



Central Valley Regional Water Quality Control Board

5 December 2022

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Vineyard Surface Water Treatment Plant
10151 Florin Road
Sacramento, CA 95829

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NOTICE OF APPLICABILITY; STATE WATER RESOURCES CONTROL BOARD ORDER WQO 2012-0010-DWQ; GENERAL WASTE DISCHARGE REQUIREMENTS FOR AQUIFER STORAGE AND RECOVERY PROJECTS THAT INJECT DRINKING WATER INTO GROUNDWATER; PILOT TEST AT PRODUCTION WELL 1; VINEYARD SURFACE WATER TREATMENT PLANT; SACRAMENTO COUNTY

On 10 February 2022, Central Valley Regional Water Quality Control Board (Central Valley Water Board) received a Notice of Intent (NOI) from Sacramento County Water Agency (Discharger) for regulatory coverage under State Water Resources Control Board (State Water Board) Water Quality Order No. 2012-0010-DWQ, the General Waste Discharge Requirements for Aquifer Storage and Recovery (ASR) Projects That Inject Drinking Water into Groundwater (hereafter, General Order). Additional information was submitted 15 July 2022. The Discharger is proposing an ASR pilot test at the Sacramento County Water Agency's (SCWA) Vineyard Surface Water Treatment Plant (VSWTP) located at 10151 Florin Road in Sacramento.

Based on the information provided, the proposed ASR pilot test qualifies for coverage under the General Order. This Notice of Applicability (NOA) serves as formal notice that the General Order is applicable to SCWA's pilot test as described. The discharge is hereby assigned **WQ 2012-0010-DWQ-RB5S-0007**.

You should familiarize yourself with the entire General Order and its attachments enclosed with this letter. The ASR pilot test must be operated in accordance with the requirements contained in the General Order; Standard Provisions and Reporting Requirements for Waste Discharge Requirements (SPRRs) dated 1 March 1991; and with the information submitted in the NOI. Sampling, monitoring, and reporting requirements must be completed in accordance with the attached Monitoring and Reporting Program (MRP) R5-2022-0822. The facility specific MRP was developed based on review of your NOI.

MARK BRADFORD, CHAIR | PATRICK PULUPA, ESQ., EXECUTIVE OFFICER

BACKGROUND

Historically, most of the water delivered to Sacramento County Water Agency (SCWA) customers were from underground aquifers, which were becoming significantly depleted. The Vineyard Surface Water Treatment Plant (VSWTP) was constructed to help reduce dependency on these local resources by providing high-quality drinking water from the Sacramento River. In the Fall of 2011, the Vineyard Surface Water Treatment Plant (VSWTP) began producing potable water from the Sacramento River for delivery to SCWA customers.

The VSWTP operates as a flocculation-sedimentation facility with a capacity of 50 million gallons per day (MGD) and expandable up to 100 MGD. SCWA has several rights to water from the Sacramento River to support existing communities and future development in central Sacramento County. A site map is shown in Attachment A.

SCWA uses both groundwater and surface water resources to meet its water supply needs in its Zone 40 located in the central portion of Sacramento County. Groundwater has historically been produced from the aquifer system, primarily within the Mehrten Formation for many decades. Regional groundwater flows towards the VSWTP vicinity are primarily from the northeast and from the north to a lesser extent. Groundwater flow at VSWTP is quite variable. In general, depth to groundwater ranges between 100 and 140 feet below ground surface (bgs).

Land use in the VSWTP vicinity is mostly undeveloped, with approximately 1,260 acres agricultural and 180 acres urban.

ASR PILOT TEST DESCRIPTION

The objective of the pilot test is to evaluate the hydraulic response of the aquifer to ASR operations at Production Well PW-1 for economic and logistical viability for a full-scale ASR program. Well PW-1 was installed in late 2007 to support the construction of the VSWTP and was last operated in 2010. PW-1 is located near the center of the VSWTP as shown in Attachment A and was constructed to a depth of 658 feet below ground surface (bgs). The pilot test area is located near the center of the South American Subbasin (5-021.65), as defined by the Department of Water Resources (DWR) Bulletin 118 (DWR, 2003). The uppermost Mehrten Formation is the target zone for the ASR pilot test.

Nearby nested monitoring well MW, located 40 feet north of PW-1 as shown on Attachment A, will be used to monitor groundwater during the pilot test. MW was constructed in 2007. The uppermost screened interval in MW was constructed to a depth of 216 feet bgs. The middle screened interval is 602 feet deep. The lower screened interval was constructed to a depth of 773 feet bgs. The middle screened interval in MW is opposite the middle 60-foot screened interval in PW-1 and will provide direct hydraulic observations during groundwater injection, storage, and recovery of potable water during the pilot test.

A summary of the screen intervals for each well to be used during the pilot test is shown in the table below:

Well	Well Description	Screen Interval	Geologic Formation
PW-1	Injection/extraction well	514 to 648 feet	Upper Mehrten
MW-216'	Upper monitoring interval	196 to 206 feet	Laguna Formation
MW-602'	Middle monitoring interval	552 to 592 feet	Upper Mehrten
MW-773'	Lower monitoring interval	753 to 763 feet	Upper Mehrten

The pilot test will consist of three full ASR cycles (injection, storage, and recovery pumping) and a brief period of recovery pumping for a water quality sample after several weeks post-ASR activities. The total duration of the pilot test is estimated at 134 days or nearly 4.5 months. Total volume of water is estimated to be 124 acre-feet for injection and 163 acre-feet for recovery. Potable recharge water will be from VSWTP and shall meet all drinking water maximum contaminant levels (MCLs) as well as Basin Plan objectives for groundwater quality. A fire hydrant located approximately 400 feet north of PW-1 will be the source of potable water for the pilot test. Recharge rates are planned to be 500 and 1,000 gallons per minute (gpm) but will be reduced if water levels are projected to rise above 20 feet bgs in PW-1 throughout each testing period. Extracted water will be discharged to the stormwater detention basin located approximately 400 feet northeast of PW-1 or a portion of the extracted water may be returned to the treatment process.

ELIGIBILITY

Based on information included in the Technical Report, the proposed ASR pilot test is consistent with the requirements set forth in Attachment C of the General Order and meets the following eligibility requirement:

1. Water to be injected will be treated and delivered to the injection well consistent with the requirements of a California Department of Public Health domestic water supply permit.
2. Existing Production Well PW-1 used for the pilot test was constructed in compliance with California Well Standards and registered with the US EPA Underground Injection Control Program.
3. Injected water for the pilot test will be of quality that will ensure compliance with the General Order.
4. The pilot test is not restricted by local ordinance, prohibition, or other law or regulation. The General Order allows that a pilot test may be exempt from

provisions of CEQA under CEQA Guidelines Section 15306, which exempts information collection (Class 6) that does not result in a serious or major disturbance to an environmental resource. Results of the pilot test will be used for CEQA documentation if SCWA pursues a full-scale ASR program.

MONITORING AND REPORTING PROGRAM

SCWA shall comply with the monitoring and reporting program requirements prescribed in the attached MRP R5-2022-0822.

ADDITIONAL TECHNICAL REPORTS FOR SUBMITTAL

SCWA shall submit a Technical Addendum no later than **90 days after completion of the pilot test** that presents the methodology, results, and recommendations for next steps along with an assessment of the potential for full-scale ASR operations.

After completion of the pilot test, SCWA shall notify the Central Valley Water Board to request either termination of the NOA or revision of the NOA to implement a full-scale ASR operation.

GENERAL INFORMATION AND REQUIREMENTS

This NOA authorizes implementation of the proposed ASR Pilot Test under Order 2010-0010-DWQ for Production Well PW-1 cited in the Technical Report and discussed in this NOA. In accordance with Prohibition B.4 of the General Order, operation of a pilot test **shall not exceed beyond 24 months from the date this NOA is issued**. SCWA shall comply with the Prohibitions, Requirements, Groundwater and Surface Water Limitations, and Provisions of the General Order. All ASR functions must be operated in accordance with the requirements contained in the General Order and the NOI and supporting documentation.

Please review this NOA carefully to ensure that it completely and accurately reflects the proposed discharge. If the discharge violates the terms or conditions of the General Order, including MRP R5-2022-0822, the Central Valley Water Board may take enforcement action, including the assessment of an administrative civil liability as authorized by provisions of the California Water Code. The required annual fee specified in the annual billing from the State Water Resources Control Board shall be paid until this NOA is officially terminated. You must notify this office in writing if the discharge regulated by this Order ceases so that coverage under the General Order can be terminated and to avoid unnecessary billing.

SALT AND NITRATE CONTROL PROGRAMS

The Central Valley Water Board adopted Basin Plan amendments incorporating new programs for addressing ongoing salt and nitrate accumulation in the Central Valley at its 31 May 2018 Board Meeting. The Basin Plan Amendments were conditionally approved by the State Water Board on 16 October 2019 (Resolution 2019-0057) and by the Office of Administrative Law on 15 January 2020 (OAL Matter No. 2019-1203-03).

Based on the conditions and duration of the proposed ASR pilot test, the discharge as described in this NOA is expected to be generally in compliance with the requirements of the Central Valley's Salt and Nitrate Control Program and does not need to concurrently participate in the CV-SALTS program. Should the Discharger propose to implement a full-scale ASR program, the Discharger shall submit a Notice of Intent to comply with the program. Information on the CV-SALTS program can be found on the [CV-SALTS website](https://www.cvsalinity.org) (<https://www.cvsalinity.org>). Questions and information requests can be made by sending an email to: cvsalts@waterboards.ca.gov.

DOCUMENT SUBMITTALS

All monitoring reports and other correspondence should be converted to searchable Portable Document Format (PDF) and submitted electronically. Documents that are less than 50 MB should be emailed to: centralvalleysacramento@waterboards.ca.gov.

To ensure that your submittal is routed to the appropriate staff person, the following information should be included in the body of the email or any documentation submitted to the mailing address for this office:

Facility Name: Sacramento County Water Agency ASR Pilot Test Well 1
Program: Non-15 Compliance
Order: WQ 2012-0010-DWQ-RB5S-0007
CIWQS Place ID: 881980

Documents that are 50 MB or larger should be transferred to a CD, DVD, or flash drive and mailed to:

Central Valley Regional Water Quality Control Board
ECM Mailroom
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670

Now that the Notice of Applicability has been issued, the Board's Compliance and Enforcement section will take over management of your case. Guy Childs is your new point of contact for questions regarding compliance with the Order. All monitoring and technical reports should be submitted to him. If you find it necessary to make a change to your permitted operations, Guy will direct you to the appropriate Permitting staff. You may contact Guy at 916-464-4648 or Guy.Childs@waterboards.ca.gov.

for Patrick Pulupa
Executive Officer

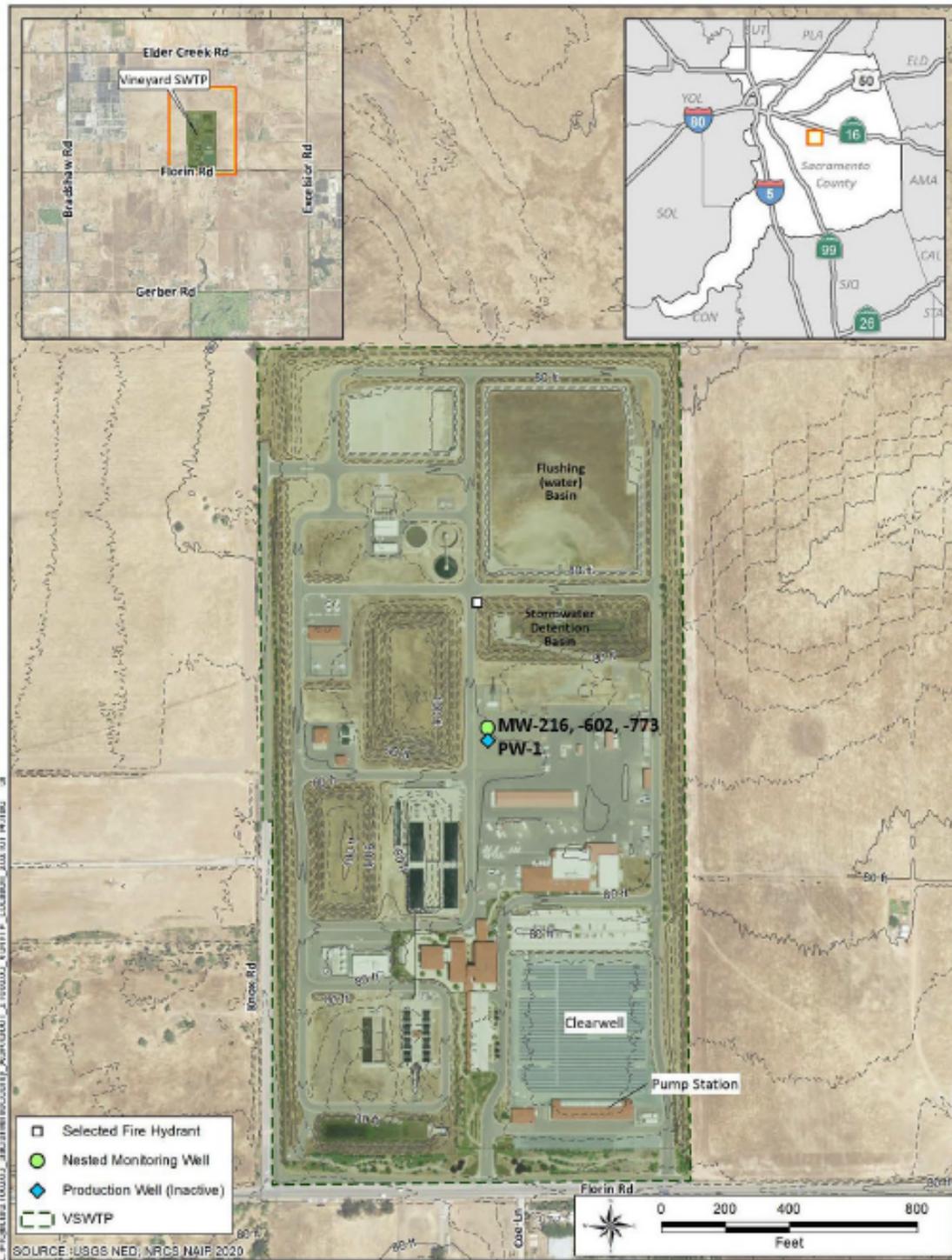
Enclosures:

Attachment A – Site Map
Monitoring and Reporting Program R5-2022-0822
WQ 2012-0010-DWQ (Discharger only)
SPRRs (Discharger only)

cc:

Sacramento County Environmental Health, Rancho Cordova (via email)
Rodney Fricke, GEI Consultants (via email)
Chris Petersen, GEI Consultants (via email)
Howard Hold, CVWQCB, Rancho Cordova (via email)
Guy Childs, CVWQCB, Rancho Cordova (via email)

ATTACHMENT A



Source:
Report of Waste
Discharge, Feb 2022

SITE MAP
Vineyard Surface Water Treatment Plant
ASR Pilot Test at Production Well 1 (PW-1)
Sacramento County

Approximate
Scale:
scale as
noted