

**OILFIELD PRODUCED WATER SUMPS
CENTRAL VALLEY WATER BOARD WORKPLAN
14 November 2014**

SUMMARY

This document is intended to provide an approach for addressing oilfield production water disposal sumps (hereafter referred to as produced water ponds or ponds) within the jurisdiction of the Central Valley Water Board (CVWB). Included are the tasks to be completed through December of 2016 (25 months) with estimates of the items to be completed and level of effort. Implementation of this approach would address the backlog of tasks to properly regulate these discharges of oilfield produced waters to land that impact groundwater quality. Full implementation of enforcement orders and continuing regulation of remaining land discharges will require a long-term commitment of resources.

Table 1 below provides a summary of known produced water ponds. Additional ponds may be identified through the inventory activities described below.

Table 1

Produced Water Pond Summary

Within the Central Valley Water Board

| Regulatory Status | Operational Status | Number of Facilities | Number of Ponds |
|-------------------|-----------------------|----------------------|-----------------|
| Permitted (WDRs) | Active | 72 ¹ | 544 |
| No WDRs | Active | 129 | 194 |
| No WDRs | Inactive ² | 81 | 130 |
| Total | | 282 | 868 |

1. These facilities are covered by 53 sets of individual WDRs and 3 General Orders (14 enrollees).
2. It is assumed (based on limited observations) that 50% of inactive facilities will have a future discharge that will require regulatory coverage.

It is anticipated that some of the currently permitted and some of the non-permitted facilities will not be able to comply with current requirements established in the Water Board's basin plans, policies, and regulations. Therefore, enforcement orders may be required to address these deficiencies, including prohibiting the use of ponds, remediation of polluted groundwater and the impositions of civil liabilities.

Tasks to be completed through December 2016 are presented below and are in line with an attached Gantt Chart showing the schedule for each task in this project (Attachment 1).

REGULATORY APPROACH

PRODUCED WATER POND INVENTORY

CVWB staff is currently conducting a systematic inventory of all the produced water ponds within the Central Valley to identify the location and status of these land discharges. This is being done by evaluating information supplied by the Division of Oil, Gas, and Geothermal Resources (DOGGR), review of aerial photographs, and field verification. The systematic approach involves prioritizing areas within the valley to ensure produced water ponds located in areas of underlying good quality groundwater are identified first. The CVWB has nearly completed its inventory work within the high priority areas, but significant additional work is underway to complete this task by the end of January 2015.

Time period to complete this task December 1, 2014 through December 31, 2015.

FIELD INSPECTIONS

Permitted facilities: The 544 produced water ponds at currently permitted facilities are routinely inspected to assess compliance with (WDRs). During the past six months CVWB staff has inspected 213 ponds. These ponds have a history of inspections and will be inspected on their regular schedule. Additional inspections are not anticipated to be needed to address their regulatory status or update waste discharge requirements (WDRs).

Unregulated facilities: Inspections of ponds located at unpermitted facilities need to be conducted prior to the Board issuing any requests for information or enforcement orders.

- During the past six months CVWB staff has inspected 25 produced water ponds located at 11 facilities.
- The remaining 299 produced water ponds at 199 facilities still need to be inspected.

Time period to complete this task December 1, 2014 through March 2, 2015.

RESPONSE TO INSPECTIONS – UNREGULATED FACILITIES

Facilities that are unregulated and found to have operating produced water ponds must be regulated under WDRs adopted by the Board. This is done by the discharger submitting a Report of Waste Discharge (RWD) to the Board. This involves a very detailed and time consuming effort by the facility and Board staff and may delay the facility from implementing measures to protect water quality, including shutting ponds down (i.e., cease discharge). To avoid any delays in placing these facilities under some form of regulation by this Board, CVWB staff is proposing to utilize its enforcement authorities to issue Cleanup and Abatement Orders (CAOs). A general CAO is not envisioned because of the need for site-specific findings; however, to expedite this effort, CVWB staff will create a template with the basic components to assist staff in preparing the documents. The orders will lay out a time schedule for completion of tasks including, but not limited to, collecting information regarding the

ponds including site conditions and characteristics, groundwater quality assessment including depth to groundwater, quality of groundwater, assessment of potential or actual impacts to groundwater, submittal of a RWD or Notice of Intent (see permitting discussion below) and, if needed, an estimate of when termination of discharge would occur. The time schedule will be based on the location of the facility, site conditions and groundwater quality and will be reasonable for the amount of work to be completed. Each CAO will be in effect until the facility is either put under WDRs or until no further regulatory coverage is needed (i.e., discharge ceases and any needed remedial activity is completed).

Time period to complete this task February 2, 2015 through November 30, 2015. Sites will be prioritized based on inspection findings and locations.

PERMITTING APPROACH

The proposed permitting strategy is designed to address both currently permitted facilities that need updated WDRs and unregulated facilities that require a permit to operate. CVWB staff is proposing three new General Orders (GOs) for existing facilities to cover the range of potential water quality conditions:

GO 1 – Low threat - facilities with discharges that meet the basin plan maximum salinity limits of 1,000 umhos/cm electrical conductivity, 200 mg/l chloride, and 1 mg/l boron;

GO 2 – Moderate threat - facilities that have discharges exceeding the salinity limits of GO 1 but will not substantially affect water quality nor cause a violation of water quality objectives;

GO 3 – No threat - facilities that overlie areas with naturally occurring poor quality groundwater that do not have probable beneficial uses and are not specifically identified in the basin plans as not being assigned such uses. The GO would provide a time schedule, not to exceed 5 years from adoption of the GO, to allow completion of basin plan amendments required to de-designate beneficial uses where data and conditions support such actions.

All of the GOs adopted by the Central Valley Water Board will have appropriate findings and will require submittal of a Notice of Intent (NOI) providing information that would allow Board staff to determine the site is eligible for coverage under the applicable GO and to ensure compliance with the State Board's Anti-Degradation Policy. The NOI is equivalent to a RWD. Monitoring and Reporting Programs (MRPs) will be established for each GO.

These orders would only be for existing facilities and CEQA requirements could be met with the existing facility exemption (lawyers will need to confirm).

Facilities that are suitable to remain in operation, but do not meet the criteria to be covered by one of the three proposed GOs, will be considered for coverage under individual WDRs.

During development of the GOs, CVWB staff will meet with stakeholders, both industry and environmental groups, to seek their input. CVWB staff will circulate administrative drafts of the GOs and

accept comments at a CVWB public workshop that will be held in Kern County. Following the workshop, staff will prepare tentative orders for consideration by the CVWB at a public hearing.

Once the orders are ready for adoption, we will be working on the process of enrolling facilities under the orders through review of Notices of Intent (NOIs) and issuance of Notices of Applicability (NOAs).

Time period to complete development and adoption of general orders is June 1, 2015 through May 31, 2016.

ENFORCEMENT APPROACH

Enforcement actions are anticipated for existing facilities that cannot comply with conditions of their WDRs or for unregulated facilities that do not comply with Board directives. Options include Cease and Desist Orders (CDOs) for facilities with WDRs, Cleanup and Abatement Order (CAOs) or information orders under Section 13267 of the Water Code for any of them, and the issuance of Administrative Civil Liabilities (ACLs). The appropriate order will be case specific. It is anticipated that many of these orders will be controversial and petitioned by dischargers. While we do not know the number of enforcement orders needed at this time, for the purposes of estimating resources detailed later in this document, it is assumed 40 enforcement actions will be taken by staff.

Time period of this task February 2, 2015 through December 31, 2016.

Technical and Monitoring Report Review

In addition to preparing and adopting/issuing WDRs, CAOs, or other enforcement orders, there will be a significant number of technical reports required from dischargers to identify conditions at their site and also periodic monitoring reports to comply with monitoring and reporting programs included in the orders. This will be long term work that is ongoing with facilities currently permitted, but will increase substantially as orders are updated. Much of this work will persist beyond the completion of this project.

Time period for these tasks are estimated to commence on September 1, 2015 and continue beyond the end date of this project on December 31, 2016.