

North San Joaquin Water Conservation District 2016 Groundwater Management Report

Prepared October 18, 2016

I. Introduction

State Water Resources Control Board (“SWRCB”) Order WR 2015-0016 includes Order Condition 11, which requires that North San Joaquin Water Conservation District (“NSJWCD” or “District”) submit an annual report to the Deputy Director regarding progress on groundwater management in the Eastern San Joaquin and Consumnes groundwater subbasins and any existing or proposed measures to address over-drafting within the District’s boundaries. This report was due one year from the date that the amended permit was issued, and subsequent reports are due with the annual Progress Report by Permittee. The 2016 NSJWCD Groundwater Management Report has been prepared to comply with Order WR 2015-0015 Condition 11.

As a preliminary matter, following the Department of Water Resources’ recent approval of a basin boundary adjustment for the Consumnes and Eastern San Joaquin Groundwater Subbasins, NSJWCD no longer overlies any portion of the Consumnes Groundwater Subbasin. Because NSJWCD has no jurisdiction over the Consumnes Subbasin, this Groundwater Management Report will not address groundwater management activities occurring in that subbasin.

II. Groundwater Management in the Eastern San Joaquin Groundwater Subbasin

NSJWCD is comprised of over 150,000 acres in the northern and eastern portions of San Joaquin County which overlies the Eastern San Joaquin Groundwater Subbasin. NSJWCD has responsibility for the protection and maintenance of groundwater resources located within its jurisdiction.

As part of its management efforts, the District observes changes in the groundwater elevation in these groundwater sources by reviewing the San Joaquin County monitoring from one-hundred seventy wells located throughout the District. In spring of 2016, the groundwater elevations at 121 of the 170 observation wells in NSJWCD were compared to the groundwater elevations in previous years. This comparison revealed that there has been a decrease in 88 out of 121 wells, an increase in 30 out of 121, and no change in 3 out of 121. The results of this comparison indicate that five years of prolonged drought have had a negative impact on groundwater elevations throughout the District, but certain projects, discussed below, have promise for addressing potential groundwater overdraft.

A. Tracy Lake Groundwater Recharge Project

The Tracy Lake Improvement District (TLID) was formed in 2011 by the North San Joaquin Water Conservation District (NSJWCD) and the landowners within the TLID (TLID Members) for the construction and operation of the Tracy Lake Pump Station and outfall pipeline to divert water from the Mokelumne River into South Tracy Lake. Water pumped into South Tracy Lake will provide direct recharge through percolation and in-lieu recharge by providing water to surrounding lands that utilize the lake water for irrigation of a nearby vineyard.

The purpose of this diversion is to provide for recharge for the underlying groundwater basin either by direct recharge via percolation of surface water from Tracy Lake or by in lieu recharge resulting from TLID Members using surface water in lieu of groundwater to address irrigation demands. The construction of the Tracy Lake Pump Station and the other capital improvements required to begin

project operation were completed in early 2016. The project will be operational as soon as water is available to divert under the District's Permit 10477.

B. South System Pump Station and Pipeline Repair Project

The South System Pump Station and Pipeline Repair Project is a project that is designed to improve the utility of NSJWCD's existing South System. The South System is comprised of a pump station located on the southern bank of the Mokelumne River that pumps water into a pipeline where it is delivered to lands within NSJWCD for irrigation.

The District currently has \$1.75 million dollars set aside to complete repairs to the South System Pump Station. CEQA has been completed and the project is out to bid. Construction is expected in 2017. Associated permitting efforts are underway.

Additionally, in 2015-2016 the District funded and completed: (1) an engineering study on the cost and feasibility of repairing the over six miles of pipeline that are included in the South System, and (2) a CCTV survey and map of the pipeline. The funding for the pipeline rehabilitation is expected to come from a combination of grant funds (if awarded) and landowner assessments unless another funding source is identified. Although the repairs South System project are still in the design and planning phases, the District anticipates that increasing the efficiency of the pump system, which will reduce the cost of delivered surface water, will lead to increased use of Mokelumne River water for irrigation by landowners along the pipeline.

C. Implementation of the Sustainable Groundwater Management Act

NSJWCD has elected to become a Groundwater Sustainability Agency ("GSA") under the Sustainable Groundwater Management Act ("SGMA") for the portion of the Eastern San Joaquin Subbasin that underlies the District's boundaries (including that portion of the prior Consumnes subbasin recently added back into the Eastern Subbasin by a DWR approved boundary modification).

The District is currently in talks with other entities within San Joaquin County that have declared their intent to become a GSA to develop a strategy for undertaking preparation of a single or coordinated Groundwater Sustainability Plan ("GSP"). The District anticipates that the institutional framework being developed in these talks will provide an effective forum for the development and implementation of a GSP that will lead to sustainable management of groundwater in the basin.

D. DREAM Project

The DREAM Project is a multi-agency short-term demonstration effort that is being developed by East Bay Municipal Utility District ("EBMUD") and San Joaquin County in conjunction with NSJWCD. The project is in the planning and permitting stage.

The concept behind the project is to deliver approximately 1,000 acre-feet of EBMUD's Mokelumne River rights to landowners in NSJWCD through the South System, who would use the water for irrigation in-lieu of pumping groundwater, accomplishing in-lieu recharge. Approximately half of the recharge credits will remain for use in NSJWCD, with the other half attributed to EBMUD as banked groundwater. During the winter months of a subsequent year, no more than 500 acre-feet of groundwater will be extracted from the project site and pumped into the Mokelumne Aqueduct for

delivery to EBMUD. The remaining 500 acre-feet will stay in the groundwater basin for future local use.

In addition to providing surface water from the Mokelumne River, EBMUD has agreed to fund the infrastructure and operational costs of the DREAM Project. The water delivery infrastructure improvements would support both project and future NSJWCD water delivery operations to landowners. All proposed DREAM Project groundwater extractions would be controlled by San Joaquin County and NSJWCD to ensure that there is no harm to the groundwater source or nearby landowners.

CEQA has been completed for the DREAM Project. Additional permitting issues remain including a groundwater export permit from San Joaquin County and a SWRCB Change Petition to enable EBMUD to deliver its Permit 10478 water to NSJWCD's service area for the project.

E. Other Projects

The projects discussed above have been the highest priority for the district in 2015-2016. However, the District has also continued working on plans for rehabilitation of its North distribution system and better use of its Cal-Fed pumping plant. The District has partnered with a large winery near the Cal-Fed pumping plant to research a project that would involve blending Mokelumne River water, groundwater recharge and recycled winery waste water to reduce waste water discharges and improve local water supplies.