

**Regional Water Quality Control Board  
Central Valley Region  
Board Meeting – 30/31 July 2015**

**FINAL Response to Written Comments for Waste Discharge Requirements General Order for  
Growers that are Members of a third-party group within the Grassland Drainage Area  
(Groundwater Discharges)**

**Order Number R5-2015-0095**

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The California Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board or “Board”) has provided opportunity for the public to submit written comments on the Tentative Waste Discharge Requirements General Order for growers that are members of a third-party group within the Grassland Drainage Area (GDA Order). The GDA Order is a component of the Central Valley Water Board’s Irrigated Lands Regulatory Program (ILRP). This document contains written responses to comments that were timely received on the Tentative GDA Order.

To better inform the development of the Tentative GDA Order, the Board circulated an initial draft of the GDA Order for public review from 31 October 2014 to 1 December 2014, and received oral comments on the initial draft at a public workshop conducted on 6 February 2015. Board staff considered these comments when it developed the revised version of the Tentative GBP Order that is currently before the Board.

The Board circulated the Tentative GBP Order for public comment from 8 May 2015 through 22 June 2015. Three comment letters were received by the deadline; the letters were submitted by:

1. [San Luis & Delta-Mendota Water Authority, Grassland Basin Drainers](#)
2. [US Fish and Wildlife Service](#)
3. [California Water Impact Network](#)

Several of the letters addressed the same common issues. This document provides the Board staff’s response to the common issues first, under the heading “General Responses”, and then provides Board staff’s response to individual comments under the heading “Specific Responses.” Based on the comments submitted, Board staff has made minor changes to the Tentative GDA Order, including changes to improve clarity and to fix typographical errors. Where minor changes have been made to accommodate commenters, the comments are not noted in this response.

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## **GENERAL RESPONSES**

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### **GENERAL ISSUE 1: Selenium should be added as a constituent to be monitored in groundwater**

Commenters recommended that selenium be monitored in the groundwater, as it is present in the groundwater, especially given that the adjacent wetlands increasingly rely on groundwater for water supply.

**RESPONSE:** Commenters correctly point out that selenium occurs in the groundwater, as soils in the area are of marine origin, fine-textured, saline, and naturally high in selenium. The water quality of the shallow groundwater underlying the Grassland Drainage Area (GDA) is well represented by the water quality of the tile drain water. The annual average selenium concentrations are in the range 40-70 µg/L in the tile drain water monitored at the start of the Grassland Bypass Channel, which conveys collected tile drainage to Mud Slough (north). The *Groundwater and Soils Technical Report* (Appendix D to the GBP 2009 EIS/EIR) states that the groundwater discharge in the GDA is predominantly by tile drains and water table evaporation. Observation well data show that groundwater movement is upward, towards the

drainage systems. Therefore, monitoring of tile drain water that is required under the Order adequately characterizes shallow groundwater and may be considered groundwater monitoring. The Order has also been revised to include monitoring of selenium in groundwater that is used for wetlands supply.

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## SPECIFIC RESPONSES

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### Comment Letter 1 – Grassland Basin Drainers

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#### 1-1. Allow 90 days for notification to growers

The Tentative GDA Order, Page 19, paragraph IV.C.7. and Table 1, Page 32: states growers should be notified of the program within 30 days of Order approval. Unlike other ILRP coalitions, there is no membership list for the Grassland Area farmers. Additional time is necessary to create this list and notify growers.

**Response:** The request for additional time is reasonable given that there is no membership list and that time is needed to create the list; the Tentative Order was revised, allowing 90 days to notify growers of the requirements upon the adoption of the Order.

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### Comment Letter 2 – United States Fish and Wildlife Service

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#### 2-1. Include selenium as a constituent to be monitored in groundwater

The GDA is in close proximity to public and private wetlands in the Grassland Ecological Area. The potential is high that GDA discharges to groundwater could affect well water used for wetland water supplies; groundwater monitoring for selenium should be included in the GDA WDR.

**RESPONSE:** See General Response 1.

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### Comment Letter 3 – California Water Impact Network

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#### 3-1. Monitoring program should include selenium in groundwater

Selenium monitoring should be required in an area known to generate large volumes of seleniferous agricultural discharges to groundwater and surface water.

**RESPONSE:** See General Response 1.

#### 3-2. Water quality objective for selenium in groundwater should be 2 µg/L

Wells in the Grasslands area provide groundwater for wetlands, refuges and duck clubs. Therefore, groundwater quality should meet the existing selenium criterion for wetlands of 2 µg/L instead of the human consumption MCL of 50 µg/L selenium.

**RESPONSE:** The applicable numeric water quality objective for selenium in groundwater is dependent on the groundwater's beneficial use. In accordance with the Basin Plan, unless otherwise designated by the Board, all groundwater in the Region is considered suitable for municipal and domestic water supply (MUN), agricultural supply (AGR), industrial service supply (IND) and industrial process supply (PRO). The California Primary MCL of 50 µg/L for selenium is used to protect the MUN beneficial use.

Revising Basin Plan objectives and beneficial uses is outside the scope of this Order. However, to ensure that selenium levels in wetlands do not become a problem, the Order has also been revised to require monitoring of selenium for groundwater where the groundwater is to be used for wetland supply water.

3-3. Well monitoring in/around the San Joaquin River Improvement Project (Reuse Area)

The Reuse Area is a concentration and percolation basin where contaminated drainage water containing salt, selenium, boron and other constituents is applied to salt tolerant crops. This should be an area of concern and require comprehensive groundwater monitoring.

**RESPONSE:** The GAR must examine available information and help determine areas that will require monitoring, the type of monitoring, and the depth/location of monitoring wells.

3-4. The proposed GDA WDR should limit salt discharges

The GDA WDR continues to exacerbate downstream violations of salinity water quality objectives for various beneficial uses, and in some cases groundwater discharges can lead to surface water quality violations. The WDR should limit how much salt may be discharged to the aquifers and the San Joaquin River. The comment letter lists exceedances of the salinity objectives from 2013 to 2015 in the San Joaquin River at Vernalis, Old River near Tracy, Old River near Middle River and San Joaquin River at Brandt Bridge.

**RESPONSE:** All discharges to groundwater, including salt, are regulated by the Tentative GDA Order in accordance with applicable Basin Plan beneficial uses, and as specified in Section III.A on receiving water limitations. The Tentative Order's strategy for evaluating groundwater quality and protection will rely on the GAR (assessment of existing groundwater quality), the Management Practices Evaluation Program (evaluation of protectiveness of water quality management practices), and the Groundwater Quality Trend Monitoring Program (monitoring of long-term trends in groundwater quality). Specifically, the Management Practices Evaluation Program will determine whether discharge to groundwater meets water quality objectives, and if additional practices are required. The Order requires implementation of practices to ensure that discharges do not cause or contribute to exceedance of a water quality objective. Depending on the results of the evaluation, growers may need to implement practices to reduce salt discharges. Also, the CV-SALTS initiative is developing a salt and nitrate management plan with recommended objectives and implementation requirements to ensure long-term environmental and economic sustainability throughout the Central Valley. CV-SALTS recommendations will be vetted through a Basin Plan amendment process and elements that are adopted will be implemented through this Order and other ILRP orders to manage salt in a way that achieves beneficial uses in a sustainable manner.

While there may be the potential for groundwater discharges to affect surface water quality, the correlation between groundwater discharge and salinity issues in the San Joaquin River is unclear at this point. The GAR may provide additional information regarding any potential correlation. Additionally, the Basin Plan's salt and boron control program requires a groundwater control program for sources of salt discharges into the lower San Joaquin River be developed by June 2020 if water quality objectives in the lower San Joaquin are not being attained. The Order contains reopener language for Basin Plan amendments; the dischargers will be required to comply with any resulting changes (section IV.1).

With respect to the list of salinity exceedances in the San Joaquin River from 2013 to 2015, staff is only aware of two periods of salinity excursion above the water quality objective in 2015. The first was from 11 to 24 January, when EC reached 1,055  $\mu\text{S}/\text{cm}$ . The second was from 17 to 25 February, during which EC reached 1008  $\mu\text{S}/\text{cm}$ . However, the Salt and Boron Control Program in the Basin Plan does not require compliance during critically dry years until 2018. Since 2015 is identified as a critically dry year, the "exceedances" noted represent anticipated elevated concentrations and are still in compliance with the Salt and Boron Control Program.