16 September 2015

Joseph C. McGahan, Watershed Coordinator
Westside San Joaquin River Watershed Coalition
PO Box 2157
Los Banos, CA 93635

APPROVAL OF WESTSIDE SAN JOAQUIN WATER QUALITY COALITION'S GROUNDWATER QUALITY ASSESSMENT REPORT

Thank you for submitting the 16 March 2015 Westside San Joaquin River Watershed Coalition's (Coalition) Groundwater Quality Assessment Report (GAR), as required by the Waste Discharge Requirements General Order R5-2014-0002 (Order).

Based on the information in the submitted documents and the attached staff review, the GAR addresses the Order's main objectives to determine high and low vulnerability areas, establishes priorities within high vulnerability areas, and provides a basis for further workplan and management plan requirements. Based on the staff review, I am issuing final approval of the GAR.

Compliance dates associated with this approval are provided in Table 1.

If you have any questions or comments regarding this letter, please contact Sue McConnell at Sue.McConnell@waterboards.ca.gov or by phone at 916-464-4798.

Sincerely,

Original signed by

Pamela C. Creedon
Executive Officer

Attachment 1: Staff Review Memo for GAR

Table 1. Compliance dates associated with the conditional approval of the Westside San Joaquin Water Quality Coalition's Groundwater Quality Assessment Report (GAR) on 16 September 2015.

Due Date*	Requirements
16 November 2015	Comprehensive Groundwater Quality Management Plan
16 September 2016	Groundwater Quality Trend Monitoring Workplan
	Groundwater QAPP for Trend Monitoring
16 September 2016	Management Practices Evaluation Program Group Workplan
	Groundwater QAPP for MPEP
16 September 2020	Review, and confirm or modify vulnerability designations
	GAR update

TO: Sue McConnell, P.E.
Program Manager
Irrigated Lands Regulatory Program

Adam Laputz, P.E.
Assistant Executive Officer
Central Valley Water Board

FROM: Dana Kulesza
Engineering Geologist
Irrigated Lands Regulatory Program

Glenn Meeks, P.G.
Senior Engineering Geologist
Irrigated Lands Regulatory Program

DATE: 19 May 2015 [revised 1 September 2015]

SUBJECT: REVIEW OF THE 16 MARCH 2015 GROUNDWATER QUALITY ASSESSMENT REPORT FOR THE WESTSIDE SAN JOAQUIN RIVER WATERSHED COALITION

On 16 March 2015, the California Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) received the Westside San Joaquin River Watershed Coalition (Westside or Coalition) Groundwater Quality Assessment Report (GAR). The GAR provides the foundational information necessary for design of the Management Practices Evaluation Program (MPEP), the Groundwater Quality Trend Monitoring Program, and the Groundwater Quality Management Plan. The GAR was reviewed to determine compliance with requirements pursuant to section VIII.D.1 of Waste Discharge Requirements General Order R5-2014-0002 (Order), and section IV.A of Attachment B (Monitoring and Reporting Program) to the Order.

The objectives of the GAR are to:

- Assess all available, applicable and relevant data and information to determine the high and low vulnerability areas where discharges from irrigated lands may result in groundwater quality degradation;
- Establish priorities for implementation of monitoring and studies within high vulnerability and data gap areas;
- Provide a basis for establishing work plans to assess groundwater quality trends;
- Provide a basis for establishing management practices evaluation program workplans and priorities developed to evaluate the effectiveness of agricultural management practices to protect groundwater quality; and
- Provide a basis for establishing groundwater quality management plans in high vulnerability areas and priorities for implementation of those plans.

Staff recommends that the GAR be approved, as it meets the terms and conditions of the Order.

Table 1 provides descriptions of the required GAR components from the Order and MRP, and lists the section in the GAR that addresses each component.

Table 1. Components of the Groundwater Assessment Report

Item No.	Required Component	Section in GAR
GAR Objectives – MRP section IV.A.1		
1	Provide an assessment of all readily available, applicable and relevant data and information to determine the high and low vulnerability areas where discharges from irrigated lands may result in groundwater quality degradation.	Throughout
2	Establish priorities for implementation of monitoring and studies within high vulnerability or data gap areas.	Throughout
3	Provide a basis for establishing Monitoring Workplans developed to assess groundwater quality trends.	Throughout
4	Provide a basis for establishing Management Practices Evaluation Program (MPEP) Workplans and priorities developed to evaluate the effectiveness of agricultural management practices to protect groundwater quality.	Throughout
5	Provide a basis for establishing groundwater quality management plans in high vulnerability areas and priorities for implementation of those plans.	Throughout
Required GAR Components – MRP section IV.A.2		
6	Detailed land use information with emphasis on land uses associated with irrigated agricultural operations. The information shall identify the largest acreage commodity types in the third-party area, including the most prevalent commodities comprising up to at least 80% of the irrigated agricultural acreage in the third-party area. If the third-party manages the area through sub-watershed groups, the GAR information should be developed for each sub-watershed.	4
7	Information regarding depth to groundwater, provided as a contour map(s), if readily available. Tabulated and/or graphical data from discrete sampling events may be submitted if limited data precludes producing a contour map.	3
8	Groundwater recharge information, if readily available, including identification of areas contributing recharge to urban and rural communities where groundwater serves as a significant source of supply.	3
9	Soil survey information, including significant areas of high salinity, alkalinity and acidity.	2
10	Shallow groundwater constituent concentrations from existing monitoring networks (potential constituents of concern include any material applied as part of the agricultural operation, including constituents in irrigation supply water [e.g., pesticides, fertilizers, soil amendments, etc.] that could impact beneficial uses or cause degradation).	5
11	Information on existing groundwater data collection and analysis efforts relevant to this Order (e.g., Department of Pesticide Regulation [DPR], United States Geological Survey [USGS], State Water Board Groundwater Ambient Monitoring and Assessment [GAMA], California Department of Public Health, local groundwater management plans, etc.). This groundwater data compilation and review shall include all readily accessible information relevant to the Order on existing monitoring well networks, individual well details, and monitored parameters. For existing monitoring networks (or portions thereof) and/or relevant data sets, the third-party should assess the possibility of data sharing between the data-collecting entity, the third-party, and the Central Valley Water Board.	7

GAR Data Review and Analysis – MRP section IV.A.3		
12	Determine where known groundwater quality impacts exist for which irrigated agricultural operations are a potential contributor or where conditions make groundwater more vulnerable to impacts from irrigated agricultural activities.	5
13	Determine the merit and feasibility of incorporating existing groundwater data collection efforts, and their corresponding monitoring well systems for obtaining appropriate groundwater quality information to achieve the objectives of and support groundwater monitoring activities under this Order. This shall include specific findings and conclusions and provide the rationale for conclusions.	5
14	Prepare a ranking of high vulnerability areas to provide a basis for prioritization of work plan activities.	6
15	Describe pertinent geologic and hydrogeologic information for the third-party area(s) and utilize GIS mapping applications, graphics, and tables, as appropriate, in order to clearly convey pertinent data, support data analysis, and show results.	2, 3, and throughout
Groundwater Vulnerability Designations – MRP section IV.A.4		
16	The GAR shall designate high/low vulnerability areas for groundwater in consideration of high and low vulnerability definitions provided in Attachment E of the Order. The vulnerability designations will be made using a combination of physical properties (soil type, depth to groundwater, known agricultural impacts to beneficial uses, etc.) and management practices (e.g., irrigation method, crop type, nitrogen application and removal rates, extent of implementation, etc.). The third-party shall provide the rationale for proposed vulnerability determinations.	6
Other		
17	Section 7835 of the California Geologist and Geophysicist Act states that **"**All geologic plans, specifications, reports, or documents shall be prepared by a professional geologist or registered certified specialty geologist, or by a subordinate employee under his or her direction. In addition, they shall be signed by the professional geologist or registered certified specialty geologist or stamped with his or her seal, either of which shall indicate his or her responsibility for them."	Title Page