that the Central Coast Water Board cannot obtain a list of individuals in the Coalition that are not undertaking follow up action,

Central Coast Water Board staff responses to comments about our legal authority to mandate the Coalition to provide a list of members who have not provided information to the Coalition on follow up actions taken can be found in Water Board Staff Response to comments Nos. 3 and 4, above.

Coalition comments:“The CCGC’s Proposed Next Steps”

“Even though the CCGC contends that the Central Coast Water Board cannot mandate reporting of the type of information identified, the CCGC does propose the following actions in an effort to cooperate with the Central coast Water Board and to further the purposes and objectives of the agricultural orders.”

7. “The CCGC, as already stated, is willing to provide Central Coast Water Board staff the opportunity to review and audit all information submitted to the CCGC at the CCGC’s home offices, or at another location agreed upon by the parties. Central Coast Water Board staff may not copy or take with them confidential documents, but they may review and audit the documents to verify the authenticity of the information provided to them from the CCGC.”

Water Board Staff Response:

Central Coast Water Board staff does not agree with this suggested action as it is noncompliant with the Coalition’s Approved Work Plan conditions. Additionally, this restricts the Central Coast Water Board staff from ensuring notification and well posting are ongoing, and determining adequacy of replacement water in the future, thereby restricting staff’s ability to ensure protection of human health. If the Central Coast Water Board does decide to proceed with this suggested alternative, the Coalition’s approved Work Plans will need to be amended.

Coalition comments:

8. “The Coalition is willing to add a penalty of perjury statement to all of its submittals to the Central Coast Water Board. Although the CCGC contends that all information submitted is accurate and true to the best of its knowledge, the CCGC is willing to take the extra step and submit information that is currently being reported accompanied with the following statement:

*I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel or represented Members properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for knowingly submitting false information, including the possibility of fine and imprisonment for violations.”*

Water Board Staff Response:

The proposed inclusion of a penalty of perjury statement does not represent an adequate or reasonable substitute for submittal of the notification letters as required under the Work Plan Approval letters, and tells us nothing about the status of replacement water or notification.

Coalition comments:

9. “The CCGC will work directly with the various county health departments to provide them with the appropriate level of information that is needed to ensure protection of public health.”

The Coalition also indicates it will survey its membership to find out if they are willing to have the Coalition convey similar individual information in a table format that identifies individuals only by their Coalition field point name if they are in the north, and by their global

identification number if they are in the south. Examples of the table and format are attached to the Coalition's response letter.

Water Board Staff Response:

Similar to our comment above, these proposed actions do not represent adequate substitutes for submittal of notification letters and a list of dischargers not conducting follow up actions, as required by the Coalition's Work Plans and would not allow the Central Coast Water Board to ensure the adequacy of efforts to protect public health.

Additionally, over the last several years, Central Coast Water Board staff has written letters to each of the county health agencies in the region. The letters notified the county health officers and the directors of the severe groundwater impairments due to nitrate, along with unsafe drinking water conditions encountered in thousands of domestic wells and hundreds of small system wells (comprised of two to fourteen connections), and the lack of widespread public notification to these residents. Response to this effort ranged from nothing to a letter thanking us for the information, but very little in the way of commitment to action. As follow up to this, the former Executive Officer (Roger Briggs) and former Central Coast Water Board Chair (Jeffrey Young) met with representatives from several counties (i.e., county supervisors, county chief executives/executive officers, etc.) to raise awareness and "ensure protection of public health."

Central Coast Water Board appreciates the Coalition's pledge to work with the county health departments, and encourages its staff to follow through with the commitment, regardless of the outcome on the drinking water notification letters.

**Central Coast Water Board Staff Analysis:**

The documentation required in the Work Plan Approval letter and further outlined in our March 21, 2014 letter will provide necessary transparency and credibility to both the Central Coast Water Board's and the Coalition's notification processes in terms of documenting that timely notification and ongoing and adequate replacement water actions are taking place. The Central Coast Water Board cannot delegate this responsibility to maintain a written record, or its authority to protect public health, to a third party, particularly on an issue as sensitive as safe drinking water. The Central Coast Water Board also cannot rely on anecdotal, aggregated, or anonymous information or records regarding this public health/drinking water issue with respect to providing notification letters. Central Coast Water Board staff must maintain and frequently access appropriate written records, as we currently do in our process for growers that conduct individual groundwater monitoring; this will enable us to follow up with replacement water sites to verify that supply is adequate, both now and in the future as residency/populations change. Additionally, information provided through this documentation will assist Central Coast Water Board staff in identifying and informing domestic well users relying on adjacent domestic wells that are not on properties enrolled under the Ag Order in areas where well water can be reasonably predicted to be unsafe.

Our request for copies of the drinking water exceedance letters and modification of the Coalition's existing drinking water notification protocol, as detailed in our March 21, 2014 letter, is necessary to provide clarity and ensure that our respective drinking water notification protocols are as credible and transparent as possible, given the significance of this human health issue.

The requirement that copies of the individual notification letters sent to coalition members informing them of the exceedance of the drinking water standards be submitted at the request of the Executive Officer is made in accordance with Condition No. 3. of the December 17, 2013 Work Plan Approval letter for the northern counties, and Condition 5.c. of the December 18, 2013 Work Plan Approval letter for the southern counties. These Work Plan approval conditions

authorize the Central Coast Water Board to request copies of the exceedance letters at any time.

Furthermore, our request is consistent with the State Board Order [Part A6, Page 34, 3<sup>rd</sup> paragraph], which states:

*“... The cooperative groundwater monitoring program must report results consistent with individual groundwater reporting defined in part 2.B, or report results in a manner that is consistent with that approved by the Executive Officer in his or her approval of the cooperative groundwater monitoring proposal.”*

This paragraph indicates that drinking water exceedance reports must be reported in a manner that is consistent with (or equivalent to) the reporting protocol for either the individual exceedance notification protocol or as approved by the Executive Officer (i.e. the approved Work Plans). Consistent with the direction of the Central Coast Water Board at its January 30, 2014 Board meeting, staff's actions have been to align these two notification protocols. When the Coalition complies with the requirements of the Work Plan Approval letters and the guidance in the March 21, 2014 letter, these notification protocols will be equitable and aligned.

Also from the State Board's Order, Part A.7, Page 34, 1<sup>st</sup> paragraph, was amended as follows:

*7. “If a discharger conducting individual groundwater monitoring or a third party conducting cooperative groundwater monitoring determines that water in any well that is used or may be used for drinking water exceeds or is projected to exceed 45 mg/L of nitrate as NO<sub>3</sub> (or 10mg/L of nitrate + nitrite as N), the discharger or third party must provide notice to the Central Coast Water Board within 24 hours of learning of the exceedance or projected exceedance. For wells on a Discharger's farm/ranch, the Central Coast Water Board will require that the Discharger notify the users within 10 days. For all other wells, the Central Coast Water Board will notify the users promptly.”*

Recognizing the potential severity and urgency of the health issues associated with drinking groundwater containing unsafe concentrations of nitrate, we must require that the Coalition notify us when a well is identified as exceeding the MCL for nitrate, and that the Discharger (growers) notify users of the well in a timely manner. Considering that the Coalition is functioning as an intermediary on behalf of the Dischargers, it is the Coalition's responsibility to provide “appropriate verification” that the users of the well have been properly notified to the satisfaction of the Executive Officer as defined in the Work Plan Approval letters. The Work Plan Approval letters provide requirements and the March 21, 2014 letter provides requested changes to the Coalition's drinking water notification, documentation, and reporting process. Compliance with these provides both documentation and confidence that all appropriate initial actions have been taken to protect public health for wells with drinking water exceedances, as required by State Board Order WQ-2013-0101. Additionally, implementation of these changes will ensure that the Coalition's drinking water notification process is consistent with the notification process that is presently followed by the Central Coast Water Board staff for growers who individually comply with groundwater monitoring requirements, in addition to complying with the direction provided by the Water Board itself in January 2014.

#### **The Cost of Re-Debating Issues and Lower Transparency:**

Over the last six months, the Central Coast Water Board, its staff, representatives from the Coalition, and staff from environmental and environmental justice groups have re-debated several issues that were previously decided by the Executive Officer under his existing authority. Some recent examples of issues include:

- Sampling schedule for Coalition groundwater monitoring,

- Groundwater monitoring analytical parameters required in the monitoring and reporting program (MRP);
- Appropriate blurring of well locations; and most recently
- Reporting of notification information associated for Coalition members' domestic wells that provide unsafe drinking water.

Each of these items had previously been resolved, although the outcome was not to the satisfaction of the Coalition. This re-debating of issues is enormously inefficient from a business perspective, drawing resources away from the jobs of implementing the order and restoring water quality and beneficial uses.

Much of the re-debating has focused on reducing availability of information provided to the Central Coast Water Board and/or the public. This effort towards reducing information transparency/availability has added significantly to the time draw on resources from all sides of this discussion. In addition to the inefficiency outlined above, because of this shift towards reduced information transparency/availability, substantial Central Coast Water Board staff time, otherwise dedicated toward dealing with unsafe domestic drinking water wells, goes toward responding to the frequent Public Records Act Requests (PRARs) either in crafting response letters or in evaluating emails, letters, and other documents to determine if the documents 1) are responsive to the PRARs and at the same time, 2) comply with the privacy rules we have created for data specific to agriculture in general and/or the Coalition.

Creating a lower information transparency/availability program for the Coalition reflects Central Coast Water Board staff's willingness to work open-mindedly with the Coalition, but has proven very costly in terms of staff resources spent on working through PRARs, preparing for Board meetings to re-debate issues, and in developing records privacy protocols that differ from how we handle all other dischargers (i.e., oil companies, industrial facilities and spills, landfills, wastewater treatment plants, small businesses such as dry cleaners, gas stations, etc.). In these other types of businesses, dischargers do not have unique rules providing diminished access to records for either the Central Coast Water Board staff or the public beyond that which is provided for drinking water well locations. Creating special rules for a subgroup (i.e., Coalition members) within any specific industry, or within the regulated community as a whole, initiates a number of imbalances in the playing field for those electing individual groundwater monitoring, as well as raising a fairness issue for those other entities regulated by the Central Coast Water Board.

Additionally, at the time of the Agricultural Order adoption, one of the reasons given for supporting a coalition option was that this would save Central Coast Water Board staff time. The Coalition's June 10, 2014 letter reiterates this point, stating,

“All the work done by the CCGC benefits the Central Coast Water Board, and allows the Central Coast Water Board to focus its limited staff resources on individuals that are not participating in the CCGC's cooperative monitoring program. This provides the Central Coast Water Board with a significant advantage in managing its workload.”

Recognizing the previously stated benefits of a coalition and the work this Coalition has completed to date, the workload savings to the Central Coast Water Board has not been realized. On the contrary, interacting with the Coalition has proven far more expensive in terms of Central Coast Water Board staff time than comparable individual monitoring for the same requirements. Central Coast Water Board staff hopes that at some point in the future, management of the Coalition work will become as or more efficient with respect to Central

Coast Water Board staff resources as that spent on growers conducting individual groundwater monitoring.

To provide a framework for understanding distribution of groundwater monitoring in this discussion of Central Coast Water Board staff efficiency, the following table shows the number of wells sampled by individuals and by coalitions in each county within the region. Central Coast Water Board ran this report in late June, and it should be noted that we expect the number of wells in the “Coalition” row to increase for some of the counties as sampling continues in these areas.

County	Total Wells	Monterey	San Luis Obispo	Santa Barbara	San Benito	Santa Cruz	Santa Clara	Ventura
Total Wells	2746	564	1090	661	144	143	138	6
Individual Monitoring	1822	365	891	313	106	89	55	3
Coalition*	924	199	199	348	38	54	83	3

\* Data Provided by Coalition on July 15, 2014.

While the table above shows that individual monitoring comprises approximately sixty-six percent (66%) of the total wells sampled, staff resources expended on growers electing individual monitoring is much less than expended on the Coalition for the reasons described above.

In the next iteration of the Agricultural Order, Central Coast Water Board staff will likely recommend that a significant amount of information associated with the Irrigated Lands Regulatory Program, including groundwater quality information, be publicly available via GeoTracker or other online access method consistent with other regulatory programs (i.e., underground storage tanks, land disposal, site cleanup program, etc.) including retaining appropriate blurring of well locations.

## CONCLUSION

The Central Coast Water Board staff cannot confirm to the Central Coast Water Board that notification of unsafe drinking water has occurred and replacement water has and continues to be provided in adequate quantities if they do not have reasonable access to the notification information, consistent with the State Water Board’s order, the expressed direction of the Central Coast Water Board, and the Work Plans approved through the December 17, 2013 and December 18, 2013 letters. The Coalition suggests that the Executive Officer does not have the authority to require the notification documentation; however, the Coalition did not express that opinion, nor challenge the requirement via the review process to the Central Coast Water Board, for either of the two Work Plan Approval letters.

Privacy is something to be respected and fairly considered, but in the State of California,

“It is hereby declared to be the established policy of the state that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption...” (Section 106.3(a) of the California Water Code).

The subsequent Section 106.3(b) states:



“All relevant state agencies, including the department, state board, and the State Department of Public Health, shall consider this state policy when revising, adopting, or establishing policies, regulations, and grant criteria when those policies, regulations, and criteria are pertinent to the uses of water described in this section.”

The information required under the Work Plan Approval letters helps to both 1) ensure this right is being met by providing reasonable access to information necessary for Central Coast Water Board staff to provide proof that notification has taken place and adequate documentation to conduct follow up determination of ongoing provision of replacement water in the future, and 2) provide information for those that depend on drinking water from wells that are not a part of the coalition’s membership in areas where it is reasonable to assume groundwater is unsafe to drink. The Central Coast Water Board staff’s obligations to ensure this right supersede the desire or the Coalition’s promise to provide privacy in this case.

Central Coast Water Board staff resources are limited and best spent on implementation of the Irrigated Lands Regulatory Program and not on the re-negotiating and reporting on these issues. The existing Work Plan Approval conditions were discussed and negotiated prior to final work plan approval. It is not appropriate or necessary to change the approval conditions in the middle of the implementation phase. Furthermore, the notification process currently used for growers that conduct individual groundwater monitoring is well established and working well and efficiently. As mentioned, at the time of this writing, Central Coast Water Board staff has issued over 102 drinking water notification letters to growers that conduct individual groundwater monitoring and the vast majority responded promptly and provided the necessary information. A copy of our notification template letter for growers conducting individual groundwater monitoring with domestic wells that exceed the nitrate MCL is attached for your reference (**Attachment 4**).

#### **SUMMARY FOR 13B – ADDRESSING CRLA’S LETTER**

The purpose of this item is to provide Central Coast Water Board review, as requested in a July 3, 2014 correspondence submitted by the California Rural Legal Assistance, Inc. (CRLA) (**Attachment 6**). Specifically, the CRLA letter requests discretionary review from the Central Coast Water Board with regards to two aspects of the Central Coast Groundwater Coalition’s (Coalition) groundwater monitoring program:

- 1) The Coalition’s notification process for wells that have exceeded the nitrate Maximum Contaminant Level (MCL), and;
- 2) The manner in which the groundwater testing results of the Coalition will be disclosed to the public.

The Central Coast Water Board is reviewing the first aspect of CRLA’s request in this item and the second aspect will be reviewed at a later date, likely the November 2014 Central Coast Water Board meeting.

This staff report presents Central Coast Water Board staff’s evaluation and recommendation concerning CRLA’s letter and associated requests. Central Coast Water Board staff recommends **No change to existing Work Plan approval conditions, and to require the Coalition to make its reporting of drinking water exceedances and associated follow up equivalent to the Water Board’s notification process for growers that conduct individual monitoring and have domestic well nitrate exceedances.** The rationale for staff’s recommendation is included below.

**DISCUSSION**

Following is a brief discussion of CRLA's specific reasons for requesting the alignment of the Coalition's drinking water notification process with Central Coast Water Board's individual monitoring notification process.

CRLA Comments:

The CRLA letter includes the following statements concerning the Coalition's approved work plan and drinking water notification process:

"This notification process is insufficient for two reasons:

- 1) The workplan does not affirmatively require any confirmation that users have been notified that the groundwater from their well is unfit for human consumption, and;
- 2) The notification process does not affirmatively inform the Regional Board staff of particular wells that contain nitrate MCL exceedances."

The CRLA letter requests that the Central Coast Water Board ensure that the Coalition's Drinking Water Notification Process is equivalent to the notification process that the Central Coast Water Board implements for individual dischargers.

The CRLA letter states,

"We request that the Board review the coalition's notification process for its members to ensure that their notification procedure contains a written confirmation component by which the Regional Board can hold the coalition accountable for the work it lays out within their workplan."

"The Regional Board can only ascertain if CCGC notification is effective or not only if the Board receives written confirmation that both the grower and all users of the water supply are informed of nitrate exceedance."

"...it remains critical that the notification process implemented by CCGC be as robust as the notification process implemented by the Regional Board Staff."

Furthermore, CRLA also requests that Central Coast Water Board ensure that the Coalition informs the Central Coast Water Board of the particular wells that have an exceedance.

The CRLA letter states,

"The coalition currently does not notify the Regional Board of the specific wells which have nitrate exceedances above the MCL. This is a serious deficiency. According to coalition presentations, the coalition only provides a summary table of wells tested that exceed the nitrate MCL but fails to provide information regarding which wells specifically exceed the drinking water standard."

"If the Regional Board cannot discern which wells have specific nitrate exceedance in the way that it can under the individual monitoring program, how can the Regional Board properly assess priority areas of known nitrate contamination of drinking water wells?"

"The coalition must bring its notification process into alignment with the individual monitoring program with regards to its notification method to members and well users, and also to the Regional Board itself."

Central Coast Water Board Response:

Based on staff's evaluation of CRLA's specific request concerning the Coalition's drinking water notification process, Central Coast Water Board staff agrees with CRLA's contention that the Central Coast Water Board needs confirmation of the notification letters in order to ensure that public health is protected – which is the same process that we use for dischargers conducting individual monitoring.

The first portion of this staff report, referenced as 13A, addresses Central Coast Water Board staff's evaluation and includes detailed responses to comments regarding aligning of drinking water notification processes and identifying exceedance well locations. Detailed responses concerning the alignment of drinking water notification processes and well location disclosure issues can be found in Water Board Staff Responses to comments Nos. 2 and 3 to part 13A of this item, above.

**RECOMMENDATION FOR ITEM 13**

Central Coast Water Board staff recommends **No change to the existing Work Plan approval conditions, and to require the Coalition to make their reporting of drinking water exceedances and associated follow up equivalent to the process for growers conducting individual groundwater monitoring, as outlined in our March 21, 2014 letter.**

The Work Plan approval conditions authorize the Central Coast Water Board to request copies of the individual exceedance letters in order to confirm that the Coalition members have notified the well users of unsafe drinking water, as well as to allow verification that replacement water is adequate and continues to be so in the future. Finally, it is our understanding that if Central Coast Water Board directs staff to deviate from the present Work Plan approval conditions, this would require a modification to the Work Plan approval letter (i.e., re-issuance of a revised approval letter). Central Coast Water Board staff recommends against this direction for the reasons stated above in 13A and 13B.

**ATTACHMENTS**

- Attachment 1 - Central Coast Groundwater Coalition's June 10, 2014 letter
- Attachment 2 - Central Coast Water Board's Conditioned Work Plan Approval letter to the Coalition, dated December 17, 2013 for the Northern Counties
- Attachment 3 - Central Coast Water Board's Conditioned Work Plan Approval letter to the Coalition, dated December 18, 2013 for the Southern Counties
- Attachment 4 - Central Coast Water Board's Drinking Water Notification Template
- Attachment 5 - Central Coast Water Board's March 21, 2014 Notification Guidance letter to the Coalition
- Attachment 6 - California Rural Legal Assistance, Inc. (CRLA's) July 3, 2014 letter

# **Exhibit GG**

October 9, 2014



Mr. Kenneth A Harris Jr., Executive Officer  
Central Coast Regional Water Quality Control Board  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401-7906

**Re: Central Coast Groundwater Coalition Proposal for Providing Member Information to the Central Coast Regional Water Quality Control Board**

Dear Mr. Harris:

The Central Coast Groundwater Coalition (CCGC) has been working diligently with Central Coast Regional Water Quality Control Board (Central Coast Water Board) staff, as directed by the Central Coast Water Board at its July 31, 2014 Board Meeting. Accordingly, we have been working cooperatively with your staff to develop a method by which they can efficiently associate domestic wells with nitrate concentrations above the maximum contaminant level (MCL) to a landowner/operator who is a member of the CCGC.

The CCGC submits the following proposal for consideration in response to the concerns expressed by Central Coast Water Board members regarding staffs need to efficiently verify compliance with certain requirements contained in Order R3-2012-0011, as modified by State Water Resources Control Board Order WQ 2013-0101 (collectively referred to hereafter as "Conditional Waiver"). The CCGC believes that this proposal provides Central Coast Water Board staff with necessary information in an appropriate format that allows them to efficiently associate domestic wells with landowner/operators so that they can verify compliance with Conditional Waiver groundwater monitoring and related notice requirements. Further, CCGC believes that providing the information to the Central Coast Water Board using the proposed approach allows for a certain level of protection to alleviate security and privacy concerns expressed by CCGC members. Our members concerns are specifically related to personal privacy and biosecurity issues as well as protection for individuals that work and/or live onsite at member's facilities. The CCGC proposes that this approach be used in lieu of submitting all exceedance notification letters to the Central Coast Water Board.

## I. Summary of Current Process

To provide the proper context for the CCGC proposal described below, the following is a summary of the CCGC's current notification process to its members, and the information that is currently reported to the Central Coast Water Board. The CCGC notifies its members within two business days of any nitrate exceedance found in a well after groundwater quality data have been received by CCGC and reviewed for accuracy. This notification is in writing and sent via Federal Express. The CCGC has worked closely with Central Coast Water Board staff to ensure that the content of the notification letter complies with the Conditional Waiver and provides the landowner/operator with appropriate instruction for actions that they must subsequently take. Specifically, the notification letter from CCGC to the member instructs the landowner/operator of their obligation to inform residents that may be using the water for domestic purposes of the potential health effects associated with consuming the water. The CCGC notification directs the landowner/operator to share the notice with all other individuals who drink the well water (posting of notice and distribution of notice). The CCGC then asks that the member respond to the CCGC in writing<sup>1</sup> of any additional follow up actions taken (i.e., actions beyond providing notification of health concerns) that have occurred previously or as a result of finding that the domestic well exceeds the drinking water standard for nitrate (e.g., supplying an alternative source of drinking water or installing treatment devices).

In addition to notifying its members of their obligations, the CCGC notifies Central Coast Water Board staff of nitrate exceedances found at all wells in reports called "Exceedance Reports". For wells monitored as part of the Work Plan for the Northern Counties, the Exceedance Report includes a well identifier ("Field Point Name"), column for well use type ("Field Point Class"), Sample Date, Nitrate Result, Water Quality Objective (WQO) (flag indicating if the concentration is above the MCL), Notification Date (date that the member was notified) and Notification Confirmation Date (date that the member confirmed that they received notification; only tracked for domestic wells with exceedances). The Field Point Name in the exceedance report is associated with the CCGC Global ID<sup>2</sup> where data are stored within GeoTracker.

A decision was made by the CCGC Board to take on the responsibility of gathering exceedance notification follow-up information from members. This decision was made following the December 2013 Central Coast Water Board meeting where Board members directed staff to follow-up with CCGC members who had received nitrate exceedance notifications and determine what action had been taken to correct the problem. All information given to CCGC related to replacement water actions has been reported to the Central Coast Water Board in an aggregated summarized format. The aggregated summary lists the replacement water action taken by members. To date, 100% of CCGC members have

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<sup>1</sup> CCGC's process for collecting follow-up information was originally informal as to match Central Coast Regional Water Board staff's process through emails and phone calls with members. Written documentation began on February 18, 2014, in response to comments made at the January 2014 Central Coast Water Board meeting.

<sup>2</sup> Data uploaded to GeoTracker for monitoring completed as a part of the Work Plan for Northern Counties are associated with a Coalition Global ID (AGL100000001) as opposed to the ranch specific Global ID on the individual landowner/operator's eNOI.

responded indicating that replacement water action was taken. In many cases, such action was taken years ago prior to adoption of the Conditional Waiver.

## **II. Summary of Proposed Approach for Supplemental Information**

To assist Central Coast Water Board staff in their ability to efficiently identify the landowner/operator associated with the wells included in exceedance reports, the CCGC proposes to submit a supplemental list of information, which will include the ranch-specific Global ID and the associated Field Point Name. Central Coast Water Board staff rely on these ranch-specific Global IDs for non-CCGC members, thus they are familiar with using them to ensure compliance with groundwater monitoring and notification requirements. By submitting in one report a list of all wells monitored under the CCGC Work Plan for Northern Counties and the associated ranch specific Global ID, Regional Board staff can quickly and efficiently relate any well nitrate concentration to eNOI information including ranch, landowner/operator and address.

A key component of this proposed approach is that the Field Point Name in existing CCGC exceedance reports can be associated with the Field Point Name in the supplemental list which is connected to a ranch specific Global ID. This will enable Central Coast Water Board staff to verify compliance with the terms of the Conditional Waiver (groundwater monitoring and reporting components) by contacting the landowner/operator associated with the ranch and listed on the eNOI. In addition to providing the supplemental list, the CCGC will amend its exceedance reports to include a brief description of follow up actions by individual well. Please note that because this is a change from the current, aggregated format, we will be seeking and encouraging member approval to share this information individually. If they do not approve, information in the amended exceedance report will indicate which members did not provide that specific information. Although this proposed approach will provide the Central Coast Water Board staff the tools necessary to contact individuals directly should extenuating circumstances necessitate, the CCGC encourages staff to continue working through the CCGC to obtain additional information regarding nitrate exceedances.

With respect to the status of monitoring efforts, monitoring under the CCGC Work Plan for Northern Counties was completed on August 28, 2014. Further, 100% of exceedance notifications have already been delivered to members in the three different geographic areas (Salinas, Pajaro, Gilroy/Hollister). The CCGC will submit an Individual Global ID List as a pdf for each of the wells monitored within each geographic area. To ensure that Regional Board staff have received the associated individual Global ID for each well monitored, the CCGC will submit a full supplemental list described in this proposal on March 15, 2015 for all wells monitored under the CCGC Work Plan for Northern Counties.

## **III. Alternatives to this Proposed Approach**

The CCGC understands that Central Coast Water Board staff will put before the Central Coast Water Board another alternative, which is to require the CCGC to submit a copy of every exceedance notification letter sent to CCGC members. We understand that Central Coast Water Board staff


considers this as a viable option to assist them in their endeavors because the exceedance notification letters include member information such as name and well location by ranch, which would help Central Coast Water Board staff identify the landowner/operator. However, the CCGC cautions against this approach. In many cases the CCGC member is not the landowner/operator. The CCGC proposal to submit a supplemental list by each geographic region connects an individual well nitrate concentration more directly to the landowner/operator through their eNOI. The CCGC proposed approach ensures that Central Coast Water Board staff can more efficiently identify members based on eNOI information.

As we detailed in our letter to the Central Coast Water Board in late July 2014, we and our members have significant concerns with providing carbon copies of the exceedance letters issued to our members to the Central Coast Water Board. Requesting all of these letters goes against the basic agreements of our program with the Central Coast Water Board. We believe our offer to provide an off-site audit of these documents at Central Coast Water Board's request, as well as providing this new document, will negate the Central Coast Water Board's need for these letters. We expect that individual letters will not need to be requested except in extraordinary instances, and in that case only specific letters should be requested that pertain to a situation for which there is no other way for the CCGC or member to substantiate compliance.

#### **IV. Conclusion**

The CCGC believes that it can efficiently and effectively work with its members to ensure compliance with the groundwater monitoring and related terms of the Conditional Waiver by conducting monitoring, assisting members with notification requirements and disseminating essential information to increase understanding of public health concerns. The CCGC submits all groundwater quality results to GeoTracker and communicates regularly with Central Coast Water Board staff regarding status of monitoring, locations of wells, nitrate exceedances, and follow up actions. The proposed approach adds to the transparency of the existing CCGC nitrate exceedance notification process and ensures that Central Coast Water Board staff have all essential information for verifying results, and for ensuring compliance with Conditional Waiver terms related to groundwater monitoring.

Sincerely,



Parry Klassen  
Executive Director  
Central Coast Groundwater Coalition