



January 31, 2020

Mr. Alfred Javier
Director of Environmental and Regulatory Compliance
Eastern Municipal Water District
P.O. Box 8300
2270 Trumble Road
Perris, CA 92572-8300

Re: Proposed Scope and Budget
Annual Best Management Practice and Groundwater Monitoring Reports
Conditional Waiver of Waste Discharge Requirement from Agricultural Operations
(CWAD) - San Jacinto Watershed

Dear Mr. Javier:

Daniel B. Stephens & Associates, Inc. (DBS&A) has prepared for Eastern Municipal Water District (EMWD) this proposed scope and budget for the second and third annual monitoring reports (2019 and 2020 reporting years) with the option for a fourth and more substantial monitoring report for the 2021 reporting year. These annual monitoring reports will be prepared for EMWD as the Administrator of the San Jacinto Coalition (Coalition) to meet the groundwater requirements of Santa Ana Regional Water Quality Control Board Order No. R8-2017-0023 (Order). Surface water requirements of the Order must be completed as an individual or through another coalition.

DBS&A is uniquely qualified to support EMWD on this important project. Members of the DBS&A team have successfully completed projects for EMWD, including the development of the Best Management Practices Plan and Water Quality Monitoring Program Plan (BMP & WQMPP) (DBS&A, 2018) and the first annual report (DBS&A, 2019). DBS&A has extensive knowledge of the San Jacinto groundwater basins through prior work in the region; has decades of experience working with the Santa Ana Regional Board, and routinely develops deliverables that meet their regulatory compliance requirements.

To maintain the continuity of the annual monitoring reports, DBS&A will continue to team with Land IQ. Land IQ is a private technology, research, and science-based consulting firm that specializes in integrating agronomic sciences with spatial sciences to address large-scale land management and landscape analysis challenges. Specifically, Land IQ integrates agronomic land-based sciences, remote sensing, GIS, and advanced data management to better understand agricultural management and production systems at the field-scale. Land IQ also builds specific, web-based interactive data management tools and solutions for the purposes of viewing results and dissemination of data.

In 2018, DBS&A/Land IQ worked with EMWD to develop the tools necessary for the Coalition's growers to comply with the CWAD through the following tasks:

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- Development of BMPs
- Development of a Data Management Tool (DMT) for grower reporting and administrative tracking
- Education of EMWD growers on how to utilize the DMT for fulfilling reporting requirements
- Assessment of BMPs on a Coalition and grower level

Through this work DBS&A/Land IQ became familiar with the farms in the Coalition, helped growers troubleshoot reporting challenges, and developed working relationships with regulatory staff. In addition to the work in the San Jacinto Watershed, Land IQ is intimately involved in the Sacramento Valley Water Quality Coalition in providing tools for five subwatersheds, covering more than 880,000 acres in order to comply with the Irrigated Lands Regulatory Program (ILRP) with the Central Valley Regional Water Quality Control Board.

The ILRP was initiated in 2003 to prevent agricultural runoff from impairing surface waters and adopted in 2012 by the Central Coast Regional Water Quality Control Board. This precedent setting regulatory program is likely to be adopted by all agriculture producing regions of the state within three years. Land IQ's knowledge and experience will help guide and prepare the Coalition to adopt the requirements of the ILRP.

Annual Monitoring Report Scope of Work

DBS&A will prepare annual BMP and groundwater monitoring reports to meet the groundwater requirements of the Order. Each annual monitoring report will consist of the following tasks:

- Project Management/Meetings
- Data Collection and DMT Updates
- Data Analysis and Reporting

Project Management/Meetings

This task includes meetings and teleconference updates with EMWD. For the purpose of this scope of work it is assumed that DBS&A and its sub-consultant will participate in monthly technical meetings by conference call as requested by EMWD. In addition, DBS&A and Land IQ will prepare presentations and participate in up to two general meetings with the Coalition at an EMWD facility. This task also includes project budget and schedule tracking.

Data Collection

DBS&A will utilize EMWD's extensive well database for groundwater water quality, groundwater elevation, and general well information such as well names, well locations, ground surface elevations, screen intervals, and well depths. In addition, DBS&A will collect water quality and water level data from publicly available sources such as Geotracker to fill data gaps.

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Land IQ previously developed an online DMT for collecting and storing agricultural information (names and address of operators, crop type, use of BMPs, etc.) Land IQ will continue to use the DMT as an efficient data collection method for the BMP reporting requirements. Coalition members will be responsible for uploading data to the DMT in the first few months of each new calendar year. Land IQ will provide outreach and assistance to the members prior to data collection deadlines.

All data input to and stored in the DMT is secure; growers are not permitted to view other growers' information. Data stored in the DMT is the property of growers and EMWD. In the event that EMWD chooses to discontinue use of the DMT, data will be exported and delivered to EMWD in a Microsoft Excel or Access format. The DMT is property of Land IQ.

Data Analysis and Reporting

DBS&A will prepare the groundwater portion of the annual monitoring report, which will include maps, charts, and tables comparing groundwater water quality to the proximity agricultural operations similar to that which was presented in the 2018 first annual report. During the first annual report DBS&A calculated the average groundwater water quality underlying farming clusters.

As described in the BMP & WQMPP (DBS&A, 2018), DBS&A will calculate the average groundwater water quality underlying farming clusters every 3 years. Thus, results of the average groundwater quality underlying farming clusters will be reported only during the 2021 annual monitoring report (with an additional cost as shown in Task 3.1 of Table 1).

Land IQ will use data reported by growers to prepare the BMP portion of the annual monitoring report, which will summarize the on-farm nutrient application and BMP information documented in the DMT. Specifically, nitrogen BMPs will be evaluated using standard metrics developed in the ILRP, which, as described above, all growers in California must comply by 2023. Salt BMPs will be reported if they are in use; but there are no metrics to evaluate them at this time. Depending of the data available, representative reporting by crop type, irrigation type, and/or BMPs may also be reported.

This task may also include minor updates to BMPs, such as changes to California Department of Food and Agriculture (CDFA) citrus fertilizer recommendations. As a result, the 2018 BMP manual developed for the Coalition (Land IQ, 2018) may be updated annually as necessary to reflect new findings in agronomics. For example, since 2018 nitrogen requirements of citrus have been refined and documented by CDFA and these new guidelines should be added to the BMP list.

Land IQ will prepare grower reports that show how an individual Coalition member's BMP practice(s) compares to the rest of the Coalition, and how the individual Coalition member's nitrate use compares to University of California Extension guidelines for nutrient use. All of

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the information is kept anonymous in that an individual Coalition member will not be able to compare his or her report to another grower's individual data.

All annual monitoring reports and Grower Reports, draft and final, will be delivered to EMWD electronically in PDF format.

Assumption and Exclusions

The annual monitoring reports do not include additional work as follows:

- Modifications to the DMT to allow it to interface with any other databases or tools.
- Modifications to the DMT to collect and allow reporting of regulatory requirements other than what is in the CWAD.
- Efforts by Land IQ to determine reporting requirements and cycles of other agencies, such as the Department of Pesticide Regulation, etc.
- Integrating any data from other databases into the DMT.

Many members of the Coalition are also members of the Western Riverside County Agricultural Coalition (WRCAC). Over the past year WRCAC has been developing a web tool (WQ Index Tool) for collecting data for the surface water requirements of the Order. EMWD may consider integrating the DMT tool with WRCAC's WQ Index Tool, however, should these services be requested, Land IQ and/or DBS&A will collaborate with EMWD to develop an additional scope of work and cost estimate.

Estimated Cost

Our annual estimated cost is summarized in the attached Table 1. Subcontracted Land IQ costs are based on an estimate of fees for a specified scope detailed in a letter to DBS&A dated December 2, 2019. Prior work conducted by DBS&A for the CWAD was performed under the Environmental Consulting Services Agreement dated May 15, 2018 between EMWD and DBS&A. If the proposed scope of work and cost estimate is acceptable to EMWD, work described in this scope will be performed under a new environmental consulting services agreement made between EMWD and DBS&A.

Other tasks related but outside of this scope of work may also be completed upon client request, such as additional data collection or analysis, field activities, teleconferences, or response to the RWQCB. Additional tasks outside of the proposed scope of work or budget may or may not require a supplemental budget authorization but will be completed on a time-and-materials (T&M) basis.

We look forward to continuing to support Eastern Municipal Water District. If you have any questions, please feel free to contact Hannah Erbele at (714) 793-7832.

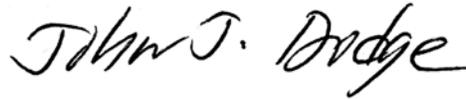
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Sincerely,

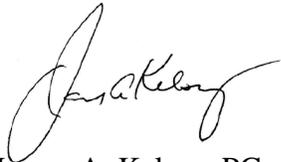
DANIEL B. STEPHENS & ASSOCIATES, INC.



Hannah Erbele, GIT
Environmental Scientist



John J. Dodge, PG
Principal Hydrogeologist



James A. Kelsey, PG
President

Attachments:

1) Cost Estimate Table

References

DBS&A. 2018. Best Management Practices Plan and Water Quality Monitoring Program Plan, Conditional waiver of waste discharge operations in the San Jacinto Watershed. September 14, 2018.

DBS&A. 2019. First Annual Best Management Practices and Water Quality Monitoring Report for 2018, Conditional waiver of waste discharge operations in the San Jacinto Watershed. September 13, 2019.

Land IQ. 2018. Best Management Practices Grower Manual for the San Jacinto Watershed. Prepared for the Eastern Municipal Water District. September 14, 2018.



**Table 1
Cost Summary For
Eastern Municipal Water District
Annual BMP & WQMR Monitoring Report
January 31, 2020**

Cost Summary by Task

Task No.	Project Description	Cost
1	Project Management/Meetings	\$21,847
2	Data Collection & DMT Updates	\$23,315
3	Data Analysis & Reporting	\$25,038
3.1	Cluster Groundwater Quality (for 2022 only)	\$14,000
2020 Budget:		\$70,200
2021 Budget:		\$70,200
2022 Budget (Optional):		\$84,200
Total:		\$224,600