March 2025

Annual Groundwater Report

Water Year 2024

TODD GROUNDWATER

NORTH SAN BENITO ANNUAL GROUNDWATER REPORT 2024

March 2025

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1301 Marina Village Parkway, Suite 320
Alameda, CA 94501
510.747.6920
www.toddgroundwater.com

SIGNATURE PAGE

Iris Priestaf, PhD
President

REGISTERED PROFESSIONAL ENGINEER
MAUREEN K. REILLY
C 67841
EXP. 6/30/23
CIVIL
STATE OF CALIFORNIA

CERTIFIED HYDROGEOLOGIST
CHAD N. TAYLOR
No.915
STATE OF CALIFORNIA

PROFESSIONAL GEOLOGIST
CHAD N. TAYLOR
No.8443
STATE OF CALIFORNIA

PROFESSIONAL GEOLOGIST
Eugene B. Yates
No. 7178
Exp. 1/31/24
STATE OF CALIFORNIA

CERTIFIED HYDROGEOLOGIST
Eugene B. Yates
No. 740
Exp. 1/31/24
STATE OF CALIFORNIA

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EXECUTIVE SUMMARY

This Annual Groundwater Report describes groundwater conditions in the North San Benito Basin, a subbasin of the Gilroy-Hollister Basin. Consistent with Annual Groundwater Reports prepared by the San Benito County Water District for decades, this report fulfills requirements of the 1953 San Benito County Water District Act (California Water Code Appendix 70). This Annual Groundwater Report also fulfills requirements of the 2014 Sustainable Groundwater Management Act (SGMA). In brief, this report incorporates adaptive management; it strives to maintain consistency with past Annual Reports while fulfilling requirements for SGMA Annual Reports and supporting sustainable groundwater management into the future.

SGMA requires sustainable management of priority groundwater basins and empowers local Groundwater Sustainability Agencies (GSAs) to manage groundwater resources. San Benito County Water District GSA (SBCWD GSA), in partnership with Valley Water (known as Santa Clara Valley Water District prior to 2019) GSA, has developed a Groundwater Sustainability Plan (GSP) for the North San Benito Basin. The North San Benito Basin is predominantly in San Benito County with small areas in Santa Clara County. The North San Benito GSP was adopted by SBCWD and Valley Water GSA and was submitted to the California Department of Water Resources (DWR) in January 2022. The 2022 GSP provides the basic information, analytical tools, and projects and management actions for continued groundwater management, guided by SGMA and by locally defined sustainability goals, objectives, and metrics. The GSP was approved by DWR in July 2023.

This Annual Groundwater Report for San Benito County Water District (SBCWD or District) documents water sources and uses, groundwater elevations and storage, and management activities for Water Year 2024 and provides recommendations. This Report also details the six Sustainable Management Criteria and their respective Minimum Thresholds (MTs).

Water Year 2024 was an above average water year and was characterized by above average rainfall, 50 and 75 percent Central Valley Project (CVP) allocations for agricultural and M&I users, and increased groundwater storage in most of the Basin. The water year spans two USBR contract years (March 2022 – February 2023 and March 2023 – February 2024. The first part of Water Year 2024 saw 100 percent CVP allocations while the latter half saw above average CVP allocations. The combined effects can be seen in the Basin as continued recovery from the severe drought of 2020-2022.

The District had been able to leverage the CVP allocations, with over 70 percent of municipal demand served by imported water. Municipal groundwater demand was reduced by 35 percent. Additional CVP supply was available to agriculture but groundwater demand remained similar to last year, likely due to the increased ET needs in Water Year 2024 which was warmer and drier than the very wet year of Water Year 2023.

The groundwater basin continues to serve as an important reserve in situations of drought, limited CVP allocation, or system disruptions. The District has effectively managed groundwater resources in San Benito County for reliable and sustainable supply. Groundwater levels and storage remain sustainable and are regularly monitored at Key Wells (also termed Representative Monitoring Sites or RMS) with reference to Minimum Thresholds (MTs). Only 1 of 22 Key Wells showed measurements below its respective MT levels and no basin-wide thresholds were triggered for a Management Area (MA) during the water year. Groundwater levels in the Key Wells will continue to be monitored and the monitoring network itself will be assessed regularly. The District has replaced four Key Wells that were no longer accessible for water level measurement. These wells have been assigned a temporary MT based on their historic lows. All of the MTs will be revised during the next period evaluation and update of the GSP.

Working collaboratively with other agencies, the District has eliminated historical overdraft, developed and managed multiple sources of supply, established an effective water conservation program, protected water quality, and provided annual reporting. Water Year 2024 witnessed approval of the GSP, grant awards to implement GSP projects and the continuation of collaborative efforts. This Annual Report includes an update on many of the Projects and Management Actions (PMAs) including managed aquifer recharge (MAR), monitoring program improvements, Master Plan Update, pursuit of funding for various projects, and information about the District's funding mechanisms.

1-INTRODUCTION

This Annual Groundwater Report describes groundwater conditions in the North San Benito Basin (**Figure 1-1**), a subbasin of the Gilroy-Hollister Basin. Consistent with Annual Groundwater Reports prepared for decades by the San Benito County Water District (SBCWD or District), this report fulfills requirements of the 1953 San Benito County Water District Act (California Water Code Appendix 70). The District Act authorizes the Board of Directors, at its discretion, to direct staff to prepare an annual investigation and report on groundwater conditions of the District and its zones of benefit, such as Zone 6, the area for distribution of Central Valley Project (CVP) water. As documented in **Appendix A**, the District Act specifies the minimum content of the report to be prepared at the direction of the District Board of Directors. This Annual Report fulfills the requirements for a District Annual Report, including a brief Annual Groundwater Memorandum Report prepared for the January 13, 2025, meeting of the Board of Directors (in Appendix A). This Annual Report also provides information to the Board of Directors on the status of the groundwater basin, estimated conditions in the next year, and management recommendations.

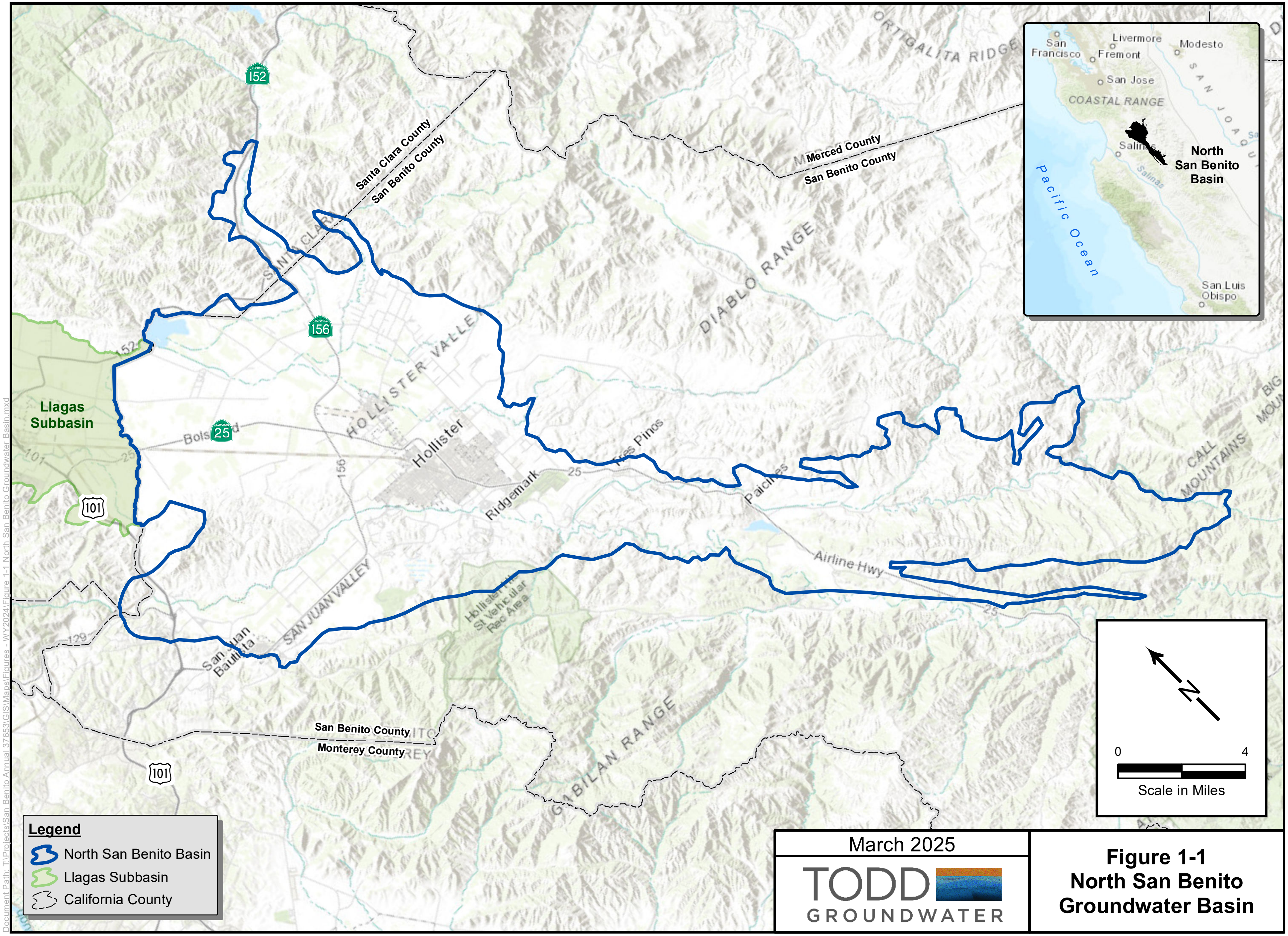
This Annual Groundwater Report also fulfills the requirements of the 2014 Sustainable Groundwater Management Act (SGMA). SGMA requires sustainable management of medium and high priority groundwater basins and empowers local Groundwater Sustainability Agencies (GSAs) to manage groundwater resources. San Benito County Water District GSA (SBCWD GSA), in partnership with Valley Water GSA, has developed a Groundwater Sustainability Plan (GSP) for the medium priority North San Benito Basin, which encompasses the historically defined Bolsa, Hollister, and San Juan Bautista Subbasins of the Gilroy-Hollister Basin and the Tres Pinos Valley Basin. The North San Benito Basin is predominantly in San Benito County with small areas in Santa Clara County. As presented in the North San Benito Groundwater Sustainability Plan (Todd 2021), the North San Benito Groundwater Basin has been divided into four management areas, shown in **Figure 1-2**, which have been defined to facilitate implementation of the GSP.

In accordance with SGMA, this Annual Report documents water supply sources and use, groundwater elevations and storage, and management activities from October 2023 through September 2024. The SGMA elements guide, detailing the required SGMA components, is included in **Appendix A**. This Annual Report conveys considerable data, including tables and figures, which are provided largely in **Appendices B through G**. **Appendix F** provides information on water rates and charges and **Appendix H** contains a list of acronyms.

The 2024 Annual Groundwater Report incorporates adaptive management; it strives to maintain consistency with past Annual Reports while fulfilling requirements for SGMA Annual Reports and supporting sustainable groundwater management into the future.

Acknowledgments

This report was prepared by Maureen Reilly, PE, , Gus Yates PG, CHG, Iris Priestaf, PhD, and Chad Taylor, PG, CHG of Todd Groundwater. We appreciate the assistance of San Benito County Water District staff, particularly Dana Jacobson, Brett Miller, CPA, CPFO, Jeff Cattaneo, PE, and David Macdonald, PE.



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TODD GROUNDWATER

Figure 1-1
North San Benito Groundwater Basin

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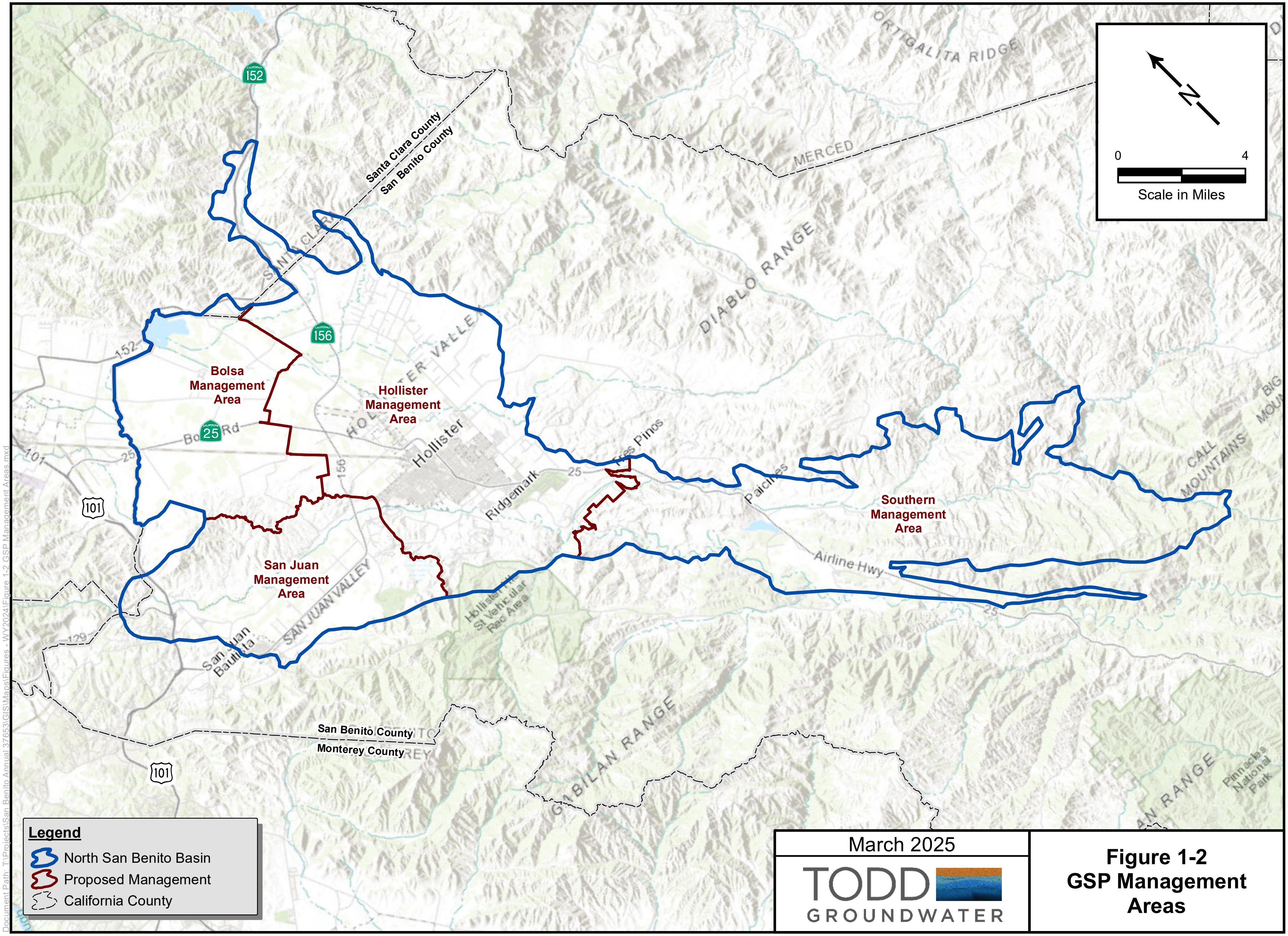

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Figure 1-2
GSP Management Areas

2 – GEOGRAPHIC AREA

This Annual Report describes conditions in the North San Benito Basin (Basin),[1] located predominantly in San Benito County with small areas in Santa Clara County. Consistent with the North San Benito GSP, it uses groundwater basin boundaries described in DWR Bulletin 118 (DWR Basin 3-003.005), California's Groundwater Update 2020. In addition to Bulletin 118, the geographic areas and boundaries of local groundwater subbasins have been defined differently by SBCWD for its management purposes. The previous and current boundaries are described here to provide a bridge between previous annual reports and the current SGMA analyses and reporting.

DWR-Defined Basin

The areas of focus for the annual reports are the Management Areas (MAs), shown on Figure 1-2. The four MAs were defined in the North San Benito GSP to facilitate implementation. Major factors in defining the MAs within the Basin were watersheds and particularly, availability of water sources and zones of benefit. SBCWD provides local surface water from Hernandez and Paicines reservoirs to the zone of benefit, Zone 3, and provides CVP water to Zone 6.

The four Management Areas are listed below with the SBCWD-defined subbasins that they generally encompass:

- Southern MA
- Hollister MA (includes Tres Pinos, Hollister East and West, Bolsa SE, Pacheco subbasins)
- San Juan MA (includes almost all District-defined San Juan subbasin)
- Bolsa MA (includes almost all District-defined Bolsa subbasin)

Hollister and San Juan MAs include portions of Zone 6; Southern and Bolsa MAs do not.

Ongoing District Monitoring Programs

Data from monitoring programs undertaken by local, state, and federal agencies are summarized below as currently incorporated in the Annual Report. The District data compilation and monitoring programs are being expanded and revised as data needs are identified through the GSP process, for example to address topics such as potential groundwater dependent ecosystems, and to represent the entire North San Benito Basin with appropriate detail.

[1] The official name is North San Benito Subbasin of the Gilroy Hollister Basin, DWR Basin Number 3-003.05. For this report, it is referred to as North San Benito Basin to clearly differentiate it from previous DWR-defined and SBCWD-defined subbasins. As a matter of context, **Figure C-1** in **Appendix C** shows all DWR Bulletin 118 groundwater basins that are wholly or partially in San Benito County.

2 – GEOGRAPHIC AREA

Climate. Climate data are regularly compiled from DWR's California Irrigation Management Information System (CIMIS) and include total solar radiation, soil temperature, air temperature/relative humidity, wind direction, wind speed, and precipitation. Additional precipitation data are available from the Western Regional Climate Center (WRCC) station at Hollister from 1934-2024 (WRCC, 2024). For the Annual Groundwater Reports, historical annual precipitation data have been compiled and reported using the Hollister rain gage for the long-term precipitation and the CIMIS San Benito station for recent monthly precipitation. Monthly precipitation and evapotranspiration for the Hollister No. 126 CIMIS station are tabulated in **Appendix B**.

Groundwater levels. SBCWD has had a semi-annual groundwater level monitoring program since Water Year (Water Year) 1977; groundwater level data gathered by the United States Geological Survey (USGS) and other agencies are available as early as 1913 (Clark, 1924). The Annual Groundwater Reports provide quarterly groundwater level data organized by year in **Appendix C**. The data are the basis for groundwater hydrographs and for numerical model updates with preparation of groundwater level contour maps, change maps, and storage change computations. The SBCWD monitoring program includes wells in the Pacheco Valley in Santa Clara County provided by Valley Water. Valley Water's monitoring program also provides data for the southern Llagas Subbasin; which are important to verify groundwater flow across the Llagas-North San Benito subbasin boundary. SBCWD reports water levels for SGMA Key Wells through the SGMA portal.

Reservoirs. The Annual Report summarizes reservoir water budget information for Hernandez, Paicines, and San Justo reservoirs and provides annual total releases from Hernandez and Paicines reservoirs from Water Year 1996 to present. Reservoir storage and release data are available in **Appendix D**.

Surface water flows and percolation. Surface water monitoring and percolation amounts are summarized in **Appendix D**. For Water Year 1994 to present, percolation of imported CVP water is documented in **Table D-3** and percolation of wastewater is shown in **Tables D-4 and D-5**. The District temporarily suspended its surface water monitoring network in 2019 but plans to relaunch surface water monitoring at selected sites as part of SGMA implementation.

Wells and groundwater pumping. SBCWD has monitored groundwater pumping in Zone 6 using electrical and motor hour meters. Pumping amounts are calculated semiannually by metering the number of hours of pump operation and multiplying by the average discharge rate. However, other estimates of pumping have indicated that the power and hour meters underestimate pumping. Irrigation pumping beyond Zone 6 is not monitored but has been estimated for regular water budget updates based on land use information and water use factors. This method of estimating groundwater pumping will be replaced as part of SGMA implementation. The District is currently investigating new water use monitoring programs (like OpenET) that will address the entire GSP area and will be documented in future Annual Reports. Estimation of groundwater pumping using the numerical model by major use category and MA is described in Section 5, which also provides information on CVP use in Zone 6 and recycled water use. **Appendix E** contains additional information on water use.

Water quality. In 1997, SBCWD initiated a program for monitoring nitrate and electrical conductivity (EC) in wells. In 2004, SBCWD established a comprehensive water quality database with records from all water systems and regulated facilities. State-wide sources of groundwater quality data include the Water Data Library (WDL), Geotracker/GAMA program, and the State Water Resources Control Board's

Division of Drinking Water. The SBCWD database is updated and reviewed annually with detailed triennial assessment as described in the GSP; a triennial update of water quality was prepared for the Water Year 2022 Annual Report and will be included in the Water Year 2025 report. The triennial analyses contain information about the database update and a review of the water quality data. **Appendix F** contains additional information on water quality last updated for the Water Year 2022 analysis.

Units and accuracy. Throughout this report, water volumes and changes in storage are shown to the nearest acre-foot (AF). These values are accurate to one to three significant digits (depending on the measurement). All digits are retained in the text to maintain as much accuracy as possible during subsequent calculations, but results should be rounded appropriately.

3 – BASIN CONDITIONS

The Annual Report summarizes basin conditions including climate, groundwater elevations, groundwater storage, and groundwater level trends. Overall, Water Year 2024 was characterized by above normal precipitation. This marks the second year in a row with above normal conditions; Water Year 2023 was a wet year.

Climate

Assessment of climatic conditions begins with collection of climate data (rainfall and evapotranspiration), which are summarized in **Appendix B**. Local climate data are compiled on a monthly basis and reviewed annually. Local rainfall and evapotranspiration is a variable that affects basin inflows (e.g., deep percolation) and outflows (groundwater pumping). Recognizing that drought often is extensive across Northern California, local dry years also may be indicative of regional drought and reduced CVP allocations. Dry years often are characterized by reduced local recharge from deep percolation and increased groundwater pumping for agricultural irrigation to offset lack of rainfall and CVP supply.

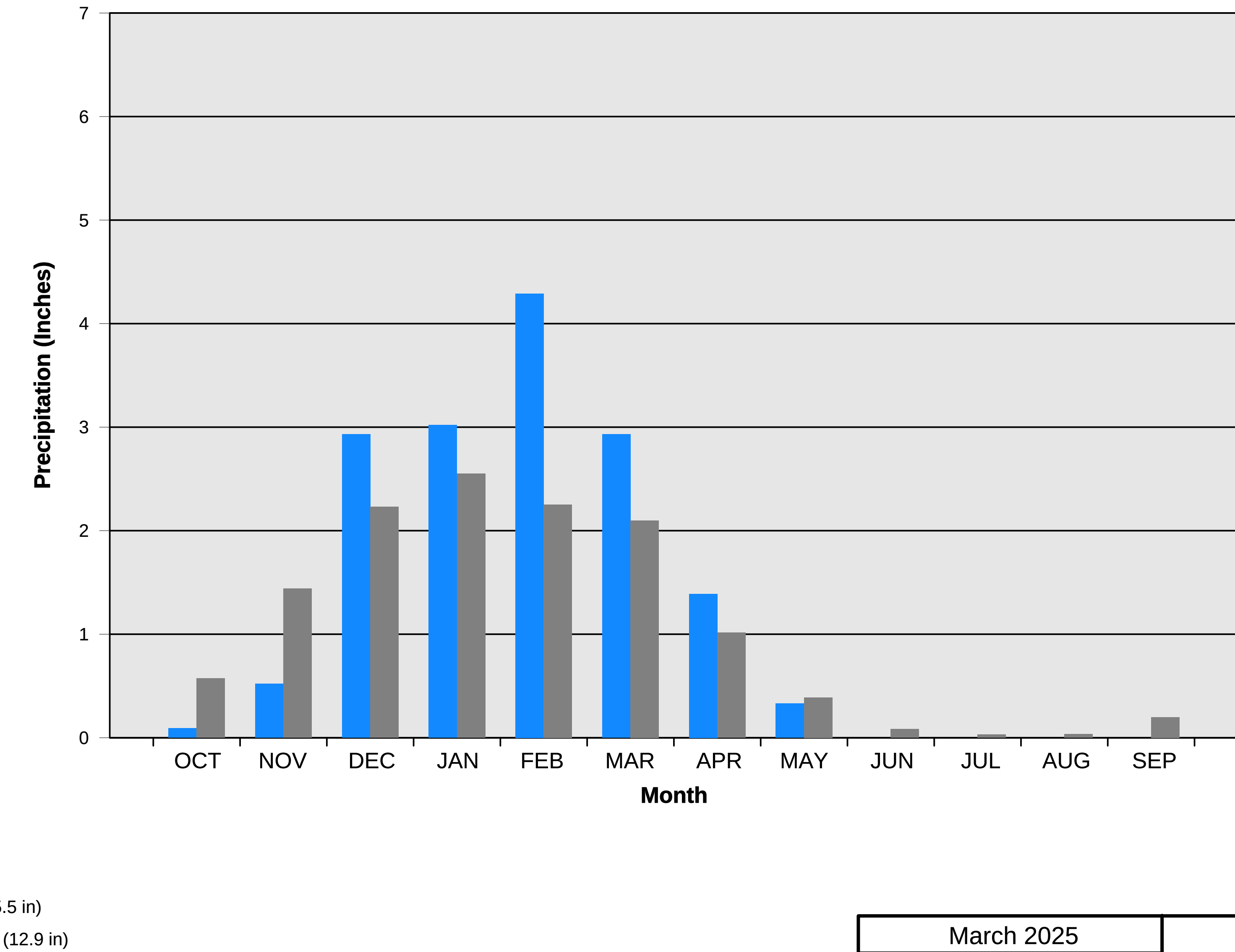
In Water Year 2024, overall precipitation was 15.5 inches; monthly totals are shown in **Figure 3-1.** Water Year 2024 was an above normal year; the annual precipitation was 120 percent of average (12.9 inches). December, January, February, and March received higher than normal precipitation (Figure 3-1). Monthly rainfall and evapotranspiration data from Water Year 1996 to Water Year 2024 are presented in **Appendix B**. **Figure 3-2** shows annual precipitation and water year type from 1976 through 2024. As illustrated, Water year 2024 rainfall was an above normal year, marking the second year in a row of above normal precipitation as Water Year 2023 was wet. Precipitation data collected through February 2025 (6.6 inches) indicate that Water Year 2025 may be a dry or below average year.

Groundwater Elevations

In October 2024, SBCWD collected groundwater elevations in 137 wells from their existing network including nine wells monitored by Valley Water. Recent monitoring included an additional 38 wells which SBCWD has been unable to monitor due primarily to changes in accessibility. SBCWD is investigating these changes in accessibility and hopes to return these wells to the network or to identify appropriate replacements.

Figure 3-3 shows well locations in the current SBCWD monitoring network, including wells previously monitored. Wells monitored in Water Year 2024 are indicated by blue circles, wells that have been monitored within the past five years but have been recently inaccessible are shown by yellow circles, and wells monitored anytime in the past are shown by gray circles. Five wells monitored by the District and two wells monitored by Valley Water are recommended to be removed from the monitoring program as these wells have been destroyed or are no longer planned to be monitored, these wells are shown in red. **Figures 3-4** through **3-7** show hydrographs for key wells in the basin with their respective minimum thresholds (MTs). Additional information on these key wells can be found in **Appendix C**, Section 5 (Water Balance), and Section 7 (SGMA Indicators). The MTs, shown as red lines on the hydrographs, were developed in the GSP to assess sustainability and minimize any risk to nearby domestic wells of future low-water levels (see Section 7).

Because several key wells for groundwater elevations are unable to be monitored and/or showed inconsistent groundwater elevations, new wells were added to the network. This is illustrated on **Figure 3-6** by Well 13-5-6L1, which is a relatively new monitoring well where groundwater elevations have ranged 100 feet over the past 10 years. A new well, DB-1, has been added to the key well network to provide additional information for this location. The replacement wells and their sustainable management criteria are detailed in Section 7 (SGMA Indicators).



Source: CIMIS

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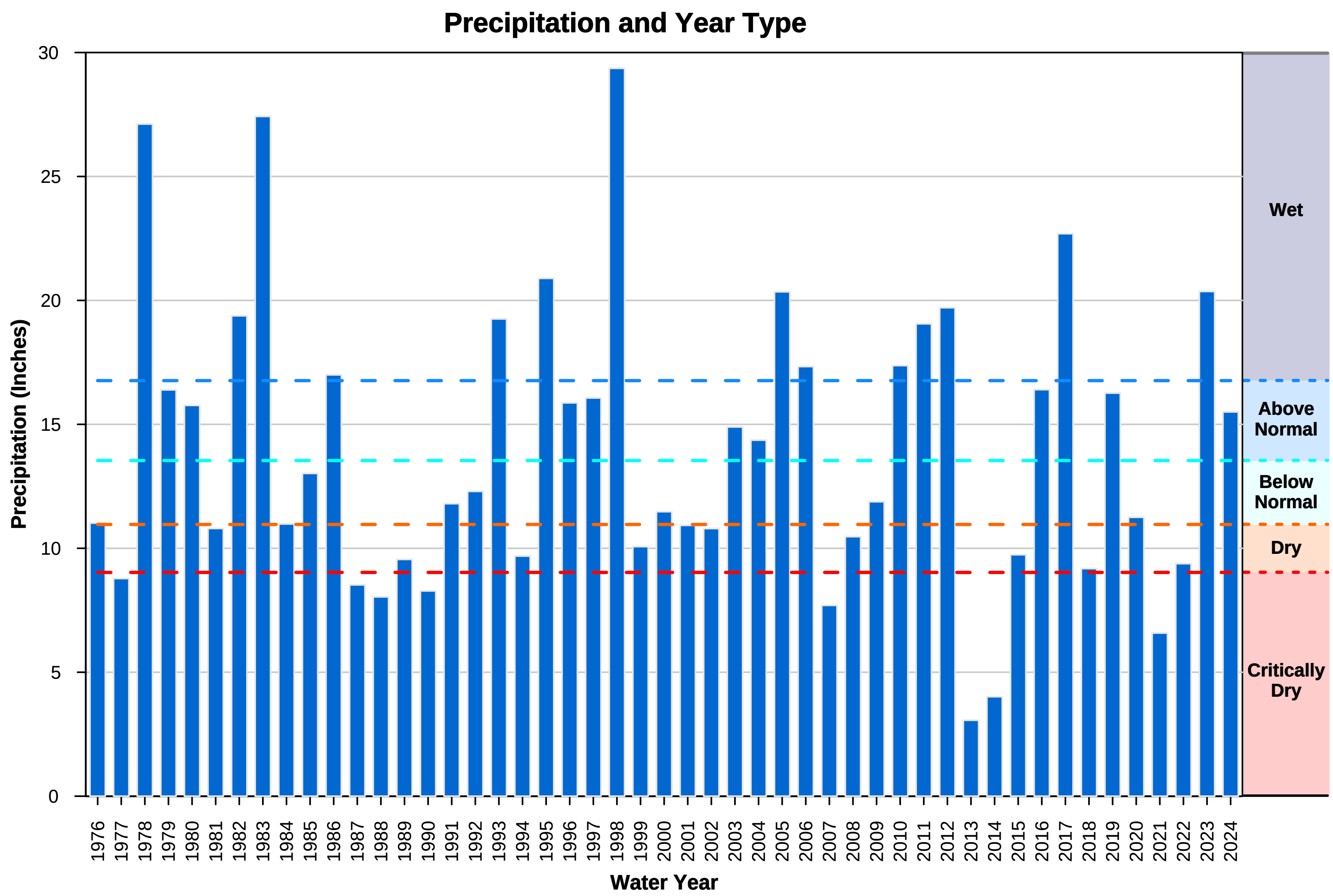
Figure 3-1
Water Year 2024
Precipitation



Source: WRCC Hollister 1 and Hollister 2 Stations

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Figure 3-2
Annual Precipitation
1976-2024

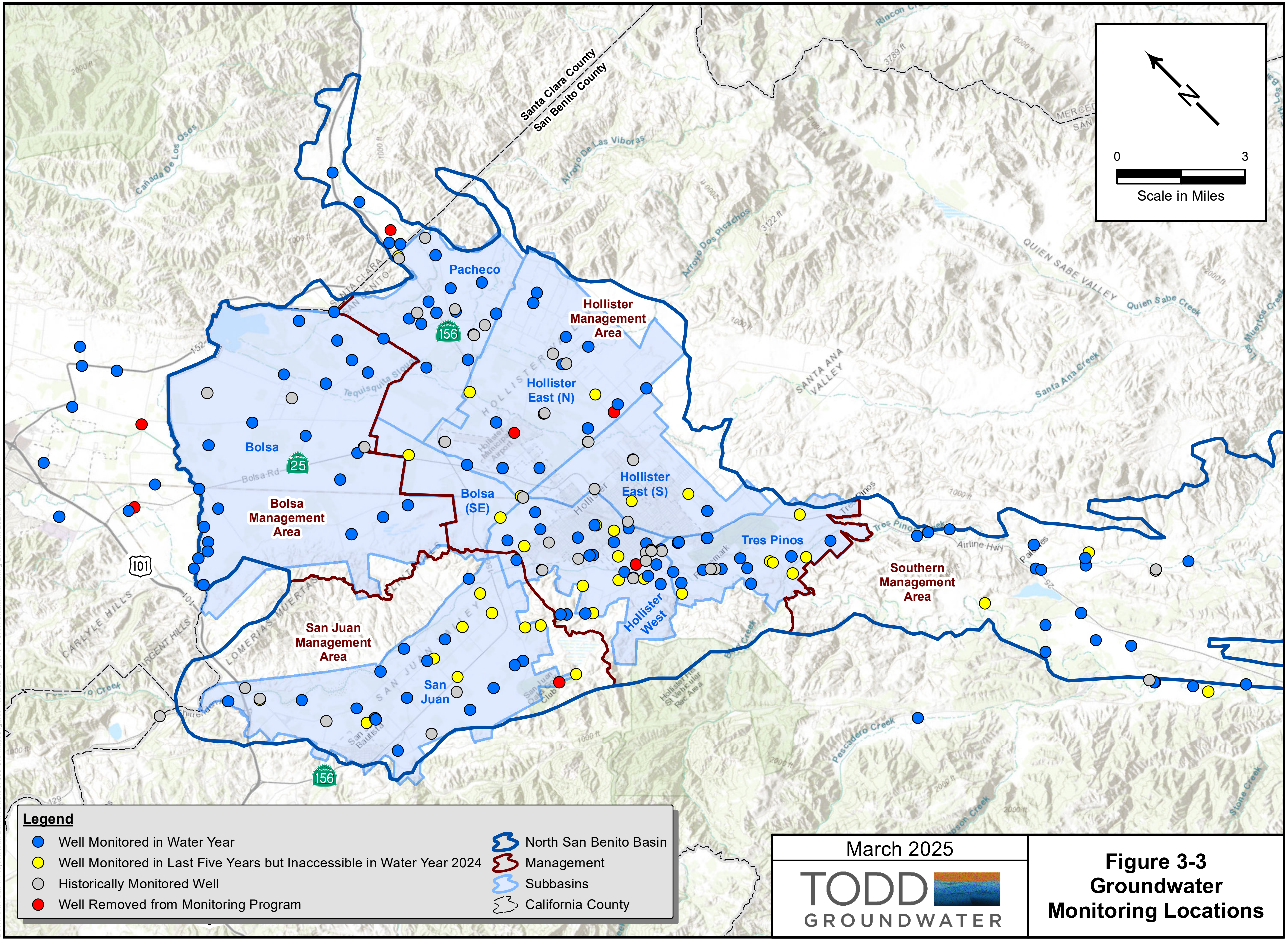

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Figure 3-3
Groundwater Monitoring Locations

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3 – BASIN CONDITIONS

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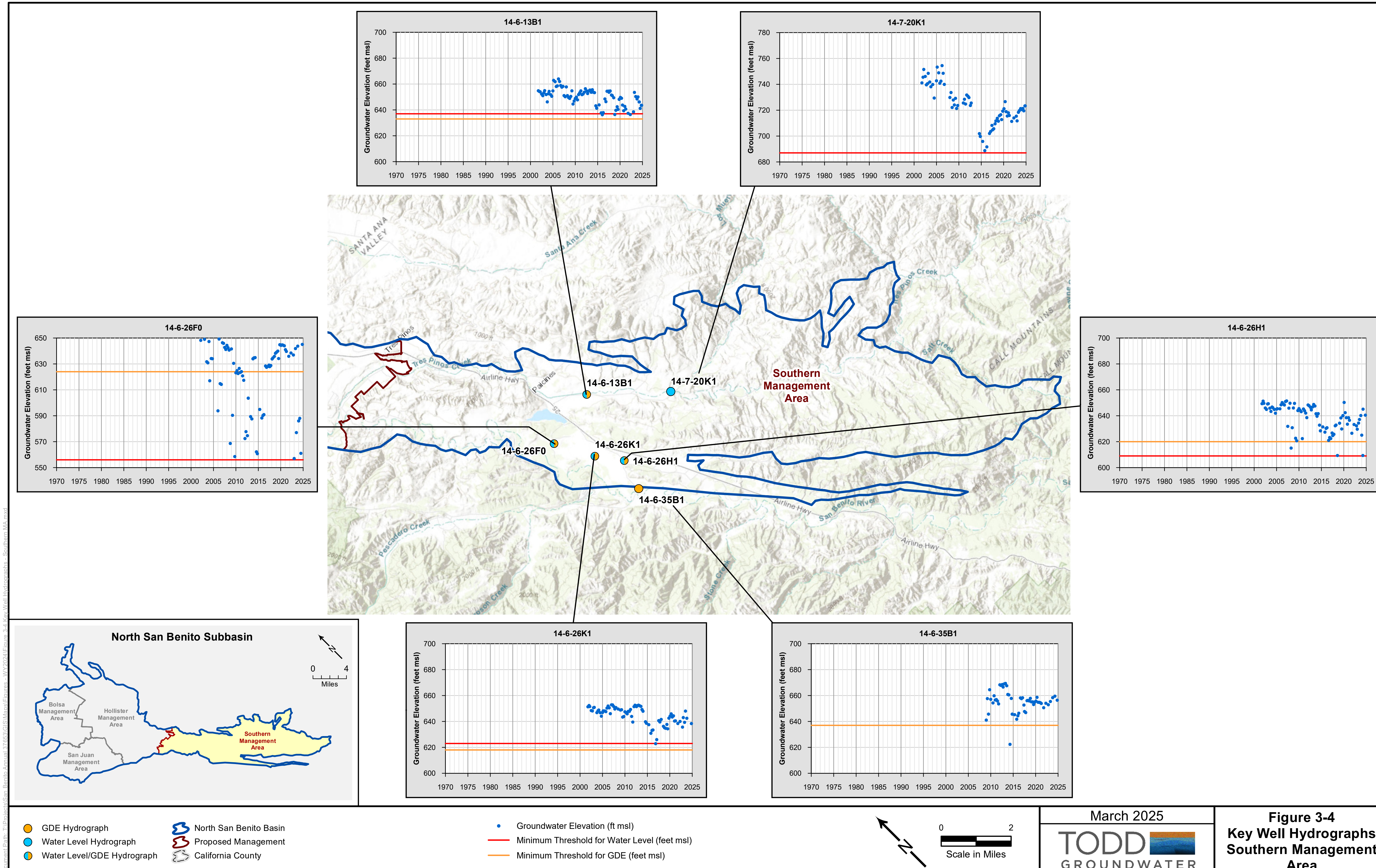


Figure 3-4
Key Well Hydrographs Southern Management Area

3 – BASIN CONDITIONS

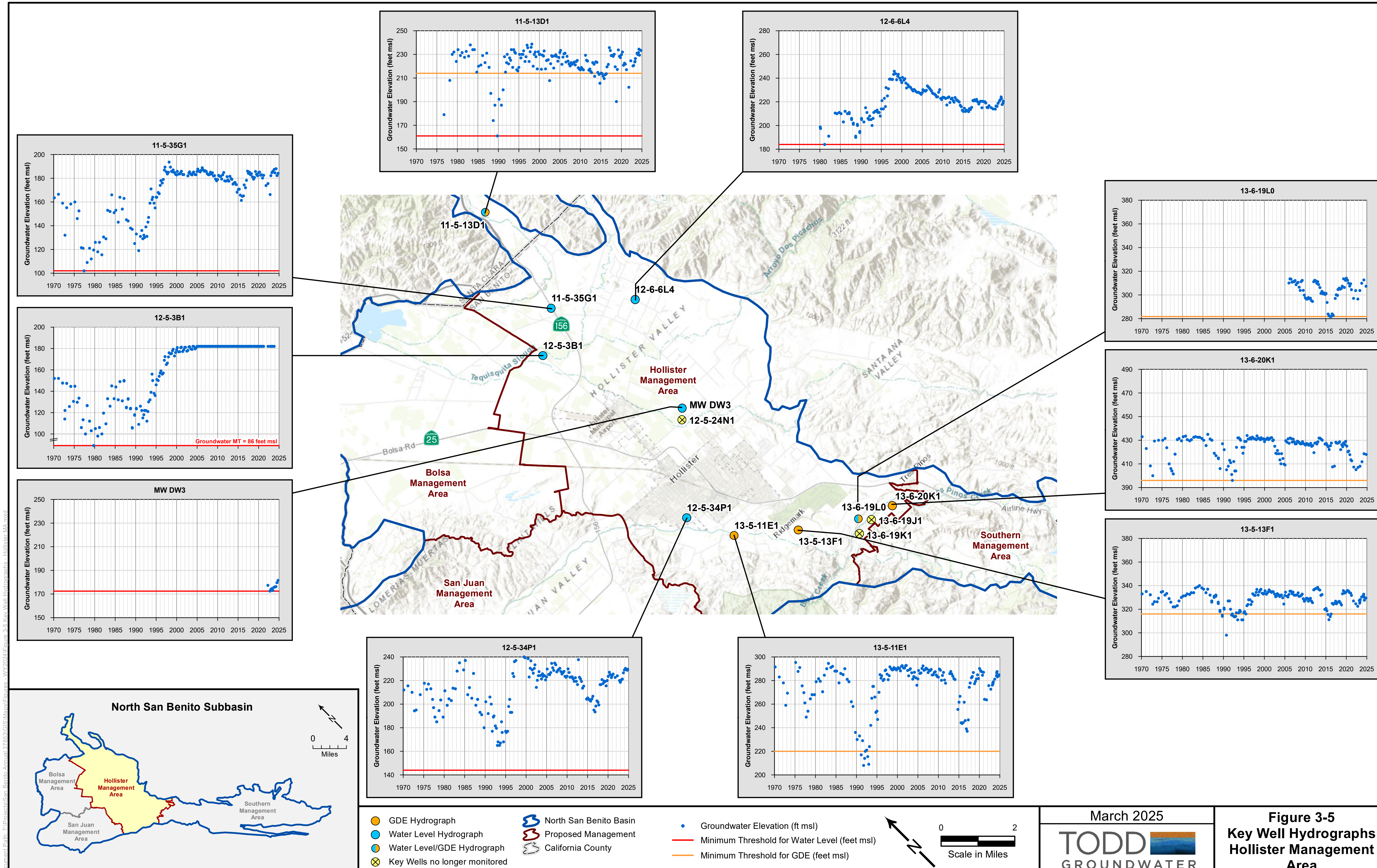
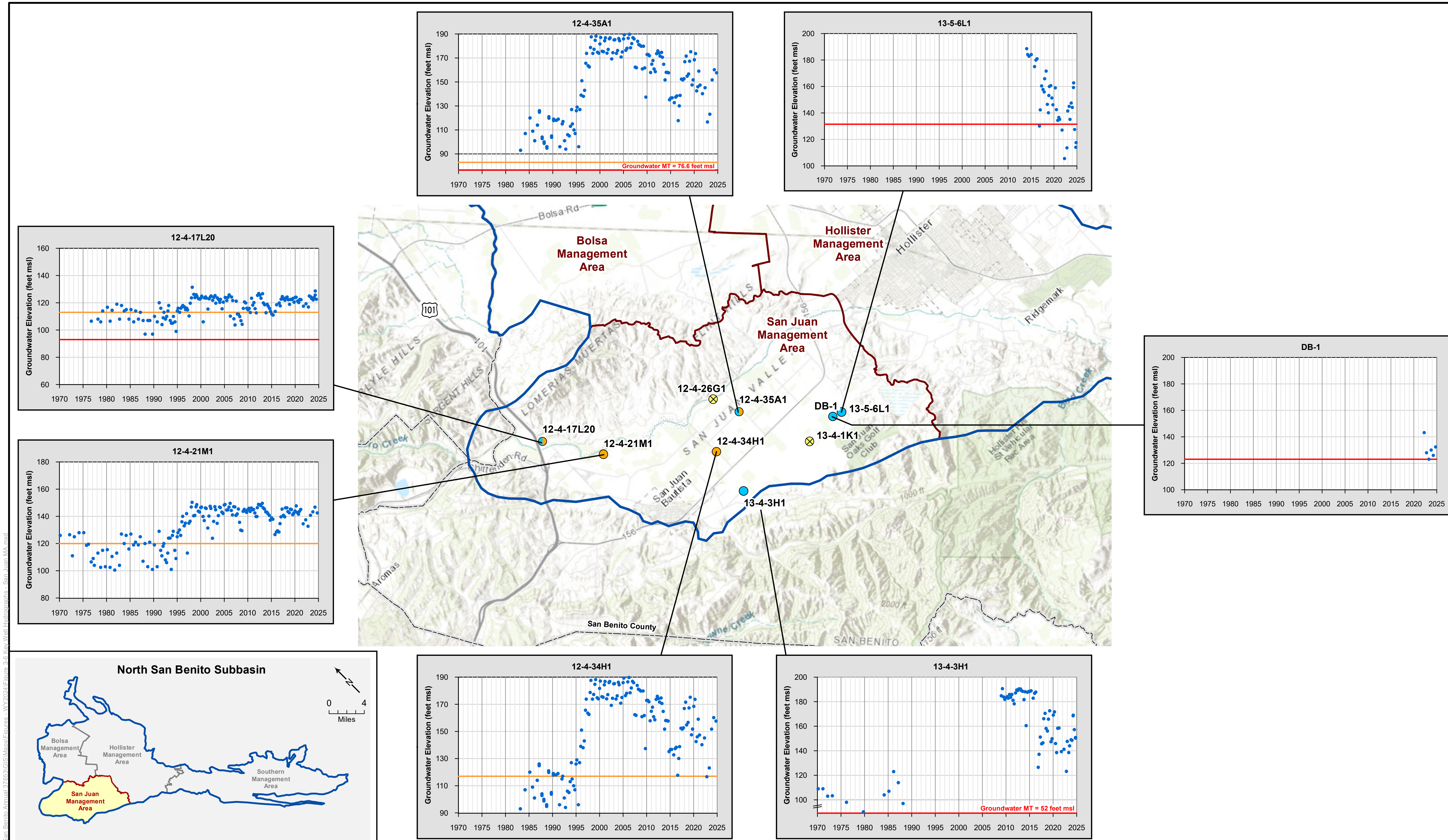


Figure 3-5
Key Well Hydrographs Hollister Management Area

3 – BASIN CONDITIONS



GDE Hydrograph
Water Level Hydrograph
Water Level/GDE Hydrograph
Key Wells no longer monitored
North San Benito Basin
Proposed Management
California County

Groundwater Elevation (ft msl)
Minimum Threshold for Water Level (feet msl)
Minimum Threshold for GDE (feet msl)

0 2
Scale in Miles

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Figure 3-6
Key Well Hydrographs San Juan Management Area

3 – BASIN CONDITIONS

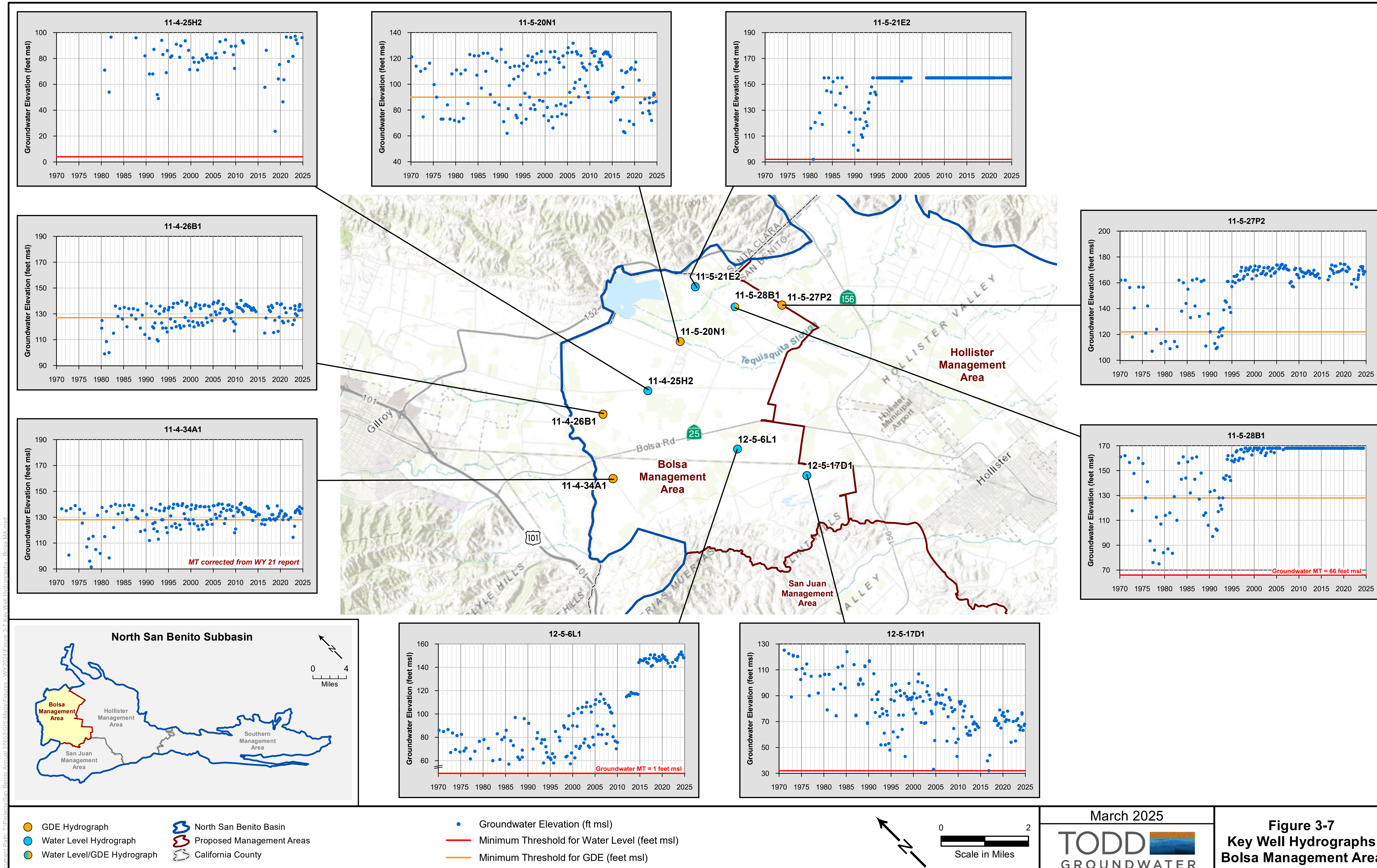


Figure 3-7
Key Well Hydrographs
Bolsa Management Area

3 – BASIN CONDITIONS

Groundwater Trends

Figures 3-4 through 3-7 shows hydrographs of key wells, illustrating long term groundwater elevation changes for the four MAs shown on the maps. As part of the GSP, a network of key wells was selected to monitor for sustainability. These wells were identified from the larger groundwater monitoring network based on length of record, location, continued monitoring, and proximity to water ways (for interconnected surface water key wells). There are 22 key wells to monitor regional groundwater levels (blue circles) and 19 key wells to monitor interconnected surface water / Groundwater Dependent Ecosystems (GDEs; orange circles). These two data sets overlap; eight wells are both groundwater level and interconnected surface water/GDE key wells (blue and orange circles). The MTs set in the GSP to determine chronic lowering of water levels are shown as red lines and MTs that serve as a proxy for interconnected surface water/GDEs are shown as orange lines. In 2024, five key wells that have been unable to be monitored in the past two years were temporarily replaced with nearby wells. Permanent replacement wells and respective MTs will be documented in the next periodic evaluation (due January 2027). More information on the key well network and these replacements can be found in Section 7 (SGMA Indicators).

This year's increases in groundwater levels and storage signal improvements in most wells from recent drought conditions. Continuing its conjunctive use of surface water and groundwater resources and recognizing that climate change will increase temporal variability of water supplies, the District continues to implement projects to increase capture of available water supplies and enhance groundwater level and storage recovery when water is available.

Southern Management Area. Although the District has monitored selected wells in the Southern MA since 2001, elevation data remain limited throughout the MA. The five key wells for water levels and one key well for interconnected surface water are shown on **Figure 3-4**. Because of topography and groundwater flow direction, water levels in the Southern MA are about 400 feet higher than those in the Hollister MA, about nine miles away. As an example, the hydrograph for Well 14-7-20K1 shows that water levels reached a local maximum during 2006, decreased to a local minimum during the drought in 2013-2015, recovered through 2019/2020, decreased slightly through 2022, and have been rising since. In 2024 groundwater elevations in Well 14-7-20K1 continued to increase while still being below historical highs. In general, the pattern of water level change over time observed in 14-7-20K1, including decline from 2020-2022, an increase in 2023, and stable conditions in 2024, is illustrative of other wells in the Southern MA.

Hollister Management Area. As shown on **Figure 3-5,** the Hollister MA has six key wells for tracking groundwater levels, three wells for tracking interconnected surface water, and one additional well serving both. One key well, 12-5-03B1, is a flowing artesian well under similar conditions as artesian wells in the Bolsa MA. The hydrographs for wells 11-5-35G and 12-5-24N1 in the north and central portions of the MA exemplify the recovery experienced in the 1990s and early 2000s with the introduction of CVP water for agricultural irrigation. Review of most of the hydrographs indicates that groundwater levels have generally plateaued, declining slightly in drought and rebounding in wet years with sufficient CVP allocation. Since 2020, and continuing through 2022, groundwater levels generally declined but remained above historical lows. In 2023, groundwater levels increased showing some recovery from the most recent drought. This recovery continued through 2024. Well 12-6-06L4 near Pacheco Creek and Well 13-5-13F1 near San Benito River also show slight recovery from drought, reflecting increased stream recharge and subsurface inflow from upgradient areas of the Basin.

San Juan Management Area. Figure 3-6 shows the locations in San Juan MA and hydrographs for six key wells: two for tracking groundwater levels, two for interconnected surface water, and two for tracking both. Groundwater elevations generally peaked around 2005-2010 with subsequent declines especially in the eastern MA. Nonetheless, groundwater levels remain above historical lows. When available, managed recharge of CVP water at the ponds near the Hollister Water Reclamation Plant (WRP) will help in managing groundwater levels. The westernmost key well 12-4-17L20 (located along the San Benito River) shows stable groundwater elevation with levels in Water Year 2024 approaching observed highs. The groundwater levels in this well have recovered and water levels are above the MT for interconnected surface water/GDEs.

Bolsa Management Area. As shown on **Figure 3-7**, the Bolsa MA has five key wells for tracking groundwater levels, four key wells for monitoring interconnected surface water/GDEs, and one for both purposes. Two key wells currently have flowing artesian conditions (11-5-21E2 and 11-5-28B1). These artesian conditions reflect local hydrogeologic confinement created by clay layers in the northern Bolsa and Hollister MAs. Groundwater elevations in these confined zones increased from 1992 until about 1998, when levels were pressurized to above the ground surface. While the groundwater pressure head above the ground surface elevation may vary in artesian wells, artesian groundwater levels are challenging to measure. Consequently, all artesian wells in the San Benito are recorded as having a groundwater elevation at ground surface elevation. Water levels in most of the key wells show generally stable trends, albeit with differing magnitudes of variability that likely reflect varying degrees of confinement and responses to pumping. An example of this variation can be seen in Wells 12-5-06L1 and 12-5-17D1, which are within two miles of each other but have different long and short-term groundwater elevation trends. Groundwater elevations in well 12-5-06L1 rose relatively consistently from the early 2000's through early 2020's and have risen and fallen in response to climate conditions since. Groundwater elevations in nearby well 12-5-17D1 have been variable, but overall indicated a declining trend from the 1970's through the 2020's and have recently stabilized. The trend differences trends in these wells likely reflect changing land use and pumping patterns and illustrate how local the effect of these changes can be on groundwater conditions. Groundwater levels in Wells 11-4-26B1 and 11-4-34A1 show increases in water levels in Water Years 2023 and 2024; these are key wells for interconnected surface water/GDEs, and spring 2024 groundwater levels are above the MTs in both.

District Act Determination of Overdraft. The District Act (see **Appendix A**) requires presentation of estimates of annual overdraft for the current water year and ensuing water year. Consistent with previous Annual Reports, this would be represented by long-term groundwater level declines, resulting from reduced rainfall and CVP imports. As of 2024, groundwater elevation trends do not indicate overdraft, and overdraft is not anticipated for the remainder of 2024 and 2025.

Sustainable Management Criteria for Groundwater Quality

Sustainable management, as defined by SGMA, is the use and management of groundwater without causing undesirable effects. For groundwater quality, SGMA defines undesirable results as significant and unreasonable adverse impacts to groundwater quality caused by GSA projects, management actions, or other management of groundwater such that beneficial uses are affected or well owners experience an increase in operational costs.

The sustainability goal is to protect groundwater and prevent circumstances where future management activities may degrade groundwater quality. This could occur if groundwater levels change and thereby induce leaching or vertical migration of poor quality groundwater, if areal migration of poor quality groundwater is induced by pumping, or if groundwater quality degradation is associated with recharge or wastewater discharge projects.

Sustainable management of the North San Benito Basin focuses on the two key constituents, TDS and nitrate, as indicators of groundwater quality degradation. As described in the GSP, the triennial analysis of TDS and nitrate is used to determine if degradation is occurring. The GSP established Minimum Thresholds (MTs) for both TDS and nitrate based on the General Basin Plan Objectives developed in the District's Salt and Nutrient Management Plan (SNMP).

As discussed in the GSP, if a triennial update shows that TDS or nitrate concentrations are greater than the minimum thresholds, it will lead to an evaluation of whether the degradation is likely caused by GSA management activities, legacy loading, or a changing dataset. A complete analysis of water quality was performed in the Annual Report for Water Year 2022 and the triennial update will occur in the Water Year 2025 Annual Report.

4-WATER BALANCE

For the GSP, a quantitative assessment of the water balance (or water budget) of the North San Benito Subbasin (or Basin) was developed, using the numerical model, and presenting estimates of inflows, outflows, and change in storage for the Management Areas (MAs). The North San Benito GSP numerical model was based on historical data for water years 1975-2017 and has been updated annually as part of the annual report. For this Annual Report, newly available data were used to improve and update analyses for recent years. Results for 2019 through 2024 are shown here.

Method of Analysis

The water balance used for the GSP, and updated here, was developed using a rainfall-runoff-recharge model and a groundwater flow model. Complete, itemized surface water and groundwater balances were estimated by combining raw data (rainfall, stream flow, municipal pumping, wastewater percolation) with values simulated using models. Collectively, the models simulate the entire hydrologic system, but each model or model module focuses on part of the system, as described below. In general, the models were used to estimate flows in the surface water and groundwater balances that are difficult to measure directly or that depend on current groundwater levels. These include surface and subsurface inflows from tributary areas, percolation from stream reaches within the Basin, groundwater discharge to streams, subsurface flow from the Llagas Subbasin and between Management Areas, locations and discharges of flowing wells, consumptive use of groundwater by riparian vegetation, and changes in groundwater storage. The two separate models, collectively referred to as the North San Benito Numerical model, are described as follows.

Rainfall-Runoff-Recharge Model. This Fortran-based model simulates hydrologic processes that occur over the entire land surface, including precipitation, interception, infiltration, runoff, evapotranspiration, irrigation, effects of impervious surfaces, pipe leaks in urban areas, deep percolation below the root zone, and shallow groundwater flow to streams and deep recharge.

Groundwater Model. The groundwater flow model uses the MODFLOW 2005 code developed by the U.S. Geological Survey, with pre- and post-processing facilitated using Groundwater Vistas, a readily available commercial software package. The model produces linked simulation of surface water and groundwater, as described below. MODFLOW simulates subsurface flow by combining equations representing flow through porous sediments (the Darcy Equation) with equations that enforce conservation of mass. The equations are implemented numerically, which means that they are applied simultaneously between all adjoining cells in a model grid through an iterative process.

The numerical model is the best tool to quantify the North San Benito water balance. The model will continue to be updated for future Annual Reports, providing a better understanding of the surface water-groundwater system and a tool to evaluate future conditions and management actions. Additional information about the model can be found in the GSP and the model documentation report found as Appendix G in the GSP. In Water Year 2024, the model was updated to reflect recent conditions and improve the simulation of past years. **Tables 4-1 through 4-4** show the updated water balances for each MA. **Figures 4-1 through 4-4** show the water balances for each MA for the entire model period.

TABLE 4-1. WATER BALANCE UPDATE - SOUTHERN MA, AF

Water Balance Items	2019	2020	2021	2022	2023	2024
Groundwater Inflow						
Subsurface inflow from external basins	-	-	-	-	-	-
Percolation from streams	27,495	15,643	12,909	8,160	52,320	28,886
Bedrock inflow	2,291	918	486	33	1,354	3,957
Dispersed recharge from rainfall[1]	6,630	4,219	3,250	2,943	28,997	10,545
Irrigation deep percolation	601	668	772	832	603	625
Reclaimed water percolation	-	-	-	-	-	-
Inflow from Hollister MA	1,462	1,147	830	812	892	858
Total inflow	**38,479**	**22,594**	**18,247**	**12,780**	**84,165**	**44,871**
Groundwater Outflow						
Subsurface outflow to external basins	-	-	-	-	-	-
Wells - M&I and domestic	(143)	(143)	(143)	(143)	(144)	(144)
Wells - agricultural	(6,722)	(7,421)	(8,652)	(9,312)	(6,734)	(7,000)
Groundwater discharge to streams	(20,328)	(20,139)	(16,521)	(13,467)	(23,058)	29,463)
Riparian evapotranspiration	(1,464)	(1,687)	(1,900)	(1,999)	(1,479)	(1,529)
Outflow to Hollister MA	(2,361)	(2,288)	(2,677)	(2,894)	(2,759)	(2,982)
Total outflow	**(31,018)**	**(31,678)**	**(29,893)**	**(27,816)**	**(34,173)**	**(41,117)**
Net Change in Storage	**7,461**	**(9,084)**	**(11,646)**	**(15,035)**	**49,992**	**3,755**

1. Dispersed recharge volumes adjusted from pre-processor to match model inflows

TABLE 4-2. WATER BALANCE UPDATE - HOLLISTER MA, AF

Water Balance Items	2019	2020	2021	2022	2023	2024
Groundwater inflow						
Subsurface inflow from external basins	-	-	-	-	-	-
Percolation from streams	24,680	15,015	13,182	10,535	44,544	24,199
Bedrock inflow	19,728	10,203	1,744	472	2,827	7,223
Dispersed recharge from rainfall[1]	25,074	12,465	6,946	5,745	47,962	24,300
Irrigation deep percolation	4,514	4,986	5,286	5,567	4,447	4,750
Reclaimed water percolation	327	291	248	226	372	392
Inflow from Southern MA	4,958	4,760	5,187	5,565	5,842	5,888
Total inflow	**79,281**	**47,720**	**32,593**	**28,111**	**105,994**	**66,752**
Groundwater Outflow						
Subsurface outflow to external basins	-	-	-	-	-	-
Wells - M&I and domestic	(1,808)	(2,056)	(3,748)	(3,651)	(3,712)	(2,050)
Wells - agricultural	(35,913)	(39,586)	(46,728)	(53,668)	(42,590)	(45,562)
Groundwater discharge to streams	(8,630)	(6,972)	(2,119)	(1,116)	(1,853)	(2,817)
Riparian evapotranspiration	(193)	(182)	(147)	(125)	(183)	(161)
Outflow to Bolsa and San Juan MAs	(11,511)	(10,985)	(10,409)	(10,243)	(10,295)	(9,837)
Total outflow	**(58,055)**	**(59,781)**	**(63,151)**	**(68,803)**	**(58,634)**	**(60,427)**
Net Change in Storage	**21,226**	**(12,061)**	**(30,558)**	**(40,692)**	**47,361**	**6,325**

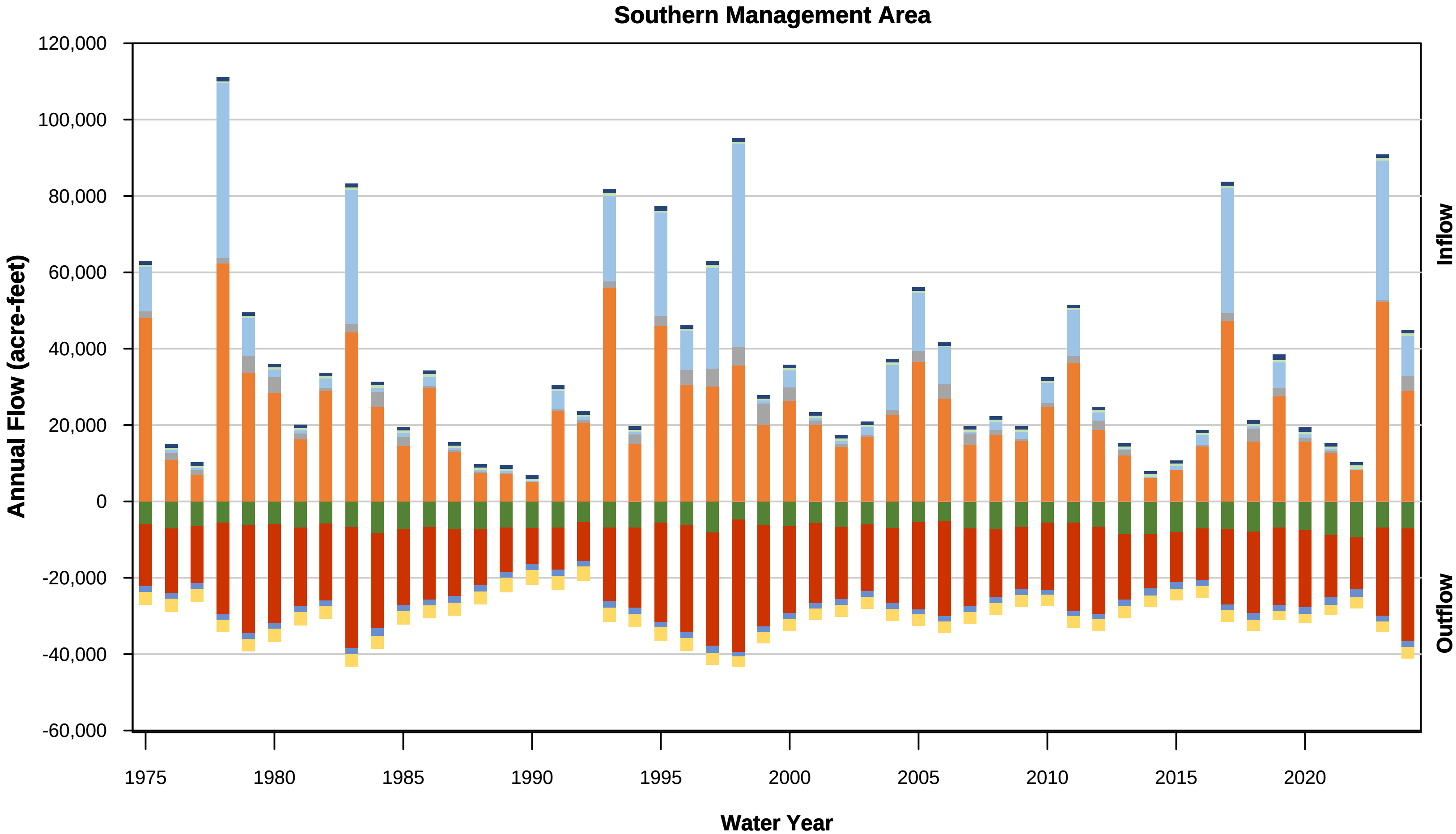
TABLE 4-3. WATER BALANCE UPDATE - SAN JUAN MA, AF

Water Balance Items	2019	2020	2021	2022	2023	2024
Groundwater Inflow						
Subsurface inflow from external basins	-	-	-	-	-	-
Percolation from streams	8,291	5,225	2,241	608	13,750	7,865
Bedrock inflow	707	558	364	99	563	1,291
Dispersed recharge from rainfall[1]	10,268	4,910	2,435	1,751	21,327	9,647
Irrigation deep percolation	1,830	2,027	2,124	2,244	1,786	1,930
Reclaimed water percolation	2,088	2,671	2,884	2,884	3,142	1,525
Inflow from Hollister and Bolsa MAs	4,980	4,916	5,057	5,441	4,636	4,534
Total inflow	**28,164**	**20,307**	**15,105**	**13,027**	**45,205**	**26,793**
Groundwater Outflow						
Subsurface outflow to external basins	-	-	-	-	-	-
Wells - M&I and domestic	(397)	(363)	(360)	(463)	(506)	(505)
Wells - agricultural	(15,944)	(17,776)	(20,162)	(22,669)	(17,726)	(19,188)
Groundwater discharge to streams	(1,716)	(1,669)	(1,064)	(599)	(1,804)	(2,239)
Riparian evapotranspiration	(997)	(1,136)	(1,267)	(1,326)	(998)	(1,025)
Outflow to Bolsa MA	(1,664)	(1,571)	(1,504)	(1,533)	(1,778)	(1,542)
Total outflow	**(20,718)**	**(22,515)**	**(24,358)**	**(26,590)**	**(22,812)**	**(24,499)**
Net Change in Storage	**7,446**	**(2,207)**	**(9,253)**	**(13,563)**	**22,393**	**2,293**

1. Dispersed recharge volumes adjusted from pre-processor to match model inflows

TABLE 4-4. WATER BALANCE UPDATE - BOLSA MA, AF

Water Balance Items	2019	2020	2021	2022	2023	2024
Groundwater Inflow						
Subsurface inflow from external basins	5,033	5,823	8,217	10,760	5,582	4,304
Percolation from streams	4,274	3,267	3,314	2,182	5,374	3,535
Bedrock inflow	-	-	-	-	-	-
Dispersed recharge from rainfall[1]	13,653	7,565	4,324	3,218	29,245	14,959
Irrigation deep percolation	2,300	2,432	2,616	2,769	2,283	2,387
Reclaimed water percolation	-	-	-	-	-	-
Inflow from Hollister and San Juan MAs	5,698	5,492	5,163	4,789	5,486	5,088
Total inflow	**30,958**	**24,578**	**23,634**	**23,719**	**47,969**	**30,273**
Groundwater Outflow						
Subsurface outflow to external basins	(15)	-	-	-	(36)	(44)
Wells - M&I and domestic	(25)	(25)	(25)	(25)	(25)	(25)
Wells - agricultural	(23,918)	(25,354)	(27,358)	(29,019)	(23,897)	(24,982)
Groundwater discharge to streams	(3,775)	(1,458)	(320)	(79)	(4,763)	(4,704)
Riparian evapotranspiration	(229)	(189)	(167)	(87)	(238)	(175)
Outflow to San Juan MA	(1,563)	(1,532)	(1,709)	(1,937)	(2,024)	(2,007)
Total outflow	**(29,525)**	**(28,558)**	**(29,577)**	**(31,146)**	**(30,982)**	**(31,936)**
Net Change in Storage	**1,433**	**(3,980)**	**(5,943)**	**(7,427)**	**16,987**	**(1,663)**



Inflows

- Inflow from Hollister MA
- Reclaimed water percolation
- Irrigation deep percolation
- Dispersed recharge from rainfall
- Bedrock inflow
- Percolation from streams
- Subsurface inflow from external basins

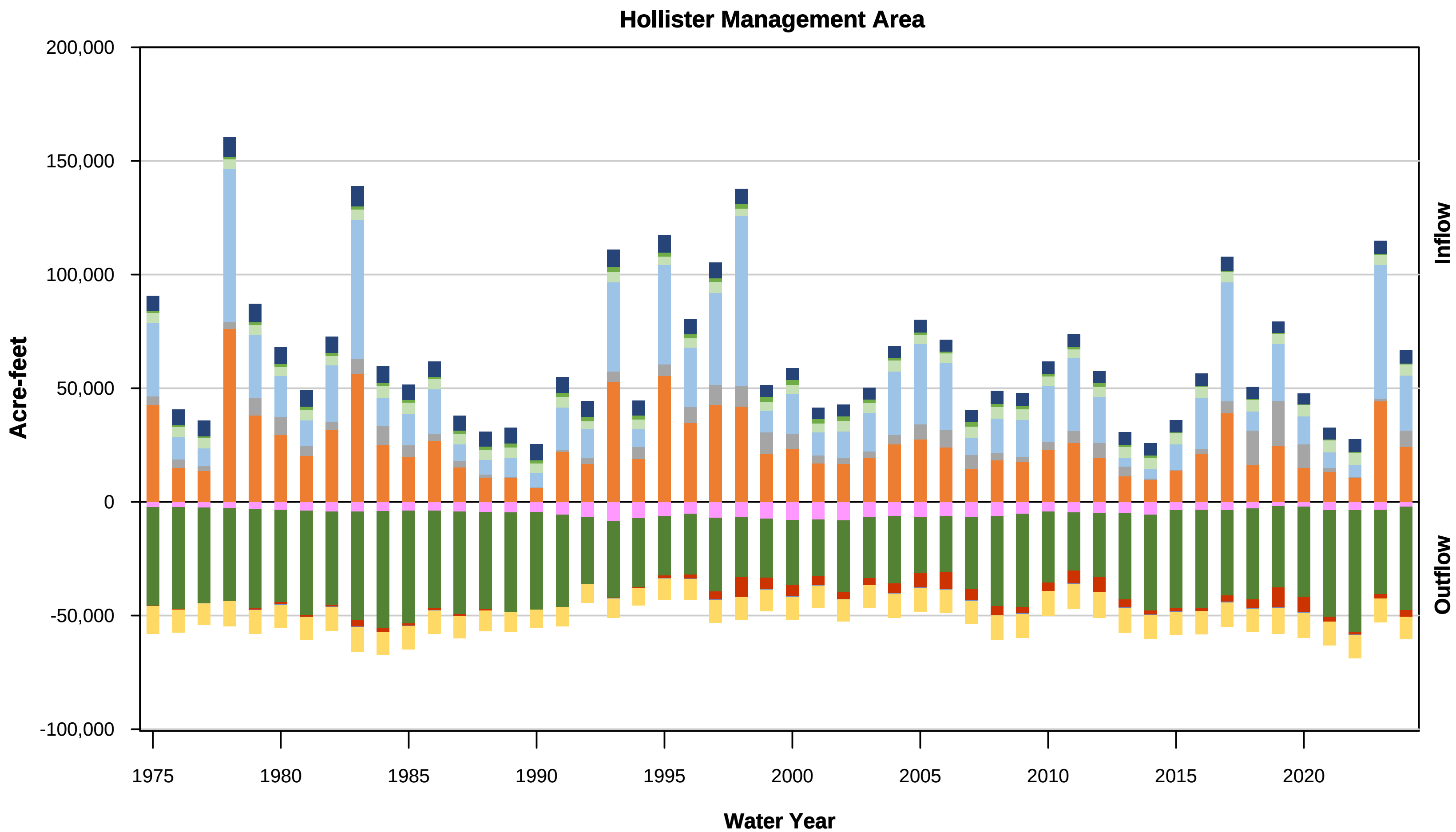
Outflows

- Shallow discharge to streams
- Subsurface outflow to external basin
- Wells - M&I and domestic
- Wells - agricultural
- Groundwater discharge to streams
- Riparian evapotranspiration
- Outflow to Hollister MA

March 2025

TODD GROUNDWATER

Figure 4-1
Water Balance
Southern
Management Area



Inflows

- Inflow from Southern MA
- Reclaimed water percolation
- Irrigation deep percolation
- Dispersed recharge from rainfall
- Bedrock inflow
- Percolation from streams
- Subsurface Inflow from external basins

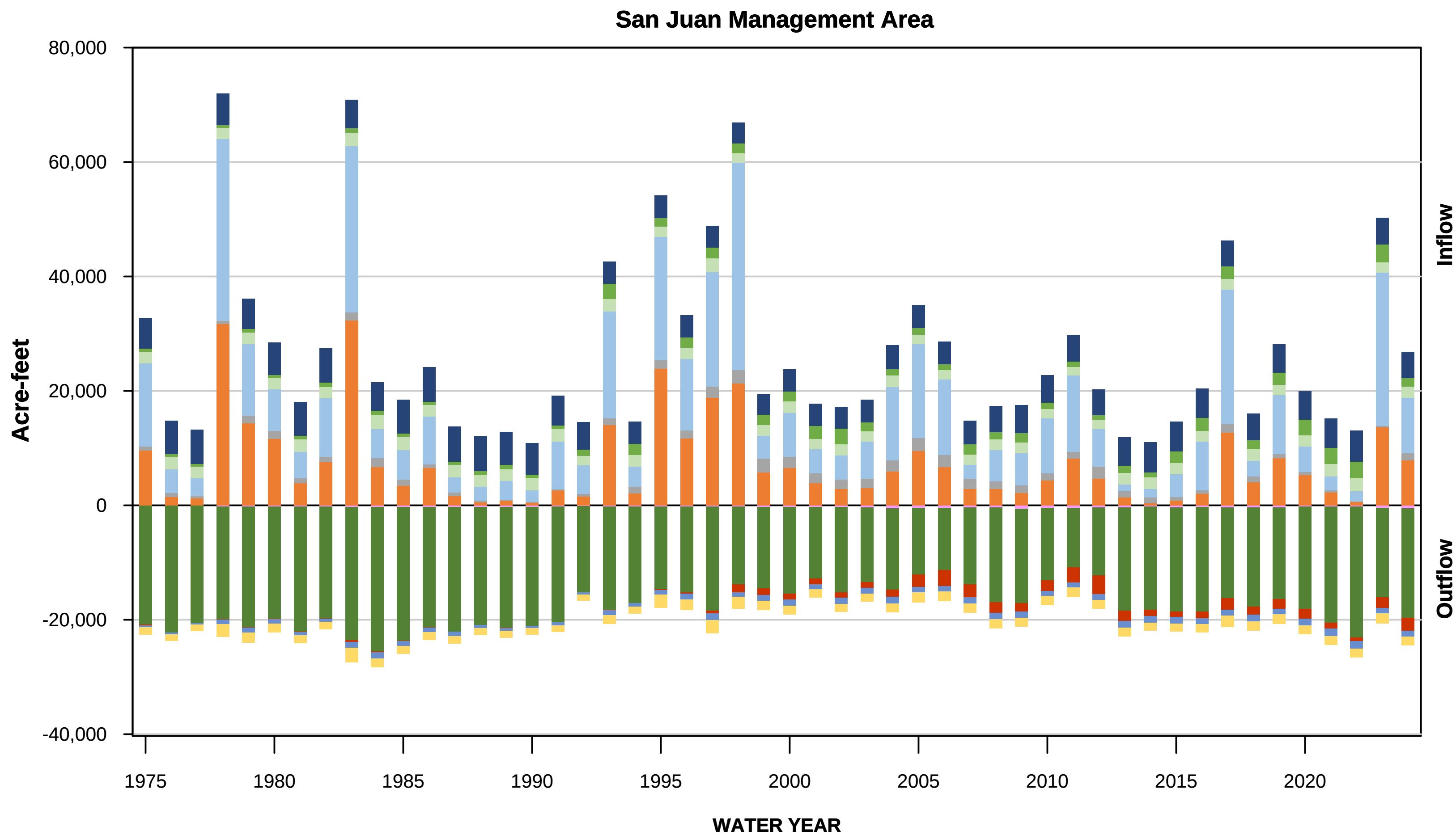
Outflows

- Shallow discharge to streams (Shallow)
- Subsurface outflow to external basins
- Wells - M&I and domestic
- Wells - agricultural
- Groundwater discharge to streams
- Riparian evapotranspiration
- Outflow to Bolsa and San Juan MAs

March 2025

TODD GROUNDWATER

Figure 4-2
Water Balance
Hollister
Management Area



Inflows

- Inflow from Hollister MA
- Reclaimed water percolation
- Irrigation deep percolation
- Dispersed recharge from rainfall
- Bedrock inflow
- Percolation from streams
- Subsurface inflow from external basins

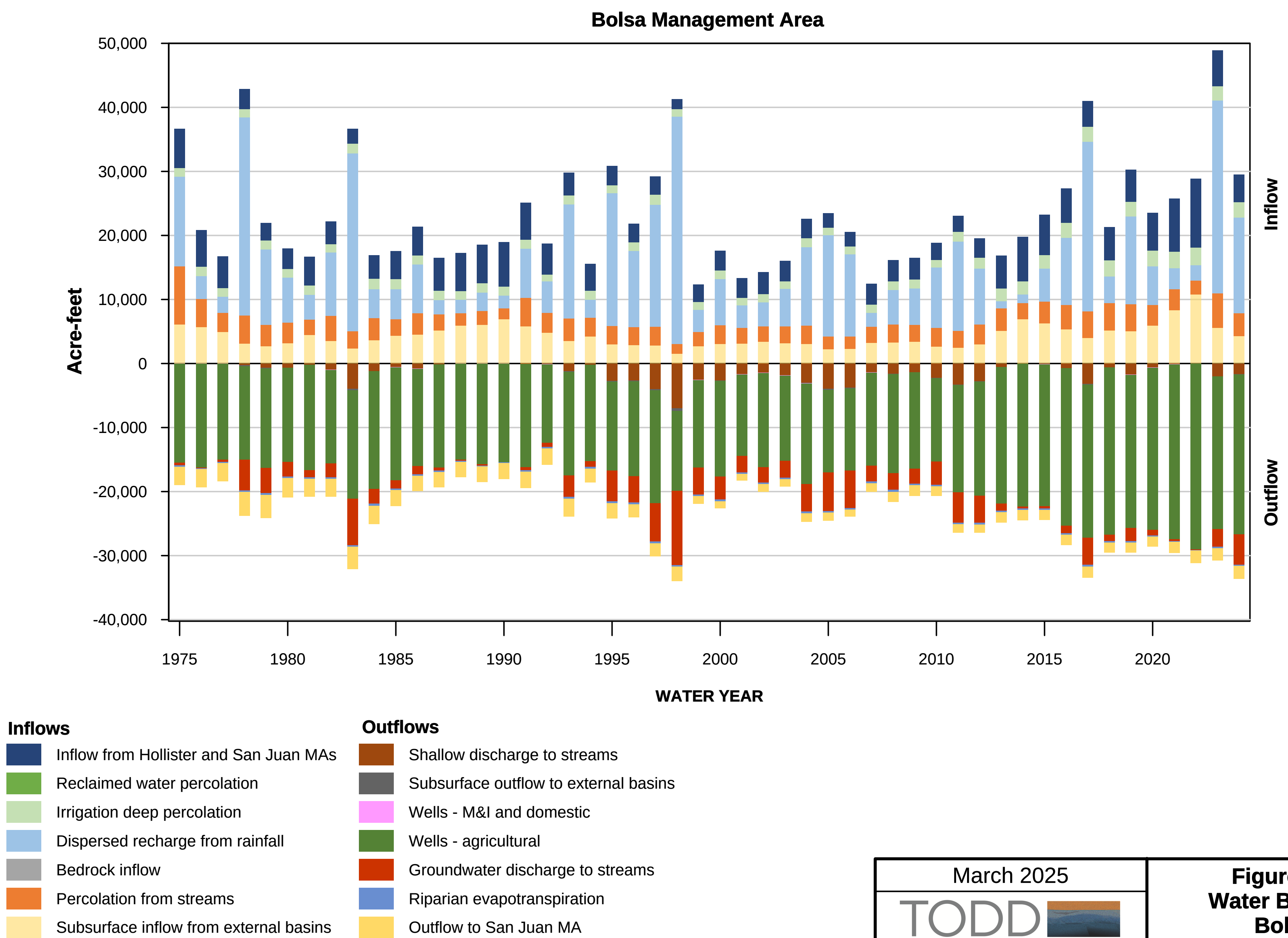
Outflows

- Shallow discharge to streams
- Subsurface outflow to external basins
- Wells - M&I and domestic
- Wells - agricultural
- Groundwater discharge to streams
- Riparian evapotranspiration
- Outflow to Bolsa MA

March 2025

TODD GROUNDWATER

Figure 4-3
Water Balance
San Juan
Management Area



March 2025

TODD GROUNDWATER

Figure 4-4
Water Balance
Bolsa
Management Area

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4-WATER BALANCE

Inflows

The rainfall-runoff-recharge model and groundwater model were updated to reflect conditions from Water Years 2019-2024. Data, assumptions and calculations for individual hydrologic processes and groundwater inflows are described below.

Precipitation and Evaporation. Precipitation and evaporation on the land surface are accounted for in the rainfall-runoff-recharge model. Data are obtained from local climate stations.

CVP Imported Water. Two Management Areas (Hollister and San Juan) receive imported water from the CVP, which is delivered to municipal and agricultural users and to several percolation ponds to enhance groundwater recharge. CVP imported water stored in San Justo Reservoir seeps from the reservoir to the local groundwater. In addition, water evaporates from water surfaces. These seepage and evaporation losses remain consistent through the period of record and are included in the groundwater model.

Dispersed Recharge from Rainfall and Deep Irrigation. Dispersed recharge from rainfall and applied irrigation water is estimated by the rainfall-runoff-recharge model. The model simulates soil moisture storage in the root zone, which derives from rainfall infiltration and irrigation, and outflows to evapotranspiration and deep percolation. Simulation is on a daily basis. In recharge zones with irrigated crops, irrigation is simulated by assuming water is applied when soil moisture falls below a certain threshold. When soil moisture exceeds the root zone storage capacity, any excess rainfall or irrigation becomes deep percolation. Rainfall and irrigation water comingle in the root zone and in deep percolation. In urban recharge zones, pipe leaks are included in the amount shown as rainfall recharge. The resulting net recharge is passed to the top layer of the groundwater model.

Percolation from Streams. Percolation from streams depends on the flow, stage, width, length, and bed permeability of stream reaches, as well as the elevation difference between the stream surface and groundwater in the underlying model cell. Point sources of recharge (such as wastewater percolation facilities) are entered into the top model layer as if they were injection wells. Surface inflows to the stream network in the surface water module of the groundwater model include a combination of gauged flows (for the San Benito River at the upstream end of the Southern MA only), simulated runoff from tributary watersheds and valley floor areas obtained from the rainfall-runoff-recharge model, and historical amounts of CVP water percolated in local streams. The effects of Hernandez Reservoir operation on San Benito River flows are included in the gauged flows, and the effects of Pacheco Reservoir on Pacheco Creek inflows were estimated by applying simple rules for seasonal storage and release. Valley floor areas are flatter than the tributary watersheds, and the amount of runoff per acre is consequently smaller. The rainfall-runoff-recharge model simulates runoff from valley floor areas, and those flows are added to the inflows of nearby stream segments in the groundwater model.

Reclaimed Water Percolation. Percolation of reclaimed water in wastewater disposal ponds occurs in two Management Areas (San Juan and Hollister) at facilities operated by the City of Hollister, Sunnyslope County Water District (SSCWD), and Tres Pinos County Water District. Discharges from the San Juan Bautista wastewater treatment plant are not included. Percolation is assumed to be the plant inflow less net evaporation and amounts of wastewater recycled for irrigation use. Additional percolation may occur around rural residential septic systems. For the numerical model, it is assumed to be negligible as the volumes would be small and spread out over the Basin.

Subsurface Groundwater Inflow. Three types of subsurface inflow are listed separately in the water balance tables. Subsurface inflow from external basins occurs only in the Bolsa MA, where flow enters from the adjacent Llagas Subbasin. This is simulated as a head-dependent flow that varies depending on simulated groundwater levels near the boundary (lower water levels increase the simulated inflow rate). Along the rest of the Basin perimeter, small amounts of subsurface inflow result from recharge percolating through fractured bedrock in tributary watershed areas. Bedrock inflow is simulated as shallow injection wells along the perimeter of the Basin.

Finally, subsurface flow occurs across the management area boundaries within the Basin. Although flow across MA boundaries is predominantly in one direction in most cases, local variations in boundary alignment relative to regional gradients can result in inflow at one location concurrent with outflow at another. For example, **Table 4-1** indicates inflow from Hollister to Southern MA although Southern MA is generally upgradient of Hollister MA. This reflects the zig-zag character of the boundary between the two MAs, such that groundwater flows from Hollister into portions of Southern MA and then flows out again.

Most groundwater inflows to the Basin are controlled by hydrologic conditions. Natural stream percolation and deep percolation from rainfall are related to the volume and distribution of rainfall. The availability of imported water similarly reflects wet and dry conditions in the source area, which for CVP water is the Sierra Nevada. Because they are related to rainfall, almost all Basin inflows are higher in wet years and lower in dry years. In contrast, deep percolation of applied irrigation water (irrigation return flow) is generally similar from year to year.

Outflows

Major outflows from the Basin are pumping (agricultural, municipal, industrial, and domestic), groundwater seepage into streams, subsurface outflow, and evapotranspiration by riparian vegetation.

Pumping by Wells. Agricultural pumping is much larger than the other types and is listed separately in the water balance tables and shown in green on the water balance bar charts. Agricultural pumping is dependent not only on cropping patterns and irrigation practices, but also on the volume of CVP imports and the amount and timing of rainfall. Spring rains decrease total irrigation demand, and growers adjust pumping to compensate for wet weather and the availability of CVP imports. Agricultural groundwater pumping in the model and water balance tables is simulated by the rainfall-runoff-recharge model. When simulated soil moisture falls below a specified threshold in a recharge zone with irrigated crops, irrigation is assumed to be applied and to refill soil moisture to capacity. Irrigation not derived from CVP water or recycled water is assumed to be from groundwater.

Agricultural pumping in Zone 6 is also monitored by SBCWD by recording the operating time of pump motors and multiplying that by a measured discharge rate. Previous studies have found that the pumping estimates obtained by this method are significantly smaller than the estimates obtained by simulating crop water demand and soil moisture. The simulation approach improved model calibration during the 2014 model update, and that approach is retained in the current model.

Reliable measurements of agricultural pumping are a recognized data gap. Given the large range or uncertainty and the model sensitivity to the volume and location of agricultural pumping, evaluation is currently underway of alternative methodologies for accurately evaluating agricultural pumping.

Municipal pumping by City of Hollister and SSCWD is in the Hollister MA, with additional pumping by San Juan Bautista in the San Juan MA. Pumping by major municipal providers is measured, as is pumping by smaller community water systems and self-supplied commercial and industrial facilities within Zone 6. Actual pumping and well locations are used in the numerical model. Additional pumping for potable use at rural residences and agricultural buildings was estimated by inventorying the number and locations of those buildings on aerial photos. This domestic pumping is assigned to 200 hypothetical wells near building locations.

A map showing the locations of agricultural and municipal, commercial, industrial, and domestic pumping is presented in **Figure 4-5**. Irrigation pumping is represented as a one-dimensional annual groundwater application rate (in inches) on the irrigated fraction of each recharge analysis polygon. Use of CVP water and recycled water has already been subtracted from total irrigation demand to obtain these estimates of groundwater-supplied irrigation. Monthly one-dimensional rates are multiplied by irrigated area and entered into the groundwater model as a hypothetical irrigation well located at the centroid of each irrigated recharge polygon. Municipal, commercial, industrial, and domestic wells are displayed as circles with areas proportional to annual pumping in 2023. Points representing the first three categories are actual well locations, and the pumping is measured and reported to the District. The small dots representing rural domestic pumping are located where rural residences are visible in aerial photographs, and a uniform production rate was assumed at all those locations.

Subsurface Outflow. Subsurface outflows to other basins and other Management Areas were calculated using the groundwater model by the same methods used to simulate subsurface inflows.

Groundwater Discharge to Streams. Discharges from the groundwater basin to surface water bodies are simulated by the groundwater model based on stream bed wetted area and permeability and on the amount by which the simulated groundwater elevation in a model stream cell is higher than the simulated surface water elevation. This occurs in all Management Areas, but notably where Pacheco Creek and Tequisquita Slough approach the Calaveras Fault, where the Pajaro River approaches the downstream end of the Bolsa MA, and along the San Benito River at the downstream end of the San Juan MA. The relatively large amounts of simulated groundwater discharge to streams in the Southern MA is balanced by high amounts of percolation from streams. The San Benito River and Tres Pinos Creek transition between gaining and losing at various locations in the Southern MA.

Riparian Evapotranspiration. The presence of dense, vigorous trees and shrubs along a stream channel is often a sign that the roots of the vegetation extend to the water table and have access to groundwater throughout the dry season. Plants that draw water directly from groundwater are called phreatophytes. In the groundwater model, riparian evapotranspiration (ET) is a function of water table depth, decreasing from unrestricted water use when the water table is at the ground surface to zero when it is 15 feet or more below the ground surface. This reflects a reasonable range of root depth distribution for a mix of riparian shrub and tree species.

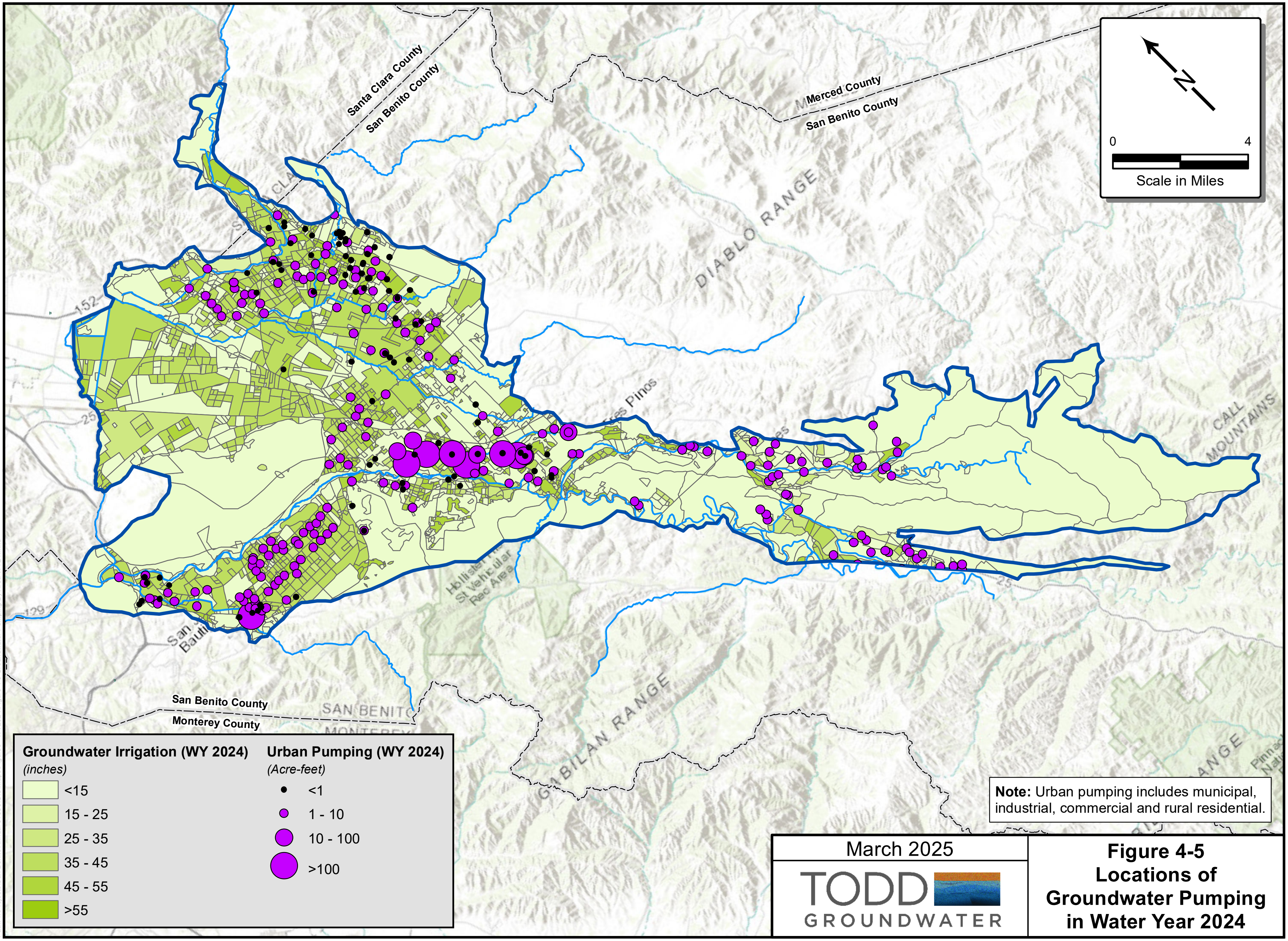

Figure 4-5
Locations of Groundwater Pumping in Water Year 2024

4-WATER BALANCE

The Management Area water balances for 2024 are easiest to interpret in the context of balances in prior years (see **Figures 4-1 through 4-4**). In the Southern MA, total inflows were lower than last water year (which was wet) but higher than the previous five years, reflecting above normal conditions resulting in increased storage in the MA. In the Hollister MA and San Juan MA had above average inflows and average outflows, adding storage to both MAs in part due to CVP deliveries. In the Bolsa MA, while total inflows were within the range of normal, outflows were slightly higher than recent years due to increased groundwater discharge to streams. Bolsa MA was the only management area where storage decreased in Water Year 2024.

Simulated Groundwater Elevations

In annual reports prepared prior to the preparation of the GSP and Basin-wide model update, contours of groundwater elevation surfaces in a portion of the Basin were constructed using measurements from monitored wells with refinement to account for the effects on groundwater of faults and other hydrogeologic conditions. These previous groundwater elevation surfaces were highly influenced by variability in data available from the monitoring network.

One of the changes to the annual reports associated with SGMA was the presentation of groundwater contours for the entire Basin. A consequence of this basin-wide approach is inclusion of areas with limited or no groundwater monitoring. As a result, contouring with relatively simple software or by hand is more difficult and subjective. However, the calibrated groundwater model, which has been updated annually since completion of the GSP, provides simulation of basin-wide groundwater elevations for every month of the model period in a way that is internally consistent with the hydrogeologic conceptualization of the Basin and the water budget. Using contours from the model produces groundwater surface elevation representations that are consistent with the water budget and change in storage estimates.

Figure 4-6 shows contours of groundwater elevations in March 2024, representing seasonal high conditions, while **Figure 4-7** shows groundwater elevations in September 2024, representing seasonal low conditions. These are contours of elevations simulated by the calibrated groundwater model, which provides estimates of water levels throughout the Basin. They are from model layer 3, which is within the typical range of screened intervals for irrigation and municipal wells. The general pattern of contours is similar for both seasons, but March water levels are up to 20 ft higher and September has discrete areas of drawdown from groundwater pumping to meet irrigation demands. Groundwater in the Southern MA flows northwest toward the Hollister MA. On the east side of the Calaveras Fault (in the center of the basin), flow is northward and westward, converging toward San Felipe Lake, where groundwater that hasn't leaked through the fault emerges into surface waterways and crosses the fault as stream base flow. On the west side of the Calaveras Fault, inflow from the Southern MA flows northwest beneath the San Benito River and bends west to enter the San Juan MA. In the latter area, flow is toward the west end of the MA, where groundwater exits by emerging as surface flow in San Juan Creek, the San Benito River, and/or the Pajaro River. In the Southern MA, simulated water levels have steep gradients beneath the hilly areas between and around the Paicines and Tres Pinos Creek Valleys and relatively flat gradients within those valleys. This reflects the relatively low estimated transmissivity of the Purisima Formation which is a secondary aquifer in the Basin present in the hills relative to the principal aquifer alluvial materials in the valleys.

Figure 4-8 shows contours of the net change in groundwater elevation during the water year from September 2023 to September 2024. In general, water levels remained stable, ranging from less than 10 feet to local increases as much as 10 feet. Areas of groundwater level decrease are indicated mostly in the Bolsa MA and northeastern Hollister MA, both areas also showed groundwater decreases last water year. These areas of decrease are characterized by relative distance from sources of stream percolation and continued or increased groundwater pumping.

Change in Storage

Figure 4-9 shows the cumulative change in storage from the model for the four Management Areas for 1975-2024. The change in storage for each MA for the model update period (2019-2024) is documented in **Tables 4-1 through 4-4**. In **Appendix E, Figures E-1** through **E-4** illustrate the annual storage change, cumulative storage change, and estimated groundwater pumping for each MA from 1975 to present**.** On each Appendix E figure, the water year type is indicated with the first letter of the types: Wet, Above normal, Below normal, Dry, and Critically dry (see Figure 3-2).

Storage increased in three of the four Management Areas for the second year in a row. Bolsa MA experienced a slight decrease in storage but remains above 2022 lows. Total storage is above the 1975 amounts in all the MAs.

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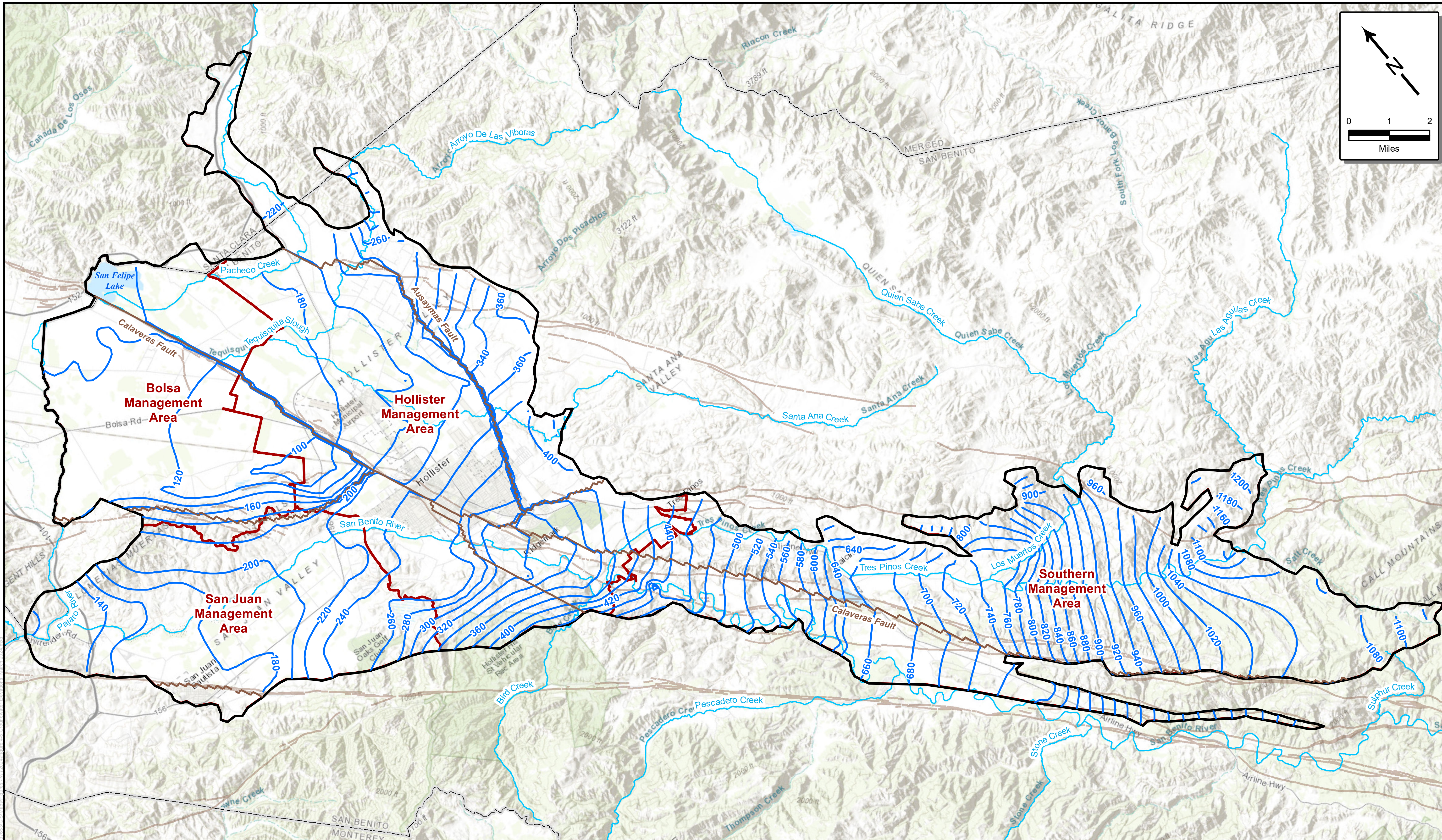


Groundwater Elevation Contour (feet msl)

Faults

Major Streams and Rivers

Management Areas

North San Benito Basin

San Benito County

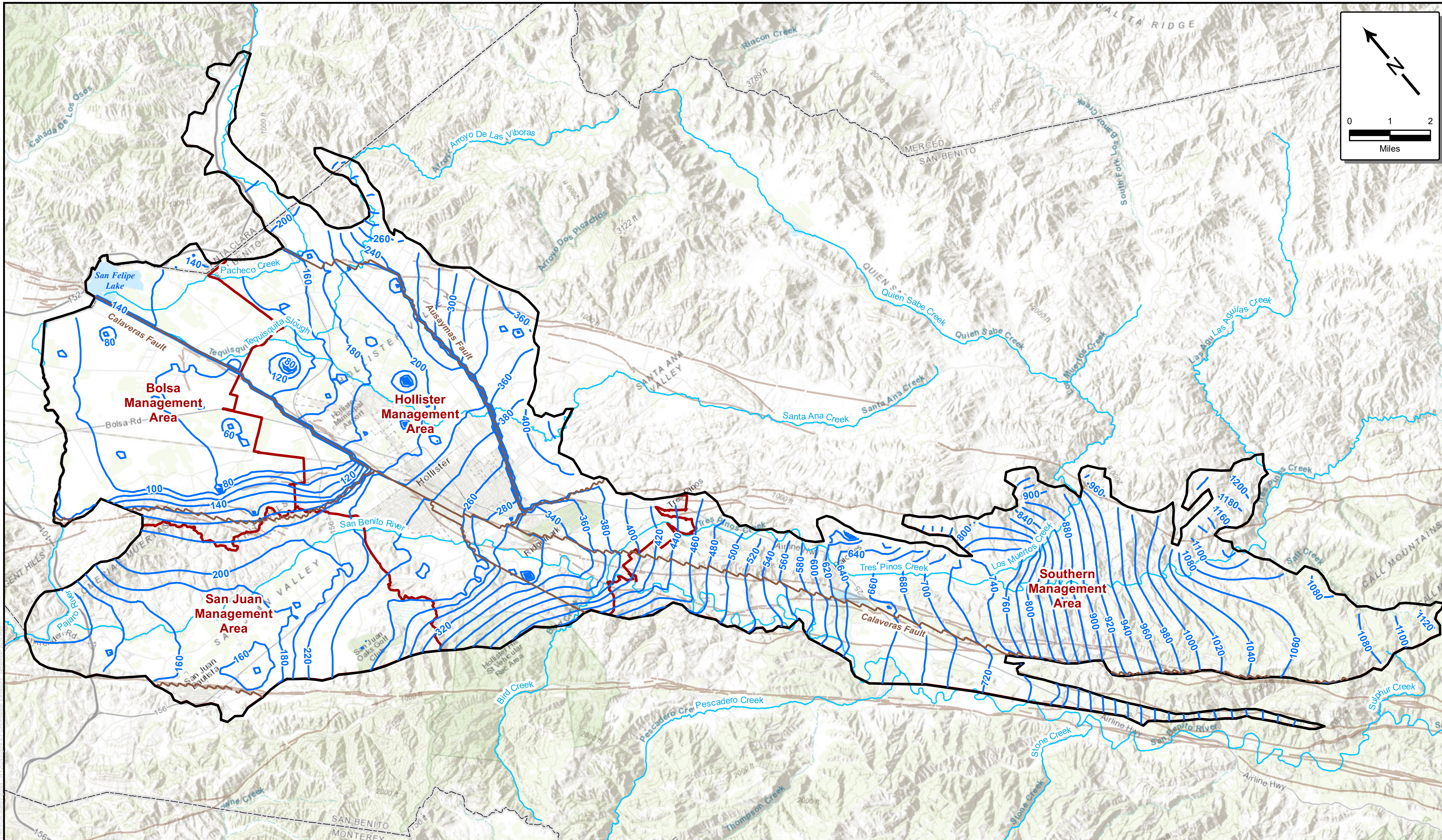
Note:
Groundwater discharge from the Basin occurs as discharge to streams, subsurface outflow, and groundwater pumping from wells. The distribution of active wells changes over time, so wells are not shown on this map.

March 2025

TODD GROUNDWATER

Figure 4-6
Groundwater Elevations
March 2024

4-WATER BALANCE



Groundwater Elevation Contour (feet msl)
Faults
Major Streams and Rivers
Management Areas
North San Benito Basin
San Benito County

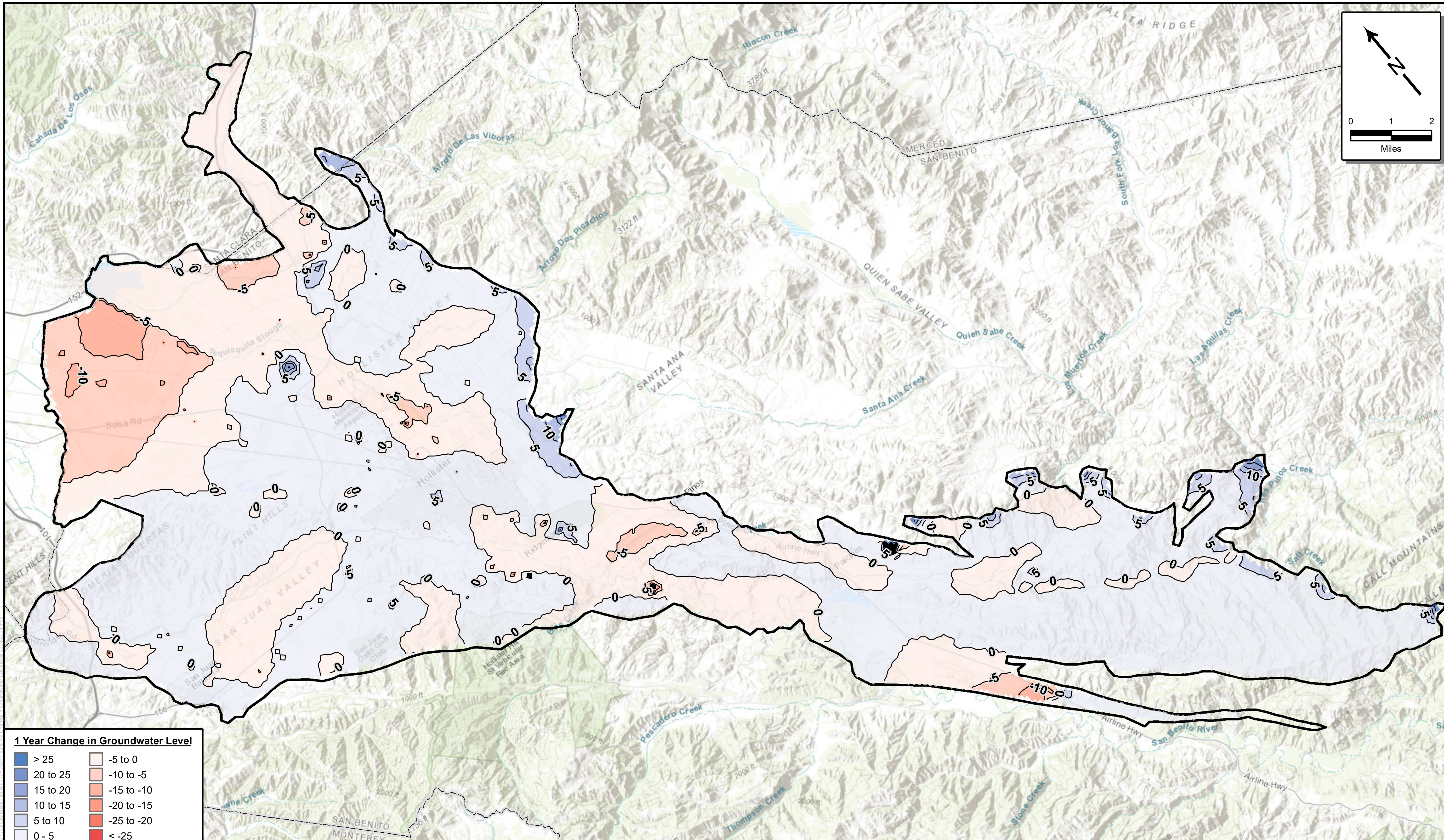
Note:
Groundwater discharge from the Basin occurs as discharge to streams, subsurface outflow, and groundwater pumping from wells. The distribution of active wells changes over time, so wells are not shown on this map.

March 2025

TODD GROUNDWATER

Figure 4-7
Groundwater Elevations
September 2024

4-WATER BALANCE



Change in GWE Sep. 2023 to Sep. 2024 Contour

North San Benito Basin

San Benito County

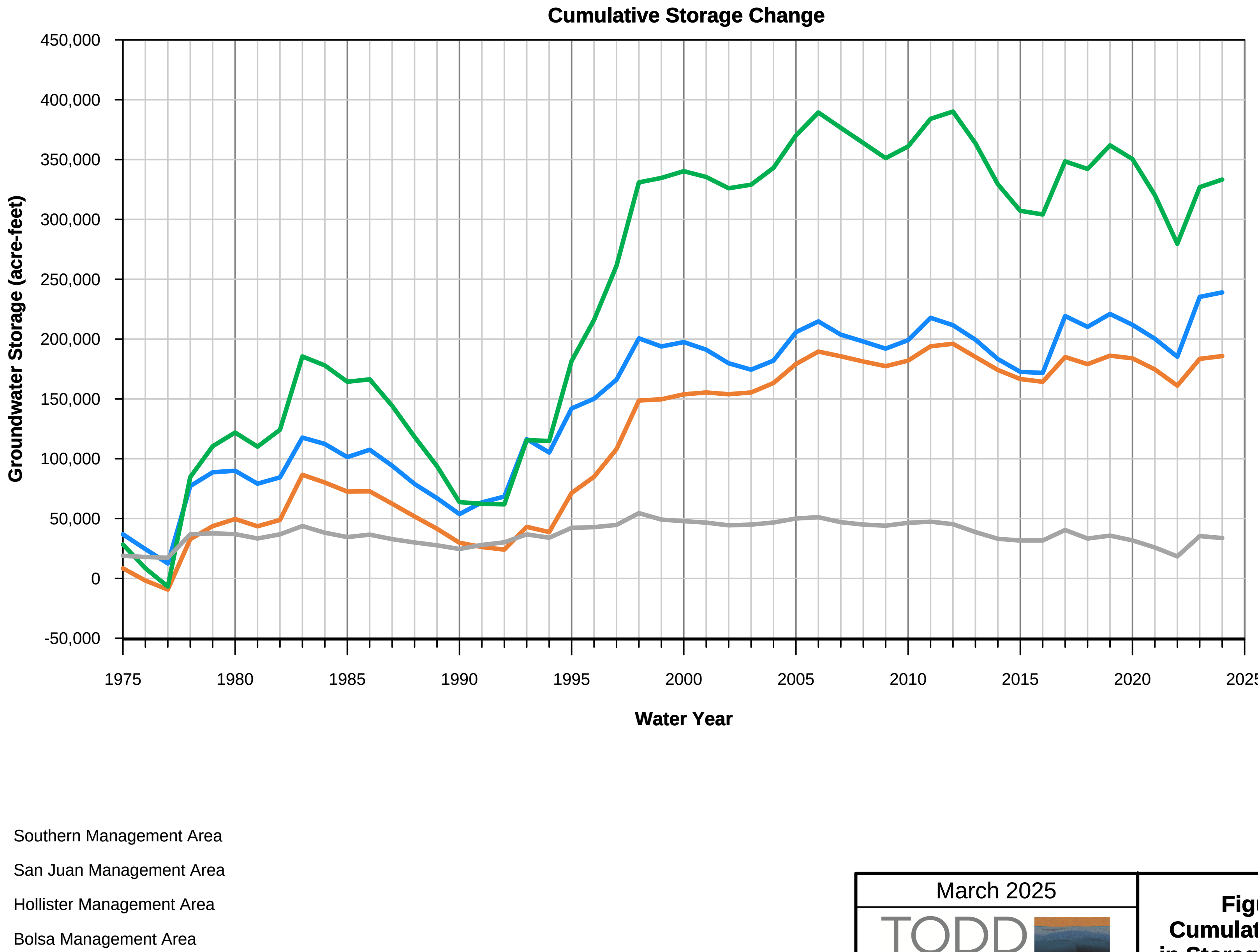
Note:
Groundwater discharge from the Basin occurs as discharge to streams, subsurface outflow, and groundwater pumping from wells. The distribution of active wells changes over time, so wells are not shown on this map.

March 2025

TODD GROUNDWATER

Figure 4-8
Change in Groundwater Elevations Sep. 2023 to Sep. 2024

4-WATER BALANCE



Path: T:\Projects\San Benito Annual 37653\GRAPHICS\WY2024\Figure 4-9 Change in Storage.grpj

March 2025

TODD GROUNDWATER

Figure 4-9
Cumulative Change in Storage, 1975-2024

5-WATER SUPPLY AND USE

Water Supply Sources

Four sources of water supply are available for municipal, rural, and agricultural water demands in the Basin. Each is summarized below; for more data and graphs, see **Appendix E.** Local groundwater and imported water are described in detail in the following sections.

Local Groundwater. Groundwater is pumped by private irrigation and domestic wells and by public water supply retailers. The District does not directly produce or sell groundwater but has the responsibility and authority to manage groundwater throughout San Benito County.

Imported Water. The District purchases Central Valley Project (CVP) water from the U.S. Bureau of Reclamation (USBR) and distributes to customers in Zone 6. Some CVP water has also been released for groundwater recharge. The District has a contract with no expiration for a total of 43,800 AFY, of which 8,250 AFY is for Municipal and Industrial (M&I) water. CVP water is not available in the Bolsa or Southern MAs.

Recycled Water. Water recycling began in 2010 with landscape irrigation at Brigatino Park. The system was expanded in 2014, including infrastructure and treatment capability for the purpose of agricultural irrigation. Recycled water currently is provided to approximately 865 acres for agricultural production and landscape irrigation. This source is reliable during drought and helps maintain sustainable water supply. Recycled water is only available in the Hollister MA.

Local Surface Water. Surface water is not used directly for potable or irrigation use in the Basin, but channel percolation is a significant source of groundwater recharge. In 2024, releases from the District's Hernandez and Paicines reservoirs were above average, reflecting the wet year and spills from Hernandez. Stormwater capture currently is limited to some diversion by the City of Hollister to the Hollister Industrial WWTP (via a combined sewer system) with subsequent treatment and discharge to percolation and evaporation ponds.

5-WATER SUPPLY AND USE

Groundwater

Groundwater is a critical water resource in North San Benito Basin, not only providing water supply in all four MAs, but also water storage. In Hollister and San Juan MAs, the Basin continues to provide a reserve in times of dry hydrologic conditions. In Bolsa and Southern MAs, groundwater is the sole source of supply.

The North San Benito Basin groundwater resource has been actively managed since 1953 when the San Benito County Water District was established. This Annual Report reflects the changing scope of groundwater management in the Basin and thus involves adapted methods, for example, to estimate agricultural groundwater pumping, which is the largest use of groundwater supply. It builds on the GSP (which includes extensive update and application of the numerical model) and presents an estimate of groundwater pumping simulated by the numerical model.

As described in the water balance section, the simulated estimate of groundwater production relies on the 2014 land use map and applies a crop coefficient to identified agricultural parcels. Annual crop ET is calculated by applying the crop coefficient to the daily observed reference ET from local CIMIS measurements. Groundwater pumping is then estimated based on the sum of crop ET and an irrigation efficiency assumption less available CVP and recycled water deliveries by parcel to agricultural customers in the MA. Estimated groundwater production by parcel is simulated as a well in the center of the identified property for modeling.

In previous annual reports, the water use patterns for Zone 6 were presented using the reported pumping from available power meters. Pumping amounts have been calculated semiannually by metering the number of hours of pump operation and multiplying by the average discharge rate. This monitoring program began in about 1990 (soon after CVP imports started) but was not applied to irrigation pumping beyond Zone 6. This historical method of estimating groundwater pumping based on power consumption has drifted from original calibration and is now considered inadequate; it is being replaced as part of SGMA implementation. Accordingly, the pumping indicated by these meters is not shown in this annual report.

The District is currently developing a new water use monitoring program that will address the entire basin area and will be documented in future SGMA Annual Reports. One method currently identified to evaluate agricultural water use is the OpenET tool developed by a consortium of private and public partners and led by Environmental Defense Fund, NASA, Desert Research Institute, and HabitatSeven. The tool utilizes satellite-based estimates of total ET by month for the entire western United States. The data are available at a spatial resolution of 30 meters by 30 meters (0.22 acres per pixel). The District has assessed using Open ET and finds it reasonably estimates crop consumptive use. They will begin implementing the tool beginning with a survey of growers to gather more information about which parcels apply imported surface water or groundwater to further fine tune groundwater use by parcel. In the future, this data will also be available for import into the numerical model to improve simulation of groundwater pumping.

5-WATER SUPPLY AND USE

Imported Water – Zone 6

The District distributes CVP water to agricultural and M&I customers in Zone 6. The allocation of the contract for each year is variable and contingent on total available supply of the CVP system. In dry years, the allocation may be zero and in wet years, it may be 100 percent of the contract amount. The USBR contract years are March through February, so Water Year 2024 (Oct 2023-Sept 2024) overlapped two contract years. Both contract years were originally predicted to be below-average hydrological conditions, which resulted in extremely low initial allocations. However, the allocation improved with wetter than expected conditions. **Table 5-1** shows the contract entitlements and recent allocations for both USBR contract years that overlap Water Year 2024 (SLDMWA 2021).

TABLE 5-5. ALLOCATION FOR USBR WATER YEARS 2023-2024

March 2023 - February 2024

	Contract	Percent Allocation	Allocation Volume (AF)
Agriculture	35,550	100%	35,550
M&I	8,250	100%	8,250
TOTAL	43,800		43,800

March 2024 - February 2025

	Contract	Percent Allocation	Allocation Volume (AF)
Agriculture	35,550	50%	17,775
M&I	8,250	75%	6,188
TOTAL	43,800		23,963

As shown in **Table 5-1**, USBR contract year 2023 (March 2023- February 2024) final allocations were 100 percent of their contract for agricultural and M&I users. Full contract supply has only happened two other times since 2006. In contract year 2024 (March 2024-2025), the allocations were 50 and 75 percent for agriculture and M&I users, respectively.

Over the last ten years (2015-2024), the average allocations were 40 percent and 69 percent for agricultural users and M&I users respectively. More information on the past years' allocations can be found in **Appendix E**.

5-WATER SUPPLY AND USE

Municipal Use

Figure 5-1 shows the municipal water supply for the City of Hollister, SSCWD, San Juan Bautista, and Tres Pinos County Water District. Municipal demand was satisfied entirely by groundwater prior to 2003. The completion of Lessalt Water Treatment Plant (WTP) in 2003, expansion of Lessalt in 2016, and completion of West Hills WTP in 2018 have significantly increased the availability and use of CVP water for the Hollister and SSCWD municipal systems.

In **Figure 5-1**, annual water supply provided through the Lessalt WTP is shown in grey and West Hills WTP in blue. In 2024, these two treatment plants served about 70 percent of the municipal supply, a significant increase from last water year when treated imported water accounted for 28 percent of total municipal supply. In Water Year 2023, in spite of ample CVP allocations, engineering issues at both the WTPs reduced capacity. It is noteworthy that in Water Year 2019, imported water represented 71 percent of supply; this indicates that when treatment capacity stands ready and imported water is available, the WTPs are available to supply much of the municipal demand. Groundwater serves as a reliable supply in situations of drought or facility disruptions, highlighting the importance of reliance on a portfolio of supplies.

It is expected that WTP operations will maximize CVP use in Water Year 2025 to increase flexibility for local water users to use groundwater or CVP. CVP provides better quality water for delivery to municipal customers and results in improved wastewater quality, which supports water recycling. The City of San Juan Bautista Regional Water and Wastewater Solution project, described in the GSP and currently being implemented, will allow the City of San Juan Bautista to have these benefits.

Agricultural Use

Figure 5-2 shows the annual volume of CVP imported water by use. Review of **Figure 5-2** reveals the variable deliveries in CVP supply for agriculture (shown in green). With 100 percent of the allocation for USBR Water Year 2022-2023 and an above average allocation in USBR Water Year 2023-2024, the total CVP volume delivered to agricultural users increased by 20 percent to 10,100 AF. This volume is the highest in the last four years but remains below the long term average of 13,667 AFY (1988-2024). While last water year (Water Year2023) was a wet year, CVP deliveries were limited due to engineering challenges. The CVP system is now completely restored, and the District and purveyors should be able to maximize CVP use as allocated.

5-WATER SUPPLY AND USE

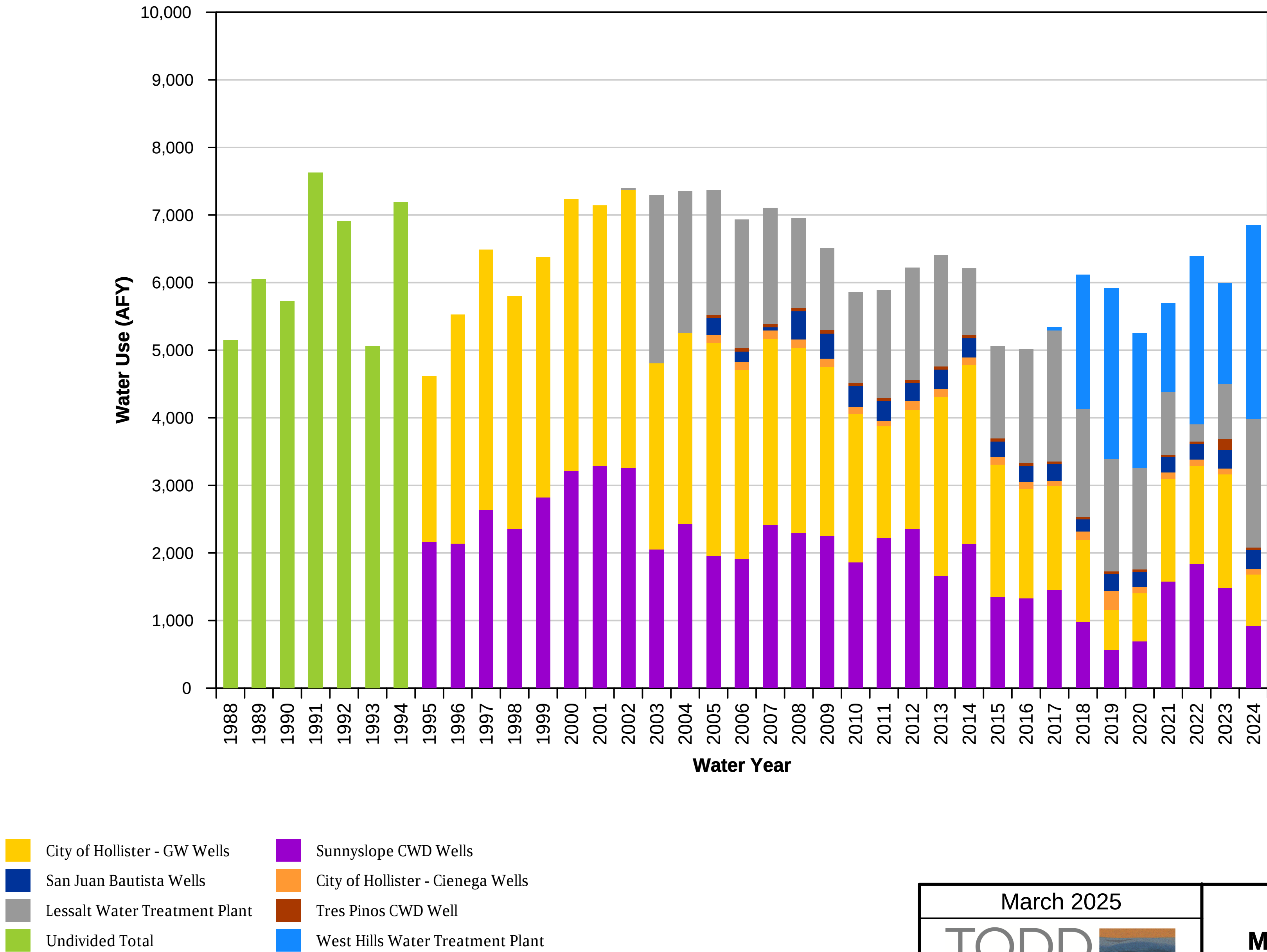
Total Water Use

Table 5-2 shows total water use in the Basin by source and user type for Water Years 2019-2024. CVP and recycled water uses are measured directly. Municipal groundwater use also is metered. M&I and domestic groundwater uses are estimated as described above and included in model simulated pumping.

As shown in **Table 5-2**, total water use was higher in Water Year 2024 than 2023. CVP imports increased about 36 percent compared to Water Year 2023. Groundwater pumping also increased from the volume used in Water Year 2023; Water Year 2024 groundwater production was just under 14 percent higher than Water Year 2023. This increase could reflect the decreased ET demand during Water Year 2023's wet conditions and a return to more average conditions in Water Year 2024.

Noting the use of a 2014 land use map in estimating unmetered groundwater use and upcoming information from the OpenET program, additional analysis of changing crop patterns is recommended along with an update of the model during the next periodic evaluation (due in 2027).

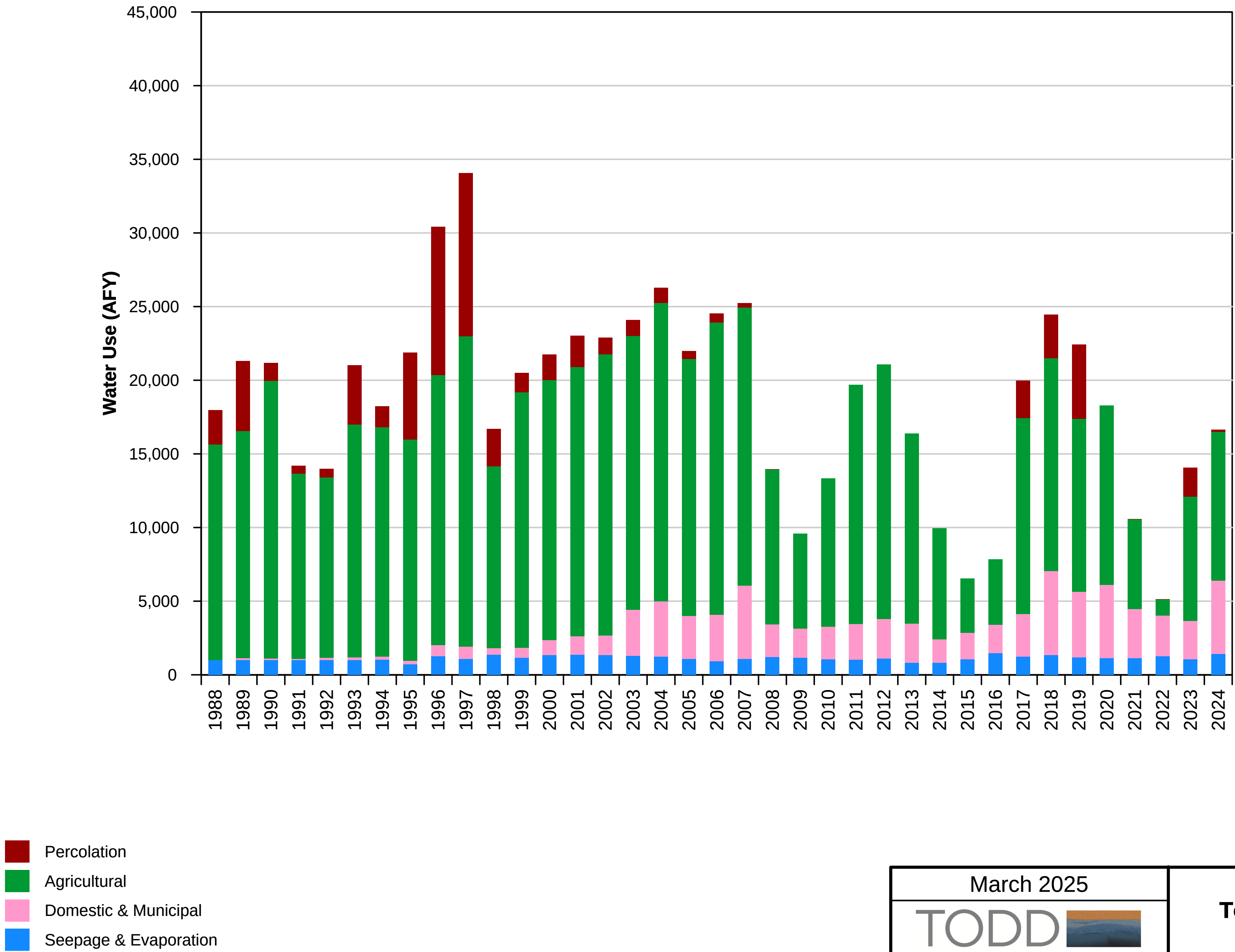
Water use information will be uploaded to DWR as part of the Annual Report. The tables are included in **Appendix A**, following the Elements Guide.



March 2025

TODD GROUNDWATER

Figure 5-1
Municipal Water Supply by Source



March 2025

TODD GROUNDWATER

Figure 5-2
Total CVP Water Use by Type
1976-2024

TABLE 5-6. TOTAL WATER USE, AF

Management Area	Water Type	User Type	2019	2020	2021	2022	2023	2024	Method
Southern	Groundwater	M&I and Domestic	143	143	143	143	144	144	Simulated
		Agricultural	6,150	6,744	7,822	8,485	6,734	7,000	Simulated
Hollister	Groundwater	M&I and Domestic	1,808	2,056	3,748	3,517	3,555	2,050	Simulated
		Agricultural	34,204	37,164	44,093	50,175	37,020	45,562	Simulated
	CVP	M&I and Domestic	4,334	3,937	3,314	298	1,077	2,104	Reported Flow Meters
		Agricultural	7,864	8,564	4,519	805	6,080	6,495	Reported Flow Meters
	RW	M&I and Domestic	108	97	21	21	79	80	Reported Flow Meters
		Agricultural	461	428	405	590	404	341	Reported Flow Meters
San Juan	Groundwater	M&I and Domestic	415	363	360	463	475	505	Simulated
		Agricultural	17,605	19,579	22,144	24,803	15,607	19,188	Simulated
	CVP	M&I and Domestic	123	1,016	27	2,488	1,539	2,880	Reported Flow Meters
		Agricultural	3,867	3,602	1,561	291	2,358	3,605	Reported Flow Meters
Bolsa	Groundwater	M&I and Domestic	25	25	25	25	25	25	Simulated
		Agricultural	15,345	16,091	17,419	18,175	23,918	24,982	Simulated
Total	**Groundwater**	**All**	**75,694**	**82,165**	**95,753**	**105,787**	**87,478**	**99,455**	**Simulated**
	CVP	**All**	**16,188**	**17,119**	**9,421**	**3,882**	**11,054**	**15,084**	**Reported Flow Meters**
	RW	**All**	**569**	**526**	**426**	**611**	**484**	**421**	**Reported Flow Meters**
	TOTAL	**ALL**	**92,451**	**99,810**	**105,600**	**110,279**	**99,016**	**114,960**	**Various**

6-WATER MANAGEMENT ACTIVITIES

As presented in the North San Benito GSP, the GSAs have been actively managing their local groundwater resources for decades with various projects and management actions. The GSP summarizes ongoing efforts, indicates supplementary work on those efforts, and identifies potential future projects and management actions. This Annual Report provides an update on significant progress.

As defined in the GSP, *Projects* are substantial efforts that involve an increase in water supply or a reduction in demand for the GSP Area. Projects outlined in the GSP include:

- Develop Surface Water Storage (e.g., Pacheco Reservoir Expansion Project)
- Expand Managed Aquifer Recharge (MAR)
- Enhance Conjunctive Use
    - Hollister Urban Area Water and Wastewater Project
    - City of San Juan Bautista Regional Water and Wastewater Solution
    - North County Project
    - Zone 3 Operations Planning Tool
- Enhance Water Conservation.

Actions provide a framework for groundwater management and include establishing GSP procedures or policies, filling data gaps with scientific studies or improved monitoring, and providing for funding. Management Actions identified in the GSP include:

- Improve Monitoring Program and Data Management System (DMS)
- Measure agricultural groundwater extraction
- Improve monitoring well network and DMS
    - Improve water quality monitoring program
    - Enhance surface water gaging
- Develop Response Plans
- Enhance Water Quality Improvement Programs
- Reduce Potential Impacts to Groundwater Dependent Ecosystems (GDEs)
- Provide Long-term Basin-wide Funding Mechanism
- Provide GSP Administration, Monitoring, and Reporting.

The projects and management actions (PMAs) are presented in the GSP with an Implementation Plan that extends to 2045 in five-year intervals; the last interval includes the 2042 deadline for the 20-year implementation to achieve and demonstrate sustainability. Not all projects and management actions are updated specifically in this Annual Report, which focuses on projects and management actions with active implementation.

It is noted that the District monitoring program is summarized in Section 2, presenting the basis for subsequent information and analyses. Importation and distribution of CVP water in Zone 6 are described in Section 5. Sources of revenue to support District operations are presented in this section.

6-WATER MANAGEMENT ACTIVITIES

Surface Water Storage

Pacheco Reservoir Expansion Project. The surface water storage project with the most advanced planning is the Pacheco Reservoir Expansion (PRE) Project. The PRE Project is a collaborative effort of Valley Water, San Benito County Water District, and Pacheco Pass Water District. The project would establish a new dam and expanded reservoir on the North Fork of Pacheco Creek, which would store local watershed inflows and CVP supplies for use by the involved agencies. The PRE project has received funding from California Proposition 1 and Safe, Clean Water Program. Recent progress includes completion and release in November 2021 of the Draft Environmental Impact Report (EIR), public meeting on the project January 2022, and closure of the public comment period in February 2022. The EIR will be recirculated in the Summer of 2025 with a Final EIR expected in the Summer of 2026. Construction is expected to begin in 2027.

Managed Percolation

Ongoing North San Benito Basin management includes percolation of local surface water, wastewater, and CVP water. Considering climate change and potential growth in urban and agricultural water demand, the GSP recognizes the importance of continued percolation activities and future expansion.

Percolation of Local Surface Water. In most years, local surface water is released from Hernandez and Paicines reservoirs for percolation along the San Benito River and Tres Pinos Creek (see **Appendix D**). Releases are managed to maximize percolation along the stream channels of the San Benito River and Tres Pinos Creek and to avoid any losses out of the Basin.

Percolation of Wastewater. Wastewater is percolated by the City of Hollister at its Domestic and Industrial plants, by SSCWD at its Ridgemark Facilities, and by Tres Pinos County Water District. While the City of San Juan Bautista wastewater treatment plant also discharges wastewater, the flows are not considered to percolate to the groundwater basin because of local hydrogeologic conditions that result in outflow to San Juan Creek. As described in the next section, the City of San Juan Bautista Regional Water and Wastewater Solution (now being built) will convey San Juan Bautista wastewater to the City of Hollister Wastewater Treatment Plant (WWTP). Recent changes in operation of the wastewater facilities (including increased water recycling) and decreased municipal water use have decreased the volume percolating to the groundwater. Information about the amount of groundwater recharged from wastewater facilities is found in **Appendix D**.

Percolation of CVP Water. In Water Year 2024, the District percolated 137 AF of CVP. While the CVP allocations were available, percolation was limited to allow groundwater storage capacity for percolation of the large amount of outflow from the Hernandez Reservoir due to the engineering issue the District managed in Water Year 2024. In normal and wet years, the District percolates in four dedicated off-stream basins; locations are shown in **Figure 6-1.** The managed recharge of the imported water was critical in replenishing the Basin in the 1980s and 1990s; however, the threat of zebra mussel contamination and low CVP allocations prevented the practice from 2008 to 2016. Given available CVP supply, the District has resumed recharge at dedicated off-stream percolation basins.

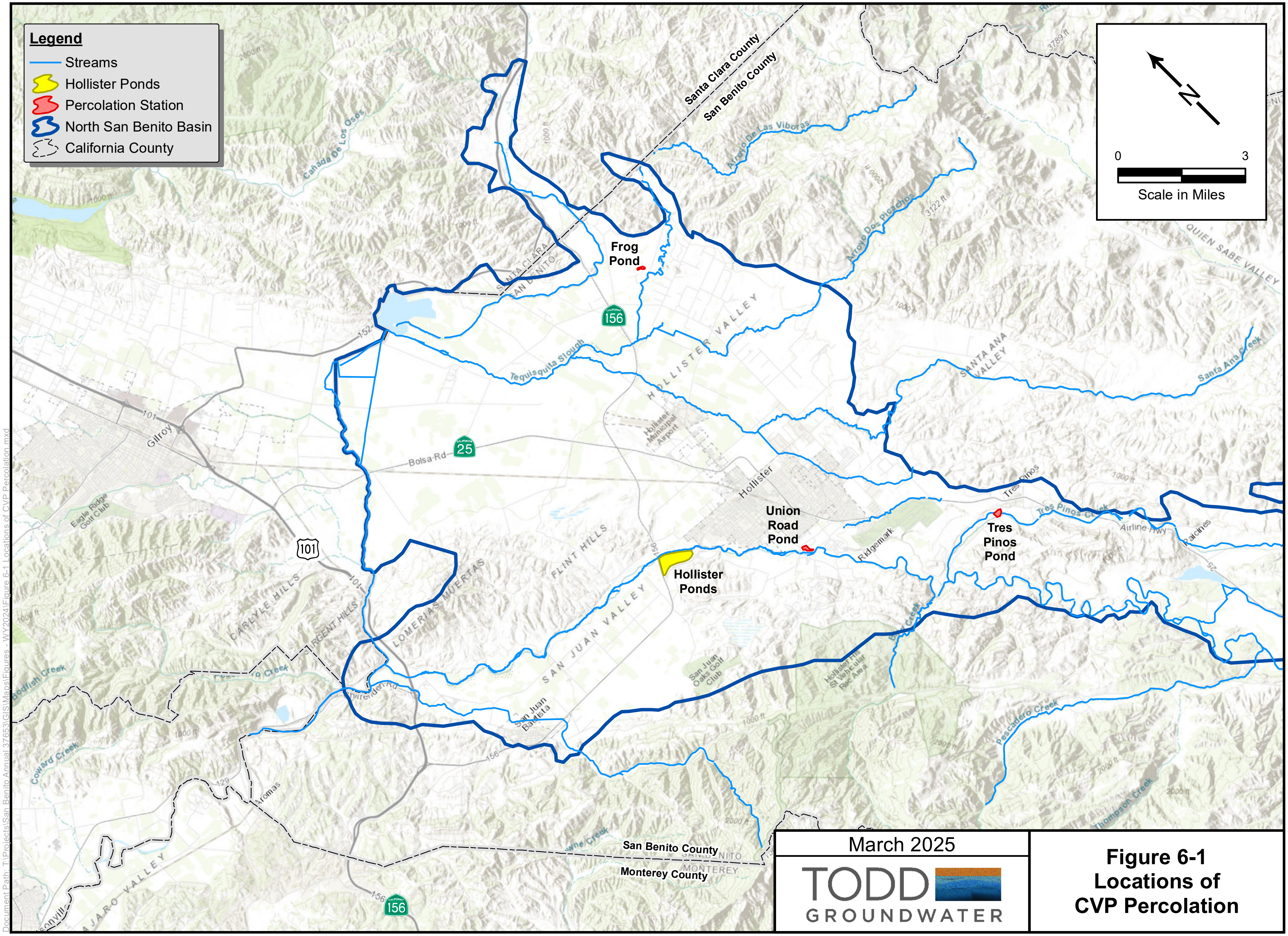
BF Sisk Dam Raise. USBR and DWR are implementing a project to raise the B.F. Sisk Dam that creates San Luis Reservoir to address seismic concerns. A subsequent phase of the project is being developed to increase water storage capability in the Reservoir. All phases of construction are scheduled for completion in 2031. SBCWD diverts its CVP allocations from San Luis Reservoir. Additional storage would increase the capacity for carryover storage of surface water allocations in years when excess water is available, for increased flexibility to use the entire CVP allocation.

Managed Aquifer Recharge (MAR)

Expanding MAR was identified as a PMA in the 2022 GSP, and a MAR study was conducted and completed in Water Year 2022. The study identified injection wells as the best method for implementing MAR in the Basin. The District has planned a MAR project using injection wells, specifically Aquifer Storage and Recovery (ASR) and has begun implementation. The entire ASR Project is planned to provide for injection and storage of up to 6,000 acre-feet per year (AFY) of treated Central Valley Project (CVP) water in wet years with recovery of up to 6,000 AFY of stored water in dry years (HDR, June 2022; HDR, October 2022). Responding to the drought conditions in recent years, the ASR Project was re-envisioned to provide a portion of the storage and recovery on an accelerated timeline. This first phase, the Accelerated Drought Response Project (ADRoP), will be completed by November 2026and will consist of five ASR wells, expansion of the West Hills WTP, and construction of pipelines to convey injection and recovery water between the five ASR wells, West Hills WTP, and the Hollister Distribution System (HDR, October 2022).

In 2022 and 2023, the District successfully applied for and was awarded three individual grants to assist in funding ADRoP. These grants included DWR SGMA Implementation and Integrated Water Resource Management grants and a USBR Small Storage Grant. In total, the District has been awarded over $20 million for ADRoP to date.

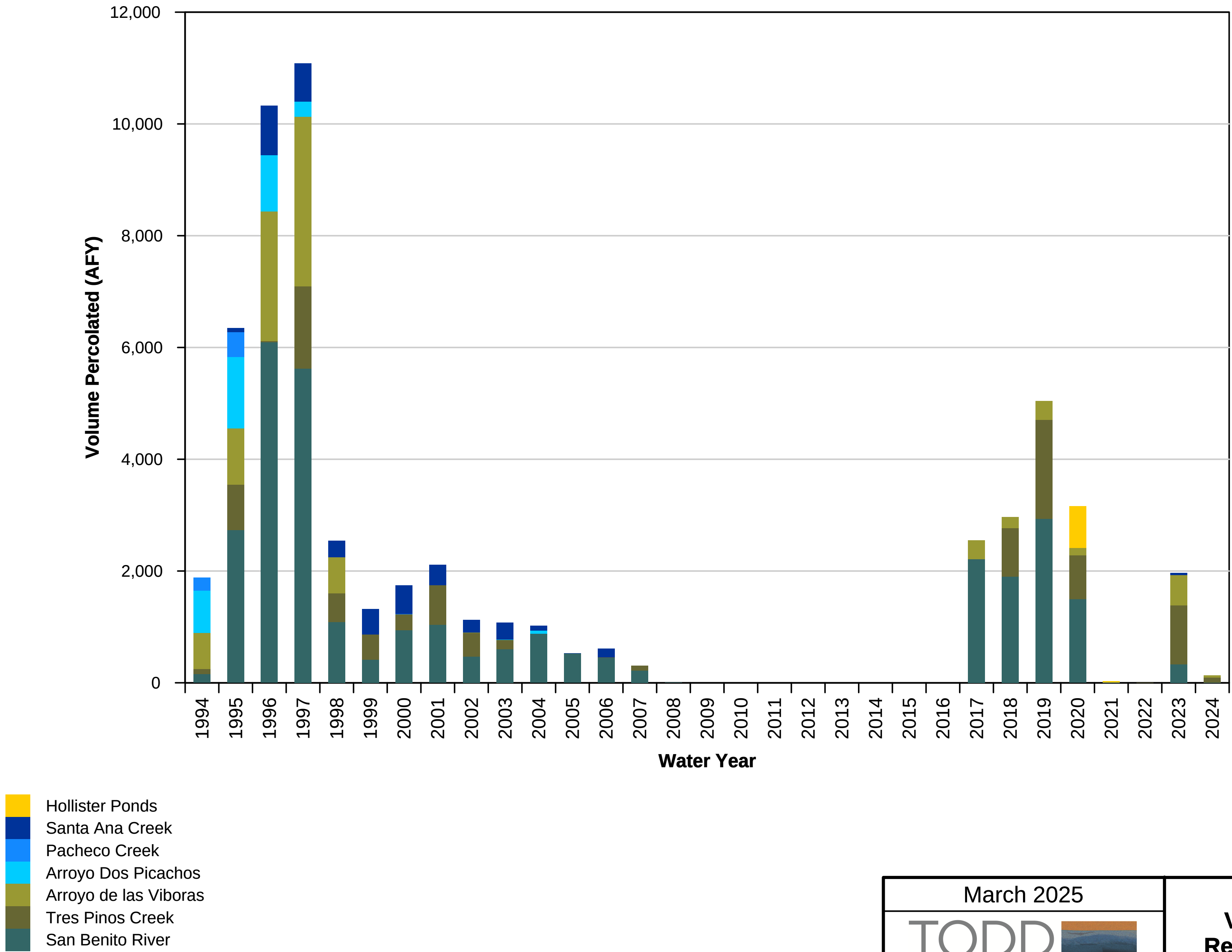
In Water Year 2024, the District made significant progress on ADRoP. This included beginning West Hills WTP expansion construction, finalization of ASR well locations, and approaching finalization of property acquisition, State and Federal environmental planning, and well and facilities design. The design and environmental review process included diligent analysis of multiple ADRoP location options and coordination with local landowners and groundwater users to identify the best area in the Basin for the placement of the first set of ASR wells. The District is on-track to complete designs for all the wells, transmission infrastructure, and other facilities in early 2025 and select contractors to begin construction shortly thereafter.



March 2025

TODD GROUNDWATER

Figure 6-1
Locations of
CVP Percolation



March 2025

TODD GROUNDWATER

Figure 6-2
Volume of CVP Recharge by Major Waterway over Time

6-WATER MANAGEMENT ACTIVITIES

Water Resources Planning and Conjunctive Use

As presented in the GSP, SBCWD is engaged in several conjunctive use projects; significant updates and recent accomplishments are summarized below.

Urban Water Management Plan (UWMP) and Agricultural Water Management Plan (AWMP). The District, in collaboration with Sunnyslope County Water District (SSCWD) and the City of Hollister, developed the 2020 UWMP for the Hollister Urban Area, which was submitted to DWR in 2021. The agencies continue to implement this plan. The UWMP provides detailed information on the current and future water supply and demand for the Hollister Urban Area and provides a comparison of supply and demand in normal years plus single-year and multi-year droughts. To address drought and other water shortages, the UWMP promotes water conservation, conjunctive use, and water recycling.

The 2020 Agricultural Water Management Plan (Todd Groundwater, Sept 2021) describes and evaluates water deliveries and uses, sources of supply, water quality, water delivery measurements, water rates and charges, water shortage allocation policies, drought management, and reasonable and practical efficient water management practices. The USBR accepted the AWMP in October 2022.

The District has begun to prepare for the next round of UWMP and AWMP. They are actively following updated from DWR and are on track for a 2026 submission.

San Benito Urban Areas Water and Wastewater Master Planning Project. This project (formerly called the Hollister Urban Area Water and Wastewater Plan) has represented an ongoing collaborative effort of SBCWD, City of Hollister, and SSCWD to provide a secure and stable water supply to the region. The project has involved provision of water treatment for CVP water, which allows its direct use for M&I purposes. It also allows delivery of improved quality water to customers. While recent USBR allocations for M&I users were reduced because of drought (see Section 5), the availability of water treatment capacity remains an important element of sustainability. The San Benito Urban Areas Water Supply and Treatment Master Plan was approved in October 2023 (HDR, 2023). The Master Plan includes the planned expansion to include City of San Juan Bautista. The Master Plan Update evaluated the reliability of the existing CVP supply and assessed various water supply alternatives to increase the resiliency of the water supply by providing storage of water available in wet years for later use during dry years. The highest-ranking alternative in the 2023 Master Plan is the ASR Project (ADRoP) described in the preceding section.

City of San Juan Bautista Regional Water and Wastewater Solution. As described in the GSP, the Regional Solution involves importing high quality water from the West Hills WTP to San Juan Bautista, replacing groundwater use, removing residential self-generating water softeners, reducing industrial salt loading to the City wastewater, and then conveying San Juan Bautista wastewater to the City of Hollister WWTP. The Regional Solution is now part of the Master Plan process. The San Juan Bautista Pipeline construction is underway and water deliveries may start as early as 2025.

6-WATER MANAGEMENT ACTIVITIES

North County Project. Test wells drilled in March 2021 as part of the North County Project were added to the North San Benito GSP groundwater level and quality monitoring program. Information about the wells (including ground surface elevation, screened intervals, and baseline conditions) are currently being collected. No action on the PMA was performed in Water Year2024.

Zone 3 Operations Planning Tool. The Zone 3 Operations Planning Tool is continuing to be updated annually and applied to guide Hernandez and Paicines reservoir operations.

Water Recycling. Water recycling is an ongoing conjunctive use project with the City of Hollister. Recycled water currently is provided to approximately 865 acres for agricultural production and landscape irrigation. Recycled water use is documented in Section 5 and Appendix D.

Water Conservation

Water conservation is an important tool to manage demands on the groundwater basin particularly during drought. Water conservation efforts in San Benito County are conducted through the Water Resources Association (WRA). WRA is a cooperative effort among the District, City of Hollister, City of San Juan Bautista, and Sunnyslope County Water District. The UWMP updated in 2021 includes a Water Supply Contingency Plan (WSCP) that includes water demand measures the District can implement during drought conditions. In response to the recent wetter years the Water Shortage Stage is at Stage 1 – Voluntary Water Conservation.

The WRA added a Turf Removal Program in May 2022 in response to the continued drought. The program has used state funding of $150,000 to pay customers to replace turf. The program pays $2 per square foot of turf removed up to 1,000 square feet ($2,000 maximum rebate). The program requires that participants use materials that are permeable and allow water to infiltrate through the soil. In addition, 25 percent of the area where the turf has been removed needs to be low-water use plants. Applicants have four months to complete their projects after their plans are approved.

In Water Year 2024, approximately 36,000 square feet of turf have been removed through the WRASBC's Turf Removal Program. There is approximately $78K remaining in the Turf Removal Program since the program began in 2022. The WRASBC expects to continue the program into FY 25/26 with additional funds being requested from Member Agencies. The WRASBC also applied for a Small-Scale Water Efficient grant through the Bureau of Reclamations WaterSMART program. The WRASBC requested $100K in their grant application that was recently submitted. The grant awards will be announced in June 2024.

The WRASBC had ramped up its school presentations and fieldtrips this year. There have been 10 such presentations and 10 field trips in Water Year 2024. Public outreach has also continued on virtual platforms including Facebook. WRA staff continues to author news articles for the online news sites that serve San Benito County. The articles provided water conservation and efficiency tips that were seasonal in nature and they continue to provide timely advice for water use. To supplement this effort, the WRA is developing a series of water conservation videos for distribution to the local news media and the WRA website.

WRA has been monitoring changes in water use sectors that have occurred over time. With more residential water use and less water use in the agricultural and business sector, they are focusing their conservation message to residential customers. This focus extends to new residential development in the City. WRA reviews landscape plans for the City of Hollister to make sure that new homes comply with the State's Model Water Efficient Landscape Ordinance (MWELO) and follows up with a post inspection after the landscape materials are installed to ensure the landscape plans were followed. WRA and the water purveyors are implementing DWR's Urban Water Use Objective (UWUO), new legislation designed to set water use targets for each category of municipal water use. The District has also prepared 169 landscape audits and 205 home surveys to help customers implement water conservation measures.

Finally, WRA continues to provide various rebates (toilets, landscape hardware, etc.). The most popular rebate program is the water softener demolishing/replacement program. With provision of CVP supply for municipal use, the delivered water quality has improved, and customers are willing to abandon unneeded water softeners. This program has the benefit of improving the water quality of municipal wastewater and recycled water.

Monitoring Program and DMS

The GSP recognized that a single, reliable, and consistent method of measuring agricultural pumping is needed for the entire Basin. This was identified as a high-priority action, noting that it is required specifically for annual reporting. SBCWD is implementing the use of remote sensing services offered by OpenET to estimate groundwater use. OpenET uses satellites to estimate water consumed by crops and other plants and provides free ET data to public water managers throughout the western states. SBCWD has assessed the results of OpenET and finds it reasonably estimates consumptive water use in crops. The District is now reaching out to landowners to collect information on the application of surface water to better refine parcel water use estimates.

In addition, the GSP's monitoring network assessment provided recommendations for the DMS well inventory, including prompt development of a unique well identification for monitored wells that discontinues use of well names as identifiers. Well identifications were updated to be consistent with DWR site IDs used in the SGMA Portal's Monitoring Network Module (MNM). All wells are identified in this report by State Well Number. Another recommendation was to enhance the DMS with cross-referencing of monitoring sites (groundwater and surface water) relative to location and monitoring for regional groundwater level, groundwater quality, shallow groundwater, subsidence, or managed aquifer recharge. The DMS was updated for groundwater levels, pumping, CVP deliveries, water quality, and reservoir water balances, and cross referencing has been initiated.

6-WATER MANAGEMENT ACTIVITIES

Monitoring Well Network

The GSP's assessment of the monitoring network identified data gaps including the uneven distribution of monitored wells across the Basin, reliance on private production wells, and insufficient groundwater level data to assess vertical gradients. Installation of new dedicated monitoring wells in the Basin was identified as a top priority to enhance the existing groundwater monitoring network. This need reflected historical data gaps in the Basin related to water level and water quality monitoring and newly identified data gaps related to monitoring groundwater elevations in areas of interconnected surface water and GDEs. In 2022, new monitoring wells were added to the monitoring program, including six shallow and six deep monitoring wells. The wells are entered in the DMS and are included in regular monitoring. Additional information about these wells including the reference point and well depths will be added to the DMS when available. These wells will continue to be monitored by SBCWD for inclusion in future annual reports and periodic GSP updates.

In Water Year 2024, four Key Wells that had become inaccessible were replaced. Temporary MTs were established but the District should conduct a survey of nearby domestic wells to ensure these temporary MTs are protective of beneficial users. In addition, the District performed reference point surveying for 26 new wells to improve monitoring accuracy and increase the network density in areas of the basin lacking monitoring.

Develop Response Plans

The GSP concludes that the Basin is managed sustainably relative to groundwater levels, but nonetheless, recognizes that declining groundwater levels could occur rapidly and approach water level MTs during drought. Regular groundwater level monitoring and annual reporting were identified as appropriate management actions to provide an early warning system. An Action Plan was prepared to respond to wells that fall below the MT level and provides a guide for the District's response in the event of rapid and potentially problematic changes. The Action Plan, included in **Appendix A,** details a four-step process to respond to potentially problematic changes relative to groundwater level or water quality thresholds is triggered. These steps include:

1. Identify exceedance and investigate the representative monitoring well area
2. Determine contributing factors
3. Evaluate implementation of specific management actions and/or projects
4. Adopt Outreach and Enforcement Plan.

Water Quality Improvement Programs

The GSP identified potential management actions to enhance water quality including collaboration with UC Extension and other organizations toward reduced nitrate and salt loading by agriculture, support to farmers for use of remote sensing to optimize fertilizer applications, and cooperation with the County and local agencies on regulation of water softeners and wastewater treatment/disposal including onsite wastewater treatment systems. As noted above, the most popular rebate program for the WRA is the water softener demolishing / replacement program.

Reduce Potential Impacts to GDEs

A recommended management action is to reduce potential impacts to GDEs. Foremost among specific actions is installation of dedicated shallow monitoring wells to measure water table depth at locations where riparian vegetation might potentially be impacted by pumping. In 2021, six shallow monitoring wells were installed at selected locations near the Pajaro River, Pacheco Creek, San Benito River (three sites), and Tres Pinos Creek. These continue to be monitored and will be included in future annual reports and periodic GSP updates. In 2024 DWR released three papers providing new technical information on interconnected surface water (DWR, 2024a, b, and c). A guidance document to assist GSAs in assessing interconnected surface water conditions and establishing Sustainable Management Criteria (SMCs) consistent with SGMA is expected in 2025. This will be incorporated in the periodic evaluation of the GSP.

Long-term Funding

Groundwater sustainability necessitates the continuation of activities including monitoring, data compilation, data analysis, numerical model update, public outreach and annual reporting, five-year periodic evaluations, GSP amendments / updates, investigations, coordination with other agencies, and program administration. While SBCWD has conducted such activities, SGMA requirements are more comprehensive and rigorous. In addition, the extent of activities encompasses the entire North San Benito Groundwater Basin. Accordingly, the GSP identifies management actions to maintain long-term, basin wide funding.

In addition to establishing a groundwater management fee for the entire North San Benito Basin, the District has been pursuing grant funding. In December 2022, the District submitted an application for ADRoP for the DWR SGMA Implementation Round 2. In May 2023, DWR announced that the District was awarded $11.5 million for the project. The District also received $1.8 million from the Integrated

Resource Management Grant. In addition, the District plans to submit additional requests for the USBR Small Storage Grant.

Plan Approval

The GSP for North San Benito Subbasin was submitted January 2022 and approved by DWR in July 2023.

Along with its approval, DWR issued a GSP Assessment Staff Report (DWR, 2023) that documented the plan implementation of SGMA and provided corrective actions. The District has begun to address these corrective actions through project and management actions and will revise Sustainability Management Criteria (SMC) as needed in the periodic evaluation and update of the GSP due January 2027. The corrective actions are summarized below:

- **Recommended Corrective Action 1** - Update the sustainable management criteria for degraded water quality to provide clear definitions of undesirable results.
- **Recommended Corrective Action 2** - Identify the minimum threshold exceedances that constitute an undesirable result for land subsidence.
- **Recommended Corrective Action 3** - Consider utilizing the interconnected surface water guidance, as appropriate, when issued by the Department to establish quantifiable minimum thresholds, measurable objectives, and management actions. Continue to fill data gaps.
- **Recommended Corrective Action 4** - Identify the total number of monitoring wells and monitoring schedule in the degraded water quality monitoring network.

Additional details and suggestions are provided in the GSP Assessment Staff Report, which encourages additional clarification of the GSP and progress toward resolution of data gaps recognized in the 2021 GSP. These suggestions and corrective actions are being reviewed to start timely implementation.

Financial Information

The District derives its operating revenue from charges levied on landowners and water users. Non-operating revenue is generated from property taxes, interest, standby and availability charges, and grants. District zones of benefit are listed in **Appendix A**. Zone 6 charges, relating to the importation and distribution of CVP water, are the focus of this section. A brief Annual Groundwater Memorandum Report (in **Appendix A**) was presented to the SBCWD Board of Directors on January 10, 2025, including the recommended groundwater rates and presenting the technical justification for the rates.

Table 6-1 presents the groundwater charges for Zone 6 water users, which reflect costs associated with monitoring and management. A full worksheet of how groundwater charges are determined can be found in **Appendix F**. Groundwater charges are adjusted annually in March. For March 2024 – February 2025, District rates are $14.03/AF for agricultural use and $14.03/AF for M&I use. The District adopts grants. District zones of benefit are listed in **Appendix A**. Zone 6 charges, relating to the importation and distribution of CVP water, are the focus of this section. A brief Annual Groundwater Memorandum Report (in **Appendix A**) was presented to the SBCWD Board of Directors on January 10, 2025, including the recommended groundwater rates and presenting the technical justification for the rates.

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TABLE 6-1. ADOPTED GROUNDWATER CHARGES

Water Year (Sept-Oct)	Agriculture ($/AF)	M&I ($/AF)
2021-2022	$13.55	$40.55
2022-2023	$13.55	$40.55
2023-2024	$13.75	$13.75
2024-2025	$14.03	$14.03
2025-2026	$14.31	$14.31

CVP rates (provided by the USBR) include the cost of service, restoration fund payment, charges for maintenance of San Luis Delta Mendota Water Authority facilities, and other fees (the breakdown is found in **Appendix G**). The District's blue valve rates (paid by users of CVP water) include a water charge and a power charge. Additionally, the standby and availability charge is a $6 per-acre charge assessed on all parcels with access to CVP water (an active or idle turnout from the distribution system). **Table 6-2** shows the CVP water charge and **Table 6-3** shows the CVP power charge.

TABLE 6-2. ADOPTED BLUE VALVE WATER CHARGES

	Blue Valve Water Charge ($/AF)				
	Agricultural			Municipal & Industrial	
Water Year (Sept-Oct)	Non - Full Cost	Full Cost (1a)	Full Cost (1b)	Small Parcel & Contract	Wholesale
2021-2022	$274.00	$411.00	$433.00	$424.00	$424.00
2022-2023	$274.00	$411.00	$433.00	$424.00	$647.00
2023-2024*	$294.68	$294.68	$294.68	$653.70	$653.70
2024-2025**	$300.58	$300.58	$300.58	$640.07	$640.07

*M&I rate do not include $100/AF reliability charge

**M&I rate do not include $175/AF reliability charge

TABLE 6-3. ADOPTED BLUE VALVE POWER CHARGES

Blue Valve Power Charge ($/AF)	Subsystem 2	Subsystem 6H	Subsystem 9L	Subsystem 9H	All other subsystems
3/1/2021	$85.35	$41.50	$93.55	$138.25	$35.75
3/1/2022	$85.35	$41.50	$93.55	$138.25	$35.75
3/1/2023	$40.22	$40.22	$94.01	$94.01	$40.22
3/1/2024	$41.64	$41.64	$97.31	$97.31	$41.64
3/1/2025	$43.10	$43.10	$100.73	$100.73	$43.10

Recycled water charges (**Table 6-4**) are set to recover current operating and maintenance costs related to the water service. Recycled water rates include those associated with water supply, water quality, and infrastructure.

TABLE 6-4. ADOPTED RECYCLED WATER CHARGES

Recycled Water ($/AF)		
Effective	Agriculture Rate	Power Charge
3/1/2021	$210.00	$61.85
3/1/2022	$211.00	$63.09
3/1/2023	$294.70	$101.10
3/1/2024	$300.59	$104.65
3/1/2025	$306.61	$108.32

Groundwater Management Fee

The District is authorized by California Water Code Section 10730(a), to collect fees to recover costs for GSP development, monitoring, and GSP Annual Reports. In July 2021, the SBCWD Board of Directors passed two resolutions respectively to levy a groundwater management fee and to request that the County of San Benito collect the groundwater management fee on the property tax rolls. The groundwater management fee is based on assessor's parcels and acreage, as the most appropriate way to ensure property owners are paying their fair share toward cost recovery. The annual rates are shown in **Table 6-5**.

Land categories as outlined below have been identified as the basis for application of fees to land within the Basin:

- Valley areas overlying productive portions of the Basin and benefiting significantly from GSP development and implementation, including major municipal and industrial areas, will be charged a land-based fee.
- Upland areas (UA) with less access to groundwater and insignificant benefit of groundwater management and GSP development will not be charged a fee.

TABLE 6-5. GROUNDWATER MANAGEMENT FEE

Groundwater Management Fee ($/Acre)	
2021-2022	$5.77
2022-2023	$5.92
2023-2024	$6.07
2024-2025	$6.23
2025-2026	$6.39

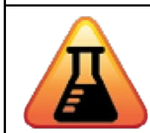
Those who receive their water through municipal agencies pay fees to their respective agencies. All other landowners are charged a fee as part of their San Benito County tax bill. It is expected that the District will have sufficient data to revise the Groundwater Management Fee to account for cost-recovery of extraction measurements during the periodic update of the GSP, to be completed in 2027.

7-GROUNDWATER SUSTAINABILITY

SGMA Indicators

Of the six sustainability criteria developed by DWR, five are relevant to North San Benito Basin (seawater intrusion is not relevant). As documented in the GSP, the Basin has been and is being managed sustainably relative to all criteria. Accordingly, sustainability does not need to be achieved, but it does need to be maintained through the planning and implementation horizon. This will involve continuation and improvement of existing management actions—most notably import of Central Valley Project (CVP) water and its conjunctive use with groundwater. It also will include improvement and expansion of management actions and monitoring.

TABLE 7-1. SGMA INDICATORS

	Indicator	Status of Minimum Threshold
	Groundwater-Level Declines	Compile water level data. Compare key wells elevations with MTs
	Groundwater-Storage Reductions	Compute groundwater storage using the numerical model.
	Water-Quality Degradation	Compile water quality data. Summarize the findings for the triennal review.
	Land Subsidence	Download and review DWR InSar data
	Interconnected Surface-Water Depletions	Review key shallow wells elevations with MTs

While the North San Benito Basin has been managed sustainably, the following sustainability criteria were defined in the GSP because potential exists for undesirable results.

- The Minimum Threshold relative to **chronic lowering of groundwater levels** is defined at designated Key Wells by historical groundwater low levels adjusted to provide reasonable protection to nearby wells. Undesirable results are indicated when two consecutive exceedances occur in each of two consecutive years, in 60 percent or more of the key wells (e.g., three of five wells) in each Management Area. The Measurable Objective is to maintain groundwater levels above the MTs and to maintain groundwater levels within the historical operating range.

- The Minimum Threshold for **reduction of storage** for all Management Areas is fulfilled by the minimum threshold for groundwater levels as proxy. The Measurable Objective for storage is fulfilled by the MT for groundwater levels, which maintains groundwater levels within the historical operating range.
- The Minimum Threshold for **land subsidence** is defined as a rate of decline equal to or greater than 0.2 feet in any five-year period. This has been considered in terms of a potential cumulative decline equal to or greater than one foot of decline since 2015; 2015 represents current conditions and the SGMA start date. The extent of cumulative subsidence across the Basin will be monitored and evaluated using InSAR and UNAVCO data. Subsidence is closely linked to groundwater levels, and it is unlikely that significant inelastic subsidence would occur if groundwater levels remain above minimum thresholds.
- The Minimum Thresholds for **degradation of water quality** address nitrate and TDS for each MA. The MT for nitrate is defined initially as the percentage of wells with concentrations exceeding the nitrate Maximum Contaminant Limit (MCL) (45 mg/L) based on current conditions (2015-2017). The MT for TDS is defined initially as the percentage of wells with concentrations exceeding the TDS value of 1,200 mg/L based on current conditions. The Measurable Objectives for both are defined as maintaining or reducing the percentage of wells with median concentrations exceeding the MTs.
- The Minimum Threshold for **depletion of interconnected surface water** is the amount of depletion associated with the lowest water levels during the 1987-1992 drought, with some adjustments made for wells with groundwater levels lower in 2016 than in 1992. Undesirable results would occur if more than 25 percent of monitored wells within 1 mile of a shallow water table reach along the Pajaro River, Pacheco Creek, San Benito River, or Tres Pinos Creek had static spring water levels lower than the lowest static spring water level during 1987-1992.

Updates on SGMA Indicators

Chronic lowering of groundwater levels. Sustainability criteria (minimum thresholds and measurable objectives) for groundwater levels rely on a network of representative monitoring wells (Key Wells). The MT for a Key Well was based on its historical low levels and adjusted as needed to minimize any risk to nearby domestic wells of future low-water levels. For each Management Area, **Figures 3-4 through 3-7** show the Key Well hydrographs and their respective MTs for groundwater levels. Current water levels are above the individual well MT in all but one key well.

Last year, Water Year 2023, four key wells were identified as unavailable – the landowner no longer granted access, the well had been destroyed, or there was an issue obtaining a water level. Replacement wells were identified for these wells. The replacement wells are located nearby in the same MA, have long term access arrangements, and reflect representative water levels. A temporary MT was set in each replacement well at the historic low water level. These MTs will be revised in the next periodic evaluation. A complete analysis of these wells, surrounding domestic wells, and potential undesirable results will be performed to identify new permanent key wells with corresponding MTs.

Table 7-2 lists the 22 key wells and their respective MTs, as well as the minimum groundwater elevation for Water Year 2024. Groundwater elevations were measured above the MT in 22 wells, two of these wells were flowing artesian wells (and thus above the MT). In Water Year 2024, one well in San Juan MA showed groundwater elevations below the respective MT.

In San Juan MA, Well 13-5-6L1 was first measured below the MT in October 2021 as reported in previous annual reports. Water Year 2024 represents the fourth year with this well's groundwater level below the MT, even after two consecutive above normal water years. Continued local pumping may be impacting this well. Undesirable results for water levels are defined as 60 percent of wells in the MA below the individual well threshold (MT) – for now this well represents 25 percent of the original key wells in San Juan. With the addition of the nearby DB-1 well to the list of key wells for the MA this single threshold exceedance represents 20 percent of the key wells in the MA. While no action is required, the groundwater levels in this key well should be reviewed and this area considered for targeted management. The District plans to investigate the local area at the next sampling event.

Overall, the data indicate that the Basin is not currently affected by undesirable results due to chronic lowering of groundwater levels.

TABLE 7-2. KEY WELLS

Groundwater Level Key Well	MA	Minimum Threshold Depth to Water (ft-bgs)	Minimum Threshold Elevation ft (NAVD 88)	Minimum Groundwater Elevation Water Year 2024	Above MT	Years Below MT	Notes
11-4-25H2	Bolsa	144	4	91.57	y		
11-5-21E2	Bolsa	63	92	155	y		
12-5-17D1	Bolsa	185	32	63.22	y		
12-5-6L1	Bolsa	176	1	150.55	y		
11-5-28B1	Bolsa	102	66	168	y		
11-5-35G1	Hollister	104	102	182.24	y		
12-5-34P1	Hollister	150	144	226.5	y		
12-5-3B1	Hollister	96	86	182	y		
12-6-6L4	Hollister	64	184	217.73	y		
MW DW3	Hollister	97.89	172.454	175.664	y		Replacement for 12-5-24N1
11-5-13D1	Hollister	97	161	229.31	y		
13-6-19L0	Hollister	178.24	281.76	309.86	y		Replacement for 13-6-19K1
13-4-3H1	San Juan	155	52	148.5	y		
13-5-6L1	San Juan	110	131.5	127.5	N	4	
DB-1	San Juan	115.6	123.083	125.993	y		Replacement for 13-4-01K1
12-4-17L20	San Juan	47	93	122.09	y		
12-4-35A1	San Juan	139.4	76.6	172.79	y		Replacement for 12-4-26G1
14-7-20K1	Southern	79	687	719.5	y		
14-6-13B1	Southern	59	637	641.18	y		
14-6-26F0	Southern	136	556	641.29	y		
14-6-26H1	Southern	73	609	625.02	y		
14-6-26K1	Southern	45	623	637.11	y		

Reduction of storage. This indicator is tracked using the groundwater levels at key wells as a proxy. In addition, the change in groundwater in storage is estimated by the numerical model (Section 4). The groundwater level data indicate that the Basin is not currently affected by undesirable results due to depletion of groundwater storage.

Land Subsidence. Land subsidence is tracked using the regional InSAR data and the site-specific UNAVCO station data provided by DWR) on its SGMA Data Viewer (DWR 2025). The most recent InSAR maps (showing change in ground elevation over Water Year 2024) indicate no areas of displacement; the basin has experienced -0.1 to 0.1 (feet) of change. This marks two years of no change in displacement. The UNAVCO data from Station 242 in northwest Bolsa was available for Water Year 2024. The available UNAVCO data indicate that ground surface decline reached its maximum in the water year during September 2024, but the annual low was higher than the low experienced in October 2022. As with every year, the basin experienced its seasonal elastic rebound through May, likely due to the wetter spring conditions. A more comprehensive analysis of the potential for subsidence will be included in the GSP periodic evaluation.

Degradation of water quality. Water quality (TDS, nitrate) continues to be monitored in the SBCWD Water Quality Monitoring Program. As discussed in Section 3, a detailed analysis and comparison of triennial data with the Minimum Thresholds was performed in Water Year 2022. For 2020-2022, the Southern, Hollister and Bolsa MAs showed decreases in the percent of wells that exceeded the respective basin objectives (based on 2015-2017) established in the GSP.

For 2020-2022, the San Juan MA showed an increase in the percent of wells with TDS concentrations greater than 1,200 mg/L basin objective, in part due to the expansion of the Irrigated Lands Program (Aglands) monitoring new locations. The SBCWD monitoring program showed only two out of six monitored wells (33%) in the San Juan MA with TDS concentrations greater than 1,200 mg/L. This particular increase in the San Juan MA does not represent a regional change in groundwater quality; continued monitoring and expanded dedicated monitoring in San Juan MA is recommended.

Depletion of interconnected surface water. Nineteen wells are currently identified as key wells for Interconnected Surface Water. These are historically monitored wells within one mile of stream reaches where springtime depth to water is typically 20 feet or less (and the key wells are not separated from the reach by a fault). The locations of the wells are shown as orange dots in **Figure 3-4** through **3-7** for each MA. The MT for these wells is based on the lowest water level in either spring 1992 or Spring 2016. As with water level Key Wells, the District has selected temporary replacement wells for three Key Wells that have been inaccessible. Temporary MTs were set at the Spring 1992 or Spring 2016 low conditions for these wells. All of the Key Wells and their MTs for Interconnected Surface water will be re-evaluated for the GSP periodic evaluation.

Table 7-3 lists the nineteen wells and their respective MTs, as well as the groundwater elevation for Spring 2024. As noted previously, three wells were replaced because the District was unable monitor the originally identified wells.

TABLE 7-3. INTERCONNECTED SURFACE WATER WELLS

Surface Water / GDE Key Well	Spring MT Groundwater Elevation (ft NAVD88)	Groundwater Elevation Spring 2024	Above MT	Years Below MT	Notes
11-4-26B1	127	132.5	Y		
11-4-34A1	128	134	Y		
11-5-13D1	214	231.51	Y		
11-5-20N1	90	85.68	N	4	
11-5-27P2	122	169.22	Y		
11-5-28B1	128	168	Y		
12-4-17L20	113	125.66	Y		
12-4-21M1	120	146.78	Y		
12-4-34H1	117	160.19	Y		
12-4-35A1	126	181.02	Y		Replacement -12-4-26G1
13-5-11E1	220	284.02	Y		
13-5-13F1	316	330.21	Y		
13-6-19L0	281.77	312.68	Y		Replacement -13-6-19K1
13-6-20K1	396	418.56	Y		Replacement - 13-6-19J1
14-6-13B1	633	646.16	Y		
14-6-26F0	624	588	Y		
14-6-26H1	620	609.33	Y		
14-6-26K1	618	554	Y		
14-6-35B1	637	659.5	Y		

Based on spring water levels, 18 wells had groundwater elevations measured above the individual MT. Only one of the key wells for surface water interconnection was below the MT level. Well 11-5-20N1 located in the Bolsa MA on Tequisquita Slough showed a groundwater elevation of 85.68 feet, slightly lower than the 90-foot threshold. This well has been below the MT for four consecutive years, with the last two being above average precipitation and surface water supply. Water levels at this location show a strong seasonal trend with water levels higher in the winter and lower in the summer. Additional data and analysis are needed at this well to understand the seasonal variation, which can range over 60 feet or more, and to evaluate the well's suitability for representing interconnected surface water and GDE conditions. While the annual range in the levels have been lower than the past (20 feet in Water Year 2024), the water level declines appear to begin earlier in the year. The District will investigate changes in seasonal groundwater pumping near this locations. This one well represents five percent of the total monitored in Spring 2024. Interconnected surface water undesirable results were defined in the GSP as 25 percent of wells with water levels below the individual MT. This has not occurred as of 2024. DWR has recently released three technical papers on interconnected surface water (DWR, 2024a, b, and c).

The District will review these papers and the forthcoming guidance and update the SMCs for Interconnected Water in future GSP periodic evaluations.

8-RECOMMENDATIONS

District policies and programs have served to effectively manage water resources for many years. The District, working collaboratively with other agencies, has eliminated historical overdraft through importation of CVP water, has developed and managed multiple sources of supply to address drought, has established an active and effective water conservation program, has initiated programs to protect water quality, and has improved delivered water quality to many municipal customers. The District also has provided consistent reporting and outreach. The following recommendations are responsive to the District Act and support effective management consistent with SGMA.

Monitoring Programs

Through GSP implementation, the monitoring programs should continue to be improved to provide the SBCWD Board of Directors with information to support management of the groundwater supplies of the District and its zones. Detailed monitoring recommendations have been developed as part of the GSP, including accurate measurement of agricultural groundwater pumping, which has been identified as an important data gap. Accurate groundwater production data is consistent not only with SGMA but also with the District Act, by which the Board of Directors can order an Annual Report, which reports on total production of water from the groundwater supplies of the District during the water year. This supports the following recommendations, provided in response to the District Act, as to the quantity of water needed for surface delivery and for replenishment of groundwater supplies, and whether or not a groundwater charge should be levied and if so, what rate per acre-foot. The District should continue to pursue methods to quantify groundwater pumping in the Basin, including OpenET.

The District should update their QA/QC of groundwater data to ensure that the monitoring network is accurately measuring changes in groundwater levels across the basin. represent regional trends, have long records of monitoring, and have the same general construction.

Groundwater Production and Replenishment

Past District percolation operations helped to reverse historical overdraft and then accumulate a water supply reserve. The District currently manages groundwater storage and surface water to minimize excessively high or low groundwater elevations on a temporal and geographic basis. The District should continue to operate Hernandez and Paicines to improve downstream groundwater conditions. In 2024, the District provided limited off-channel percolation of CVP water; this should be continued with optimization of recharge when CVP water is available. In light of climate change and increasing variability of CVP supply, replenishment projects like ADRoP should be pursued as a groundwater management priority. Such replenishment operations are critical to sustainable groundwater supply.

8-RECOMMENDATIONS

CVP Purchase Recommendation

CVP imports continue to be a critical source of supply for agricultural users and M&I. The water retailers rely on continued CVP water, treated through Lessalt or West Hills WTP, to provide quality drinking water to their customers. This ability to maximize CVP use will increase flexibility for local water users to use groundwater or CVP. CVP also provides better quality water for delivery to municipal customers and results in improved wastewater quality, which supports water recycling. In addition, the District is pursuing projects to store CVP imports in wet years through ASR (ADRoP) and can continue to percolate the water through off-stream channels. As such, the District should continue to purchase the maximum available CVP volume allocated during the upcoming contract year.

Groundwater Charges

The groundwater charge for the current USBR contract year (March 2024-February 2025) is recommended to be $14.03 per AF for agricultural use in Zone 6 and a groundwater charge of $14.03 per AF is recommended for M&I use. For the upcoming year March 2025 – February 2026, District rates are proposed to be $14.31 for agricultural use and $14.31 for M&I use. The District adopts rates on a three-year cycle. Current water rates were adopted January 2023.

9-REFERENCES

California Irrigation Management Information System (CIMIS) 2022, http://www.cimis.water.ca.gov/, station 126, Last accessed: November 10.

Clark, W. O., 1924, Ground water in Santa Clara Valley, California: USGS Water-Supply Paper 519, https://pubs.er.usgs.gov/publication/wsp519

Department of Water Resources, California (DWR), 2023, Gilroy-Hollister Valley – North San Benito Subbasin- 2022 Groundwater Sustainability Plan, July 27.

DWR, 2024a, Depletions of Interconnected Surface Water: An Introduction, Draft, February, https://data.cnra.ca.gov/dataset/68e0d8b6-a207-4b30-a16b-3daeb659faea/resource/218e3361-c142-400f-a97f-5dfa79cd4997/download/depletionsofisw_paper1_intro_draft.pdf

DWR, 2024b, Techniques for Estimating ISW Depletion Caused by Groundwater Use, Draft, September, https://data.cnra.ca.gov/dataset/68e0d8b6-a207-4b30-a16b-3daeb659faea/resource/9c76066b-b20b-4241-9199-4578bdb5a720/download/depletionsofisw_paper2_techniques_draft.pdf

DWR, 2024c, Examples for Estimating ISW Depletion Caused by Groundwater Use, Draft, September, https://data.cnra.ca.gov/dataset/68e0d8b6-a207-4b30-a16b-3daeb659faea/resource/9edd0f9c-317f-42ba-85ff-15f49aa5ff43/download/depletionsofisw_paper3_examples_draft.pdf

DWR, 2025, DWR SGMA Data Viewer, Land Subsidence, NASA JPL InSAR Dataset, accessed March 2025, https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer.

HDR, 2022, Summary of the Accelerated Drought Response Project (ADRoP), October 25.

HDR, 2023, San Benito Urban Areas Water Supply and Treatment Master Plan Update for the City of Hollister, City of San Juan Bautista, San Benito County, San Benito County Water District, and Sunnyslope County Water District, Approved: October 25.

San Luis & Delta-Mendota Water Authority (SLDMWA), 2021, Water Supply Reports, November, http://www.sldmwa.org/operations/water-supply-reports/

State Water Resources Control Board (SWRCB), 2012, Water Quality Order 2012-0010, General Waste Discharge Requirements for Aquifer Storage and Recovery Projects that Inject Drinking Water into Groundwater, available at https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2012/wqo2012_0010_with%20signed%20mrp.pdf

Todd Engineers/Groundwater 2006 to 2024, San Benito County Annual Groundwater Reports. Water Years 2006-2023.

Todd Groundwater 2021, North San Benito Groundwater Sustainability Plan, November.

Todd Groundwater 2022, North Hollister Test Well Drilling, Construction, and Testing, January.

9-REFERENCES

Todd Groundwater, 2014, San Benito County Salt and Nutrient Management Plan.

Western Regional Climate Center (WRCC), 2024, https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca4025, Last Accessed January 2025.

APPENDIX A REPORTING REQUIREMENTS

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APPENDIX A REPORTING REQUIREMENTS

The San Benito County Water District Act (1953) is codified in California Water Code Appendix 70. Section 70-7.6 (District Act) authorizes the District Board of Directors to require the District to prepare an annual groundwater report. This Annual Report satisfies both the requirements of a SGMA Annual Report and report detailed in the District Act. The District Act requires that the report address the District and its zones of benefit (**Table A-1**) for the water year. While section 70-7.2 defines the water year as March through February, the same as the USBR contract year, Section 70-7.6 identifies data sets to be documented for the hydrologic water year, October through September.

Table A-1. District Zones of Benefit

Zone	Area	Provides
1	Entire County	Specific District administrative expenses
3	San Benito River Valley (Paicines to San Juan) and Tres Pinos River Valley (Paicines to San Benito River)	Operation of Hernandez and Paicines reservoirs and related groundwater recharge and management activities
6	Hollister and San Juan Management Areas of North San Benito Groundwater Basin (previously San Juan, Hollister East, Hollister West, Pacheco, Bolsa SE, and Tres Pinos subbasins)	Importation and distribution of CVP water and related groundwater management activities

The Board has consistently ordered preparation of Annual Reports, and the reports have included the contents specified Section 70-7.6. The following table shows the contents specified by the Act and the section of the Annual Report where the information is available.

The full text of Appendix 70, Section 70-7.6 through 7.8 is enclosed in this appendix.

Table A-2. District Act Requirements

District Act Requirements		Annual Report Section	Notes
Overdraft	An estimate of the annual overdraft for the current water year and for the ensuing water year. Information for the consideration of the Board in its determination of the annual overdraft and accumulated overdraft as of September 30 of the current year	4	The water balance is simulated for the continuous period from January 1976 through September 2023. The basin is not in overdraft over the contract year (March 2022 through February 2023) or the water year (October 2022 through September 2023).
Total Production	A report as to the total production of water from the groundwater supplies of the District and its zones as of September 30 of the current year.	5	CVP imports, groundwater pumping, and recycled water use are reported for agricultural and other uses for the hydrologic water year ending September 30
	Information for the consideration of the Board in its determination of the estimated amount of agricultural water and the estimated amount of water other than agricultural water to be withdrawn from the groundwater supplies of the District and its zones		
Future Purchase	The amount of water the District is obligated to purchase during the ensuing water year.	5, 8	The allocations for the contract years covered by the report are shown in Tables 5-1 and 5-2. Recommendations to purchase the full amount available are provided.
	A recommendation as to the quantity of water needed for surface delivery and for replenishment of the groundwater supplies of the District and its zones during the ensuing water year.		
Rate	A recommendation as to whether or not a groundwater charge should be levied in any zone(s) of the District in the ensuing water year and if so, a rate per acre-foot for all water other than agricultural water for such zone(s)	6, Appendix G, and Engineer's Report	Rate information is provided by the contract (USBR) year
Other	Any other information the Board requires.	1-9	The report includes SGMA implementation, financial information, and other content requested by staff and Board.

APPENDIX A REPORTING REQUIREMENTS

Water Code Appendix 70 Excerpts

Sec. 7.6. the board by resolution require the district to annually prepare an investigation and report on groundwater conditions of the district and the zones thereof, for the period from October 1 of the preceding calendar year through September 30 of the current year and on activities of the district for protection and augmentation of the water supplies of the district and the zones thereof. The investigation and report shall include all of the following information:

(a) Information for the consideration of the board in its determination of the annual overdraft.

(b) Information for the consideration of the board in its determination of the accumulated overdraft as of September 30 of the current calendar year.

(c) A report as to the total production of water from the groundwater supplies of the district and the zones thereof as of September 30 of the current calendar year.

(d) An estimate of the annual overdraft for the current water year and for the ensuing water year.

(e) Information for the consideration of the board in its determination of the estimated amount of agricultural water and the estimated amount of water other than agricultural water to be withdrawn from the groundwater supplies of the district and the zones thereof for the ensuing water year.

(f) The amount of water the district is obligated to purchase during the ensuing water year.

(g) A recommendation as to the quantity of water needed for surface delivery and for replenishment of the groundwater supplies of the district and the zones thereof the ensuing water year.

(h) A recommendation as to whether or not a groundwater charge should be levied in any zone or zones of the district during the ensuing year.

(i) If any groundwater charge is recommended, a proposal of a rate per acre-foot for agricultural water and a rate per acre-foot for all water other than agricultural water for such zone or zones.

(j) Any other information the board requires.

(Added by Stats. 1965, c. 1798, p.4167, 7. Amended by Stats.1967,c.934, 5, eff. July27,1967; Stats. 1983, c. 402, 1; Stats. 1998, c. 219 (A.B.2135), 1.)

Section 70-7.7. Receipt of report; notice of hearing; contents; hearing

Sec. 7.7. (a) On the third Monday in December of each year, the groundwater report shall be delivered to the clerk of the board in writing. The clerk shall publish, pursuant to Section 6061 of the Government Code, a notice of the receipt of the report and of a public hearing to be held on the second Monday of January of the following year in a newspaper of general circulation printed and published within the district, at least 10 days prior to the date at which the public hearing regarding the groundwater report shall be held. The notice shall include, but is not limited to, an invitation to all operators of water producing facilities within the district to call at the offices of the district to examine the groundwater report.

(b) The board shall hold, on the second Monday of January of each year, a public hearing, at which time any operator of a water-producing facility within the district, or any person interested in the condition of the groundwater supplies or the surface water supplies of the district, may in person, or by representative, appear and submit evidence concerning the groundwater conditions and the surface water supplies of the district. Appearances also may be made supporting or protesting the written groundwater report, including, but not limited to, the engineer's recommended groundwater charge.

(Added by Stats. 1965, c. 1798, p. 4167, 8. Amended by Stats. 1983, c. 02,2; Stats. 1998, c. 219 (A.B.2135,2.)

Section 70-7.8. Determination of groundwater charge; establishment of rates; zones; maximum charge; clerical errors

Sec. 7.8. (a) Prior to the end of the water year in which a hearing is held pursuant to subdivision (b) of Section 7.7, the board shall hold a public hearing, noticed pursuant to Section 6061 of the government Code, to determine if a groundwater charge should be levied, it shall levy, assess, and affix such a charge or charges against all persons operating groundwater- producing facilities within the zone or zones during the ensuing water year. The charge shall be computed at fixed and uniform rate per acre-foot for agricultural water, and at a fixed and uniform rate per acre-foot for all water other than agricultural water. Different rates may be established in different zones. However, in each zone, the rate for agricultural water shall be fixed and uniform and the rate for water other than agricultural water shall be fixed and uniform. The rate for agricultural water shall not exceed one-third of the rate for all water other than agricultural water.

(b) The groundwater charge in any year shall not exceed the costs reasonably borne by the district in the period of the charge in providing the water supply service authorized by this act in the district or a zone or zones thereof.

(c) Any groundwater charge levied pursuant to this section shall be in addition to any general tax or assessment levied within the district or any zone or zones thereof.

(d) Clerical errors occurring or appearing in the name of any person or in the description of the water-producing facility where the production of water there from is otherwise properly charged, or in the making or extension of any charge upon the records which do not affect the substantial rights of the assesse or assesses, shall not invalidate the groundwater charge.

(Added by Stats. 1965, c. 1798, p. 4168, 9. Amended by Stats. 1983, c. 402, 3; Stats.1983, c. 402, 3; Stats. 1998, c. 219 (A.B.2135), 3.)

APPENDIX A REPORTING REQUIREMENTS

SGMA Annual Elements Guide

Groundwater Sustainability Plan Annual Report Elements Guide

Basin Name	North San Benito		
GSP Local ID			
California Code of Regulations - GSP Regulation Sections	***Groundwater Sustainability Plan Elements***	**Document *page number(s) that address the applicable GSP element.***	***Notes: Briefly describe the GSP element does not apply.***
Article 5	**Plan Contents**		
Subarticle 4	***Monitoring Networks***		
§ 354.40	**Reporting Monitoring Data to the Department**		
	Monitoring data shall be stored in the data management system developed pursuant to Section 352.6. A copy of the monitoring data shall be included in the Annual Report and submitted electronically on forms provided by the Department.	Figures 3-4, 3-5, 3-6, 3-7, Appendix C	
	Note: Authority cited: Section 10733.2, Water Code. Reference: Sections 10728, 10728.2, 10733.2 and 10733.8, Water Code.		
Article 7	**Annual Reports and Periodic Evaluations by the Agency**		
§ 356.2	**Annual Reports**		
	Each Agency shall submit an annual report to the Department by April 1 of each year following the adoption of the Plan. The annual report shall include the following components for the preceding water year:		
	(a) General information, including an executive summary and a location map depicting the basin covered by the report.	ES, Figure 1-1	
	(b) A detailed description and graphical representation of the following conditions of the basin managed in the Plan:		
	(1) Groundwater elevation data from monitoring wells identified in the monitoring network shall be analyzed and displayed as follows:		
	(A) Groundwater elevation contour maps for each principal aquifer in the basin illustrating, at a minimum, the seasonal high and seasonal low groundwater conditions.	Figure 4-6, 4-7	
	(B) Hydrographs of groundwater elevations and water year type using historical data to the greatest extent available, including from January 1, 2015, to current reporting year.	Figures 3-4, 3-5, 3-6, 3-7	
	(2) Groundwater extraction for the preceding water year. Data shall be collected using the best available measurement methods and shall be presented in a table that summarizes groundwater extractions by water use sector, and identifies the method of measurement (direct or estimate) and accuracy of measurements, and a map that illustrates the general location and volume of groundwater extractions.	Table 5-2, Figure 4-5	
	(3) Surface water supply used or available for use, for groundwater recharge or in-lieu use shall be reported based on quantitative data that describes the annual volume and sources for the preceding water year.	Table 5-1, 5-2, Appendix E	
	(4) Total water use shall be collected using the best available measurement methods and shall be reported in a table that summarizes total water use by water use sector, water source type, and identifies the method of measurement (direct or estimate) and accuracy of measurements. Existing water use data from the most recent Urban Water Management Plans or Agricultural Water Management Plans within the basin may be used, as long as the data are reported by water year.	Table 5-2, Figure 4-5	
	(5) Change in groundwater in storage shall include the following:		

California Code of Regulations - GSP Regulation Sections	*Groundwater Sustainability Plan Elements*	Document *page number(s) that address the applicable GSP element.*	*Notes: Briefly describe the GSP element does not apply.*
	(A) Change in groundwater in storage maps for each principal aquifer in the basin.	Figure 4-8	
	(B) A graph depicting water year type, groundwater use, the annual change in groundwater in storage, and the cumulative change in groundwater in storage for the basin based on historical data to the greatest extent available, including from January 1, 2015, to the current reporting year.	Figures E-1, E-2, E-3, and E-4	
	(c) A description of progress towards implementing the Plan, including achieving interim milestones, and implementation of projects or management actions since the previous annual report.	Section 6	

APPENDIX A REPORTING REQUIREMENTS

SGMA Annual Report Data Upload

North San Benito Annual SGMA Portal   A Groundwater Extractions

Basin Number	3-003.05
Water Year	2024 (Oct. 2023 - Sept. 2024)
Total Groundwater Extractions (AF)	99,455
Water Use Sector Urban (AF)	2,723
Water Use Sector Industrial (AF)	-
Water Use Sector Agricultural (AF)	96,732
Water Use Sector Managed Wetlands (AF)	-
Water Use Sector Managed Recharge (AF)	-
Water Use Sector Native Vegetation (AF)	-
Water Use Sector Other (AF)	-
Water Use Sector Other Description	

Basin Number	3-003.05
Water Year	2024 (Oct. 2023 - Sept. 2024)
Meters Volume (AF)	-
Meters Description	
Meters Type	
Meters Accuracy (%)	
Meters Accuracy Description	
Electrical Records Volume (AF)	0
Electrical Records Description	
Electrical Records Type	
Electrical Records Accuracy (%)	
Electrical Records Accuracy Description	
Land Use Volume (AF)	0
Land Use Description	
Land Use Type	
Land Use Accuracy (%)	
Land Use Accuracy Description	
Groundwater Model Volume (AF)	99,455.0
Groundwater Model Description	Numerical Model developed for the GSP and updated for the Annual Report
Groundwater Model Type	Estimate

Groundwater Model Accuracy (%)	50-60 %
Groundwater Model Accuracy Description	Without data on the actual water use it is impossible to calculate the % accuracy
Other Method(s) Volume (AF)	-
Other Method(s) Description	
Other Method(s) Type	
Other Method(s) Accuracy (%)	
Other Method(s) Accuracy Description	

Basin Number	3-003.05
Water Year	2024 (Oct. 2023 - Sept. 2024)
Methods Used To Determine	Meters
Water Source Type Central Valley Project (AF)	15084
Water Source Type State Water Project (AF)	-
Water Source Type Colorado River Project (AF)	-
Water Source Type Local Supplies (AF)	-
Water Source Type Local Imported Supplies (AF)	-
Water Source Type Recycled Water (AF)	421
Water Source Type Desalination (AF)	-
Water Source Type Other (AF)	-
Water Source Type Other Description	-

Basin Number	3-003.05
Water Year	2024 (Oct. 2023 - Sept. 2024)
Total Water Use (AF)	114,960
Methods Used To Determine	Model Estimate for groundwater pumping
Water Source Type Groundwater (AF)	99,455
Water Source Type Surface Water (AF)	-
Water Source Type Recycled Water (AF)	421
Water Source Type Reused Water (AF)	-
Water Source Type Other (AF)	15,084
Water Source Type Other Description	CVP
Water Use Sector Urban (AF)	7,788
Water Use Sector Industrial (AF)	-
Water Use Sector Agricultural (AF)	107,173
Water Use Sector Managed Wetlands (AF)	-
Water Use Sector Managed Recharge (AF)	-
Water Use Sector Native Vegetation (AF)	-
Water Use Sector Other (AF)	-

Water Use Sector Other Description	

APPENDIX A REPORTING REQUIREMENTS

Memorandum Report:

San Benito County Water District Annual Groundwater Report
for January 10, 2025 Meeting of the Board of Directors

December 19, 2024

MEMORANDUM REPORT

To: Jeff Cattaneo and Dana Jacobson, San Benito County Water District

From: Iris Priestaf, PhD and Maureen Reilly, PE

Re: San Benito County Water District Annual Groundwater Report for January 6, 2025 Meeting of the Board of Directors

The San Benito County Water District (District or SBCWD) was formed in 1953 by a special act (District Act) of the State with responsibility and authority to manage groundwater. The District Act authorizes the Board of Directors, at its discretion, to direct staff to prepare an annual report on groundwater conditions of the District and its zones of benefit, such as Zone 6, the area for distribution of Central Valley Project (CVP) water. The groundwater report (addressing the previous water year from October 1 through September 30) also summarizes activities of the District for protection and augmentation of water supplies and provides management recommendations. Annual Groundwater Reports have been prepared since the 1970s and District Act requirements are listed in Appendix A of recent reports.

In response to the 2014 Sustainable Groundwater Management Act (SGMA), the District became the exclusive Groundwater Sustainability Agency (GSA) for the North San Benito Groundwater Basin (Basin) in San Benito County. In coordination with Santa Clara Water District (Valley Water), the GSA for the Santa Clara County portion of the Basin, the District led preparation of a Groundwater Sustainability Plan (GSP) for the Basin that was submitted to the California Department of Water Resources (DWR) in January 2022 and received Approval from DWR in July 2023. Starting in 2022, the District shifted Annual Groundwater Report preparation to align with the requirements of SGMA, and SGMA Annual Reports for water years 2021 - 2023 (Todd 2022, 2023, 2024) have been prepared for local use and submittal to DWR. The District recently initiated preparation of the SGMA Annual Report for water year 2024 in accordance with SGMA and consistent with the District Act. The water year 2024 SGMA Annual Groundwater Report is planned for completion by April 1, 2025.

This brief Memorandum Report has been prepared at the direction of the SBCWD Board of Directors to address requirements of the District Act, while recognizing that the SGMA Annual Report will provide the substantial documentation that has been presented in pre-SGMA Annual Groundwater Reports.

1. GROUNDWATER BASIN CONDITIONS

As documented in the GSP (Todd 2021), the Basin is not in overdraft. Historical overdraft was halted through importation of CVP water and other management actions. In water year (WY) 2024[1], the wet conditions from WY 2023 resulted in higher allocations in the beginning of the year and was followed by above average conditions. In February 2024, CVP initial allocations were at 15 percent for agricultural uses and 65 percent for municipal and industrial (M&I) uses. In April, the United States Bureau of Reclamation (USBR) increased allocation to 40 percent. Finally in June, USBR announced the CVP 2024 water supply allocations were 50 percent for agricultural uses and 75 percent for M&I uses (ACWA 2024).

Table 1 shows that WY 2024 M&I and agricultural groundwater pumping was the lowest in the past six years, due to the increased use of imported water in both sectors. It should be noted that Table 1 relies on the power meters monitoring agricultural pumping and the Annual Report will use the numerical model simulated pumping.

Table 1. Groundwater Production in Zone 6 by Water Year, acre-feet per year

	WY 2019	WY 2020	WY 2021	WY 2022	WY 2023	WY 2024
Agriculture*	15,423	17,021	22,614	23,945	13,147	13,132
Municipal & Industrial	2,660	3,514	6,067	5,840	4,769	2,321
* based on power meters in Zone 6						

While WY 2024 was an above average year hydrologically, the lasting effects of the multiple year drought can still be seen in North San Benito Basin. Groundwater levels and storage reserves have shown an increase over the past years but remain at or below historical highs. However, the District continues to manage the Basin to maintain water levels above the quantitative minimum thresholds that are protective of beneficial uses of groundwater (Todd 2021).

2. WATER SUPPLIES AND MANAGEMENT ACTIVITIES

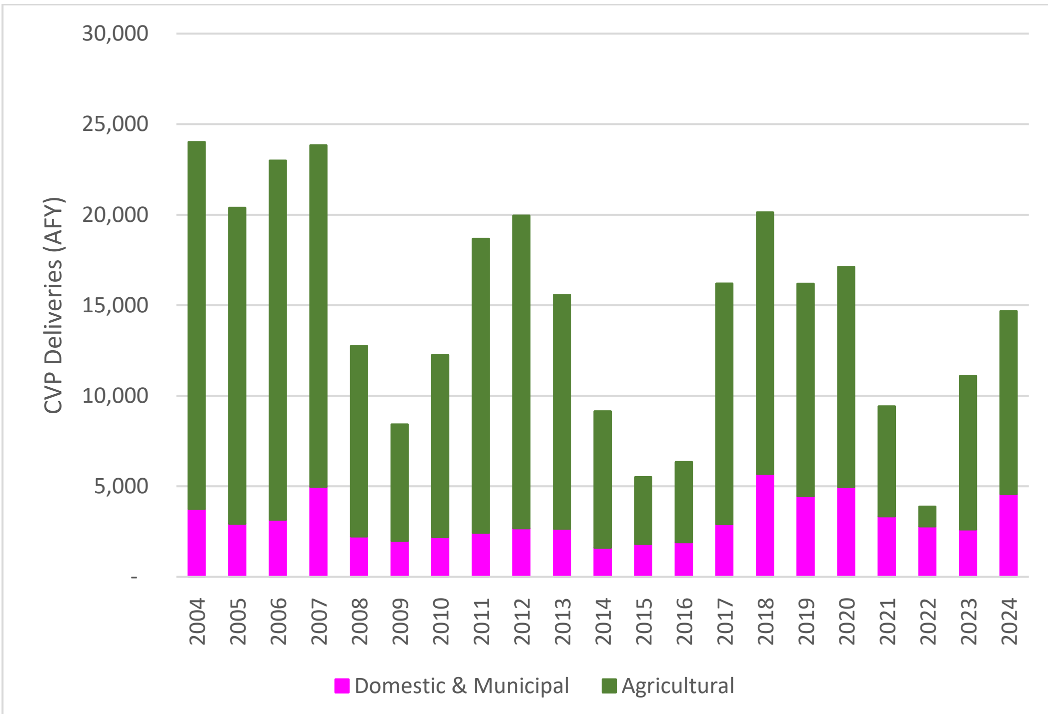
As described in the previous SGMA Annual Reports and pre-SGMA Annual Groundwater Reports, water supply sources available in Zone 6 include local groundwater, imported CVP water, recycled water, and local surface water.

The District contract with USBR provides up to 35,550 acre-feet per year (AFY) of imported water for agricultural use and 8,250 AFY for M&I use. As noted above, CVP allocations were

[1] Water year 2024 was the 12-month period from October 1, 2023 through September 30, 2024.

increased to 50 percent and 75 percent for agricultural and M&I uses, respectively, in WY 2024. However, because both treatment plants were operational, the overall delivery of CVP to users in Zone 6 was higher than the previous three years due to previous drought and infrastructure issues. **Figure 1** shows the delivered CVP water by user type over the last 20 years.

Figure 1. CVP Deliveries by User Type (WY 2004- WY 2024)



CVP and the other non-groundwater water sources are used conjunctively with local groundwater. The District has consistently worked to maintain groundwater storage in the Basin to serve as an important water source in dry years when CVP and other sources are restricted. District groundwater management projects (also described in GSP Chapter 8, Todd 2021) are focused on increasing water importation, local water storage, managed aquifer recharge, and water recycling, all of which maintain and increase local groundwater storage.

Ongoing management actions include groundwater level, quality, and water use monitoring, data compilation and analysis, numerical modeling, water conservation, water quality improvement programs, stakeholder outreach, reporting, and administrative activities among others that contribute to long-term sustainability.

3. RECOMMENDATIONS

The following recommendations are responsive to the District Act:

- Continue to purchase and supply all imported CVP water available under the District's contract and any additional supplies that can reasonably be attained.
- Continue to operate Hernandez and Paicines reservoirs for percolation to improve downstream groundwater conditions.
- Continue off-channel percolation of CVP water as available and expand percolation capabilities.
- Levy a groundwater charge in Zone 6 as substantiated and recommended in the 2024 Annual Groundwater Report. The groundwater charge for the USBR contract year (March 2025-February 2026) is recommended to be $14.31 per acre-foot (AF) for agricultural use in Zone 6 and a groundwater charge of $14.31 per AF is recommended for M&I use.

4. REFERENCES

Association of California Agencies, 2023, Bureau of Reclamation Bolsters CVP Water Supply Allocations, https://www.acwa.com/news/bureau-of-reclamation-bolsters-cvp-water-supply-allocations/, April 23, 2023.

Todd Groundwater (Todd),2024, 2023, 2022, 2021 Annual Groundwater Report, March.

Todd Groundwater (Todd), 2021, North San Benito Groundwater Sustainability Plan, November.

APPENDIX B CLIMATE DATA

List of Tables and Figures

Table B-1. Monthly Precipitation at the SBCWD CIMIS Station (inches)

Water Year	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL	% Normal
1996	0.12	0.01	2.21	4.38	4.52	1.56	1.33	1.32	0.00	0.01	0.00	0.00	15.46	118%
1997	0.96	3.16	4.26	6.84	0.21	0.09	0.19	0.02	0.10	0.00	0.00	0.03	15.86	121%
1998	0.16	3.78	2.59	4.94	9.06	2.70	2.31	2.40	0.09	0.02	0.00	0.08	28.13	215%
1999	0.54	1.93	0.79	2.54	2.49	1.52	0.67	0.06	0.07	0.00	0.00	0.00	10.61	81%
2000	0.14	0.98	0.11	4.05	4.53	0.68	0.40	0.45	0.10	0.00	0.00	0.02	11.46	88%
2001	3.54	0.80	0.23	2.86	2.77	0.62	2.20	0.01	0.01	0.03	0.02	0.00	13.09	100%
2002	0.70	11.48	11.93	0.66	1.15	1.57	0.37	0.28	0.00	0.00	0.00	0.00	28.14	215%
2003	0.00	1.67	5.04	0.77	1.41	1.06	3.05	0.06	0.00	0.00	0.06	0.00	13.12	100%
2004	0.20	0.60	5.25	1.31	4.21	0.59	0.27	0.08	0.01	0.00	0.00	0.01	12.53	96%
2005	1.95	0.54	3.46	2.49	2.89	3.42	0.83	0.64	0.43	0.00	0.00	0.04	16.69	128%
2006	0.07	0.27	3.08	1.49	1.01	4.96	1.73	0.39	0.01	0.00	0.02	0.01	13.04	100%
2007	0.20	0.73	1.69	0.57	2.22	0.29	0.55	0.02	0.00	0.02	0.00	0.43	6.72	51%
2008	0.71	0.67	0.92	4.56	2.06	0.09	0.06	0.00	0.00	0.00	0.00	0.00	9.07	69%
2009	0.28	1.05	1.89	0.35	3.73	1.83	0.20	0.47	0.00	0.00	0.00	0.15	9.95	76%
2010	0.50	0.02	1.31	2.29	2.19	1.74	3.44	0.61	0.00	0.01	0.00	0.00	12.11	93%
2011	0.72	1.85	2.59	1.57	2.63	2.33	0.19	0.78	0.30	0.00	0.00	0.00	12.96	99%
2012	0.69	0.96	0.07	0.81	0.46	2.34	1.39	0.26	0.09	0.00	0.00	0.00	7.07	54%
2013	0.01	2.23	1.15	1.35	0.64	0.46	0.30	0.02	0.01	0.00	0.03	0.10	6.30	48%
2014	0.07	0.37	0.17	0.22	1.91	1.59	0.86	0.02	0.00	0.00	0.00	0.14	5.35	41%
2015	1.57	0.48	5.78	0.02	1.20	0.22	0.24	0.87	0.00	0.01	0.09	0.08	10.56	81%
2016	0.22	3.65	1.58	3.98	0.57	3.72	0.79	0.05	0.08	0.08	0.06	0.10	14.88	114%
2017	1.77	2.48	3.33	4.66	6.05	1.70	1.09	0.50	0.32	0.00	0.02	0.00	21.92	168%
2018	0.20	1.12	0.19	2.39	0.29	2.74	1.33	0.00	0.00	0.00	0.00	0.00	8.26	63%
2019	0.17	2.52	1.48	2.24	4.02	2.55	0.25	1.95	0.20	0.00	0.00	0.00	15.38	118%
2020	0.00	1.40	3.69	1.39	0.00	2.78	1.18	0.42	0.24	0.13	0.02	0.00	11.25	85%
2021	0.00	0.42	0.77	3.82	0.28	1.28	0.01	0.00	0.00	0.00	0.00	0.00	6.58	50%
2022	2.16	0.41	5.09	0.09	0.10	0.64	0.74	0.02	0.13	0.00	0.00	0.00	9.38	72%
2023	0.00	2.06	6.17	4.09	2.33	5.03	0.01	0.59	0.08	0.00	0.00	0.00	20.36	156%
2024	0.09	0.52	2.93	3.02	4.29	2.93	1.39	0.33	0.00	0.00	0.00	0.00	15.50	119%
AVG	0.63	1.70	2.74	2.38	2.32	1.79	0.93	0.44	0.08	0.01	0.01	0.04	13.08	100%

Note: The average precipitation is based on the period of record (1875-2018).
-The CIMIS value for September 2017 (2.4") includes measurement error due to irrigation overspray. The corrected District value is 0".
-The CIMIS value for February, May, June, and August 2018 (0.8", 2.6", 0.1", 0.03") includes measurement error due to irrigation overspray. The corrected District value is 0.3" for February and 0" for all other months.
-The CIMIS value for October and November 2018 included measurement error due to irrigation overspray. The corrected District value is 0.17" for October and 2.52" for November (WRCC Hollister2 Station)

Table B-2. Reference Evapotranspiration at the SBCWD CIMIS Station (inches)

Water Year	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL	% Normal
1996	3.88	2.24	1.22	1.48	1.88	3.67	5.10	6.06	6.73	7.39	6.68	4.71	51.04	103%
1997	3.84	1.84	1.37	1.38	2.48	4.27	5.84	7.51	7.13	7.18	6.71	5.67	55.22	111%
1998	3.85	1.84	1.52	1.29	1.38	2.82	4.26	4.53	5.27	6.91	6.83	4.72	45.22	91%
1999	3.51	1.73	1.52	1.54	1.84	3.01	4.72	5.80	6.66	6.92	5.91	4.67	47.83	96%
2000	4.00	1.98	1.89	1.22	1.62	3.69	5.14	6.04	6.73	6.74	6.19	4.74	49.98	101%
2001	2.91	1.71	1.47	1.47	1.81	3.07	3.90	6.15	6.54	6.02	6.23	4.75	46.03	93%
2002	3.51	1.91	1.24	1.53	2.26	3.66	4.21	6.37	7.05	7.24	6.14	5.39	50.51	102%
2003	3.57	1.94	1.25	1.56	1.80	3.87	3.79	6.00	6.47	7.29	6.15	5.07	48.76	98%
2004	4.11	1.73	1.24	1.32	1.72	3.98	5.19	6.38	6.71	6.63	5.98	5.32	50.31	101%
2005	3.08	1.69	1.44	1.30	1.69	2.95	4.38	5.74	6.36	6.86	6.13	4.55	46.17	93%
2006	3.59	2.00	1.19	1.43	2.18	2.43	3.00	5.49	6.41	7.02	5.60	4.38	44.72	90%
2007	3.28	1.69	1.37	1.77	1.77	4.11	4.76	6.29	6.89	6.79	6.46	4.65	49.83	100%
2008	3.48	2.21	1.44	1.25	2.03	3.76	5.17	5.97	6.88	6.74	6.31	5.00	50.24	101%
2009	3.82	1.87	1.36	1.70	1.72	3.51	4.83	5.53	6.31	7.08	6.31	5.30	49.34	99%
2010	3.45	2.21	1.71	1.26	1.80	3.49	3.87	5.37	6.71	6.29	5.88	4.98	47.02	95%
2011	3.02	1.86	1.05	1.59	2.05	2.71	4.43	5.34	5.99	6.56	5.74	4.64	44.98	91%
2012	3.27	1.89	1.83	1.84	2.46	3.34	4.39	6.39	6.81	6.63	6.00	4.60	49.45	100%
2013	3.25	1.82	1.16	1.50	2.10	3.71	5.39	6.26	6.36	6.46	5.98	4.83	48.82	98%
2014	3.51	2.02	1.80	2.08	1.85	3.58	4.89	6.83	6.61	6.43	6.02	4.74	50.36	101%
2015	3.90	1.86	1.45	1.80	2.16	4.13	5.12	5.01	6.41	6.52	6.49	5.34	50.19	101%
2016	4.11	2.05	1.39	1.32	2.72	3.40	4.65	5.71	7.54	7.22	5.74	5.15	51.00	103%
2017	3.40	2.11	1.47	1.55	1.76	3.73	4.45	6.29	6.82	7.62	6.03	5.16	50.39	101%
2018	4.15	1.93	1.98	1.57	2.66	3.25	4.81	5.83	7.29	7.65	6.60	5.15	52.87	106%
2019	3.85	2.20	1.54	1.58	1.91	3.42	4.81	5.17	6.68	7.15	6.54	5.36	50.21	101%
2020	4.24	2.31	1.37	1.60	2.78	3.15	4.54	6.53	7.17	6.96	6.23	4.78	51.66	104%
2021	4.16	2.24	1.82	1.79	2.45	3.79	5.27	6.54	7.09	7.15	6.18	5.27	53.75	108%
2022	3.66	2.23	1.21	1.78	2.73	4.02	5.36	6.91	7.73	7.30	6.45	5.42	54.80	110%
2023	3.63	2.11	1.17	1.61	2.05	2.94	5.02	5.08	5.68	7.52	6.19	4.55	47.55	96%
2024	3.94	2.39	1.52	1.39	2.09	3.41	4.58	6.00	7.02	7.55	6.74	5.13	51.76	104%
AVG	3.65	1.99	1.45	1.53	2.06	3.48	4.69	5.97	6.69	6.96	6.22	4.97	49.66	100%

Note: The averages are for the available period of record, 1995 for reference evapotranspiration.

APPENDIX C GROUNDWATER DATA

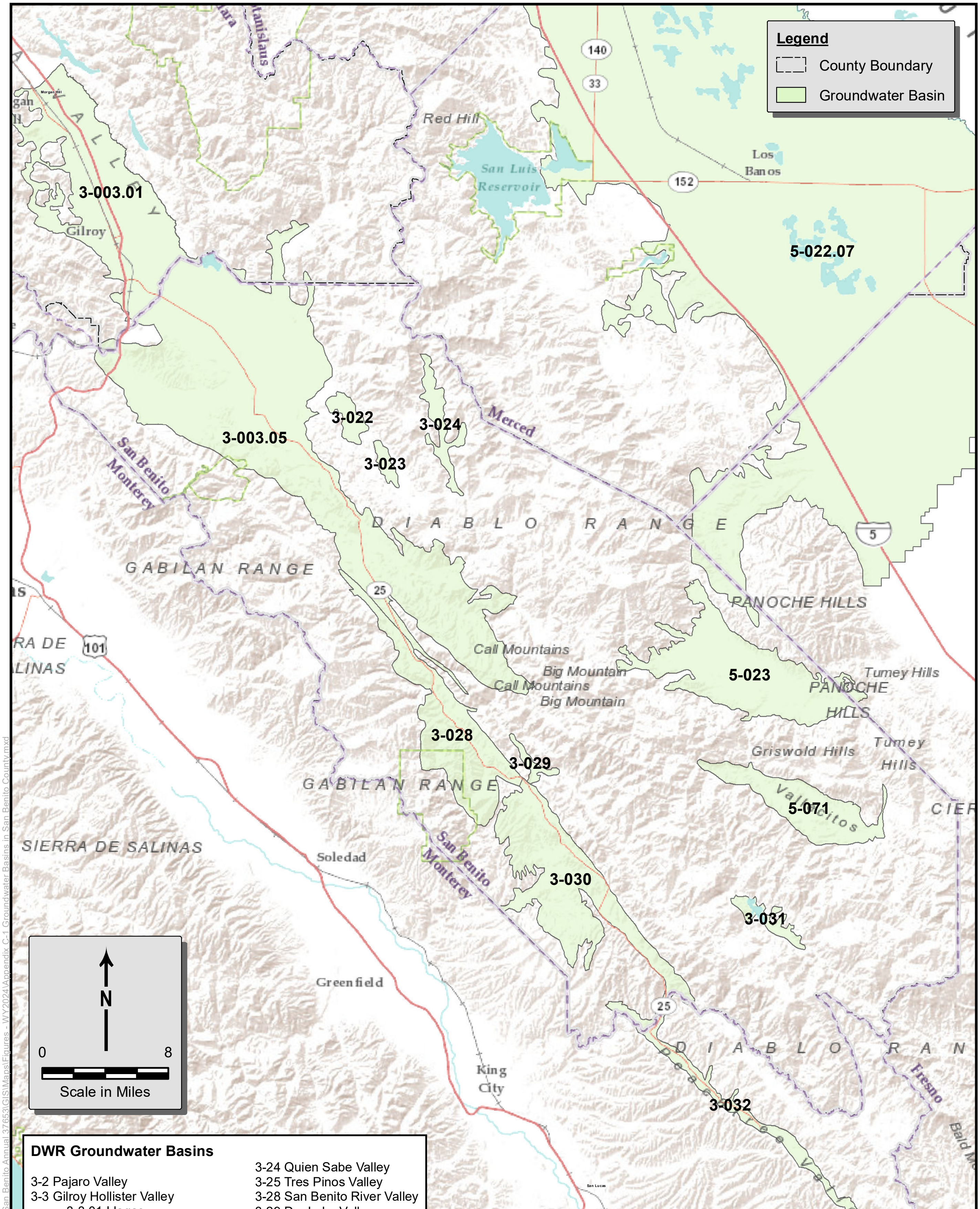
List of Tables and Figures

Table C-1. Groundwater Elevations October 2023 through October 2024

Local SWN	Ground	Well Depth	Depth to Top	MA	Oct 23	Jan Elev	Apr Elev	Jul Elev	Oct 24	Subbasin
Southern Management Area										
14-6-13B1	696.0	0	0	Southern	648.4	650.0	646.2	641.2	643.6	TPCV
14-6-14Q0	694.0	0	0	Southern	638.3		635.7		636.1	Paicines
14-6-26F0	692.0	0	0	Southern	643.7		641.3		645.1	Paicines
14-6-26H1	682.0	0	0	Southern	640.2	625.0	643.1		638.5	Paicines
14-6-26K1	668.0	0	0	Southern	642.5		637.1		638.4	Paicines
14-6-35B1	707.0	0	0	Southern	658.4		657.5		654.4	Paicines
14-6-36D0	737.0	0	0	Southern	656.9		664.3		654.4	Paicines
14-7-19G0	753.0	0	0	Southern	714.0		710.4		707.1	TPCV
14-7-20K1	766.0	0	0	Southern	721.3	720.5	721.3	719.5	723.3	TPCV
Bolado Park #1	506.3	0	0	Southern	493.7		495.7		498.1	
Bolado Park #2	520.1	0	0	Southern	501.6		505.2		506.1	
MW DW5	669.5	0	0	Southern	629.7	630.4	623.9	627.3	629.2	
MW DW6	769.5	0	0	Southern	751.6	752.0	752.5	753.6	754.0	
MW SW4	538.5	0	0	Southern	509.6		514.2	515.5	518.0	
MW SW5	621.5	0	0	Southern	614.2		611.8	607.1	605.8	
Panoche Solar Farm	688.9	0	0	Southern	650.3		653.9		663.8	
Swett 1	663.0	0	0	Southern	629.5		631.6		634.3	
Swett 2	668.6	0	0	Southern	627.9		630.3		631.7	
Swett2 1	710.8	0	0	Southern	652.2		660.2		667.1	
Swett2 2	710.4	0	0	Southern	647.2		655.8		663.1	
San Juan Management Area										
12-4-17L20	140.0	0	0	San Juan	122.1	123.8	125.7	122.6		SJ
12-4-18J1	150.0	0	0	San Juan	122.2		126.1		122.0	SJ
12-4-21M1	170.0	250	0	San Juan	143.3		145.8		141.5	SJ
12-4-34H1	199.0	387	120	San Juan	151.7		158.7		156.1	SJ
12-4-35A1	216.0	325	110	San Juan	172.8		180.0			SJ
12-5-28N1	253.7	408	168	San Juan	221.9		227.3		224.7	SJ
12-5-30H1	250.0	240	0	San Juan	207.1		210.6		207.5	SJ
12-5-31H1	248.0	0	0	San Juan	187.2					SJ
13-4-3H1	207.0	312	168	San Juan	149.0	148.5	168.8	157.2	150.3	SJ
13-4-4A3	210.0	195	48	San Juan	198.3		199.1		194.8	SJ
13-5-6L1	241.5	0	0	San Juan	147.5	144.2	159.2	127.5	114.1	SJ
775 Flint Rd	216.3	0	0	San Juan	179.9					SJ
Alameda 1 (Top Flavor)	228.1	0	0	San Juan	156.7		143.1		128.1	SJ
Alameda 2	208.8	0	0	San Juan	146.4		149.4		157.6	SJ
Barker Farms 1	187.1	0	0	San Juan	123.7		140.8		152.2	SJ
Barker Farms 2	187.7	0	0	San Juan	120.3		139.8		154.3	SJ
Barker Farms 3	185.8	0	0	San Juan	117.1					SJ
Barker Farms 4	181.2	0	0	San Juan	169.7		157.7			SJ
Dobler	238.7	0	0	San Juan	130.0		126.0		132.4	SJ
MW SW3	181.6	0	0	San Juan	167.9		169.1	168.6	168.7	SJ
Bolsa Management Area										
11-4-25H2	148.0	631	216	Bolsa	91.6	113.1	105.6	100.1	96.0	B
11-4-26B1	143.0	642	149	Bolsa	128.7		135.0	137.3	132.8	B
11-4-34A1	142.0	100	0	Bolsa	136.0		135.7	132.8	136.8	B
11-5-20N1	150.0	300	0	Bolsa	71.9		90.1	92.0	86.6	B
11-5-27P2	185.0	331	67	Bolsa	172.5		167.6	166.7	167.6	B
11-5-28B1	168.0	198	125	Bolsa	168.0	168.0	168.0	168.0	168.0	B
11-5-31F1	159.0	515	312	Bolsa	80.6		94.7		88.8	B
12-5-17D1	217.0	950	314	Bolsa	63.5	65.8	76.3	63.2	67.0	B
12-5-5G1	175.0	500	150	Bolsa	107.5		119.6		111.3	B
12-5-5M1	175.0	0	0	Bolsa	57.6		75.5		67.0	B
12-5-6L1	177.0	0	0	Bolsa	150.9	151.2	153.1	150.6	148.2	B
12-5-7P1	204.0	750	360	Bolsa	46.0		57.0		57.0	B
MW DW1	202.5			Bolsa	91.0	92.1	93.0	91.8	90.5	B
MW SW2	176.5			Bolsa	159.1		160.3	158.9	158.4	B

Table C-1. Groundwater Elevations October 2023 through October 2024

Llagas - SCVWD										
11-4-10D4	171.8	0	0	Llagas	145.7	157.9	165.2	139.7	140.3	SCVWD
11-4-17N4	183.6	0	0	Llagas	154.0	164.3	167.2	153.7	153.5	SCVWD
11-4-21P3	156.7	0	0	Llagas	140.9	149.5	148.4		144.4	SCVWD
11-4-22N1	154.1	0	0	Llagas	135.5	146.6	144.4	125.2	134.8	SCVWD
11-4-2D8	232.9	0	0	Llagas	152.2	166.7	161.2	133.9	142.4	SCVWD
11-4-2N1	174.9	0	0	Llagas	146.6	158.4	160.0		141.7	SCVWD
11-4-32R2	144.6	0	0	Llagas	128.9	138.4	137.1	122.1	128.9	SCVWD
11-4-3J2	198.8	0	0	Llagas	149.7	165.1	159.0	127.3	146.4	SCVWD
11-4-8K2	181.8	0	0	Llagas	154.9	163.9	166.3		154.2	SCVWD
Hollister Management Area										
11-5-12E1	277.0	103	52	Hollister			240.1		237.5	PC
11-5-13D1	258.0	125	0	Hollister	231.0	229.9	233.2	229.3	232.8	PC
11-5-24C2	249.0	165	70	Hollister	225.4		228.8		226.0	PC
11-5-24L1	234.0	70	0	Hollister	208.8		212.0		210.0	PC
11-5-25G1	244.3	225	0	Hollister			211.7		209.0	PC
11-5-26N2	198.0	232	95	Hollister	174.3		180.5		171.9	P
11-5-26R3	208.0	225	65	Hollister	181.6		183.9		179.5	P
11-5-35C1	198.0	180	0	Hollister	176.7		178.3		177.2	P
11-5-35G1	206.0	230	0	Hollister	187.4	184.6		182.2	184.2	P
11-5-35Q3	203.0	0	0	Hollister			179.1		172.3	P
11-5-36C1	223.0	98	0	Hollister	196.8		201.7		198.1	P
11-5-36M1	223.0	0	0	Hollister			187.2		183.3	P
11-6-31M2	284.0	188	155	Hollister			253.4		234.5	P
12-5-13H1	250.0	0	0	Hollister	233.2		237.7		231.2	HE
12-5-1G2	215.0	300	0	Hollister	183.4		185.1		184.2	P
12-5-22C1	236.0	237	102	Hollister	176.4		182.4		174.2	HE
12-5-22J2	250.0	355	120	Hollister	197.0		198.4		193.6	HE
12-5-23A20	239.0	862	178	Hollister	184.5		187.0		180.5	HE
12-5-27E1	270.0	175	0	Hollister	199.5		203.7		211.1	HW
12-5-28J1	276.0	220	0	Hollister	217.3		221.8		223.2	HW
12-5-2H5	210.0	128	42	Hollister	190.8		192.0		188.7	P
12-5-2L2	202.0	170	0	Hollister			197.0		197.1	P
12-5-33E2	266.0	121	81	Hollister	223.6		226.2		224.7	HW
12-5-34P1	294.0	195	153	Hollister	226.5	229.0	229.9	229.0	229.2	HW
12-5-36B20	315.0	500	430	Hollister	200.0		197.6		195.8	HE
12-5-3B1	182.0	128	100	Hollister	182.0				182.0	P
12-6-18G1	303.0	198	70	Hollister			268.7		264.9	HE
12-6-30E1	375.0	0	0	Hollister	350.5		348.6		345.0	HE
12-6-6L4	248.0	235	50	Hollister	220.5	221.7	221.2	217.7	219.2	P
12-6-7P1	266.0	147	0	Hollister	246.4		248.4		244.5	HE
13-5-10B1	305.0	0	0	Hollister	221.3		224.8		222.6	HW
13-5-11E1	309.0	0	0	Hollister	281.2		286.0	283.1	284.1	HW
13-5-11Q1	324.0	178	61	Hollister	266.2		279.0		283.5	TP
13-5-12D3	360.0	0	0	Hollister						TPCV
13-5-12D3	360.0	500	200	Hollister			303.0		286.0	TP
13-5-12D4	360.0	0	0	Hollister			256.0		193.0	TP
13-5-12K1	440.0	0	0	Hollister			326.0		322.0	TP
13-5-12N20	332.0	352	301	Hollister			320.8		317.2	TP
13-5-13F1	348.0	134	30	Hollister	330.5		331.5	327.6	329.5	TP
13-5-13H1	400.0	252	112	Hollister	341.5		345.6		341.4	TP
13-5-13J2	375.0	180	0	Hollister	340.2		347.9		342.5	TP
13-5-13Q1	360.0	185	44	Hollister	334.1		336.5		332.6	TP
13-5-3L1	303.0	126	0	Hollister	233.0		236.0		235.0	HW
13-5-4B	285.0	0	0	Hollister					236.4	HW
13-5-4P1	318.0	0	0	Hollister	277.0		277.9		276.3	HW
13-5-5F0	320.0	0	0	Hollister	289.4		291.4		216.3	TPCV
13-5-5J0	338.0	0	0	Hollister	240.1		238.3		307.5	HW
13-6-19L0	460.0	0	0	Hollister	309.9		312.7		307.4	TPCV
13-6-19L1	460.0	0	0	Hollister	324.5		326.5		322.2	TPCV
13-6-20K1	440.0	0	0	Hollister	411.8		418.6		418.0	TP
13-6-7D2	500.0	0	0	Hollister	338.1		338.9		337.0	HE
Alameda 3	269.7	0	0	Hollister	149.8		156.2		162.7	
Cienega 1	320.1	0	0	Hollister	292.5		292.8		297.4	
MW DW3	270.3	0	0	Hollister	175.7	176.0	176.2	179.5	181.5	
MW DW4	294.0	0	0	Hollister	235.2	235.6	243.7	237.3	235.7	
MW SW6	318.4	0	0	Hollister	308.0		307.5	306.2	309.3	
San Benito Foods #2	295.7	0	0	Hollister	239.7		240.9		247.9	



March 2025

TODD GROUNDWATER

Appendix C-1
Groundwater Basins in San Benito County

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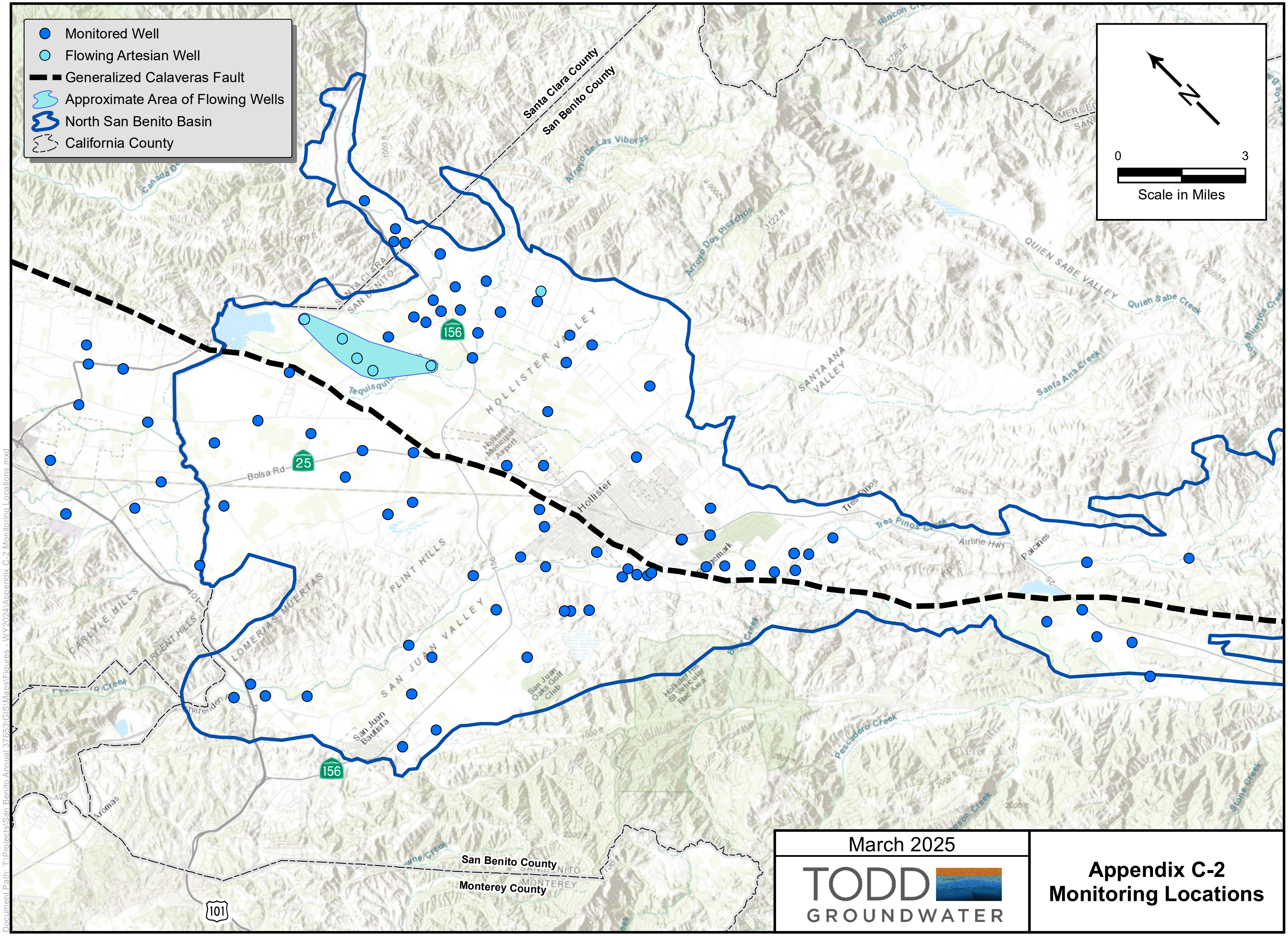

March 2025

TODD GROUNDWATER

Appendix C-2
Monitoring Locations

APPENDIX D PERCOLATION DATA

List of Tables and Figures

Table D-1. Reservoir Water Budgets for Water Year 2024 (acre-feet)

	Hernandez	Paicines	San Justo	
Observed Storage				
Starting Storage (Oct 2023)	3,107	2,055	6,191	
Ending Storage (Sept 2024)	496	630	5,059	
Inflows				
Rainfall	274	176	242	
San Benito River	28,204	2,016	n.a.	
Hernandez-Paicines transfer	n.a.	2,385	n.a.	
San Felipe Project*	n.a.	n.a.	15,679	*
Total Inflows	**28,478**	**4,578**	**15,921**	
Outflows				
Hernandez spills	0	n.a.	n.a.	
Hernandez-Paicines transfer	323	n.a.	n.a.	
Tres Pinos Creek percolation releases	n.a.	3,012	n.a.	
San Benito River percolation releases	32,540	0	n.a.	
CVP Deliveries*	n.a.	n.a.	14,833	*
Evaporation and seepage (less interceptor wells)	685	2,415	1,413	
Total Outflows	**33,547**	**5,427**	**16,247**	
Change in Storage				
Observed storage change (Ending - Starting)	**-2,611**	**-1,425**	**-1,132**	
Calculated net storage change (Inflow - Outflows)	**-5,069**	**-849**	**-325**	
Unaccounted for Water (Observed - Calculated)**	**2,458**	**-576**	**-807**	
Reservoir Information				
Reservoir capacity	17,200	2,870	11,000	
Maximum storage	12,572	2,580	10,308	
Minimum storage	558	250	4,573	

* Reflects imported water for beneficial use, not all stored in reservoir

** Negative value is water shortage, positive value is water surplus

Table D-2. Historical Reservoir Releases (AFY)

WY	Hernandez	Paicines	TOTAL
1996	13,535	6,139	19,674
1997	3,573	2,269	5,842
1998	26,302	450	26,752
1999	12,084	1,293	13,377
2000	13,246	2,326	15,572
2001	12,919	3,583	16,502
2002	9,698	310	10,008
2003	5,434	0	5,434
2004	3,336	0	3,336
2005	19,914	677	20,591
2006	14,112	196	14,308
2007	12,022	1,254	13,276
2008	7,646	495	8,141
2009	4,883	0	4,883
2010	8,484	4,147	12,631
2011	9,757	2,397	12,154
2012	6,341	1,321	7,662
2013	3,963	677	4,640
2014	0	0	0
2015	0	0	0
2016	0	0	0
2017	23,191	2,407	25,597
2018	6,054	384	6,438
2019	15,924	2,045	17,969
2020	9,473	2,037	11,510
2021	7,480	504	7,984
2022	3,279	210	3,489
2023	17,451	2,199	19,650
2024*	32,450	3,012	35,462
AVG	**10,433**	**1,391**	**11,824**

*Releases were not optimized to recharge the aquifer as the valve was broken. Some recharge may have left the basin

Todd Groundwater 3/9/2025

Table D-3. Historical Percolation of CVP Water (AFY)

Water Year[1]	Pacheco Creek	Arroyo de las Viboras			Arroyo Dos Picachos			Santa Ana Creek				Tres Pinos Creek (and Pond)	San Benito River		Total
		Road	Creek 1 (Frog Ponds)	Creek 2	Fallon Road	Jarvis Lane	Creek	John Smith Road	Maranatha Road	Airline Highway	Ridgemark		Union Road Pond	Hollister Ponds	
1994	232	136	515	0	0	550	209	0	0	0	0	85	158	0	1,885
1995	444	238	770	2	0	654	622	73	0	0	0	809	2,734	0	6,345
1996	0	494	989	832	67	235	708	531	197	134	25	21	6,097	0	10,330
1997	0	447	601	1,981	77	0	200	17	353	286	29	1,477	5,619	0	11,087
1998	0	132	109	403	0	0	0	65	0	158	74	518	1,084	0	2,543
1999	0	0	0	0	0	0	4	256	48	141	10	452	413	0	1,322
2000	1	0	0	6	0	0	3	236	21	240	12	285	938	0	1,740
2001	0	0	0	0	0	0	0	161	17	186	1	703	1,041	0	2,110
2002	0	0	0	2	0	0	1	78	2	143	0	426	470	0	1,122
2003	0	0	0	0	0	0	5	119	9	172	0	163	605	0	1,074
2004	0	0	0	0	0	0	52	83	0	0	0	1	882	0	1,018
2005	0	0	0	0	0	0	0	0	0	0	0	0	527	0	527
2006	0	0	0	0	0	0	7	156	0	0	0	1	451	0	614
2007	0	0	0	0	0	0	0	0	0	0	0	88	216	0	304
2008	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6
2009	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2014	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2017	0	0	340	0	0	0	0	0	0	0	0	0	2,209	0	2,549
2018	0	0	199	0	0	0	0	0	0	0	0	867	1,899	0	2,965
2019	0	0	335	0	0	0	0	0	0	0	0	1,775	2,932	0	5,043
2020	0	0	134	0	0	0	0	0	0	0	0	780	1,499	747	3,161
2021	0	0	2	0	0	0	0	0	0	0	0	2	3	20	28
2022	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
2023	0	0	536	0	0	0	0	0	0	40	1	1,060	328	0	1,966
2024	0	0	41	1	0	0	0	0	0	0	0	91	5	0	137

1. 2017-2022 percolation occurred only to recharge basins adjacent to the listed streams.

Table D-4. Percolation of Municipal Wastewater during Water Year 2024

	Pond Area[1] (acres)	Effluent Discharge (acre-feet)	Evaporation[2] (acre-feet)	Percolation (acre-feet)
Hollister - domestic	93	2,975	266	2,709
Hollister - industrial	39	0	0	0
Ridgemark Estates I & II	7	183	21	163
Tres Pinos	2	21	5	16
Total	141	3,180	292	2,888

Notes:

1. Hollister pond areas are from Dickson and Kenneth D. Schmidt and Associates (1999) and include treatment ponds in addition to percolation ponds at the domestic wastewater treatment plant. Assumes 80% of total pond area in use at any time (Rose, pers. comm.). These areas should be updated as operations change.

2. Average evaporation less precip = 43 inches (56 in/yr evaporation (DWR Bulletin 73-79) less 13 in/yr precip (CIMIS) The IWTP evaporation was adjusted to account only for when the ponds are in use.

The San Juan Bautista plant is not included because the unnamed tributary of San Juan Creek that receives its effluent usually gains flow along the affected reach and is on the southwest side of the San Andreas Fault. These conditions prevent the effluent from recharging the basin.

Table D-5. Historical Percolation of Municipal Wastewater (AFY)

	Hollister Reclamation Plant - Domestic	Hollister - industrial wastewater and stormwater	Ridgemark Estates I & II	Tres Pinos	TOTAL
1994	1,775	665	155	5	2,600
1995	1,935	610	180	10	2,735
1996	2,020	689	207	14	2,930
1997	1,965	909	201	17	3,092
1998	2,490	518	231	17	3,256
1999	1,693	1,476	156	12	3,337
2000	2,110	1,136	293	24	3,563
2001	1,742	1,078	303	24	3,147
2002	1,884	1,545	283	24	3,736
2003	2,009	1,432	279	24	3,744
2004	1,787	1,536	268	21	3,612
2005	1,891	1,323	227	26	3,468
2006	1,797	1,211	216	33	3,257
2007	1,740	1,228	139	19	3,126
2008	1,580	1,257	139	19	2,996
2009	1,976	428	172	19	2,594
2010	1,922	37	172	19	2,150
2011	1,807	466	183	19	2,476
2012	1,740	605	177	19	2,541
2013*	889	332	188	21	1,430
2014	1,552	86	179	21	1,838
2015	1,816	344	161	21	2,342
2016	1,923	305	154	21	2,402
2017	1,945	57	154	20	2,177
2018	1,365	57	150	15	1,587
2019	1,822	0	149	16	1,986
2020	2,392	0	155	6	2,553
2021	2,405	0	161	16	2,582
2022	2,618	0	155	16	2,788
2023	2,699	0	156	16	2,872
2024	2,709	0	183	16	2,908

*Potential missing data

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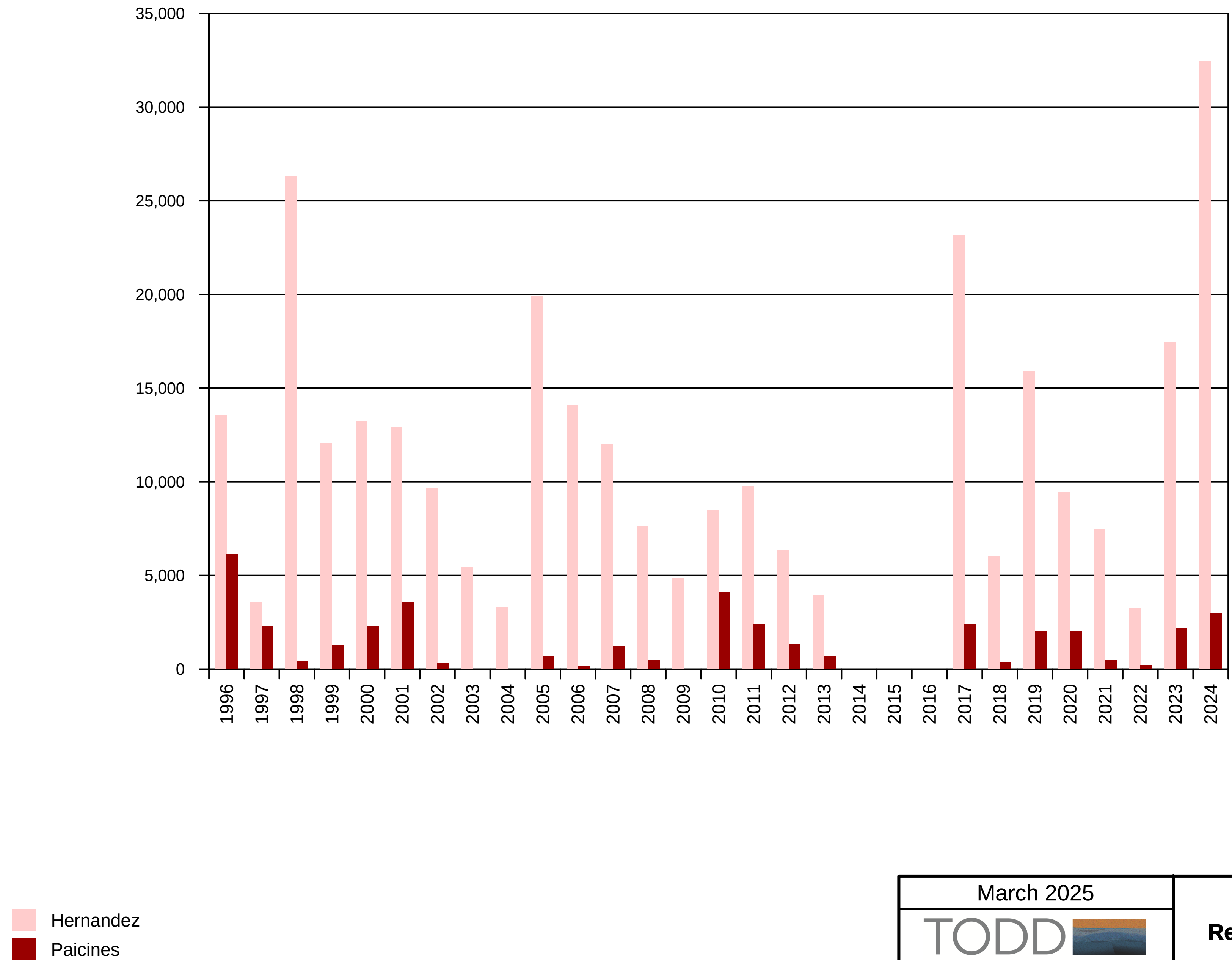

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Appendix D-1
Reservoir Releases for Percolation

APPENDIX E WATER USE DATA

List of Tables and Figures

Table E-1. Recent CVP Allocation and Use

Water Year	Municipal and Industrial (M&I) CVP				Agricultural CVP			
	Percent of Contract Allocation[1] (USBR Water Year Mar-Feb)	Percent of Historic Average[2] (USBR Water Year Mar-Feb)	Contract Amount Used (AF) (Hydrologic Water Year Oct-Sep)	Contract Amount Used (%) (Hydrologic Water Year Oct-Sep)	Percent of Contract Allocation[3] (USBR Water Year Mar-Feb)	Percent of Contract and M&I Adjustment[2] (USBR Water Year Mar-Feb)	Contract Amount Used (AF)[4] (Hydrologic Water Year Oct-Sep)	Contract Amount Used (%) (Hydrologic Water Year Oct-Sep)
2006	100%		3,152	38%	100%		19,840	56%
2007	100%		4,969	60%	40%		18,865	53%
2008	37%	75%	2,232	27%	40%	45%	10,514	30%
2009	29%	60%	1,978	24%	10%	11%	6,439	18%
2010	37%	75%	2,197	27%	45%	50%	10,061	28%
2011	100%		2,433	29%	80%		16,234	46%
2012	51%	75%	2,683	33%	40%	40%	17,267	49%
2013	47%	70%	2,652	32%	20%	22%	12,914	36%
2014	34%	50%	1,599	29%	0%	0%	7,545	21%
2015	25%		1,810	22%	0%		3,697	10%
2016	55%		1,914	23%	5%		4,434	12%
2017	100%		2,909	35%	100%		15,837	45%
2018	75%		5,679	69%	50%		17,418	49%
2019	100%		4,457	54%	75%		16,774	47%
2020	65%		4,953	60%	15%		15,327	43%
2021	65%		3,341	40%	0%		6,108	17%
2022[5]	33%		2,786	34%	0%		1,098	3%
2023	100%		2,616	32%	100%		8,441	24%
2024	75%		4,984	60%	50%		12,066	34%
Average (14-23)	**69%**				**40%**			

Notes: 1 Total contract (100% allocation) M&I 8,250 AFY
2 Shortage Policy Adjustments
3 Total contract (100% allocation) Ag 35,550 AFY
4 Includes water percolated
5 Public Health Safety volumes

Table E-2. Historical CVP and RW Use by MA in Zone 6 (AFY)

MA:	San Juan MA	Hollister MA		Total Zone 6	
Source:	CVP	CVP	RW	CVP	RW
1993	4,300	11,333	0	15,633	0
1994	3,836	11,155	0	14,990	0
1995	4,554	11,576	0	16,130	0
1996	5,187	13,636	0	18,823	0
1997	6,191	14,858	0	21,048	0
1998	4,099	8,697	0	12,796	0
1999	5,990	12,048	0	18,038	0
2000	6,372	12,301	0	18,673	0
2001	7,232	12,170	0	19,402	0
2002	7,242	13,169	0	20,411	0
2003	7,127	14,607	0	21,734	0
2004	7,357	16,653	0	24,010	0
2005	6,245	14,139	0	20,384	0
2006	7,200	15,792	0	22,992	0
2007	6,160	15,955	0	22,115	0
2008	3,160	9,586	0	12,745	0
2009	1,605	6,599	0	8,204	0
2010	3,452	8,532	151	11,984	151
2011	5,623	13,045	183	18,667	183
2012	5,976	13,973	230	19,949	230
2013	4,134	11,431	357	15,566	357
2014	1,984	7,160	262	9,144	262
2015	975	4,532	101	5,507	101
2016	819	5,528	499	6,347	499
2017	5,853	10,344	366	16,197	366
2018	6,383	13,748	471	20,131	471
2019	3,990	12,198	569	16,188	569
2020	4,618	12,501	526	17,119	526
2021	1,587	7,859	472	9,446	472
2022	2,779	1,102	611	3,882	611
2023	3,897	7,158	484	11,054	484
2024	6,485	8,599	341	15,084	341
AVG 93-24	4,763	11,000	176	15,762	176

* No Recycled Water is used in San Juan MA

Table E-3. Municipal Water Use by Major Purveyor for Water Year 2024 (AF)

	WY 2024	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Groundwater													
Sunnyslope CWD	**915**	59	60	45	44	35	10	10	41	47	162	157	245
City of Hollister	**769**	32	8	13	57	24	25	38	66	94	150	129	134
City of Hollister - Cienega Wells	**75**	8	6	8	5	0	8	8	8	8	6	5	6
San Juan Bautista	**288**	26	22	20	20	16	18	19	25	29	33	32	27
Tres Pinos CWD	**30**	3	2	2	2	2	2	2	3	3	3	1	4
Groundwater Subtotal	**2,078**	**129**	**98**	**89**	**127**	**77**	**64**	**77**	**143**	**182**	**353**	**324**	**415**
CVP Imported Water													
Lessalt Treatment Plant	**1,907**	223	208	155	140	113	93	125	138	152	178	215	167
West Hills Treatment Plant	**2,868**	344	246	205	184	118	201	235	256	295	250	306	228
Imported Water Subtotal	**4,775**	**567**	**454**	**361**	**324**	**231**	**294**	**360**	**394**	**447**	**428**	**521**	**396**
Municipal Total													
TOTAL Municipal Water Supply	**6,853**	**695**	**552**	**450**	**451**	**308**	**358**	**437**	**537**	**629**	**782**	**845**	**810**

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Table E-4. Historical Municipal Water Use by Major Purveyor (AFY)

WY	Sunnyslope CWD - GW	City of Hollister - GW	City of Hollister - Cienega Wells[1]	San Juan Bautista	Tres Pinos CWD	Lessalt Treatment Plant	West Hills Treatment Plant	Undivided Total	TOTAL
1988						0	0	5,152	5,152
1989						0	0	6,047	6,047
1990						0	0	5,725	5,725
1991						0	0	7,631	7,631
1992						0	0	6,912	6,912
1993						0	0	5,066	5,066
1994						0	0	7,186	7,186
1995	2,167	2,446				0	0		4,613
1996	2,139	3,386				0	0		5,525
1997	2,638	3,848				0	0		6,486
1998	2,357	3,441				0	0		5,798
1999	2,820	3,558				0	0		6,378
2000	3,214	4,021				0	0		7,235
2001	3,290	3,851				0	0		7,141
2002	3,256	4,120				21	0		7,398
2003	2,053	2,754				2,494	0		7,302
2004	2,426	2,828				2,101	0		7,356
2005	1,959	3,147	123	247	49	1,843	0		7,368
2006	1,907	2,801	123	150	49	1,900	0		6,930
2007	2,413	2,758	123	47	49	1,719	0		7,108
2008	2,294	2,746	123	417	47	1,323	0		6,949
2009	2,251	2,503	123	373	47	1,212	0		6,509
2010	1,861	2,194	108	308	47	1,344	0		5,861
2011	2,225	1,651	80	292	47	1,593	0		5,887
2012	2,360	1,761	130	267	45	1,657	0		6,219
2013	1,655	2,655	120	281	46	1,648	0		6,405
2014	2,134	2,646	114	285	49	979	0		6,207
2015	1,348	1,960	114	225	49	1,364	0		5,060
2016	1,331	1,615	105	232	49	1,682	0		5,014
2017	1,449	1,543	79	249	32	1,940	51		5,344
2018	978	1,217	121	184	34	1,596	1,990		6,119
2019	565	588	283	257	33	1,660	2,524		5,912
2020	694	707	95	224	35	1,503	1,990		5,248
2021	1,576	1,517	101	224	35	931	1,314		5,698
2022	1,839	1,449	97	229	34	258	2,488		6,394
2023	1,478	1,684	90	276	159	814	1,489		5,990
2024	915	769	75	288	30	1,907	2,868		6,853

1. Data from Hollister Cienega Wells for 2005-2008 was estimated to be the same as WY 2009
Cells with no data indicate that the information is unavailable, while years with no use are shown explicitly as 0's.

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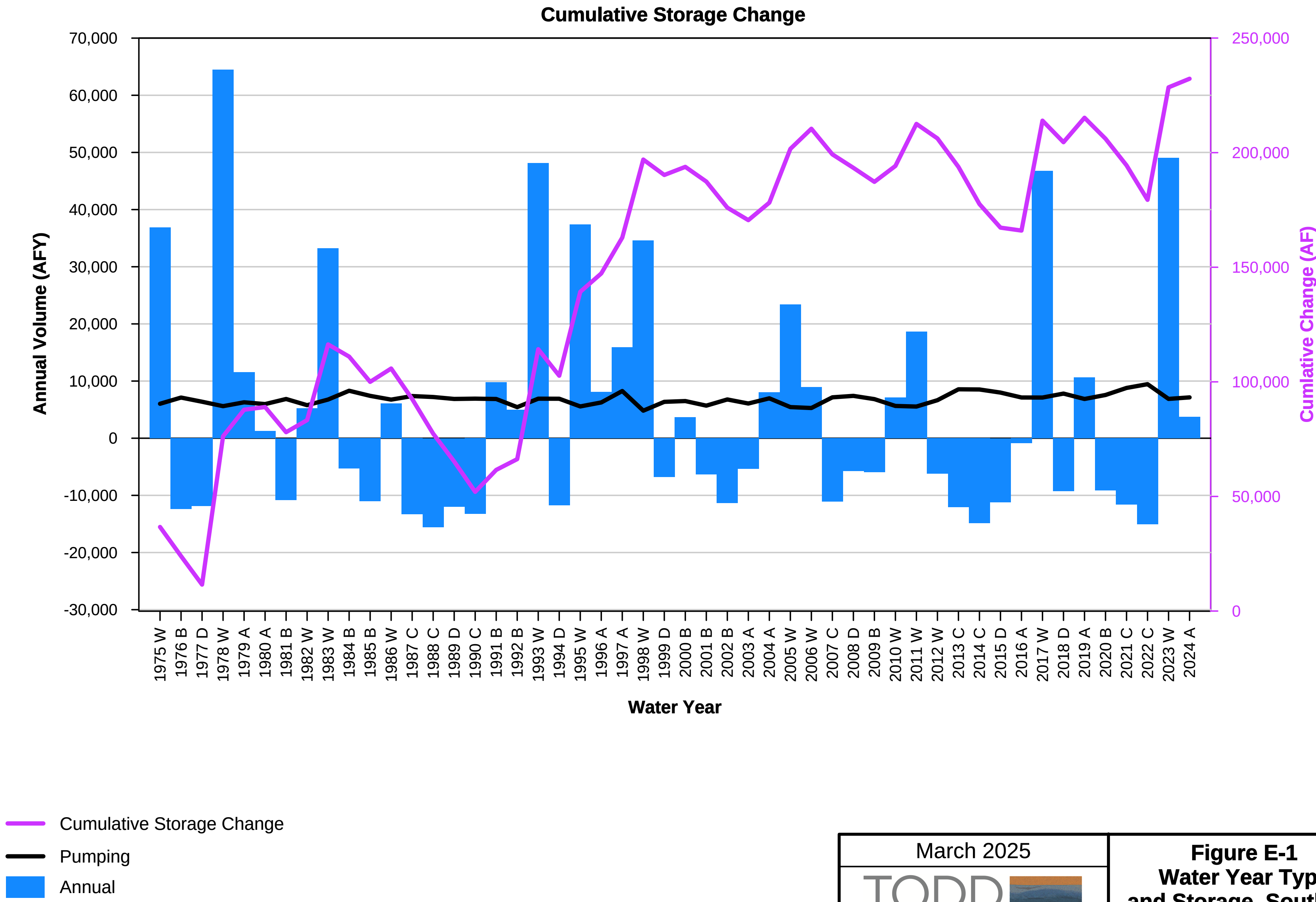

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Figure E-1
Water Year Type and Storage, Southern Management Area

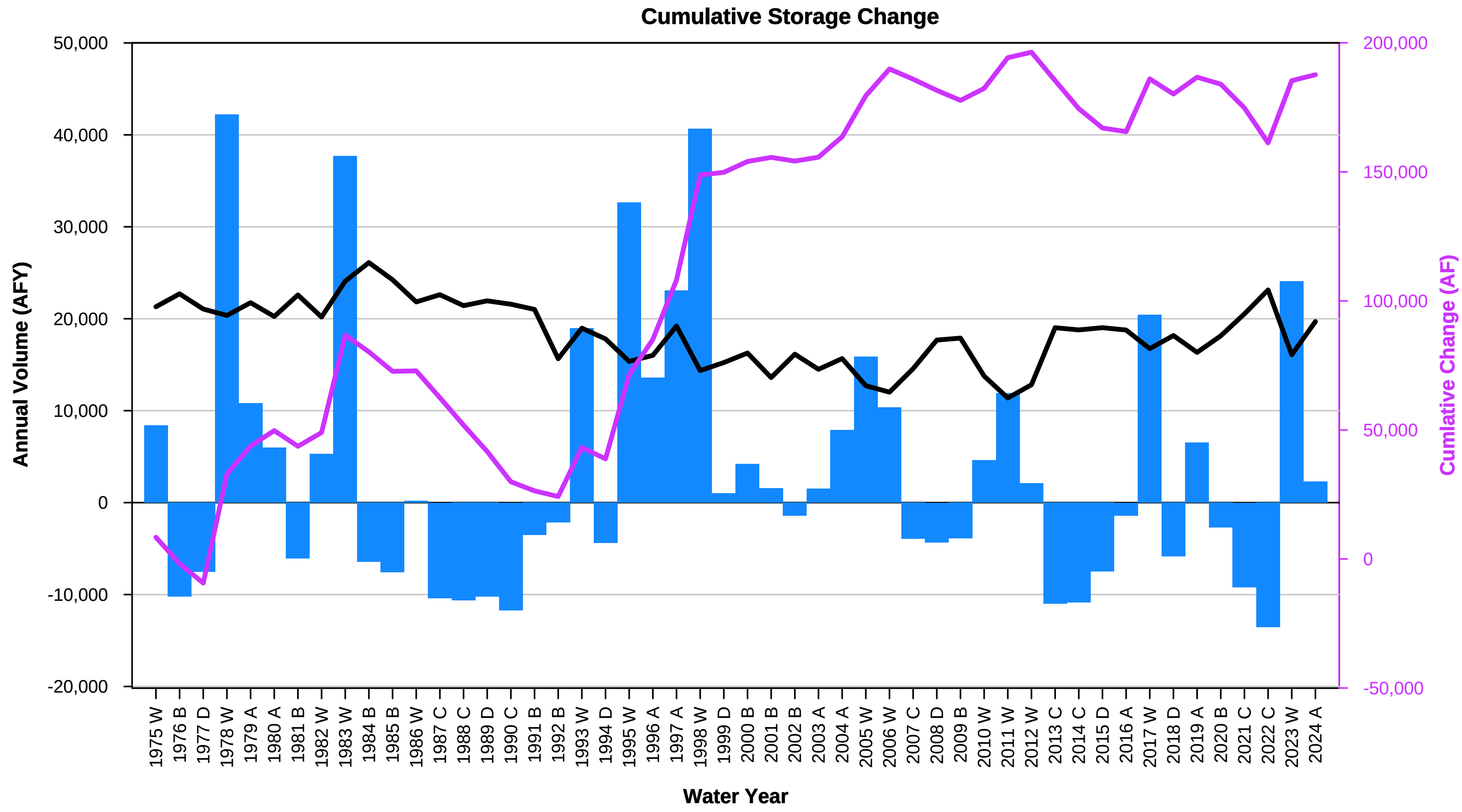

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Figure E-2
Water Year Type and Storage, San Juan Management Area

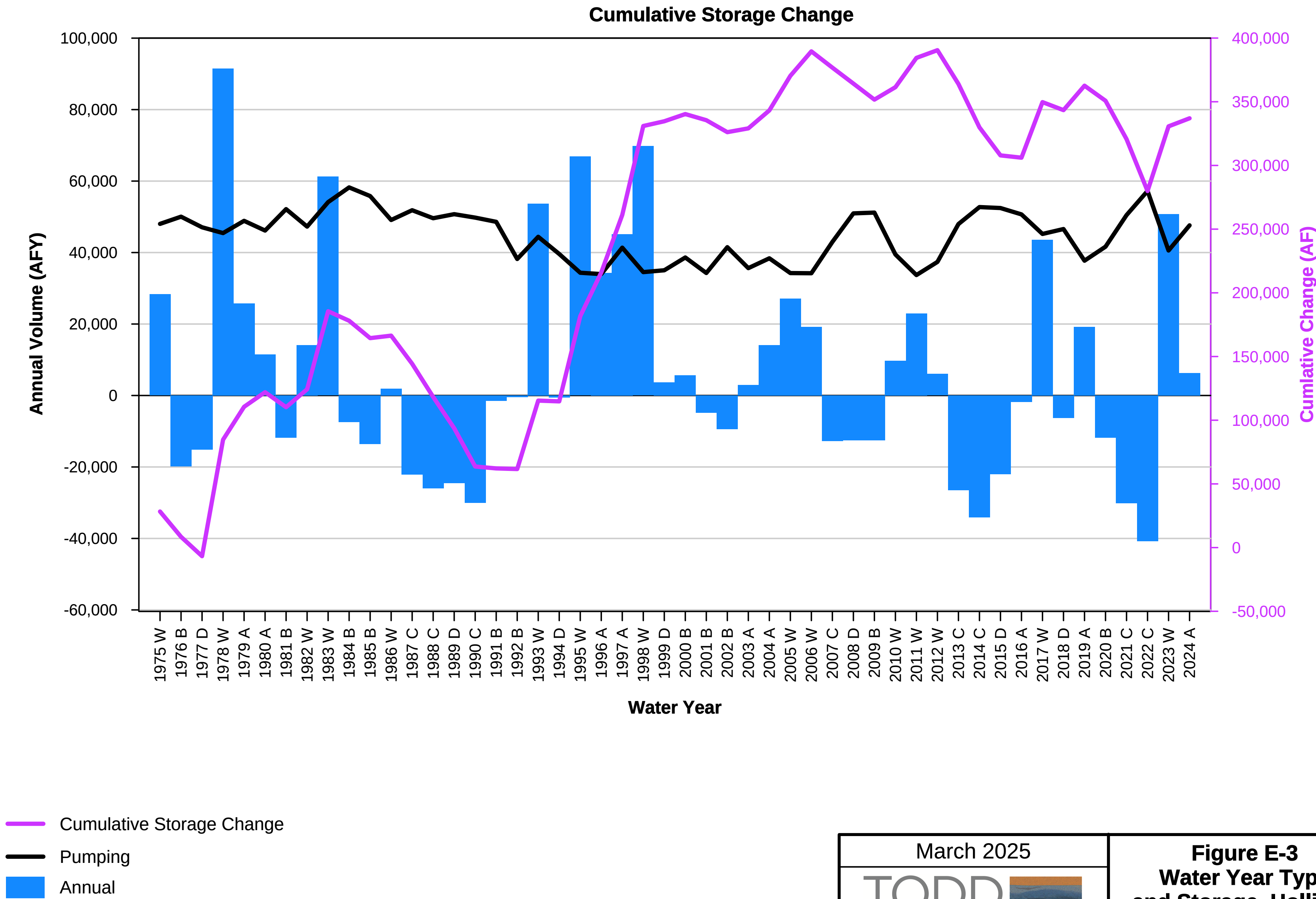

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Figure E-3
Water Year Type and Storage, Hollister Management Area

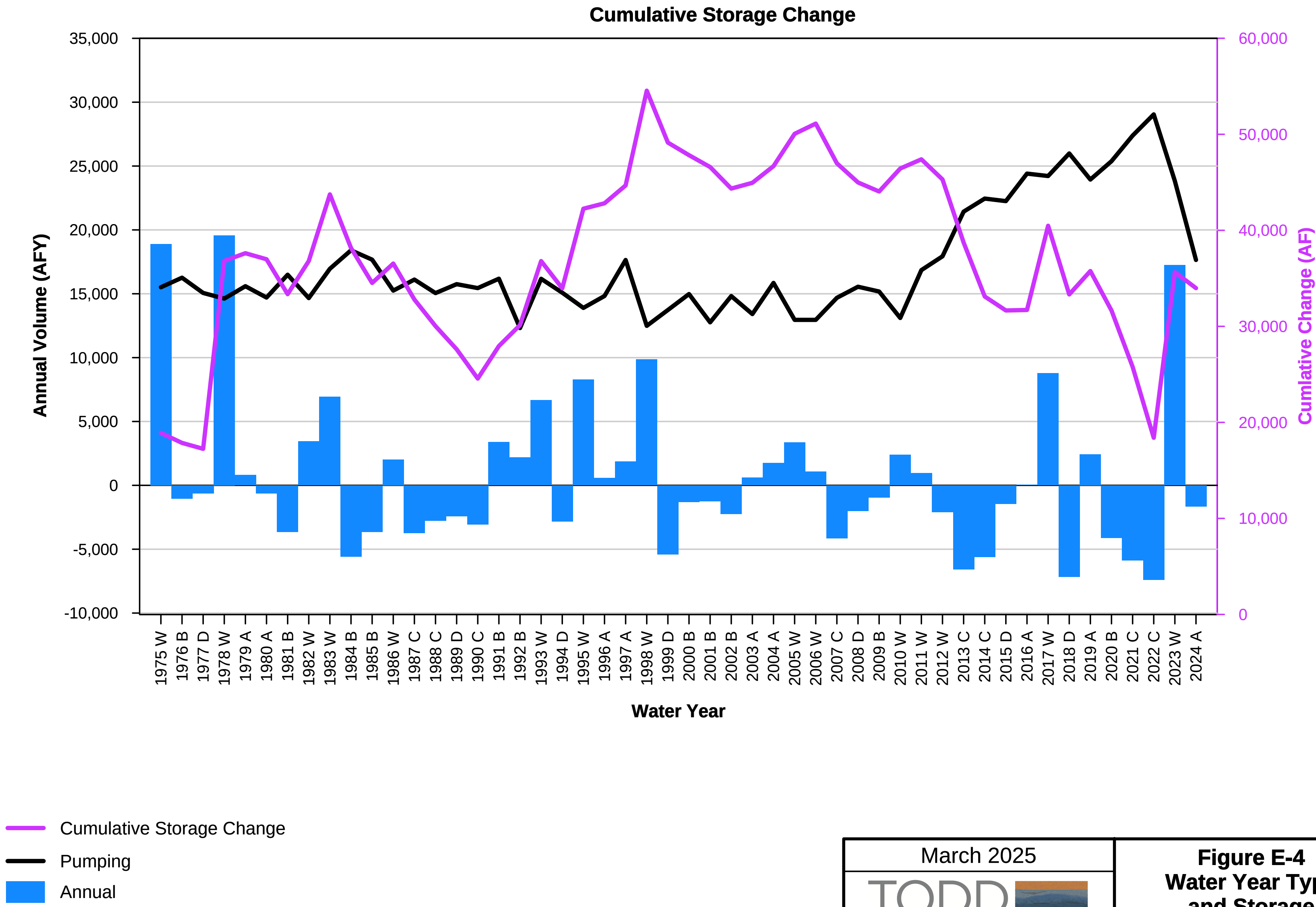

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Figure E-4
Water Year Type and Storage
Bolsa Management Area

APPENDIX F RATES AND CHARGES

List of Tables and Figures

Table F-1. Historical and Current San Benito County Water District CVP (Blue Valve) Water Rates (dollars/af)

USBR Water Year	Standby & Availability Charge (dollars/acre)	Water Charge			Power Charge					Groundwater Charge (dollars/af)			Recycled Water (per AF)	
		Agricultural	Municipal & Industrial		Distribution Subsystem					Agricultural	Municipal & Industrial		Agricultural	Power Charge
			Small Parcel & Contract	Wholesale	2	6H	9L	9H	Others					
1987	$8.00	$34.00	n.c.							n.i.	n.i.			
1988	$2.00	$34.00	n.c.							n.i.	n.i.			
1991	$4.00	$38.00	$110.00							$6.25	$22.00			
1992	$4.00	$45.00	$120.00							$2.00	$10.00			
1994	$4.50	$77.61	$168.92							$1.00	$5.00			
1995	$4.50	$77.61	$168.92							$1.00	$15.75	First 100 af		
											$36.70	Next 500 af		
											$54.60	Over 600 af		
1996	$6.00	$75.00	$150.00							$1.50	$33.00			
1997	$6.00	$75.00	$157.00							$1.50	$33.00			
1998	$6.00	$75.00	$155.00							$1.50	$33.00			
2000	$6.00	$75.00	$155.00							$1.50	$11.50			
2001	$6.00	$75.00	$155.00							$1.50	$25.00			
2004	$6.00	$75.00	$150.00	$150.00	$24.30	$46.75	$25.05	$53.70	$15.25	$1.50	$10.00			
2005	$6.00	$80.00	$150.00	$150.00	$26.15	$49.40	$35.00	$66.90	$17.10	$1.50	$21.50			
2006	$6.00	$85.00	$160.00	$160.00	$23.60	$36.05	$34.70	$65.75	$18.40	$1.50	$21.50			
2007	$6.00	$85.00	$160.00	$160.00	$23.60	$36.05	$34.70	$65.75	$18.40	$1.50	$21.50			
2008	$6.00	$100.00	$170.00	$170.00	$17.25	$19.40	$32.60	$62.75	$14.85	$1.50	$21.50			
2009	$6.00	$115.00	$180.00	$180.00	$17.50	$20.25	$42.55	$74.85	$16.30	$2.50	$22.50			
2010	$6.00	$135.00	$200.00	$200.00	$22.00	$27.30	$49.75	$84.35	$21.75	$2.50	$22.50			
2011	$6.00	$155.00	$220.00	$220.00	$22.70	$28.15	$51.25	$86.90	$22.40	$2.50	$22.50			
2012	$6.00	$170.00	$235.00	$235.00	$23.35	$29.00	$52.80	$89.50	$23.10	$2.50	$22.50			
2013	$6.00	$170.00	$235.00	$235.00	$40.30	$29.25	$43.05	$91.55	$22.40	$3.25	$23.25			
2014	$6.00	$170.00	$238.00	$238.00	$41.55	$30.15	$44.35	$94.30	$23.10	$3.60	$23.25			
2015	$6.00	$179.00	$247.00	$247.00	$42.75	$31.05	$45.70	$97.15	$23.80	$3.95	$23.25			
2016	$6.00	$272.00	$363.00	$363.00	$123.10	$75.65	$109.95	$162.55	$66.05	$4.95	$24.25		$182.55	$57.70
2017	$6.00	$191.00	$363.00	$363.00	$126.80	$77.90	$113.25	$167.45	$68.05	$6.45	$24.25		$183.45	$59.45
2018	$6.00	$209.00	$363.00	$363.00	$130.60	$80.25	$116.25	$172.45	$70.10	$7.95	$24.25		$183.45	$59.45
2019	$6.00	$254.00	$404.00	$404.00	$80.45	$39.30	$88.15	$130.30	$33.70	$12.75	$38.25		$183.45	$59.45
2020	$6.00	$265.00	$415.00	$415.00	$82.85	$40.45	$90.80	$134.10	$34.75	$13.15	$39.40		$208.00	$60.64
2021	$6.00	$274.00	$424.00	$424.00	$85.35	$41.50	$93.55	$138.25	$35.75	$13.55	$40.55		$210.00	$61.85
2022	$6.00	$274.00	$424.00	$647.00	$85.35	$41.50	$93.55	$138.25	$35.75	$13.55	$40.55		$211.00	$63.09
2023	$6.00	$294.68	$653.70	$653.70	$40.22	$40.22	$94.01	$94.01	$40.22	$13.75	$13.75		$294.70	$101.10
2024	$6.00	$300.58	$640.07	$640.07	$41.64	$41.64	$97.31	$97.31	$41.64	$14.03	$14.03		$300.59	$104.65
2025	$6.00	$306.59	$623.53	$623.53	$43.10	$43.10	$100.73	$100.73	$43.10	$14.31	$14.31		$306.61	$108.32

Notes:
af = acre-feet.
n.c. = no classification.
n.i. = not implemented
All rates effective March 1 through following February.

Table F-2. Recent US Bureau of Reclamation Charges per Acre-Foot for CVP Water

User Category and Cost Item	Irrigation[1]						Municipal & Industrial					
	Cost of service (non-full cost)	Restoration fund[3]	SLDMWA[4]	Trinity PUD Assessment	Total	Contract rate[5]	Cost of service[2] (non-full cost)	Restoration fund[3]	SLDMWA[4]	Trinity PUD Assessment	Total	Contract rate[5]
1994	$71.68	$6.20	n.a.		$77.88	$17.21	$165.67	$12.40	n.a.		$178.07	$85.86
1995	$66.47	$6.35	n.a.		$72.82	$17.21	$132.90	$12.69	n.a.		$145.59	$85.86
1996	$65.63	$6.53	n.a.		$72.16	$27.46	$127.40	$13.06	n.a.		$140.46	$85.86
1997	$69.57	$6.70	n.a.		$76.27	$27.46	$143.27	$13.39	n.a.		$156.66	$85.86
1998	$61.58	$6.88	$5.00		$73.46	$27.46	$130.88	$13.76	$5.00		$149.64	$85.86
1999	$60.30	$6.98	$2.73		$70.01	$27.46	$127.91	$13.96	$2.73		$144.60	$85.86
2000	$64.24	$7.10	$6.43		$77.77	$27.46	$129.59	$14.20	$6.43		$150.22	$85.86
2001	$69.50	$7.28	$2.65		$79.43	$27.46	$129.40	$14.56	$4.15		$148.11	$85.86
2002	$68.71	$7.54	$6.61		$82.86	$24.30	$130.32	$15.08	$6.61		$152.01	$79.13
2003	$72.20	$7.69	$5.46		$85.35	$24.30	$129.07	$15.38	$5.46		$149.91	$79.13
2004	$74.52	$7.82	$6.61		$88.95	$24.30	$134.86	$15.64	$6.61		$157.11	$79.13
2005	$77.10	$7.93	$7.99		$93.02	$24.30	$132.01	$15.87	$7.99		$155.87	$79.13
2006	$91.13	$8.24	$9.31		$108.68	$30.93	$214.41	$16.49	$9.31		$240.21	$77.12
2007	$93.53	$8.58	$9.99	$0.11	$112.21	$30.93	$215.32	$17.15	$9.99	$0.11	$242.46	$80.08
2008[6]	$28.12	$8.79	$10.95	$0.07	$47.93	$30.93	$33.34	$17.57	$10.95	$0.07	$61.68	$33.34
2009	$30.20	$9.06	$11.49	$0.07	$50.82	$30.20	$32.77	$18.12	$11.49	$0.07	$62.45	$32.77
2010	$33.27	$9.11	$11.91	$0.11	$54.40	$33.27	$36.11	$18.23	$11.91	$0.11	$66.36	$36.11
2011	$38.92	$9.29	$9.51	$0.05	$57.77	$38.92	$42.58	$18.59	$9.51	$0.05	$70.73	$42.58
2012	$39.71	$9.39	$15.20	$0.05	$64.35	$39.71	$37.95	$18.78	$15.20	$0.05	$71.98	$37.95
2013	$40.39	$9.79	$17.29	$0.05	$67.52	$39.91	$38.71	$19.58	$17.29	$0.05	$75.63	$40.92
2014	$46.87	$9.99	$28.81	$0.23	$85.90	$46.87	$29.70	$19.98	$28.81	$0.23	$78.72	$29.70
2015	$53.82	$10.07	$30.66	$0.23	$94.78	$53.82	$34.74	$20.14	$30.66	$0.23	$85.77	$34.74
2016	$85.12	$10.21	$30.66	$0.30	$126.29	$38.28	$61.24	$20.41	$30.66	$0.30	$112.61	$23.42
2017	$66.17	$10.23	$14.15	$0.30	$90.85	$39.90	$49.50	$20.45	$14.15	$0.30	$84.40	$22.85
2018	$79.09	$10.47	$20.39	$0.30	$110.25	$48.35	$43.74	$20.94	$20.39	$0.30	$85.37	$17.45
2019	$67.32	$10.63	$20.26	$0.30	$98.51	$40.14	$37.54	$21.26	$20.26	$0.30	$79.36	$17.98
2020	$72.24	$10.91	$27.57	$0.12	$110.84	$52.76	$37.18	$21.82	$27.57	$0.12	$86.69	$17.87
2021	$72.61	$11.11	$38.52	$0.15	$122.39	$48.42	$35.47	$22.23	$38.52	$0.15	$96.37	$35.47
2022	$46.07	$11.23	$39.19	$0.15	$96.64	$28.46	$45.07	$22.46	$39.19	$0.15	$106.87	$27.50
2023	$66.96	$12.02	$14.46	$0.15	$93.59	$33.97	$63.15	$24.05	$14.46	$0.15	$101.81	$25.52
2024	$44.47	$13.00	$23.92	$0.00	$81.39	$22.15	$46.97	$25.99	$23.92	$0.00	$96.88	$25.04
2025	$37.98	$13.33	$29.85	$0.00	$81.16	$18.42	$41.25	$26.67	$29.85	$0.00	$97.77	$24.91

Notes:

(1) Total USBR rate given for non-full cost users only, as they represent the majority of water users.

(2) Cost-of-service for agricultural and municipal and industrial users includes a capital repayment rate and an operation and maintenance (O&M) rate. For municipal and industrial customers, cost-of-service also includes a deficit charge, which includes interest on unpaid O&M and interest on capital and on unpaid deficit.

(3) Restoration fund charges apply October 1 through September 30. All other rates effective March 1 through following February.

(4) Beginning in 1998, the San Luis-Delta Mendota Water Authority instituted this charge to "self-fund" costs associated with maintaining the Delta-Mendota Canal and certain other facilities, which were formerly funded directly by the Bureau of Reclamation. SLDMWA issues preliminary rates in December for the upcoming contract year (March-February). These rates are used for rate-setting purposes; actual rates may vary.

(5) The contract rate is the minimum rate CVP contractors are allowed to pay. To the extent that the contract rate does not cover interest plus actual operation and maintenance costs, a contractor deficit is accumulated that is charged interest at the current-year treasury borrowing rate.

(6) Per the amendatory contract with the USBR "out of basin" capital costs that were previously included in the cost of service are now under a separate repayment contract.

(7) Cost of service rates are inclusive of USBR direct pumping and Project Use Energy costs.

APPENDIX H LIST OF ACRONYMS

List of Acronyms

AF or A/F	acre-foot
AFY	acre-foot per year
AG	agriculture
BMP	Best Management Practices
CASGEM	California Statewide Groundwater Elevation Monitoring
CEQA	California Environmental Quality Act
cfs	cubic feet per second
CIMIS	California Irrigation Management Information System
COC	Constituent of Concern
CVP	Central Valley Project
District or SBCWD	San Benito County Water District
CWD	County Water District
DDW	Division of Drinking Water
DWR	California Department of Water Resources
DWTP	Domestic Wastewater Treatment Plant
ET	evapotranspiration
ft	feet
GAMA	Groundwater Ambient Monitoring and Assessment
GICIMA	Groundwater Information Center Interactive Map
GPBO	General Basin Plan Objective
gpd	gallons per day
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
GW	groundwater
HUA	Hollister Urban Area
IRWMP	Integrated Regional Water Management Plan
ITRC	Irrigation Training and Research Center, California Polytechnic State University
IWTP	Industrial Wastewater Treatment Plant
M&I	Municipal and Industrial
MA	Management Area
MCL	Maximum Contaminant Level
MGD	million gallons per day
msl	mean sea level
MT	Minimum Threshold
MW	Monitored well
NGVD	National Geodetic Vertical Datum
pdf	Adobe Acrobat Portable Document Format
PPWD	Pacheco Pass Water District
PVWMA	Pajaro Valley Water Management Agency
RW	recycled water
RWQCB	Regional Water Quality Control Board

List of Acronyms (cont.)

SCVWD	Santa Clara Valley Water District
SEIR	Supplemental Environmental Impact Report
SGMA	Sustainable Groundwater Management Act
SLDMWA	San Luis & Delta-Mendota Water Authority
SMCL	Secondary Maximum Contaminant Levels
SSCWD	Sunnyslope County Water District
USBR	U.S. Bureau of Reclamation
UWMP	Urban Water Management Plan
WRA	Water Resources Association of San Benito County
WTP	Water Treatment Plant
WWTP	Wastewater Treatment Plant
WY	water year