December 2025



# 2025 Agricultural Water Management Plan











TODD GROUNDWATER

# SAN BENITO COUNTY WATER DISTRICT

## 2025 AGRICULTURAL WATER MANAGEMENT PLAN

**December 2025**

TODD GROUNDWATER

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## List of Acronyms

| | |
|---|---|
| AF | Acre-feet |
| AFY | Acre-feet per year |
| AWMP or Plan | Agricultural Water Management Plan |
| cfs | cubic feet per second |
| CIMIS | California Irrigation Management Information System |
| City or Hollister | City of Hollister |
| CVP | Central Valley Project |
| CVPIA | Central Valley Project Improvement Act |
| DDW | California Water Resources Control Board Division of Drinking Water |
| District | San Benito County Water District |
| DWR | California Department of Water Resources |
| DWRF | Domestic Waste Reclamation Facility |
| ET | Evapotranspiration |
| Eto | Reference Evapotranspiration |
| EWMP | Efficient Water Management Practice |
| gpm | Gallons per minute |
| GSA | Groundwater Sustainability Agency |
| GSP | Groundwater Sustainability Plan |
| HUA | Hollister Urban Area |
| ILRP | Irrigated Lands Regulatory Program |
| M&I | Municipal and Industrial |
| MCL | Maximum Contaminant Level |
| mg/L | Milligrams per liter |
| NRCS | Natural Resources Conservation Service |
| OID | Oakdale Irrigation District |
| ppt | parts per trillion |
| RWQCB | Regional Water Quality Control Board |
| SBX7-7 | Steinberg Water Conservation Act of 2009 |
| SBUA | San Benito Urban Area |
| SGMA | Sustainable Groundwater Management Act |
| SLDMWD | San Luis Delta Mendota Water District |
| SMCL | Secondary Maximum contaminant Level |
| SSJID | South San Joaquin Irrigation District (SSJID) |
| SSURGO | Soil Survey Geographic Database |
| TDS | Total Dissolved Solids |
| ug/L | Micrograms per liter |
| USBR | U.S. Bureau of Reclamation |
| USDA | U.S. Department of Agriculture |
| UWMP | Urban Water Management Plan |
| WAP | Water Allocation Policy |
| WRA | Water Resources Association |
| WTP | Water Treatment Plants |
| WWTP | Wastewater Treatment Plant |
| WY | Water Year, Hydrologic October 1 through September 30 |
| WMO | Water management objectives |

# 1 PLAN PREPARATION AND ADOPTION

The San Benito County Water District (SBCWD or District) is a contractor with the U.S. Bureau of Reclamation (USBR) for imported water from the Central Valley Project (CVP). The CVP water is provided from San Luis Reservoir (SLR) through the San Felipe Division[1], which provides water to SBCWD and Valley Water (Santa Clara Valley Water District).

The Central Valley Project Improvement Act (CVPIA) is federal legislation establishing rules and regulations for the Central Valley Project (CVP). The CVPIA outlines criteria for contractors who receive water from the CVP to report their water supply, water demand, and water efficiency measures. The latest criteria update was released by USBR in the "2020 Standard Criteria" (USBR 2020). The USBR is currently working on an update, but a more recent version has not been released as of September 2025.

In addition to the federal legislation, the California Water Code requires that agricultural water suppliers (providing water to 10,000 or more irrigated acres) prepare and adopt an Agricultural Water Management Plan (AWMP) and submit that Plan to the California Department of Water Resources (DWR). The Plan is required to describe and evaluate 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. Adoption of an AWMP and implementation of efficient water management practices (EWMPs) are required in order for the agricultural water supplier to be eligible for any State water loans or grants.

SBCWD receives CVP water and has over 20,000 irrigated acres within its Zone 6 area of benefit for CVP water. Accordingly, this AWMP has been prepared in accordance with the requirements of USBR's Standard Criteria and DWR's SBX7-7 (Water Conservation Act of 2009) and new legislation. It follows the recommendations in both the "2020 Standard Criteria" prepared by USBR and *A Guidebook to Assist Agricultural Water Suppliers to Prepare a 2025 Agricultural Water Management Plan* (Guidebook) prepared by DWR.

AWMPs are to be prepared every five years. SBCWD last updated its AWMP in 2020 (SBCWD, 2021). The 2025 AWMPs must be adopted by April 1, 2025 and submitted to DWR within 30 days of adoption. However, SBCWD also participates in the Urban Water Management Plan (UWMP) for the San Benito Urban Area, which overlaps the Zone 6 area. The UWMP which includes the District, Sunnyslope, the City of Hollister, and the City of San Juan Bautista is in development and expected to be adopted by the deadline, July 1, 2026. The UWMP will be submitted to USBR separately at that time to meet all requirements from the USBR's Standard Criteria.

[1] CVP water supply commonly also is termed San Felipe water.

This 2025 AWMP updates information in the 2020 AWMP and addresses additional content requirements pursuant to new legislation including AB 1668 (Water Management Planning) and California Water Code §10820 (AWMP). These include:

- An annual water budget with specific components on a water-year basis
- Identification of water management objectives based on the water budget to improve system efficiency or to meet other water management objectives
- Quantification of water use efficiency using methods identified in *A Proposed Methodology for Quantifying the Efficiency of Agricultural Water Use* (DWR, 2012)
- Drought Plan with actions for drought preparedness.

This 2025 AWMP updates the structure and many of the tables from the 2020 AWMP to ensure compliance with the Federal criteria and California Water Code, consistency with other plans, and increased readability. Appendix A includes the checklists for USBR plans and DWR plans to indicate where the required information can be located in the document.

The water use, supply, and budget tables have been revised from representative years to a five-year period extending from Water Year[2] (WY) 2021 to WY 2025.

## 1.1 WATER MANAGEMENT ACTIVITIES

SBCWD has broad powers for the acquisition, storage, and distribution of water for irrigation, domestic, fire protection, municipal, commercial, industrial, and all other beneficial uses, as follows:

- to store water in surface or underground reservoirs
- to conserve and reclaim water
- to appropriate and acquire water and water rights, import water, and conserve it
- to control flood and storm waters of streams that flow into the district, and to conserve such waters for beneficial purposes by spreading, storing, retaining, and causing to percolate
- to carry on technical and other necessary investigations, make measurements, collect data, make analyses, studies, and inspections pertaining to water supply, water rights, control of flood and storm waters, and use of water.

The District has led preparation, in collaboration with Valley Water, of the GSP for the entire North San Benito Groundwater Basin and submitted the GSP to DWR in January 2022 in compliance with the Sustainable Groundwater Management Act (SGMA) (Todd, 2021). The GSP provides for cooperative management of the shared groundwater resources in the Basin. The GSP sustainability goal is to manage groundwater sustainably to support

[2] A Water Year (WY) is defined as October 1 through September 30. For example, WY 2016 extends from October 2015 through September 2016.

beneficial uses and to optimize conjunctive use of surface water, imported water, and groundwater. Annual reporting has demonstrated the continued implementation of the GSP including monitoring and management in accordance with the plan. The GSP was approved by DWR and currently is being evaluated by the District in accordance with the Periodic Evaluation required under SGMA. The District is planning on preparing a GSP Amendment and will submit it to DWR in January 2027. In addition to these activities, the District also implements best management practices to improve water use efficiency for agricultural users. These Efficient Water Management Practices (EWMPs) are described in Section 7.

The District has prepared Annual Groundwater Reports since the 1990s, at the direction of the Board of Directors, to fulfill the requirements set forth in SBCWD's formation act (California Water Code Appendix 70). Previously the Annual Groundwater Report has focused on the Zone 6 area but since Water Year 2020 have been expanded to encompass the North San Benito Groundwater Basin to meet SGMA requirements. Appendix 70 requires preparation of the report (summarizing the water year October 1 through September 30) in December and presentation to the Board of Directors in January. Appendix 70 states that the annual report will provide documentation of groundwater levels and pumping, groundwater storage change, and overdraft (if any); an estimate of next-year conditions, agricultural pumping, and water purchases; and the required recommendations for surface water deliveries, groundwater replenishment, and groundwater charges. In recent years, Annual Reports have been prepared with triennial updates on water quality conditions to report on the SGMA implementation of this Sustainable Management Criteria (Todd, 2025).

## 1.2 COORDINATION ACTIVITIES

Within San Benito County, and the District's Zone 6 encompasses the City of Hollister, City of San Juan Bautista, and unincorporated County land. The District actively coordinates with the cities and Sunnyslope County Water District (SSCWD or Sunnyslope) on management of municipal water supply. The District, in cooperation with Hollister and Sunnyslope, is in the process of preparing an UWMP that details the municipal water supply of the San Benito Urban Area (SBUA) and will be submitted to DWR by July 1, 2026.

**Table 1** summarizes the efforts SBCWD has taken to involve appropriate agencies and the general public in the District's AWMP update process. The City, County, and interested Parties were notified that the AWMP would be revised. Notifications included locations where the AWMP can be viewed, time and place of the public hearing, and contact information. Public notices were published before the public hearing in accordance with Government Code §6066. Copies of notifications and public notices are included in **Appendix B**.

A public hearing was held on January 21, 2026 for SBCWD Board consideration of adoption of this Plan. The Resolution of Adoption is included as **Appendix C**. A summary of notice is provided below.

- Notification was sent to Interested Parties (see **Table 1**) on intent to update SBCWD AWMP on December 15, 2025,
- Notice in local newspaper on January 2, 2026 and January 9, 2026 of Public Hearing to adopt the 2025 AWMP (per Gov. Code §6066),
- Posted Draft AWMP on District's website ( www.sbcwd.org) and a hard copy was available at District offices January 21, 2026 and
- Electronic version of the Draft Plan was submitted to entities that requested such drafts (see **Table 1)**.

**Table 1. Summary of Coordination, Adoption, and Submittal Activities**

| Potential Interested Parties | Notified of AWMP | Notified of Public Meetings | Attended Public Meetings | Copy of Adopted AWMP/ Amendment Sent |
|---|---|---|---|---|
| City of Hollister | 12/15/25 | | | 1/21/26 |
| Sunnyslope County Water District | 12/15/25 | | | 1/21/26 |
| City of San Juan Bautista | 12/15/25 | | | 1/21/26 |
| San Benito County | 12/15/25 | | | 1/21/26 |
| San Benito County Water District GSA | | | | 1/21/26 |
| DWR | | | | 1/21/26 |
| San Benito Weekly | | 1/2/26, 1/9/26 | | |
| California State Library | | | | 1/21/26 |
| Website | | | | 1/21/26 |

## 1.3 AWMP Adoption, Submittal and Availability

The SBCWD 2025 AWMP was adopted by the District Board at a public hearing conducted at a regular meeting of the Board of Directors on January 21, 2026. The Board unanimously voted to consider and incorporate comments received prior to and at the public hearing. A copy of the resolution adopting the AWMP is included in **Appendix C**.

The District posted a Final version of the 2025 AWMP on its website and made it available to the appropriate entities per California Water Code §10843 (see **Table 1**) within 30 days of adoption by the District.

The AWMP was uploaded to the DWR Water Use Efficiency Portal on January 21, 2026 and a thumb drive with an electronic copy was mailed to the State Library on January 21, 2026.

## 1.4 AWMP Implementation Schedule

Following adoption, the 2025 AWMP will be in effect for five years; the next AWMP update will occur in early 2031. The 2025 AWMP provides details on its EWMPs along with an implementation schedule in Section 7 of this Plan.

## 1.5 AWMP Checklist and USBR Crosswalk

**Appendix A** contains a multipage checklist provided in the Draft AWMP Guidebook developed from the California Water Code requirements for plan content and plan preparation and adoption. Completion of this table supports preparation of the AWMP and provides DWR and the public with the AWMP sections where required elements can be found.

**Appendix A** also contains the crosswalk provided by USBR to allow for the UWMP to be used to supplement some of the Standard Criteria requirements.

## 1.6 Contact Information

This AWMP was prepared by Todd Groundwater on behalf of San Benito County Water District. The SBCWD contact overseeing the plan was:

Lundi Barosso-Osorio
Water Conservation Program Manager
San Benito County Water District
(831) 637-4378

# 2 DESCRIPTION OF SERVICE AREA

## 2.1 HISTORY

San Benito County Water District is a special district formed in 1953 under State law (California Water Code Appendix 70) pursuant to the San Benito County Water District Act. It originally was formed as the San Benito County Water Conservation and Flood Control Act. The name was changed from the San Benito County Water Conservation and Flood Control District to San Benito County Water District in 1989.

## 2.2 LOCATION AND FACILITIES

SBCWD is the county-wide manager of water resources, the owner and operator of local surface water reservoirs (Hernandez and Paicines) and associated recharge operations, and the wholesaler for Central Valley Project (CVP) supplies from the U.S. Bureau of Reclamation (USBR). The District's area encompasses the entire San Benito County area of approximately 1,396 square miles.

### 2.2.1 Size and Location of Service Area

SBCWD has established three Zones of Benefit reflecting the responsibilities described in **Table 2**. While Zone 1 is the entire San Benito County, the extents of Zones 3 and 6, and the North San Benito Basin are shown in **Figure 1.** Zone 6 is the area designated for the importation and distribution of CVP water and related groundwater management activities. The remaining areas rely on groundwater wells. **Table 3** summarizes the water supplier information for SBCWD.

**Table 2. SBCWD Zones of Benefit**

| Zone | Area | Provides | Area (acres) |
|---|---|---|---|
| 1 | Entire County | Specific District administrative expenses | 893,440 |
| 3 | San Benito River Valley (Paicines to San Juan) and Tres Pinos Creek Valley (Paicines to San Benito River) | Operation of Hernandez and Paicines reservoirs and related groundwater recharge and management activities | 35,745 |
| 6 | GSP Management Areas Hollister and San Juan | Importation and distribution of CVP water and related groundwater management activities | 47,614 |

**Table 3. Water Supplier Information**

| Description | Summary |
|---|---|
| **Date of District Formation** | 1953 |
| **Source of Water** | |
| Local Surface Water | indirect |
| Local Groundwater | ✓ |
| Recycled Water | ✓ |
| USBR CVP water | ✓ |
| **Service Area Gross Acreage** | 47,614 |
| **Service Area Developed as Irrigated Agricultural Acreage (2023 includes idle land)** | 19,275 |
| **Service Area Irrigated Acreage (2023)** | 12,566 |

Land use source: DWR Land Use Mapping Portal, 2025

The San Benito Urban Area (SBUA) is also located within Zone 6 and includes 13,411 acres of urban area, outlined on **Figure 2**. The District, along with the three retailers Hollister, San Juan Bautista, and Sunnyslope are preparing an UWMP for this area and will submit the report by July 2026. Municipal water demand and supply for this area is not included in this AWMP. For detailed information about the demand, supply, and water contingency plan please refer to the SBUA UWMP (Todd, 2021).

### 2.2.2 Water Management Facilities

The District's water conveyance and storage facilities include the main Hollister conduit, laterals, and local reservoirs. Facilities are shown on **Figure 3** and summarized in **Table 4**. Percolation ponds are shown on **Figure 4**. In addition, SBCWD, City of Hollister, and SSCWD have collaborated on construction and operation of two municipal water treatment plants (WTPs), the Lessalt and West Hills WTPs that allow for treatment and direct domestic use of CVP water. The urban use of CVP is discussed in detail in the SBUA UWMP. With the exception of expanded recycled water deliveries, no changes are expected in the next five years. Brief descriptions of the facilities are included below.

**Water Conveyance and Delivery System**

The USBR facilities that import water to SBCWD and Valley Water from San Luis Reservoir through Pacheco Pass include the Pacheco Tunnel, Pacheco Pumping Plant, and Pacheco Conduit. The CVP distribution system within San Benito County is composed of eight pressure-reducing turnouts, four pumping facilities, four active percolation sites, and the 10,000 acre-foot San Justo Reservoir. A computerized telemetry system aids in delivering water through over 150 miles of buried pipe. The District does not operate any agricultural drains.

**Table 4. Water Conveyance and Delivery System**

| Conveyance System | Number of Miles |
|---|---|
| Unlined Canal | 0 |
| Lined Canal | 0 |
| Pipelines | 158 |
| Drains | 0 |
| **Total** | **158** |

Source: SBCWD, 2025

**Storage Facilities**

San Justo Reservoir, **Figure 3**, is a federal facility and the main storage reservoir for CVP imported water in San Benito County with a capacity is 10,308 AF. Many challenges are associated with the operation of San Justo Reservoir including managing storage, seepage, and eliminating invasive zebra mussels. San Justo is used by the District as a part of its distribution system. It is estimated about 10 percent of the water stored in San Justo is lost

due to seepage and evaporation, but some of this seepage is recovered by SBCWD through pumping four recovery wells downgradient of the reservoir. The water produced by these wells is returned to the Reservoir. The District also operates Paicines and Hernandez reservoirs on the San Benito River for local surface water storage. Releases from these reservoirs are used to recharge the groundwater basin with benefits to Zone 3 (see **Figure 1**)

**Groundwater Recharge Basins**
The District operates off-stream recharge basins to replenish the groundwater basin with CVP water. These ponds, shown on **Figure 4** and listed in **Table 5,** are off-stream ponds.

### Table 5. Groundwater Recharge Basins

| Recharge Basin | Size (acres) |
|---|---|
| Union Pond | 10.4 |
| Frog Pond | 4.6 |
| Tres Pinos Pond | 12.4 |
| Hollister Ponds | 135.0 |
| **Total** | **162.3** |

**Groundwater Wells**
With the exception of the seepage recovery wells, SBCWD does not currently own and operate production wells. Groundwater is produced for beneficial uses from numerous wells in Zone 6 including 177 private agricultural wells, 552 domestic wells, and 33 other wells (including community water systems or industrial uses) with power meters that the District monitors. Municipal purveyors operate 11 wells and report their production to the District:

- City of Hollister – 3 active wells
- City of San Juan Bautista – 2 active wells
- SSCWD – 5 active wells
- Tres Pinos Water District – 1 active well

## 2.3 Service Area Terrain and Soils

The topography of northern San Benito County, including the North San Benito Basin and Zones 3 and 6, includes a series of valleys along the San Benito and Pajaro rivers and their respective tributaries. These valleys are separated by hills and low mountains with elevations up to 3,500 feet above mean sea level. The topography of the area limits irrigated agriculture to the valleys, including the Hollister and San Juan valleys in Zone 6.

The North San Benito GSP documents the topography and drainage features in detail, including maps of local streams and surface water features. The GSP identifies springs, seeps, and wetlands supported by groundwater within the Basin as identified from the

(Natural Communities Commonly Associated with Groundwater) NCCAG geodatabase. NCCAG compiled the sites from other databases based on the frequency of flooding. About half of the features are classified as seasonally flooded, which is more likely to be associated with localized ponding of rainfall runoff than discharge of regional groundwater.

**Figure 5** shows soil hydrologic group data from the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Soil Survey Geographic Database (SSURGO) (NRCS, 2018). The soil hydrologic group is an assessment of soil infiltration rates determined by the water transmitting properties of the soil, which include hydraulic conductivity and percentage of clays in the soil, relative to sands and gravels. The groups are defined as:

- Group A – High Infiltration Rate: water is transmitted freely through the soil; soils typically less than 10 percent clay and more than 90 percent sand or gravel.
- Group B – Moderate Infiltration Rate: water transmission through the soil is unimpeded; soils typically have between 10 and 20 percent clay and 50 to 90 percent sand.
- Group C – Slow Infiltration Rate: water transmission through the soil is somewhat restricted; soils typically have between 20 and 40 percent clay and less than 50 percent sand.
- Group D – Very Slow Infiltration Rate: water movement through the soil is restricted or very restricted; soils typically have greater than 40 percent clay, less than 50 percent sand.

The hydrologic group of the soil generally correlates with the potential for infiltration of water to the subsurface, although the hydrologic characteristics of the underlying geology may differ.

The North San Benito GSP provides a detailed discussion of water budget elements (inflows, outflows, and change in groundwater storage) for water years 1975-2017. The SBCWD Annual Groundwater Reports continue to update these water budgets each water year.

## 2.4 CLIMATE

San Benito County has a moderate California coastal climate, with a hot and dry summer season typically lasting from May through October. Average annual rainfall ranges from 7 inches in the drier eastern portion of the County to 27 inches per year in high elevations to the south (PRISM, 2010). The City of Hollister, some 30 miles inland from the coast and separated from it by the Gabilan Range, receives an annual average rainfall of about 13 inches. Snowfalls in the mountains are infrequent and relatively light. A comparatively long growing season of 265 days or more per year prevails, and year-round cropping is practiced to some extent. The area has a high percentage of sunny days, particularly in summer. Most rainfall occurs in the late fall, winter, and early spring, generally between November and April. Therefore, significant irrigation is required during summer months (HDR 2017).

**Table 6. Average Monthly Climate Information – Hollister #126**

| Month | Average Precipitation | Average Reference Evapotranspiration ($Et_o$) | Average Maximum Temperature | Average Minimum Temperature |
|---|---|---|---|---|
| | inches | inches | °F | °F |
| **January** | 2.74 | 1.54 | 38.95 | 61.53 |
| **February** | 2.44 | 2.05 | 40.13 | 63.31 |
| **March** | 1.98 | 3.45 | 41.60 | 66.42 |
| **April** | 0.96 | 4.66 | 43.41 | 69.42 |
| **May** | 0.51 | 5.95 | 47.31 | 73.79 |
| **June** | 0.07 | 6.67 | 50.58 | 78.89 |
| **July** | 0.01 | 6.96 | 53.61 | 81.31 |
| **August** | 0.01 | 6.25 | 53.83 | 82.35 |
| **September** | 0.06 | 4.95 | 52.36 | 82.14 |
| **October** | 0.73 | 3.67 | 47.49 | 77.51 |
| **November** | 1.81 | 1.98 | 41.81 | 67.77 |
| **December** | 2.70 | 1.44 | 38.55 | 61.06 |
| **Annual Total or Average** | **14.02** | **49.57** | **45.83** | **72.17** |

**Figure 6** is a graph of annual rainfall in Hollister from 1975 to 2024. While rainfall data have been collected monthly since 1875, precipitation and other weather data have been collected since June 1994 from a California Irrigation Management Information System (CIMIS) station located by the San Benito County Water District office in Hollister (Station #126). As shown, annual precipitation is subject to wide annual variations. Data from the Hollister CIMIS station is summarized on **Table 6.**

Evapotranspiration (ET) is the loss of water to the atmosphere by evaporation from soil and plant surfaces and transpiration from plants. It is an indicator of how much water is needed by plants (e.g., crops and landscaping) for healthy growth and productivity. ET from a standardized well-watered grass surface is the common reference, denoted as ETo. The least ET occurs in the cool wet winter months and greatest ET occurs during the hot dry summer months. This results in peak monthly water demands in summer that are three times the comparable winter demand. Average annual ETo in Zone 6 is 49.6 inches, peaking at 6.25 to 6.96 inches per month in June, July, and August.

Average monthly temperatures in Zone 6 range from approximately 48 degrees Fahrenheit in January and December to near 65 degrees in July and August. In these two months, daily maximum temperatures typically reach as high as 86 degrees.

Other key physical parameters that control irrigation needs include wind speed and number of frost-free days. The average wind velocity is 3.3 miles per hour but varies seasonally, **Table 6**. Zone 6 experiences an average of 34.8 days per year when temperatures are below freezing, for 330.45 frost-free days (WRCC, 2021).

### 2.4.1 Impact of microclimates on water management within the District

Several microclimates exist across the North San Benito area. As a result, crop water demands, and cultural practices are variable. San Juan Valley represents the largest microclimate in the District area with more fog, lower temperatures, afternoon winds, and a more temperate climate. A CIMIS station for this area was installed in 1999, and data from the San Juan Valley CIMIS station is summarized on **Table 7.**

**Table 7. Average Monthly Climate Information – San Juan Valley #143**

| Month | Average Precipitation | Average Reference Evapotranspiration ($Et_o$) | Average Minimum Temperature | Average Maximum Temperature |
|---|---|---|---|---|
| | inches | inches | °F | °F |
| **January** | 2.03 | 1.56 | 37.80 | 61.90 |
| **February** | 2.42 | 2.04 | 38.91 | 63.01 |
| **March** | 2.33 | 3.40 | 40.81 | 65.70 |
| **April** | 1.15 | 4.73 | 42.20 | 68.61 |
| **May** | 0.63 | 6.10 | 45.66 | 72.68 |
| **June** | 0.20 | 6.82 | 48.96 | 78.25 |
| **July** | 0.12 | 7.17 | 51.85 | 80.61 |
| **August** | 0.11 | 6.39 | 52.20 | 81.16 |
| **September** | 0.20 | 5.08 | 50.75 | 81.17 |
| **October** | 0.62 | 3.62 | 46.20 | 77.21 |
| **November** | 1.18 | 1.93 | 40.53 | 68.14 |
| **December** | 2.63 | 1.44 | 37.33 | 61.31 |
| **Annual Total or Average** | **13.64** | **50.28** | **44.42** | **71.61** |

Period of Record Jan 1998 to August 2025
Source: CIMIS

## 2.5 NATURAL AND CULTURAL RESOURCES

Natural and cultural resources of northern San Benito County include its mild climate, streams, and fertile valleys. Before the arrival of the first European settlers, the San Benito county area was inhabited by the Mutsun group of the Ohlone Native Americans. In 1797 Spanish missionaries founded the first European settlement in the county as Mission San Juan Bautista. The town of Hollister was next founded in 1868 and San Benito County was organized in 1874. Agriculture is San Benito County's largest industry, currently including extensive vegetable and row crops, orchards, and vineyards, as well as pasture and rangeland.

## 2.6 OPERATIONAL INFORMATION

### 2.6.1 Operating Rules and Regulations

The District documents all operation information for users in the *San Benito County Water District Water Users Handbook* (**Appendix D**). In addition, **Appendix E** provides sample forms and bills for water users.

**Agricultural Water Allocation Policy (WAP)**

The Handbook (**Appendix D)** includes the Agricultural Water Allocation Policy (WAP) in the Regulations Section (R-1) pages 1-4. The WAP documents eligibility for CVP imported water, entitlement amounts, and distribution details.

CVP water is supplemental to local groundwater. Only a portion of Zone 6 has access to CVP through the surface water distribution system. Each parcel served from the distribution system has a per acre entitlement to contract for water:

- 1.2 Acre-feet per acre for Agricultural land with less than 1.5mg/l of Boron
- 2.0 Acre-feet per acre for Agricultural land with 1.5 mg/l or more of Boron in the groundwater.

**Water orders and shut-offs**
In addition, the Handbook also includes official and actual lead times necessary for water orders and shut-off (Section 2 Page 1-3 & Section 3, Page 2). Water orders are to be placed through the District office Monday – Friday from 8:30 a.m. – 12:30 p.m.at least twenty-four hours in advance. Water is not to be turned on until the order is approved by the District. As the District is a completely piped and pressurized system, there is no actual lead time that is required to turn water on. Water is always available at the turnouts; however, low pressure may occur for users if deliveries are not scheduled in advance.
When the system needs to be shut down for repairs, water users are notified approximately 10 days in advance of the shutdown. When emergency shutdowns do occur, District staff contacts the affected water users.

**Surface and subsurface drainage from farms**

The District's rules and regulations require water users to "take reasonable steps to re-use or control tailwater." It is desired that tailwater be prohibited from leaving the parcel to which San Felipe water is delivered. If damage to property of the District or neighboring farms occurs, the District may discontinue water service to that property if steps are not taken to alleviate the situation. This information is included in more detail in the Handbook (Section 6 Page 1 & Regulations Section Page 6).

The District has no policy regarding subsurface drainage.

**Water transfers by the district and its customers**

The District's rules and regulations provide for customer transfers under certain conditions and subject to the District's Board of Directors approval regarding impacts on the system, water supply, and geographic area. The District encourages and facilitates these water market transfers. More information can be found in the Handbook Regulations Section Page 4-5, and Resolution of the San Benito County Water District Establishing a Policy for Inter-Subsystem Transfers For The 2016-2017 Water Contract Year (**Appendix D**).

### 2.6.2 Water Delivery Measurements/Calculations

The District delivers CVP water to 635 agricultural customers over 997 parcels. There are 1,068 delivery points (commonly called blue valves) where imported water is accessed by 371 agricultural users, 270 M&I and small parcels, and 10 District facilities. Water deliveries are measured using propeller and turbine meters. The water delivery devices are summarized in **Table 8**. The full CVP system has 1,068 Zenner Direct Read Turbine meters ranging from size 2 inches to 12 inches in diameter.

In addition to measuring imported water, the District monitors private groundwater pumping in Zone 6. Pumping amounts are calculated semiannually by metering the number of hours of pump operation and multiplying by the average discharge rate, which is measured a few times per year. This monitoring program began in about 1990 (soon after CVP imports started) and currently about 264 agricultural customers are monitored for groundwater production, most through power meters and some through private flow meters. Hour meters are read every six months. The power meters are not calibrated and are replaced on average once every other year.

Alternative methods of measuring agricultural groundwater extraction have been evaluated as part of the GSP and the District is moving ahead with OpenET remote sensing.

**Table 8. Water Delivery Measurement Devices (Agricultural Customers Only)**

| Measurement Device | Number of Delivery Points (Meters) | Frequency of Maintenance (Months) | Frequency of Calibration (Months) | Reading Frequency (Days) | Estimated Level of Accuracy (%) |
|---|---|---|---|---|---|
| **Propeller Meters** | 743 | 60 | 60 | 30 | +/- 3% |
| **Other (Power Meters at Wells)** | 264 | 24 | - | 180 | +/- 20% |

## 2.7 WATER RATE SCHEDULES AND BILLING

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. Zone 6 charges, relating to the importation and distribution of CVP water, are the focus of this section. SBCWD rates and documentation can be found in **Appendix F**.

**Table 9** 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 the most recent Annual Groundwater Report (**Appendix G**). Groundwater charges are adjusted annually in March. For March 2025 – February 2026, District rates are $14.31 for agricultural use and $14.31 for M&I use. The District adopts rates on a three-year cycle.

**Table 9. Groundwater Charges**

| Year | Agriculture ($/AF) | M&I ($/AF) |
|---|---|---|
| 2025-2026 | $14.31 | $14.31 |

Source: Todd, 2025

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 F**). 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 10** shows the CVP water charge and **Table 11** shows the CVP power charge.

**Table 10. CVP Water Charge**

| Blue Valve Water Charge ($/AF) | | | | |
|---|---|---|---|---|
| | Agricultural | | | Municipal & Industrial |
| Year | Non - Full Cost | Full Cost (1a) | Full Cost (1b) | |
| 2024-2025 | $300.58 | $300.58 | $300.58 | $640.07 |

M&I rate do not include $175/AF reliability charge
Source: Todd, 2025

**Table 11. CVP Power Charge**

| Blue Valve Power Charge | Subsystem 2 | Subsystem 6H | Subsystem 9L | Subsystem 9H | All other subsystems |
|---|---|---|---|---|---|
| ($/AF) | | | | | |
| 3/1/2025 | $43.10 | $43.10 | $100.73 | $100.73 | $43.10 |

Source: Todd, 2025

Recycled water charges (**Table 12**) 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 12. Recycled Water Charge**

| Recycled Water ($/AF) | | |
|---|---|---|
| Effective | Agriculture Rate | Power Charge |
| 3/1/2025 | $300.61 | $108.32 |

Source: Todd, 2025

**Water-use data accounting procedures**
The District's water-use data accounting procedures are described in the SBCWD Accounting Policies and Procedures Manual. The customers' records are kept on the District's accounting software database for a five-year period and are readily available for review by the customer. Sample Water Bills are included as **Appendix E**.

## 2.8 WATER SHORTAGE ALLOCATION POLICIES AND DROUGHT PLAN

The District's Drought Plan is included as **Appendix H**. The Drought Plan, developed in 2020, remains up to date and reflects the District's water shortage allocation policies, information on drought vulnerability, and drought responses. The foundation of SBCWD's Drought Plan includes optimization of conjunctive water resource management including groundwater recharge and best use of supplemental source water (such as recycled water) as available. In brief, District landowners are incentivized to rely on surface water resources when available

to preserve groundwater resources for use in drought conditions, in case of imported water reductions. The Drought Plan for agricultural uses is set up with a similar structure to the Water Shortage Contingency Plan developed for municipal users in the UWMP. Additional details of these policies and strategies of the Drought Plan are provided in **Appendix H**.

# 3 INVENTORY OF WATER RESOURCES

The major water supply sources for Zone 6 include imported water from CVP, recycled water, and groundwater. Local surface water indirectly replenishes the groundwater system.

## 3.1 IMPORTED WATER

The Central Valley Project (CVP) is a Federal water system operated by the U.S. Bureau of Reclamation (USBR) with multiple uses including irrigation water supply for agricultural and urban uses, flood control, navigation improvement on the Sacramento River, water quality enhancement, hydroelectric power, fish and wildlife, and recreation. The CVP consists of 20 dams and reservoirs, 11 power plants, and 500 miles of major canals, conduits, and tunnels. The San Felipe Division diverts water supply from San Luis Reservoir (shared with the State Water Project or SWP) through the Pacheco Tunnel and Pacheco Conduit to Santa Clara and San Benito counties. The Santa Clara Conduit conveys water to the Santa Clara Valley and the San Benito (Hollister) Conduit conveys water to San Justo Dam, an offstream storage reservoir in San Benito County.

SBCWD has a 40-year contract (to February 29, 2028 with options for renewal) for a maximum of 8,250 AFY of M&I water and 35,550 AFY of agricultural water (Contract number: 8-07-20-W0130). Actual CVP deliveries are modified on an annual basis by USBR, reflecting hydrologic conditions (e.g., drought), reservoir storage, and the environmental status of the Sacramento-San Joaquin Delta.

SBCWD distributes CVP water to agricultural, municipal, and industrial customers in Zone 6 through 12 subsystems containing approximately 158 miles of pressurized pipeline laterals (SBCWD, 2015). Such distribution of CVP water “in lieu” of groundwater pumping has been instrumental in reversing historical overdraft and preventing future overdraft. The Hollister Conduit, CVP distribution systems, and San Justo Reservoir (where CVP water is stored in the basin) are shown on **Figure 3**. SBCWD also has recharged groundwater with CVP water through off-stream recharge ponds.

The City of Hollister and Sunnyslope purchase CVP water as the primary M&I CVP customers. Other M&I uses of CVP water include urban irrigation, golf courses, and potable supply for the Stonegate community. Treatment of CVP water for potable M&I supplies within the SBUA is provided by the Lessalt and West Hills Water Treatment Plants (WTPs) on the east and west sides of Hollister, respectively. The municipal water supply and demand is documented in the 2020 UWMP and will be updated in the 2025 UWMP.

**Table 13**, on the following page, documents the CVP delivery by type for the past 10 USBR water years. The contract year extends from April through March. It should be noted that this report (and the Annual Groundwater Report) documents supply and demand in hydrologic water October through September. In addition, total delivery to customers may differ from water delivered to the District due to in-District storage and transfers.

**Table 13. CVP Allocations and Deliveries by Type**

| Bureau Water Year | WY 2015-16 | | WY 2016-17 | | WY 2017-18 | | WY 2018-19 | | WY 2019-20 | | WY 2020-21 | | WY 2021-22 | | WY 2022-23 | | WY 2023-24 | | WY 2024-25 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | M&I | Ag | M&I | Ag | M&I | Ag | M&I | Ag | M&I | Ag | M&I | Ag | M&I | Ag | M&I | Ag | M&I | Ag | M&I | Ag |
| CVP Allocation | 2,063 | 0 | 4,538 | 1,778 | 8,250 | 35,550 | 6,188 | 17,775 | 8,250 | 26,663 | 5,775 | 8,760 | 2,063 | 0 | 2,766 | 0 | 8,250 | 35,550 | 6,188 | 17,775 |
| **Water Delivery By Type** | | | | | | | | | | | | | | | | | | | | |
| CVP Delivery | 1,546 | 0 | 2,317 | 1,778 | 8,250 | 12,558 | 3,688 | 11,130 | 8,250 | 12,833 | 5,775 | 5,203 | 2,063 | 0 | 1,889 | 0 | 8,250 | 10,396 | 6,187 | 9,757 |
| Rescheduled Water | 0 | 1,433 | 517 | 0 | 2,221 | 0 | 0 | 3,693 | 0 | 376 | 0 | 4,268 | 0 | 3,557 | 0 | 0 | 621 | 0 | 0 | 0 |
| SCVWD Transfer | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SCVWD (in SLR as stored water) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Surplus USBR | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exchange Contractors thru SLDMWD | 0 | 0 | 4,085 | 1,298 | 125 | 327 | 2,500 | 1,028 | 0 | 1,140 | 250 | 1,505 | 0 | 0 | 0 | 0 | 25 | 480 | 0 | 0 |
| Yuba | 0 | 192 | 0 | 553 | 0 | 0 | 0 | 612 | 0 | 0 | 0 | 812 | 510 | 0 | 0 | 544 | 0 | 0 | 0 | 0 |
| Supplemental OID/SSJID | 0 | 0 | 0 | 939 | 0 | 154 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| North of Delta | 0 | 0 | 0 | 1,910 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,072 | 0 | 0 | 0 | 3,000 |
| **TOTAL DELIVERED TO DISTRICT** | **1,546** | **1,625** | **6,919** | **6,478** | **10,596** | **13,039** | **6,188** | **16,463** | **8,250** | **14,349** | **6,025** | **11,788** | **2,573** | **3,557** | **1,889** | **1,616** | **8,896** | **10,876** | **6,187** | **12,757** |

## 3.2 GROUNDWATER

Groundwater represents about half of the total water supply for Zone 6 and more than 70 percent of the agricultural water supply in an average water year and provides an essential reserve for additional supply during droughts. In Zone 6, the relative proportions of groundwater and CVP water use are affected primarily by the availability of CVP water from USBR; in the past 10 years, CVP supply has ranged from 44 percent to 89 percent of the Zone 6 supply to agriculture.

Zone 6 overlies the North San Benito Subbasin (Basin) of the Gilroy-Hollister Groundwater Basin, which covers approximately 200 square miles situated between and including portions of the Diablo Range to the east and the Gabilan Range to the west. To manage this basin sustainably, the District and the Santa Clara Valley Water District, now Valley Water, have prepared a GSP (Todd, 2021) and have prepared Annual Reports to document the basin's sustainability.

The Basin consists of a series of connected valleys and intervening uplands in the Coast Ranges. It is characterized by unconsolidated to semi-consolidated sediments that were deposited in alluvial fan and stream environments from a variety of source rocks and directions. These deposits interfinger in the subsurface so that regional zones of low or high permeability have not been distinguished. The valley portions contain unconsolidated alluvial deposits—clay, silt, sand, and gravel—that store and transmit significant quantities of groundwater. These geologic deposits also underlie some upland areas (such as the Lomerias Muertas, Flint Hills, and hills in the southern portion of the Basin) but generally are more consolidated and less permeable than in the valley areas. The Principal aquifers include the unconsolidated alluvial deposits in the valley areas and generally range from 0 to 300 feet thick. Secondary aquifers include the older, less permeable deposits that underlie the valleys at depth, crop out in portions of the valley areas, and occur in upland areas with thickness up to several thousand feet.

The Basin boundaries are defined mostly by geology (contacts with relatively impermeable consolidated rocks) and by faults that may form barriers to groundwater flow. Faults crossing the Basin, most notably the Calaveras Fault, are partial barriers to groundwater and are important because they may offset bedrock and affect the local depth of the Basin.

As discussed in section 2.2.2, the District maintains recharge basins. In addition, the District owns and operates two reservoirs upgradient of the groundwater basin with releases for replenishment of the basin.

## 3.3 RECYCLED WATER

Water recycling is a cooperative effort of SBCWD and the City of Hollister. Recycled water has been provided by the City of Hollister for landscape irrigation since 2010. The system was expanded in 2014, including infrastructure and treatment capability to improve water quality for the purpose of agricultural irrigation. The system was further improved in 2015 when the District installed 1.65 miles of additional distribution system piping and 30

metered deliveries to provide water for agricultural customers for approximately $1,000,000. In 2016, the Recycled Water Storage Pond was installed in "Pond 2" at the Domestic Waste Reclamation Facility (DWRF) to improve distribution system water quality and to store surplus supply during high agricultural demand periods when the DWRF is not producing enough recycled water. In 2019, the District installed a series of sand media filters upstream of the Recycled Water Distribution System to improve water quality to allow agricultural customers the ability to use drip irrigation and minimize backwash waste. These upgrades to the Recycled Water Storage Pond and distribution system cost approximately $1,500,000. Recycled water currently is provided to approximately 865 acres for agricultural production and landscape irrigation. Recycled water use is relatively small but has the potential to increase in the future. In WY 2024, recycled water to agricultural users in Zone 6 was 341 AF.

## 3.4 LOCAL SURFACE WATER

SBCWD owns and operates two reservoirs along the San Benito River. Hernandez Reservoir (capacity 17,200 AF) is located on the upper San Benito River in southern San Benito County. Paicines Reservoir (capacity 2,870 AF) is an off-stream reservoir between the San Benito River and Tres Pinos Creek. It is filled by water diverted from the San Benito River, with some of the diversions consisting of natural runoff and some consisting of water released from Hernandez Reservoir. Water stored in the two reservoirs is released for percolation in Tres Pinos Creek and the San Benito River to augment groundwater recharge during the dry season.

## 3.5 SOURCE WATER QUALITY

Water provided by the District for agricultural uses is considered non-potable. However, water quality of the water supply is conducted regularly and documented in Section 5.2. Additional information about the M&I water supply to urban users is found in the 2020 UWMP (Todd, 2021) and will be updated in the 2025 UWMP, currently being prepared.

# 4 DESCRIPTION OF QUANTITY OF WATER USES

Water use within Zone 6 varies from year to year and is dependent upon precipitation, cropping patterns, fallowed acreage, and available surface water supplies. This section describes water uses during the previous five water years (WY 2020 to WY 2024).

## 4.1 BASIS FOR REPORTING WATER QUANTITIES

Analysis of water uses during the previous five water years is required for the annual budget (Section 5). This time period, extending from WY 2020 through WY 2024, was also selected to be representative of District recent water uses and includes both dry and wet years. Normal, wet, and dry conditions are generally determined by the CVP allocations. 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.

The year types are described below in **Table 14**, for the WY 2020 through WY 2024 time period. The water use information in this section is provided on a water year basis for the overall water budget unless indicated otherwise.

**Table 14. Water Year Types, CVP Allocations, and Annual Rainfall**

| WY | Year Type[1] | CVP allocation[2] | Rainfall (in)[3] |
|---|---|---|---|
| **2020** | Below Normal | 15% | 11.25 |
| **2021** | Critically Dry | 0% | 6.58 |
| **2022** | Dry | 0% | 9.38 |
| **2023** | Wet | 100% | 20.36 |
| **2024** | Above Average | 50% | 15.50 |

1. From GSP Annual Report
2. Based on contract year (Mar to April)
3. CIMIS Hollister Station

## 4.2 AGRICULTURAL WATER DEMAND

Annual agricultural water demand by source in the District Zone 6 is shown in **Table 15** for WY 2020 – WY 2024. Agricultural demand was estimated based on estimated crop irrigation requirements and cropping patterns from the most recent land use map. As discussed below, uncertainty exist in both the calculation of agricultural water demand and pumping, and some assumptions were made to balance the water budget.

Crops and associated acreages were compiled from the DWR Land Use Portal for 2023, the most recent data available. **Figure 7** illustrates the 2023 cropping patterns across Zone 6 from the (DWR, 2025). The most recent land use map is 2023 and the same acreage was assumed for the five year period 2020 – 2024. However, cropping patterns in Zone 6 can be dynamic and responsive to available water supply and other factors including labor and market demand. In dry years, some crops are fallowed to reduce water use or because water at the needed quality is not available. In addition, cropping decisions and water allocations are generally made in the beginning of the growing season and the effects of dry years are seen the following year in agricultural demand. To simulate some of these cropping variations in the water use analysis, it was assumed that improved pasture and hay parcels were unirrigated in years when CVP deliveries were lower than average.

Crop consumptive use was calculated using reference evapotranspiration (ET), area of crop, and crop specific multipliers (Kc) used in the numerical model. Monthly ET for the period was available from local CIMIS stations. The monthly crop consumption totals are shown in **Table 15** as developed for the numerical model, however the model relies on a static crop area and distribution. The most recent area of each crop type, as developed by DWR and Land IQ is also displayed in **Table 15**. The agricultural water demand is currently being evaluated as part of the GSP Periodic Evaluation. SBCWD will continue to review crop consumptive use estimates and compare the crop coefficient method with remote sensing to continue to refine groundwater use estimates.

Agricultural irrigation is designed to slightly exceed the crop consumptive use of the crop. Irrigation efficiency is the ratio of crop consumptive use to the applied irrigation volume. In Zone 6, this irrigation efficiency indicates that about 10 to 20 percent of the applied irrigation for agricultural irrigation infiltrates surficial soils past the root zone and percolates to the water table, providing groundwater recharge. It is assumed that water applied in excess of the crop consumptive use results in deep percolation to the groundwater aquifer.

For SBCWD, water use for agriculture can also be estimated using the available data on water deliveries (CVP, recycled water, and groundwater extraction). The total water delivered was compared to the calculated consumptive use. To reflect the wide range of water use in the miscellaneous truck crops, the consumptive use was calibrated to achieve an average irrigation efficiency of approximately 80 to 90 percent, an estimate consistent with recent surface water-groundwater modeling.

**Table 15. Annual Agricultural Water Demand (AF)**

| | Area[1] (Acres) | Crop Consumptive[2] (AFY) | | | | | Avg Crop Demand[3] (ft/yr) |
|---|---|---|---|---|---|---|---|
| **Crop** | | **2020** | **2021** | **2022** | **2023** | **2024** | |
| Citrus | 54 | 49 | 51 | 52 | 45 | 49 | 2.9 |
| Grapes | 176 | 732 | 774 | 796 | 681 | 728 | 2.4 |
| Deciduous | 2,221 | 7,437 | 7,639 | 7,877 | 6,933 | 7,618 | 3.2 |
| Grain and Hay | 3,123 | 6,574 | 7,014 | 7,162 | 6,038 | 6,413 | 1.9 |
| Truck Crops | 12,874 | 57,259 | 59,160 | 60,790 | 52,881 | 57,860 | 3.3 |
| Mixed Pasture | 738 | 1,055 | 1,098 | 1,119 | 971 | 1,057 | 4.0 |
| Field crops | 90 | 5,374 | 5,562 | 5,695 | 5,032 | 5,451 | 2.6 |
| **Total** | **19,275** | **78,480** | **81,297** | **83,492** | **72,581** | **79,175** | **2.9** |

1. Area from DWR 2023 Land Use Mapping
2. Crop Consumptive Use from numerical model (Todd, 2022)
3. Average Crop Demand from numerical model (Todd, 2022)

#### 4.2.1 Multiple Cropping Information

The DWR/Land IQ land use for San Benito County does not record if any of the parcels use multiple cropping. However, because the District monitors private well extraction, the water use for crops was calibrated to account for multiple cropping practices.

#### 4.2.2 Future Land Use Changes

Land use in the Zone 6 area is not expected to significantly change in the near future.

## 4.3 Environmental Water Use

There are no environmental uses that are supported by the District's water supplies.

## 4.4 Recreational Water Use

There are no recreational uses that are supported by the District's water supplies.

## 4.5 MUNICIPAL AND INDUSTRIAL USE

The District is a wholesale urban water supplier and supplies water on a wholesale basis to Sunnyslope County Water District and the City of Hollister. It does not have retail urban customers in the form of multi- or single-family connections. Other non-agricultural water demands supplied by the District include golf courses, schools, and landscape-only meters, etc. All municipal and industrial uses within the SBUA are detailed in the 2020 UWMP (and upcoming 2025 UWMP) and not included in the AWMP (Todd, 2021).

## 4.6 GROUNDWATER RECHARGE USE

The District recharges surplus CVP water for groundwater replenishment and conjunctive management through District-constructed recharge basins shown in **Figure 4**.

SBCWD owns and operates two reservoirs along the San Benito River. Hernandez Reservoir (capacity 17,200 AF) is located on the upper San Benito River in southern San Benito County. Paicines Reservoir (capacity 2,870 AF) is an offstream reservoir between the San Benito River and Tres Pinos Creek. It is filled by water diverted from the San Benito River, with some of the diversions consisting of natural runoff and some consisting of water released from Hernandez Reservoir. Water stored in the two reservoirs is released for percolation in Tres Pinos Creek and the San Benito River to augment groundwater recharge during the dry season. More information on the operation and location of recharge is available in the most recent Annual Report (**Appendix G**). **Table 16** presents a summary of the District's groundwater recharge for WY 2020 - WY 2024.

**Table 16. Groundwater Recharge (AF)**

| Location | Water Year 2020 | Water Year 2021 | Water Year 2022 | Water Year 2023 | Water Year 2024 |
|---|---|---|---|---|---|
| District Recharge Basins | 3,161 | 28 | 2 | 1,966 | 137 |
| Reservoir Releases | 11,510 | 7,984 | 3,489 | 19,650 | 35,462 |
| **Total** | **14,671** | **8,011** | **3,492** | **21,615** | **35,599** |

Source: Annual Report 2024

## 4.7 OTHER WATER USE

No other transfers or exchanges have occurred in WY 2020 - WY 2024.

## 4.8 OUTFLOWS FROM THE DISTRICT

Outflow from the agricultural system includes crop consumptive use and deep percolation of applied irrigation. It is assumed most agricultural areas are designed to increase their irrigation efficiency and have limited field runoff. The District does not operate a drain system and there are no other managed outflows.

In regard to the groundwater basin, wells are by far the largest outflows from the Basin, and they are abundant in the urban and agricultural areas. Natural outflow from the Basin consists of groundwater discharge into creeks and rivers. The primary exit points are groundwater seepage into the lower ends of the Pajaro and San Benito Rivers as they approach the northwestern end of the basin and enter the bedrock canyon leading to the coast. Locations of gaining reaches of streams are mapped and discussed in the GSP.

# 5 DESCRIPTION OF QUANTITY AND QUALITY OF WATER RESOURCES

Water supply for SBCWD includes CVP imported water, recycled water, and groundwater. A summary of these water sources and associated uses are provided below.

## 5.1 WATER SUPPLY QUANTITY

### 5.1.1 Surface Water Supply

**Table 17** shows a summary of the District's surface water deliveries for agriculture in WY 2020-WY 2024**.** It should be noted that these values are slightly different that then CVP supplies into the basin (**Table 13**), as water is stored in San Justo and not necessarily delivered in the same water year. CVP supply is measured directly at each delivery point (blue valves). The 635 blue value delivery points for agricultural users are fitted with propeller and turbine meters to accurately measure delivered supply. As documented in section 2.1.1, actual CVP deliveries are modified on an annual basis by USBR, reflecting hydrologic conditions (e.g., drought), reservoir storage, and the environmental status of the Sacramento-San Joaquin Delta.

**Table 17. Agricultural Water Supplies (AF)**

| Source | Water Year 2020 | Water Year 2021 | Water Year 2022 | Water Year 2023 | Water Year 2024 |
|---|---|---|---|---|---|
| CVP Ag Allocation | 12,166 | 6,080 | 1,096 | 8,438 | 10,100 |
| Recycled Water | 428 | 405 | 590 | 404 | 341 |
| Groundwater | 79,578 | 91,478 | 101,638 | 83,279 | 96,732 |
| **Total** | **92,172** | **97,963** | **103,324** | **92,121** | **107,173** |

Source: Annual Report 2024

### 5.1.2 Groundwater Supply

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. Simulated groundwater pumping within the District for WY 2020-WY 2024 is shown in **Table 17**.

Reliable measurements of agricultural pumping are a recognized data limitation. 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.

### 5.1.3 Recycled Water Supply

Treated effluent from the City of Hollister's DWRF is used for irrigation on land within Zone 6. The amount of applied treated effluent ranged between 341 and 590 AFY between WY 2020 and WY 2024 (**Table 17**).

### 5.1.4 Drainage

Irrigation practices and groundwater management practices are such that with minor exceptions no surface or subsurface drainage waters leave Zone 6. The District does not manage agricultural drains nor monitor drain flow for water quality or volume.

## 5.2 WATER SUPPLY QUALITY

While CVP and recycled water is generally of excellent quality, groundwater from the North San Benito Groundwater Basin is highly mineralized. The sections below provide information on CVP, groundwater, and recycled water quality.

### 5.2.1 Surface Water Quality

Imported water from CVP is generally good water quality. The most recent water quality sample from San Justo Reservoir (August 2024) is shown in **Table 18**. Total Dissolved Solids (TDS) is 320 mg/L, below the Secondary Maximum Contaminant Level (SMCL) of 1,000 mg/L and lower than the other sources of water available to growers.

**Table 18. Water Quality by Source**

| SBCWD Source Water Quality | | | | | |
|---|---|---|---|---|---|
| **Parameter** | **Units** | **CVP Water Quality[1]** | **Recycled Water Quality[2]** | **Groundwater Quality – Hollister[3]** | **Groundwater Quality - San Juan** |
| Total Dissolved Solids (TDS) | mg/L | 320 | 1,200 | 952 | 1,369 |
| Nitrate (as N) | mg/L | <0.23 | 5 | 5.9 | 5.4 |
| Calcium | mg/L | 25 | NA | 65 | 83 |
| Magnesium | mg/L | 14 | NA | 65 | 92 |
| Sodium | mg/L | 56 | 200 | 189 | 188 |
| Potassium | mg/L | 3.6 | NA | 4 | 4 |
| Chloride | mg/L | 80 | 150 | 185 | 203 |
| Sulfate | mg/L | 39 | 250 | 207 | 251 |
| Arsenic | ug/L | 2.1 | NA | 29 | 3 |
| Boron | mg/L | NA | 1,500 | 1,341 | 873 |

1. August 2024 sampling at San Justo
2. RWQCB Regulatory Order R3-2008-0069, reports Total Nitrogen as N
3. average data from wells 2020-2022 (regulatory facilities excluded)

### 5.2.2 Groundwater Quality

Groundwater quality conditions are described in the GSP; this discussion focuses on the Hollister and San Juan management areas of the GSP, which were defined in part by Zone 6 boundaries.

The quality of groundwater in the North San Benito Basin has been described as highly mineralized and of marginal water quality for drinking and agricultural purposes. The mineralized water quality is typical of other relatively small Coast Range groundwater basins and reflects the geologic formations in the Central Coast watersheds (e.g., marine sediments) and the relatively low permeability of groundwater basin sediments, which leads to long contact time with groundwater.

**Total Dissolved Solids**

TDS concentrations are generally high throughout the Basin and the average TDS concentrations exceed the secondary MCL for drinking water (1,000 mg/L). While concentrations are high (e.g., exceeding 500 mg/L), recent years (2014 through 2024) are characterized by TDS concentrations that are stable or decreasing. For example, in the San Juan Valley, some wells downstream of the wastewater treatment ponds show a general decrease in concentrations, possibly due to the reduced percolation of wastewater in recent

years. Generally, the eastern and northern edges of the Basin show lower concentrations of TDS. Higher TDS areas reflect geology (e.g., fault zones and older sediments) and historical wastewater disposal among other factors. Average TDS values for the Hollister and San Juan Management Areas are shown in **Table 18**.

**Nitrate**

Nitrate, long identified as a constituent of concern (COC) in the Basin, has multiple and widespread sources including fertilizer application and wastewater disposal (both municipal and domestic). Given that these sources are on or near the ground surface, shallow groundwater typically is characterized by higher concentrations than deep groundwater. In fact, the highest recent concentrations occurred in shallow wells in the eastern San Juan area. Nitrate concentrations are elevated above natural concentrations (typically less than 10 mg/L), but most samples have indicated nitrate concentrations below the MCL of 45 mg/L. With some exceptions, concentrations are relatively stable over time. Additional review of basin nitrate concentrations was performed for the Irrigated Lands program. The report indicated that, for the 1,105 wells used in analysis of nitrate concentrations in the Gilroy-Hollister Valley Basin, 26 percent had average concentrations over the MCL of 45 mg/L (this includes Llagas Subbasin in Santa Clara County, LSCE, 2015). Average nitrate values for the Hollister and San Juan Management Area are shown in **Table 18**.

TDS and nitrate are recognized as constituents of concern in the GSP, and sustainability criteria (e.g., minimum thresholds) have been defined to guide management for both. Other constituents will continue to be monitored in the event that future basin management could affect concentrations and therefore agricultural water supply. These include the following:

- **Hardness.** Hardness (total hardness, as $CaCO_3$) is a widespread condition in the Basin indicating that high concentrations of calcium and magnesium ions in water will form insoluble residues with soap. It is a naturally occurring condition but can be impacted by anthropogenic sources that add calcium or magnesium to the groundwater. The natural hardness of the groundwater indirectly relates to increases in groundwater salinity in localized areas due to the use of water softeners.

- **Boron.** Boron is naturally occurring in the Basin and associated with marine clays, thermal springs, and closed basin evaporites; clay deposited from marine waters contains 400 to 600 mg/L of boron (Reynolds, 1972). Plants are especially sensitive to boron, and agricultural standards are set at 0.7 mg/L (700 ug/L) to 0.75 mg/L (750 ug/L). Some damage can occur to crops at even lower concentrations. Boron has been identified as a COC in the Basin because elevated concentrations historically contributed to abandonment of orchards in Hollister Valley (Eaton et al., 1941). The highest concentrations are associated with a north-south trending band in the Hollister Valley, which is thought to be controlled by geologic conditions and may be related to changing water chemistry along a fault plane at depth. The WAP for CVP requires monitoring of Boron concentrations as more imported water was supplied to growers with groundwater impacted by higher boron concentrations.

### 5.2.3 Recycled Water Quality

Treated effluent quality is monitored and reported to the Regional Water Quality Control Board (RWQCB). Recycled water quality data from the Master Reclamation Requirements (MRR) (Order Number R3-2008-0069) is listed in **Table 18**.

### 5.2.4 Additional Water Quality Monitoring

In addition to the District's regular monitoring programs, groundwater quality is also sampled in compliance with the State Water Board Long-Term Irrigated Lands Regulatory Program (ILRP). This program provides for waste discharge requirements from irrigated lands through surface water and groundwater monitoring. Owners or operators of irrigated lands may comply with the program either as individuals or through coalition groups.

The Central Coast Groundwater Coalition (CCGC) was founded in July 2013 to represent landowners and growers who operate in Monterey, San Benito, Santa Clara, Santa Cruz, San Luis Obispo and Santa Barbara counties, and the northern portion of Ventura County. CCGC is a non-profit organization whose primary function is to fulfill groundwater quality regulatory requirements in the ILRP of the RWQCB.

CCGC developed a plan for groundwater monitoring that was approved by RWQCB in July 2013. A key component of the plan is sampling of drinking water wells with a focus on nitrate. In June 2015, CCGC submitted a groundwater characterization report (LSCE, 2015) for the northern counties, including the Salinas, Pajaro, and Gilroy-Hollister valleys. CCGC and their third party administrator, Central Coast Water Quality Preservation Inc, are currently reviewing water quality trends in the basin and developing a monitoring network to meet the water quality requirements of the ILRP. The new program is expected to be submitted to the RWQCB in December 2025.

# 6 WATER BUDGET

This section summarizes the Zone 6 water use and supply for the WY 2020 – WY 2024 time period. This water budget provides an overall picture of water use within the District and the ability of the available supplies to meet these water demands. A discussion of water management objectives follows the water budget section, and at the end of the section, the efficiency of agricultural water use is quantified.

## 6.1 ANNUAL WATER BUDGET

Water budget inflows are summarized in **Table 20**. Inflows include all the water delivered to agricultural customers. It does not include groundwater recharge because the recharge components would be considered both an inflow (surface water into the District) and an outflow (recharged to the groundwater basin). In addition, M&I pumping is also not included in the inflow and outflow tables because it would also be considered an inflow (pumping within District) and an outflow (delivery for M&I use) and is documented separately in the UWMP.

### 6.1.1 Inflows

Inflows to the agricultural system includes water supply from the three major sources (CVP, groundwater, and recycled water), as well as effective precipitation, shown on **Table 19**. Effective precipitation is defined here as the portion of precipitation that satisfies crop consumptive demands.

The daily ET needs of a crop can be satisfied by either applied irrigation or through natural precipitation. Total irrigation was estimated to be the ET demand of the crop minus precipitation. The portion of precipitation that satisfies ET demand, effective precipitation, is controlled by the intensity and distribution of the precipitation. The estimated amount of precipitation available to satisfy crop ET was evaluated on a monthly basis. This estimate indicated that 24 percent of total rainfall may be available to contribute to the required amount of applied water.

### 6.1.2 Outflows

Outflows are shown in **Table 20** and include crop consumptive use and deep percolation of applied water. There are no quantified surface water outflows. The deep percolation term was calculated and is the difference between total inflows used for agriculture (**Table 19**) minus crop consumptive use (**Table 15**) and is a balancing term for the water budget. The magnitudes of deep percolation values for 2020 to 2024 are similar to the values generated with the model update (Todd, 2021).

**Table 19. Water Budget Inflows (AF)**

| Inflow Component | AWMP Location for Supporting Calculations | How Quantified? | Uncertainty | Water Year 2020 | Water Year 2021 | Water Year 2022 | Water Year 2023 | Water Year 2024 |
|---|---|---|---|---|---|---|---|---|
| Effective Precipitation | Section 4.1 and Section 6.1.1 | Estimated | +/- 10% | 2,827 | 1,654 | 2,357 | 5,117 | 3,896 |
| CVP Ag Allocation | Sections 5.1.1, Table 17 | Measured | +/- 3% | 12,166 | 6,080 | 1,096 | 8,438 | 10,100 |
| Recycled Water | Sections 5.1.3, Table 17 | Measured | +/- 3% | 428 | 405 | 590 | 404 | 341 |
| Private groundwater pumping | Section 5.1.2, Table 17 | Measured | +/- 20% | 79,578 | 91,478 | 101,638 | 83,279 | 96,732 |
| **Total** | | | | **94,999** | **99,617** | **105,681** | **97,238** | **111,069** |

**Table 20. Water Budget Outflows (AF)**

| Outflow Component | AWMP Location for Supporting Calculations | How Quantified? | Uncertainty | Water Year 2020 | Water Year 2021 | Water Year 2022 | Water Year 2023 | Water Year 2024 |
|---|---|---|---|---|---|---|---|---|
| Crop Consumptive Use[1] | Section 3.2, Table 15 | Estimated | +/- 20% | 58,991 | 61,139 | 62,783 | 54,507 | 59,467 |
| Surface Outflows | NA | NA | NA | 0 | 0 | 0 | 0 | 0 |
| Deep Percolations[2] | Section 3.2 | Estimated | +/- 20% | 36,009 | 38,478 | 42,898 | 42,731 | 51,602 |
| **Total** | | | | **94,999** | **99,617** | **105,681** | **97,238** | **111,069** |

1. Only ET from crops, volume does not account for irrigation efficiency
2. Difference between total inflows used for agriculture (Table 20) minus crop consumptive use

## 6.2 IDENTIFY WATER MANAGEMENT OBJECTIVES

SBCWD has developed water management objectives (WMOs) to improve long-term planning and resiliency, adapt to climate change, and improve regional self-reliance. These WMOs are listed and discussed below. The District is actively implementing each of these three WMOs. Additional information on implementation of the EWMPs is provided in Section 7.

- Encourage more efficient water use at the farm level
- Optimize conjunctive management of imported CVP water with groundwater resources through direct use and groundwater banking and recovery
- Implement GSP projects and management actions

**Encourage More Efficient Water Use at the Farm Level**
Efficient water use by landowners can reduce water demands if growers are made aware of more efficient practices and these practices are cost effective. The District encourages efficient water use at the farm level in many ways and will continue to do so as technology and new methods or options become available.

The District measures all water delivered to customers and water pricing is generally based on quantity delivered. The customers can use this as a benchmark to track reduced water use and save money. The District contributes to the Water Resource Association (WRA) which provides technical assistance to landowners to allow them to make the best use of their land and irrigation water. Landowners can receive technical assistance regarding improvements to on-farm irrigation systems through the WRA.

**Optimize Conjunctive Management of Imported CVP Water with Groundwater Resources Through Direct Use and Groundwater Banking and Recovery**
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) wells, 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 2026 and 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.

The District continues to make significant progress on ADRoP. This included initiation of 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 has completed design and solicitation of contractors for construction of ADRoP and began construction in early 2025. Construction started with expansion of the WHWTP to increase the capacity for treatment of CVP to potable standards. Construction of the first Aquifer Storage and Recovery (ASR) well for ADRoP began in August 2025 and is scheduled to be completed by the end of 2025. Construction of pipelines and other infrastructure is expected to begin late in the 3rd quarter or early in the 4th quarter of 2025.

**Implement North San Benito Groundwater Sustainability Agency Projects and Management Actions**

The North San Benito Basin GSP (Todd, 2021) identifies projects and management actions to maintain groundwater sustainability. *Projects* are substantial efforts that involve an increase in water supply or a reduction in demand for the GSP Area. *Actions* provide a framework for groundwater management including establishing GSP procedures or policies, filling data gaps with scientific studies or improved monitoring, and providing for funding. Additional description of the following projects and management actions is provided in the GSP. The projects and management actions are currently being evaluated as part of the Periodic Evaluation of the GSP.

**Projects**

- Develop Surface Water Storage (Pacheco Reservoir Expansion Project)
- Expand Managed Aquifer Recharge (MAR)
- Enhance Conjunctive Use
- Enhance Water Conservation.

**Management Actions**

- Improve Monitoring Program and Data Management System (DMS)
- Develop Response Plans
- Enhance Water Quality Improvement Programs
- Reduce Potential Impacts to groundwater dependent ecosystems (GDEs) (Steelhead and Riparian Vegetation)
- Provide Long-term Basin-wide Funding Mechanism
- Provide Administration, Monitoring, and Reporting.

## 6.3 QUANTIFY THE EFFICIENCY OF AGRICULTURAL WATER USE

For the AWMP, each supplier is to quantify the efficiency of agricultural water use within its service area using one or more of the four provided water use efficiency quantification methods developed by DWR and documented in *A Proposed Methodology for Quantifying*

*the Efficiency of Agricultural Water Use* (DWR, 2012). The method chosen must account for all of the applicable water uses:

Method 1: Crop Water Use
Method 2: Agronomic Water Use
Method 3: Environmental Water Use
Method 4: Recoverable Flows

Method 1 (Crop Water Use) and Method 4 (Recoverable Flows) are applicable to SBCWD and are provided below. SBCWD has little agronomic or environmental water use within its service area.

**Method 1: Crop Consumptive Use Fraction**
The Method 1 calculation quantifies the efficiency of applied irrigation water consumed directly for crop growth. The crop consumptive use fractions (CCUFs) for WY 2020- WY 2024 are shown in **Table 21**. The CCUFs range from 71 to 83 percent, a reasonable irrigation efficiency for crops within SBCWD.

**Method 4: Water Management Fraction**
Method 4 documents the amount of water that is recoverable for reuse. For SBCWD, this includes deep percolation of irrigation water, reservoir releases, and groundwater recharge. The water management fractions (WMFs) for WY 2020- WY 2024 are shown in **Table 22**. The WMF ranges from 0.82 in dry years to 1.03 in wet years, with an average of 0.94. This is indicative of the positive water management, primarily as a result of the intentional groundwater recharge that occurs when CVP supplies are available.

**Table 21. Crop Consumptive Use Fraction**

| Water Year | Evapotranspiration of Applied Water (ETAW)[1] (Acre-feet/Year) | Applied Water (AW)[2] (Acre-feet/Year) | Crop Consumptive Use Fraction (No units) |
|---|---|---|---|
| WY 2020 | 78,480 | 94,999 | 83% |
| WY 2021 | 81,297 | 99,617 | 82% |
| WY 2022 | 83,492 | 105,681 | 79% |
| WY 2023 | 72,581 | 97,238 | 75% |
| WY 2024 | 79,175 | 111,069 | 71% |

1. From Table 15. Agricultural Demand by Crop
2. From Table 19 Water Budget Inflows (AF)

**Table 22. Water Management Fraction**

| Water Year | Evapotranspiration of Applied Water (ETAW)[1] (Acre-Feet per Year) | Recoverable Flows (RF)[2] (Acre-Feet per Year) | Applied Water (AW)[3] (Acre-Feet per Year) | Water Management Fraction (No units) |
|---|---|---|---|---|
| WY 2020 | 78,480 | 14,671 | 94,999 | 0.98 |
| WY 2021 | 81,297 | 8,011 | 99,617 | 0.90 |
| WY 2022 | 83,492 | 3,492 | 105,681 | 0.82 |
| WY 2023 | 72,581 | 21,615 | 97,238 | 0.97 |
| WY 2024 | 79,175 | 35,599 | 111,069 | 1.03 |
| **Average** | **79,005** | **16,678** | **101,721** | **0.94** |

1. From Table 14. Water Year Types, CVP Allocations, and Annual Rainfall
2. From Table 16. Groundwater Recharge (AF)
3. From Table 19 Water Budget Inflows

# 7 CLIMATE CHANGE

Climate change factors with the potential to affect the District's ability to meet water demands include:

- Changes in water demand
- Decreased water supply
- Extreme weather events.

### 7.1.1 Changes in Water Demand

Climate change can affect projected water demand. Climate change is likely to increase temperatures and ET and may also increase the duration of high temperature/ET periods ("heat waves"). This would increase water demand for agricultural irrigation, with particular ramifications for summer months. Public outreach will be critical to reduce demand in the high-water use summer months. The WRA has programs to improve efficient irrigation practices and reduce water waste and these programs have and will continue to reduce potential impacts from climate change.

### 7.1.2 Decreased imported water supply

Climate change is likely to affect water supply as well as demand (see Section 4.6). The most significant impact to supply will be the availability of imported water. Snowpack is expected to decrease as the climate warms and CVP allocations will likely decrease and become more variable as a result. In addition, CVP relies in part on the Delta, which is a climate-sensitive habitat where environmental requirements may also reduce CVP allocation.

According to the Intergovernmental Panel on Climate Change, global warming could significantly alter California's hydrologic cycles and water supply. These impacts could include decreased Sierra snowpack, increased temperatures, more severe droughts, sea level rise, and increased floods. Climate models indicate that precipitation as rainfall is expected to increase as snowfall decreases over the Sierra Nevada and Cascade mountain ranges. This reduction in snowpack would directly impact the volume of imported water available for all the District CVP customers, including the District. Sierra snowmelt feeds rivers that flow to the Delta, the source of CVP imported water. The Delta is also at risk from the predicted increases in climate variability associated with climate change. More severe flooding and rising sea levels threaten the waterways that serve as a vital link in the CVP system within the Delta.

Future CVP supply and contract allocations are estimated by Cal Sim II, a DWR tool used to simulate California State Water Project (SWP)/Central Valley Project (CVP) operations. The Cal Sim results use current operations to determine the allocations for the Santa Clara/San Benito Water Districts based on various hydrology. These estimates have been used in the GSP and UWMP to assess the future availability of CVP supply to the District.

### 7.1.3 Decreased local water supply

As discussed in the North San Benito Basin GSP, local climate change (as of 2070) is projected to be warmer and wetter than the current climate. Precipitation and rainfall recharge are expected to increase in winter, and crop water demands are expected to increase in summer. Climate change also may cause more variable weather patterns, including longer and more severe droughts and more intense rainfall and runoff events that make managed aquifer recharge operations more difficult, including managing local reservoir releases for percolation.

Climate Change is already taken into account for future supply projections for all sources to Zone 6. Water use efficiency will be critical to continue to meet the agricultural needs with limited supply.

### 7.1.4 Impacts on Groundwater

As noted in section 7.1.2 and 7.1.3, climate change will impact imported and local water supply. For future scenarios in the GSP, climate change was included in the water supply projections. In all management areas, rainfall recharge was considerably higher in wet years under climate change, but about the same as under historical conditions in dry and normal years. In contrast, pumping was greater by a fairly uniform amount in all years. In management areas without CVP water (Southern and Bolsa), irrigation pumping was only slightly higher under climate change conditions. The increase was larger in Zone 6, Hollister and San Juan Management Areas, because CVP imports were reduced by climate change, which necessitated even greater reliance on groundwater.

Because groundwater serves as a reserve, it is expected that more pumping will occur in years when the CVP allocations are decreased. Climate change is expected to decrease reliability on the CVP system, especially during dry years. However, SBCWD is planning to utilize their full CVP allocation when available through the ADRoP project. Excess imported water is injected into the groundwater aquifer and can recharge the reserve or be recovered and delivered in meet the increased groundwater demand.

### 7.1.5 Extreme Weather Events

Extreme weather events are expected to become more frequent as climate change brings increased climate variability, resulting in more droughts, floods, and heat waves. SBCWD has emergency plans in place for resulting issues that these weather events may cause on their infrastructure.

# 8 WATER USE EFFICIENCY INFORMATION

## 8.1 EFFICIENT WATER MANAGEMENT PRACTICES IMPLEMENTATION AND REPORTING (EWMP)

EWMPs are best management practices (BMPs) implemented to improve water use efficiency. The Federal Standard Criteria requires AWMPs to describe 5 Critical BMPs and 12 Exemptible BMPs. The California Water Code mandates that AWMPs address a specific list of 16 EWMPs: 2 critical and 14 conditional practices. There is overlap between these sets of BMPs; **Table 23** summarizes the EWMPs and the corresponding BMP. Additional BMPs for urban use are discussed in the 2020 UWMP (Todd, 2021) and will be documented in the 2025 UWMP, currently under preparation.

**Table 24** presents the estimates of water use efficiency improvements that have occurred since the 2020 AWMP and estimates of water use efficiency improvements for 5 and 10 years in the future. The schedule and budget to implement EWMPs appears in **Table 25**.

# APPENDIX A

## AWMP Checklist

## USBR Crosswalk

Table 1. DWR AWMP Checklist

| AWMP* Location | Guidebook Location | Description | Water Code Section (or as identified) |
|---|---|---|---|
| 1 | 1.4 | AWMP Required? | 10820, 10608.12 |
| NA | 1.4 | At least 25,000 irrigated acres | 10853 |
| 1 | 1.4 | 10,000 to 25,000 acres and funding provided | 10853 |
| 1 | 1.4 | April 1, 2021 update | 10820 (a) |
| 1.3 | 1.4 A.2 | AWMP submitted to DWR no more than 30 days after adoption, AWMP submitted electronically | 10820(a)(2)(B) |
| 1.4 | 1.4 B | 5-year cycle update | 10820 (a) |
| NA | 1.4 B | New agricultural water supplier after December 31, 2012 - AWMP prepared | 10820 (b) |
| 1 | 1.6, 5 | USBR water management/conservation plan: | 10828(a) |
| NA | 1.6, 5.1 | Adopted and submitted to USBR within the previous four years, AND | 10828(a)(1) |
| NA | 1.6, 5.1 | The USBR has accepted the water management/conservation plan as adequate | 10828(a)(2) |
| See HUA UWMP (Todd, 2021) | 1.4.B | UWMP or participation in area wide, regional, watershed, or basin wide water management planning: does the plan meet requirements of SB X7-7 2.8 | 10829 |
| 1.1 | 3.1 A | Description of previous water management activities | 10826(d) |
| 1.2 | 3.1 B.1 | Was each city or county within which supplier provides water supplies notified that the agricultural water supplier will be preparing or amending a plan? | 10821(a) |
| 1.2 | 3.2 B.2 | Was the proposed plan available for public inspection prior to plan adoption? | 10841 |
| na | 3.1 B.2 | Publicly-owned supplier: Prior to the hearing, was the notice of the time and place of hearing published within the jurisdiction of the publicly owned agricultural water supplier in accordance with Government Code 6066? | 10841 |
| 1.2 | 3.1 B.2 | 14 days notification for public hearing | GC 6066 |
| 1.2 | 3.1 B.2 | Two publications in newspaper within those 14 days | GC 6066 |
| 1.2 | 3.1 B.2 | At least 5 days between publications? (not including publication date) | GC 6066 |
| na | 3.1 B.2 | Privately-owned supplier: was equivalent notice within its service area and reasonably equivalent opportunity that would otherwise be afforded through a public hearing process provided? | 10841 |
| 1.3 | 3.1 C.1 | After hearing/equivalent notice, was the plan adopted as prepared or as modified during or after the hearing? | 10841 |
| 1.3 | 3.1 C.2 | Was a copy of the AWMP, amendments, or changes, submitted to the entities below, no later than 30 days after the adoption? | 10843(a) |

| AWMP* Location | Guidebook Location | Description | Water Code Section (or as identified) |
|---|---|---|---|
| 1.3 | 3.1 C.2 | The department. | 10843(b)(1) |
| 1.3 | 3.1 C.2 | Any city, county, or city and county within which the agricultural water supplier provides water supplies. | 10843(b)(2) |
| 1.3 | 3.1 C.2 | Any groundwater management entity within which jurisdiction the agricultural water supplier extracts or provides water supplies. | 10843(b)(3) |
| 1.3 | 3.1 C.3 | Adopted AWMP availability | 10844 |
| 1.3 | 3.1 C.3 | Was the AWMP available for public review on the agricultural water supplier's Internet Web site within 30 days of adoption? | 10844(a) |
| na | 3.1 C.3 | If no Internet Web site, was an electronic copy of the AWMP submitted to DWR within 30 days of adoption? | 10844(b) |
| 1.4 | 3.1 D.1 | Implement the AWMP in accordance with the schedule set forth in its plan, as determined by the governing body of the agricultural water supplier. | 10842 |
| 2.2 | 3.3 | Description of the agricultural water supplier and service area including: | 10826(a) |
| 2.2.1 | 3.3 A.1 | Size of the service area. | 10826(a)(1) |
| 2.2.2 | 3.3 A.2 | Location of the service area and its water management facilities. | 10826(a)(2) |
| 2.3 | 3.3 A.3 | Terrain and soils. | 10826(a)(3) |
| 2.4 | 3.3 A.4 | Climate. | 10826(a)(4) |
| 2.6 | 3.3 B.1 | Operating rules and regulations. | 10826(a)(5) |
| 2.6.2 | 3.3 B.2 | Water delivery measurements or calculations. | 10826(a)(6) |
| 2.7 | 3.3 B.3 | Water rate schedules and billing. | 10826(a)(7) |
| 2.8 | 3.3 B.4 | Water shortage allocation policies and detailed drought plan | 10826(a)(8) |
| 4 | 3.4 | Water uses within the service area, including all of the following: | 10826(b)(5) |
| 4.2 | 3.4 A | Agricultural. | 10826(b)(5)(A) |
| 4.3 | 3.4 B | Environmental. | 10826(b)(5)(B) |

| AWMP* Location | Guidebook Location | Description | Water Code Section (or as identified) |
|---|---|---|---|
| 4.4 | 3.4 C | Recreational. | 10826(b)(5)(C) |
| 4.5 (see also HUA UWMP) | 3.4 D | Municipal and industrial. | 10826(b)(5)(D) |
| 4.6 | 3.4 E | Groundwater recharge, including estimated flows from deep percolation from | 10826(b)(5)(E) |
| 3 | 3.5 A | Description of the quantity of agricultural water supplier's | 10826(b) |
| 3.1 | 3.5 A.1 | Surface water supply. | 10826(b)(1) |
| 3.2 | 3.5 A.2 | Groundwater supply. | 10826(b)(2) |
| 3.3 | 3.5 A.3 | Other water supplies, including recycled water | 10826(b)(3) |
| 4.8 | 3.5 A.4 | Drainage from the water supplier's service area. | 10826(b)(6) |
| 5.2 | 3.5 B | Description of the quality of agricultural waters suppliers supplies as: | 10826(b) |
| 5.2.1 | 3.5 B.1 | Surface water supply. | 10826(b)(1) |
| 5.2.2 | 3.5 B.2 | Groundwater supply. | 10826(b)(2) |
| 5.2.3 | 3.5 B.3 | Other water supplies. | 10826(b)(3) |
| 5.2.4 | 3.5 C | Source water quality monitoring practices. | 10826(b)(4) |
| 6.1 | 3.6 | Annual water budget based on | **Code** 10826(c) |
| 6.2 | 3.7 C | Identify water | **Code** |
| 6.3 | 3.8 D | Quantify the | **Added to Water Code** |
| 7 | 3.9 | Analysis of climate change effect on future water supplies analysis | 10826(d) |
| 8 | 4 | Water use efficiency | 10826(e) |
| 8.1 | 4.1 | Implement efficient water management practices (EWMPs) | 10608.48(a) |
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| 8.1 | 4.1 B | Implement additional locally cost-effective and technically feasible EWMPs | 10608.48(c) |
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| NA | 6 A | Lack of legal access certification (if water measuring not at farm gate or delivery point) | CCR §597.3(b)(2)(A) |
| NA | 6 B | Lack of technical feasibility (if water measuring not at farm gate or delivery point) | CCR §597.3(b)(1)(B), |
| 9.1 | 6 A, 6 B | Delivery apportioning methodology (if water measuring not at farm gate or delivery point) | CCR §597.3.b(2)(C), |

| AWMP* Location | Guidebook Location | Description | Water Code Section (or as identified) |
|---|---|---|---|
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## Notification Documentation

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## Resolution of Plan Adoption

# APPENDIX D

## SBCWD Water User Handbook, Rules and Regulations

DOCUMENT #
OMA 00064

# REGULATIONS, SPECIFICATIONS

# AND

# STANDARD DETAILS
# (INCLUDING 1996 REVISIONS)




OCTOBER, 1999
(Revised July, 2000)

**SAN BENITO COUNTY WATER DISTRICT**

**REGULATIONS AND SPECIFICATIONS**

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# POLICIES and PROCEDURES

# POLICIES AND PROCEDURES

## 1. PURPOSE

The purpose of these Regulations and Specifications is to provide a policy to be used by the San Benito County Water District in connection with any and all applicants who are required or may desire to construct pipelines and appurtenances to connect to the existing and/or proposed distribution system of the District, whether immediately or in the future.

## 2. WHO IS COVERED

These Regulations and Specifications shall apply to any and all individuals, builders or subdividers who may construct pipelines and appurtenances to be connected to District facilities.

## 3. RESOLUTION ADOPTING POLICY REGARDING SUBDIVISION OF LAND

A "Resolution Adopting District Policy Regarding the Subdivision of Land Within the San Felipe Project's Direct Distribution System in Zone 6" is hereby incorporated in and made a part of these Regulations and Specifications. (See page PP-3.)

## 4. RESOLUTION ESTABLISHING INSPECTION FEES

A "Resolution of the San Benito County Water Conservation and Flood Control District Establishing Inspection Fees Per Ordinance No. 11" is hereby incorporated in and made a part of these Regulations and Specifications. (See page PP-4.)

## 5. ORDINANCE NO. 11

"An Ordinance Establishing the District's Fees for Inspection of Water Lines Within the District's Distribution System and Providing for Modification Thereof by Resolution" is hereby incorporated in and made a part of these Regulations and Specifications. (See page PP-5.)

## 6. ORDINANCE NO. 12

"An Ordinance of the San Benito County Water District Establishing a Backflow Prevention System and Regulations Relating Thereto" is hereby incorporated in and made a part of these Regulations and Specifications. (See page PP-6.)

## 7. AGREEMENT

Before issuing final approval to an individual, builder or subdivider to construct and/or connect to the District's distribution system, an Agreement will be required binding the individual, builder or subdivider to certain terms and/or conditions relative to the proposed project. The District shall determine the terms and conditions of such an Agreement.

## 8. APPLICATION FOR FIRE PROTECTION

Any and all individuals, builders or subdividers intending to use District facilities for the purpose of Fire Protection shall provide the District with plans for such facilities. An Application for Fire Protection must be completed, approved by the District, and recorded in the San Benito County Courthouse by the applicant. The Application for Fire Protection is hereby incorporated in and made a part of these Regulations and Specifications. (See page PP-16.) This application will be in addition to any other agreements or permits required by the District.

Maintenance of all fire protection appurtenances is the responsibility of the applicant. Approval of the Fire Protection Application by the District does not relieve the applicant of these responsibilities.

## 9. PERMITS

Any connection to or work around U. S. Bureau of Reclamation Facilities shall require a Bureau permit. This specifically includes work within right-of-ways and easements of the U.S. Bureau of Reclamation. The individual, builder or subdivider shall be responsible for acquiring and following the requirements of said Bureau permit.

A copy of the Bureau "Outline of Process for Permits and Consents" is hereby incorporated in and made a part of these Regulations and Specifications. (See page PP-17.) Permits will be submitted to the District for forwarding to the U.S. Bureau of Reclamation.

## 10. SUPPLEMENTAL WATER SYSTEM

Any and all individuals, builders or subdividers intending to use San Felipe Project water for supplemental water purposes shall be required to enter into a Contract with the District. Said Contract shall include, but not be limited to, the following conditions:

(a) The individual, builder or subdivider shall acknowledge that the water supply by the District shall be a supplemental source only.

(b) The individual, builder or subdivider shall be responsible for the quality of the water in terms of potability.

(c) The individual, builder or subdivider shall be responsible for adequate storage of the water.

(d) The individual, builder or subdivider shall hold the District, its employees and agents, harmless from any claim of liability with regard to the supplemental water delivery.

RESCINDED
By Res. No. 98-14

RESOLUTION NO. 88-04

RESOLUTION ADOPTING DISTRICT POLICY REGARDING
THE SUBDIVISION OF LAND WITHIN THE SAN FELIPE PROJECT'S
DIRECT DISTRIBUTION SYSTEM IN ZONE 6

WHEREAS, each subdivider shall construct at his sole expense, a pipeline from the District's subsystem onto all parcels of 5 (five) acres or more intended to be, or currently served by the District's direct distribution system; and

WHEREAS, each 5 (five) acre or larger parcel shall be provided with a tee at the main line, a below ground valve and a blind flange of a size to be determined by the District. At the option of the subdivider, an above ground riser may be installed on each parcel. The construction of the riser shall be in strict accordance with all District Regulations and Specifications; and

WHEREAS, when the subdivider installs above ground risers, he shall provide a meter specified by the District and manufactured by the Sparling Instruments Company, Inc. The subdivider shall also provide the District with the new Assessor's Parcel Number, the name and address of the parcel owner, and the serial number and size of the meter being installed on each particular parcel; and

WHEREAS, all subdividers shall, prior to construction, provide the District with two sets of plans which shall include existing District facilities and all pipelines and appurtenances proposed to be built. At the option of the District, said plans may be submitted to the District's Engineer for his review and approval. The costs of this review shall be borne by the subdivider; and

WHEREAS, the subdivider shall, prior to construction, submit a list of all materials (pipeline, valves, etc.) proposed for the project. All materials shall meet the District's requirements as found in the Regulations and Specifications; and

WHEREAS, all construction shall be inspected by an inspector designated by the District. If full time inspection is required, the costs and expenses of said inspection shall be borne by the subdivider; and

WHEREAS, all pipeline testing shall be in accordance with the District's Regulations and Specifications and shall be witnessed by the District's inspector; and

WHEREAS, when the construction and testing have been completed and accepted by the District, the subdivider shall deed the lines and appurtenances, free of all encumbrances, to the District. The deed dedicating the system to the District shall be accompanied by "as-built" drawings consisting of one set of reproducible mylar prints and three sets of black and white prints; and,

WHEREAS, a 20' permanent easement over the pipeline shall be dedicated to the District for the purpose of maintenance and repair of the system. A metes and bounds description shall be provided to the District and also recorded in the San Benito County Recorder's office.

NOW, THEREFORE, BE IT RESOLVED and ORDERED by the Board of Directors of San Benito County Water Conservation and Flood Control District that this Resolution be incorporated as District policy regarding the subdivision of land within the San Felipe Project's direct distribution system in Zone 6.

PASSED AND ADOPTED by the Board of Directors of the San Benito County Water Conservation and Flood Control District this 27th day of April, 1988, by the following vote:

AYES: DIRECTORS: Cullum, Gabriel, Overfelt and Porteur.
NOES: DIRECTORS: None.
ABSENT: DIRECTORS: Svanson.

Harry J. Cullum, President.

ATTEST: Mary L. Malone

RESOLUTION NO. 88-16

RESOLUTION OF THE SAN BENITO COUNTY WATER CONSERVATION AND FLOOD CONTROL DISTRICT ESTABLISHING INSPECTION FEES PER ORDINANCE NO. 11

WHEREAS, Ordinance No. 11 provides that the San Benito County Water Conservation and Flood Control District shall initially establish inspection fees and at least annually thereafter, review the fee structure and

WHEREAS, the Board of Directors has reviewed a proposed fee structure and is prepared to establish initial inspection fees,

NOW, THEREFORE, the Board of Directors of the San Benito County Water Conservation and Flood Control District resolve as follows:

1. Inspection fee schedule: The following fees shall be charged for District inspection of water facilities, which fees are based upon the estimated cost of construction of the water lines and appurtenances:

| Estimated cost of construction | | Inspection fee |
|---|---|---|
| First | $50,000 | 3% |
| Next | $150,000 | 2% |
| Amount exceeding | $200,000 | 1 1/2% |

2. Review of fee schedule: The fee schedule established herein shall be reviewed at least annually. Unless earlier reviewed, this schedule shall be placed on the Board's December agenda for each year to determine if the established fee structure adequately meets the needs of the District.

AYES: DIRECTORS: Cullum, Gabriel, Overfelt and Porteur.

NOES: DIRECTORS: None.

ABSENT: DIRECTORS: Swanson.

SAN BENITO COUNTY WATER CONSERVATION AND FLOOD CONTROL DISTRICT

Harry J. Cullum, President

ATTEST: Mary L. Malone
Mary L. Malone, District Secretary

# RESOLUTION NO. 98-14

## A RESOLUTION OF THE SAN BENITO COUNTY WATER DISTRICT BOARD OF DIRECTORS RESCINDING RESOLUTION 88-04 AND ESTABLISHING POLICY REGARDING DISTRIBUTION EXTENSION AND/OR MODIFICATION FOR PARCELS IMPACTED BY THE SUBDIVISION OF LAND WITHIN THE SAN FELIPE PROJECT DISTRIBUTION SYSTEM SERVICE AREA IN ZONE 6

**WHEREAS,** Resolution 88-04 resolution adopting District policy regarding the subdivision of land within the San Felipe Project direct distribution system in Zone 6 provides for the expansion or extension of the San Felipe Project's direct distribution system to parcels of five (5) acres or more intended to be or currently served by the District' s direct distribution system; and

**WHEREAS,** experience has shown that certain modifications to that policy are necessary; and

**WHEREAS,** experience has shown that subdivision regularly reduces parcel sizes to the extent that the current delivery meters are larger than necessary and inappropriate for accurate metering and operation of the District system.

**NOW, THEREFORE BE IT RESOLVED** by the Board of Directors of the San Benito County Water District that:

1. Resolution No. 88-04 is rescinded.
2. The landowner shall be responsible for the extension and/or modification of the District's distribution system to provide service to all parcels of five (5) acres or more resulting from the subdivision of the lands currently served or intended to be served by the District's San Felipe Distribution System.
3. The landowners shall fulfill their responsibility to extend and/or modify the District's distribution system at the time of the subdivision of the land and prior to recordation of the Final Map.
4. The extension and/or modification of the District's distribution system shall be coordinated with San Benito County to the maximum extent practical.
5. The location, design and specifications of all extensions, additions and modifications to the District's San Felipe Distribution System shall be

determined solely and conclusively by the District except as expressly provided herein;

6. The design and construction shall be in strict accordance with District regulations and specifications then in effect and shall be reviewed and approved by the District Engineer. The cost of design review including, but not limited to facilities, land rights, document preparation and administration shall be borne by the landowner. The charge will be in accordance with District Rules and Regulations from time to time in effect.
7. The landowner design submittal shall include a list of all materials (pipe fittings, valves, etc), proposed for the project.
8. All materials shall meet the District's regulations and specifications then in effect and be approved by the District Engineer.
9. All extensions, additions and modifications shall be installed by the District at the landowners expense unless the landowner elects to undertake the installation.
10. The landowner, at the landowners expense, ~~may~~ *shall* have the facilities installed by a competent and experienced contractor who is licensed for the construction of water facilities by the State of California and approved by the District Engineer and shall indemnify and hold the District harmless from any personal injury, death or property damage resulting therefrom. *(As amended by Resolution No. 2000-15 on 07-17-00)*
11. The District reserves the right to construct, with its own personnel or by contract, taps on existing pipelines and extensions involving complicated connections to or interference with the District's facilities; such construction shall be at the landowners expense.
12. All facilities constructed in accordance with these regulations shall, upon acceptance by the District, become the property of the District and shall there after be operated and maintained by the District as a part of the San Felipe Distribution System.
13. New facilities shall be located only on land owned by the District in fee, in a public street or highway right-of-way or an easement granted to the District within an area satisfactory to the District.
14. The landowner will cause to be conveyed or granted to the District without cost to the District such land and/or easements as the District determines to be necessary for the extension, addition or modification of the San Felipe Distribution System.
15. All materials and construction undertaken by the landowner shall be inspected by an inspector designated by the District Engineer. Costs and expenses of said inspection shall be in accordance with District rules and regulations and shall be borne by the landowner.
16. Designs, drawings, material lists and land and easement descriptions may be included in the subdivision map and improvement drawings required for the subdivision by San Benito County. This landowner cost reduction measure shall be subject to the prior approval of the District Manager.

17. Where the modification of the distributions system require the replacement of existing valves and meters the landowner shall be credited the salvage value of the valves, fittings and/or meters as determined solely and conclusively by the District.

**NOW THEREFORE BE IT RESOLVED** by the Board of Directors of the San Benito County Water held on Wednesday, July 29, 1998 by the following vote.

| | | |
|---|---|---|
| AYES: | DIRECTOR | Rupert, Gonzales, Perry, Buzzetta, Swanson |
| NOES: | DIRECTOR | None |
| ABSENT: | DIRECTOR | None |

*/s/ Robert M. Swanson*
Robert Swanson, President

ATTEST: */s/ Janet L. Torres*
Janet L. Torres, Administrative Services Officer

ORDINANCE NO. 11

AN ORDINANCE ESTABLISHING THE DISTRICT'S FEES FOR INSPECTION OF WATER LINES WITHIN THE DISTRICT'S DISTRIBUTION SYSTEM AND PROVIDING FOR MODIFICATION THEREOF BY RESOLUTION

BE IT ORDAINED by the Board of Directors of the San Benito County Water Conservation and Flood Control District as follows:

Section 1. Intent of Ordinance: The District personnel presently inspects water lines for new construction or developments located within the District's distribution system for the purpose of insuring compliance with the District's construction standards. It is the intention of this ordinance to establish inspection fees so that the District may recover its costs for such inspection.

Section 2. Inspection Fees: Inspection fees charged for District inspection of water facilities shall be based upon the estimated cost of the construction of the water lines and appurtenances and shall be established at least annually by resolution of the Board of Directors.

Section 3. Payment of Fees: The fees established pursuant to the authority granted in this ordinance shall be paid in advance of the District's inspection. In the event fees are not so paid in advance, the District shall have no obligation to perform any such inspection until such fees are paid.

Section 4. The fee schedule established pursuant to the authority granted in this ordinance shall be reviewed at least annually. Any modification of the fee schedule shall be accomplished by resolution of the District Board of Directors.

Section 5. Constitutionality: If any section or phrase of this ordinance is for any reason held to be unconstitutional, such decision shall not affect the validity of the remaining portions of this ordinance.

Section 6. This ordinance shall be in full force and effect at 12:01 a.m. on the 30th day after its passage and shall be published once in the Evening Free Lance, a newspaper of general circulation published and printed in the County of San Benito, State of California, together with the names of the members of the Board of Directors voting for and against same prior to 15 days from passage hereof.

Passed and adopted this 28th day of December, 1988, by the following vote:

AYES: DIRECTORS: Cullum, Gabriel, Overfelt and Porteur.

NOES: DIRECTORS: None.

ABSENT: DIRECTORS: Swanson.

SAN BENITO COUNTY WATER CONSERVATION AND FLOOD CONTROL DISTRICT BOARD OF DIRECTORS

By Harry J. Cullum
Harry J. Cullum, President

ATTEST:
Mary L. Malone
Mary L. Malone, District Secretary

ORDINANCE NO. 12
AN ORDINANCE OF THE SAN BENITO COUNTY WATER DISTRICT
ESTABLISHING A BACKFLOW PREVENTION SYSTEM AND REGULATIONS
RELATING THERETO

The Board of Directors of the San Benito County Water District does ordain as follows:

I. PURPOSE

The purpose of this Ordinance is to establish reasonable precautions for the protection of San Benito County Water District's agricultural and nonagricultural water users from a potential hazard of receiving or consuming water that may contain chemicals, while continuing to allow (1) chemigation practices (the injection of necessary plant nutrients and agricultural chemicals into the farmer's on-farm irrigation facilities), (2) tailwater reuse, and drainage recycling, (3) delivery of water to commercial facilities (such as manufacturers, food and fiber processing facilities, and other businesses), (4) agricultural chemical tank filling operations, and (5) commingling well water with District water.

Water pressure in the District's system is greater than the pressure in a water user's system when water is being delivered under normal operating conditions. However, water pressure in the District's pipeline may suddenly drop below the pressure in a water user's system in the event of a break in the District's pipeline or a power failure causing a shutdown of the District's pumps. This drop in pressure may reverse the pressure gradient, thereby making it possible for the water in the water user's system to be drawn or flow back into the District's pipeline.

If a water user is injecting chemicals into an on-farm pipeline system or mixing chemicals with water from the District's system or recycling tailwater or drainwater or operating a well connected to the same system when the pressure in the District's system drops below the pressure in his on-farm system, the diluted chemical and/or well water may be drawn into the District's pipeline. The same problem may occur in connection with certain deliveries of nonagricultural (M&I) water.

II. PERMITS

A. Chemigation. All agricultural water users either (1) conducting chemigation practices (the injection of necessary plant nutrients, agricultural chemicals, or any other materials into the farmer's on-farm irrigation facilities), or (2) reusing tailwater or drainage recycling or (3) commingling well water through facilities or equipment interconnected with the District's water distribution system shall be required to install a District approved backflow prevention device and obtain a Chemigation Permit from the District. A separate backflow prevention device shall be required at each location where any of the above practices are taking place. Moving of the device from one location to another shall not be permitted. Permit applications shall be made on forms to be provided by the District, which forms shall include the Delivery Meter No., Assessor's Parcel No., Well No., the type of activity (chemigation, tailwater reuse, or commingling of well water) to be conducted at the site, and such other terms and conditions as the District deems advisable and in the best interest of the District. Installation, operation, and maintenance of any equipment required by this Ordinance shall comply with the permit. Such permit shall have a term of five years unless (1) delivery of water to the site by the District is discontinued, or (2) the nature of the service category is changed, or (3) specified otherwise therein, or (4) it is revoked in accordance with this Ordinance.

B. Chemical Tank Filling. 1/

All agricultural water users and commercial agricultural chemical applicators conducting agricultural chemical tank filling or mixing with water supplied from the District's distribution system shall obtain a permit from the District for each site to be used for such activities. Permit applications shall be made on forms to be provided by the District, which forms shall include the Delivery Meter No., Assessor's Parcel No., Well No., and such other terms and conditions as the District deems advisable and in the best interest of the District. Installation, operation, and maintenance of any equipment required by this Ordinance shall comply with the permit. Such permit shall have a term of five

years unless (1) delivery of water to the site by the District is discontinued, or (2) the nature of the service category is changed, or (3) specified otherwise therein, or (4) it is revoked in accordance with this Ordinance.

C. Nonagricultural (M&I). All nonagricultural (M&I) water users within categories 3 through 11 of Section III.B shall obtain a permit from the District for each M&I delivery location. Permit applications shall be made on forms to be provided by the District, which forms shall include the Delivery Meter No., Assessor's Parcel No., Well No., the type of activity to be conducted at the site, and such other terms and conditions as the District deems advisable and in the best interest of the District. Installation, operation, and maintenance of any equipment required by this Ordinance shall comply with the permit. Such permit shall have a term of five years unless (1) delivery of water to the site by the District is discontinued, or (2) the nature of the service category is changed, or (3) unless specified otherwise therein, or (4) it is revoked in accordance with this Ordinance.

1/ All agricultural water users and commercial agricultural chemical applicators conducting agricultural chemical tank filling or mixing with water supplied from the District's distribution system are also required to do so only in compliance with Section 6610 of Title 3 of the California Administrative Code, as the same may now or hereafter be amended, regarding backflow prevention. Commercial (for hire) applicators are also required to comply with Section 6630, Title 3 of that code, as the same may now or hereafter be amended, regarding conspicuous and legible marking of spray and mixing equipment.

As of the effective date of this Ordinance, Sections 6610 and 6630 provide as follows:

Section 6610. "Each service rig and piece of application equipment that handles pesticides and draws water from an outside source shall be equipped with an air gap separation, reduced pressure principle backflow prevention device, or double check valve assembly. Backflow protection must be acceptable to both the water purveyor and the local health department."

Section 6630. "Each person engaged for hire in the business of pest control shall keep each ground rig, service rig, and similar equipment used for mixing or applying pesticides conspicuously and legibly marked with either the business' name, or with "licensed Pest Control Operator," "Fumigation Division," Licensed Funigator" or substantially similar wording, and the pest control operator license number of the person or firm. The markings shall be large enough to be readable at a distance of 25 feet.

III. EQUIPMENT REQUIREMENTS

A. General. Except as otherwise provided in Paragraph B of this Section III, the following table specifies the type of backflow prevention device or equipment required to be installed by the permittee in the specified conditions. All equipment installed pursuant to permits issued under this Ordinance shall be (1) as specified and approved by the District, (2) installed within 25 feet upstream of any other piped connections or injection point(s) whichever is closer to the District's delivery for which the permit is granted, (3) a permanent fixture at the location for which the permit is issued for a period of not less than one (1) year, and (4) be installed by the water user.

1. Distance from District Delivery

Upon special application by the water user and a written finding by the District Manager that the circumstances warrant a variance from the standard distance requirement (25 feet) set forth herein, the District Manager may issue permits allowing a device to be installed at a distance greater than 25 feet providing; (a) that such distance shall at no time exceed 75 feet from the District's delivery, (b) that both the water user and landowner(s) certify and attest that there are no piped connections of any size or type upstream of the proposed installation point, and (c) that the device is visible and readily accessible.

III. B. SPECIFIED EQUIPMENT

Water or Service Category
and Protection Device Required

| WATER SERVICE CATEGORY | PROTECTION DEVICE REQUIRED 2/ TO BE INSTALLED BY THE WATER USER |
|---|---|
| 1. Agricultural deliveries discharging into on-farm pipelines injecting agricultural chemicals, reusing tailwater, recycling drainage water, or commingling well water. | A. Air Gap Separation, or<br>B. Double Chemigation Valve Assembly. 3/ |
| 2. User owned piped facilities capable of being used for tank filling for the Purpose of mixing or applying chemicals. | A. Air Gap Separation, or<br>B. Double Chemigation Valve Assembly. 4/ |
| 3. Motels, restaurants, apartments, public and private meeting places, schools, hospitals, medical buildings, nursing and convalescent homes, clinics and offices. | A. Air Gap Separation, or<br>B. Approved Double Check Valve Assembly. |
| 4. Public or private parks, playgrounds, cemeteries, golf courses. | A. Air Gap Separation, or<br>B. Approved Double Check Valve Assembly. |
| 5. Canneries, packing houses, gins, reduction plants, food processors, cold storage facilities, vehicle washing facilities, feed lots, feed processors and animal containment facilities. | A. Approved Air Gap Separation, or<br>B. Reduced Pressure Principle Backflow Preventer. |
| 6. Chemical plants - supplying, manufacturing, processing, compounding or treating. | A. Air Gap Separation. |
| 7. Metal manufacturing, cleaning, processing, or fabrication plants or shops. | A. Air Gap Separation, or<br>B. Approved Reduced Pressure Principle Backflow Preventer. |
| 8. Oil or gas production, storage or transmission properties or facilities. | A. Air Gap Separation, or<br>B. Approved Reduced Pressure Principle Backflow |
| 9. Sewage treatment and storm drain facilities. | A. Air Gap Separation, or<br>B. Reduced Pressure Principle Backflow Preventer. |

| | | |
|---|---|---|
| 10. | Vehicle maintenance or repair facilities. | A. Air Gap Separation, or<br>B. Reduced Pressure Principle Backflow Preventer. |
| 11. | Any facility, structure or operation not covered above or a private water system, upon a finding by the District Manager that a protection device of the type he specifies is necessary to provide the protection required by these Regulations. | A. Air Gap Separation, or<br>B. Reduced Pressure Principle Backflow Preventer, or Approved Double Check Value Assembly. |

2/ If a single delivery provides more than one category of service from a single outlet, the protection device required shall be that as required for the high hazard use. Required backflow prevention devices for service categories 3-11 were obtained from the State of California, Health and Welfare Agency, Department of Health Services' Manual of Cross Connection Control Procedures and Practices. An "approved" device for these categories shall be one which has been tested, approved and listed by the University of Southern California, Foundation for Cross-Connection Control and Hydraulic Research Requirements for all service categories are subject to review and revision.

3/ The term "chemigation valve" shall mean a specially equipped flanged check valve that permits no leakage in a direction reverse to the normal flow. The closure element (e.g. clapper, disc, poppet, or other design) shall be internally weighted or loaded to promote rapid and positive closure. The valve shall be additionally equipped with: (1) A nominal 2" diameter combination air vent/vacuum relief and minimum 4" diameter inspection port located on the top of the valve upstream of the closure element, (2) a minimum 3/4" orifice size automatic low pressure drain located on the bottom of the valve upstream of the closure element, and (3) 1 nominal 3/4" diameter female thread test port located on the side of the valve downstream of the closure element. The approval of the chemigation valve by the District will be based on a favorable laboratory evaluation report by an approved independent testing laboratory. A double chemigation valve assembly means two chemigation valves in series, the second (downstream) valve need not be equipped with the 2" vacuum relief valve.

4/ Chemical tank filling at delivery sites identified as low pressure deliveries pursuant to Appendix A. shall be done only through the use of an Air Gap Separation--direct hose connections are not allowed.

IV. IMPLEMENTATION AND INSTALLATION SCHEDULE

A. Effective immediately, any water user or his designee who desires to conduct chemigation practices (the injection of necessary plant nutrients and agricultural chemicals into the farmer's on-farm irrigation facilities), or reuse tailwater or recycle drainwater, or commingle well water or fill his chemical tank or conduct any of the M&I water service activities listed in Section III. B shall obtain a permit and install the equipment required by this Ordinance prior to any such activity.

B. All backflow prevention devices shall be installed no later than July 1, 1990.

C. Applications for the permits required by this Ordinance shall be filed with the District office at 30 Mansfield Road, Hollister, California (P. O. Box 899, Hollister, CA 95024) at least 60 days prior to (1) the scheduled installation date or (2) the chemigation or reuse of tailwater or commingling of well water, whichever comes first, so that the permit can be issued by the District and the equipment can be timely acquired and installed by the water user.

V. DEVICES PROVIDED BY DISTRICT

Chemigation valves, approved double check valves and reduced pressure principal backflow preventers required by this Ordinance shall be made available by the District at the District's cost which cost shall be billed to the installing water user. Title to such devices shall remain in the District.

VI. INSTALLATION, MAINTENANCE, AND REPAIR

A. The purchase and installation of the devices on facilities required under this Ordinance shall be at the sole expense of the permittee (water users).

B. Normal maintenance and repair of the devices or facilities required under this Ordinance will be performed by the District provided however, that damage inflicted by abuse shall be billed to the water user.

VII. INSPECTIONS AND TESTING

A. The District will inspect all new equipment installations for compliance with this Ordinance.

B. All equipment installed pursuant to this Ordinance shall be inspected and tested at least annually pursuant to a schedule established by the District.

C. All permittees shall assist and cooperate with District testing and inspection personnel to the extent reasonably necessary.

VIII. ENFORCEMENT

A. Lack of Equipment or Permit

1. Water deliveries to sites and for activities subject to requirements established by this Ordinance, including installation deadlines, and specified equipment as listed in Section III. B above, but for which there is no permit on file and no equipment installed pursuant to this Ordinance, shall be terminated upon 15 days written notice, except that the termination for (1) prohibited tank filling activities or (2) a water user's second failure to obtain a required permit and install the required equipment shall be effective immediately. When the user obtains the required permit, water service will be restored, but the activities covered by this Ordinance shall continue to be prohibited until installation of the equipment required under this Ordinance.

2. Water deliveries to sites and for activities covered by this Ordinance and for which the required equipment has been installed without the required permit shall be terminated upon 30 days written notice.

3. In addition to the termination of water service as provided in paragraphs 1 and 2 above, chemical tank filling which does not comply with this Ordinance shall be reported to the appropriate regulatory agency.

B. Improper Equipment. Upon a finding by the District that improper equipment has been installed or the equipment has been deficiently installed, the water user shall be given 30 days written notice to install the proper equipment or otherwise correct the deficiency. If the water user fails to correct the deficiency within the 30 day period, water service to the delivery site shall be terminated.

C. Equipment Test Failure

1. Upon a finding by the District that equipment required by this Ordinance has been bypassed, altered, or otherwise made nonfunctional, the provision of Section VIII. A.1 (Lack of Equipment) shall be applicable and water service shall be terminated upon five days written notice (immediately in the case of chemical tank filling) until proper functioning is restored and the equipment is retested and recertified.

2. Where equipment is found to be operational but otherwise fails its periodic test by the District, the water user shall cease regulated activities until repairs have been made and the device has been retested and recertified..

IX. MISCELLANEOUS

A. The District Manager is hereby authorized and directed to do any and all things necessary to implement and effectuate this Ordinance.

B. All District rules and Regulations pertaining to the delivery of, use of, and payment for water shall remain in full force and effect, except as otherwise provided herein.

C. An appeal from any decision or determination made pursuant to this Ordinance may be made to the Board of Directors. Any such appeal shall be in writing and shall be filed with the Secretary of the District within 15 days after the decision or determination of the District Manager. In the absence of such an appeal, the decision or determination shall be final. In the event of an appeal, the decision of the Board shall be final.

D. The District Manager shall provide a general summary of the provisions of this Ordinance to all landowners and water users within the District.

X. INVALIDITY

Should any provision of this ordinance be found by a court of law to be unconstitutional, unlawful, or invalid, such court decision shall not affect the validity of the remaining provisions of this ordinance.

XI. EFFECTIVE DATE

This ordinance shall be in full force and effect at 12:01 a.m. on the 30th day after its passage and shall be published once in the Pinnacle, a newspaper of general circulation published and printed in the County of San Benito, State of California, together with the names of the members of the Board of Directors voting for and against same prior to 15 days from passage hereof.

Passed and adopted this 9th day of APRIL, 1990, by the following vote.

AYES: DIRECTORS: Swanson, Porteur, Gabriel and Cullum

NOES: DIRECTORS: None

ABSENT: DIRECTORS: Overfelt

SAN BENITO COUNTY WATER DISTRICT

Robert M. Swanson, President

ATTEST: Kathleen Kramer

Kathleen Kramer, District Secretary

Recording requested by and
after recording, return to:

SAN BENITO COUNTY WATER DISTRICT
P. O. Box 899
Hollister, CA 95024-0899

## APPLICATION FOR SUPPLEMENTAL FIRE PROTECTION

The undersigned _____ whose property is located at _____, APN _____ does hereby request the use of the San Benito County Water District facilities for the purpose of supplemental FIRE PROTECTION.

The applicant understands that all necessary appurtenances for the connection to District facilities shall be the responsibility of the landowner or his lessee. Plans for all such appurtenances shall be submitted to the District's Chief of Operations at the District Office, 30 Mansfield Road, Hollister, California 95023, (408) 637-8218 and the California Department of Forestry, (408) 637-4475 for their approval, prior to installation.

It is further understood that the undersigned shall be responsible for the cost, installation and maintenance of said appurtenances.

THE UNDERSIGNED UNDERSTANDS AND AGREES THAT ALTHOUGH WATER FROM THE DISTRICT'S DISTRIBUTION SYSTEM MAY BE USED FOR THE PURPOSE OF FIRE PROTECTION, THE DISTRICT CANNOT GUARANTEE THE AVAILABILITY OF WATER FOR SUCH PURPOSES. THE UNDERSIGNED, AND HIS AGENTS, SUCCESSORS, AND ASSIGNS, AGREE TO HOLD THE DISTRICT AND ITS AGENTS AND EMPLOYEES FREE AND HARMLESS FROM ANY LOSS OR DAMAGE INCURRED AS A RESULT OF INADEQUATE WATER OR PRESSURE IN THE DISTRIBUTION SYSTEM FOR FIRE FIGHTING PURPOSES.

The undersigned set their hand and seal this _____ day of _____, 19___.

_____ Applicant

_____ District

**ALL-PURPOSE ACKNOWLEDGMENT**

State of _____
County of _____

On _____ (DATE) before me, _____ (NAME, TITLE OF OFFICER - E.G. "JANE DOE, NOTARY PUBLIC")

personally appeared _____ (NAME(S) OF SIGNER(S))

☐ personally known to me - OR - ☐ proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

Witness my hand and official seal.

_____ (SIGNATURE OF NOTARY)

CAPACITY CLAIMED BY SIGNER

☐ INDIVIDUAL(S)
☐ CORPORATE _____
OFFICER(S) _____ (TITLE(S))
☐ PARTNER(S)
☐ ATTORNEY-IN-FACT
☐ TRUSTEE(S)
☐ SUBSCRIBING WITNESS
☐ GUARDIAN/CONSERVATOR
☐ OTHER: _____

SIGNER IS REPRESENTING:
(NAME OF PERSON(S) OR ENTITIES)

_____
_____
_____

ATTENTION NOTARY: Although the information requested below is OPTIONAL, it could prevent fraudulent attachment of this certificate to unauthorized document.

THIS CERTIFICATE MUST BE ATTACHED TO THE DOCUMENT

Title or Type of Document _____

Number of Pages _____ Date of Document

United States Department of the Interior
Bureau of Reclamation

Outline of Process for Permits and Consents

The following is to be used as a guide to insure that all necessary information is submitted:

1. Copies of all correspondence received from applicant.
2. An initial deposit fee of $200.00 from the applicant.
3. Letter from applicant agreeing to pay all administrative fees.
4. Six (6) legible copies of all pertinent maps, and drawings including plan and profile.
5. District comments, suggestions, land use stipulations, and recommendations.
6. Description of environmental impact or any available environmental statement or report with respect to the application.
7. Name and mailing address of individual, partnership or corporation to whom the document is to be issued. If partnership, names of partners composing partnership. If a corporation, state in which the corporation was organized.
8. Any other supporting information.

All of the above information should be delivered to the Water District for mailing to the Tracy Office.

When package is received by Tracy Office:

1. Sent to Engineering for review
2. Prepare CEC and draft of document
3. Letter to Regional Office with package ATTN: MP 401
4. Document received by Tracy Office from MP 401
5. Document sent to Water District for processing
6. Document received from Water District
7. Document to MP 401 for execution
8. Document received from MP 401
9. Document sent to Water District

To insure the continuity of the process all additional information should be processed by the Water District first.

# DESIGN CRITERIA

# DESIGN CRITERIA

## 1. PIPELINE CRITERIA

(a) Underground Pipe - All pipelines shall have a minimum 36" cover to finish grade, and shall be laid at uniform grades so as to limit high points in the pipeline.

All high points shall have air valves as shown on the standard details. All pipelines shall be designed on plan and profile sheets. All tapping valves and sleeves are subject to District approval and shall be Mueller cast-iron type or equal for sizes 12" and under. Sizes over 12" shall be Romac "SST" tapping sleeves. A tapping sleeve cannot be used on the existing RPM pipe (all pipe 27" and larger in Subsystem 9 and 10).

(b) Pipeline Size Requirements - The minimum size pipeline shall be 8" diameter and the maximum size pipeline shall be 12" inside diameter unless otherwise approved by the District. All pipelines larger than 12" inside diameter shall be designed and constructed by the District at the expense of the Contractor.

The pipeline diameter shall equal or exceed the nominal diameter for any delivery served from the pipeline.

All pipelines shall be looped when practical and appropriate in the opinion of the District.

Pipelines shall be sized along the following criteria:

| Size | Cumulative Service Area |
|---|---|
| 8" | 35 acres or less |
| 10" | 70 acres |
| 12" | 125 acres or more |

or lesser size (8" minimum) used when a hydraulic analysis is performed.

The size of delivery pipe shall be no greater in diameter than the line pipe to which it is teed or tapped.

## 2. METER CRITERIA

All deliveries shall be sized from the table below according to the number of acres it serves.

| Max. Acres Served | Min. Nominal Delivery Meter Size |
|---|---|
| 5 | 2" |
| 25 | 4" |
| 60 | 6" |
| 80 | 8" |
| Over 80 acres | Consult District |

Piping valves, vertical flow meters, and fittings shall match the nominal delivery meter size, excepting Type C, E, and F deliveries (as shown in the standard details) where the piping size between the delivery meters and the buried butterfly valve shall be approved by the District.

Piping valves, appurtenances, and vertical flow meters are specified in Division 5, "Mechanical" and pipe and fittings are specified in Division 3, "Pipeline" of these standard specifications.

## 3. PUMPING STATION/TREATMENT FACILITY

Should the proposed project contain either a private pumping station or private treatment facility, the District shall review the proposed plans and specifications with regard to location, size, capacity, type, and method of operation. This review is in addition to any required local, State, or Federal reviews.

No pump station will be allowed or constructed that will, in the opinion of the District Engineer, have a negative impact on either the flow or pressure in any District facilities.

## 4. ENCROACHING FACILITIES

Encroachments within SBCWD pipeline corridor rights-of-way shall be held to the practicable minimum. Underground encroachments in areas where SBCWD facilities such as pipeline, thrust blocks and appurtenances are located shall also be held to the practicable minimum.

Transverse pipeline or conduit crossings of the type described in the specifications generally will be allowed if they comply with the criteria presented herein and in the Standard Details, and if no other practicable alternative exists.

Longitudinal pipeline or conduit encroachments of SBCWD pipeline rights-of-way generally will not be allowed. However, in special cases where no other feasible alternative exists, short longitudinal encroachments complying with the guidelines presented herein may be allowed. In no case will natural gas, petroleum-product, or other pipelines with cathodic protection be allowed in a longitudinal encroachment, nor will longitudinal encroachments be permitted in the area of a planned SBCWD pipeline.

Generally, individual lots in a subdivision will not be allowed to encroach on SBCWD pipeline rights-of-way. In some instances, however, individual lots may be allowed if no other feasible alternative exists. In that event, the purchaser of the lot must sign an easement agreement and comply with all the encroachment requirements.

Structures that may not be constructed in, on, or along SBCWD pipeline rights-of-way include buildings, garages, carports, trailers, longitudinal curbs, gutters, sidewalks, longitudinal concrete or gunite lined drainage channels, street light standards, supports for large signs, longitudinal fences, power or telephone poles and similar surface structures.

No trees, vines, or deep-rooted plants will be allowed within the SBCWD pipeline rights-of-way.

High voltage direct current power lines shall not be permitted to encroach on the SBCWD pipeline rights-of-way, except in unusual circumstances. Individual power services crossing the SBCWD pipeline will be allowed where no alternative exists. Generally, power crossings will be limited to distribution lines and a very limited number of street lights and traffic signals where no other alternative exists.

All temporary or permanent changes in ground surfaces within SBCWD pipeline rights-of-way are to be considered to be encroaching structures and must be handled as such. Earthfills and cuts on adjacent property shall not encroach onto SBCWD pipeline rights-of-way without prior approval by SBCWD.

The ground surfaces within SBCWD pipeline rights-of-way must be restored to a condition equal to that which existed before the encroachment work began or as shown on the approved plans.

Existing gravity drainage of the SBCWD pipeline rights-of-way must be maintained. Any new drainage facilities or modifications to existing facilities must be approved by the District.

If unusual conditions are proposed for the encroaching structure or unusual field conditions within SBCWD pipeline rights-of-way are encountered, the SBCWD reserves the right to impose more stringent criteria than those prescribed herein.

# GENERAL PROVISIONS

# GENERAL PROVISIONS

## 1. INTRODUCTION

The GENERAL PROVISIONS contained herein are a portion of the Regulations and Specifications for the construction of pipelines and appurtenances to connect to the existing and/or proposed distribution system of the San Benito County Water District, whether immediately or in the future.

References in these Specifications to the Contractor shall, for the purpose of this document, refer to the individual, builder or subdivider constructing the facilities.

References in these Specifications to pay quantities and to payment shall not be applicable.

All questions regarding the applicability of any section of these Specifications shall be directed to the District in writing. Unless exemption of any provision, section, sentence, clause or part of these Specifications is given in writing, by the District, it shall be deemed applicable.

## 2. DEFINITIONS

The following terms, as used in any of the Regulations and Standard Specifications, are respectively defined as follows:

(a) "Contract Documents" - Shall mean these Regulations and Specifications including but not limited to: the Standard Details, the Payment Bond, the Performance Bond, the General Provisions, the Specifications, the Specification Drawings, the referenced Schedule of Prevailing Rates of Wages and all addenda setting forth any modifications or interpretations of any of said documents.

(b) "Contract" - Shall mean any and all work being performed by an individual, builder or subdivider which will connect to the existing and/or proposed distribution system of the District, whether immediately or in the future.

(c) "District" - The San Benito County Water District with principal office in Hollister, California.

(d) "Board of Directors" or "Board" - The Board of Directors of the District.

(e) "Engineer" - Unless otherwise stated, District Engineer, acting either directly or through properly authorized agents or employees, such employees or agents acting within the scope of the particular duties entrusted to them.

(f) "Contractor" - Shall mean the individual, builder or subdivider proposing construction and connection to the District's system.

(g) "Subcontractor" - The term Subcontractor, as employed herein, includes only those parties having a direct contract with the Contractor and it includes one who furnishes material worked to a special design according to the plans or specifications of this work but does not include one who merely furnishes material not so worked.

(h) "County" - County of San Benito, California

(i) "Pipe Invert" - The bottom of the inside of the pipe.

## 3. MATERIALS AND CONSTRUCTION UTILITIES

Unless otherwise stipulated, the Contractor shall provide and pay for all materials, labor, water, tools, equipment, light, power, transportation and other facilities necessary for the execution and completion of the work. Unless otherwise specified, all materials shall be new and both workmanship and materials shall be of a good quality. The Contractor shall, if required, furnish satisfactory evidence as to the kind and quality of materials. Certificates of compliance for manufacturing and testing will be required and shall be submitted to the District prior to the installation of any materials or equipment.

## 4. PERMITS AND REGULATIONS

Permits and licenses of a temporary nature necessary for the prosecution of the work shall be secured and paid for by the Contractor. As previously stated, any work performed on the facilities in the rights-of-way or easements of the U.S. Bureau of Reclamation require a permit from the U.S. Bureau of Reclamation. The Contractor shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of the work as drawn and specified. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules and regulations, and without such notice to the District, he shall bear all costs arising therefrom.

## 5. BONDS AND INSURANCE

(a) Performance and maintenance payment bonds: The Contractor shall furnish to the District bonds as follows:

(1) Performance bond.-Performance bond with a surety or sureties approved by the District and with a penal amount equal to 100 percent of the contract price at the time of award.

(2) Payment bond.-Payment bond with a surety or sureties approved by the District for the protection of all persons supplying labor and material in the prosecution of the work provided for in the contract, for the use of each such person. The payment bond shall be in the sum of 50 percent of the contract price at the time of award.

(3) Maintenance Bond.-Corporate Surety Maintenance Bond for faulty workmanship and materials in the amount of ten percent (10%) of the total contract

cost. Said bond is to be for the term of one year after completion and acceptance of the work and shall be delivered to the District before acceptance of the contract.

(4) Costs.-All costs of furnishing performance and payment bonds shall be the responsibility of the Contractor.

(b) Requirements for execution of surety bonds: Each surety company bond (bid, performance, payment) which purports to have been executed by an agent or attorney-in-fact for the corporate surety is required to have submitted with it a power of attorney to the signatory agent or attorney-in-fact and executed by the corporate surety upon a date reasonably proximate to the date of the bond, or the power of attorney shall be accompanied by a certification of the surety to the effect that the power of attorney was in full force and effect upon a date reasonably proximate to the date of the bond.

(c) Bonding of Subcontractors: For the purposes of this paragraph, the term "subcontractor" shall mean every party to whom a part of the contract may be sublet to perform construction, alteration, or repair work on the jobsite regardless of the tier in the chain of subcontractual relationships. The term "subcontractor" does not include suppliers or others not actually performing work at the jobsite.

Except for subcontracts of $25,000 or less, the prime contractor shall require every subcontractor of whatever tier, as evidence of his reliability and financial responsibility, to furnish a payment bond in form and with a reasonable surety thereon acceptable to the prime contractor in a penal sum of not less than 50 percent of the subcontract price to assure payment to all persons supplying labor, materials, or rental equipment to such subcontractor for either incorporation or consumption in the work covered by this contract or in its performance, provided that the maximum penal sum required will be $250,000. The prime contractor shall furnish a copy of each subcontractor payment bond received to the District, which copy shall be accompanied by a properly dated power of attorney as provided in the paragraph above.

The obligee under the payment bond shall be the party who has let the subcontract. The bond shall give a right of action to those persons supplying such labor, materials, or rental equipment due to loss caused by the non-payment of any and all moneys owing on account thereof, provided, however, that written notice of such indebtedness is furnished to the prime contractor, the principal, and the sureties within 90 days, and suit therefor is initiated within one year, both periods to commence on the day on which the last of the labor, materials, or rental equipment were performed or furnished.

(d) Certificate of Insurance: Attention is directed to Section 7-1.12 of the California Department of Transportation Standard Specifications.

Contractor shall provide, at the time of execution of the agreement or contract for work, at his own expense, a certificate of insurance for general liability of $1,000,000 for each occurrence or aggregate and workers' compensation.

All insurance shall be primary and the District shall be named as an additional insured under the policy.

Prior to commencement of work, the Contractor shall provide Builder's Risk "All Risk" completed value insurance coverage (including flood but unless otherwise specified in the bid documents excluding earthquake and tidal wave) upon the entire project and including completed work and work in progress. The District shall be named as an additional insured. The policy shall be endorsed to provide that it will not be cancelled without giving thirty (30) days prior written notice to the District by mail.

(e) Workers' Compensation: Pursuant to the requirements of Section 1860 of the Labor Code, the Contractor will be required to secure the payment of workers' compensation to his employees in accordance with the provisions of Section 3700 of the Labor Code.

Prior to the commencement of work, the Contractor shall sign and file with the District a certification in the following form:

> "I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provision and furnish proof of said insurance before commencing the performance of the work of this contract."

(f) Nothing contained in this paragraph shall create any contractual relationship between any subcontractor and the District.

## 6. PRECONSTRUCTION MEETING AND CONSTRUCTION SCHEDULE

After approval of the project by the District and 14 days prior to the start of construction, a preconstruction meeting shall be held. At the preconstruction meeting, the Contractor shall submit a construction schedule showing the order in which the Contractor proposes to carry on the work with estimated dates on which the Contractor will start and complete each part of the work. The construction schedule as submitted shall be used as a basis to determine inspection requirements. If the Contractor proposes to change the order of work or scheduled dates, he shall submit a revised construction schedule to the District.

## 7. INSPECTION AND ACCEPTANCE

(a) All work (which term includes, but is not restricted to materials, workmanship, and manufacture and fabrication of components) shall be subject to inspection and test by the District at all reasonable times and at all places prior to acceptance. Any such inspection and test is for the sole benefit of the District and shall not relieve the Contractor of the responsibility of providing quality control measures to assure that the work strictly complies with the contract requirements. No inspection or test by the District shall be construed as constituting or implying acceptance. Inspection or test shall not relieve the Contractor of responsibility for damage to or loss of the material prior to acceptance, nor in any way affect the continuing rights of the District after the acceptance of the completed work under the terms of paragraph (f) of this clause, except as hereinabove provided.

(b) As stated under "Policies and Procedures", the requirements of Ordinance No. 11 and subsequent resolutions shall govern concerning the inspection fees and payment of fees.

(c) The Contractor shall, without charge, replace any material or correct any workmanship found by the District not to conform to the District's construction standards unless in the public interest the District consents to accept such material or workmanship. The Contractor shall promptly segregate and remove rejected material from the premises.

(d) If the Contractor does not promptly replace rejected material or correct rejected workmanship, the District (1) may, by contract or otherwise, replace such material or correct such workmanship and charge the cost thereof to the Contractor, or (2) may terminate the Contractor's right to proceed in accordance with the clauses of this contract.

(e) The Contractor shall furnish promptly, without additional charge, all facilities, labor, and material reasonably needed for performing such safe and convenient inspection and test as may be required by the District. All inspection and test by the District shall be performed in such manner as not to unnecessarily delay the work. Special, full-size, and performance tests shall be performed as described in the specifications. The District reserves the right to charge to the Contractor any additional cost of inspection or test when material or workmanship is not ready at the time specified by the Contractor for inspection or test or when reinspection or retest is necessitated by prior rejection.

(f) Unless otherwise provided, acceptance by the District shall be made as promptly as practicable after completion and inspection of all work required, or that portion of the work that the District determines can be accepted separately. Acceptance shall be final and conclusive except as regards latent defects, fraud, or such gross mistakes as may amount to fraud, or as regards to District's rights under any warranty or guarantee.

## 8. INSPECTION WORKING HOURS

Inspections shall be provided by the District between the hours of 8 A.M. and 4 P.M. on non-holiday weekdays and paid as specified under "Policies and Procedures".

The Contractor shall pay overtime for all inspections required to be performed by District employees due to the scheduling of work by the Contractor between 4 P.M. and 8 A.M. on weekdays, and anytime on Saturdays, Sundays and District Holidays, and shall include travel time of the inspector. District holidays are as follows:

| | |
|---|---|
| New Year's Day | January 1 |
| Lincoln's Birthday | February 12 |
| President's Day | Third Monday in February |
| Memorial Day | Last Monday in May |
| Independence Day | July 4 |
| Labor Day | First Monday in September |
| Columbus Day | Second Monday in October |
| Veteran's Day | November 11 |
| Thanksgiving Day | Fourth Thursday in November |
| Day after Thanksgiving | Fourth Friday in November |
| Christmas Day | December 25 |

Should a holiday fall on a Saturday, Friday is the day off. If the holiday falls on Sunday, Monday is the day off.

## 9. TIME LIMITATIONS

All shutdowns must be performed after the hour of 9 A.M. and be completed by 2 P.M. The maximum allowable shut-down on any one service is 5 hours unless otherwise approved by the District. The Contractor shall give 7 days written notice to the District of any tie-in so proper inspection may be provided.

## 10. STANDARD DETAILS AND INSTRUCTIONS BY DISTRICT

Where details shown on the standard details differ from the requirements of these specifications, the requirements of these specifications shall govern. In the event there are minor differences as determined by the District between details and dimensions shown on the standard details and those of existing features at the site, the details and dimensions of existing features at the site shall govern.

The District will furnish additional instructions by means of drawings or memorandum when necessary for the proper execution of the work.

## 11. DRAWINGS AND SPECIFICATIONS ON THE WORK

The Contractor shall keep one copy of all drawings and specifications on the work in good order, available to the District and his representatives. Such drawings and specifications shall include any changes or modifications to the work that have been included in the work completed.

## 12. RECORD DRAWINGS

Upon completion of construction and acceptance by the District, the Contractor shall provide the District with "as-built" drawings consisting of one (1) set of reproducible mylar prints and three (3) sets of prints as stated in Resolution No. 88-04 included under "Policies and Procedures" of these Regulations and Specifications.

## 13. LANDS FOR WORK

The District shall provide access to District property as necessary to construct connections to District-owned facilities. The Contractor shall confine his operations to the immediate area of the centerline location and shall conduct his operations in such a manner as to avoid injury or damage to adjoining property or improvements.

Should the Contractor find it necessary to use additional land for his purposes during construction of the work, he shall provide for the use of such lands at his own expense, together with right of access to same.

As stated in Resolution No. 88-04 included under "Policies and Procedures", the District will require a 20-foot permanent easement for the purpose of maintenance and repair of the system.

## 14. SUBSTITUTION OF BRANDS

Where materials and equipment are specified on the standard details or in the specifications as similar and equal to a certain brand, the Contractor may submit a request to the District for approval of another brand of equal quality. No substitution may be made without such prior approval and the District shall be the final judge of equality.

## 15. OWNERSHIP OF REMOVED MATERIALS

Unless otherwise specifically stated in the specifications, any existing equipment or materials removed by the Contractor during the course of the work shall remain the property of the District. Equipment shall be removed with care to prevent unnecessary damage and shall be neatly stored at a location adjacent to the site of the work or at the District Maintenance Yard at 30 Mansfield Road as directed by the District. All removed meter tubes and meters shall remain the property of the District and shall be returned to the District Maintenance Yard as directed by the District.

# SPECIFICATIONS

DIVISION 1. GENERAL REQUIREMENTS
DIVISION 2. EARTHWORK
DIVISION 3. PIPELINE
DIVISION 4. CONCRETE
DIVISION 5. MECHANICAL
DIVISION 6. SPECIAL CONSTRUCTION

# DIVISION 1 - GENERAL REQUIREMENTS

## SECTION 1.1 - SPECIAL CONDITIONS

### 1.1.1 REVIEW SCHEDULE

The District will require 14 calendar days for review of drawings or data submitted by the Contractor for review, and this review time will apply to each separate submittal or resubmittal independent of the review status of the drawings or data.

### 1.1.2 SUBMISSION OF PLAN AND PROFILE DRAWINGS

Unless otherwise specifically stated in the Special Provisions, the Contractor shall submit to the District prior to initiation of construction, five sets of plan and profile drawings showing the proposed pipeline, appurtenances and all adjacent utilities and structures for the District's review. Said plan and profile shall also indicate existing District facilities and the proposed method of connecting to said facilities.

### 1.1.3 PERFORMANCE AND SUPERVISION OF WORK BY CONTRACTOR

a. Performance of work: The Contractor shall perform on the site and with his own organization and forces on his payroll work equivalent to at least 30 percent of the total amount of construction work at the site. The cost of contractor furnished material and equipment incorporated in the work shall not be included in computing the total amount of construction work at the site.

b. Supervision of work: If the Contractor does not give personal superintendence to the work at all times during its performance and until the work is completed and accepted, he shall provide a competent superintendent fully authorized to act in his behalf. The superintendent shall be an employee of the Contractor and on the Contractor's payroll.

### 1.1.4 SHOP DRAWINGS, PRODUCT DATA AND STANDARDS

a. General: All drawings submitted by the Contractor shall have the Contractor's or supplier's title and drawing number on each drawing. Drawings and data shall show the District specifications number. All dimensions shall be in feet and inches and all wording, signs, symbols, etc. shall be in English.

b. Review drawings and data: As soon as practicable before proceeding with fabrication or procurement of material, the Contractor shall submit to the District for review five copies of the drawings and data listed below under the heading "Submittal of the following is required." Any fabrication or procurement performed or shipment made prior to review of the drawings and data shall be at the Contractor's risk. The District shall have the right to require the Contractor to make any changes in the equipment design which the District determines necessary to make the equipment conform to the requirements of these

specifications without additional cost to the District. Review by the District of the Contractor's drawings or data shall not be held to relieve the Contractor of any part of the Contractor's responsibility to meet all of the requirements of these specifications or of the responsibility for the correctness of the Contractor's drawings.

The drawings shall show any necessary details in fabrication or erection, which are not shown on the plans furnished to the District, and shall verify details and dimensions which are shown. Where dimensions of structures are dependent on dimensions of equipment, the Contractor shall verify these dimensions before starting any work dependent on or affected by them.

Where submittal data are required for commercial products or equipment, the Contractor shall submit complete identifying data giving the name of the Project, Contractor, equipment to which the drawing applies, manufacturer's name, type, model, size and characteristics of the equipment. When a catalog sheet is submitted, the particular item proposed shall be underlined or marked. The data shall be comprehensive and shall fully demonstrate that all equipment specified and required will be provided. Each shipment of drawings shall be accompanied by a letter of transmittal giving a list of the drawing numbers and the names mentioned above. If the equipment is accepted, two approved prints will be returned to the Contractor. If the Contractor wishes extra copies be returned, he shall submit additional copies.

Submittal of the following is required:

(1) PVC pipe: Commercial Products Data.

(2) All fittings: Commercial products data and/or shop drawings.

(3) Steel casing pipe: Checked detail shop drawings of field joints showing manufacturing dimensions and tolerances and material data.

(4) All valves: Commercial products data.

(5) Any underground appurtenances: Commercial products data and/or shop drawings.

(6) Any private pump stations: Certified shop and erection drawings, and data regarding pump and motor characteristics and performance. The data shall include guaranteed performance curves based on shop tests of the pumping unit which show that the unit meets the specified requirements for head, capacity, efficiency and horsepower for the capacity step specified. Certified tests of mechanically duplicate units will be acceptable.

c. Mailing address: All drawings, data, test reports, and curves shall be forwarded to: San Benito County Water District, 30 Mansfield Road, Hollister, CA 95024.

## SECTION 1.2 - MATERIALS

### 1.2.1 MATERIALS TO BE FURNISHED BY THE CONTRACTOR

a. General: The Contractor shall furnish all materials required for completion of the work.

The words "material" or "materials" as used in these specifications to denote items furnished by the Contractor shall be construed to mean equipment, machinery, product, component, or any other item required to be incorporated in the work.

Materials furnished by the Contractor shall be of the type and quality described in these specifications or shown on the standard details. The Contractor shall make diligent effort to procure the specified materials from any and all sources, but where, because of U.S. Government priorities or other causes materials required by the specifications become unavailable, substitute materials may be used, provided that no substitute materials shall be used without prior written approval of the Engineer. The Engineer's determination as to whether substitution shall be permitted and as to what substitute materials may be used shall be final and conclusive.

b. Inspection of Materials: Materials furnished by the Contractor which will become a part of the completed construction work shall be subject to inspection in accordance with Clause No. 3 and 7 of the General Provisions at any one or more of the following locations, as determined by the Engineer: at the place of production or manufacture, at the shipping point, or at the site of the work. To allow sufficient time to provide for inspection, the Contractor shall submit to the Engineer, at time of issuance, copies in triplicate of purchase orders, including drawings and other pertinent information covering materials on which inspection will be made as advised by the Engineer, or shall submit other evidence in the event such purchase orders are issued verbally or by letter.

The inspection of materials at any of the locations specified above or the waiving of the inspection thereof shall not be construed as being conclusive as to whether the materials and equipment conform to the requirements under Clause No. 7(a) of the General Provisions, nor shall the Contractor be relieved thereby of the responsibility for furnishing materials meeting the requirements of these specifications. Acceptance of all materials will be made only at the site of the work.

## 1.2.2 REFERENCE SPECIFICATIONS AND STANDARDS

a. General: The materials to be furnished by the Contractor which are specified by reference to Federal Specifications, Federal Standards, or other standard specifications or codes shall be in compliance with the latest editions or revisions thereof in effect on the date drawings are received, including any amendments or supplements. In the event of conflicting requirements between a referenced specification, standard, or code, and these specifications, these specifications shall govern.

Unless otherwise specified, all materials that will become a part of the completed work shall be new and shall conform to the Federal or other specifications and standards referred to herein. Where reference specifications numbers are designated throughout these specifications, they refer to Federal Specifications unless otherwise noted. In the event that the materials are not covered by Federal or other specifications, the materials furnished shall be of standard commercial quality. Where types, grades, or other options offered in

the reference specifications are not specified in these specifications, the material furnished will be acceptable if it is in accordance with any one of the types, grades, or options offered.

The references to materials, wherein manufacturer's products or brands are specified, are made as standards of comparison only as to type, design, character, or quality of the article required, and do not restrict bidders to the manufacturer's products or to the specific brands named. It shall be the responsibility of the Contractor to prove equality of materials and products to those referenced and to provide all descriptive information, test results, and other evidence as may be necessary to prove the equality of materials or products which he offers as being equal to those referenced.

Single copies of Federal Specification may be obtained at Business Service Centers of Regional Offices of the General Services Administration. Specifications, standards, and codes published by associations or other standardizing agencies should be obtained by the Contractor, at his expense, directly from those agencies.

b. Address for obtaining reference specifications and standards: Addresses for obtaining some of the referenced specifications, standards, and codes are listed below. Information on other specifications, standards, and codes referred to in these specifications may be obtained from the Bureau of Reclamation, Attention D-1330, P.O. Box 25007, Denver, CO 80225.

Federal Specifications and Standards - Specification Sales (3 FRSBS), Building 197, Washington Navy Yard, General Services Administration, Washington, D.C. 20407.

Military Specifications and Standards - Naval Publications and Forms Center, 5801 Tabor Avenue, Philadelphia, PA 19120.

AISC - American Institute of Steel Construction, Inc., 1221 Avenue of the Americas, New York, NY 10020.

AISI - American Iron and Steel Institute, 1000 16th Street NW, Washington, D.C. 20036.

ANSI - American National Standards Institute, 1430 Broadway, New York, NY 10018.

ASME - American Society of Mechanical Engineers, 345 East 47th Street, New York, NY 10017.

ASTM - American Society of Mechanical Engineers, 1916 Race Street, Philadelphia, PA 19103.

AWS - American Welding Society, Inc., 2501 NW Seventh Street, Miami, FL 33125.

AWWA - American Water Works Association, Inc., 6666 W. Quincy Avenue, Denver, CO 80235.

IEEE - Institute of Electrical and Electronic Engineers, 345 East 47th Street, New York, NY 10017.

IPCEA - Insulated Power Cable Engineers Association, 192 Washington Street, Belmont, MA 02178.

JIC - Joint Industrial Council, 7901 Westpark Drive, McLean, VA 22101.

NEC - National Electrical Code, National Fire Protection Association, 470 Atlantic Avenue, Boston, MA 02210.

NEMA - National Electrical Manufacturers Association, 155 East 44th Street, New York, NY 10017.

SAE - Society of Automotive Engineers, 400 Commonwealth Drive, Pittsburgh, PA 15096.

UL - Underwriters' Laboratories, 207 East Ohio Street, Chicago, IL 60611.

### 1.2.3 MATERIALS AND WORKMANSHIP

As stated in clause No. 3 of the General Provisions, materials used in the manufacture of equipment to be furnished by the Contractor shall be of the most suitable grade for the purpose intended. The Contractor shall be responsible for the accurate manufacture and fabrication of the equipment in accordance with the best modern practice and the requirements of these specifications notwithstanding minor errors or omissions therefrom.

Liberal factors of safety and adequate shock-absorbing features shall be used throughout the designs and especially in the design of all parts subject to stresses or shock, including alternating- and vibrating-type stresses and shock. Shock-absorbing features shall include provisions which prevent components from loosening.

Unless otherwise specified, materials used in the manufacture of the equipment shall conform to applicable Federal Specifications or Federal Standards, and if there are no applicable Federal Specifications or Federal Standards, shall conform to the applicable specifications of the American Society for Testing and Materials, the Society of Automotive Engineers, or the American National Standards Institute. If the Contractor for justifiable cause proposes to deviate from or to use materials not covered by the Federal Specifications or Federal Standards, he shall state the reasons for and exact nature of the deviation and shall submit for the approval of the Engineer complete specifications for the materials that he proposes to use.

Parts shall be made accurately to standard gage where possible so as to facilitate replacement and repair. Bolts, nuts, screws, taps, pipes, and pipe fittings shall be unified screw threads conforming to ANSI B1.1 and B2.1. For internal connections of individual items of equipment only, the Contractor will be permitted to deviate from ANSI, provided that he furnishes a complete set of all such necessary taps and dies which might be required by the District to facilitate repair or replacement.

### 1.2.4 RIGHT TO OPERATE AND USE UNSATISFACTORY MATERIALS OR EQUIPMENT

If, after installation, the operation or use of the materials or equipment furnished by the Contractor proves to be unsatisfactory to the Engineer, the District shall have the right to operate or use such

materials or equipment until correction of defects, errors, or omissions, by repair or by partial or complete replacement, can be made without interfering with District operations. Unless otherwise agreed upon in advance, the period of such operation or use, pending correction of defects, will not exceed one year.

## SECTION 1.3 - LOCAL CONDITIONS

### 1.3.1 ELECTRICAL SUPPLY AND COMMUNICATION LINES

The Contractor shall make all necessary or required provisions and shall perform all work required by his operations under the contract and incident to any interference with electrical supply and communication lines, whether overhead or underground, existing on the date drawing approval is received with their operation or with the maintenance of service thereon, all in a manner satisfactory to the owners or operators thereof and to the Engineer.

The District will not be responsible for any errors or omissions. It shall be the responsibility of the Contractor to discover the true nature and location of utilities prior to beginning work.

The cost of providing and maintaining all necessary or required temporary structures; of making any necessary repairs, replacements, or similar operations; or furnishing indemnity or other bonds, if required; and all or any other costs required by this paragraph shall be paid by the Contractor.

### 1.3.2 INTERFERENCE WITH EXISTING IMPROVEMENTS

The pipeline and structures to be constructed under these specifications will be adjacent to, cross, or extend along existing improved property of others, including roadways, driveways, pipelines, orchards, and cultivated lands. The Contractor shall conduct his operations in such sequence and such manner as to minimize disturbance to or destruction of improvements and to interfere as little as possible with the operations of property owners. Permits shall be obtained by the Contractor, at his expense, for operations on rights-of-way of roadways and streets.

If, in the opinion of the Engineer, there is sufficient operating space to perform the work in a reasonable manner without removing or destroying existing improvements, the Contractor shall perform the work without removing or destroying such improvements and in no event shall the Contractor remove any trees, shrubs, or vines on the right-of-way or construction easements without the prior approval of the Engineer. Where the Contractor is prohibited by the Engineer from removing existing improvements, he will be permitted to remove obstructions such as overhanging branches and to perform such pruning as is necessary for the prosecution of the work. The pruning and removal of branches shall be done in such a manner as to cause the minimum amount of damage to the existing improvements.

The Contractor shall confine all of his operations within such space as is available within the right-of-way limits. If the Contractor's operations are such as to require additional space, the Contractor shall arrange and secure, at his own expense, any additional temporary space required for his operations.

The excavation, disposal of the excavated material, and backfill operations shall be performed in such a manner that lands and improvements can be restored as nearly as practicable to their

original conditions, as determined by the Engineer. Any stones, trees, brush, or other deleterious material left by construction operations shall be disposed of by means acceptable to the Engineer.

Pipe trenches shall not remain open more than 15 calendar days unless otherwise authorized in writing by the Engineer. In case pipe trenches are left open longer than 15 calendar days, the Engineer shall have the right to order the Contractor to backfill the pipe trenches and reexcavate when the pipe-laying operations are ready to proceed, and such refilling and reexcavation shall be at the Contractor's expense.

At all times the Contractor shall provide means of ingress and egress over construction activities so as to permit the removal of crops and access to residences, garages, and usual farm activities. The Contractor shall not store pipe or imported backfill materials on the right-of-way for more than 45 calendar days unless otherwise directed.

Where the pipelines cross or extend along a public street or roadway, not more than one lane of traffic shall be blocked at any time.

Where the pipelines cross utility lines, the owners of such utility lines shall be notified 72 hours prior to the construction at such utility line crossing. Temporary service shall be provided by the Contractor during any period when utility lines are disturbed, unless the Contractor makes other arrangements with the owners.

Domestic waterlines and sewerlines shall not be interfered with for a period of more than 2 hours unless otherwise approved by the District.

Where the pipelines are constructed across agricultural land, the Contractor shall provide the property owners with an access route across the zone of construction at all times.

The Contractor shall adequately protect all adjoining property from damage and shall be fully responsible for any damage to adjoining property that may result from his operations under the contract. Such protection shall include erection and maintenance of barricades, flasher lights, danger signals, signs, and other precautionary measures for the protection of public and private property.

The Contractor will be held strictly responsible for all damages to persons or property that occur as a result of his fault or negligence. The Contractor shall promptly notify the property owners of any damage which is his responsibility. The Contractor, within 30 days after his knowledge of or notice from a landowner of damages off the right-of-way caused by his operations under this contract, shall notify the District in writing as to his disposition of each such claim or assumption of responsibility for damage caused by any such unauthorized use. In order to adequately protect the District against claims, demands, or liabilities arising out of the Contractor's construction operations, the District shall notify the Contractor to settle the matter. If no action is taken by the Contractor within 7 days, the District will, at the Contractor's expense, settle the matter.

# DIVISION 2 - EARTHWORK

## SECTION 2.1 - EXCAVATION

### 2.1.1 EXCAVATION FOR PIPE TRENCHES

a. General: Excavation for pipe trenches includes excavation for lateral pipelines, delivery installations, and pipeline accessories that are outside the lines for excavation for structures. It also includes other additional excavation that is outside the lines shown on the standard detail titled "Typical Trenches" that is required for certain pipeline accessories and structures. Pipeline accessories are defined as connecting, controlling, or measuring devices along the pipelines, including pipe bends, anchors, collars and air valves.

Excavation for pipe trenches for lateral pipelines, delivery installations, and pipeline accessories shall be to the lines, grades, and dimensions shown on the standard detail, as provided in this paragraph or as directed.

The bottom of the trench shall be finished accurately to the lines and grades shown on the standard detail or established by the Engineer.

The minimum widths of excavation at bottom of trench permitted are shown on the standard detail.

Trenches shall be excavated 4-inches below the bottom of the pipe and refilled with sand to the bottom of the pipe as shown on the standard detail.

b. Safety: All excavation shall conform to "Title 8 of the California Administrative Code," Article 6 of the Construction Safety Orders.

c. Foundation for pipe: Where the foundation material below the layer of sand is unsuitable as determined by the Engineer, the Contractor shall overexcavate the bottom of the trench as shown on the standard detail or as directed and replace the overexcavation with compacted sand. The backfill below the pipe shall be placed and compacted as specified in paragraph 2.2.2. If at any point in trench excavation the natural foundation material is disturbed or loosened during the excavation process or otherwise, it shall be compacted in place, or, where directed, it shall be removed and replaced with suitable material and compacted in accordance with paragraph 2.2.2. Any and all excess excavation or overexcavation performed by the Contractor for any purpose or reason except for additional excavation as may be prescribed by the Engineer, and whether or not due to the fault of the Contractor, shall be at the expense of the Contractor. Fill and compacting of fill for such excess excavation or overexcavation shall be at the expense of the Contractor.

### 2.1.2 DISPOSAL OF EXCAVATED MATERIALS

All material from required excavations which is determined to be suitable by the Engineer may be

used for backfill about structures or other required earthwork. Excess materials and all unsuitable material shall be removed to a site obtained by the Contractor at the Contractor's expense. Any permits required for disposal of excess material shall be obtained by the Contractor.

It shall be the responsibility of the Contractor to make all arrangements and to dispose of the material removed in excavation and not suitable or required for backfill or other required earthwork.

Unless otherwise directed, no material shall be wasted in drainage channels. Waste banks shall be left with reasonably even and regular surfaces.

## SECTION 2.2 - BACKFILL

### 2.2.1 BACKFILL IN PIPE TRENCHES

Backfill in pipe trenches includes placing all backfill required about lateral pipelines, delivery installations, and pipeline accessories excavated in accordance with paragraph 2.1.1.

Backfill in pipe trenches shall be sand as specified under paragraph 4.1.1, shall be washed and shall be placed to the lines shown on the standard detail, as specified in this paragraph, or as directed. Backfill shall be placed and compacted as specified in paragraph 2.2.2. The amount of sand used for backfill, and the manner of depositing the sand shall be subject to the approval of the Engineer.

The Contractor shall furnish and place gravel in the air valve pipe wells as shown on the standard detail. The gravel shall conform to paragraph 2.2.5.

The 4-inch layer of sand below the bottom of the pipe shall be placed before the pipe is laid in the trench. The 4-inch layer of sand below the bottom of the pipe shall be compacted and struck off parallel to the centerline grade of the pipe.

Backfill shall not be dropped directly on the pipe. All backfill shall be carefully placed and spread in uniform layers. Backfill shall be placed to about the same elevation on both sides of the pipe to prevent unequal loading and displacement of pipe. The difference in elevation of the backfill on both sides of pipe shall not exceed 6-inches at any time. Backfill above compacted backfill about the pipe may be placed as soon as compacting of backfill about the pipe is completed, provided that the placing of this backfill shall be delayed at locations designated by the Engineer for the procurement of samples of compacted backfill about the pipe for testing, and further provided that if the tests indicate insufficient density of the compacted backfill about the pipe, the Contractor may be required to remove the backfill above the compacted backfill about the pipe, continue compacting the backfill until the proper density is obtained, and replace the backfill above the compacted backfill above the pipe, all at the Contractor's expense. Compacted backfill shall be placed to a minimum depth of 2 feet above the top of the pipe before construction equipment is used over the pipe. Once the above earth covers are in place, the maximum equipment loading allowed over the pipe shall be HS-20 loading in accordance with the "Standard Specifications for Highway Bridges," AASHTO latest edition. Construction equipment that exerts a larger load on the top of the pipe shall not be allowed to travel over the pipe at any time, until a method for protecting the pipe from a larger load is approved by the Engineer.

All lands along the laterals shall be restored to their original condition within 30 calendar days after the pipe is laid in the pipe trenches, provided that arrangements may be made to dispose of excess material thereon as provided in paragraph 2.1.2.

2.2.2 COMPACTING BACKFILL IN PIPE TRENCHES

a. General: Backfill in pipe trenches shall be compacted as shown on the standard details, as specified in this paragraph, or as directed.

b. Location of compacted backfill:

(1) Sand backfill, backfill for bedding, and backfill on outside of horizontal curves shall be compacted as shown on the standard detail.

(2) Backfill placed under or within 4 feet of the edge of pavement shall be compacted to the surface to County of San Benito requirements, and to dimensions and slopes as directed.

(3) Backfill placed where other pipelines cross lateral pipelines shall be compacted to the horizontal centerline of the pipeline crossing the lateral pipeline and to dimensions and slopes as directed.

(4) Backfill placed at tees with horizontal outlets, pipe bends, encasements, and collars including collar-type blocking shall be compacted as shown on the standard details.

(5) Where additional excavation for pipe trenches is shown on the standard details, or directed, to remove low density of other unsuitable material, the backfill required for this additional excavation shall be compacted.

(6) Backfill placed around valve boxes, deliveries, and pipe erected vertically for air valves shall be compacted as shown on the standard details.

c. Compacting backfill: Backfill in pipe trenches shall be compacted in layers having about the same top elevation on both sides of the pipe to prevent unequal loading and displacement of the pipe. All compacted backfill in pipe trenches shall be free from voids or loose material. Backfill shall be compacted as specified in Sections 6 and 19 of the State of California Department of Transportation Standard Specifications.

Sand shall be deposited in horizontal layers and compacted to the relative density specified below. The excavating and placing operations shall be such that the materials, when compacted, will be blended sufficiently to secure the highest practicable unit weight and best stability. Water shall be added to the materials as may be required to obtain the specified density by method of compaction being used.

The thickness of the horizontal layers after compaction shall not be more than 6-inches if

compaction is performed by tampers or rollers; not more than 12-inches if compaction is performed by treads of crawler-type tractors, surface vibrators, or similar equipment; and not more than the penetrating depth of the vibrator if compaction is performed by internal vibrators.

The relative density tests will be made by the District at the Contractor's expense. The relative density of the compacted material shall be not less than 90 percent around the pipes and 12-inches above the top of the pipe and not less than 90 or 95 percent for the remainder of the trench as shown in the standard details. The relative density will be determined by the California Test No. 216 or 231. At the District's option the relative density may be determined by the Standard Bureau of Reclamation's relative density tests for cohesionless free draining soils. For this test, the compacted material shall not be less than 70 percent around the pipes and the remainder of the trench.

Relative density (%) =

$$\frac{\text{Max. Den. X (in-place den.-min.den.)}}{\text{In-place den. x (max. den.-min.den.)}} \times 100\%$$

2.2.3 STRUCTURE BACKFILL

All structural backfill shall be spread in lifts not exceeding 8 inches in uncompacted thickness; each layer shall be brought to the proper moisture content and compacted to not less than 90% of optimum density as measured by ASTM Test Designation D1557.

Do not backfill retaining walls or tank walls until the concrete wall and supporting slab have reached the specified 28-day strength with a minimum elapsed time of 10 days.

Structural backfill shall have a sand equivalent of not less than 20 and shall conform to the following grading as specified in Section 19-3.06 of the State of California Department of Transportation Standard Specifications:

| Sieve Sizes | Percentage Passing |
|---|---|
| 3" | 100 |
| No. 4 | 35-100 |
| No. 30 | 20-100 |

2.2.4 TEST PITS

The Contractor shall excavate, at his expense, test pits along the lateral pipelines of 12-inch-diameter pipe at locations and at times as determined by the Engineer.

The test pits shall be excavated after the backfill has been placed and compacted to a height of outside diameter plus 12-inches above the bottom of the pipe as shown on the standard detail.

The test pits shall be excavated to a depth and area sufficient in size to allow a District inspector to visually inspect the haunch area of the pipe for voids or loose material next to the pipe and, if required,to take a field density test. Test pits shall meet all safety requirements.

After the haunch area of the pipe has been inspected and, if required, the field density test has been taken, the Contractor shall backfill and compact the test pit area in accordance with the applicable paragraphs of these specifications. If the inspection of the haunch areas of the pipe and/or the results from the field density tests show that the backfill has not been placed and compacted as required by these specifications, the Contractor will be required to excavate additional test pits along the pipeline to determine the extent of the area over which the backfill has not been placed and compacted as required. The Contractor will be required to replace and recompact the backfill in the pipe trench to meet the specifications requirements throughout the entire area of unsuitable backfill as determined from the additional test pits. The work required to excavate additional test pits and to replace and recompact the backfill shall be performed at no cost to the District.

### 2.2.5 GRAVEL

The Contractor shall furnish all materials and perform all work for placing gravel fill in valve boxes and valve pipe wells.

The gravel shall be placed in the locations and to the lines and thicknesses shown on the standard details or as directed.

The materials used for gravel shall be as specified in Section 90-3.02 of the State of California Department of Transportation Standard Specifications and shall also be subject to approval of the Engineer. The gravel shall consist of sand and gravel, shall be reasonably well graded, and shall contain the minimum practicable amount of fine material. The gravel shall not contain stones having a dimension of more than one inch.

# DIVISION 3 - PIPELINE

## SECTION 3.1 - PIPELINE, GENERAL

### 3.1.1 PIPE, GENERAL

The Contractor shall furnish and lay pipe as shown on the Standard Details and as specified in these specifications. Where a delivery connection or line pipe crosses an existing conduit, a minimum clear distance between pipeline and conduit of 1-foot outside to outside shall be provided. Where two pipelines furnished under these specifications are installed parallel to each other, a minimum clearance of 18 inches shall be maintained between them. Pipe installed parallel to an existing conduit shall have a minimum clearance as shown on the Standard Details, and these specifications, or shall conform to the requirements of the conduit owner, whichever is greater. The types of pipe permitted under these specifications are specified in the following paragraphs.

During manufacturing, transporting, storing, and laying pipe and pipe fittings, the pipe and pipe fittings shall not be dropped or subjected to any unnecessary jar, impact, or other treatment that could crack the shell or otherwise damage the pipe. Pipe shall not be loaded and hauled to the worksite until after the specified curing period. The Contractor shall not lay any pipe by using a method of stabbing or swinging one joint into the collar or bell of another joint.

The Contractor shall not reuse rubber gaskets when pipe joints are pulled and refitted.

The Contractor shall submit for District review those materials listed in Section 1.1.4 "Shop Drawings, Product Data and Standards" of these Standard Specifications.

### 3.1.2 LINE PIPE

The Contractor shall be required to install PVC pressure pipe for line and delivery pipe. No other pipeline material will be permitted in distribution system construction. PVC shall be SDR 26 for Class 160 or SDR 21 for Class 200 pipe as specified under Section 3.2 "PVC Pressure Pipe".

### 3.1.3 CASING PIPE

The casing pipe shall be steel pipe as specified by AWWA C 200. Single weld butt joints will be acceptable and field welding shall conform with AWWA C 206. The pipe shall have a minimum wall thickness of ½" and the inside diameter shall be at least 2" greater than the largest outside diameter of the carrier pipe. The casing shall be so installed as to prevent formation of waterway under the roadway. It shall have been bearing throughout its length and slope to one end. The ends of the casing shall be sealed to protect against the entrance of foreign material which might prevent ready removal of the carrier pipe.

The casing pipe shall be lined and coated with a coal-tar protective coating as specified by AWWA C 203.

Casing to be installed in open trench shall have a Bell and Spigot type ring joint similar to those specified by AWWA C 203.

### 3.1.4 FILLING AND HYDROSTATIC TESTING OF THE PIPELINE SYSTEM

The Contractor shall fill and test the pipeline as specified in this paragraph. Before filling the pipeline, the Contractor shall remove all debris. The pipeline shall be filled at a slow rate to prevent air entrapment. After the pipeline has been completely filled, it shall be maintained at a full condition for a minimum period of 24 hours before testing.

The Contractor shall furnish suitable testing plugs or caps, all necessary pressure pumps, pipe connections, gages, other equipment, and all labor required. The Contractor shall perform a combined pressure and leakage test.

The Contractor's proposed rate, time, and procedure for filling the pipeline shall be approved by the Engineer before any water is placed in the pipeline. The Contractor shall notify the Engineer at least 24 hours of the testing procedures to be used by the Contractor and before pressure is to be applied to the pipeline. Pipelines shall be tested to a minimum pressure of 200 psi. If the total length of pipeline is less than 100 feet, the pressure test may be waived by the Engineer. Upon completion of testing, the pipeline shall remain full of water. The Engineer will notify the Contractor as to when the Engineer needs to be present to observe the test results and shall be notified by the Contractor as testing proceeds.

The duration of each test shall be 2 hours. Leakage shall be defined as the quantity of water that must be supplied into the newly laid pipe to maintain pressure within 5 psi of the 200 psi test pressure after the pipe has been filled with water and the air in the pipeline has been expelled. No installation shall be accepted if the leakage is greater than $L=NxDx0.0019$ where L=allowable leakage in gallons per hour, N=number of joints in the tested line, and D=minimal diameter of the pipe in inches at 200 psi test pressure.

For example, if 300 feet of 20 foot lengths of eight-inch line is being tested,

$L = (14 \text{ joints})(8 \text{ inches})(.0019)$
$L = 0.21$ gallons/hr. allowable leakage.

If the section fails to pass the pressure or leakage test, faulty joints shall be repaired at the Contractor's expense, even to the extent of disassembling and remaking the joint, and all defective pipe and fittings shall be removed and replaced in a manner satisfactory to the Engineer. Additional tests and repairs shall be made at the Contractor's expense until the section passes the specified test.

If, in the judgment of the Engineer, it is impracticable to follow the foregoing procedure exactly for any reason, modifications in the procedure shall be made as required and approved, but in any event the Contractor shall be responsible for the ultimate tightness of the line within the above soundness and tightness requirements.

Pumps shall always be monitored while in operation to avoid accidental over pressuring of the

pipeline. Pumps shall run continuously and shall have pressure relief valves and a bypass line in the system. Two gages are required to provide a means of ensuring a correct pressure reading. Valves shall be located at the air-bleed outlet and between the pump and the bulkhead.

### 3.1.5 DELIVERY INSTALLATIONS

The Contractor shall furnish and install the delivery installations as shown on the Standard Details unless directed otherwise by the Engineer. The delivery type and location shall be shown on the Drawings.

### 3.1.6 TELEMETRY CABLE

Telemetry cable, where specified or shown on the drawings, shall be buried with all line pipe to the burial dimensions shown on the drawings. Where two line pipes are parallel, a cable shall be provided for each line pipe. At each lateral tee, a concrete electrical pull box and cover shall be provided. The pull box shall have inside dimensions of 10½ x 17¼ x 12 inches deep, and shall be CALTRANS Number 3½ or approved equal. The pull box shall be installed per CALTRANS Standard Specifications. Three feet of slack cable from each line pipe branch shall be placed in the box unless directed otherwise. Cable shall be provided and located to provide for future telemetry connection from devices to be located at the centerline of each delivery concrete foundation four feet above grade.

For each delivery concrete foundation, slack cable shall be coiled 24 inches below grade, adjacent to the concrete foundation and over the delivery pipe. The position of all buried slack cable shall be indicated by plastic marking tape designed for that purpose.

Cable shall be filled, rodent-resistant, double-jacketed type and shall conform to the following minimum specifications:

REA Designation BJFY

REA Specification - manufactured in accordance with PE-39

Shield - 0.010 inch copper corrugated tape.

Jacket - Double insulated (inner and outer sheath); outer jacket to be high molecular weight polyethylene.

Pair Color Coding - in accordance with PE-39.

Gauge - 19 AWG.

Number of Pairs - 12

Cable shall be continuous, with no cut ends, except at lateral ends and lateral tees. Cut ends shall be sealed with heat shrinkable sleeves. Electrical continuity shall be demonstrated to the Engineer prior to sealing and backfilling cut ends. Bends shall observe the minimum radius recommended by the cable manufacturer.

## 3.1.7 LOCATOR WIRE SYSTEM

The Contractor shall furnish and install a locator wire system on all line pipe. Locator wire shall be buried with all line pipe to the burial dimensions shown on the drawings. Locator wire shall be No. 12 AWG wire with THWN insulation and shall be taped on the top of the pipeline. The wire shall be carried into the valve box for every buried valve. Six feet of slack shall be left in each valve box with the wire entering and leaving without being broken. Splices shall be made only in the valve boxes. The wire shall be installed so as to make it easily accessible as shown on the Standard Detail.

## 3.1.8 CONSTRUCTING NON-TRENCHED ROAD CROSSINGS

a. General: The Contractor shall furnish all materials for and construct the road crossings by jacking or slurry boring where the drawings prohibit trenching as shown on the standard detail. No excavation for the purposes of this paragraph shall be within 4-feet of edge of pavement.

b. Jacking: The method of jacking under the highways and railroads shall be approved by the Engineer. The material required to be excavated during jacking operations shall be removed carefully so as to prevent caving and flow of the material into the pipe. The excavated hole shall be of a diameter no greater than 0.2 foot larger than the outside diameter of the pipe. Areas resulting from caving or excavation outside the specified limits shall be backfilled with sand or grout by a method that will fill the voids. The end of the pipe shall be kept within 6 inches of the face of the excavation at all times. The pipe-jacking operations shall be continuous from the time they are started until all the pipe is jacked in place. Excavated material shall be disposed of as directed.

c. Carrier Pipe Installation: The carrier pipe shall be installed using steel casing insulators. The method of threading the carrier pipe shall be approved by the Engineer. There shall be a minimum of 2-inches of sand bedding between the outside of the carrier pipe (including couplings, etc.) and the inside of the casing. This bedding shall fill the entire annular space, with a maximum vertical unfilled void at the top of 2-inches. Precautions, approved by the Engineer, shall be taken to avoid sandblast damage to the carrier pipe during sand insertion.

d. Materials:

(1) Carrier pipe shall conform to the applicable paragraphs of these specifications. Flexible couplings shall be provided on the carrier pipe at the ends of the casing pipe as shown on the standard detail.

(2) Casing pipe shall be smooth steel pipe conforming to the paragraphs of these specifications.

(3) Sand shall conform to paragraph 4.1.1.c.

(4) Mortar and grout shall be as specified in this paragraph. Mortar for pipe joints shall be mixed not richer than one part, by weight, of cement to one part, by weight, of clean well-graded sand, and not leaner than one part, by weight, of cement to two parts, by weight, of clean well-graded sand, and with just sufficient water to obtain the proper consistency. To improve the workability of the mortar, the Contractor may replace not more than 7 percent, by weight, of cement with hydrated lime, or may replace not more than 30 percent, by weight, of cement with an approved pozzolan, or may add an air-entraining agent in the mortar, or use any approved combination of these. Cement and sand and admixture or pozzolan, if used, for mortar in joints shall conform to the requirements for these materials as used in the pipe. Hydrated lime shall be a standard commercial product as approved. Any mortar which has become so stiff that proper placement cannot be assured without retempering shall be wasted, and mortar shall be prepared in small batches so as to prevent stiffening before it is used. Mortar for filling grooves shall be of such consistency that it will adhere to the ends of the pipe.

Grout used for filling joints by pouring shall be mixed in the proportion of one part of cement, by weight, to not more than one part, by weight, of sand passing No. 16-mesh screen, and thoroughly mixed to a consistency of thick cream.

## 3.1.9 PIPE IN PAVED ROAD AND DRIVEWAY CROSSINGS

Except as otherwise shown on the drawings, pipe in paved road and driveway crossings, including fittings, shall be furnished in pipe classes of not less than the pipe class of the adjacent line pipe, provided that pipe shall not be less than class 160 pipe. In all cases where Class 160 pipe is used, compaction shall be to the original ground surface unless directed otherwise by the Engineer.

## 3.1.10 PIPE CROSSINGS

Any contractor or individual duly authorized to perform construction or improvements within the SBCWD pipeline rights-of-way must notify the water district at least 48 hours prior to commencement of work and at least 24 hours prior to recommencement of work after a period of interrupted construction activity.

Any contractor or individual constructing improvements in, on, or along SBCWD pipeline rights-of-way must limit his construction to the encroaching structure previously approved by the SBCWD and construct the improvements strictly in accordance with plans approved by the SBCWD. Inspection of the construction will be made by the water district personnel. SBCWD retains the right to suspend or terminate the contractors activities within SBCWD pipeline rights-of-way if he deviates from approved plans.

Prior to construction of any structure that encroaches within SBCWD pipeline right-of-way, an excavation must be made to determine the location of existing SBCWD facilities. The excavation must be made by or in the presence of water district personnel.

Special efforts must be taken to field locate and protect SBCWD buried electrical and telemetering cables.

Any non-metallic encroaching structure below ground level shall be accompanied with a metallic strip within the SBCWD pipeline rights-of-way.

For pressure pipelines or force mains within SBCWD rights-of-way, joints must be watertight and field tested for leakage at 120% of design pressure before placing encasement or backfilling over joints. No leakage will be allowed.

The owner of newly constructed facilities that encroach on SBCWD pipeline rights-of-way shall notify the water district of the completion of construction and shall provide the water district with three copies of as-built drawings showing actual improvements constructed in, on, or along the rights-of-way.

Except in case of ordinary maintenance and emergency repairs, an owner of encroaching facilities shall give the water district at least 10 days notice in writing before entering upon SBCWD pipeline rights-of-way for the purposes of constructing, reconstructing, repairing, or removing the encroaching structure or performing any work on or in connection with the operation of the encroaching structure.

## SECTION 3.2 - PVC PRESSURE PIPE

### 3.2.1 GENERAL

Polyvinylchloride (PVC) pressure pipe, sizes 8 through 12 inches in diameter, shall be furnished, installed, and tested as herein specified.

PVC pressure pipe shall conform to ASTM D 2241 for standard dimension ratio SDR 26 for 160 psi pipe or SDR 21 for 200 psi pipe.

PVC pressure pipe shall be tested to levels as shown in ASTM D 2241.

Joints in line pipe shall be rubber gasketed.

Fittings for PVC pressure pipe shall be as specified under Section 3.3, "Fittings for PVC Pressure Pipe."

### 3.2.2 MATERIALS

a. Pipe: PVC pressure pipe shall be made from Class 12454-A or 12454-B virgin PVC resin compounds in accordance with ASTM D 1784. Physical and chemical properties shall be in accordance with ASTM D 1784.

b. Rework Materials: Clean rework materials generated from the manufacturer's own pipe production may be used by the same manufacturer for like purpose provided that the rework material meets the requirements of paragraph 3.2.2a above and the finished product incorporating the rework material is equal in quality to the product made from virgin compounds.

### 3.2.3 LAYING PVC PRESSURE PIPE

PVC piping shall be installed in a neat, workmanlike manner. Piping shall be installed to accurate lines and grades, and as specified.

Where temporary supports are used, they shall be sufficiently rigid to prevent shifting or distortion of the pipe. Provision shall be made for expansion where necessary.

Before assembly, all dirt and chips shall be removed from inside the pipe and fittings and from the threads.

After being cut to final lengths, the ends of PVC piping shall be reamed to remove burrs.

A sufficient number of unions shall be used to allow for the dismantling of all pipes, valves, and equipment. Unions shall be 250 WSP and shall be made of PVC for joining PVC pipe and malleable iron or steel with brass or bronze seats for joining ferrous pipe.

At all times when pipe installation is not actually in progress, the open ends of pipe shall be closed by temporary plugs, caps, or other approved means. For exterior buried piping, watertight plugs shall be used and if water or debris is in the trench when work is resumed, the plug shall not be removed until adequate provision has been made to prevent any water or debris entering the pipe even though this may necessitate dewatering the trench.

Testing of PVC pressure pipe shall be as specified under Section 3.14, "Filling and Hydrostatic Testing of the Pipeline System."

## SECTION 3.3 - FITTINGS FOR PVC PRESSURE PIPE

### 3.3.1 GENERAL

Tees, crosses, tapers, adapters, couplings, and bends shall be fabricated of steel or cast iron, and shall conform to the provisions of this section. All joints between steel tapers, adapters, couplings, and bends and PVC pressure pipe shall be rubber gasket joints. Shop drawings of the design of fabricated steel fittings and fittings to connect PVC pressure pipe to other types of pipe or to concrete structures or encasements shall be submitted to the District for review as specified under Section 1.1.4, "Shop Drawings, Product Data and Standards" of these Standard Specifications.

Tapers and adapters shall have ends which will fit the type of joint in the adjacent pipeline.

### 3.3.2 MATERIALS

a. Steel Fittings: Steel pipe for use in fittings, including riser pipe on delivery meters and fire flow nozzle, shall be as specified by AWWA C 200. Single weld butt joints will be acceptable and field welding shall conform with AWWA C 206. Steel fittings shall be fabricated in accordance with AWWA C 208. Steel flanges shall be Class D or E conforming with AWWA C 207.

b. Cast Iron Fittings: Cast iron fittings shall conform to AWWA C 110 for fittings modified as necessary to accept PVC pressure pipe spigots. The overall length of fittings except tapers may vary from the AWWA standard subject to the approval of the Engineer.

Cast iron fittings shall be suitable for the class of pipe adjacent to the fittings. Flange-to-hub adapters shall be manufactured with seats perpendicular to the centerline of the pipe, capable of accepting end thrust. Cast iron fittings shall be cement mortar lined in accordance with AWWA C 104.

Where required, cast iron tapers and adapters shall be provided with cast-on rings or lugs of sufficient size to transmit the thrust from the taper or adapter to the concrete collars.

c. Tapping Valve and Sleeve: Tapped connections in pipe and fittings shall be made in such manner as to provide a watertight joint and adequate strength against pullout. The maximum size of taps in pipe or fittings without bosses shall not exceed that listed in the appropriate table of the Appendix to ANSI A21.51 based on 3 full threads for cast iron and 2 full threads for ductile iron. Tapping valve and tapping sleeves shall be Mueller type or equal cast iron flange type. Gate valve for use with tapping sleeve shall be as specified in Section 5.2.2, Materials, and shall be compatible with the tapping sleeve and tapping machine.

Where the size of the connection exceeds that given above for the pipe in question, a boss shall be provided on the pipe barrel, the tap shall be made on the flat part of the intersection of the run and branch of a tee or cross, or the connection shall be made by means of a tapped tee, branch fitting and tapped plug or reducing flange, or tapping tee and tapping valve, all as indicated or approved.

All drilling and tapping of pipe shall be done normal to the longitudinal axis of the pipe; fittings shall be drilled and tapped similarly, as appropriate. Drilling and tapping shall be done only by skilled mechanics. Tools shall be adapted to the work and in good condition so as to produce good, clean-cut threads of the correct size, pitch and taper.

3.3.3 LININGS AND COATINGS

a. Interior:

(1.) The interior of all steel fittings shall be fusion-bonded epoxy coated in accordance with AWWA C 213. Fusion-bonded epoxy shall be Scotchkote 134 and liquid-applied repair coating Scotchkote 314, as manufactured by 3M Company, Electrical Specialties Division, 3M Austin Center, P.O. Box 2963, Austin, Texas, 78769-2963 (1-800-722-6721); or equal. Coating thickness shall be 12-15 mils.

(2.) Cast iron fittings shall be cement-mortar lined in accordance with AWWA C 104.

b. Exterior:

(1.) Above-grade: The above-grade exterior of steel or cast-iron fittings shall be coated as follows:

Surfaces shall be pickled or sandblasted in accordance with SSPC Designation SP-8 or SP-6, respectively. One prime coat shall be applied to a minimum dry film thickness of 2.0 mils within 4 hours of blasting or while the pickled metal is still warm. Primer shall be Carboline Rustcon 230, Engard 123, Koppers Pug Primer, or an approved equal product.

Topcoat shall consist of two (2) coats of alkyd enamel in the color "Warning Blue", number 963 as used by Triangle Paint Corporation, Inc., of Berkeley, California.

Above-grade PVC fittings shall also be painted as specified herein.

(2.) Below-grade: Steel fittings installed below grade shall be fusion-bonded epoxy coated as specified above.

Cast-iron fittings installed below grade shall be encased with polyethylene wrap to produce a minimum thickness of 8 mils over all surfaces in accordance with AWWA C 105.

3.3.4 INSTALLATION

The Contractor shall furnish and install such temporary supports and bracing as may be required to hold the fittings in place and prevent distortion during backfilling and placing of concrete; however, the embedment of timber supports will not be permitted.

Fittings shall be cleared of all debris, dirt, etc., before being installed.

# DIVISION 4 - CONCRETE

## SECTION 4.1 - CONCRETE, NEW CONSTRUCTION

### 4.1.1 MATERIALS

The Contractor shall furnish all materials for use in concrete, including cement, water, sand, coarse aggregate, and specified admixtures; and shall furnish all reinforcing bars and fabric and materials for curing concrete. Prior to placement of concrete, the Contractor shall submit to the District the brand name and manufacturer for each admixture and for curing compound. The District reserves the right to require submission of manufacturer's test data and certification of compliance, and to require submission of samples for testing of admixtures and/or curing compound prior to or during use in concrete.

a. Cement: Cement shall be Portland cement and shall conform to ASTM C 150 for Type II cement. Contractor shall use a single, approved standard brand throughout the work.

b. Water: Water shall be clean and free from deleterious amounts of acid, alkalis, silt, or organic materials.

c. Sand and coarse aggregate: Sand and coarse aggregate shall meet all requirements of ANSI/ASTM C 33. Coarse aggregate shall conform to size No. 57 (1 to 3/16-inches).

The District reserves the right to test the sand and coarse aggregate at the Contractor's expense and if required, the Contractor shall submit, for preliminary tests and approval, representative samples of the sand and coarse aggregate proposed for use in the work.

d. Air-entraining admixture: The air-entraining admixture shall conform to ASTM C 260.

e. Chemical admixture: The Contractor may use chemical admixtures which conform to ASTM C 494, type A or D when approved by the Engineer.

f. Reinforcing bars and fabric: Reinforcing bars shall conform to ANSI/ASTM A 615, grade 60, including supplementary requirements. Fabric shall be electrically welded-wire fabric conforming to ANSI/ASTM A 185 or A 497. Wire for tieing reinforcement in place shall be No. 18 AWG black annealed or heavier.

g. Formwork: Formwork shall be 5/8 B-B Plyform, Class I or better. Each sheet shall be grade stamped with an APA grade mark.

### 4.1.2 COMPOSITION

The maximum water-cement ratio of the concrete shall be 5.5 gallons per sack. The slump of the concrete when placed shall not exceed 3-inches. The compressive strength of the concrete shall be sufficient to insure that each concrete mix meets the following requirements:

a. Eighty percent of test cylinders shall have a compressive strength at 28 days in excess of 3,000 psi.

b. The average compressive strength at 28 days of any six consecutive test cylinders shall exceed 3,000 psi.

The compressive strength of the concrete will be in accordance with Section 90-9 of the latest edition of the State of California Department of Transportation Standard Specifications.

Unless otherwise directed, the Contractor shall design the concrete mix in accordance with these specifications.

| Class of Concrete | Maximum Size Aggregate in Concrete (inch) | Maximum Slump (inch) | Total Air Content (%) |
|---|---|---|---|
| A | 1 inch | 3 | 5.5 ± 0.5 |

Each mix design shall be submitted to the Engineer for review prior to use of the concrete mix.

The District will test the concrete for compliance with the specifications and reserves the right to design and adjust mix proportions.

Air-entraining admixture shall be used in such amount as will effect the entrainment of from 4 to 6 percent of air, by volume, of the concrete as discharged from the mixer.

4.1.3 EXECUTION

a. Batching, Mixing, and Transportation: All concrete shall be mixed and delivered in accordance with the "Specification for Ready-Mixed Concrete" (ASTM C 94).

b. Forms: The forms shall be smooth, mortar-tight, true to the required lines and grade, and of sufficient strength to resist springing out of shape during the placing and vibrating of concrete. All dirt, chips, sawdust and other foreign matter shall be completely removed before concrete is placed. Forms previously used shall be thoroughly cleaned of all dirt, mortar and foreign matter before being used. Before concrete is placed in forms, all inside surfaces of the form shall be thoroughly coated with an approved form sealer. The form sealer shall be of high penetrating quality leaving no film on the surface of the forms that can be absorbed by the concrete or be incompatible with concrete paint.

All exposed edges shall be chamfered with triangular fillets not less than 3/4 inch by 3/4 inch. These fillets and chamfer strips shall be milled from clear straight grain lumber and shall be surface on all sides.

Joints in formwork for exposed building foundation walls and curbs shall be taped.

c. Stripping: Forms shall be removed in such manner as to insure the complete safety of the structure.

Formwork for walls and other parts not supporting the weight of the concrete may be removed as soon as the concrete has hardened sufficiently to resist damage from removal operations (minimum elapsed time 24 hours) particularly when form ties will be bent by the removal operations.

Formwork for beam soffits and slabs and other parts that support the weight of concrete, shall remain in place until the concrete has reached its specified 28-day strength, with a minimum of 14 days elapsed before form removal.

When shores and other vertical supports are so arranged that the form facing material may be removed without loosening or disturbing the shores and supports, the facing material may be removed at an earlier age as specified or permitted. The shores and supports shall remain in place until the concrete has reached its specified 28-day strength, with a minimum of 14 days elapsed before form removal.

Retaining walls, building walls or tank wall shall not be backfilled until the concrete wall and supporting slab or slabs have reached the specified 28-day strength, with a minimum of 10 days elapsed time before backfilling.

Whenever the formwork is removed during the curing period, the exposed concrete shall be cured by one of the methods specified herein.

d. Reinforcing: Steel reinforcement shall be accurately placed and shall be supported and secured against displacement by the use of adequate and proper supporting and spacing devices, tie wires, etc., so that it will remain in its correct location in the finished work. No supporting devices shall be used that will impede the flow of concrete.

Unless otherwise directed, the minimum concrete coverage for steel reinforcement shall be as follows:

| | |
|---|---|
| Where concrete is deposited against ground: | 3" |
| Concrete in forms exposed to earth: | 2" |

The clear spacing between parallel bars shall not be less than 1-1/2 times the nominal diameter of the maximum size aggregate, and in no case less than 1-1/2 inches, except at splices which may be wired together.

Reinforcement will be inspected for compliance with requirements as to size, shape, length, splicing, position, and amount after it has been placed.

e. Placing concrete: All concrete shall be placed, finished and cured, and all other pertinent construction practices shall be in accordance with the Specifications for Structural Concrete for Buildings (ACI 301), hereby made a part of these specifications.

In addition to the requirements of ACI 301, concrete shall be placed so that:

(1) A uniform appearance of surfaces will be obtained.

(2) The concrete will be free of all rock pockets, honeycombs and voids.

(3) Deposit as nearly as practical in its final position.

(4) Deposit in walls in approximately 18 inch layers, preceding at a uniform rate.

(5) Do not deposit or place concrete until all forms, reinforcing steel, and construction joints have been inspected by the Engineer and accepted in advance within the entire extent of the pour.

(6) The subgrade must be moist when the concrete is placed for floor slabs to prevent excessive loss of water from the concrete mix.

f. Vibrators and vibrating: Employ as many vibrators and tampers as necessary to secure the desired results. Minimum: one per each 20 cubic yards of concrete placed per hour.

Eliminate the following practices:

(1) Pushing of concrete with vibrator.

(2) External vibration of forms.

(3) Allowing vibrator to vibrate against reinforcing steel where steel projects into green concrete.

(4) Allowing vibrator to vibrate contact faces of forms.

Vibrators shall function a minimum frequency of 3600 cycles per minute when submerged in concrete.

Supplement vibration by forking and spading along the surfaces of the forms and between reinforcing whenever flow is restricted.

g. Curing:

(1) General: Freshly deposited concrete shall be protected from premature drying and excessively hot or cold temperatures and shall be maintained with minimal moisture loss at a relatively constant temperature for the period of time necessary for the hydration of the cement and proper hardening of the concrete.

(2) Initial Curing: Initial curing shall immediately follow the finishing operation. Concrete shall be kept continuously moist at least overnight. One of the following materials or methods shall be used.

- Ponding or continuous sprinkling.
- Absorptive mat or fabric kept continuously wet.
- Waterproof paper conforming to ASTM C 171.

o Curing compounds conforming to "Specifications for Liquid Membrane-Forming Compounds for Curing Concrete" (ASTM C 309). Such compounds shall be applied in accordance with the recommendations of the manufacturer and shall not be used on any surfaces against which additional concrete or other cementitious finishing materials are to be bonded, nor on surfaces on which such curing is prohibited by the project specifications.

(3) Final curing: Immediately following the initial curing and before the concrete has dried, additional curing shall be accomplished by one of the following materials or methods:

o Continuing the method used in initial curing.

o Waterproof paper conforming to "Specifications for Waterproof Paper for Curing Concrete" (ASTM C 171).

o Other moisture-retaining coverings as approved.

(4) Duration of curing: The final curing shall continue until the cumulative number of days or fractions thereof, not necessarily consecutive, during which temperature of the air in contact with the concrete is above 50°F has totaled 7 days. If high-early-strength concrete has been used, the final curing shall continue for a total of 3 days. Rapid drying at the end of the curing period shall be prevented.

(5) Formed surfaces: Steel forms heated by the sun and all wood forms in contact with the concrete during the final curing period shall be kept wet. If forms are to be removed during the curing period, one of the above curing materials or methods shall be employed immediately. Such curing shall be continued for the remainder of the curing period.

h. Construction joints: Joints not shown on the drawing shall be so made and located as to least impair the strength of the structural element and shall be approved by the Engineer.

The surfaces of all concrete at all joints shall be thoroughly cleaned and all laitance removed by sandblasting. In preparation for the next pour, the joints shall be dampened, then thoroughly covered with a coat of neat cement mortar of similar proportions to the mortar in the concrete. The mortar shall be as thick as possible on vertical surfaces at least 1/2" thick on horizontal surfaces. The fresh concrete shall be placed before the mortar has obtained its initial set.

i. Embedded items: All sleeves, inserts, anchors, and embedded items required for adjoining work or for its support shall be placed prior to concreting. Embedded items shall be positioned accurately and supported against displacement. Voids in sleeves, inserts and anchor bolt slots shall be filled temporarily with a readily removable material to prevent entry of concrete into the voids.

j. Cold weather concreting: When the mean daily temperature falls below 40°F., concreting shall be in accordance with the "Recommended Practice for Cold Weather

Concrete - ACI 306". A written statement of the precautions proposed to be taken for depositing concrete below 40°F. temperature shall be submitted to the Engineer for acceptance.

k. Concrete finishes:

(1) Rough or board form finish: Rough or board form finish surfaces shall be true to line and plane with no specific requirements for selected facing materials. Tie holes and defects shall be patched and fins shall be rubbed down with wooden blocks. Otherwise, surfaces shall be left with the texture imparted by the forms.

(2) Grout cleaned finish: After the concrete, still freshly hardened, has been predampened, a slurry consisting of 1 part cement (including an appropriate quantity of white cement) and 1-1/2 parts sand passing the No. 16 sieve, by damp loose volume, shall be spread over the surface with clean burlap pads or sponge rubber floats. Any surplus shall be removed by scraping and then rubbing with clean burlap. The finish shall be cured in an approved manner. Sample to be approved by Engineer.

(3) Broom or belt finish: Slabs shall be given a coarse traverse scored texture by drawing a broom or burlap belt across the surface. This operation shall follow immediately after floating. Slab finishing tolerance shall be 1/8" in 10'.

## SECTION 4.2 - REPAIR OF CONCRETE

All concrete that is damaged or defective from any cause; concrete that is honeycombed, fractured, or otherwise defective; and concrete which, because of excessive surface depressions, must be excavated and built up to bring the surfaces to the prescribed lines shall be removed and replaced and imperfections and irregularities on concrete surfaces shall be corrected to the satisfaction of the Engineer. The proposed method of repair shall be submitted for approval prior to any repairs.

# DIVISION 5 - MECHANICAL

## SECTION 5.1 - MECHANICAL, GENERAL

The Contractor shall submit for District review those materials listed in Section 1.1.4 of these Standard Specifications.

This section covers valves and appurtenances and flow meters. Fittings and pipe are specified in Division 3, "Pipeline" of these Standard Specifications.

## SECTION 5.2 - VALVES AND APPURTENANCES

### 5.2.1 GENERAL

The Contractor shall furnish and install the various types and sizes of valves and appurtenances and flow meters. The valves and appurtenances and flow meters shall be in accordance with the requirements of these specifications and as shown on the standard details.

In-line valves shall be of a diameter equal to the downstream pipe, unless shown otherwise.

### 5.2.2 MATERIALS

a. Sleeve-type couplings: Style 38, without pipe stops, as manufactured by Dresser Manufacturing Division, 41 Fisher Avenue, Bradford, PA 16701; or equal.

b. Valve boxes:

(1) Valve boxes for field installation shall be concrete valve boxes equal to Series No. 9 or valve extension No. 1-R by Brooks Products, Inc., 10141 Olney Street, El Monte, CA 91734.

(2) Valve boxes and valve box extensions for roadway installation shall be equal to No. 3-RT by Brooks Products, Inc., 10141 Olney Street, El Monte, CA 91734.

c. Gravel for valve boxes: Gravel for valve boxes shall conform to paragraph 2.2.5.

d. Bronze Gate valves: Bronze gate valves, Federal Specification WW-V-54D, type I, II, or III, class B, Screwed. Valves shall open when turning the operator in a counter-clockwise direction.

Bronze gate valves shall be used only in air valve installations.

e. Tapping Sleeves and Gate Valves: AWWA Standard C 509, resilient-seated with stainless steel bolts, "O" ring seals, non-rising stem, open left, two-inch (2") square wrench nut with 304 stainless steel retainer nut inside. Gate valves shall be as manufactured by Mueller or approved equal.

Gate valve used for tapping sleeves shall be flanged on both sides. Mueller tapping sleeve or equal shall be used for installations of 12" or smaller.

Gate valves 10" or larger shall be approved by the District. Bypass valves may be required.

f. Butterfly valves: AWWA standard C 504, class 150B, with the axis of the leaf horizontal with the valve in the installed position. Butterfly valves shall be Groundhog as manufactured by Henry Pratt Company, 401 S. Highland Avenue, Aurora, IL 60507; or approved equal.

Buried butterfly valves, except bypass valves, shall be flanged type, suitable for buried service, and equipped with manual operators with 2 inch square operating nut. Valves shall open when turning the operator in a counter-clockwise direction. The valves shall be furnished with the valve boxes and extension stems, and a total of four tee-handled wrenches.

Buried butterfly valves for bypasses shall be flanged type, suitable for buried service, equipped with manual operators with 2 inch square operating nut. Valves shall open when turning the operator in a counter-clockwise direction. The valves shall be furnished with the valve boxes and extension stems.

The 2" operator nuts for all buried butterfly valves shall be 4 feet or less from the original ground surface. All extensions shall be approved by the Engineer.

The butterfly valves at the deliveries shall be flanges and equipped with manual operators, handwheels, and position indicators. Valves shall open when turning the operator in a counter-clockwise direction.

g. Air valves: Air release valves shall be APCO Model 145C Combination Air Release Valves or approved equal. The valve shall have a 2" minimum large orifice and 5/64" minimum small orifice. The valve shall be of the lever frame type. The valve shall have 1" NPT threaded inlet and outlet. The valve shall permit large volumes of air to pass while the line is filling or draining and continuous venting of the air pockets while the line is in service. The valve will include both of these functions in a single valve body.

h. Corporation stops: Catalog No. H-9996 as manufactured by Mueller Co., Decatur, Illinois; or equal.

i. Vertical flow meter: The vertical flow meter shall consist of a meter tube, flow straightening vanes and vertical propeller meter as shown on the standard details.

(1) Meter tube: The meter tube shall be of fabricated steel construction as specified for steel fittings in Section 3.3, "Fittings for PVC Pressure Pipe" of these Standard Specifications with wall thickness of not less than 3/16" thick, and shall have a flanged side outlet of the same size as the inlet. The flanged inlet and outlet shall conform to AWWA standard C 207, Class D, flanges with bolt holes straddling the centerline. A flanged mounting shall be provided at the top of the meter tube, which is suitable for attaching the meter assembly.

A 1½" and 3/4" coupling shall be provided and located on the meter tube and shall include appropriate plugs, as shown in the standard details.

(2) Flow straightening vanes: Provide flow straightening vanes immediately upstream of the inlet flange on all flow meters 6" and larger. Such vanes shall conform to the meter manufacturer's recommended design for welded vanes.

(3) Vertical propeller meter: Sparling Meter Manufacturing Series 100, Model FM132 Verti-flow meter.

j. The Contractor shall install, on any pipeline that terminates by any means other than an above ground delivery, a "blow-off valve" (2 inch discharge minimum) as shown on the standard detail. Said valve shall be capable of expelling air and/or water from the pipeline.

## 5.2.3 LININGS AND COATINGS

Lining of valves and appurtenances shall be as per the manufacturer's recommendations. The steel meter tube interior shall be fusion-bonded epoxy coated in accordance with AWWA C 213. Fusion-bonded epoxy shall be Scotchkote 134 and liquid-applied repair coating Scotchkote 314, as manufactured by 3M Company, Electrical Specialties Division, 3M Austin Center, P.O. Box 2963, Austin, Texas, 78769-2963 (1-800-722-6721); or equal. Coating thickness shall be 12-15 mils.

Before exposure to the weather and after thorough cleaning to remove all rust, dirt, grease and other foreign matter, the equipment and appurtenances specified herein shall be coated as specified hereinafter.

a. Above grade: Ferrous parts, not customarily finished at the shop, shall be pickled or sandblasted in accordance with SSPC Designation SP-8 or SP-6, respectively. One prime coat shall be applied to a minimum dry film thickness of 2.0 mills within 4 hours of blasting or while the pickled metal is still warm. Primer shall be Carboline Rustcon 230, Engard 123, Koppers Pug Primer, or an approved equal product.

Topcoat shall consist of two (2) coats of alkyd enamel in the color "Warning Blue, number 963 as used by Triangle Paint Company, Inc., of Berkeley, California.

b. Below grade: Buried valves and appurtenances shall be encased with polyethylene wrap to produce a minimum thickness of 8 mils over all surfaces in accordance with AWWA C 105.

## 5.2.4 INSTALLATION

Valves shall be installed as nearly as possible in the positions indicated on the drawings consistent with the conveniences of operating the hand wheel. All valves shall be carefully erected and supported in their respective positions free from all distortion and strain or appurtenances during handling and installation. All material shall be carefully inspected for defects in workmanship and material, all debris and foreign material cleaned out of valve openings and seats, all operating mechanisms operated to check their proper functioning, and all nuts and bolts checked for tightness.

Valves and other equipment which do not operate easily or are otherwise defective shall be repaired or replaced at the Contractor's expense.

Valves shall not be installed with stems below the horizontal. Valves shall be set plumb and supported adequately in conformity with instructions of the manufacturer.

A permanent type gasket of uniform thickness shall be provided between flanges of valves.

# DIVISION 6 - SPECIAL CONSTRUCTION

## SECTION 6.1 - SPECIAL STRUCTURE REQUIREMENTS

### 6.1.1 AIR VALVE WELLS

a. General: The Contractor shall furnish and erect pipe vertically for the air valves as shown on the standard details. The pipe lengths and diameters shall be as shown on the standard details or as directed. Where wells require pipe of sufficient length, the pipe may be furnished in manufactured lengths. Otherwise, the pipe shall be cut to lengths shown on the standard details or as directed.

b. Materials: Pipe erected vertically for the air valve wells may be concrete culvert pipe conforming to ANSI/ASTM C 76, Class II or III. Cement used in concrete culvert pipe shall meet the requirements of Federal Specification SS-C-1960 3A for Type II portland cement and shall meet the low-alkali requirements and false-set limitations specified therein.

Pipe erected vertically shall have bell-and-spigot ends, tongue-and-groove ends, or square-cut ends. Pipe joints for the air-valve wells shall be banded, collared, or bell-and-spigot joints without rubber gaskets.

The Contractor shall furnish and install covers for the air-valve wells in accordance with the standard details. Covers for the air-valve wells shall conform to paragraph 6.12.

c. Erection: Backfill or concrete placed about the pipe erected vertically shall be placed carefully so that the pipe will not be moved after erection.

### 6.1.2 COVERS FOR AIR-VALVE WELLS

a. General: The Contractor shall furnish and install covers for the air-valve wells as shown on the standard details and in accordance with this paragraph. The metal covers and related support brackets and hardware shall be galvanized zinc-coated (hot dip) after fabrication. Painting is not required.

b. Materials:

(1) Structural steel.-Structural shapes, plates and bars shall conform to Federal Specification QQ-S-741D.

(2) Expansion anchors.-Expansion anchors shall conform to Federal Specification FF-S-325, group 1, type 1, class 2, or group II, type 4, class 1. Proof load test will not be required.

(3) Bolts and nuts.-Bolts and nuts shall conform to Federal Specifications FF-N-836C and FF-B-575C.

c. Welding: Welding shall conform to the requirements of AWS D1.1.

d. Galvanizing zinc coating (hot dip): Galvanizing zinc coating (hot dip) shall conform to ASTM Designations A 123 and A 153. Galvanizing zinc coating (hot dip) on assembled metal work shall conform to ASTM Designations A 384, A 385 and A 386.

6.13 INDICATOR POSTS

a. General: The Contractor shall furnish and erect indicator posts at each valve site indicated by the Engineer. The indicator posts shall be erected as shown on the drawings.

b. Materials: The indicator posts shall be flexible fiberglass delineators with concave design. Delineators shall be white, 62-inches long, and furnished with yellow, 3"x12", engineering grade reflective tape. Engineering grade reflective tape shall be installed 2 inches from the top of the delineator post. The delineators shall be Flextron No. FT-62-MCD as manufactured by Carson Manufacturing Co. or approved equal.

c. Erection: The Contractor shall perform all work, including earthwork required for complete erection of the indicator posts. The indicator posts shall be installed as per manufacturer's recommendations.

# SAN BENITO COUNTY WATER DISTRICT

## STANDARD DETAILS

## AUGUST, 1993




Exp. 6-30-97

DISTRICT ENGINEER

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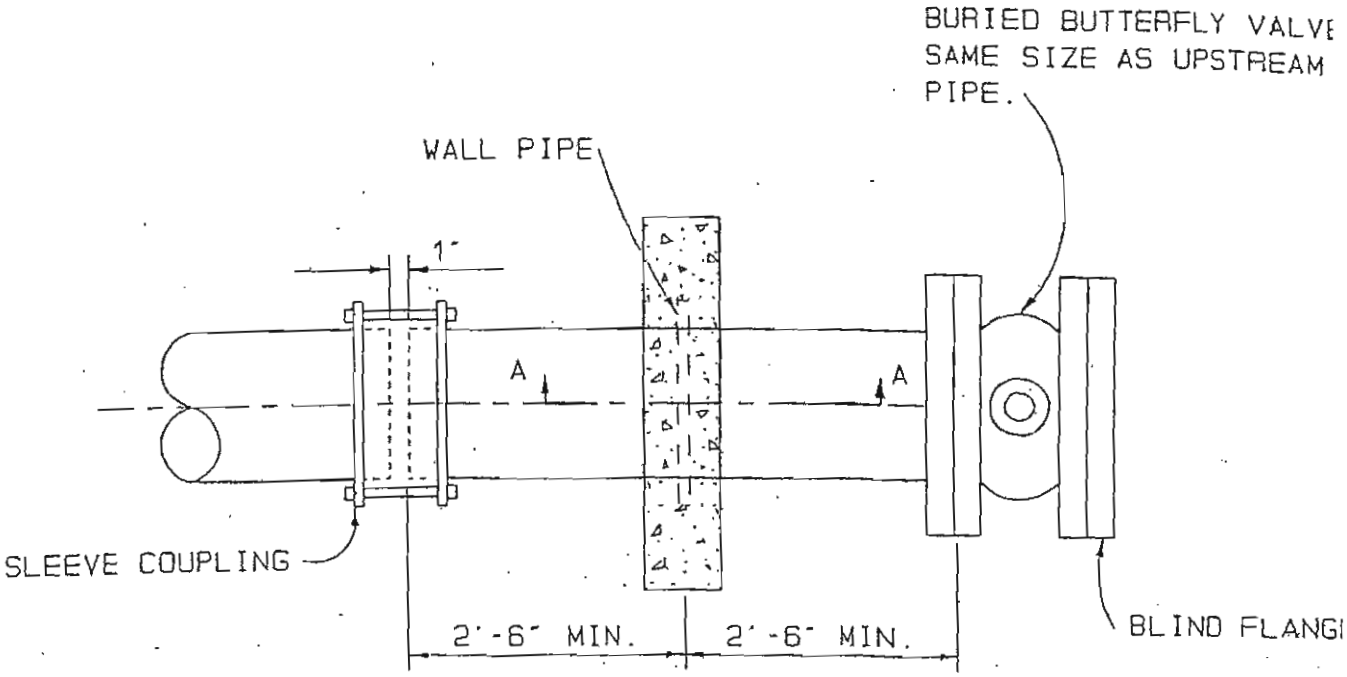
5-1 Pipe Crossing - Potable Water Line and Other Utility Lines
5-2 Pipe Crossing - Sewer Line and Non-Potable Water Line
5-3 Pipe Crossing - Concrete Encasement

6. Chain Link Fence

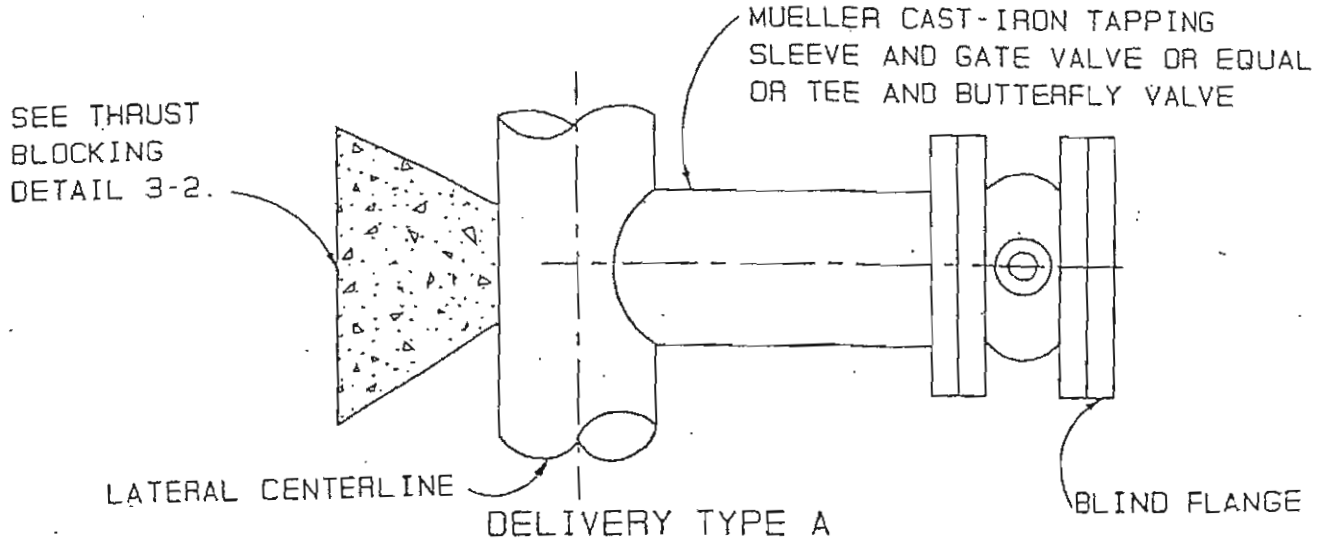
Standard Plan - A85

# SECTION 1

# DELIVERY DETAILS




DELIVERY TYPE D



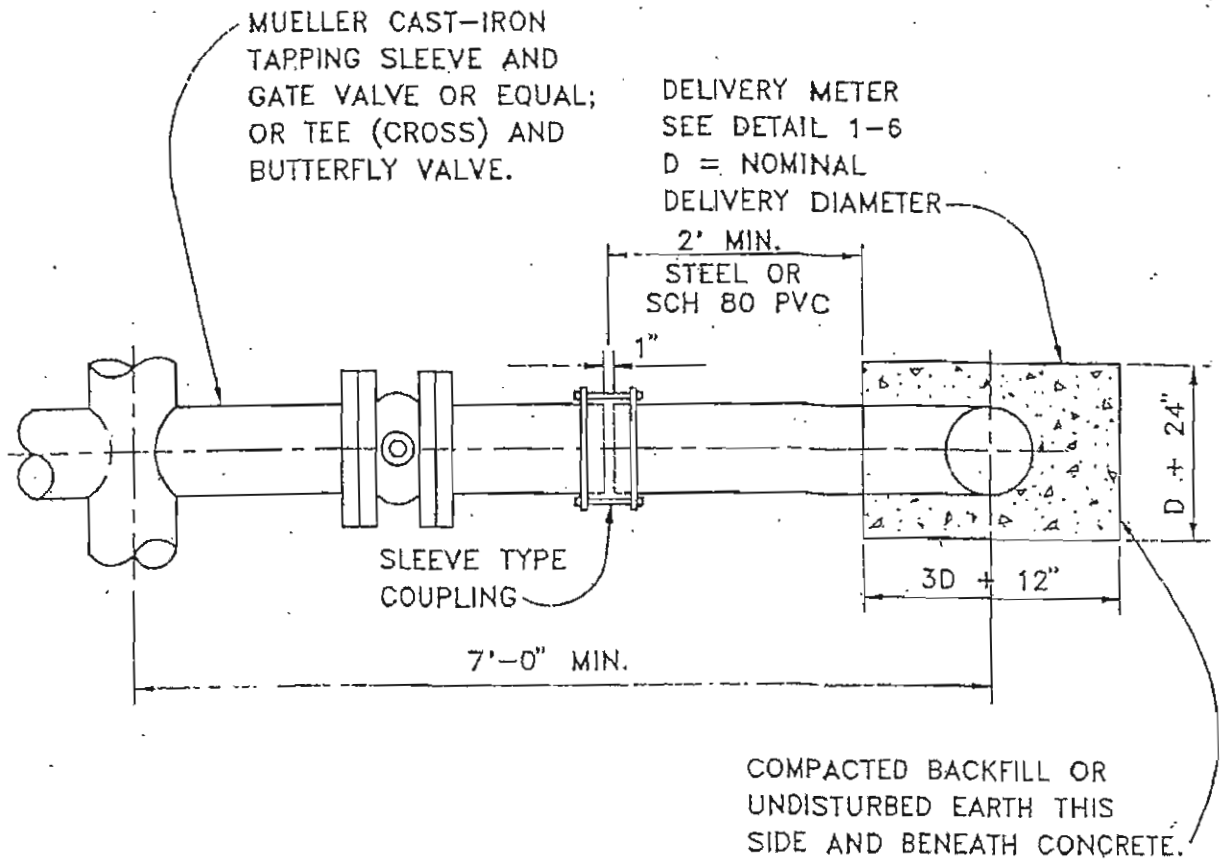

DELIVERY TYPE A

NOTES:
1) SEE IN-LINE THRUST BLOCK DETAIL 3-7 FOR SECTION A-A.
2) FOR 12" AND UNDER USE MUELLER CAST-IRON TAPPING SLEEVE. FOR OVER 12" USE ROMAC "SST" TAPPING SLEEVE.

| SAN BENITO COUNTY WATER DISTRICT | DESIGNED BY: C+D | SCALE: NO SCALE |
|---|---|---|
| DELIVERY TYPE A AND D | DRAWN BY: C+D | DATE: MAR 1993 |

APPROVED BY:

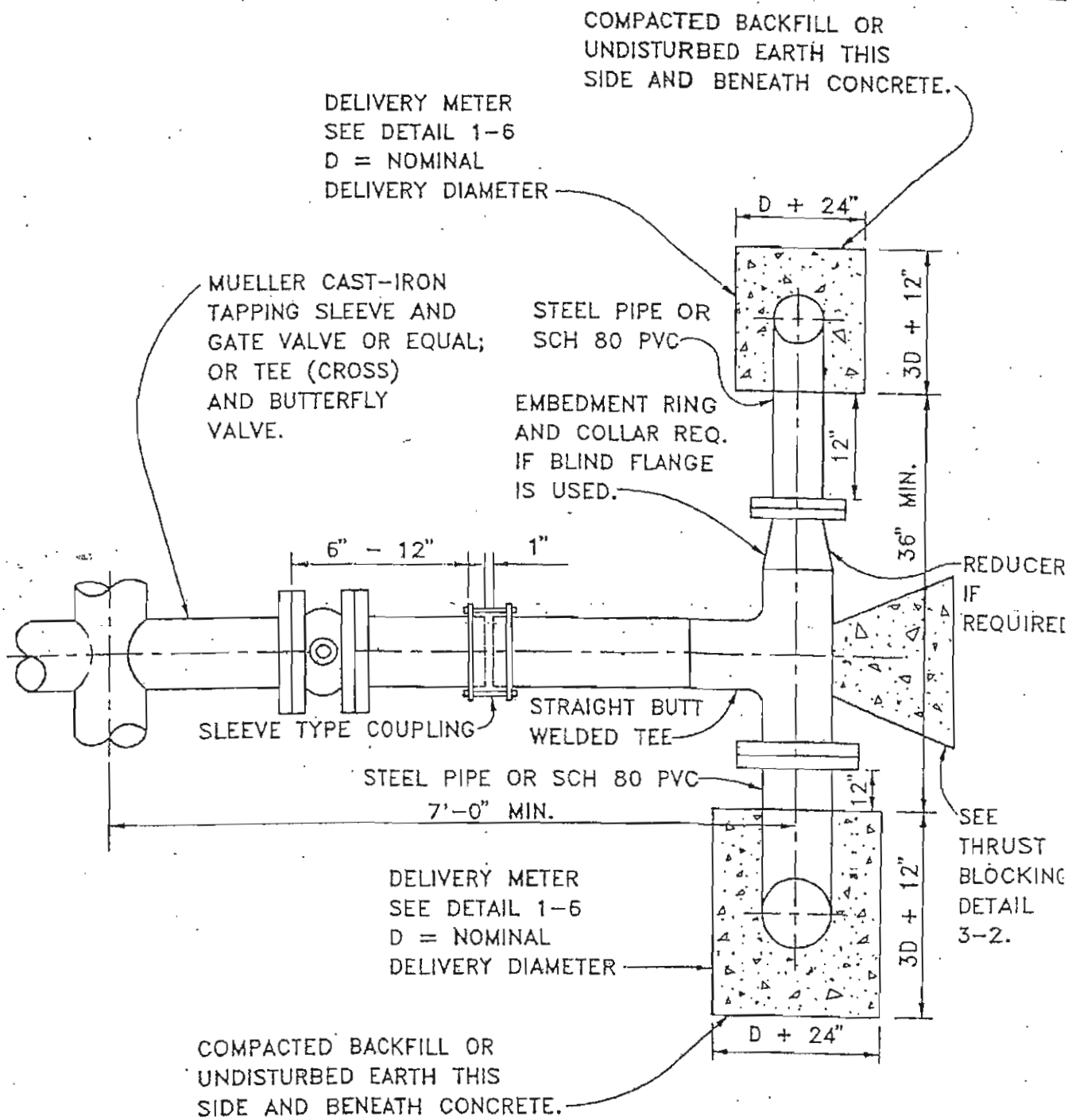
APPROVED BY:




NOTES:

1) SEE DELIVERY TYPE E DETAIL 1-4 IF DELIVERY IS AT END OF LATERAL.
2) FOR 12" AND UNDER USE MUELLER CAST-IRON TAPPING SLEEVE. FOR OVER 12" USE ROMAC "SST" TAPPING SLEEVE.

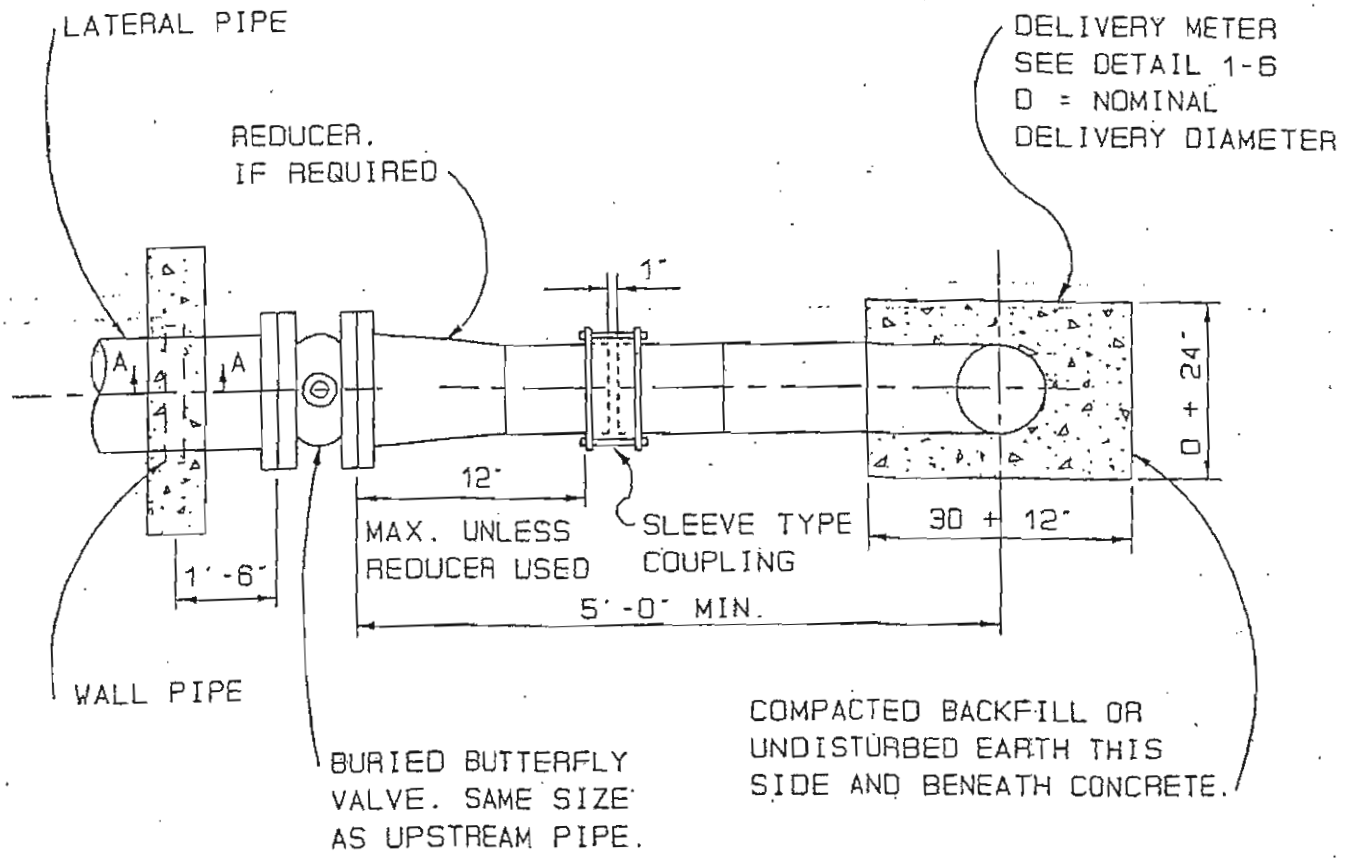
| SAN BENITO COUNTY WATER DISTRICT | DESIGNED BY: | SCALE: |
|---|---|---|
| | C+D | NO SCALE |
| DELIVERY TYPE B | DRAWN BY: | DATE: |
| | C+D | FEB 1996 |
| APPROVED BY: / APPROVED BY: | CHECKED BY: | DRAWING NO. |




NOTES:

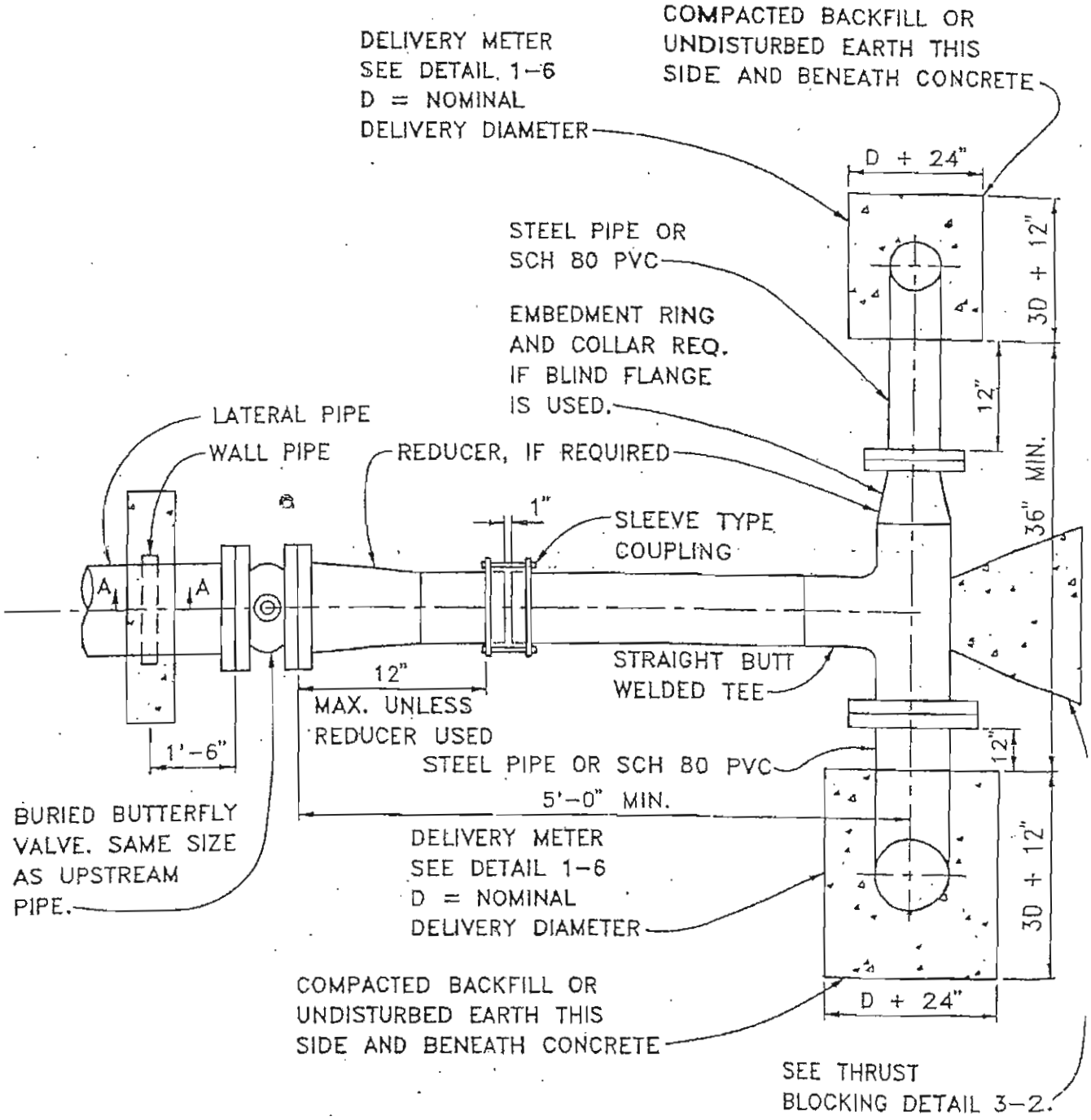
1) SEE DELIVERY TYPE F DETAIL 1-5 IF DELIVERY IS AT END OF LATERAL.
2) FOR 12" AND UNDER USE MUELLER CAST-IRON TAPPING SLEEVE. FOR OVER 12" USE ROMAC "SST" TAPPING SLEEVE.

| SAN BENITO COUNTY WATER DISTRICT<br>DELIVERY TYPE C | DESIGNED BY: C+D | SCALE: NO SCALE |
|---|---|---|
| | DRAWN BY: C+D | DATE: FEB 1996 |
| APPROVED BY: | APPROVED BY: | CHECKED BY: C+D | DRAWING NO. |



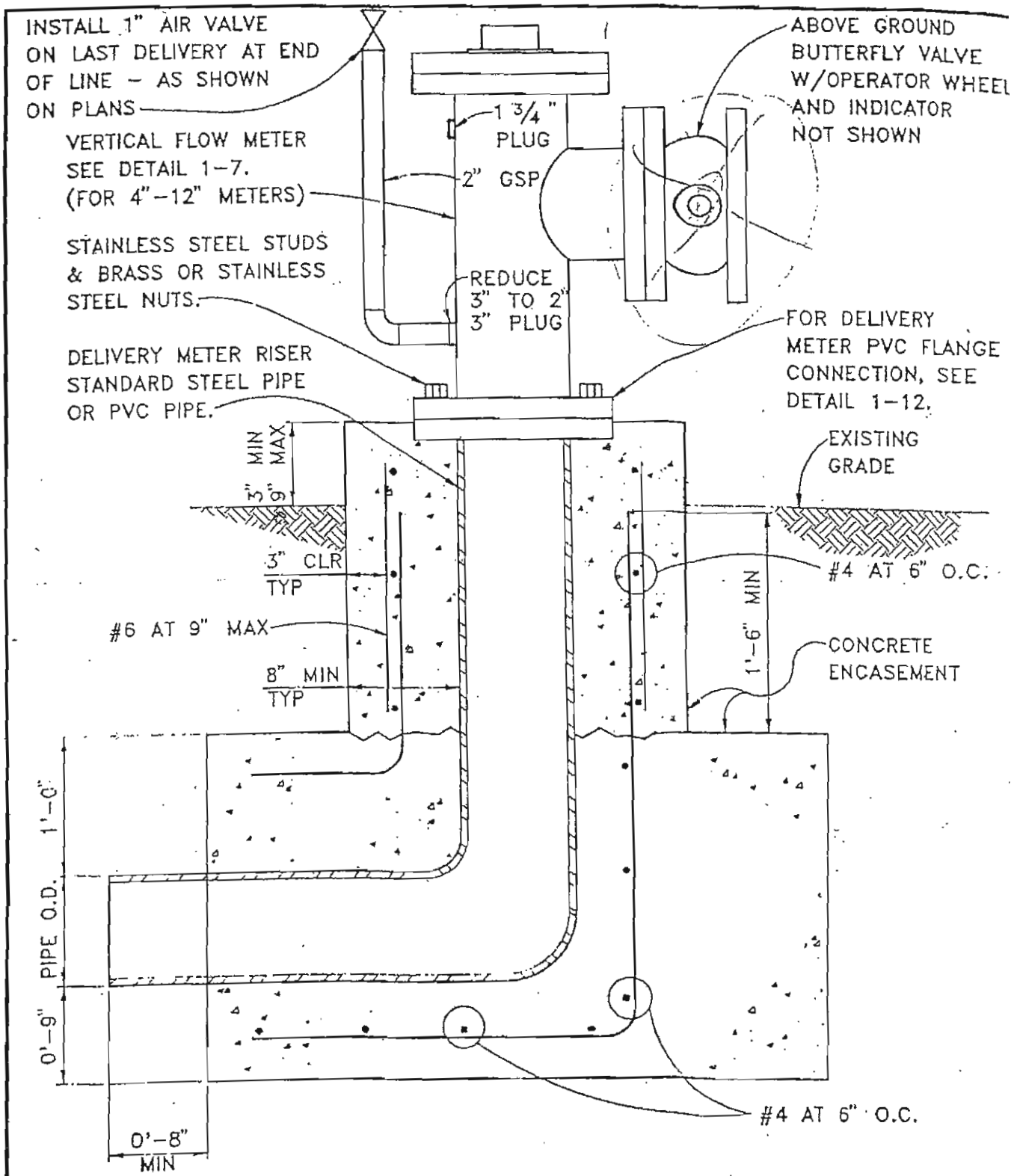

NOTES:
1) SEE IN-LINE THRUST BLOCK DETAIL 3-7 FOR SECTION A-A.

| | | |
|---|---|---|
| SAN BENITO COUNTY WATER DISTRICT | DESIGNED BY: C+D | SCALE: NO SCALE |
| DELIVERY TYPE E | DRAWN BY: C+D | DATE: NOV 1992 |
| APPROVED BY: / APPROVED BY: | CHECKED BY: | DRAWING NO. |




NOTES;
1) SEE IN-LINE THRUST BLOCK DETAIL 3-7 FOR SECTION A-A.

| SAN BENITO COUNTY WATER DISTRICT | DESIGNED BY: | SCALE: |
|---|---|---|
| DELIVERY TYPE F | C+D | NO SCALE |
| | DRAWN BY: | DATE: |
| | C+D | FEB 1996 |
| APPROVED BY: / APPROVED BY: | CHECKED BY: | DRAWING NO. |



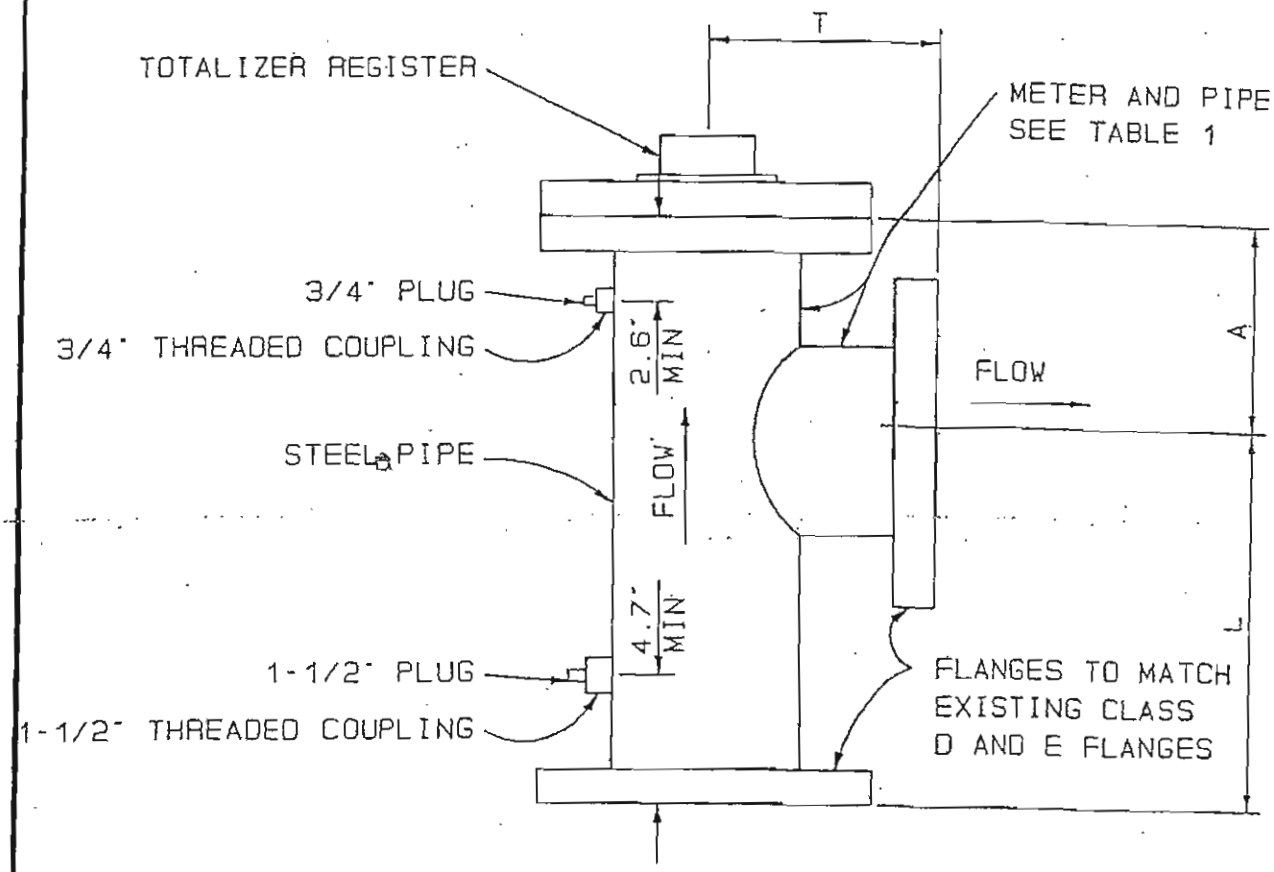

# SAN BENITO COUNTY WATER DISTRICT

## DELIVERY METER DETAIL (4" –12" METERS)

| | |
|---|---|
| DESIGNED BY: C+D | SCALE: NO SCALE |
| DRAWN BY: C+D | DATE: FEB 1996 |
| CHECKED BY: | DRAWING NO. |

APPROVED BY:

APPROVED BY:




ELEVATION VIEW

| PIPE AND METER SIZE | L | A | T |
|---|---|---|---|
| 4" | 15.90" | 4.10" | 8" |
| 6" | 17.25" | 5.15" | 8" |
| 8" | 24.50" | 6.50" | 8" |
| 10" | 24.75" | 7.55" | 9" |
| 12" | 25.25" | 8.45" | 10" |

SAN BENITO COUNTY WATER DISTRICT

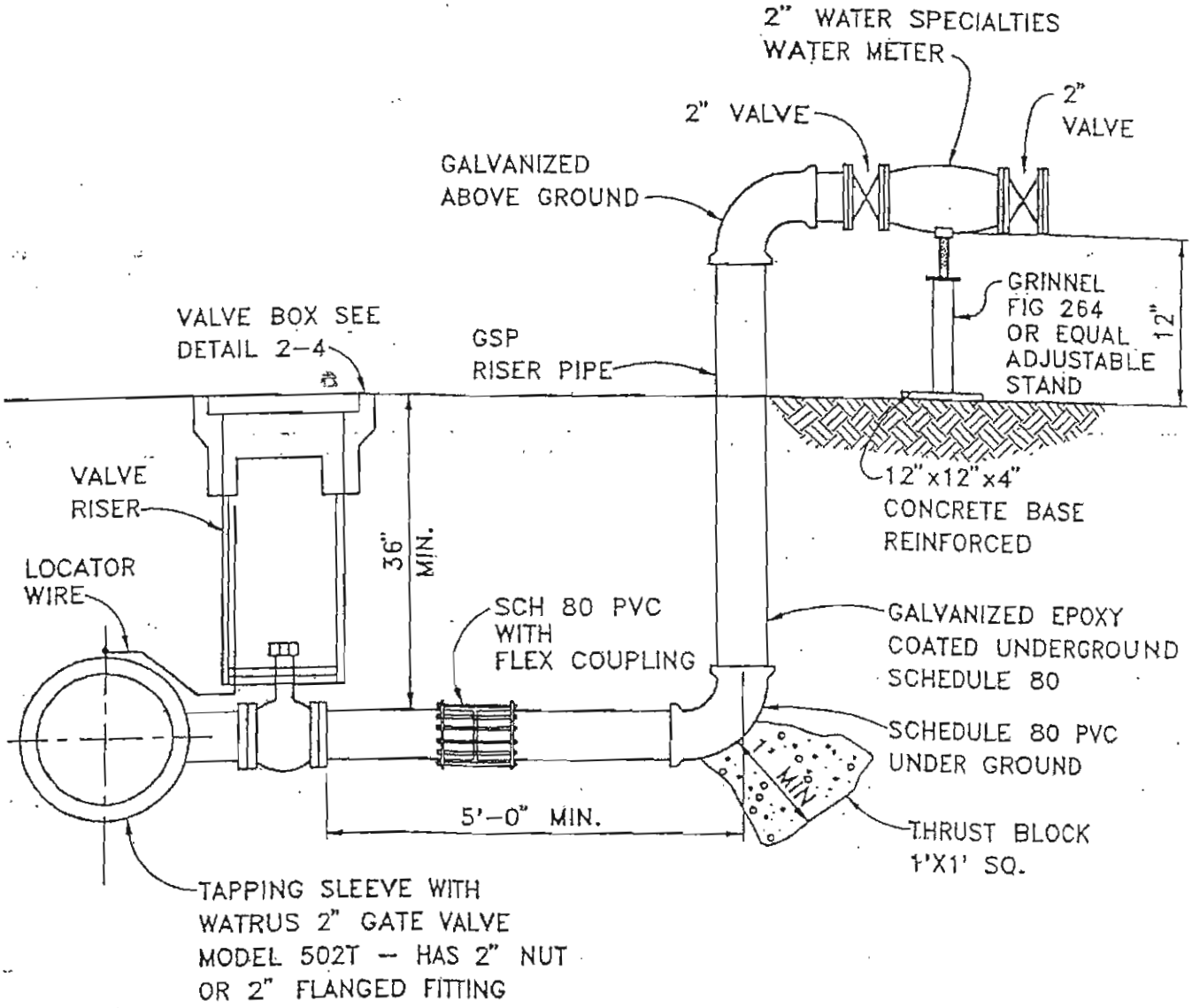
VERTICAL FLOW METER

| | |
|---|---|
| DESIGNED BY: C+D | SCALE: NO SCALE |
| DRAWN BY: C+D | DATE: NOV 1992 |
| CHECKED BY: | DRAWING NO. |

APPROVED BY:

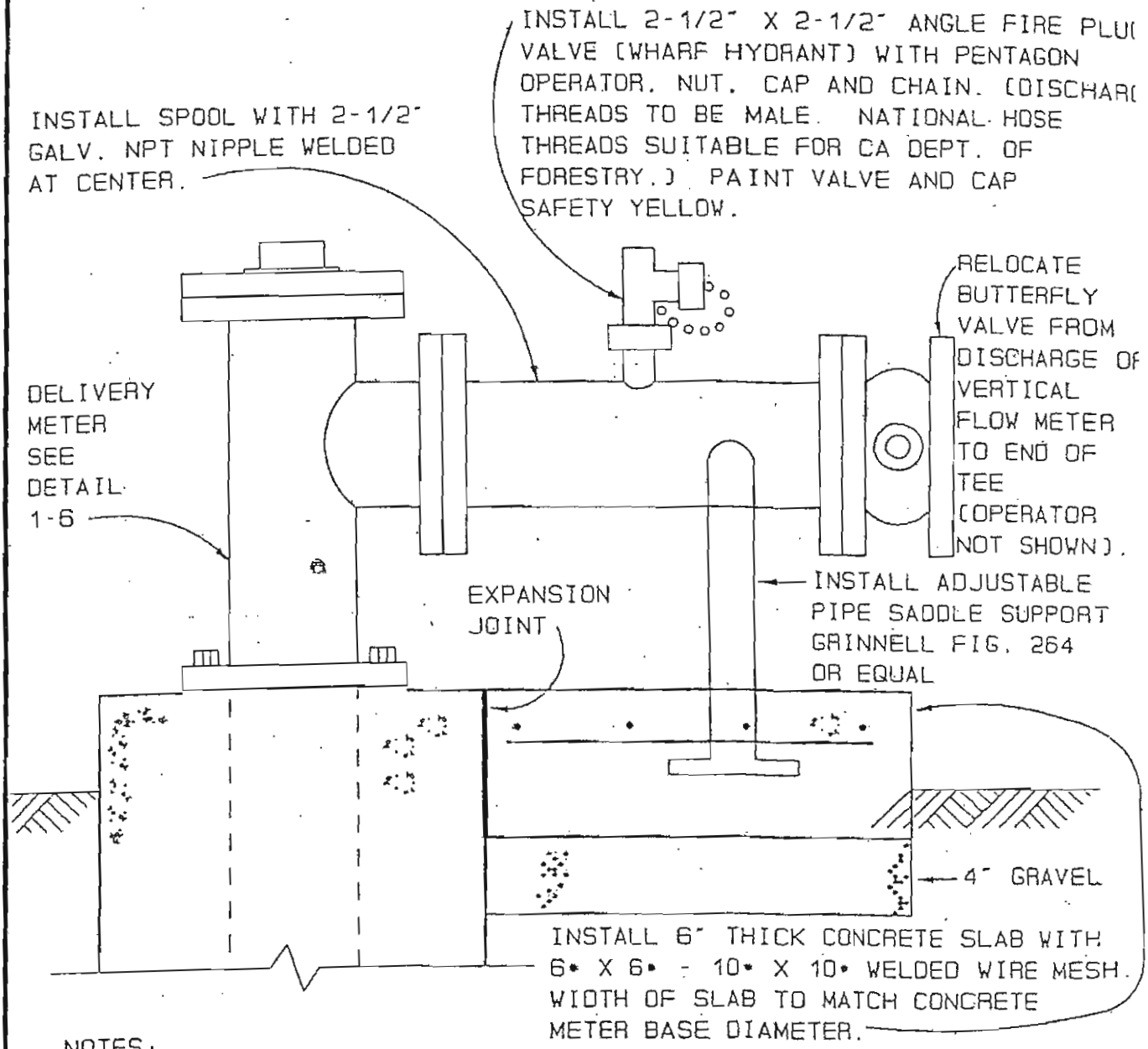
APPROVED BY:

SEE SPECIFICATIONS FOR PAINTING REQUIREMENTS




NOTE: IF DISTANCE FROM MAIN LINE TO RISER PIPE IS 20 FT. OR MORE USE 4" TAPPING SLEEVE AND GATE VALVE WITH VALVE BOX. INSTALL 4" TO 2" REDUCER BEFORE GATE VALVE NEAR THE RISER.

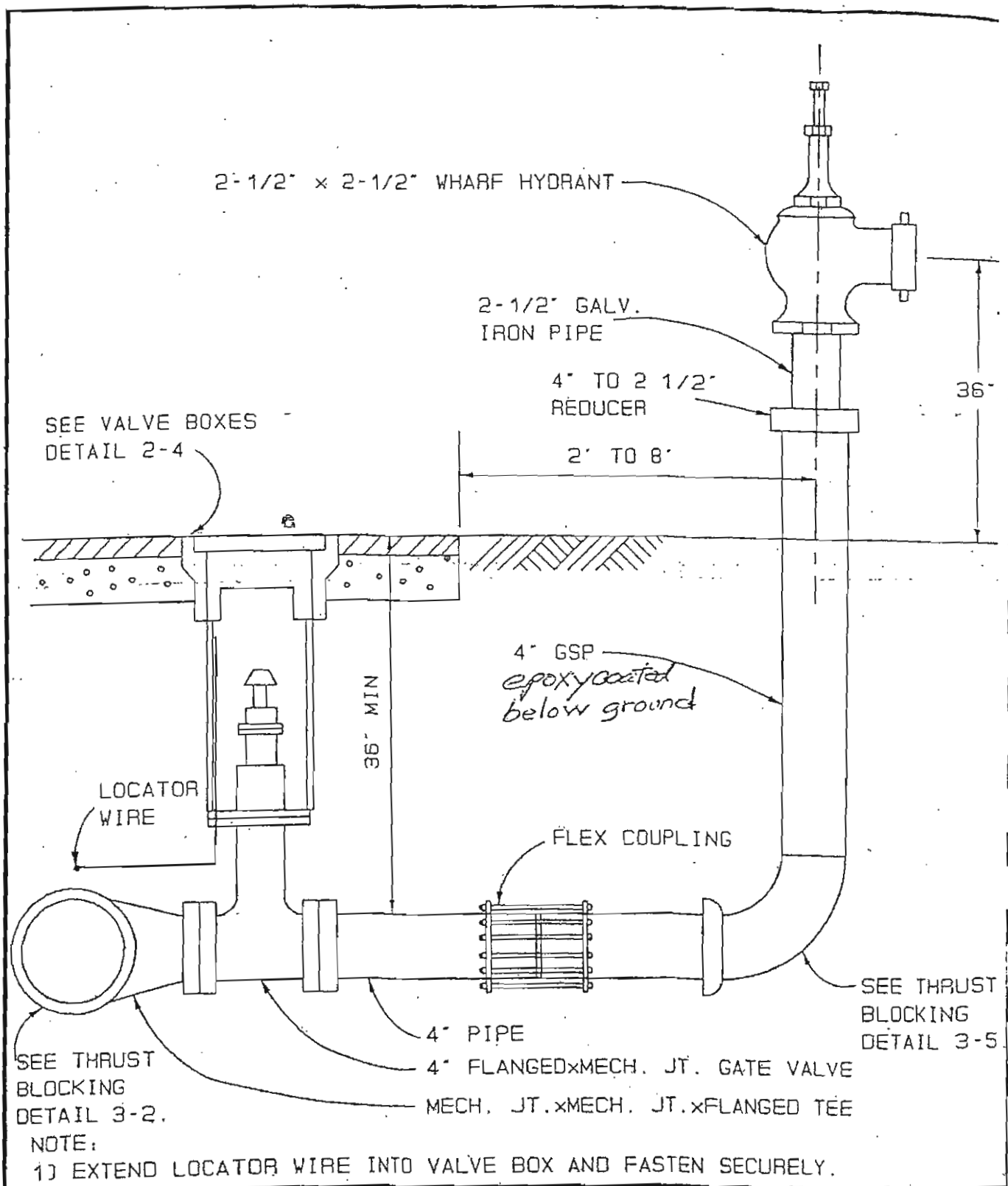
| SAN BENITO COUNTY WATER DISTRICT<br>2" RISERS FOR<br>5 ACRE PARCELS | DESIGNED BY: C+D | SCALE: NO SCALE |
|---|---|---|
| | DRAWN BY: C+D | DATE: FEB 1996 |
| APPROVED BY: | APPROVED BY: | CHECKED BY: / DRAWING NO. |




NOTES:

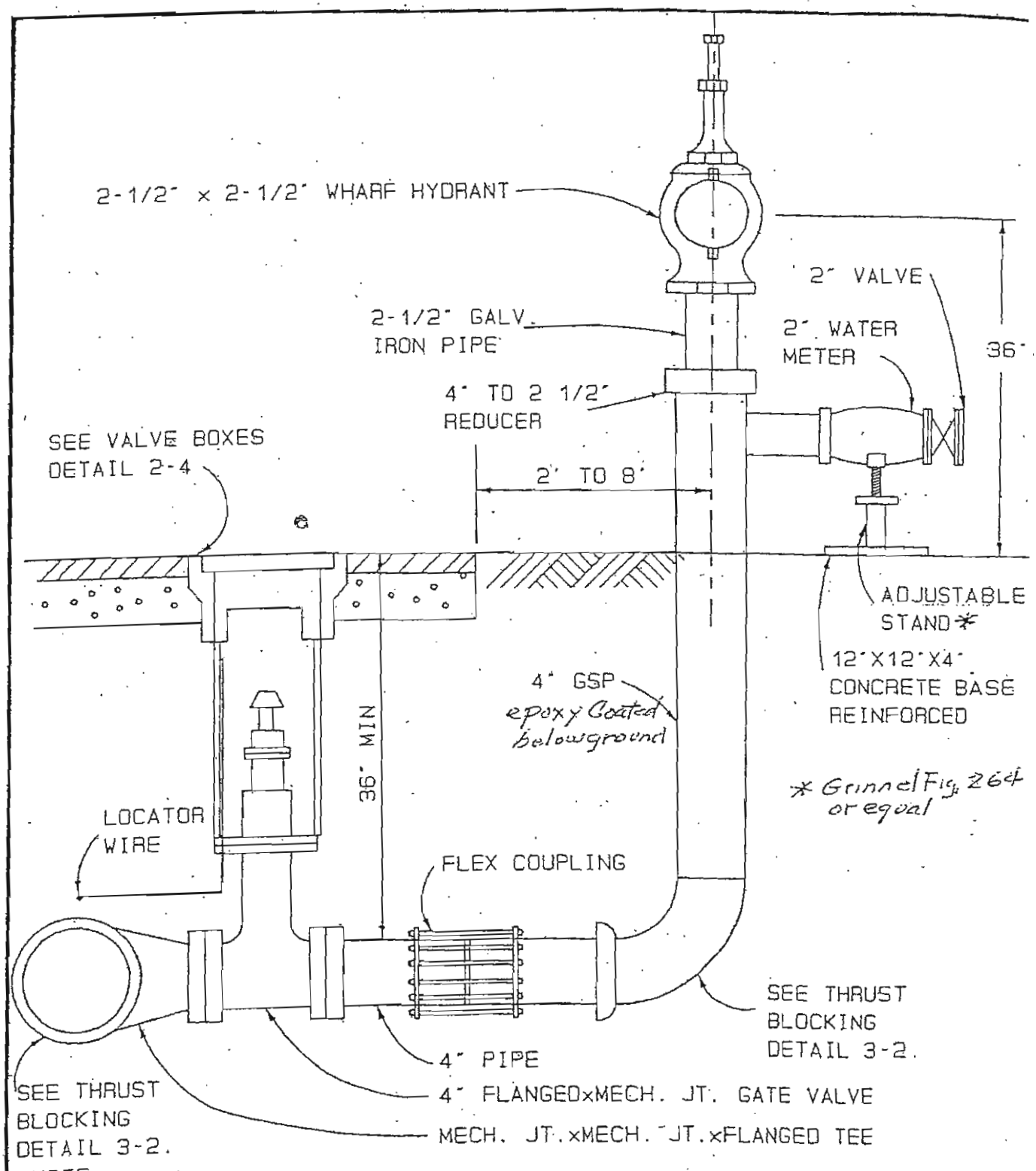
1) A REFLECTORIZED BLUE BOTT'S DOT SHALL BE INSTALLED IN THE CENTER OF THE ROAD PAVEMENT OPPOSITE THE FIRE NOZZLE.
2) ALL CONSTRUCTION SHALL MEET S.B.C.W.D. AND THE CA DEPT. OF FORESTRY AND FIRE PROTECTION STANDARDS.
3) A LIMITED NUMBER OF MANUFACTURED STEEL SPOOLS (WITHOUT THE 2-1/2" NPT NIPPLE) ARE AVAILABLE AT THE S.B.C.W.D. OFFICE AT $50 PER 4" SPOOL, $75 PER 6" SPOOL, $100 PER 8" OR LARGER SPOOL.

| SAN BENITO COUNTY WATER DISTRICT | DESIGNED BY: | SCALE: |
|---|---|---|
| | C+D | NO SCALE |
| FIRE FLOW NOZZLE | DRAWN BY: | DATE: |
| | C+D | NOV 1992 |
| APPROVED BY: / APPROVED BY: | CHECKED BY: | DRAWING NO. |




NOTE:
1) EXTEND LOCATOR WIRE INTO VALVE BOX AND FASTEN SECURELY.

| | | |
|---|---|---|
| SAN BENITO COUNTY WATER DISTRICT | DESIGNED BY: C+D | SCALE: NO SCALE |
| 2-1/2" WHARF HYDRANT | DRAWN BY: C+D | DATE: NOV 1992 |
| APPROVED BY: / APPROVED BY: | CHECKED BY: | DRAWING NO. |




NOTE:
1) EXTEND LOCATOR WIRE INTO VALVE BOX AND FASTEN SECURELY.

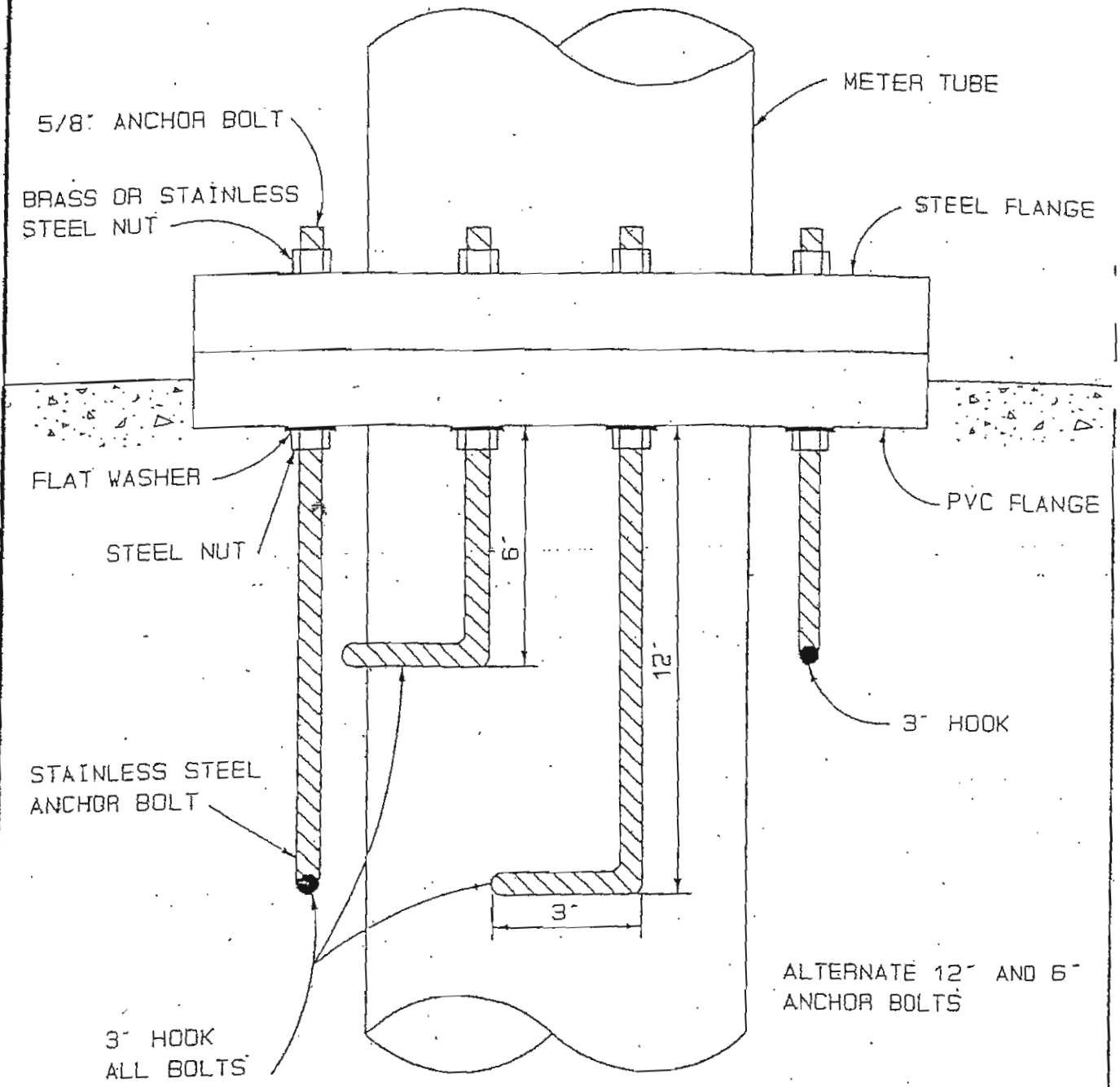
# SAN BENITO COUNTY WATER DISTRICT

## 2-1/2" WHARF HYDRANT AND 2" DELEVERY METER

| | |
|---|---|
| DESIGNED BY: C+D | SCALE: NO SCALE |
| DRAWN BY: C+D | DATE: MAR 1993 |
| CHECKED BY: | DRAWING NO. |

APPROVED BY: _____

APPROVED BY: _____

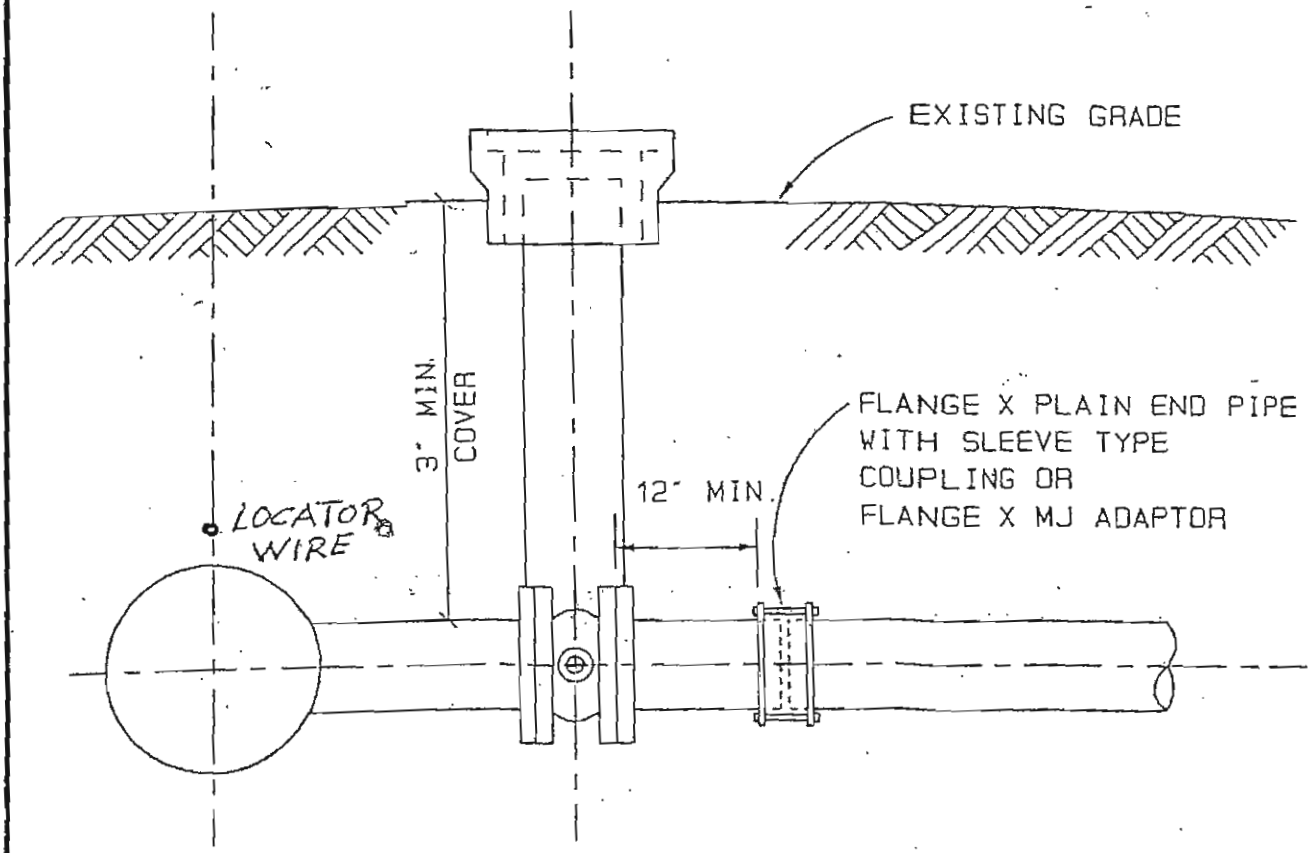



NOTES:
1) 5/8" THREADED STAINLESS STEEL BAR WITH 3" BEND ON ONE END CAN BE USED 18" IN LENGTH AND 12" IN LENGTH

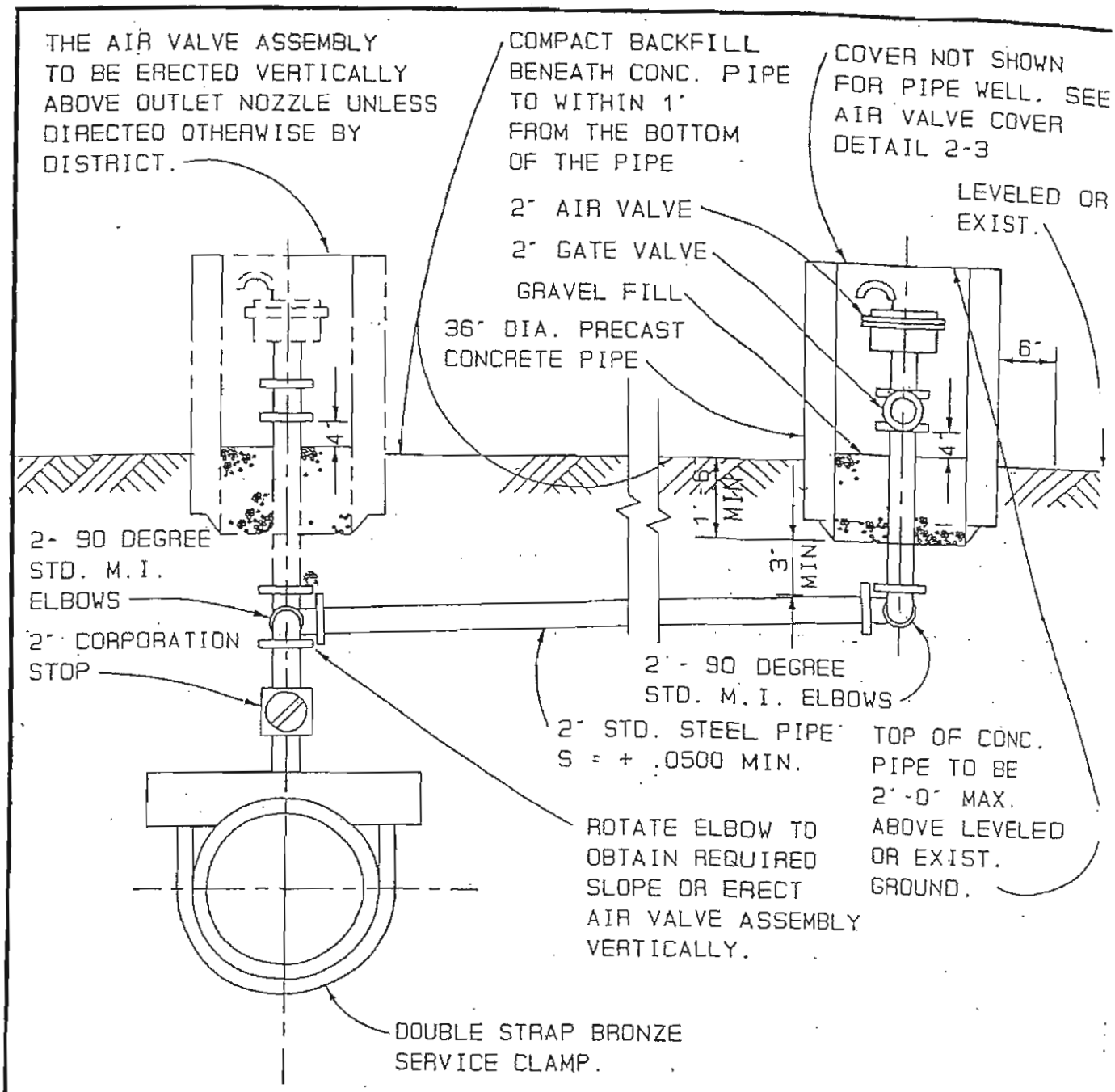
| | | |
|---|---|---|
| SAN BENITO COUNTY WATER DISTRICT<br>DELIVERY METER<br>PVC FLANGE CONNECTION | DESIGNED BY: C+D | SCALE: NO SCALE |
| | DRAWN BY: C+D | DATE: MAR 1993 |
| APPROVED BY: | APPROVED BY: | CHECKED BY: |

# SECTION 2

# PIPELINE DETAILS



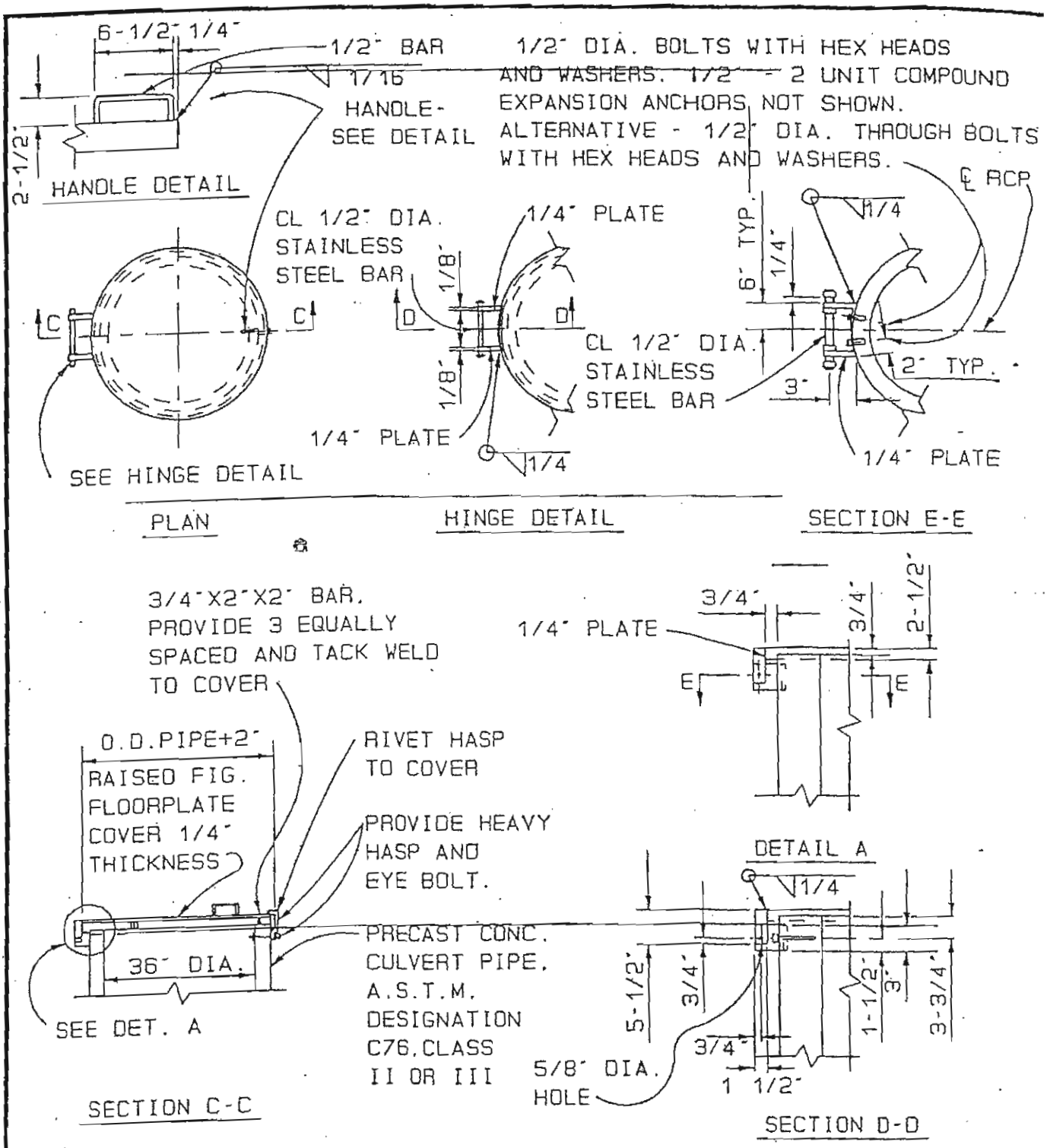

| | | | |
|---|---|---|---|
| SAN BENITO COUNTY WATER DISTRICT | | DESIGNED BY: C+D | SCALE: NO SCALE |
| LATERAL VALVE INSTALLATION | | DRAWN BY: C+D | DATE: NOV 1992 |
| APPROVED BY: | APPROVED BY: | CHECKED BY: | DRAWING NO. |




NOTES:

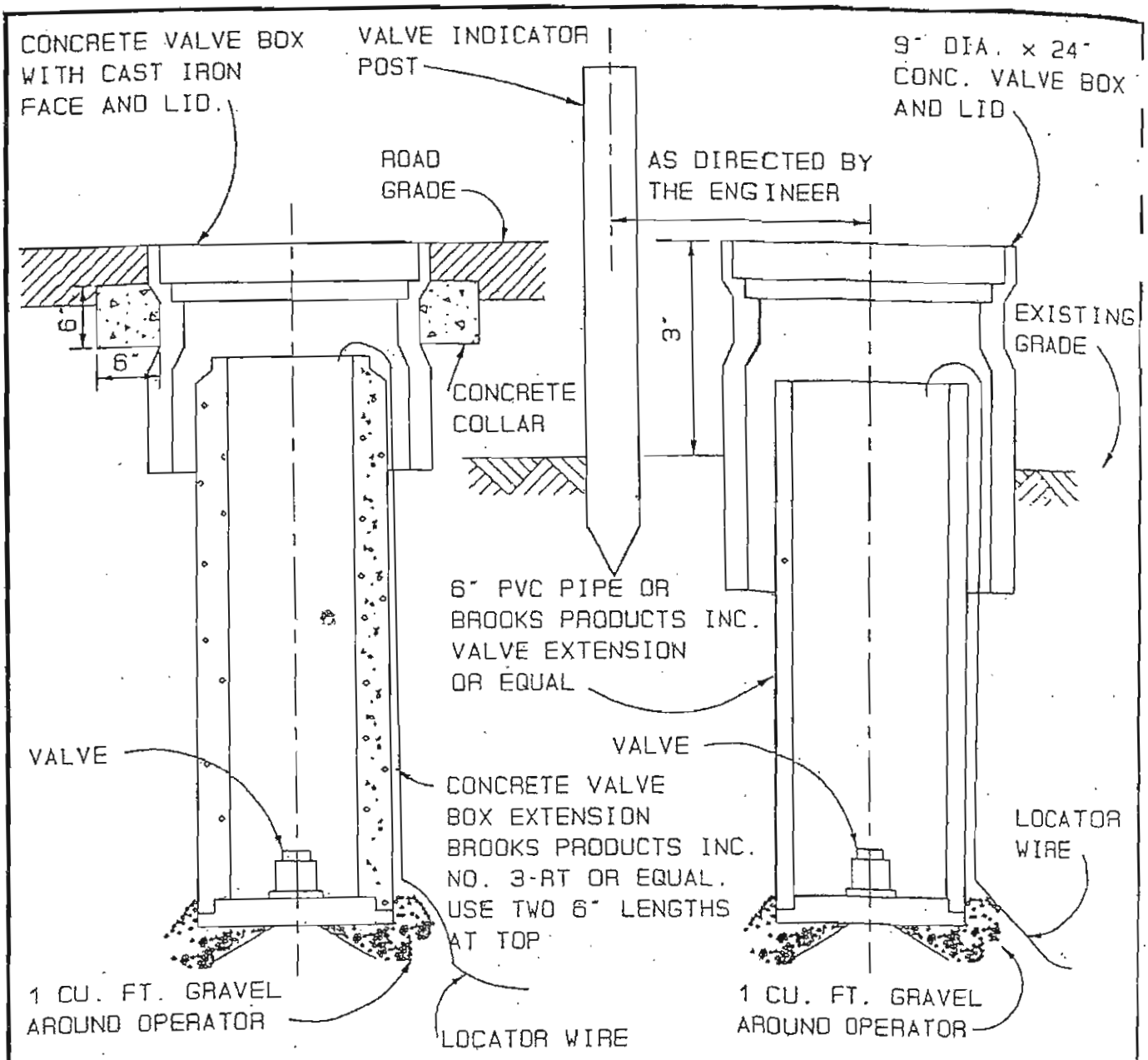
1) 36" DIAMETER PRECAST CONCRETE PIPE SHALL CONFORM TO ASTM C 76 CLASS II OR III

| | | | |
|---|---|---|---|
| SAN BENITO COUNTY WATER DISTRICT<br>AIR VALVE INSTALLATION | | DESIGNED BY: C+D | SCALE: NO SCALE |
| | | DRAWN BY: C+D | DATE: NOV 1992 |
| APPROVED BY: | APPROVED BY: | CHECKED BY: | DRAWING NO. |




NOTES:
1) GALVANIZE AFTER FABRICATION.

| | | | |
|---|---|---|---|
| SAN BENITO COUNTY WATER DISTRICT | | DESIGNED BY: C+D | SCALE: NO SCALE |
| AIR VALVE COVER | | DRAWN BY: C+D | DATE: NOV 1992 |
| APPROVED BY: | APPROVED BY: | CHECKED BY: | DRAWING NO. |




DETAIL A
VALVE BOX
PAVED AND DRIVEWAY
INSTALLATION

DETAIL B
VALVE BOX
UNPAVED INSTALLATION

NOTES:
1) LOCATOR WIRE FROM THE TOP OF PIPE SHALL BE BROUGHT UP TO THE TOP OF THE VALVE BOX AS SHOWN.

# SAN BENITO COUNTY WATER DISTRICT

## VALVE BOXES

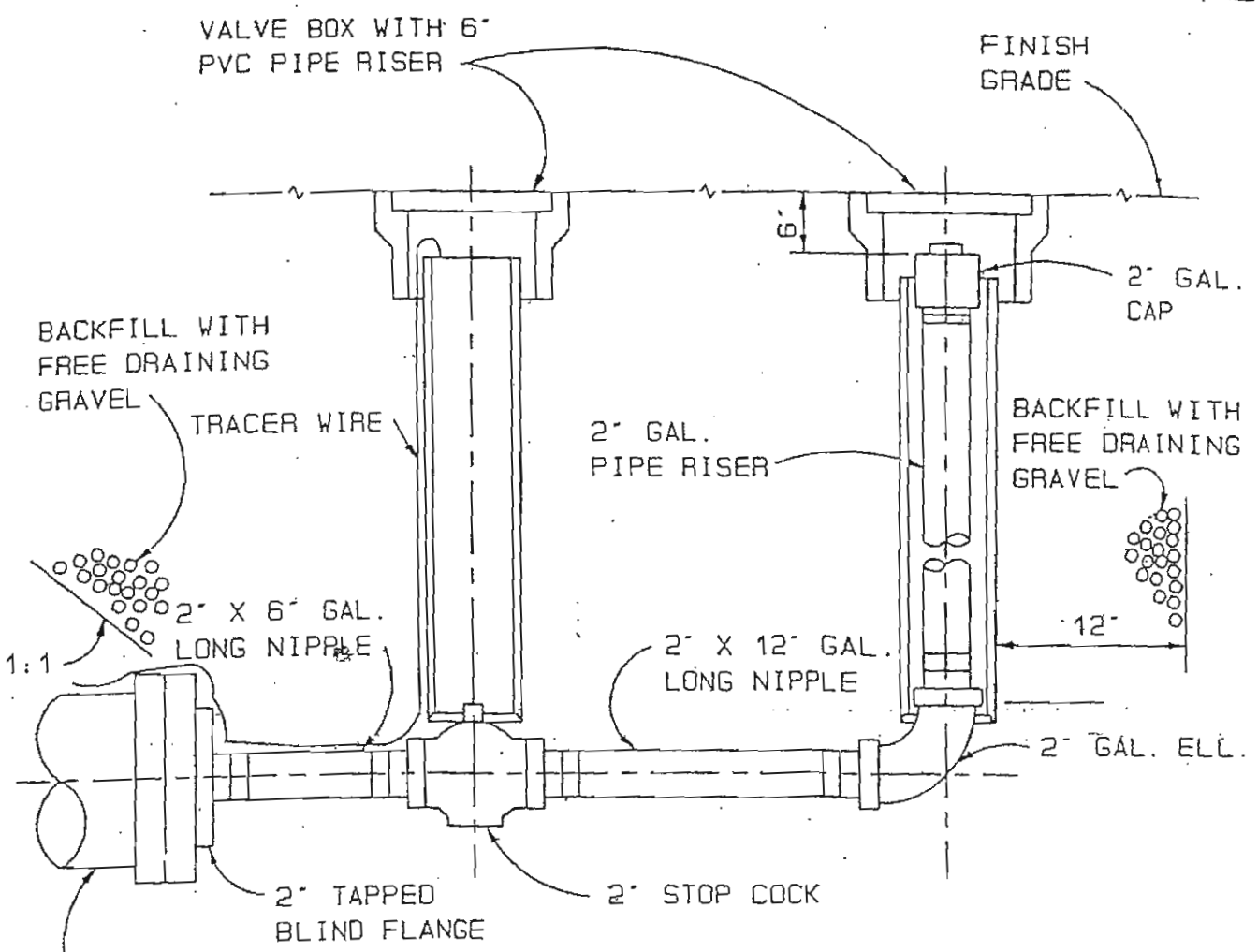
| DESIGNED BY: | SCALE: |
|---|---|
| C+D | NO SCALE |
| DRAWN BY: | DATE: |
| C+D | NOV 1992 |
| CHECKED BY: | DRAWING NO. |
| C+D | D-4 |

APPROVED BY:

DISTRICT MANAGER

APPROVED BY:

DISTRICT ENGINEER

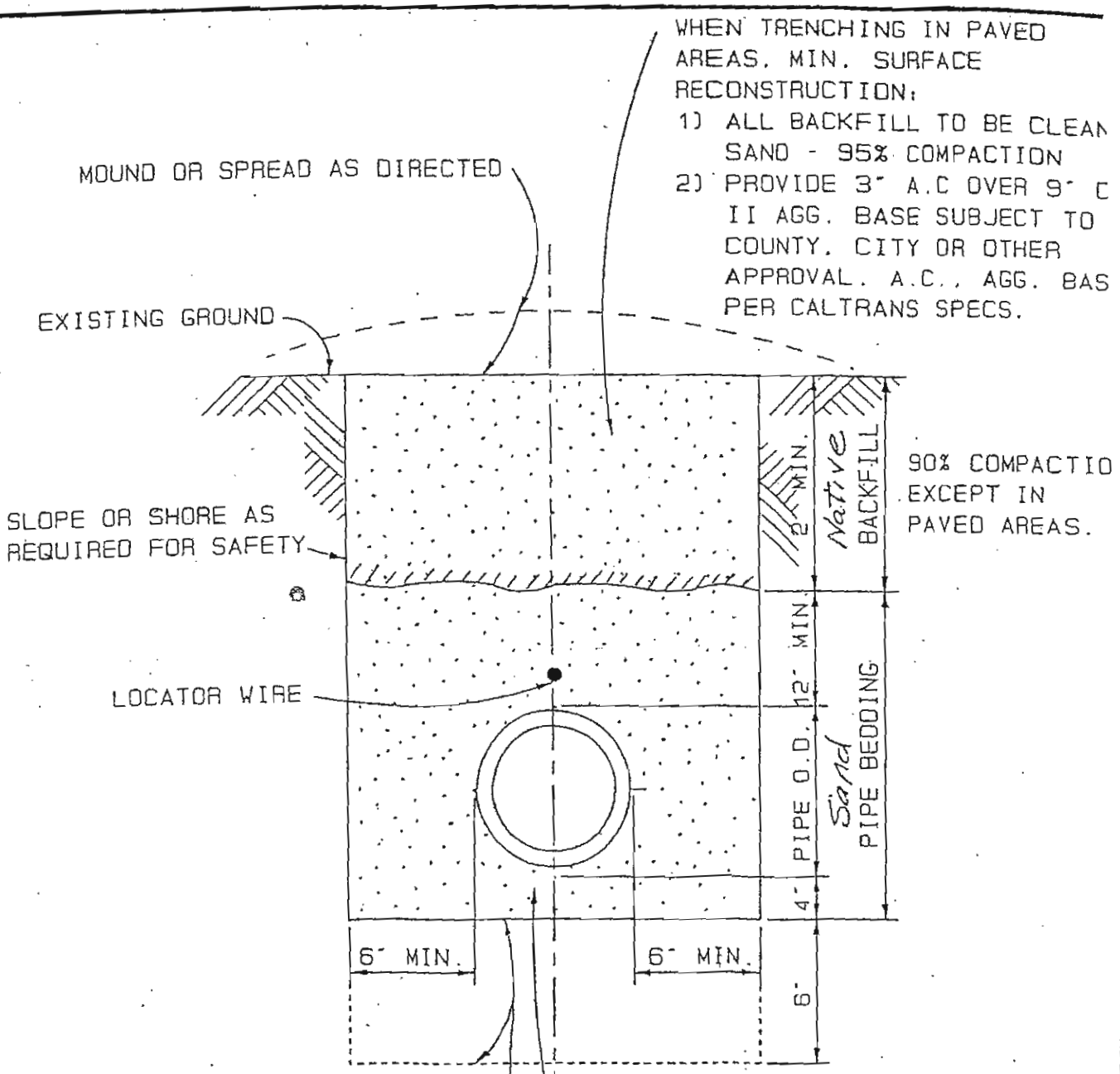



NOTES:
1) ALL PIPE SHALL BE SCHEDULE 80, GALVANIZED AND THREADED. ALL FITTINGS SHALL BE 300 LB (EXTRA HEAVY) MALLEABLE IRON GALVANIZED FITTINGS.

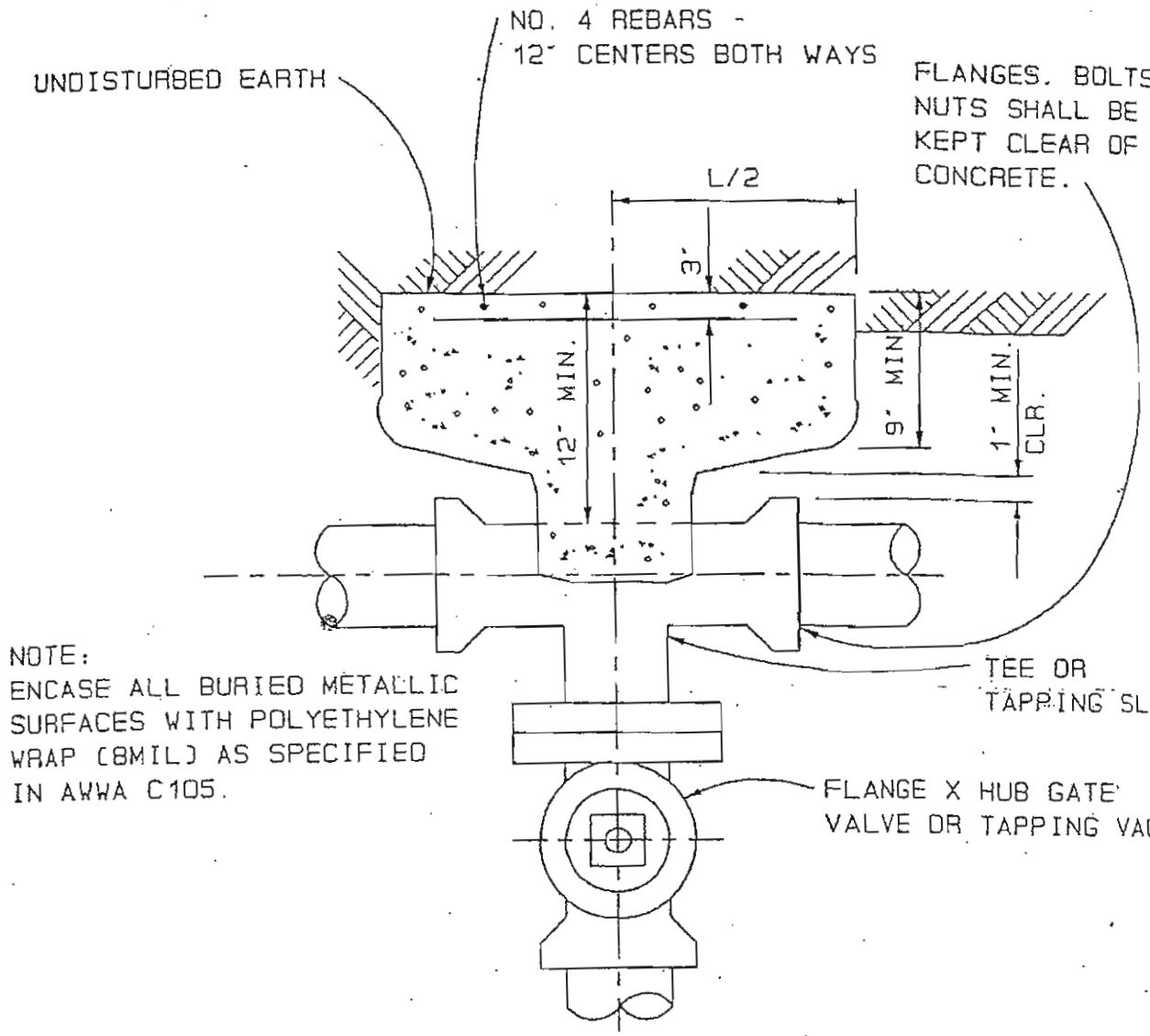
| SAN BENITO COUNTY WATER DISTRICT | DESIGNED BY: C+D | SCALE: NO SCALE |
|---|---|---|
| BLOWOFF ASSEMBLY | DRAWN BY: C+D | DATE: NOV 1992 |
| APPROVED BY: | APPROVED BY: | CHECKED BY: / DRAWING NO. |

# SECTION 3

# CONSTRUCTION DETAILS




| | | |
|---|---|---|
| SAN BENITO COUNTY WATER DISTRICT<br>TYPICAL TRENCHES | DESIGNED BY: C+D | SCALE: NO SCALE |
| | DRAWN BY: C+D | DATE: NOV 1992 |
| APPROVED BY: | APPROVED BY: | CHECKED BY: DRAWING NO. |




NOTE:
ENCASE ALL BURIED METALLIC SURFACES WITH POLYETHYLENE WRAP (8MIL) AS SPECIFIED IN AWWA C105.

| BRANCH PIPE SIZE | BEARING AREA (S.F.) | L X H |
|---|---|---|
| 3" OR 4" | 2 | 1'5" X 1'5" |
| 6" | 3 | 1'9" X 1'9" |
| 8" | 5 | 2'3" X 2'3" |
| 10" | 9 | 3'0" X 3'0" |
| 12" | 15 | 3'10" X 3'10" |

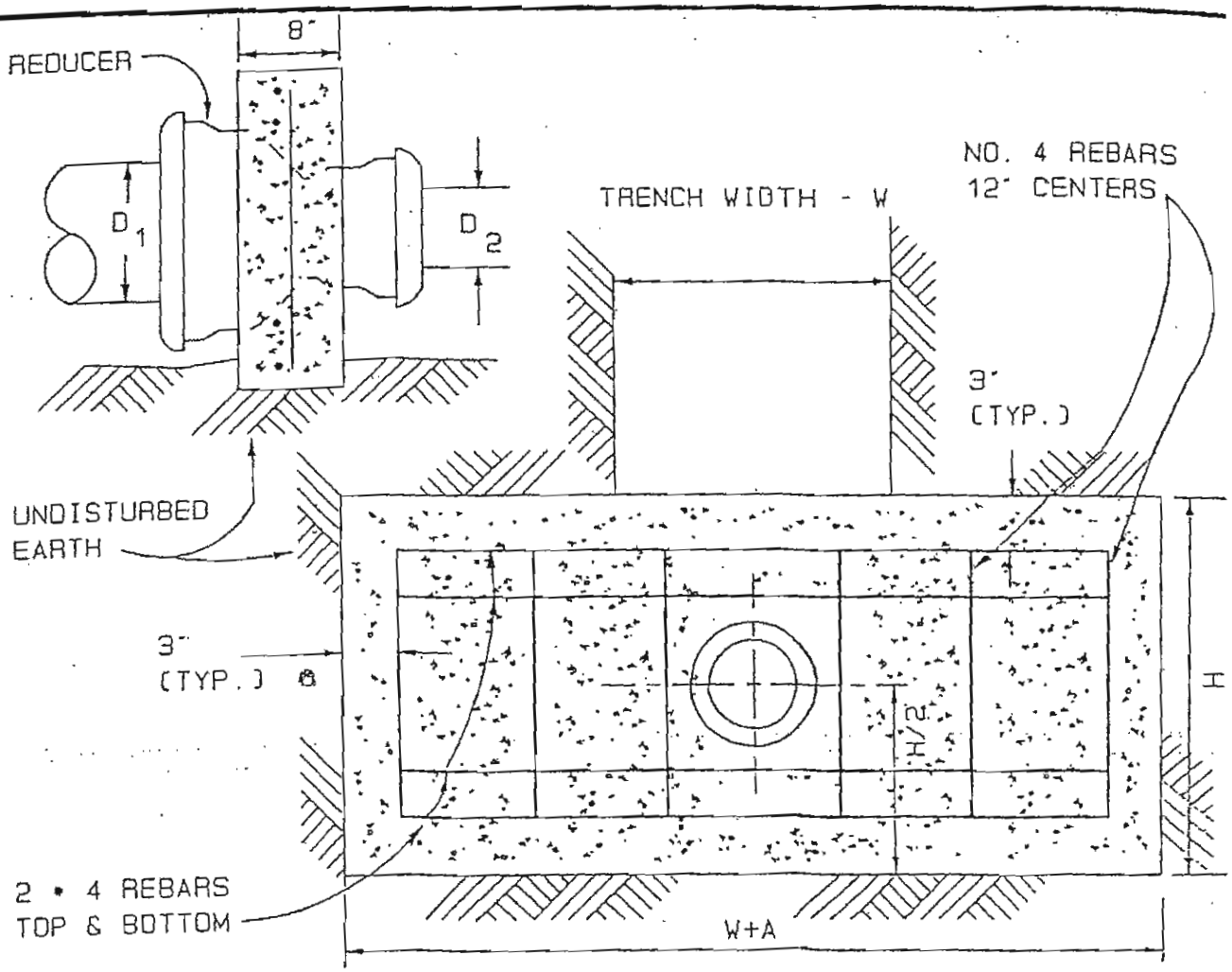
# SAN BENITO COUNTY WATER DISTRICT

## THRUST BLOCKING - TEES

| | |
|---|---|
| DESIGNED BY: C+D | SCALE: NO SCALE |
| DRAWN BY: C+D | DATE: NOV 1992 |
| CHECKED BY: | DRAWING NO. |

APPROVED BY:

APPROVED BY:




| ANCHORS FOR REDUCERS | | |
|---|---|---|
| $D_1 \times D_2$ | H | A |
| 12" × 10" | 1'-4" | 2'-0" |
| 12" × 8" | 2'-0" | 2'-6" |
| 12" × 6" | 2'-0" | 3'-2" |
| 8" × 6" | 1'-0" | 2'-0" |
| 8" × 4" | 1'-0" | 2'-10" |
| 6" × 4" | 1'-0" | 1'-4" |

NOTES:

1) ENCASE ALL BURIED METALLIC SURFACES WITH POLYETHYLENE WRAP AS SPECIFIED IN AWWA C105.
2) REDUCER ANCHOR IS REQUIRED ONLY WHEN LARGER CONNECTING JOINT IS OTHER THAN FLANGED.

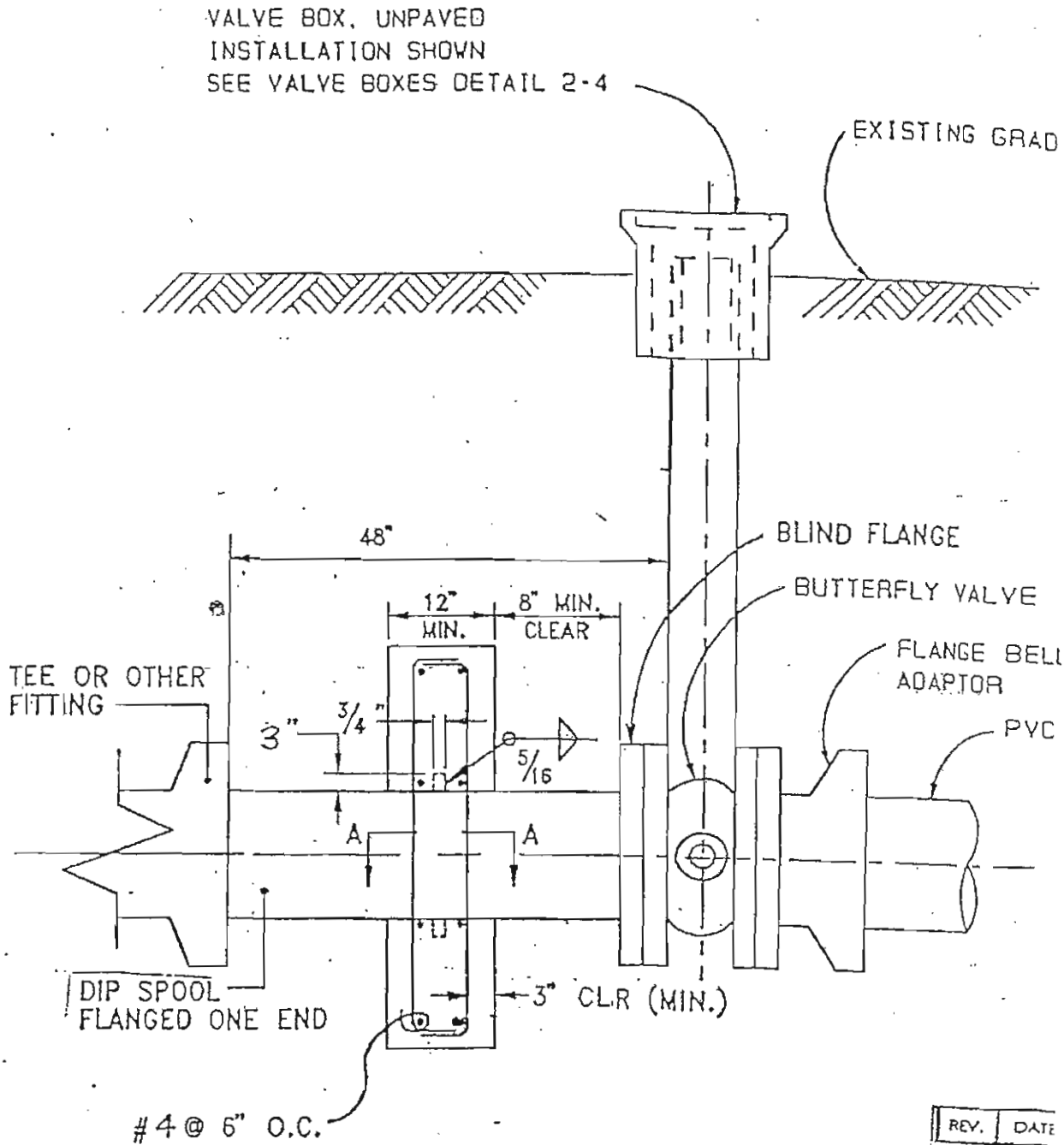
SAN BENITO COUNTY WATER DISTRICT

THRUST BLOCKING - REDUCERS

| DESIGNED BY: | SCALE: |
|---|---|
| C+D | NO SCALE |
| DRAWN BY: | DATE: |
| C+D | NOV 1992 |
| CHECKED BY: | DRAWING NO. |

APPROVED BY: _____

APPROVED BY: _____




| REV. | DATE |
|---|---|
| 1 | 4-15 |
| 2 | 5-17 |
| | |
| | |

NOTE: SEE IN-LINE THRUST BLOCK DETAIL 3-7 FOR SECTION A-A.
REQUIRED BEARING SHALL BE AGAINST UNDISTURBED SOIL.

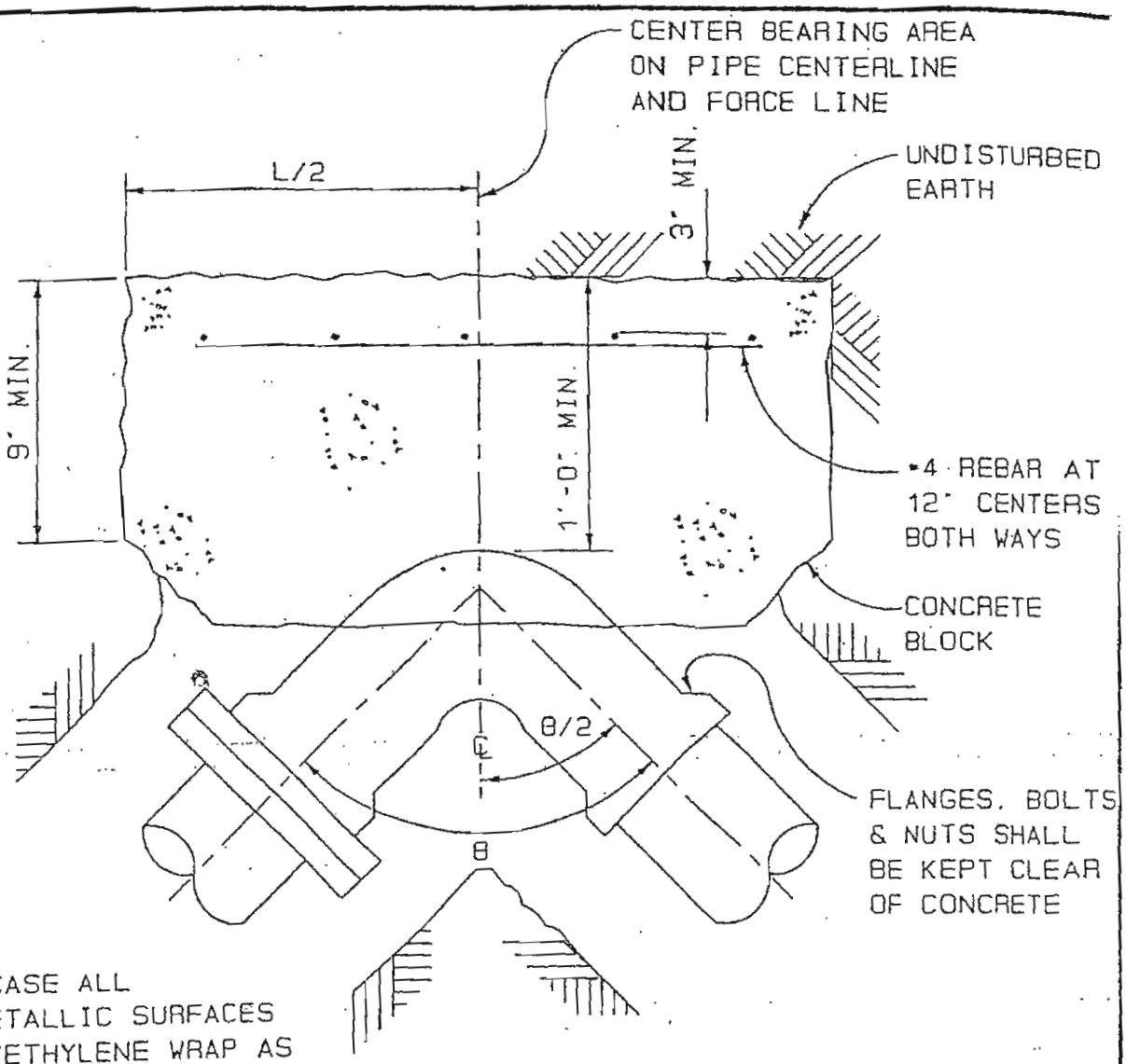
SAN BENITO COUNTY WATER DISTRICT

THRUST BLOCKING - VALVES

| | |
|---|---|
| DESIGNED BY: C+D | SCALE: NO SCALE |
| DRAWN BY: C+D | DATE: NOV 1992 |
| CHECKED BY: C+D | DRAWING NO. 3-4 |

APPROVED BY: _____ DISTRICT MANAGER

APPROVED BY: _____ DISTRICT ENGINEER




NOTE: ENCASE ALL BURIED METALLIC SURFACES WITH POLYETHYLENE WRAP AS SPECIFIED IN AWWA C105.

| | REQUIRED BEARING AREA (SQ. FT.) | | | | | BEARING AREA DIMENSIONS (L x H) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pipe Size | 5.625° | 11.25° | 22.25° | 45° | 90° | 5.625° | 11.25° | 22.25° | 45° | 90° |
| 6" | 1 | 1 | 2 | 3 | 5 | 1'0" x 1'0" | 1'0" x 1'0" | 1'5" x 1'5" | 1'9" x 1'9" | 2'3" x 2'3" |
| 8" | 1 | 1 | 2 | 4 | 8 | 1'0" x 1'0" | 1'0" x 1'0" | 1'5" x 1'5" | 2'0" x 2'0" | 2'10" x 2'10" |
| 10" | 1 | 2 | 4 | 7 | 12 | 1'0" x 1'0" | 1'5" x 1'5" | 2'0" x 2'0" | 2'8" x 2'8" | 3'5" x 3'5" |
| 12" | 1 | 3 | 5 | 9 | 17 | 1'0" x 1'0" | 1'9" x 1'9" | 2'3" x 2'3" | 3'0" x 3'0" | 4'2" x 4'2" |

# SAN BENITO COUNTY WATER DISTRICT

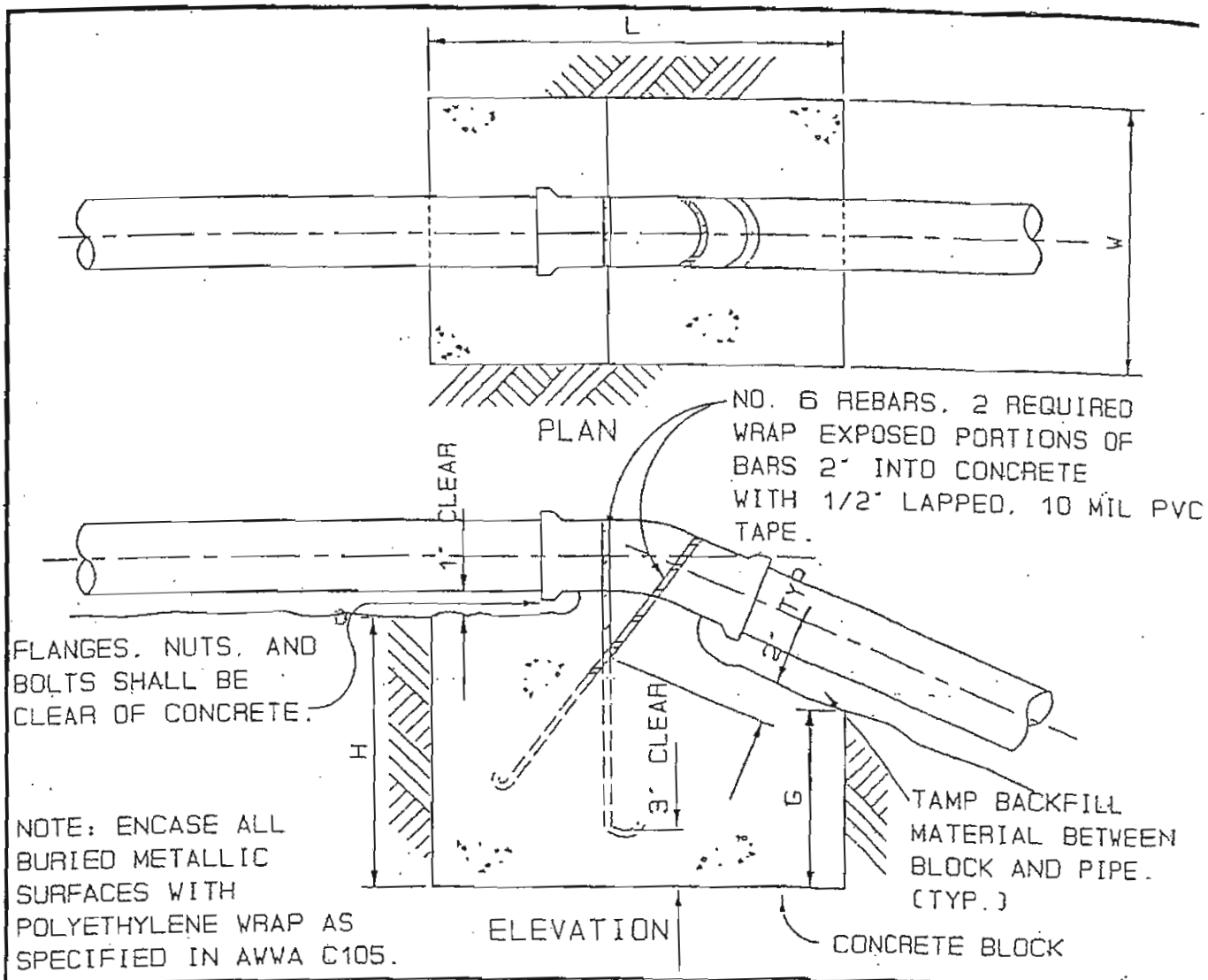
## THRUST BLOCKING - ELBOWS

| | |
|---|---|
| DESIGNED BY: C+D | SCALE: NO SCALE |
| DRAWN BY: C+D | DATE: NOV 1992 |
| CHECKED BY: | DRAWING NO. |

APPROVED BY:

DISTRICT MANAGER

APPROVED BY:




## THRUST BLOCK DIMENSIONS- UPWARD THRUST

| Pipe Size | 11.25° BEND | | | | 22.25° BEND | | | | 45° BEND | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | L | W | H | G | L | W | H | G | L | W | H | G |
| 6" | 2'0" | 2'0" | 1'0" | 9" | 2'0" | 2'0" | 2'0" | 1'0" | 3'0" | 2'0" | 2'0" | 6" |
| 8" | 2'0" | 2'0" | 1'0" | 9" | 3'0" | 2'0" | 2'0" | 1'0" | 4'6" | 2'0" | 3'0" | 6" |
| 10" | 3'0" | 2'0" | 2'0" | 1'8" | 4'0" | 2'0" | 2'0" | 1'0" | 6'0" | 2'0" | 3'8" | 8" |
| 12" | 3'0" | 2'0" | 2'0" | 1'8" | 6'0" | 2'0" | 2'0" | 1'0" | 7'0" | 2'6" | 4'0" | 8" |

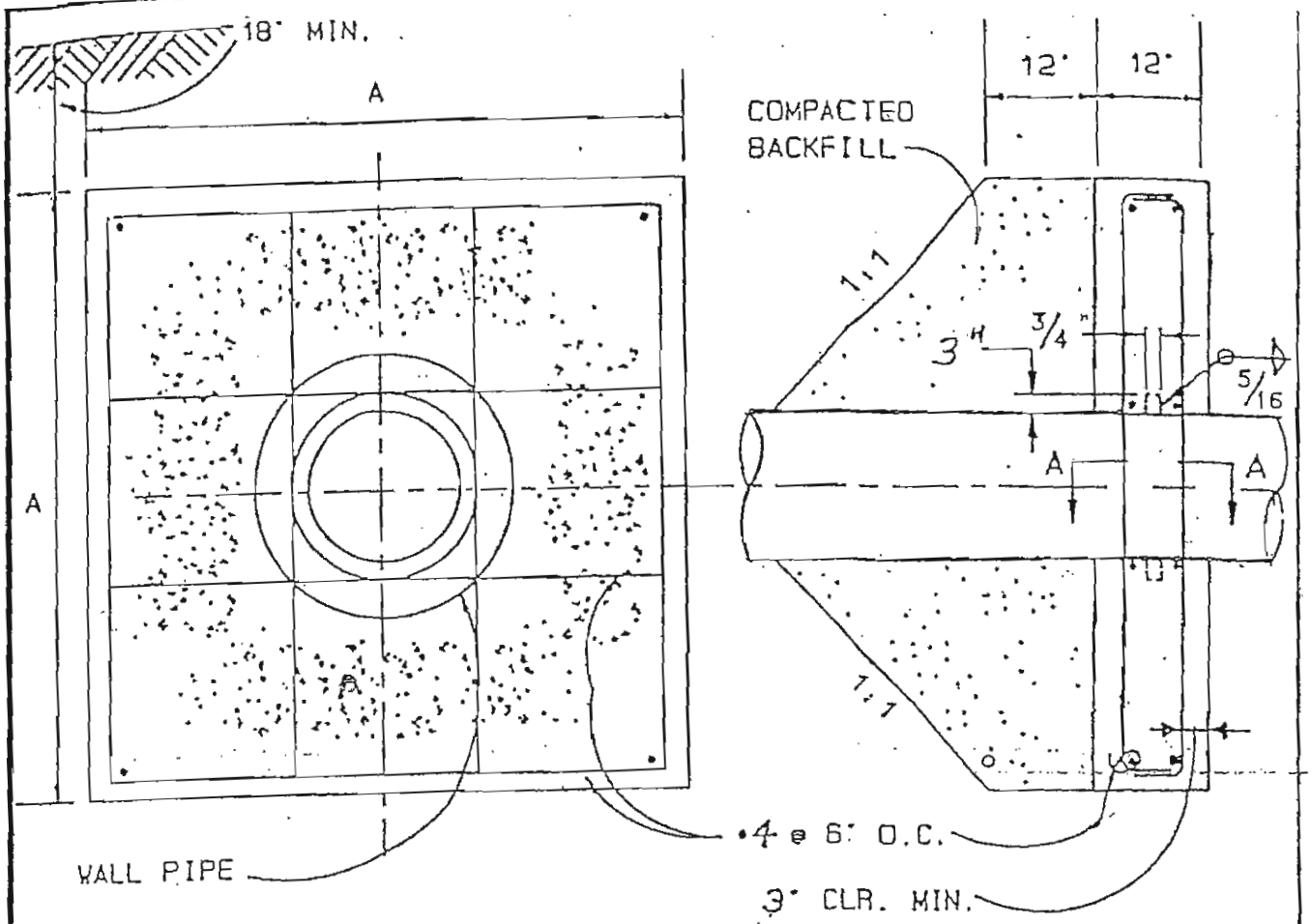
SAN BENITO COUNTY WATER DISTRICT

ELBOWS UPWARD THRUST BLOCKING

| | |
|---|---|
| DESIGNED BY: C+D | SCALE: NO SCALE |
| DRAWN BY: C+D | DATE: NOV 1992 |
| CHECKED BY: | DRAWING NO. |

APPROVED BY:

APPROVED BY:




SUB 9 LOW

| PIPE SIZE | BEARING AREA | A | A |
|---|---|---|---|
| 4" | 2 SQ FT | 1'-4" | 1'-6" |
| 6" | 4 SQ FT | 2'-0" | 2'-3" |
| 8" | 7 SQ FT | 2'-7" | 3'-0" |
| 10" | 11 SQ FT | 3'-3" | 3'-9" |
| 12" | 15 SQ FT | 3'-11" | 4'-6" |

| REV. | DATE |
|---|---|
| 1 | 4-15-96 |
| 2 | 5-17-96 |

NOTES: 1) SEE IN-LINE THRUST BLOCK DETAIL 3-7 FOR SECTION A-A.
2) THE VALUE OF 1500 PSF TO BE USED IN DESIGNING. ACTUAL SOIL CONDITIONS REVEALED BY OPEN TRENCH MAY REQUIRE ADJUSTMENT IN THRUST BLOCK AREA.

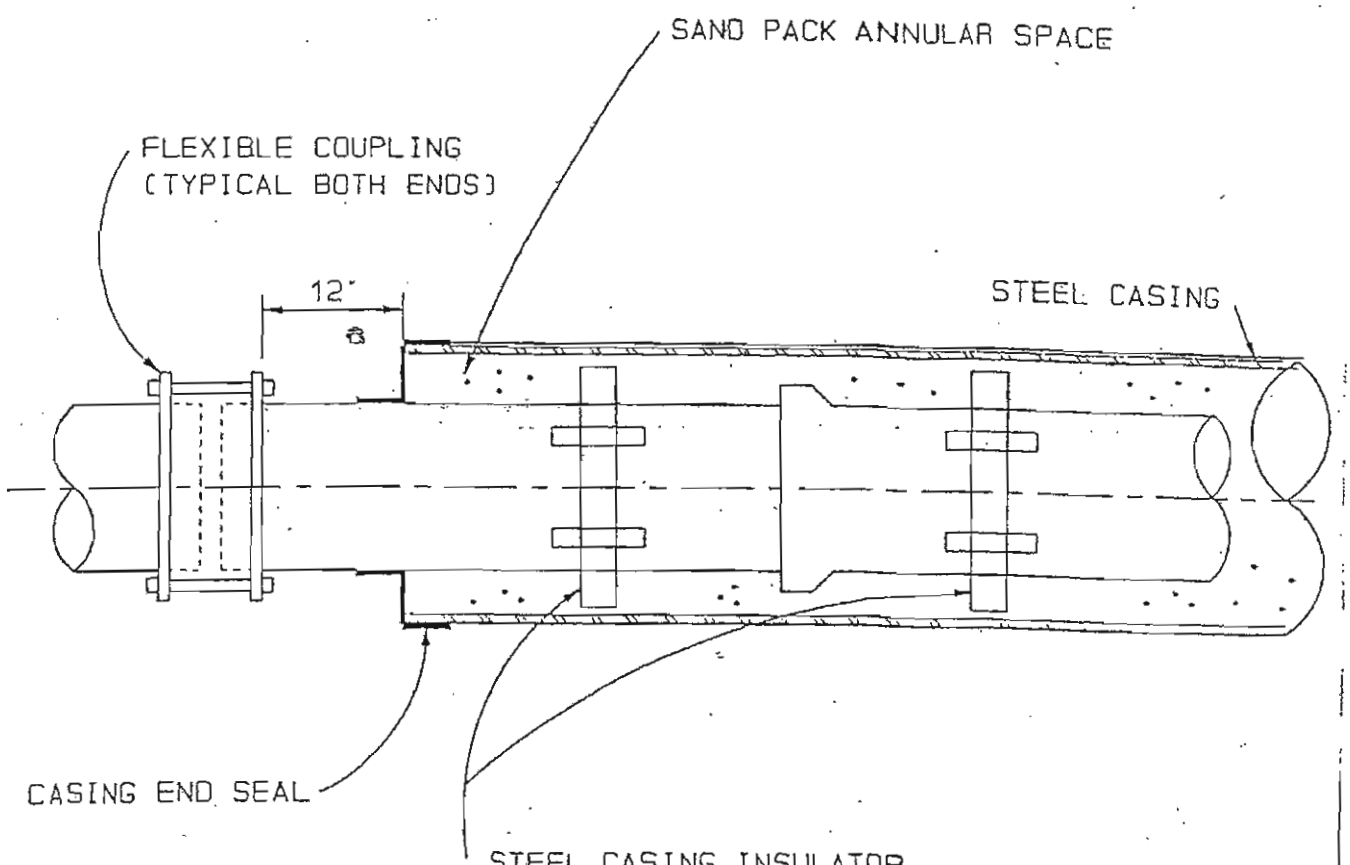
SAN BENITO COUNTY WATER DISTRICT

IN-LINE THRUST BLOCK

| DESIGNED BY: | SCALE: |
|---|---|
| C+D | NO SCALE |
| DRAWN BY: | DATE: |
| C+D | NOV 1992 |
| CHECKED BY: | DRAWING NO |
| C+D | 3-7 |

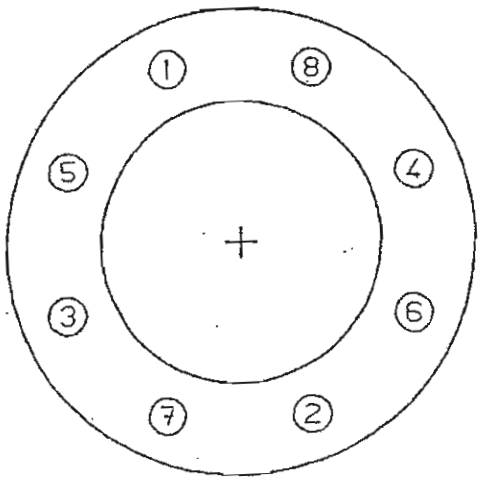
APPROVED BY: _____ DISTRICT MANAGER

APPROVED BY: _____ DISTRICT ENGINEER



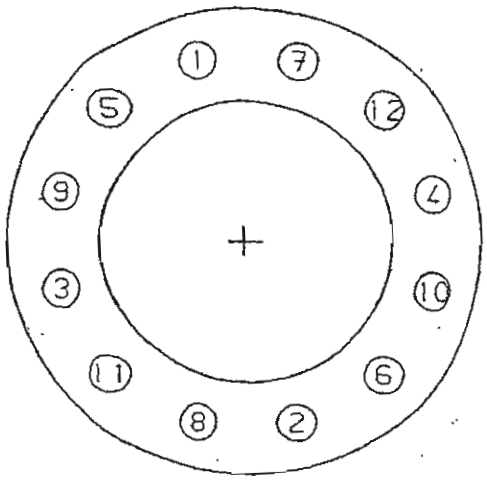

| | | | |
|---|---|---|---|
| SAN BENITO COUNTY WATER DISTRICT | | DESIGNED BY: C+D | SCALE: NO SCALE |
| BORING AND JACKING DETAILS | | DRAWN BY: C+D | DATE: NOV 1992 |
| APPROVED BY: | APPROVED BY: | CHECKED BY: | DRAWING NO. |

TOP




8 BOLT
TIGHTENING SEQUENCE

TOP

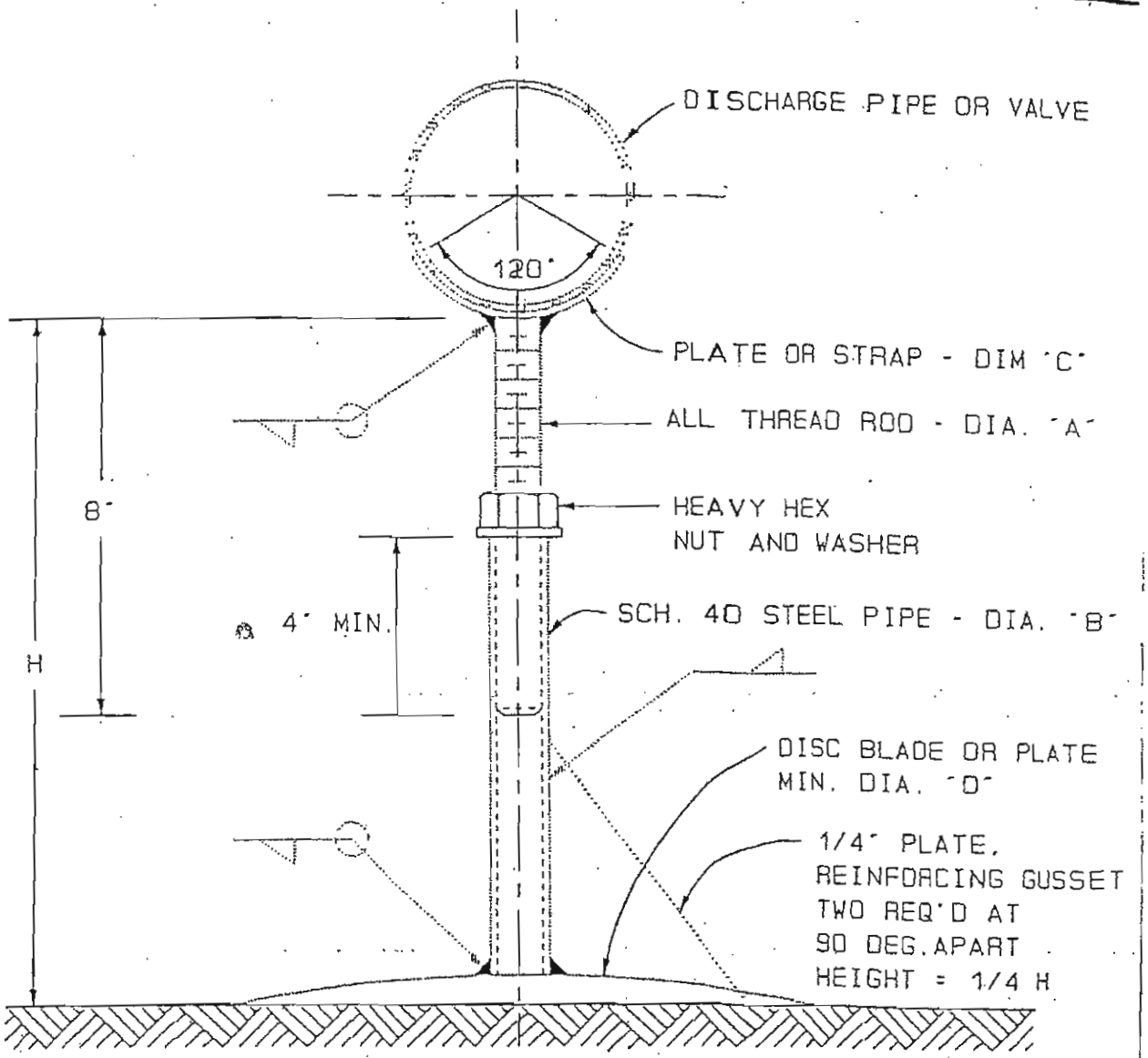



12 BOLT
TIGHTENING SEQUENCE

TIGHTEN BOLTS ACCORDING TO SEQUENCE SHOWN ABOVE. TIGHTENING SHOULD BE ACCOMPLISHED IN A MINIMUM OF THREE STAGES WITH FINAL TORQUE VALUES ACCORDING TO THE TABLE BELOW. UNIFORM TIGHTENING WILL ELIMINATE LEAKING GASKETS. TORQUE VALUES SHOULD BE CHECKED UPON COMPLETION OF TIGHTENING SEQUENCE. A 1/8" THICK NEOPRENE OR RUBBER GASKET SHALL BE USED. RING TYPE GASKETS ARE RECOMMENDED.

| VALVE SIZE | BOLT QUANTITY-SIZE | REQUIRED TORQUE |
|---|---|---|
| 4" | 8 - 5/8" | 80 Ft. Lbs. |
| 6" | 8 - 5/8" | 80 Ft. Lbs. |
| 8" | 8 - 3/4" | 140 Ft. Lbs. |
| 10" | 12 - 7/8" | 145 Ft. Lbs. |
| 12" | 12 - 1" | 145 Ft. Lbs. |

| | | | |
|---|---|---|---|
| SAN BENITO COUNTY WATER DISTRICT | | DESIGNED BY: C+D | SCALE: NO SCALE |
| FLANGE BOLT TIGHTENING | | DRAWN BY: C+D | DATE: NOV 1992 |
| APPROVED BY: | APPROVED BY: | CHECKED BY: | DRAWING NO. |




## DIMENSIONS AND DIAMETERS

| PIPE DIA. | A | B | C |
|---|---|---|---|
| 4" | 7/8" | 1" | 1/4" X 1-1/4" |
| 6" | 1" | 1-1/4" | 3/8" X 1-1/2" |
| 8" | 1" | 1-1/4" | 3/8" X 1-1/2" |
| 10" | 1-1/4" | 1-1/2" | 1/2" X 2" |
| 12" | 1-1/4" | 1-1/2" | 1/2" X 2" |

| H - MAX | D | GUSSET |
|---|---|---|
| 2' | 12" | NOT REQ'D |
| 4' | 24" | REQ'D |
| 6' | 30" | REQ'D |

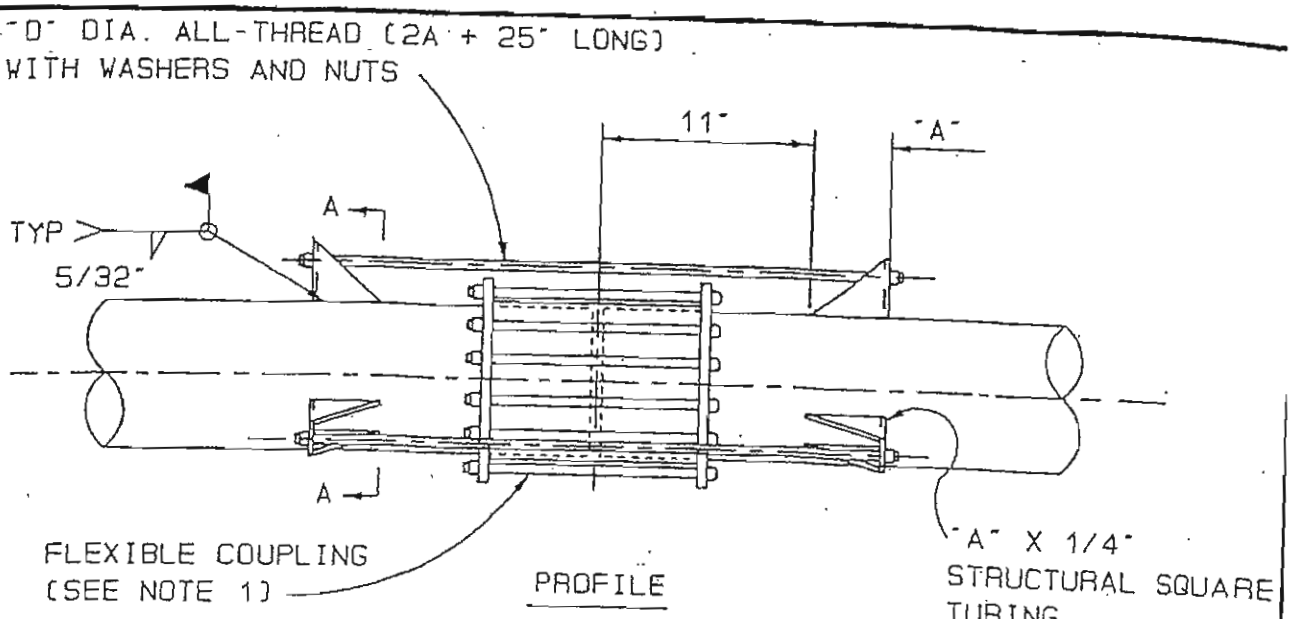
SAN BENITO COUNTY WATER DISTRICT

PIPE SUPPORT

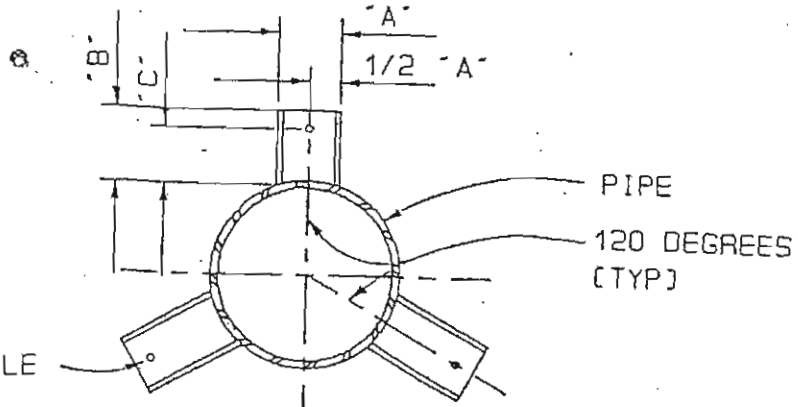
| | |
|---|---|
| DESIGNED BY: C+D | SCALE: NO SCALE |
| DRAWN BY: C+D | DATE: NOV 1992 |
| CHECKED BY: | DRAWING NO. |

APPROVED BY: _____

APPROVED BY: _____




PROFILE




SECTION A-A

NOTES:

1) FLEXIBLE COUPLING SHALL HAVE A MIDDLE RING LENGTH OF 7 INCHES.
2) THIS RESTRAINT IS USED WITH 4" TO 12" NORMAL PIPE ONLY.
3) BOLTING PATTERN OF FLEXIBLE COUPLING SHALL BE OFFSET WITH RESTRAINT LAYOUT.
4) GAP BETWEEN PIPES SHALL BE 3/4" +/- 1/4".

| PIPE DIAMETER | "A" | "B" | "C" | "D" - DIA. |
|---|---|---|---|---|
| 4" | 2.5" | 4.0" | 3.0" | 0.5" |
| 6" | 2.5" | 4.0" | 3.0" | 0.5" |
| 8" | 2.5" | 4.0" | 3.0" | 0.5" |
| 10" | 3.5" | 4.5" | 3.25" | 0.75" |
| 12" | 3.5" | 4.5" | 3.25" | 0.75" |

SAN BENITO COUNTY WATER DISTRICT

FLEXIBLE COUPLING RESTRAINT

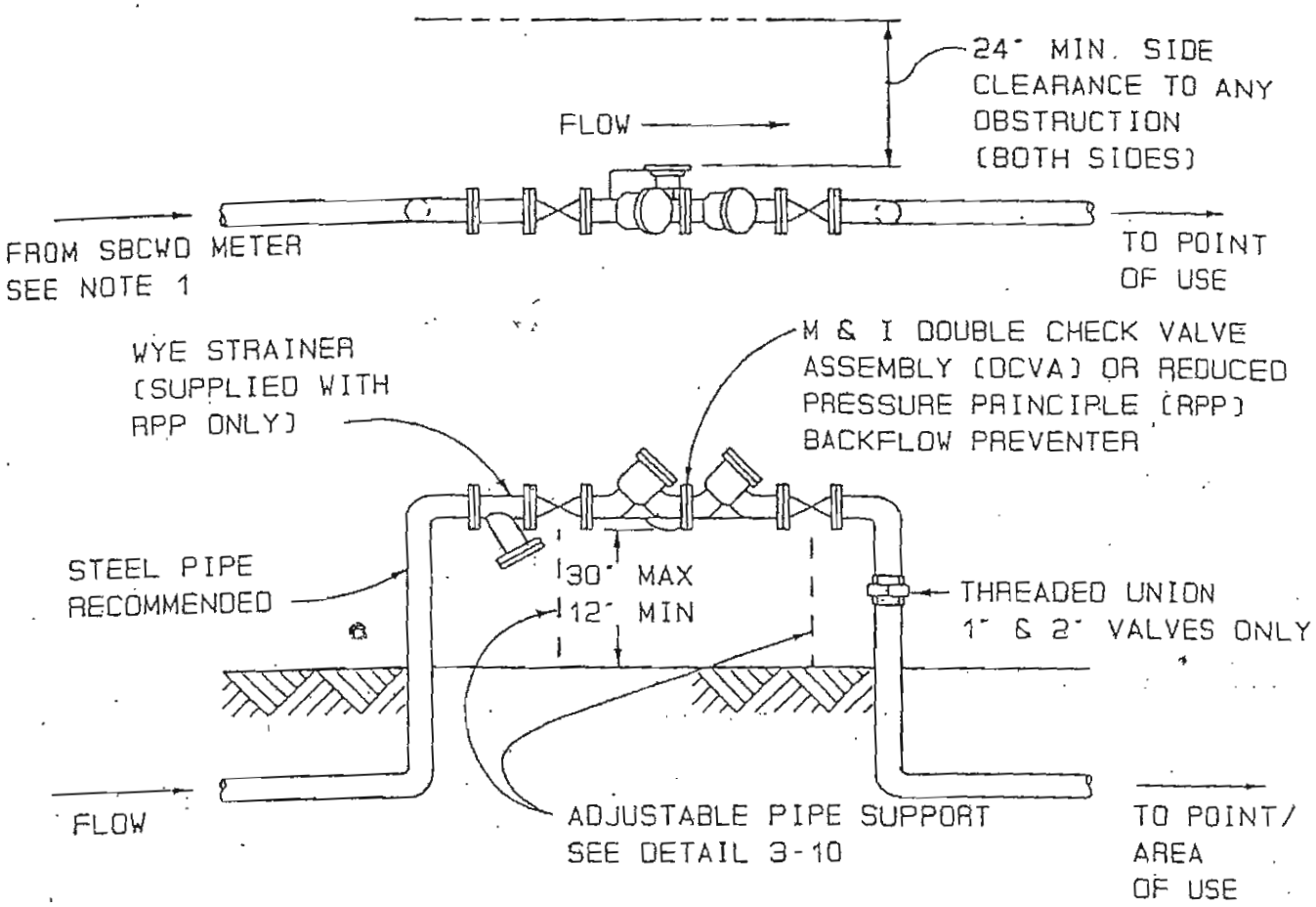
| | |
|---|---|
| DESIGNED BY: C+D | SCALE: NO SCALE |
| DRAWN BY: C+D | DATE: NOV 1992 |
| CHECKED BY: | DRAWING NO. |

APPROVED BY: _____ DISTRICT ENGINEER

APPROVED BY: _____

# SECTION 4

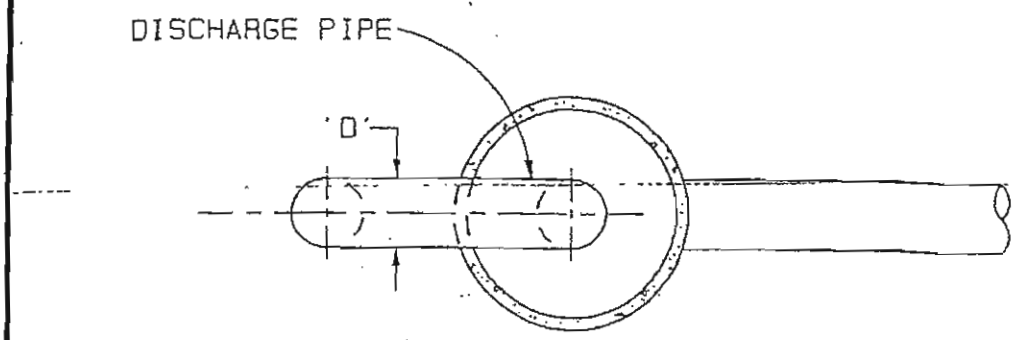
# BACKFLOW PREVENTION DETAILS

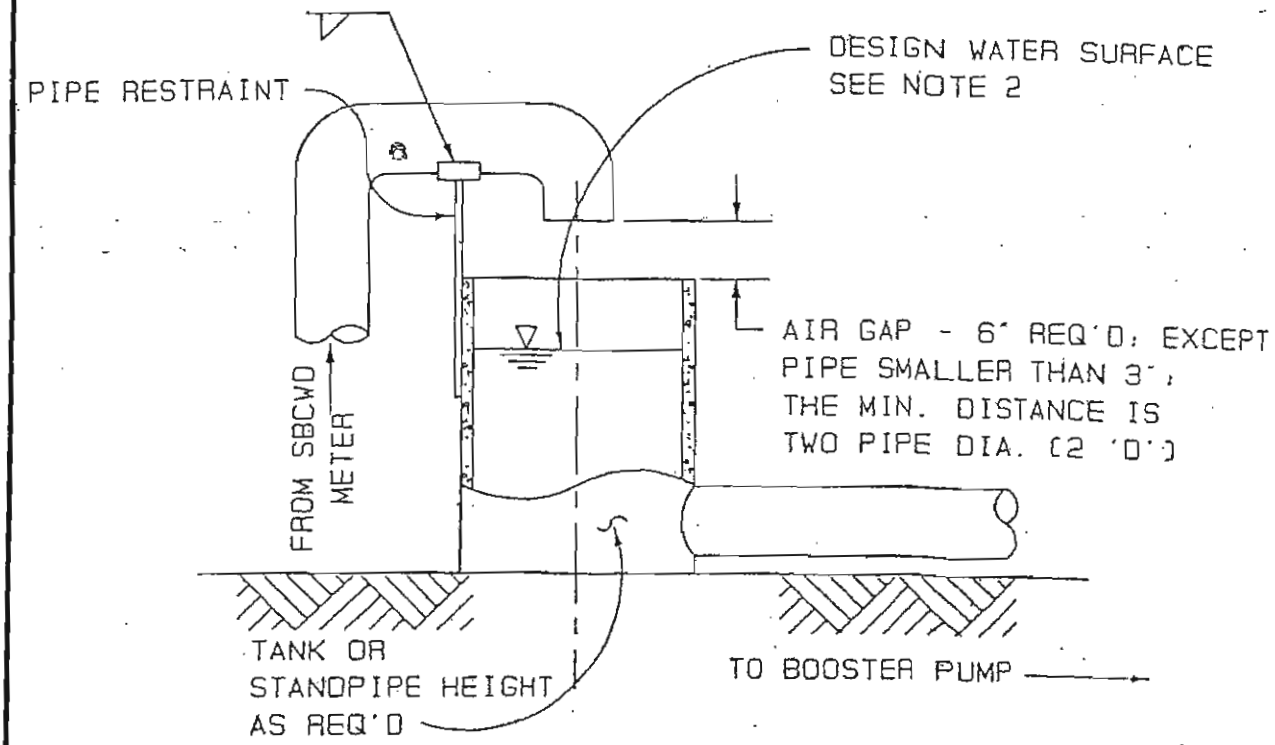



NOTES:

1) VALVE MUST BE INSTALLED WITHIN 25' OF THE DISTRICT'S METER EXCEPT UPON APPROVAL FROM THE DISTRICT.
2) THIS DRAWING APPLIES TO BOTH M & I DOUBLE CHECK VALVE ASSEMBLIES (DCVA) AND REDUCED PRESSURE PRINCIPLE (RPP) BACKFLOW PREVENTERS.
3) ALL VALVES SHALL BE AWWA/USC APPROVED AND WILL BE SUPPLIED BY THE DISTRICT AT THE WATER USER'S EXPENSE.
4) DIFFERENT MANUFACTUER'S VALVES AND VALVES OF DIFFERENT SIZES MAY VARY IN APPEARANCE.
5) WATER USERS ARE CAUTIONED THAT THESE DEVICES HAVE PRESSURE LOSES OF 8 - 14 PSI UNDER NORMAL OPERATING CONDITIONS.
6) IF A BOOSTER PUMP IS REQUIRED, IT SHOULD BE INSTALLED UPSTREAM OF THE VALVE -SEE DETAILS 4-9 AND 4-10.
7) TWO ADJUSTABLE PIPE SUPPORTS ARE RECOMMENDED FOR VALVE INSTALLATIONS 3" OR LARGER.

| | | |
|---|---|---|
| SAN BENITO COUNTY WATER DISTRICT<br>MUNICIPAL AND INDUSTRIAL<br>BACKFLOW VALVE INSTALLATION | DESIGNED BY: C+D | SCALE: NO SCALE |
| | DRAWN BY: C+D | DATE: NOV 1992 |
| APPROVED BY: | APPROVED BY: | CHECKED BY: / DRAWING NO. |



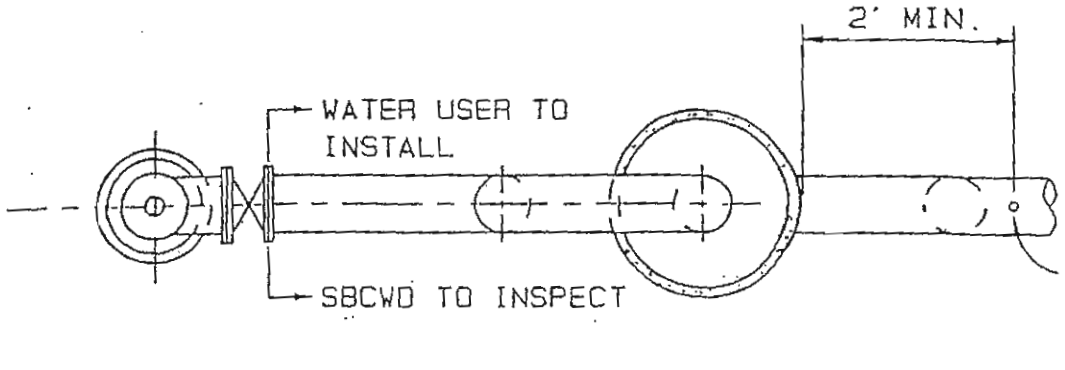



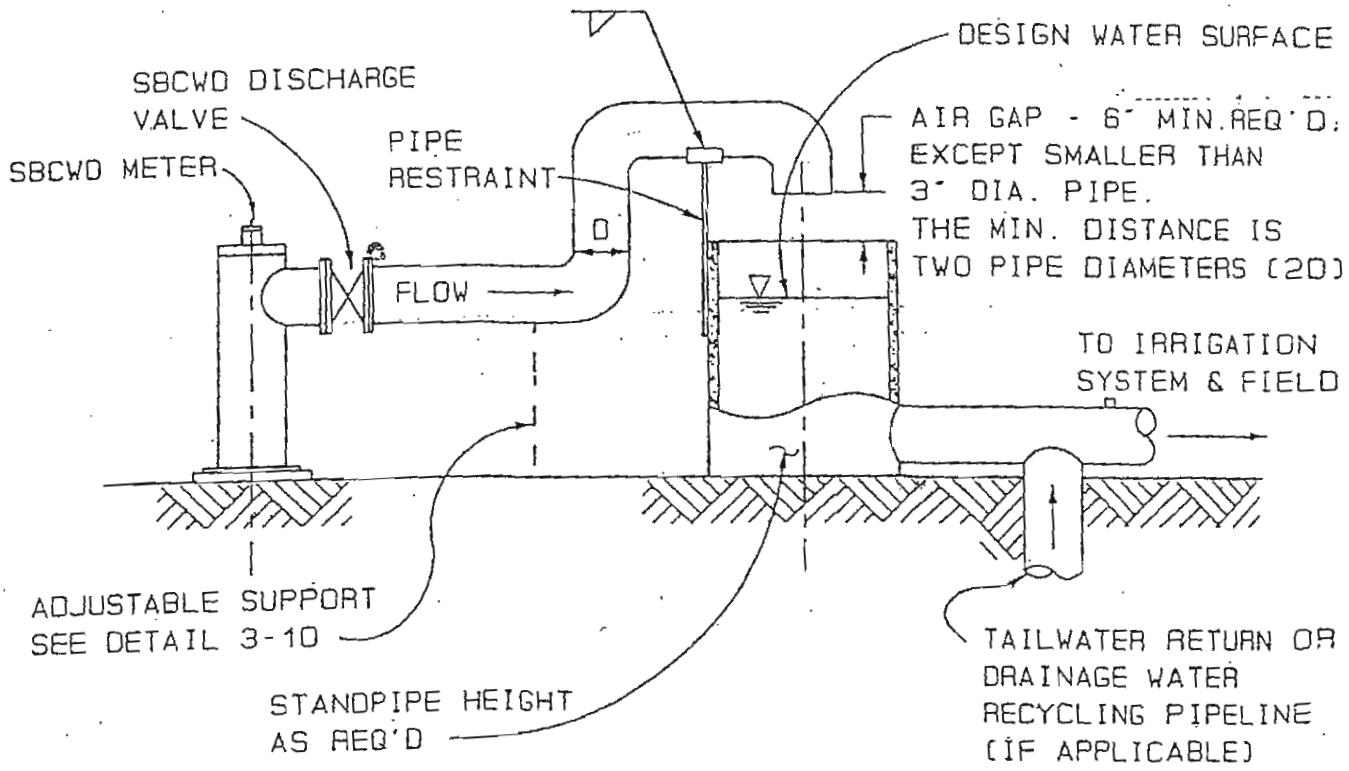

NOTES:

1) AUTOMATIC REMOTE OPERATED WATER LEVEL CONTROL VALVES MAY BE USED.

2) STANDPIPE MAY BE CONSTRUCTED TO ANY HEIGHT. ALTHOUGH WATER USERS SHOULD VERIFY THAT THE MINIMUM DELIVERY HEAD IS GREATER THAN THE HEIGHT OF THE DISCHARGE PIPE.

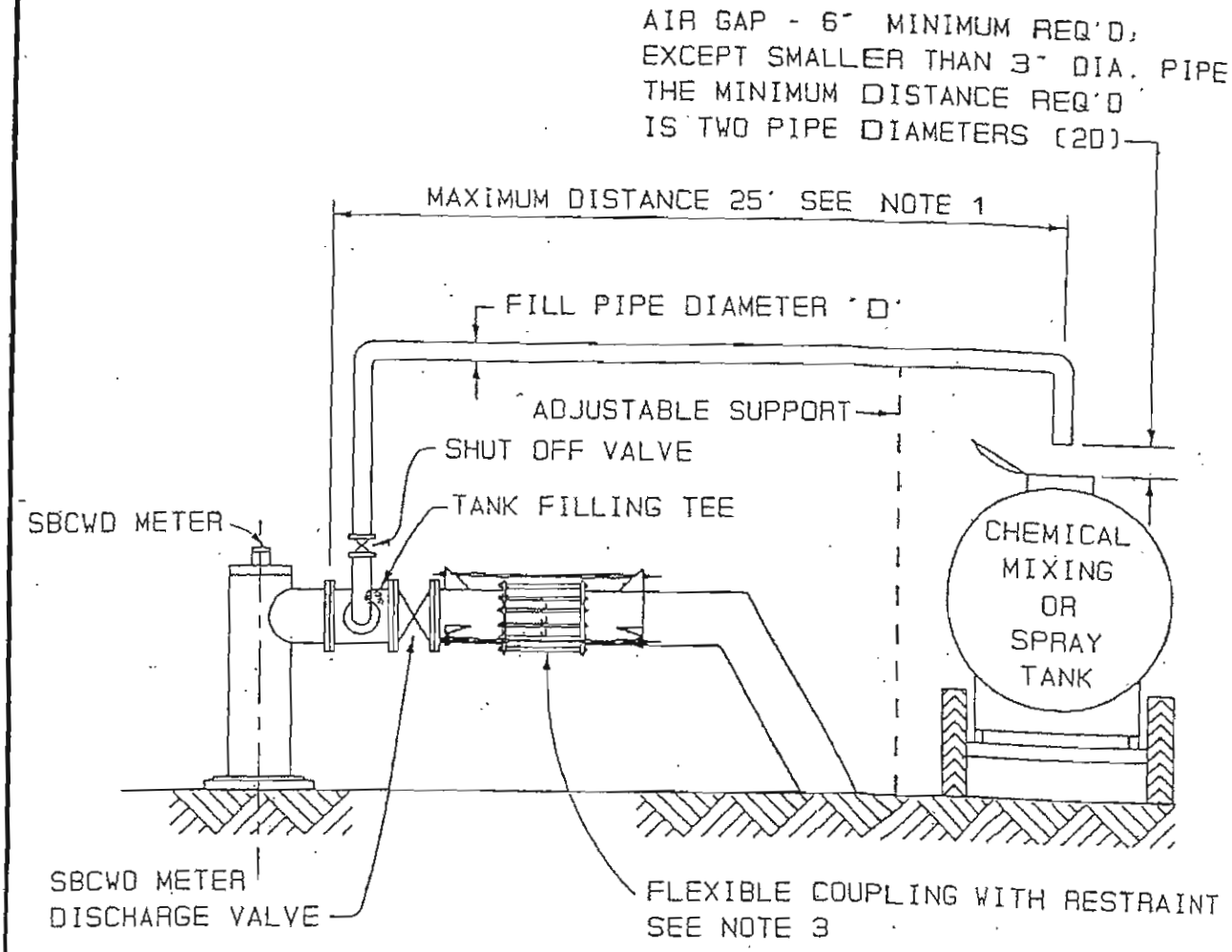
| | | |
|---|---|---|
| SAN BENITO COUNTY WATER DISTRICT<br>MUNICIPAL AND INDUSTRIAL<br>AIR GAP INSTALLATION | DESIGNED BY: C+D | SCALE: NO SCALE |
| | DRAWN BY: C+D | DATE: NOV 1992 |
| APPROVED BY: | APPROVED BY: | CHECKED BY: / DRAWING NO. |




NOTES:
1) AUTOMATIC REMOTE OPERATED LEVEL CONTROL VALVES MAY BE USED.
2) STANDPIPE MAY BE CONSTRUCTED TO ANY HEIGHT, ALTHOUGH WATER USERS SHOULD VERIFY THAT THE MINIMUM DELIVERY HEAD IS GREATER THAN THE HEIGHT OF THE DISCHARGE PIPE.
3) STANDPIPE MUST BE WITHIN 25' OF THE DISTRICT DELIVERY AND THERE SHALL BE NO PIPE CONNECTIONS OR INJECTION POINTS UPSTREAM OF THE STANDPIPE.

| SAN BENITO COUNTY WATER DISTRICT | DESIGNED BY: C+D | SCALE: NO SCALE |
|---|---|---|
| STANDPIPE WITH AIR GAP | DRAWN BY: C+D | DATE: NOV 1992 |
| APPROVED BY: _____ DISTRICT ENGINEER | APPROVED BY: _____ | CHECKED BY: | DRAWING NO. |



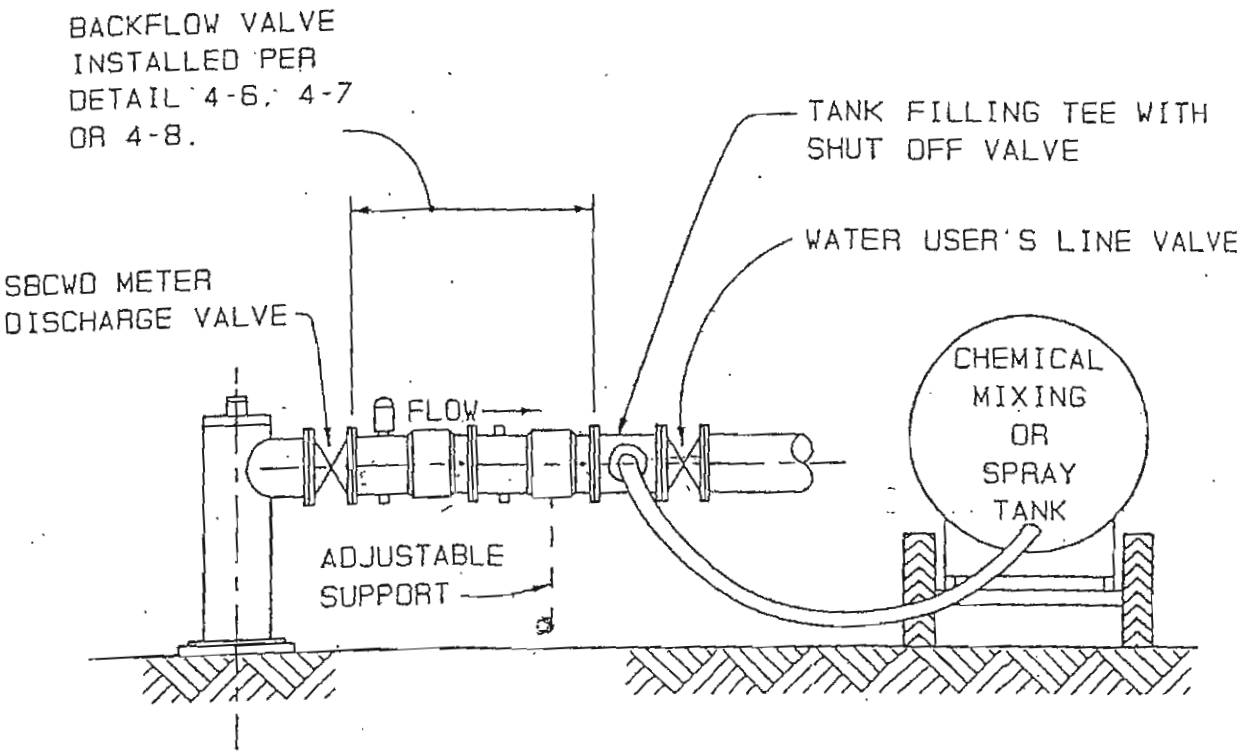

NOTES:

1) THE DISCHARGE OF THE FILL PIPE SHALL BE WITHIN 25' OF THE DELIVERY METER. EXCEPTION: MAY BE EXTENDED TO 75' IF DISCHARGE FILL PIPE IS UNDERGROUND OR UPON SPECIAL APPROVAL.

2) CHEMICAL TANK FILLING AT DELIVERY SITES IDENTIFIED AS LOW PRESSURE DELIVERIES BY THE DISTRICT SHALL BE DONE ONLY THROUGH THE USE OF AIR GAP SEPARATION.

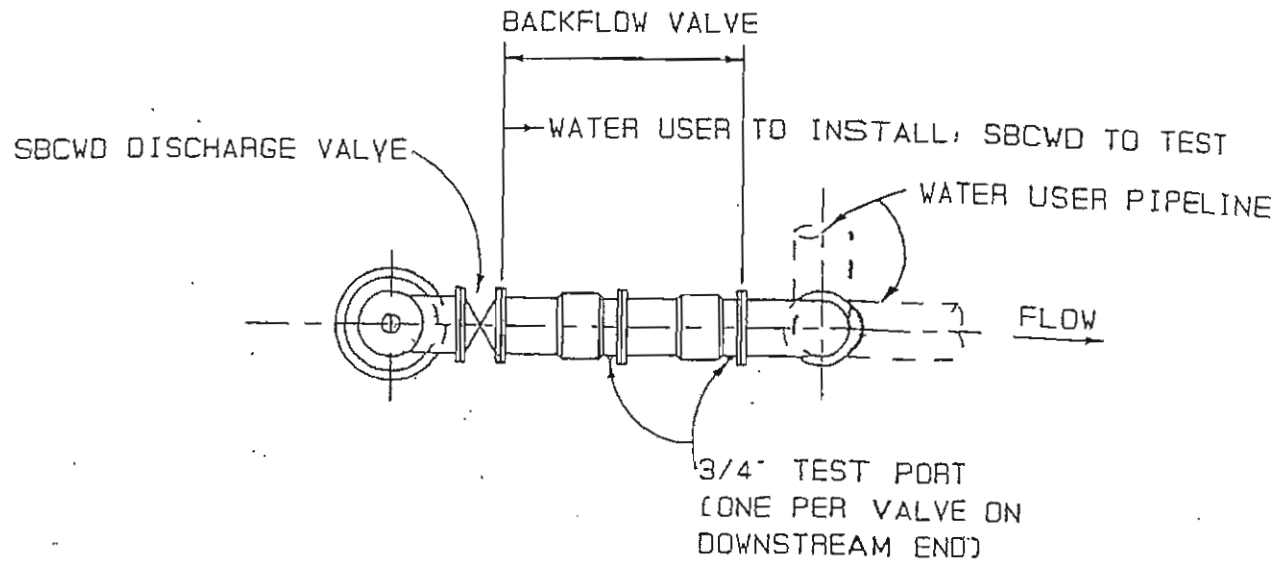
3) FLEXIBLE COUPLING RESTRAINT SEE DETAIL 3-11.

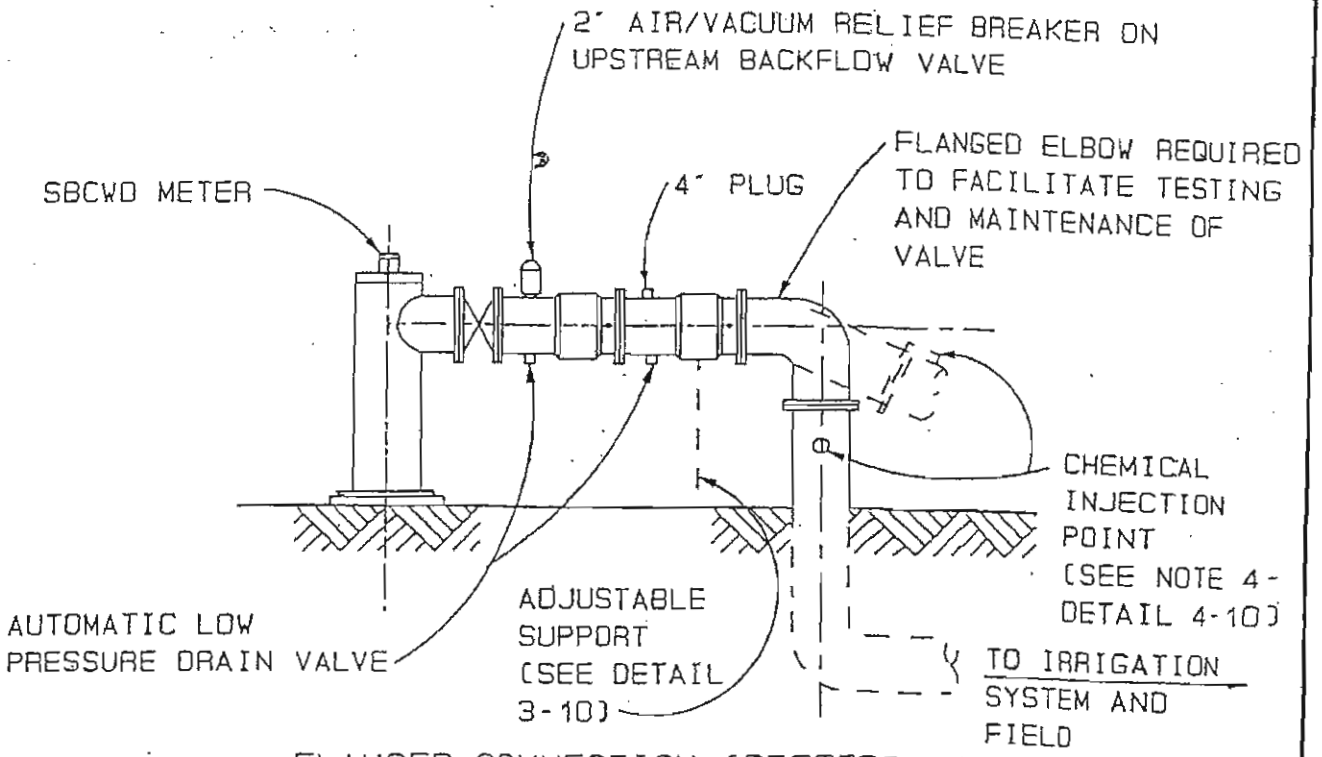
| SAN BENITO COUNTY WATER DISTRICT<br>CHEMICAL TANK FILLING<br>WITH AIR GAP | DESIGNED BY: C+D | SCALE: NO SCALE |
|---|---|---|
| | DRAWN BY: C+D | DATE: NOV 1992 |
| APPROVED BY: _____ DISTRICT MANAGER | APPROVED BY: _____ DISTRICT ENGINEER | CHECKED BY: C+D | DRAWING NO. |




NOTES:
1) THE CONNECTION OF THE FILL HOSE TO THE METER DISCHARGE PIPE SHALL BE DOWNSTREAM FROM THE DOUBLE BACKFLOW VALVE.
2) HOSE FILL CONNECTIONS ARE NOT ALLOWED WITH A SINGLE BACKFLOW VALVE.

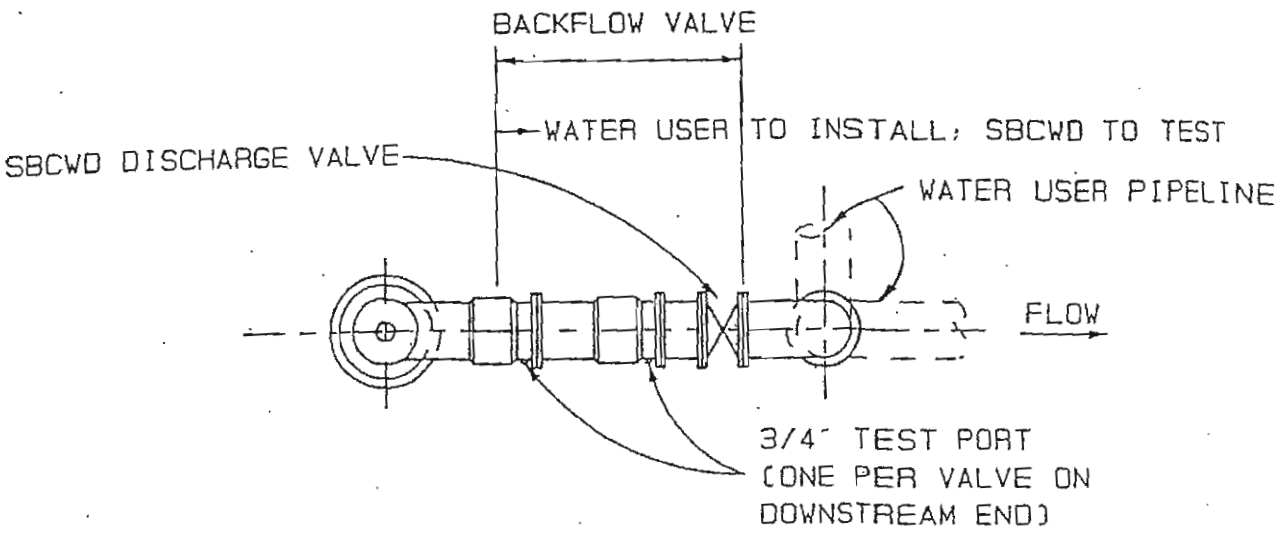
| | | |
|---|---|---|
| SAN BENITO COUNTY WATER DISTRICT<br>CHEMICAL TANK FILLING<br>WITH BACKFLOW VALVES | DESIGNED BY: C+D<br>DRAWN BY: C+D | SCALE: NO SCALE<br>DATE: NOV 1992 |
| APPROVED BY: | APPROVED BY: | CHECKED BY: / DRAWING NO. |

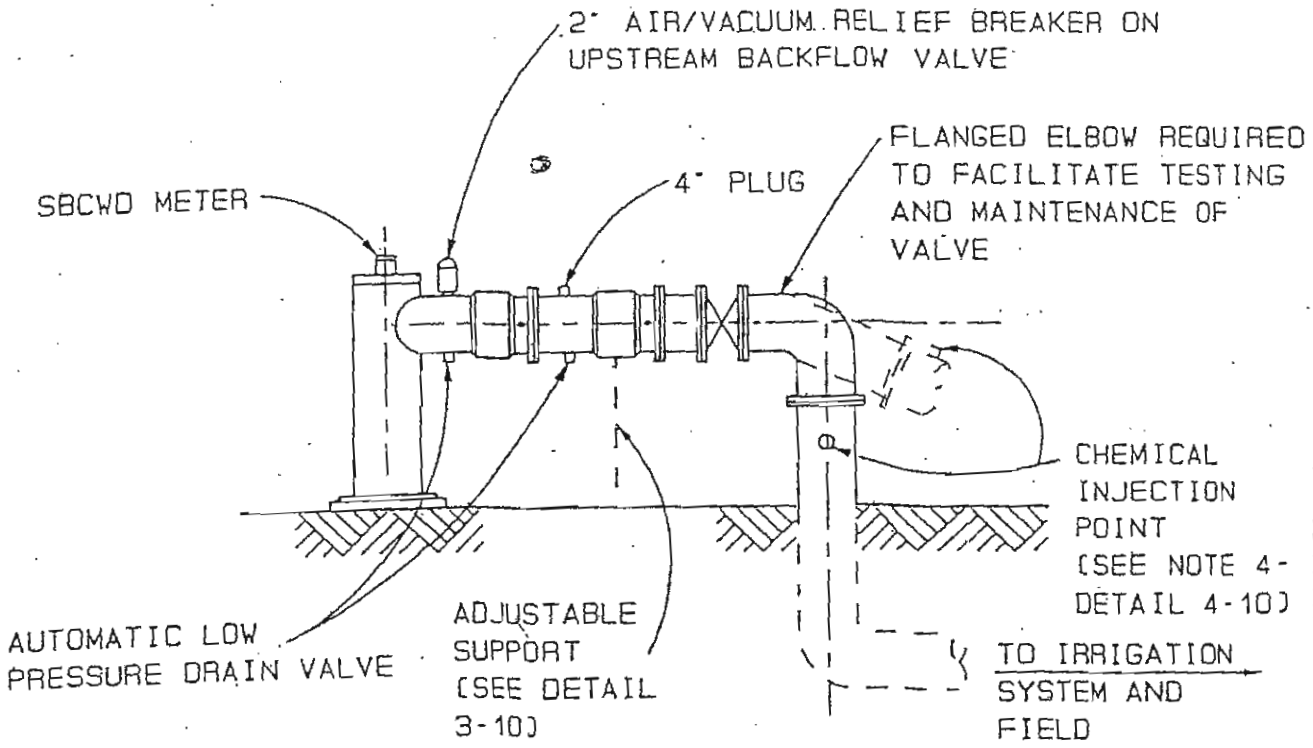



FLANGED CONNECTION (PREFERRED)

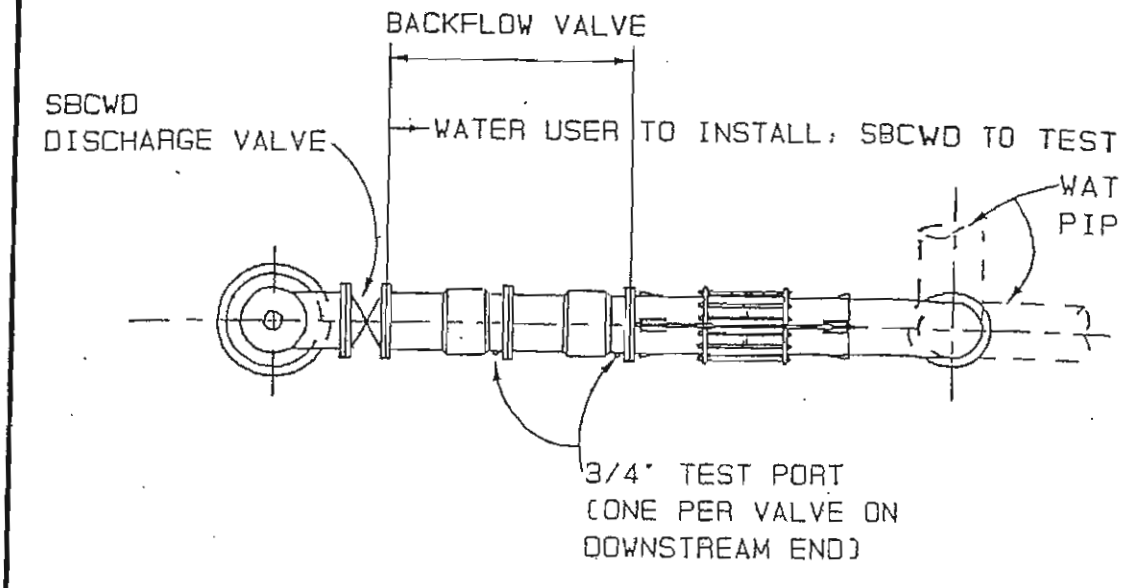
| | | | |
|---|---|---|---|
| SAN BENITO COUNTY WATER DISTRICT<br>4" & 6" BACKFLOW PREVENTION<br>FLANGED INSTALLLATION | | DESIGNED BY: C+D | SCALE: NO SCALE |
| | | DRAWN BY: C+D | DATE: NOV 1992 |
| APPROVED BY: | APPROVED BY: | CHECKED BY: | DRAWING NO. |

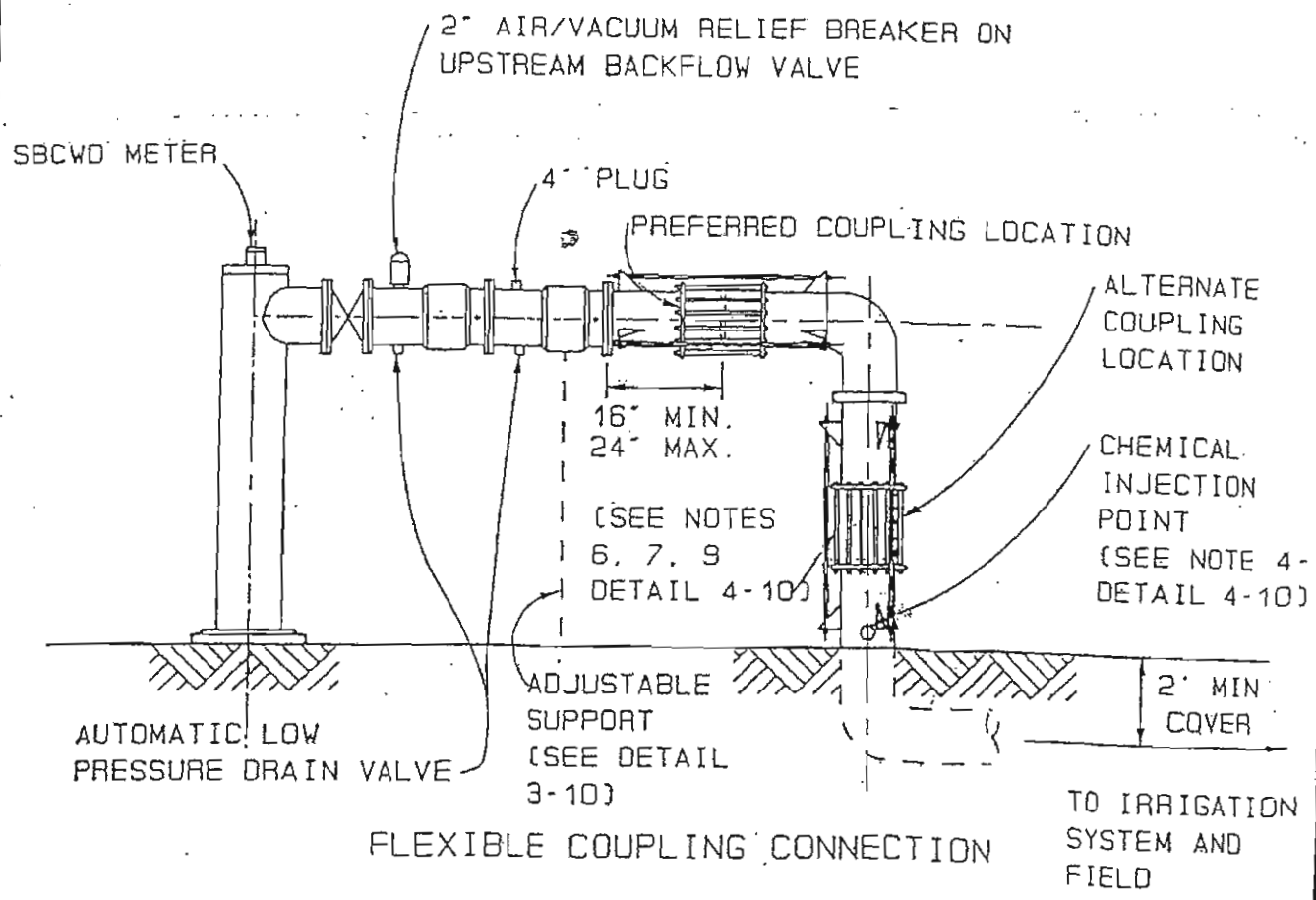



FLANGED CONNECTION (PREFERRED)

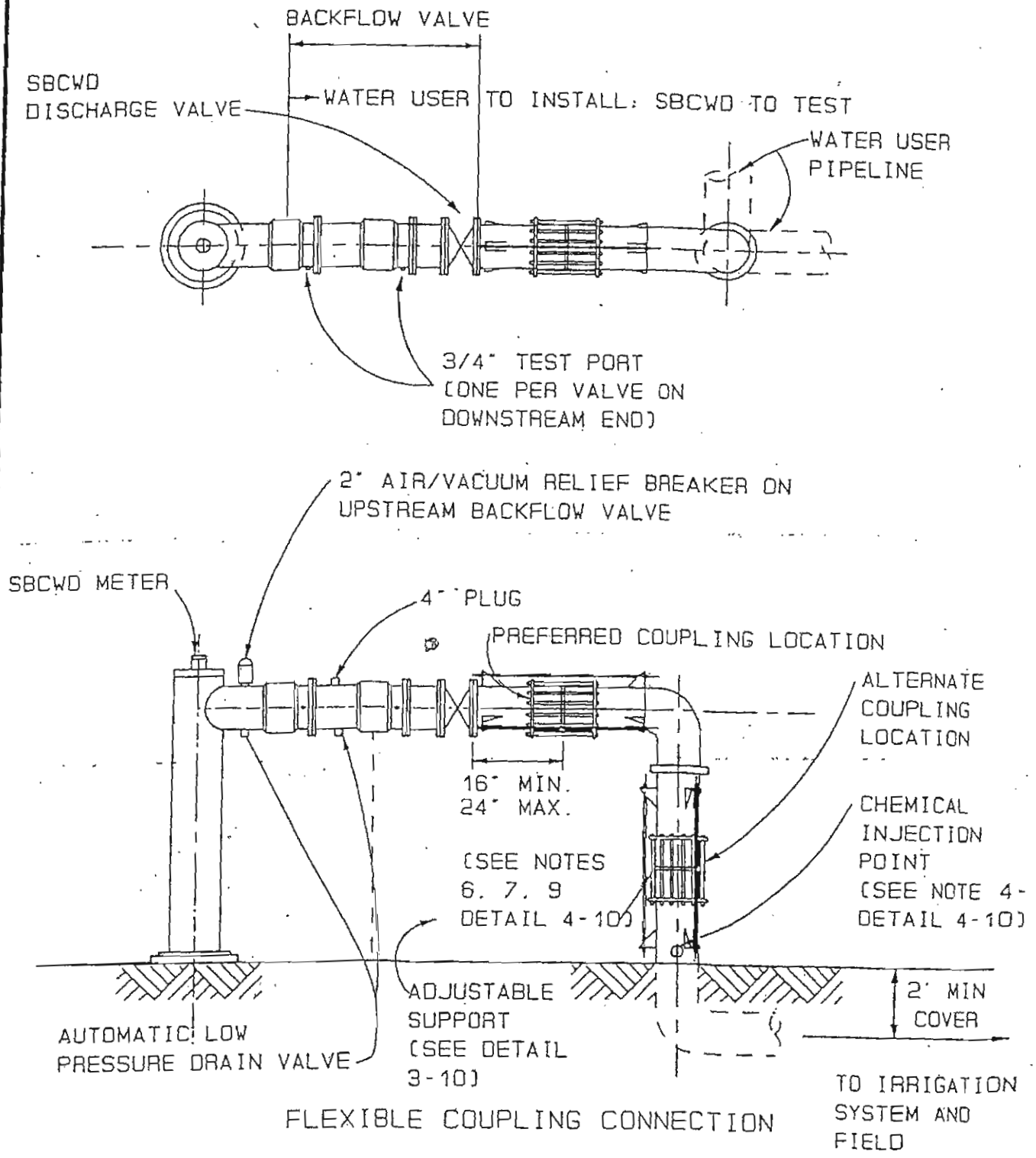
| | | |
|---|---|---|
| SAN BENITO COUNTY WATER DISTRICT<br>8", 10", 12" BACKFLOW PREVENTION<br>FLANGED INSTALLATION | DESIGNED BY: C+D | SCALE: NO SCALE |
| | DRAWN BY: C+D | DATE: NOV 1992 |
| APPROVED BY: | APPROVED BY: | CHECKED BY: / DRAWING NO. |




FLEXIBLE COUPLING CONNECTION

| | | |
|---|---|---|
| SAN BENITO COUNTY WATER DISTRICT<br>4" - 6" BACKFLOW PREVENTION<br>FLEXIBLE COUPLING INSTALLATION | DESIGNED BY: C+D | SCALE: NO SCALE |
| | DRAWN BY: C+D | DATE: NOV 1992 |
| APPROVED BY: | APPROVED BY: | CHECKED BY: / DRAWING NO. |




FLEXIBLE COUPLING CONNECTION

| | | |
|---|---|---|
| SAN BENITO COUNTY WATER DISTRICT<br>8", 10", 12" BACKFLOW PREVENTION<br>FLEXIBLE COUPLING INSTALLATION | DESIGNED BY: C+D<br>DRAWN BY: C+D | SCALE: NO SCALE<br>DATE: NOV 1992 |
| APPROVED BY: | APPROVED BY: | CHECKED BY: |

# NOTES FOR FLANGED INSTALLATION AND FLEXIBLE COUPLING INSTALLATION: DETAILS 4-6, 4-7, 4-8 AND 4-9

1. ALL PIPE JOINTS AND CONNECTIONS SHALL BE WATERTIGHT.

2. AN ADJUSTABLE PIPE SUPPORT MUST BE INSTALLED AND MAINTAINED TO FACILITATE TESTING.

3. TAILWATER RETURN OR DRAINAGE WATER RECYCLING PIPELINE MUST BE A MINIMUM OF 4' BEYOND THE DOWNSTREAM FLANGE OF THE BACKFLOW VALVE.

4. THE CHEMICAL INJECTION POINT MUST BE A MINIMUM OF 2' BEYOND THE DOWNSTREAM FLANGE OF THE BACKFLOW VALVE.

5. BACKFLOW VALVES MAY BE INSTALLED ANYWHERE WITHIN 25' OF THE DISTRICT'S DELIVERY PROVIDING THERE ARE NO PIPE CONNECTIONS OR INJECTION POINTS OF ANY TYPE UPSTREAM OF THE VALVE.

6. RESTRAINTS ARE NECESSARY TO PREVENT ADDED LOAD AND STRESS ON THE DISTRICT'S EQUIPMENT AND TO PREVENT SEPARATION OF THE FLEXIBLE COUPLING. THE AMOUNT AND DIRECTION OF THRUST WILL VARY DEPENDING UPON THE CONFIGUATION OF THE WATER DISCHARGE PIPING.

7. IT IS THE WATER USER'S RESPONSIBILITY TO ASSURE THAT PROPER THURST RESTRAINT IS PROVIDED TO PREVENT DAMAGE TO THE DISTRICT'S FACILITIES. THE WATER USER SHALL NOT INSTALL ANY FLEXIBLE COUPLING OTHER THAN THE CONFIGURATION SHOWN FOR THRUST, SHEAR AND TORSION.

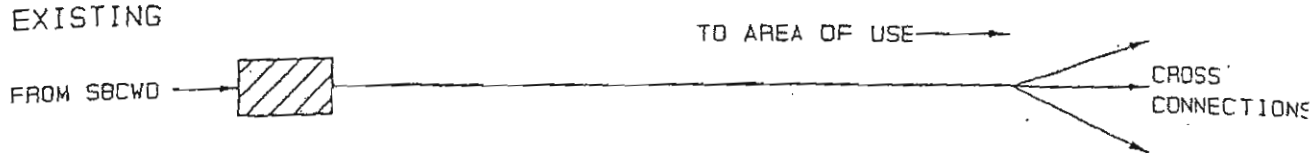
8. BACKFLOW VALVES SHALL BE ABOVE THE HIGHEST DOWNSTREAM OUTLET, AND SHALL HAVE A MINIMUM OF 12" OF GROUND CLEARANCE.

9. ONE FLEXIBLE COUPLING WITH A MINIMUM 7" MIDDLE RING LENGTH AND RESTRAINTS ARE REQUIRED TO FACILITATE TESTING AND MAINTENANCE OF VALVE. SEE DETAIL 3-11 FOR RESTRAINT.

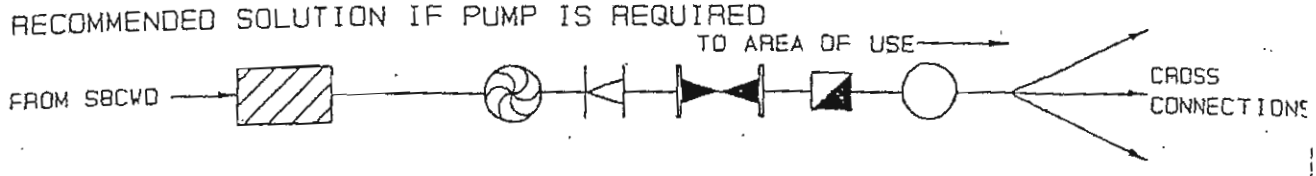
| | | |
|---|---|---|
| SAN BENITO COUNTY WATER DISTRICT<br>PRIMARY DELIVERY<br>INSTALLATION NOTES | DESIGNED BY: C+D<br>DRAWN BY: C+D<br>CHECKED BY: | SCALE: NO SCALE<br>DATE: NOV 1992 |
| APPROVED BY: | APPROVED BY: | |

## SITUATION #1 - WITH TREATMENT, NO PUMP

EXISTING

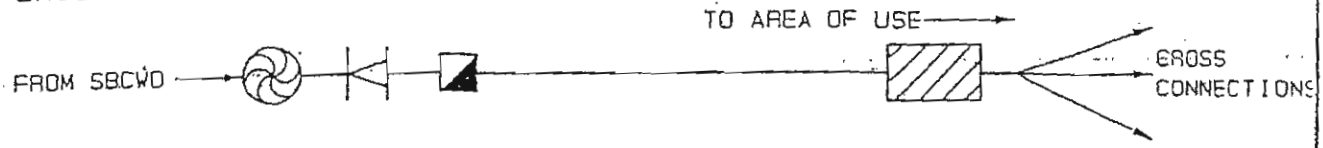



RECOMMENDED SOLUTION IF PUMP IS REQUIRED

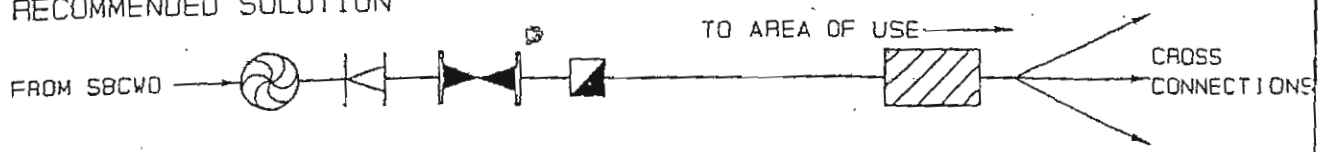



## SITUATION #2 - WITH TREATMENT, EXISTING PUMP UPSTREAM

EXISTING

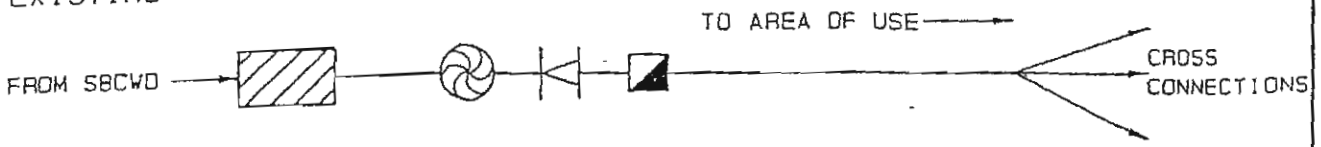



RECOMMENDED SOLUTION

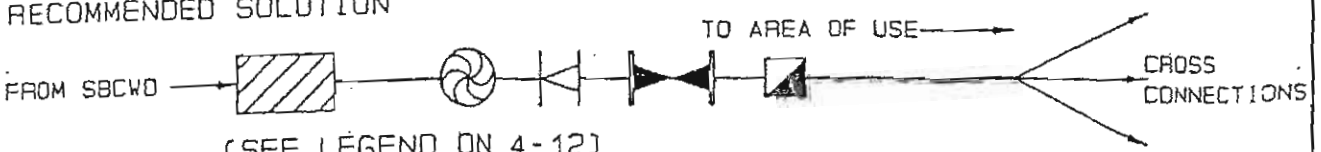



## SITUATION #3 - WITH TREATMENT, EXISTING PUMP DOWNSTREAM

EXISTING




RECOMMENDED SOLUTION

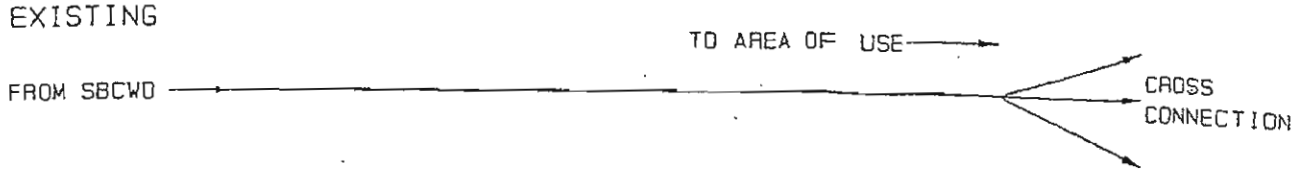



(SEE LEGEND ON 4-12)

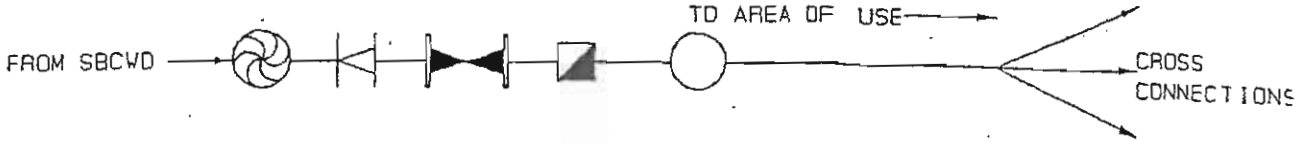
| | | |
|---|---|---|
| SAN BENITO COUNTY WATER DISTRICT<br>MUNICIPAL AND INDUSTRIAL<br>REMOTE BACKFLOW VALVES<br>SITUATIONS AND SOLUTIONS - A | DESIGNED BY: C+D | SCALE: NO SCALE |
| | DRAWN BY: C+D | DATE: NOV 1992 |
| APPROVED BY: / APPROVED BY: | CHECKED BY: | DRAWING NO. |

## SITUATION #4 - NO TREATMENT, NO PUMP

EXISTING

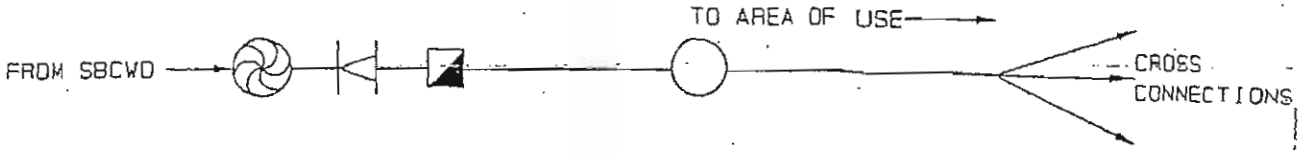



RECOMMENDED SOLUTION IF PUMP IS REQUIRED

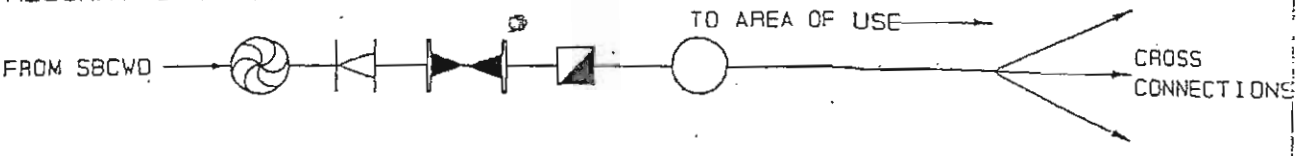



## SITUATION #5 - NO TREATMENT, WITH EXISTING PUMP

EXISTING




RECOMMENDED SOLUTION




## LEGEND

- BOOSTER PUMP
- BOOSTER PUMP CHECK VALVE
- BACKFLOW PREVENTION DEVICE
- BOOSTER PUMP ON/OFF PRESSURE SWITCH
- HYDROPNEUMATIC OR WATER TANK
- POTABLE WATER TREATMENT PLANT

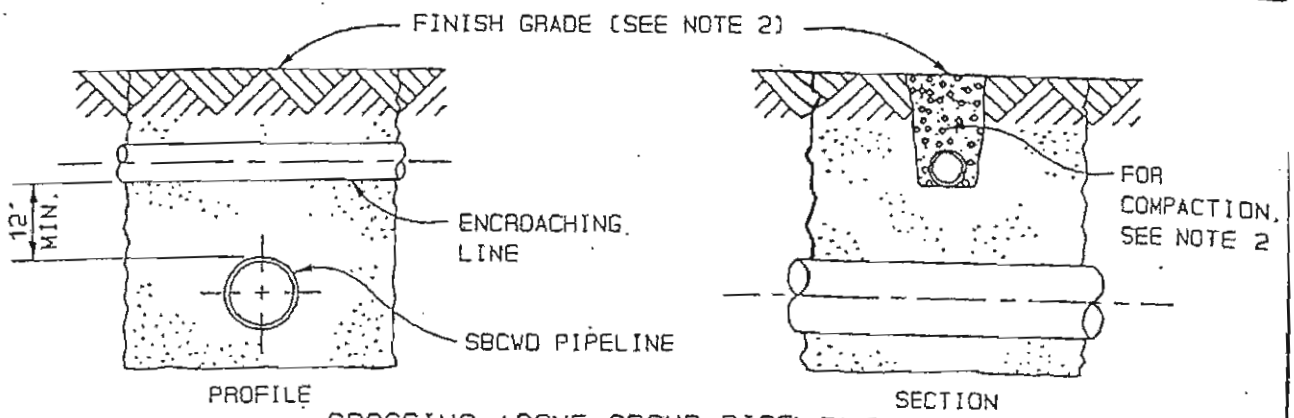
## NOTES

1. THESE DIAGRAMS REPRESENT GENERAL CONFIGURATIONS ONLY. INDIVIDUAL SITES WILL VARY.
2. THERE SHALL BE NO CROSS CONNECTIONS TO ANY POINT OF USE UPSTREAM OF THE BACKFLOW PREVENTION DEVICE.
3. INSTALLATION OF M & I DELIVERY BACKFLOW PREVENTION DEVICES AT DISTANCES GREATER THAN 25' FROM THE DISTRICT'S DELIVERY SHALL BE ALLOWED ONLY UPON SUBMITTAL, REVIEW AND APPROVAL OF SBCWD.
4. WATER USERS SHOULD CONSULT WITH THEIR WATER TREATMENT PLANT AND/OR PUMP INSTALLER BEFORE ATTEMPTING TO MAKE ANY SYSTEM MODIFICATION.

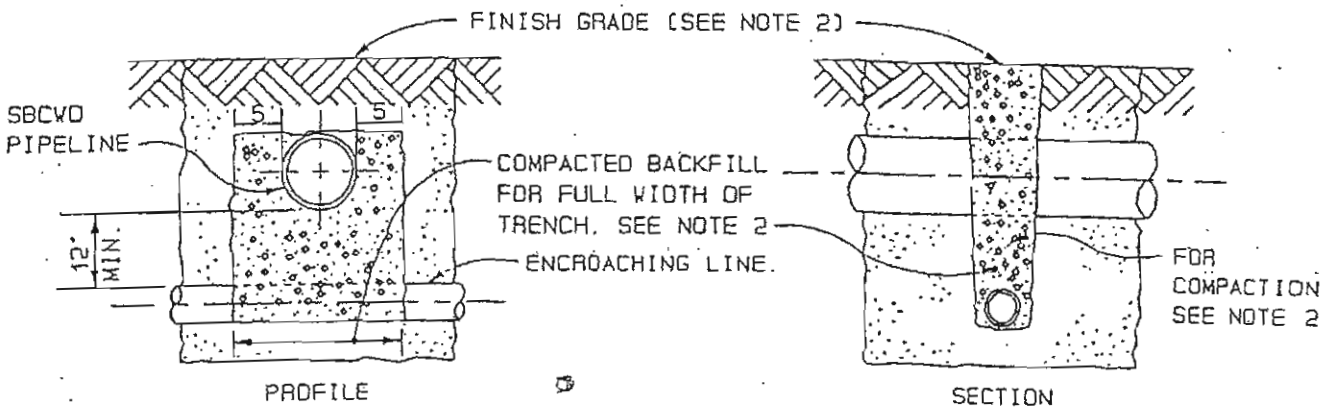
| | | |
|---|---|---|
| SAN BENITO COUNTY WATER DISTRICT<br>MUNICIPAL AND INDUSTRIAL<br>REMOTE BACKFLOW VALVES<br>SITUATIONS AND SOLUTIONS - B | DESIGNED BY: C+D<br>DRAWN BY: C+D | SCALE: NO SCALE<br>DATE: NOV 1992 |
| APPROVED BY: | APPROVED BY: | CHECKED BY: / DRAWING NO. |

# SECTION 5

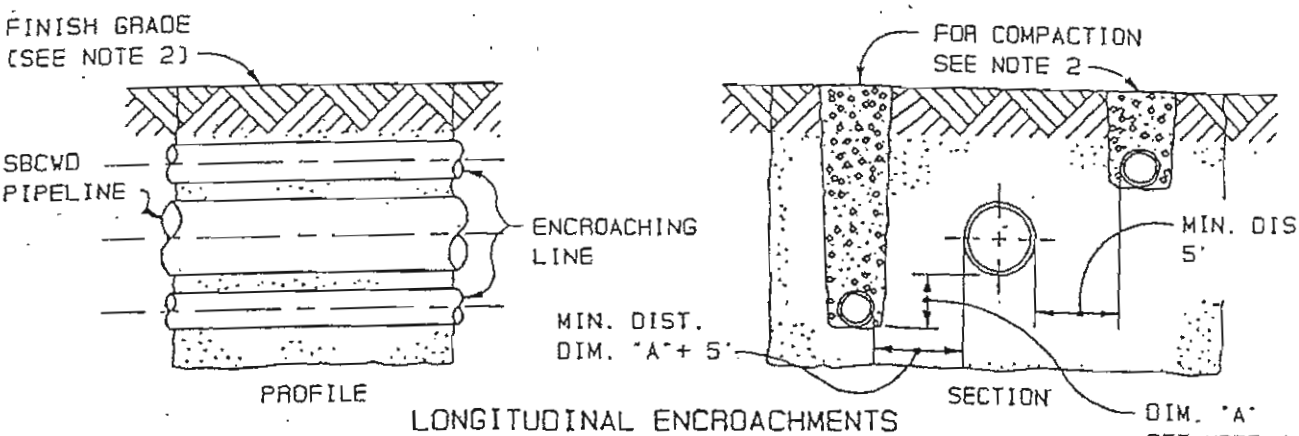
# PIPE CROSSING DETAILS




CROSSING ABOVE SBCWD PIPELINE




CROSSING BELOW SBCWD PIPELINE




LONGITUDINAL ENCROACHMENTS

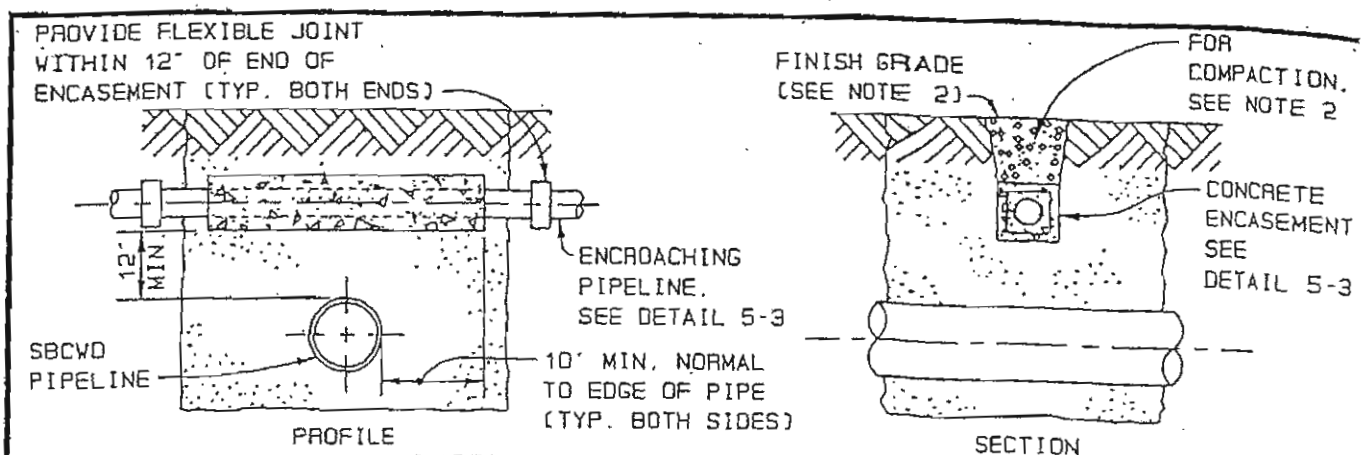
(ENCROACHING LINE SHOWN ABOVE OR BELOW SBCWD PIPELINE)

NOTES:

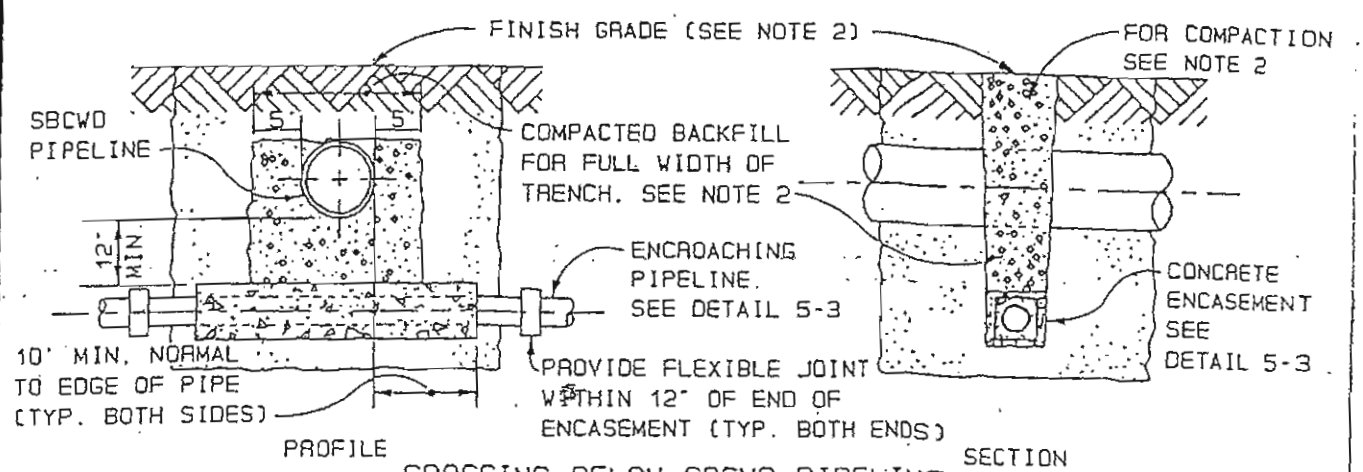
1) VERTICAL DISTANCE BETWEEN BOTTOM OF SBCWD PIPELINE AND BOTTOM OF ENCROACHING LINE AS DETERMINED BY DESIGN OF ENCROACHING LINE.

2) SEE SPECIFICATIONS SECTION 2.2 BACKFILL AND DESIGN CRITERIA SECTION 4.

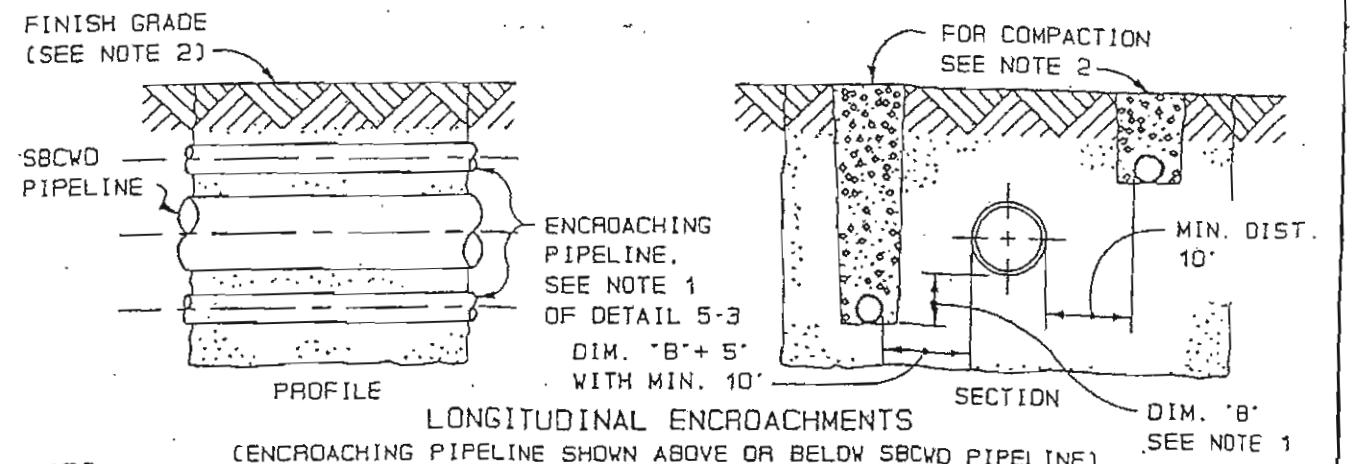
| | | |
|---|---|---|
| SAN BENITO COUNTY WATER DISTRICT<br>PIPE CROSSING<br>POTABLE WATER LINE AND<br>OTHER UTILITY LINES | DESIGNED BY: C+D | SCALE: NO SCALE |
| | DRAWN BY: C+D | DATE: MAR 1993 |
| APPROVED BY: | APPROVED BY: | CHECKED BY: / DRAWING NO |




CROSSING ABOVE SBCWD PIPELINE




CROSSING BELOW SBCWD PIPELINE




LONGITUDINAL ENCROACHMENTS

(ENCROACHING PIPELINE SHOWN ABOVE OR BELOW SBCWD PIPELINE)

NOTES:

1) VERTICAL DISTANCE BETWEEN BOTTOM OF SBCWD PIPELINE AND BOTTOM OF ENCROACHING PIPELINE AS DETERMINED BY DESIGN OF ENCROACHING PIPELINE.

2) SEE SPECIFICATIONS SECTION 2.2 BACKFILL AND DESIGN CRITERIA SECTION 4.

| | | |
|---|---|---|
| SAN BENITO COUNTY WATER DISTRICT<br>PIPE CROSSING<br>SEWER LINE AND<br>NON-POTABLE WATER LINE | DESIGNED BY: C+D | SCALE: NO SCALE |
| | DRAWN BY: C+D | DATE: MAR 1993 |
| APPROVED BY: / APPROVED BY: | CHECKED BY: | DRAWING NO. |

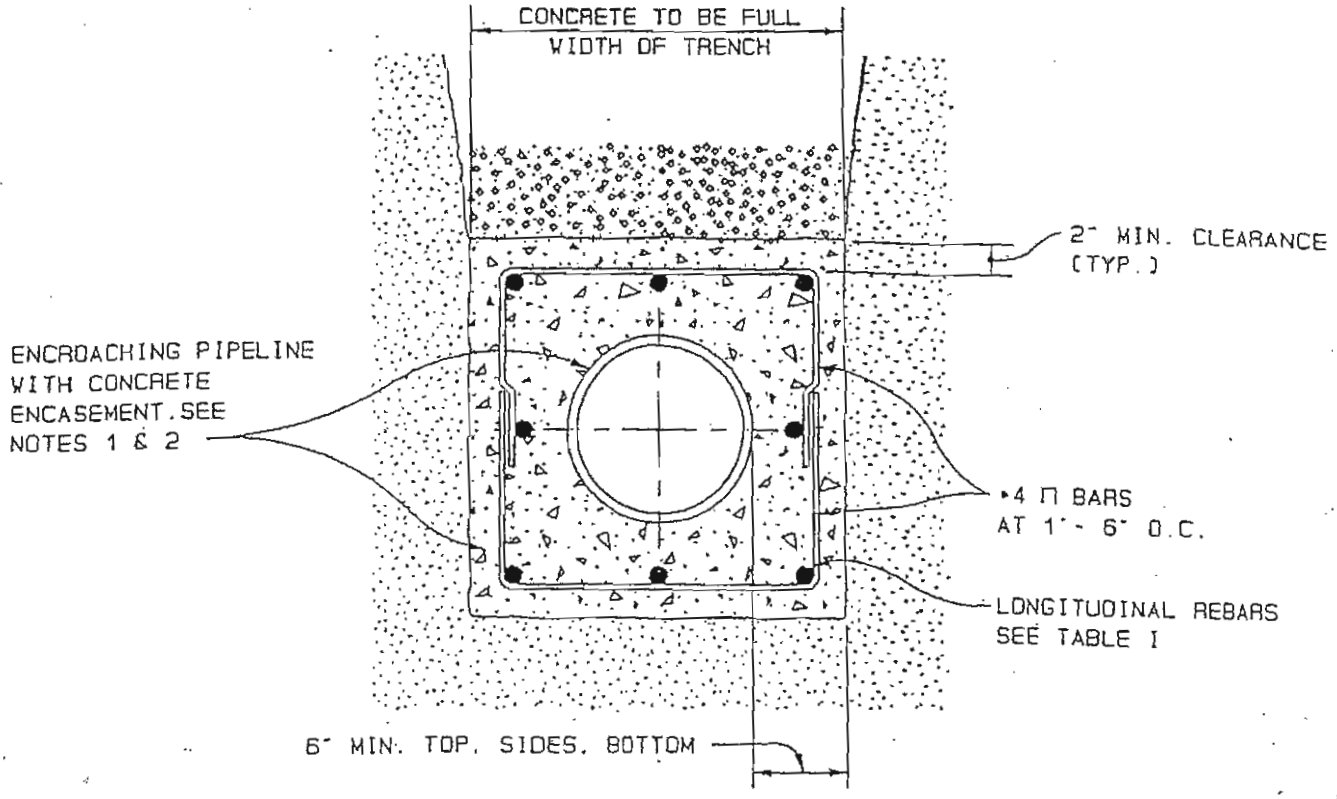



TABLE I

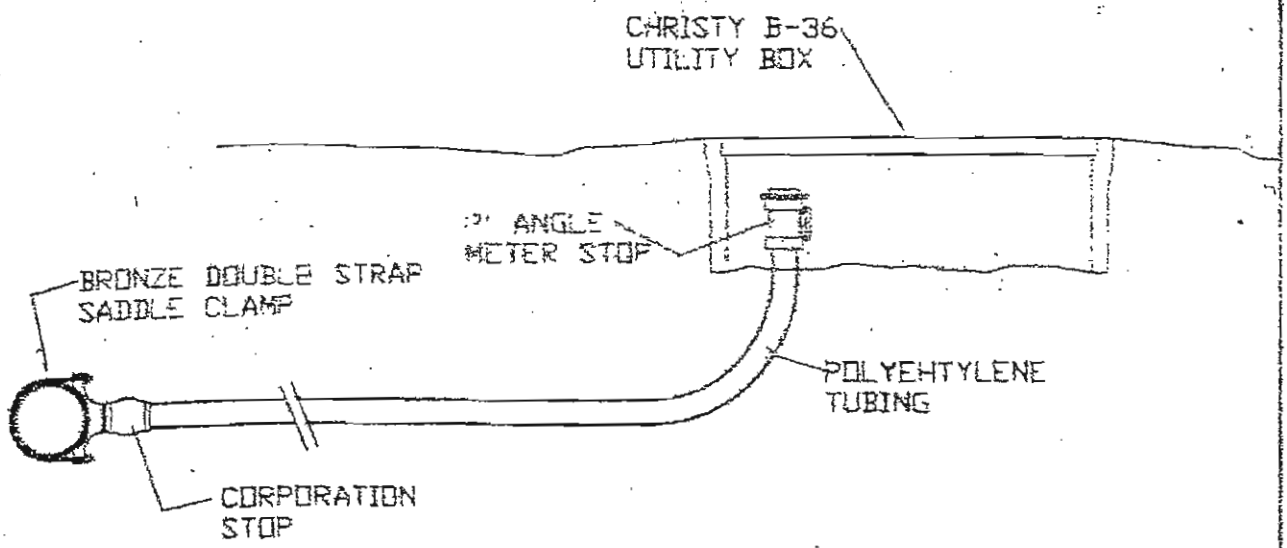
| SIZE OF ENCROACHING MAIN | LONGITUDINAL REINFORCEMENT |
|---|---|
| 12" AND SMALLER | #4 AT 1'-0" |
| 14" TO 24" | #5 AT 1'-0" |
| 26" TO 48" | #6 AT 1'-0" |
| LARGER THAN 48" | SPECIAL DESIGN |

NOTES:

1) FOR PRESSURE PIPELINES OR FORCE MAINS WITHIN SBCWD R.O.W., JOINTS MUST BE WATERTIGHT AND FIELD TESTED FOR LEAKAGE AT 120% OF DESIGN PRESSURE BEFORE PLACING ENCASEMENT OR BACKFILLING OVER JOINTS. NO LEAKAGE WILL BE ALLOWED.

2) CONCRETE ENCASEMENT MUST BE PLACED AGAINST UNDISTURBED OR COMPACTED SOIL.

| | | | |
|---|---|---|---|
| SAN BENITO COUNTY WATER DISTRICT<br>PIPE CROSSING<br>CONCRETE ENCASEMENT | | DESIGNED BY: C+D | SCALE: NO SCALE |
| | | DRAWN BY: C+D | DATE: MAR 1993 |
| APPROVED BY:<br>DISTRICT MANAGER | APPROVED BY:<br>DISTRICT ENGINEER | CHECKED BY: C+D | DRAWING NO. 5-3 |




NOTES:

1. ALL WATER SERVICE INSTALLATIONS INCLUDE METER BOX.

2. 2"ø WATER SERVICE WITH 2" ANGLE METER STOP (FORD, MUELLER OR JONES)

3. ALL WATER SERVICES SHALL HAVE A HAND TAMPED SAND BEDDING 9" BENEATH THE TUBING AND SHALL HAVE 6" MINIMUM CLEARANCE ON EACH SIDE.

4. ALL WATER SERVICES SHALL BE POLYETHYLENE CTS SDR 9 (ASTM D2737) TUBING.

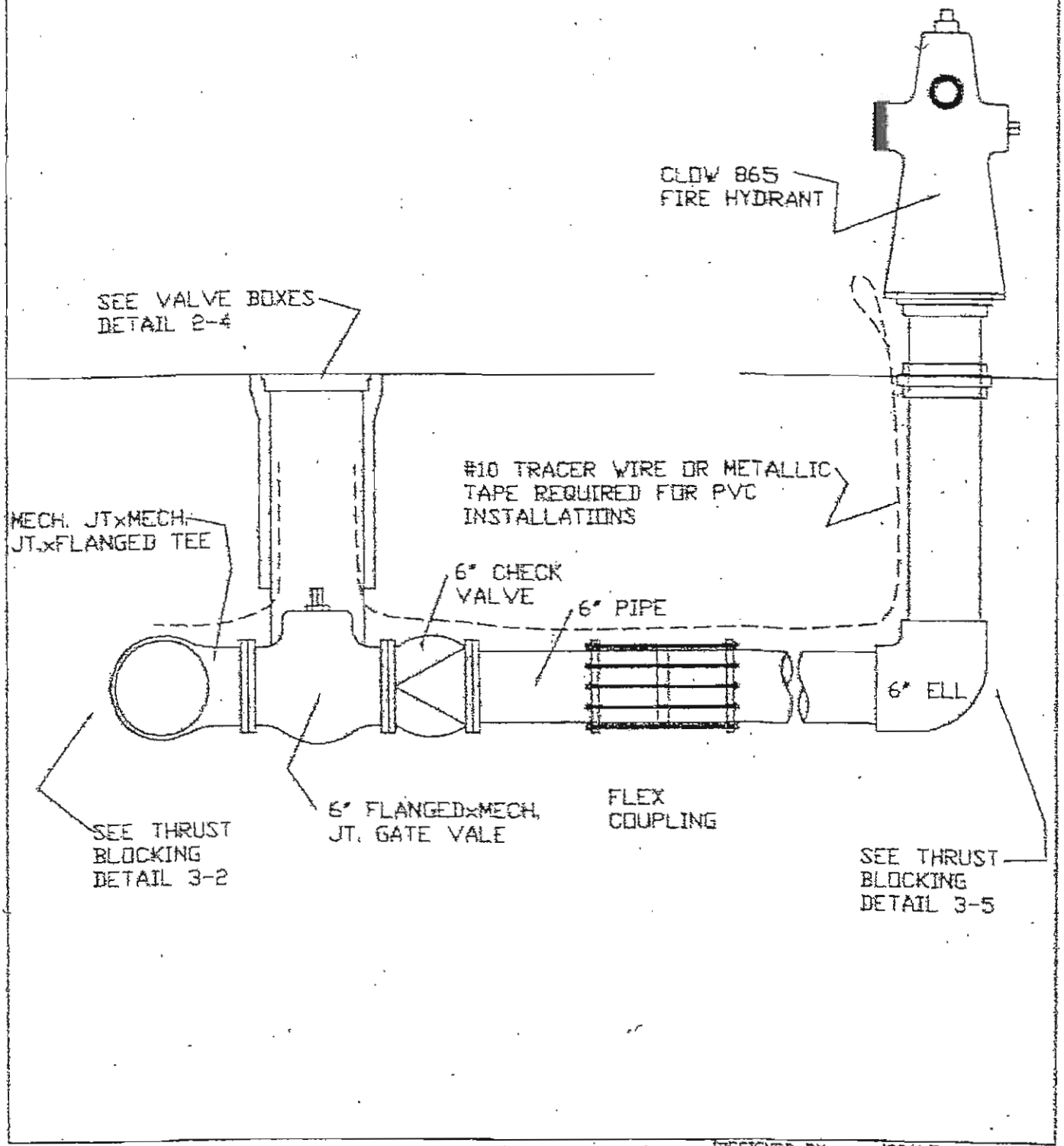
5. CORPORATION STOP SHALL BE FORD, MUELLER OR JONES.

6. WATER METER BOX SHALL BE CHRISTY B-36 WITH B36D LID OR APPROVED EQUAL.

7. A MINIMUM CLEARANCE OF 12" BETWEEN WATER SERVICES REQUIRED IN COMMON TRENCH.

8. ALL TUBING CONNECTIONS SHALL BE THE COMPRESSION TYPE: FORD "PACK JOINT", MUELLER "INSTA-TITE" OR EQUAL.

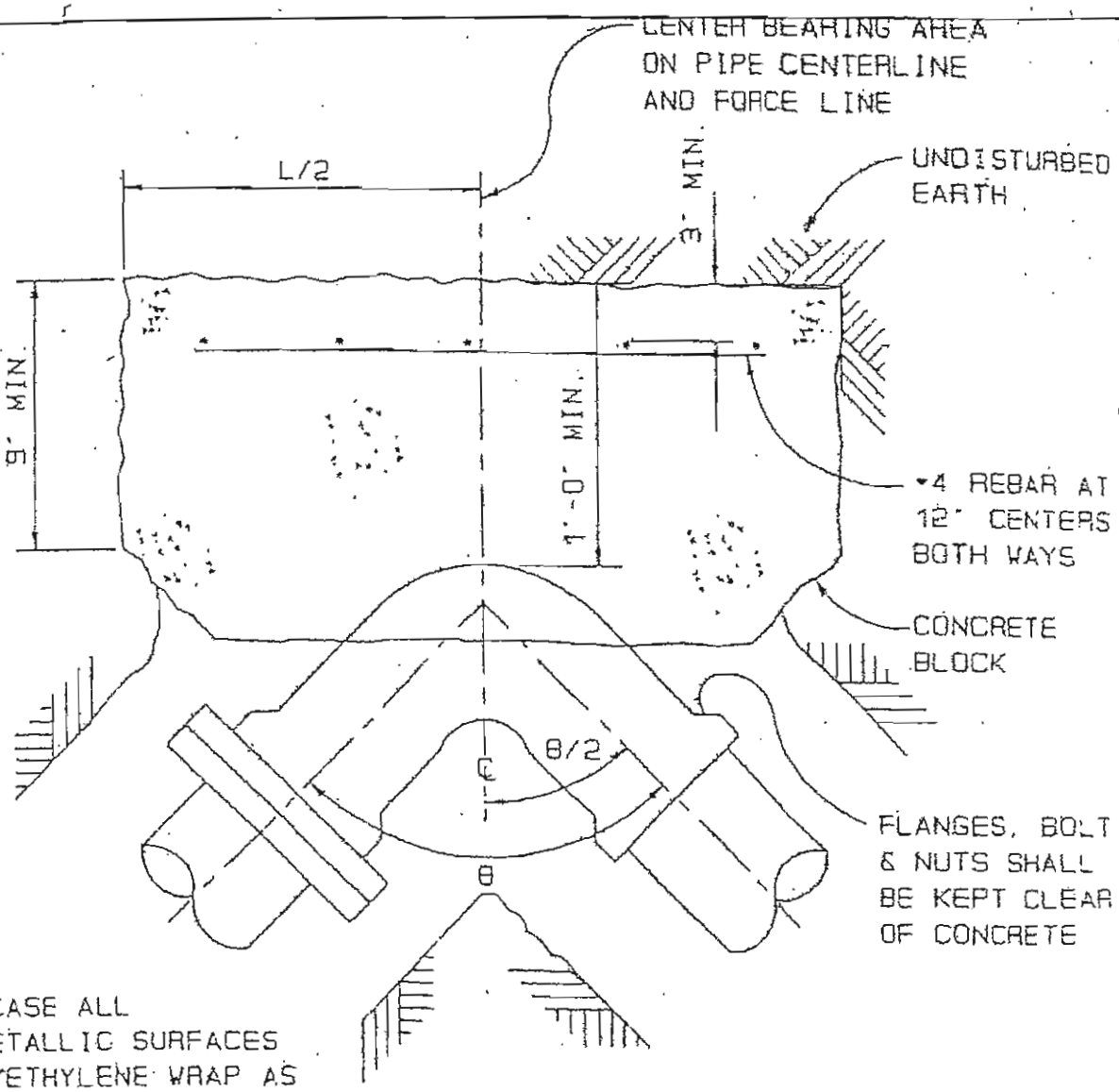
| | | | |
|---|---|---|---|
| SAN BENITO COUNTY WATER DISTRICT | | DESIGNED BY: | SCALE: NO SCALE |
| TYPICAL 2"ø UNDERGROUND DELIVERY | | DRAWN BY: | DATE: DEC. 2004 |
| APPROVED BY: DISTRICT MANAGER | APPROVED BY: DISTRICT ENGINEER | CHECKED BY: | DRAWING NO: 1-13 |




# SAN BENITO COUNTY WATER DISTRICT

## FIRE HYDRANT ASSEMBLY

| | | | |
|---|---|---|---|
| | | DESIGNED BY: | SCALE: NO SCALE |
| | | DRAWN BY: | DATE: DEC. 2004 |
| APPROVED BY: DISTRICT MANAGER | APPROVED BY: DISTRICT ENGINEER | CHECKED BY: | DRAWING NO: 1-14 |




NOTE: ENCASE ALL BURIED METALLIC SURFACES WITH POLYETHYLENE WRAP AS SPECIFIED IN AWWA C105.

| | REQUIRED BEARING AREA (SQ. FT.) | | | | | BEARING AREA DIMENSIONS (L x |
|---|---|---|---|---|---|---|
| Pipe Size | 5.625° | 11.25° | 22.25° | 45° | 90° | 5.625° | 11.25° | 22.25° | 45° | 90° |
| 6" | 1 | 1 | 2 | 3 | 5 | 1'0" x 1'0" | 1'0" x 1'0" | 1'5" x 1'5" | 1'9" x 1'9" | 2'3" x 2'3" |
| 8" | 1 | 1 | 2 | 4 | 8 | 1'0" x 1'0" | 1'0" x 1'0" | 1'5" x 1'5" | 2'0" x 2'0" | 2'10" x 2'0" |
| 10" | 1 | 2 | 4 | 7 | 12 | 1'0" x 1'0" | 1'5" x 1'5" | 2'0" x 2'0" | 2'8" x 2'8" | 3'5" x 3'5" |
| 12" | 1 | 3 | 5 | 9 | 17 | 1'0" x 1'0" | 1'9" x 1'9" | 2'3" x 2'3" | 3'0" x 3'0" | 4'2" x 4'2" |

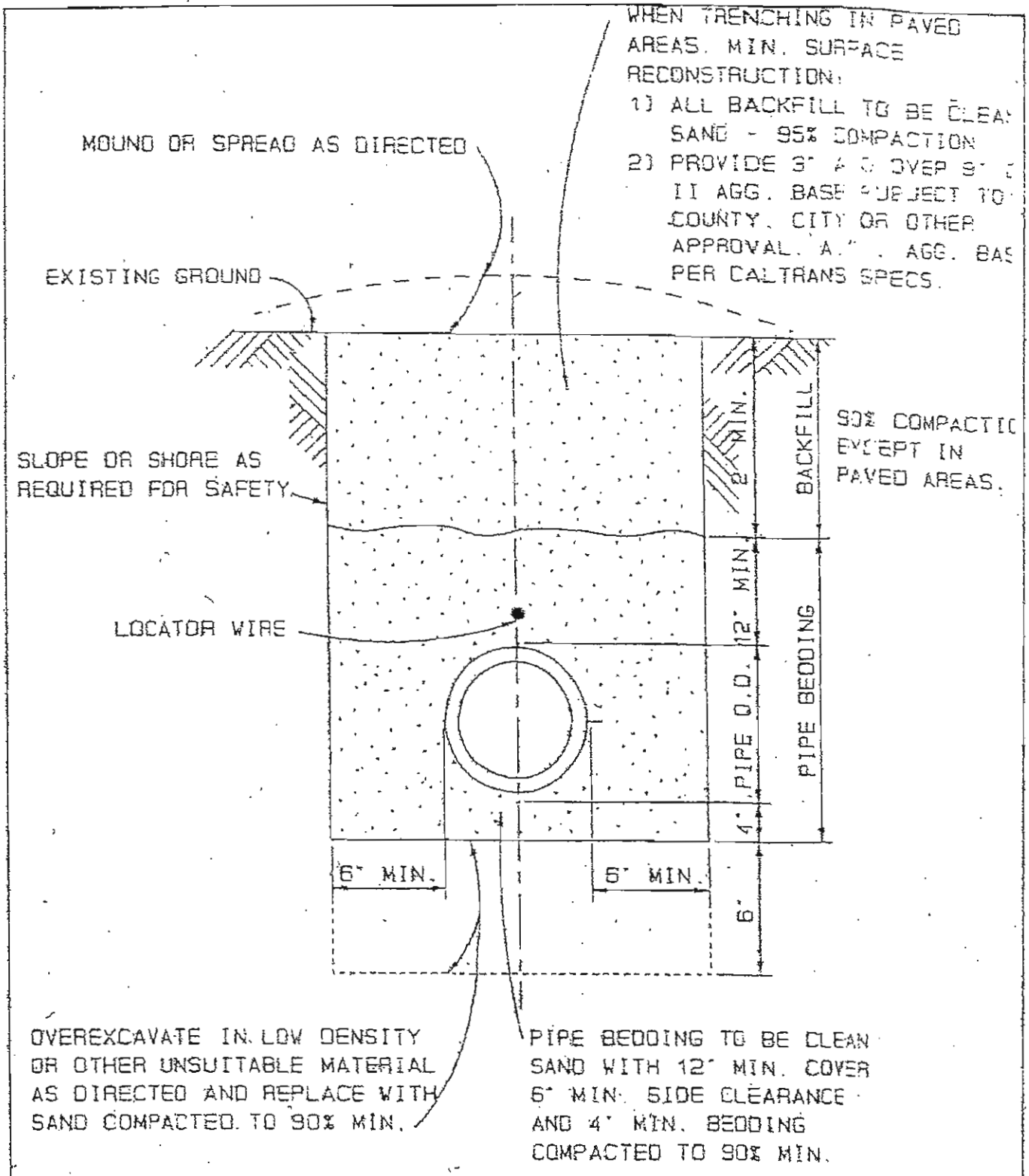
# SAN BENITO COUNTY WATER DISTRICT

## - THRUST BLOCKING - ELBOWS

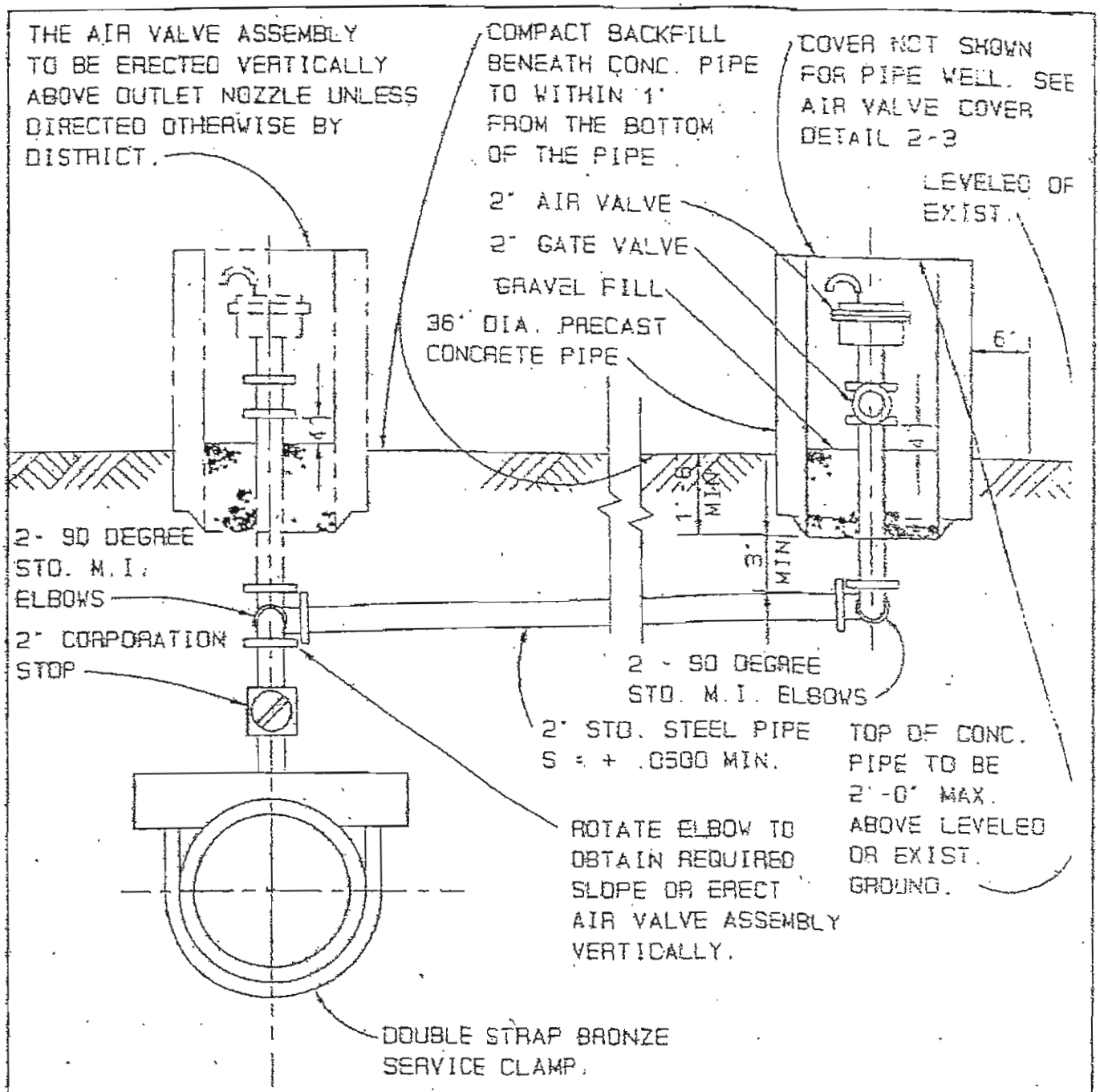
| | | | |
|---|---|---|---|
| DESIGNED BY: C+D | SCALE: NO SCALE |
| DRAWN BY: C+D | DATE: NOV 1992 |
| CHECKED BY: C+D | DRAWING NO: 3-5 |

APPROVED BY: _____ DISTRICT MANAGER

APPROVED BY: _____ DISTRICT ENGINEER



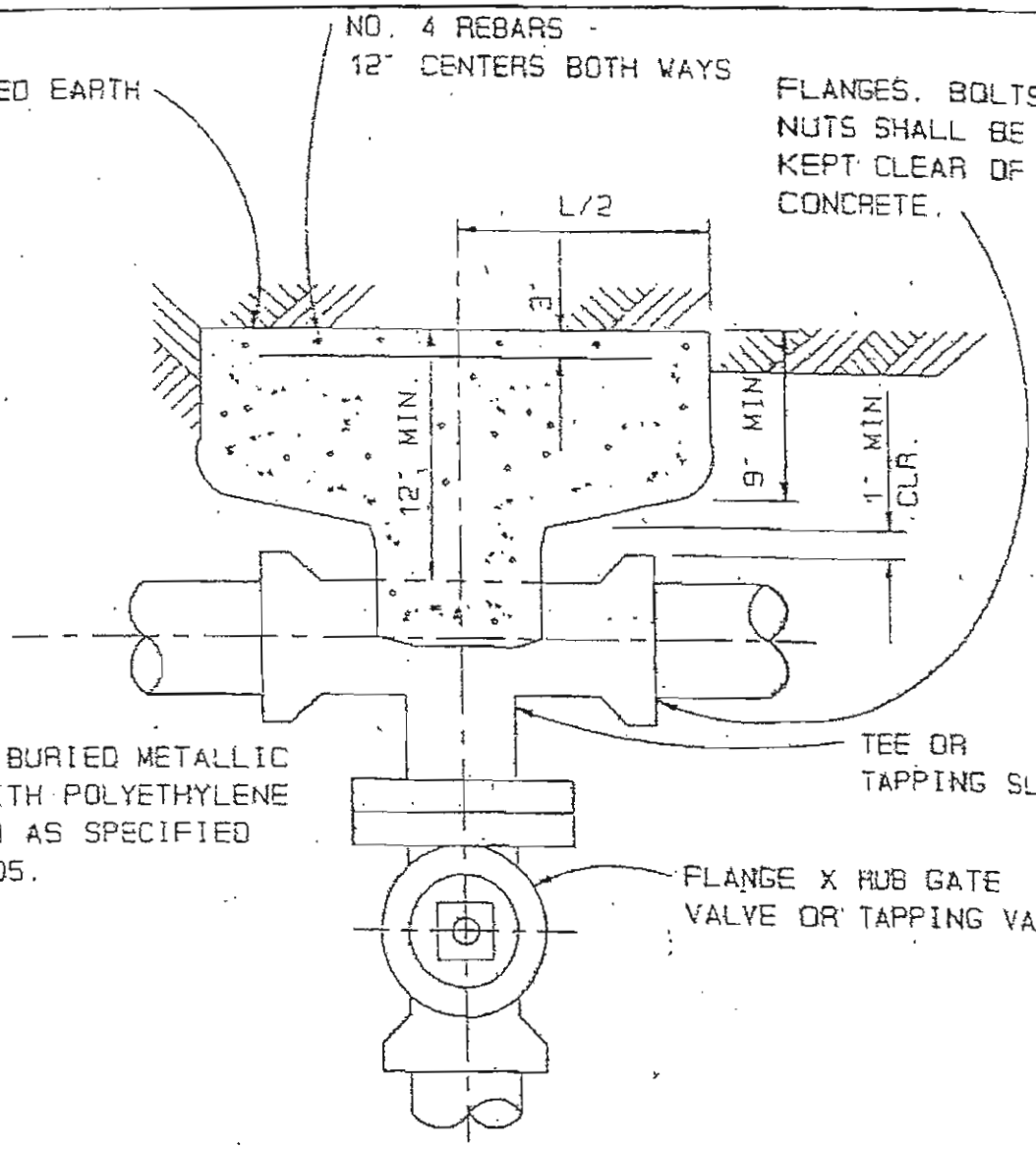

| SAN BENITO COUNTY WATER DISTRICT | DESIGNED BY: C+D | SCALE: NO SCALE |
|---|---|---|
| TYPICAL TRENCHES | DRAWN BY: C+D | DATE: NOV 1992 |




NOTES:

1) 36" DIAMETER PRECAST CONCRETE PIPE SHALL CONFORM TO ASTM C 76 CLASS II OR III

| | | | |
|---|---|---|---|
| SAN BENITO COUNTY WATER DISTRICT<br>AIR VALVE INSTALLATION | | DESIGNED BY: C+D | SCALE: NO SCALE |
| | | DRAWN BY: C+D | DATE: NOV 1992 |
| APPROVED BY: DISTRICT MANAGER | APPROVED BY: DISTRICT ENGINEER | CHECKED BY: C+D | DRAWING NO 2-2 |




NOTE:
ENCASE ALL BURIED METALLIC SURFACES WITH POLYETHYLENE WRAP (8MIL) AS SPECIFIED IN AWWA C105.

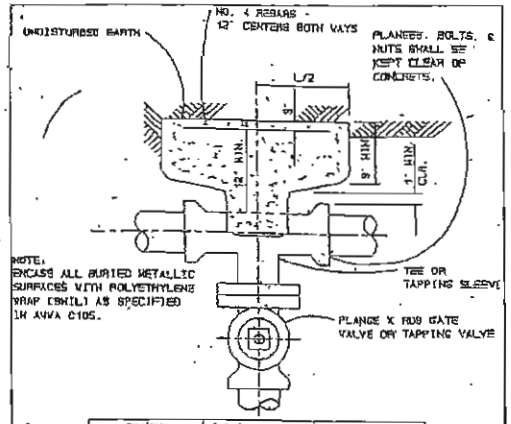
| BRANCH PIPE SIZE | BEARING AREA (S.F.) | L X H |
|---|---|---|
| 3" OR 4" | 2 | 1'5" X 1'5" |
| 6" | 3 | 1'9" X 1'9" |
| 8" | 5 | 2'3" X 2'3" |
| 10" | 9 | 3'0" X 3'0" |
| 12" | 15 | 3'10" X 3'10" |

# SAN BENITO COUNTY WATER DISTRICT

## THRUST BLOCKING - TEES

| | | | |
|---|---|---|---|
| DESIGNED BY: C+D | SCALE: NO SCALE | | |
| DRAWN BY: C+D | DATE: NOV 195 | | |
| APPROVED BY: DISTRICT MANAGER | APPROVED BY: | CHECKED BY: C+D | DRAWING NO. 3-2 |

KEEP TO SCALE REGULATORS, SPECIFICATIONS AND STANDARD DETAILS FOR A COMPLETE SET OF REQUIREMENTS

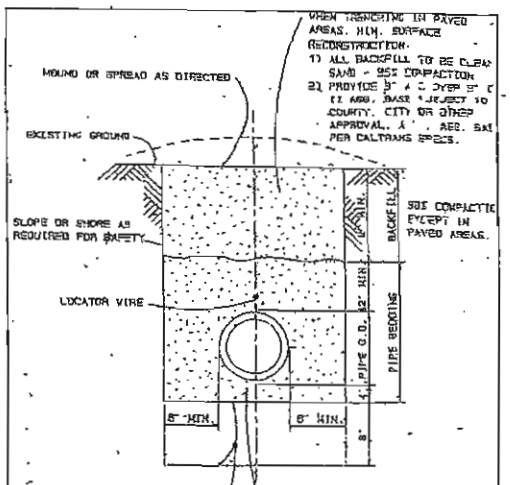



| BRANCH PIPE SIZE | BEARING AREA (S.F.) | L x H |
|---|---|---|
| 3" OR 4" | 2 | 1'5" X 1'5" |
| 6" | 3 | 1'8" X 1'5" |
| 8" | 5 | 2'3" X 2'3" |
| 10" | 9 | 3'0" X 3'0" |
| 12" | 13 | 3'10" X 3'10" |

SAN BENITO COUNTY WATER DISTRICT

THRUST BLOCKING - TEES

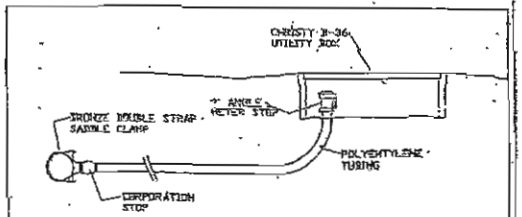
DESIGNED BY: C+D | SCALE: NO SCALE | DRAWN BY: C+D | DATE: NOV 1992 | CHECKED BY: C+D | DRAWING NO. 3-2




SAN BENITO COUNTY WATER DISTRICT

TYPICAL TRENCHES

DESIGNED BY: C+D | SCALE: NO SCALE | DRAWN BY: C+D | DATE: NOV 1992 | CHECKED BY: C+D | DRAWING NO. 3-1



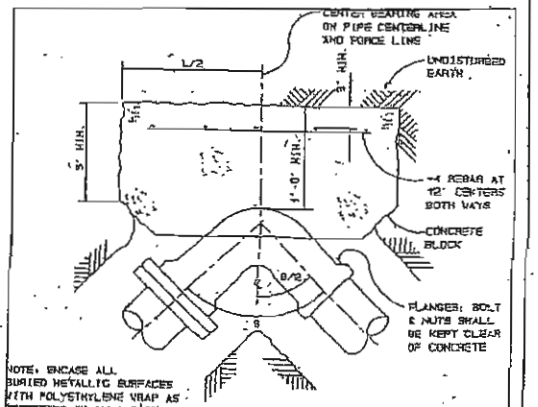

NOTES:

1. ALL WATER SERVICE INSTALLATIONS INCLUDE METER BOX.
2. 2" WATER SERVICE WITH 2" ANGLE METER STOP (FORD, MUELLER OR JONES)
3. ALL WATER SERVICES SHALL HAVE A HAND TAMPED SAND BEDDING 6" BENEATH THE TUBING AND SHALL HAVE 6" MINIMUM CLEARANCE ON EACH SIDE.
4. ALL WATER SERVICES SHALL BE POLYETHYLENE CTS SDR 9 CA3TR (CA3737) TUBING.
5. CORPORATION STOP SHALL BE FORD, MUELLER OR JONES.
6. WATER METER BOX SHALL BE CHRISTY B-36 WITH B36G LID OR APPROVED EQUAL.
7. A MINIMUM CLEARANCE OF 12" BETWEEN WATER SERVICES REQUIRED IN COMMON TRENCH.
8. ALL TUBING CONNECTIONS SHALL BE THE COMPRESSION TYPE FORD "PACK JOINT", MUELLER "INSTA-TITE" OR EQUAL.

SAN BENITO COUNTY WATER DISTRICT

TYPICAL 2"Ø UNDERGROUND DELIVERY

DESIGNED BY: | SCALE: NO SCALE | DRAWN BY: | DATE: DEC 2004 | APPROVED BY: DISTRICT MANAGER | APPROVED BY: DISTRICT ENGINEER | CHECKED BY: | DRAWING NO. 1-13

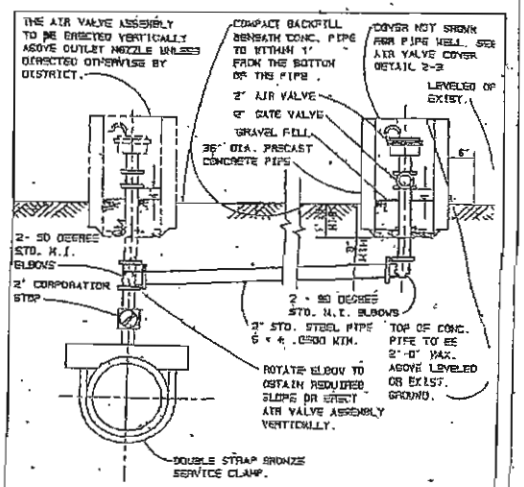



| PIPE SIZE | REQUIRED BEARING AREA (SQ. FT.) 5.625° | 11.25° | 22.25° | 45° | 90° | BEARING AREA DIMENSIONS (L x H) 5.625° | 11.25° | 22.25° | 45° | 90° |
|---|---|---|---|---|---|---|---|---|---|---|
| 4" | 1 | 1 | 2 | 3 | 5 | 1'0" x 1'0" | 1'0" x 1'0" | 1'5" x 1'5" | 1'8" x 1'5" | 2'3" x 2'3" |
| 6" | 1 | 1 | 2 | 4 | 8 | 1'0" x 1'0" | 1'0" x 1'0" | 1'5" x 1'5" | 2'0" x 2'0" | 2'13" x 2'13" |
| 8" | 1 | 2 | 4 | 7 | 12 | 1'0" x 1'0" | 1'5" x 1'5" | 2'0" x 2'0" | 2'8" x 2'8" | 3'2" x 3'2" |
| 12" | 1 | 3 | 5 | 9 | 17 | 1'0" x 1'0" | 1'8" x 1'8" | 2'3" x 2'3" | 3'0" x 3'0" | 4'2" x 4'2" |

SAN BENITO COUNTY WATER DISTRICT

THRUST BLOCKING - ELBOWS

DESIGNED BY: C+D | SCALE: NO SCALE | DRAWN BY: C+D | DATE: NOV 1992 | CHECKED BY: C+D | DRAWING NO. 3-5

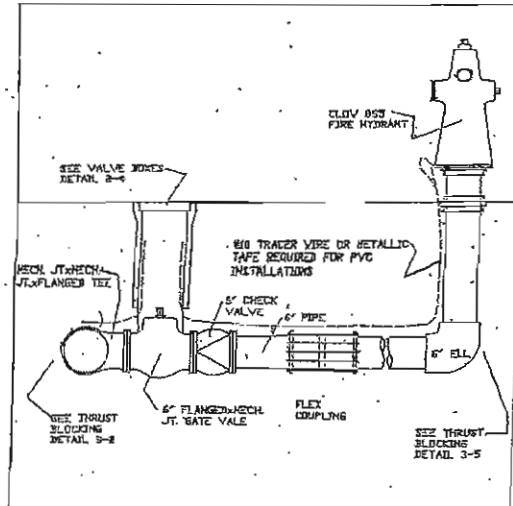



NOTES:
1) 36" DIAMETER PRECAST CONCRETE PIPE SHALL CONFORM TO ASTM C 76 CLASS II OR III

SAN BENITO COUNTY WATER DISTRICT

AIR VALVE INSTALLATION

DESIGNED BY: C+D | SCALE: NO SCALE | DRAWN BY: C+D | DATE: NOV 1992 | CHECKED BY: C+D | DRAWING NO. 3-2




SAN BENITO COUNTY WATER DISTRICT

FIRE HYDRANT ASSEMBLY

DESIGNED BY: | SCALE: NO SCALE | DRAWN BY: | DATE: SEP. 2004 | APPROVED BY: DISTRICT MANAGER | APPROVED BY: DISTRICT ENGINEER | CHECKED BY: | DRAWING NO. 1-14

# San Benito County Water District

## Recycled Water User Information Bulletin

## PERMIT APPLICATION PROCESS

**Application (Form A1)**
The *Recycled Water Permit Application* includes the following information:

- Site address, assessor's block and lot numbers, or property metes and bounds.
- Applicant's name and address, owner's name and address (if different). Applicant's relationship to the subject property as legal owner, tenant, or lessee.
- Description of planned recycled water use on the property.
- Total irrigated area, expressed in appropriate units (square feet, acres).
- Estimated annual flow and peak flow at point of connection, gallon per minute.
- Designation of Customer's On-site Recycled Water Supervisor, including address and 24-hr phone number.
- Other items that could be of concern when using recycled water.
- Type of land use on the property
- Identification of other governmental entities that may have regulatory jurisdiction over the re-use site related to on-site water use, drinking water, food handling or public health issues, such as USDA, State Food and Drug, State Licensing and Certification, etc.

**On-Site Recycled Water Service Plan (Form A2)**
The *On-Site Recycled Water Service Plan* must clearly show the following information on the site plan:

- All residences and other buildings on the site.
- The boundaries of the intended use area.
- Adjacent streets.
- Locations of all major improvements on the site.
- All facilities supplied with recycled or potable water service. Facilities include, but are not limited to, drinking fountains, restrooms, outdoor eating areas, decorative fountains and showers.
- If there are no facilities located in the defined use area, then a note on the plans must indicate that no facilities exist.
- Any wells, lakes, ponds, reservoirs, storage tanks or other water impoundments located on-site or within 100 feet of the site must be shown on the site plan.
- Proposed location and type of signage.
- Description of what will be irrigated (e.g., landscape, specific food crop, etc.).
- Method of irrigation (e.g., spray, flood, or drip).

- Location of potable water pipelines and domestic water supply wells in or adjacent to the use area.
- A description of site containment measures.
- Direction of drainage and description of the area to which the drainage will flow.
- Protection measures of drinking water fountains and designated outdoor eating areas, if applicable.
- Proposed irrigation schedule (if public access is included).
- Measures to be taken to exclude or minimize public contact.
- Any other relevant items.

In addition, proposed uses that include impoundment must include:

- Purpose of the impoundment.
- Description of the degree of public access.
- Conditions under which the impoundment can be expected to overflow and the expected frequency.
- Direction of drainage and description of the area to which the drainage will flow.

The *On-Site Recycled Water Service Plan* must also show the following information on the piping plan (or on the site plan if space permits):

- The complete recycled water systems
- The potable system in the vicinity of the recycled water connection
- Horizontal and vertical distance between the recycled and potable system in locations where they cross
- All sources of recycled water and potable water
- The location and type of all existing and new backflow prevention devices and water meters (recycled water and potable water)
- The location of outdoor hose bibs, quick couplers and other points of ready access to recycled or potable water systems
- The location of irrigation controllers, timers, valve and fixtures (sprinklers, bubblers, etc.)

For existing facilities converting to recycled water use piping plan must indicate:

- Which piping and other devices are existing
- Which piping and other devices will be installed as part of the retrofit work
- The proper separation requirements between potable and recycled water lines (for new piping). Where practical this means a separation of ten (10) horizontal feet when lines run parallel, and where lines cross, the potable service shall be no less than one foot above the recycled service. The District may approve reduced separation distances if these preferred separation distances cannot be achieved.
- How potential cross-connections will be avoided
- Detail drawings of areas where special installation or retrofit procedures are required, such as cutting and capping to separate potable and recycled systems, installation of backflow prevention devices, special construction where pipe separation criteria cannot be met, etc.

SBCWD may offer assistance with many of the steps in the application process. This assistance will include coordination with applicable State and local agencies, and may include assistance with design of modifications, preparation of the On-Site Recycled Water Service Packages, construction and testing. Contact SBCWD for more information on assistance that may be available.

**Permit Renewal**

Permits are issued for periods of one water year (March 1 through February 28) each year. Applicants must file a renewal request form annually.

If a change in owner, lessee or site plan has occurred, a new permit application must be filed by the owner and applicant.

Renewals are subject to compliance with all monitoring and testing requirements.

---

The purpose of this information bulletin is to provide additional information to aid Customers in implementing specific sections of the Rules and Regulations for Recycled Water Customers.

Reference: Section 7.0 Rules and Regulations for Recycled Water Customers, April 1, 2015

Date: June 1, 2015

# SAN BENITO COUNTY WATER DISTRICT
# RECYCLED WATER USE PERMIT APPLICATION AND PERMIT

| SITE WHERE USE IS PROPOSED | (District Use Only) |
|---|---|
| Turnout Number: | Date Received / / |
| Ranch Name or Description: | Date Distributed / / |
| List ALL parcels that will receive Recycled water by Assessors Parcel Number: | Date of Determination / / |
| Specify Location or Address: | ☐ Accepted ☐ Returned ☐ Rejected<br>Customer Number:<br>Notes: |

## CUSTOMER BILLING - APPLICANT - INFORMATION

Applicant is ☐ Owner ☐ Lessee ☐ Other (describe)

Billing Name Title

Billing Address Telephone No.

City State Zip Code

Email Address

## OWNER INFORMATION (If Different From Applicant)

Owner's Name

Contact Person

Address Telephone No.

City State Zip Code

Email Address

## CUSTOMER'S DESIGNATED ON-SITE RECYCLED WATER USER SUPERVISOR (See Note 1)

Relationship to Applicant: ☐ Same ☐ Partner ☐ Permanent Employee ☐ Other:

Name Title

Address

City State Zip Code

**The Customer's On-Site Recycled Water Supervisor must be reachable at all times in case of emergency. All numbers are for District use only.**

Telephone number during regular business hours: _____

EMERGENCY NUMBERS: ☐ Evening: _____ ☐ Pager: _____

☐ Cellular: _____ Email: _____

## PROPOSED WATER USES (Check all that apply)

☐ Agriculture, Orchard: Approx. area _____ (Acres) ☐ Agriculture, Row Crop: Approx. area _____ (Acres)

☐ Ag, Other (specify)

Briefly describe the proposed use checked above. Include types of plants to be irrigated, etc.

_____

_____

_____

| TYPE OF LAND USE ON SITE | GOVERNMENT AGENCIES WITH JURISDICTION (See Note 2) |
|---|---|
| ☐ Agricultural | x City of Hollister |
| ☐ Residential | x California Division of Drinking Water |
| ☐ Industrial | x Regional Water Quality Control Board |
| | x San Benito County Water District |
| | ☐ US Department of Agriculture |
| | ☐ State Food and Drug Administration |
| | ☐ County Ag Commission |
| | ☐ _____ |
| | ☐ _____ |

| WATER DEMAND ESTIMATES | ON SITE WELLS |
|---|---|
| Estimated Annual Use ☐ Ac-Ft ☐ Gallons | **Is there an On Site Well that is operational?** _____ |
| Peak Use in Gallons/Minute (GPM) | List All On Site Wells by SBCWD Well Number: |
| Hours of Use | 1) _____ |
| Days of Use | 2) _____ |
| ☐ Dry Season Only ☐ Year-round | 3) _____ |

## OFF SITE WELLS OR OTHER WATER SOURCES

**Is there an Off Site source of Water?** _____

**If So, Please Describe:**

_____

_____

_____

| CUSTOMER'S ON-SITE IRRIGATION SUPERVISOR SIGNS | APPLICANT SIGNS |
|---|---|
| I have read and understand the San Benito County Water District's *RULES AND REGULATIONS FOR RECYCLED WATER CUSTOMERS*. I will operate the recycled water system in compliance with all conditions of the Recycled Water Use Permit.<br><br>Print _____<br><br>Signature _____<br><br>Date _____ | By signing this application, I hereby certify that I have read and understand the San Benito County Water District's *RULES AND REGULATIONS FOR RECYCLED WATER CUSTOMERS and the ADDITIONAL TERMS OF SERVICE, as amended from time to time(attached hereto)*, and that I agree to be bound by all of the terms and conditions set forth therein during the effective dates of this permit and any subsequent renewal thereof. I herby designate the person I named at the left as the Recycled Water User's Supervisor in accordance with the *RULES AND REGULATIONS FOR RECYCLED WATER CUSTOMERS*. I hereby certify that the information contained in this application is true and correct to the best of my knowledge.<br><br>Print _____<br><br>Signature _____<br><br>Date _____ |
| **OWNER SIGNS (If Different From Applicant)** | **PERMIT APPROVAL (TO BE COMPLETED BY SBCWD STAFF)** |
| By signing on the space below, I hereby certify that Applicant has submitted this Application with my knowledge and consent, and that I have read and understand the San Benito County Water District's *RULES AND REGULATIONS FOR RECYCLED WATER CUSTOMERS* and the *ADDITIONAL TERMS OF SERVICE, as amended from time to time* (attached hereto), and that I agree to be bound by all of the terms and conditions set forth therein during the effective dates of this permit and any subsequent renewal thereof.<br><br>Print _____<br><br>Signature _____<br><br>Date _____ | By signing on the space below, I hereby certify that Applicant has satisfactorily completed the steps required to receive recycled water service. This permit is effective for the dates noted below and subject to renewal for continued recycled water service.<br><br>Operator Signature _____<br><br>General Manger Signature _____<br><br>Permit Number _____<br><br>Dates Effective _____ to _____<br><br>*Site Specific Requirements Attached* |

Note 1: Customer's On-Site Recycled Water User's Supervisor: It is responsibility of the Customer to provide surveillance and supervision of the water system in a way that assures compliance at all times with current regulations. In order to accomplish this, the Customer shall designate, with the approval of the District, an On-site Recycled Water User's Supervisor (User Supervisor) to provide liaison with the District. This person may represent the owner, tenant, or property manager as appropriate; however, he/she must be a permanent employee responsible for the Recycled Water System at the site who is available at all times and has the authority to carry out any requirements of the Agency's *RULES AND REGULATIONS FOR RECYCLED WATER CUSTOMERS*.

Note 2: List those governmental entities that may have regulatory jurisdiction over the irrigated site related to on-site water use, drinking water, food handling or public health issues.

Copies:_____ Field Inspector
_____ File (Original)

San Benito County Water District
ADDITIONAL TERMS OF SERVICE
Attachment to Recycled Water Application and Permit
Effective May 2016

Applicant and Owner agrees with the following terms of service, in addition to those terms contained in the Rules and Regulations for Recycled Water Customers, The District Act (Water Code Appendix 70-1 et seq.) and this Permit, and any renewal thereof.

1. Recycled water shall be allocated weekly to land in the service area based upon acreage and availability of water from the reclamation plant. The initial weekly allocation shall be a maximum of .025 acre feet per acre.

3. Water must be ordered consistent with District scheduling guidelines.

4. No more than 1 week's worth of water may be ordered during a 7 day period (Monday through Sunday) unless unused capacity and water are available at any given time, as determined by the District.

6. Applicant and Owner shall be financially responsible for all water used on his/her land but lessee may order/schedule water.

7. Landowners receiving service shall pay a minimum annual charge of $700. This charge is intended to recover the cost to the District for installing a turnout and meter on landowner's property. The annual charge shall also entitle the landowner to $700 dollars worth of water, calculated at $700 divided by the then current per acre foot charge.

8. Recycled water is supplemental to groundwater supplies and is subject to availability or interruption in service. Applicant and Owner agrees to indemnify, defend and save the District harmless from any and all damages or claims, including reasonable attorneys' fees, should recycled water service be interrupted or recycled water become unavailable for any reason.

9. Applicant and Owner agrees to comply with all monitoring and reporting requirements as set forth in the California Division of Drinking Water and the California Regional Water Quality Control Board, which requirements are on file at the District office for your information.

10. Any amendments to the "Rules and Regulations for Recycled Water Customers" and the "Additional Terms of Service" shall be posted on the District's website at www.sbcwd.com.

## SAN BENITO COUNTY WATER DISTRICT
## RECYCLED WATER DISTRIBUTION SYSTEM

# AUTHORIZATION TO SCHEDULE WATER

I, the undersigned, owner of Assessor's Parcel Number, _____ hereby Authorize the following named lessee(s) operator(s) to apply for an allocation, purchase, and place water orders through my delivery meter number V:_____

OWNER:

Name _____

Company_____

Address _____

_____

LESSEE/OPERATOR:

Name_____

Company_____

Address _____

_____

I understand and agree that water service to an individual water user shall be discontinued at the time the water user has taken his full allocation. In addition, a user who takes in excess of his/her/its allocation shall pay for the overused water according to District policies and rates in effect on the date of the overuse. The unauthorized using, taking, or wasting of water may further subject the water user to civil or criminal prosecution. The District Manager is authorized, after written notice to the water user, if in his judgement, it is advisable and in the best interest of the District, to lock the delivery facilities off, or discontinue water service to any water user.

I understand and agree that, in the event the above names lessee/operator does not pay for all water purchased, ordered, and/or used through said meter or any related charges, I am responsible and will pay all charges, including applicable administrative fees.

The Authorization shall continue until further notice.

The undersigned acknowledges the above and agrees to be bound by the rules and regulations of the District governing the allocation, purchase, payment, use, transfer and other conditions for service from the Recycled Water Distribution System.

_____ _____

Signature Date

SAN BENITO COUNTY WATER DISTRICT
RECYCLED WATER PROGRAM

# RULES AND REGULATIONS

FOR

RECYCLED WATER CUSTOMERS

In conformance with Title 22 of the California Code of Regulations

Approved by the Board of Directors:

April 1, 2015

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## 1.0 PURPOSE AND INTENT

The Purpose and Intent of the *Rules and Regulations for Recycled Water Customers* are to allow for the safe use of recycled water in the San Benito County Water District's (SBCWD or District) service area by establishing:

- Protection measures for potable water systems.
- Procedures for permitting recycled water customers.
- Requirements for on-site recycled water systems.
- Requirements for operating recycled water systems.
- Charges for recycled water services.
- Ensuring compliance with Title 22 of the California Code of Regulations.

The effluent from the City of Hollister Reclamation Facility, which provides the recycled water supply for the District, will meet the highest Department of Public Health standards for recycled (also called reclaimed) water. These standards and requirements are embodied in Title 22 of the California Code of Regulations (Title 22). In meeting these requirements, the recycled water will be treated to tertiary levels and will include filtration and disinfection.

## 2.0 ADMINISTRATION OF REGULATIONS

The State Department of Public Health (DPH) and the Regional Water Quality Control Board (RWQCB) have issued regulations to ensure that recycled water is produced, distributed and used safely. The District's *Rules and Regulations for Recycled Water Customers*, are designed to ensure that the District's recycled water system is operated in accordance with these state laws and guidelines, as well as the adopted policies and procedures of the District Board of Directors. The Manager of the District is responsible for enforcing the regulations approved by the District Board of Directors which are necessary for the administration of the District's recycled water system in accordance with state laws and guidelines. The District Board of Directors may amend the regulations as conditions require. Recycled Water Customers are required to comply with the *Rules and Regulations for Recycled Water Customers* and its amendments to maximize the beneficial use of water recycled while complying with Title 22. These *Rules and Regulations* outline administrative procedures and permit conditions, basic instruction on how to obtain a Recycled Water Use Permit, and established rules for Recycled Water Customers' on-site systems for distributing and using recycled water.

## 3.0 USES OF RECYCLED WATER

### 3.1 Authorized Uses of Recycled Water

The distribution of recycled water for agricultural irrigation by the District has been approved by DPH and RWQCB. Subject to the conditions of these regulations and specific permit requirements, permits will be issued by the District for the use of recycled water for agricultural irrigation. Other uses of recycled water distributed by the District are not allowed.

The District reserves the right to review each proposed use at each location for approval on a case-by-case basis. The District may reject any proposed specific use for reasons of safety, public health, public acceptability, technical feasibility or other concerns, for which the District's determinations shall be final. At its discretion, the District may set forth specific requirements as conditions for the permitted use. The District may also, at its option, require specific prior approval from RWQCB or DPH.

### 3.2 Prohibited Use Areas

**Runoff Conditions** - The agricultural irrigation systems shall be designed, constructed, and operated to prevent runoff outside the approved use area.

**Ponding Conditions** - The agricultural irrigation systems shall be designed, constructed, and operated to minimize ponding within the approved use area. This does not apply to approved impoundments. At no time shall recycled water be applied at a rate greater than the existing condition infiltration rate.

**Windblown Spray Conditions** - The agricultural irrigation systems shall be designed, constructed and operated to minimize windblown spray from passing outside the approved use area.

**Prohibited Uses** - Use of recycled water for any purposes other than those explicitly approved by the District, the State DPH, or the State RWQCB, or use of recycled water in areas other than those specifically shown on the approved plans, is strictly prohibited.

**Disposal In Unapproved Areas** - Disposal of recycled water for any purpose, including approved uses, in areas other than those explicitly approved in the current effective Recycled Water Use Permit issued by the District, and without the prior knowledge and approval of the appropriate regulatory agencies, is strictly prohibited.

## 4.0 SEVERABILITY

If any section, subsection, sentence, clause or phrase of these *Rules and Regulations* is found to be invalid or unconstitutional, the remaining portions of these *Rules and Regulations* shall remain unaffected. The SBCWD Board of Directors declares that it would have approved these *Rules and Regulations* by section, subsection, sentence, clause, or phrase irrespective of the fact that any one or more of the sections, subsections, sentences, clauses or phrases be declared invalid or unconstitutional.

## 5.0 RECYCLED WATER CUSTOMERS

### 5.1 Water Users Eligible for Recycled Water Service
Any water user in the service area boundaries with an applicable use of recycled water may apply for recycled water service. All recycled water customers will be subject to the requirements of Sections 5.2 and 5.3.

### 5.2 Allocation of Water to Recycled Water Customers
The District may, at its discretion, make the allocation of recycled water for the best and highest use of the water in a manner most efficient for preserving and restoring the groundwater basin.

The District may establish priorities for water assignments to balance salt loadings, meet customer needs, or based on other criteria. This prioritization shall be adhered to in the assignment of water deliveries.

### 5.3 Obligation of Recycled Water Customers
The District shall require that approved recycled water customers accept and use recycled water in a manner consistent with the allowed uses and these Rules and Regulations.

## 6.0 CONDITIONS OF SERVICE

### 6.1 Permit Required
The District will provide service after a Recycled Water Use Permit is issued. The Recycled Water Use Permit shall include any requirements specific to the Recycled Water Customer which shall apply in addition to these *Rules and Regulations*. The Recycled Water Use Permit shall be developed by the District during the permit application process.

### 6.2 Financial Conditions
Recycled Water Customers must maintain current accounts with the District and pay for all recycled water used, in addition to any other District fees or charges. Fees and charges for recycled water service shall be established by the Board of Directors in accordance with applicable requirements of State law, including Proposition 218.

### 6.3 Operational Conditions
All recycled water will be provided to the Recycled Water Customer under the terms and conditions and in the quantity specified in the Recycled Water Use Permit.

**Liability.** The District shall not be liable for any damage caused by the use of recycled water or resulting from defective plumbing, broken or faulty services or recycled water mains, off-site or on-site facilities failures, high or low pressure conditions, or interruptions of service. Recycled water may contain higher levels of certain salts and minerals than the customer's existing water supply. The District makes no expressed or implied guarantee that its recycled water is suitable for particular uses at any specific site, or that

it is compatible with specific soils or crops. The District shall not be liable for damage to Recycled Water Customer's facilities, including soil, plantings or landscape elements, due to constituents in its recycled water. The District will provide guidance to customers on the successful use of recycled water, such as information on plant selection and irrigation practices. By accepting Recycled Water Service, the Recycled Water Customer agrees to hold the District, its employees, agents and officers harmless from and against any all loss, damage and/or liability which may be suffered or incurred by Recycled Water Customer in connection with the use of Recycled Water.

**Suspension of Service.** The District may temporarily suspend recycled water service at any time, and for any reason, including in the event the recycled water produced at the wastewater treatment plant does not meet the requirements of regulatory agencies. Recycled water service will, in such case, be restored as soon as possible, as determined by the District.

The Recycled Water Customer may terminate service if there are no longer suitable uses for recycled water at a site that is subject to a Recycled Water Permit.

### 6.4 Penalty for Violations

**Public Nuisance.** The use of recycled water in any manner in violation of these Rules and Regulations, or any permit issued hereunder is hereby declared a public nuisance and shall be corrected or abated as directed by the District. Any person who violates any provision of these Rules and Regulations or any permit issued hereunder shall be liable pursuant to Section 70-11.5 of the California Water Code Appendix (District Act) for civil penalties in the amount of five hundred dollars ($500) per day for each day of that violation, in addition to any other penalties that may be prescribed by law or the District Act. In any court action filed by the District to enforce these Rules & Regulations, the prevailing party in any such action shall be entitled to recover court costs and reasonable attorney's fees.

**Injunction.** Whenever a use of recycled water is in violation of these Rules and Regulations, or any permit issued hereunder, or otherwise causes or threatens to cause a condition or nuisance, the District may seek injunctive relief as may be appropriate to enjoin such discharge or use.

**Permit Revocation.** In addition to any other statute or rule authorizing termination of recycled water service, the District may revoke a permit issued hereunder if a violation of any provision of these Rules and Regulations is found to exist or if use of recycled water causes or threatens to cause a nuisance.

**Penalty.** Violation of any provision of this act is a misdemeanor punishable by a fine of not more than five hundred dollars ($500), or by imprisonment in the county jail for a term not exceeding six months, or by both that fine and imprisonment. Any such violation constitutes a separate offense for each day during any portion of which the violation occurs. The district may pursue any and all actions available at law or in equity to enforce the terms of this act or to enjoin violations thereof.

### 6.5 Termination of Service

If any time during construction or operation of the recycled water system, real or potential hazards are evidenced, such as cross-connections with a potable system, improper tagging, signing, or marking, or unapproved/prohibited uses, the District may terminate immediately, without notice, recycled water service in the interest of protecting the public health. All modifications required to replace the recycled water supply with potable water shall be at the Recycled Water Customer's expense. Service shall be terminated if a customer is not in possession of a current Recycled Water Use Permit.

### 6.6 Amendments

From time to time there may be amendments to the existing *Rules and Regulations* as approved by the District Board of Directors by ordinance. These amendments may be made without the consent of the Recycled Water Customer. These amendments will be enforced upon their effective date.

## 7.0 RECYCLED WATER USE PERMITS

This section describes the permit application and details of the permit.

### 7.1 Permit Application Process

A completed *Recycled Water Use Permit Application* must be submitted to the District by the owner or authorized representative of the property to be served with recycled water. Application forms are available from the District on request. Approval for service shall be indicated by the District's issuance of a *Recycled Water Use Permit*. This permit shall be in addition to any permits and conditions required by other agencies.

In addition to the *Recycled Water Use Permit Application*, the *On-site Recycled Water Service Plan* of the property must be submitted. The *On-site Recycled Water Service Plan* includes the site information necessary for the District to verify that recycled water will be used in a manner compliant with applicable rules and regulations. The *On-site Recycled Water Service Plan* will be in the form of a site map or sketch.

The application shall be signed by a principal owner or duly authorized representative of that person stating, under penalty of perjury, that the information contained is true and correct, and that the applicant agrees to comply with these *Rules and Regulations* and any and all other applicable governing documents.

The application package shall consist of the completed application form with the service plan.

Upon receipt of a completed application package, the District shall review the material and respond within thirty (30) calendar days of receipt of the complete application package. The District may require additional information if deemed necessary. The District shall determine if the property to be served is in a suitable area for recycled water use and if the necessary quantity and quality of recycled water can be made available to

the applicant.

The permit shall be the binding agreement between the District and the Recycled Water Customer. The Recycled Water Customer shall report any changes (permanent or temporary) to the premises or operation that significantly change the volume or methods of recycled water use or any change in the ownership of the facility. A new application must be submitted to reinstate a permit that has been canceled or revoked.

### 7.2 Permit Conditions

Recycled Water Use Permits are subject to the following conditions:

The Recycled Water Use Permit is conditional on adherence to specific requirements in the *Rules and Regulations*. Other appropriate portions of District ordinances shall apply equally and fully to the recycled water distribution system and Recycled Water Customers.

If deemed essential to protect public health and safety and insure regulatory compliance, the District may impose additional permit conditions at any time.

The District reserves the right to immediately revoke the permit of any Recycled Water Customer found to be in violation of any permit condition and to shut off the recycled water without further notice.

The Recycled Water Use Permit shall be effective only after the site retrofit and Cross-Connection Test have been successfully completed and approved by the District. Final approval must also be obtained from the District Manager or his/her designated representative.

A copy of the current permit must be available for review at all times at the use site and on file in the District office.

The permit shall incorporate reference information provided in the permit application. The application shall be attached to the permit.

### 7.3 Time Permit is in Effect

The Recycled Water Use Permit shall stay in effect for one (1) year unless one of the following occurs:

- Permit is revoked by the San Benito County Water District.
- A change of property ownership occurs.
- A change of Recycled Water Customer occurs.
- The Recycled Water Customer applies for and is issued a new or amended permit.

### 7.4 Renewal of Permit

Recycled water use permits must be reapplied for by the Recycled Water Customer upon expiration, if recycled water service is to continue. Application for a permit to be renewed must be submitted to the District at least sixty (60) days prior to expiration of the existing permit. A time extension may be granted by the District for a period not to exceed sixty (60) days.

In all cases, documentation of the Cross-Connection Control Test is required for permit renewal (see Section 9.4).

### 7.5 No Transfer of a Permit.

Recycled water use permits are issued to a specific Recycled Water Customer for a specific operation. A recycled water use permit shall not be reassigned, or transferred or sold to a new owner, new customer, different premise, or a new or changed operation, including new a tenant.

### 7.6 Other Applicable Codes and Regulations

Applicable rules and regulations, ordinances, and specifications that govern the use of recycled water within the District include the following documents, which are incorporated into these *Rules and Regulations* by reference:

| DOCUMENT TITLE | DISTRICT/ORGANIZATION |
|---|---|
| California Code of Regulations, Title 22, Division 4, Wastewater Recycling Criteria | California Department of Public Health |
| California Code of Regulations, Title 17, Regulations Relating to Cross-Connections | California Department of Public Health |
| Master Reclamation Permit for Distribution of Recycled Water (Order # R3-2008-0069) | Central Coast Regional Water Quality Control Board (Region 3) |
| Recycled Water Use Manual and Rules of Service – June 2010 | City of Hollister |

## 8.0 ON-SITE REQUIREMENTS FOR RECYCLED WATER SERVICE

The intent of the *Recycled Water Use Permit Application* and the *On-site Recycled Water Service Plan* (see Section 7.1) are to show compliance with the requirements of this section.

### 8.1 Installation of Services

The District reserves the right to determine the size and location and/or type of recycled water service pipelines, service connections, meters, backflow protection devices and other physical appurtenances related to the recycled water service. All meters shall be installed by, or under the supervision of, the District. The meters shall be installed so as

to be accessible at all times for inspection, reading and testing.

The District shall, at its own expense, furnish and install service pipe of suitable capacity from its recycled water mains to the customer's water meter, to the extent possible. Under certain circumstances, a property owner requesting recycled water may be required to finance the cost of extending the District's distribution pipeline to their site.

All meters and appliances installed by the District or one of its representatives, whether in a public right of way or upon the Recycled Water Customer's premises, shall continue to be the property of the District, and may be repaired, replaced or removed by the District at any time. The Recycled Water Customer shall exercise reasonable care to prevent the meters and appliances installed upon the premises from being damaged or destroyed. The District shall be notified of any discovered defects. Any damage to a meter or other appliance or pipes owned by the District, caused by the carelessness or neglect of the Recycled Water Customer will be repaired at the Recycled Water Customer's expense.

The Recycled Water Customer shall install, maintain and repair service piping from the District butterfly valve downstream to his or her premises at his or her own expense, except as noted in Section 11.

### 8.2 Service Connection Limitations

The District reserves the right to limit the land area under one ownership supplied by a single recycled water service connection and a single recycled water meter. A recycled water service connection and its corresponding meter shall not be used to supply water to areas not shown on the User's On-Site Recycled Water Use Plan.

No person or persons shall open or in any way tamper with or make any addition or alteration whatsoever to any recycled water street main, service connection, meter, stopcock, valve, or air-cock connected with the recycled water mains.

Operating pressures in the recycled water distribution system shall be determined by the District. The Customer shall design or operate the on-site system using the available pressure.

### 8.3 Protective Measures

The following provisions are to protect potable water supplies against actual, undiscovered, unauthorized, or potential cross-connections to the Customer's recycled water system. These provisions are in accordance with Title 17 (Public Health) of the California Code of Regulations and are in addition to, not in lieu of, the controls and requirements of other regulatory agencies, such as the DPH.

**Backflow Prevention.** All Recycled Water Customers whose premises are served by recycled water and have a connection to a potable water system, a private potable water well, or a private irrigation/non-potable water well shall have backflow protection to protect against cross-connection with the recycled water system.

Backflow prevention devices or air gap separations shall be provided, installed, tested, and maintained by the Recycled Water Customer at customer expense. Test reports shall be submitted to the District's Water Recycling Program as directed. Type of backflow protection device required shall be based on the criteria in Title 17 and the device manufacturer and model must be approved by the District prior to installation.

**Customer Responsibility.** It shall be the responsibility of each Customer, at his or her own expense, to furnish, install, and keep in good working order and safe condition, any and all protective devices required by the Rules and Regulations. The District shall not be responsible for any loss or damage directly or indirectly resulting from the improper or negligent installation, operation, use, maintenance, repair or interfering with, any protective device by any Recycled Water Customer or any other person.

Requirements governing backflow prevention are intended to protect public and private potable water supplies. Customers are ultimately responsible for protecting against potential hazards of cross-connections within their own property.

**Customer's On-Site Recycled Water Supervisor.** It is the responsibility of the Recycled Water Customer to provide surveillance and supervision of the recycled water system in a way that assures compliance at all times with current regulations. In order to accomplish this, the Customer shall designate, with the approval of the District, an On-site Recycled Water Supervisor to provide liaison with the District. This person may represent the owner, tenant, or property manager as appropriate; however, he/she must be a permanent employee responsible for the recycled water system at the site, who is available at all times and has the authority to carry out any requirements of the Water Recycling Program.

The Recycled Water Customer must notify the District immediately of any change in personnel for the Customer's On-Site Recycled Water Supervisor position.

**Cross-Connection and Backflow Prevention Device Testing.** Prior to initiation of recycled water service, a cross-connection test shall be conducted to verify the absence of cross-connections between the potable and recycled water systems. Tests shall be performed by an AWWA-certified Cross-Connection Control Specialist in accordance with District procedures.

Prior to initiation of recycled water service, any backflow prevention devices installed on-site shall be tested to verify functionality. Tests shall be performed by an AWWA-certified Backflow Prevention Assembly Tester in accordance with District procedures.

**Other Measures.** Each time there is a change of Recycled Water Customer (either owner or tenant) on any premises, the owner or customer shall notify the District immediately.

Any alterations to existing on-site facilities that may affect required protection level must be reported immediately to the District.

Nontoxic tracer dyes may be introduced into the recycled water system by the District where feasible, to determine the existence of any cross-connections or backflow conditions into a potable water system.

In the event of inadvertent violation of permit conditions or potential contamination of the on-site potable water supply, the Recycled Water Customer shall inform the District and immediately take action to correct the problem. If the problem cannot otherwise be immediately corrected, the Recycled Water Customer shall cease use of recycled water until compliance with the permit and protection of public health can be assured.

### 8.4 Facilities Design and Construction

**Applicable Standards.** Recycled water systems, both on-site and off-site, shall be separate and independent of any potable water systems except as noted. Systems must be designed so as to minimize the possibility of cross-connections.

On-site facilities, including new facilities required to retrofit existing systems, shall be designed and constructed according to the requirements, conditions, and standards of these Rules and Regulations, and other regulations in effect at the time of construction.

**Retrofits.** Where it is planned that an existing non-recycled water system be converted to a recycled water facility, the Customer shall include measures necessary to bring the system into full compliance with these Rules and Regulations in the User's Permit Application. No existing potable water facilities shall be connected to or incorporated into the recycled water system without the District's approval.

**Signage and Public Notification.** Adequate means of notification must be provided to inform the public, employees and others that recycled water is being used. The Recycled Water Customer may order and purchase signs from the District. If the signs are purchased elsewhere, a copy of the sign shall be submitted to the District for review and approval before they are installed. The District will review the sign and ensure that the requirements of the recycled water regulations, with respect to size, wording and international symbols, are met.

**Identification of Recycled Water Facilities and Equipment.** Components of a recycled water system shall be identified with appropriate signage, tags, tape, or other means to differentiate them from the potable system. The District will provide examples of identification devices and approved wording for such devices. The words on the signs shall be in a language appropriate for the Customer’s irrigation personnel. The signs shall be in English and other appropriate languages to accommodate the Customer’s irrigation personnel who do not read English.

The signs may also be in multiple languages, if necessary.

Facilities and equipment shall be identified as follows:

All above-ground equipment, including pumps, piping, storage reservoirs, valves, quick-couplers, etc., which may contain recycled water shall be clearly and adequately identified by purple color-coding tags, stickers and/or signage.

Water meters used for recycled water service shall be tagged and/or painted purple. These meters shall not be interchanged or used for potable water service after repairs and/or meter testing has been performed.

New recycled water piping, which is permanent in nature, shall be color coded purple with an approved warning notice embossed or integrally stamped/marked on the pipe. As an alternative, standard pipe may be wrapped with purple tape containing the warning notice. The tape shall cover at least one-half the circumference of the pipe and be securely fastened. The use of warning tape, placed in the trench above the pipe to identify its location, is encouraged, but does not fulfill this requirement.

Valves, strainers, controllers, and other appurtenances on the recycled water system shall be appropriately identified using purple paint, tags, stickers or other suitable means.

Quick-coupling valves on the recycled water system shall be visibly different from those used on the potable system. The use of Acme® threaded couplings for recycled water is preferred, and shall be required for sites where both recycled water and potable water quick coupling valves are present.

Customers shall maintain all signage and identification devices, and replace, repair or refurbish all devices as needed.

**Vehicle Identification.** Any vehicle used to transport recycled water shall be clearly marked with labels or signs. Any vehicle used for the transportation or storage of recycled water must not be reused for the transportation or storage of water intended for potable use.

**Design Restrictions.** Design for on-site recycled water distribution systems, including retrofits, shall observe the following restrictions and required separations:

Areas irrigated with recycled water must be kept completely separated from domestic water wells and reservoirs. Recycled water shall not be applied within 50 feet of any well used for domestic supply unless it the following conditions are met:

- A geological investigation demonstrates that an aquitard exists at the well between the uppermost aquifer being drawn from the ground surface.
- The well contains an annular seal that extends from the surface into the aquitard.
- The well is housed to prevent any recycled water spray from coming into contact with the wellhead facilities.

- The ground surface immediately around the wellhead is contoured to allow surface water to drain away from the well.

- The owner of the well approves of the elimination of the buffer zone requirement.

Recycled water shall not be used as a domestic or animal water supply.

Where practical, a separation of ten (10) horizontal feet shall be maintained where potable and recycled water lines run parallel. Where potable and recycled lines cross, the potable service shall be no less than one foot above the recycled service. The District may approve reduced separation distances if these preferred separation distances cannot be achieved.

Hose bibs are not to be installed on any recycled water system for any purpose. The use of quick couplers is permitted, subject to the identification requirements described above.

No impoundment of disinfected tertiary recycled water shall occur within 100 feet of any domestic water supply well.

Any irrigation runoff shall be confined to the recycled water use area unless otherwise authorized by the California Regional Water Quality Control Board.

Spray, mist, or runoff shall not enter any dwelling, designated outdoor eating areas, or a food handling facilities.

## 9.0 DESIGN, INSTALLATION, AND INSPECTION

### 9.1 Design Approval

Before the construction of any new recycled water system, major modifications of an existing recycled water system, or retrofit of an existing system for recycled water use, On-site Recycled Water Service Plans must be prepared by the Recycled Water Applicant and approved by the District. Approval shall be contingent upon evidence that all applicable design requirements, rules and regulations for a recycled water system are satisfied.

### 9.2 On-Site Recycled Water Service

The *On-Site Recycled Water Service Plan* is to convey information on the above ground features on two plans: 1) the site plan and 2) the piping plan. The piping plan can be combined with the site plan if space permits.

Preparation of the *On-Site Recycled Water Service Plan* does not exempt the Recycled Water Applicant from submitting other on-site improvement plans normally required by local authorities. Other improvement plans required by a local authority must still be submitted in accordance with the local authority's standard procedures.

### 9.3 Basis for Plan Review Criteria

Review of *On-Site Recycled Water Service Plans* conducted by the District will consist of

checking for conformance with various regulations and guidelines governing distribution of recycled water. Even though the District performs a plan check, the Applicant is not relieved of responsibility to meet all requirements. A brief description of applicable codes and regulations, in addition to these *Rules and Regulations* can be found in Section 7.6.

The District will review the *On-Site Recycled Water Service Plan* by checking that the plan complies with the regulations and guidelines governing the use of recycled water. The District will provide a copy of this checklist on request.

### 9.4 Cross-Connection and Backflow Prevention Device Tests

The District requires that Cross-Connection Tests be performed for Use Sites supplied with recycled water and with 1) a connection to a potable water system, 2) a private potable water well or 3) a private irrigation/non-potable water well. The District also requires that Backflow Prevention Assembly Tests be performed for Use Sites with installed backflow prevention devices.

**Cross-Connection Control Inspection Team.** All inspections and testing (except the Preliminary Cross-Connection Test) will be conducted by a team consisting of a certified AWWA Cross-Connection Control Specialist, the Customer's On-site Recycled Water Supervisor, and other personnel as required.

**Preliminary Cross-Connection Test - Existing Sites.** For sites that already have an irrigation system that is separate from the domestic (potable) service, the District may require that a preliminary test be conducted. This test would be performed before any retrofit work as a means of screening for potential cross-connections. The preliminary test is particularly useful for sites where the irrigation piping is complex or not well documented.

The test shall be done by the Applicant in the presence of a District staff person. A cross-connection specialist does not need to be present for a Preliminary Cross-Connection Test.

**Visual Inspection.** Prior to delivery of recycled water, a visual inspection of the recycled water system shall be conducted by the Cross-Connection Control Inspection Team. The use area shall be inspected for possible cross connections with the potable water system. If possible, the visual inspection shall be conducted prior to the date scheduled for the final cross-connection test and after the completion of all retrofit work.

**Final Cross-Connection Test.** Prior to initial operation, the recycled water system within each facility and use area shall be inspected for possible cross connections with potable water systems. The Applicant shall provide proof of a final cross-connection test at any use site where both recycled and potable water are present in separate piping systems before the District connects the Applicant's recycled water system to the District's recycled water system. This test is to ensure the absolute separation of the recycled and potable water systems.

**Backflow Prevention Device Test.** Prior to initial operation, any backflow prevention devices shall be tested to verify functionality. A certified AWWA Backflow Prevention Assembly Tester shall perform the backflow prevention device tests. The Applicant shall provide proof of backflow prevention device testing before the District connects the Applicant's recycled water system to the District's recycled water system.

**Periodic Cross-Connection and Backflow Prevention Device Tests.** After the site has been approved and placed in operation, a visual inspection by the District shall be performed and passed at a minimum of once per year. This inspection may take place during a routine inspection or may be scheduled for a separate time. The Cross-Connection Control Test shall be performed and passed a minimum of once per year. The Backflow Prevention Device Tests shall be performed and passed a minimum of once per year. The District may require more frequent Cross-Connection or Backflow Prevention Device testing, if conditions dictate.

### 9.5 Construction Inspection

The District or designated representatives may conduct on-site inspections during the construction phase to ensure that materials, installation and procedures are in accordance with the approved plans, specifications, and all applicable regulations. Accordingly, the Recycled Water Customer shall notify the District of the schedule for all phases of planning, construction and startup.

### 9.6 Field Testing and Inspection

All systems shall conform to the requirements of the most recent Uniform Plumbing Code as applicable, except intermittent pressure piping. During the coverage test with recycled water, the irrigation system will be inspected for proper use of full, half, and quarter sprinkler heads with head mounted metal deflectors, proper atomizing, and irrigation spray on non-approved use areas.

### 9.7 Installation of Turnouts

Recycled water turnouts shall be installed at the location and size designated by the District Manager. Service installation shall be made only to property abutting on public streets or abutting on such distribution mains as may be constructed in public rights-of-way or easements.

### 9.8 Changes in Customer's Equipment

Customers making any material change in the size, character or extent of the equipment or operations utilizing recycled water service, or whose change in operations results in a large increase in the use of recycled water, shall immediately give the District written notice of the nature of the change and, if necessary, amend their application.

### 9.9 Pressure Conditions

All Applicants for recycled water service shall be required to accept such conditions of pressure and service as are provided by the distribution system at the location of the

proposed service connection, and shall hold the District harmless for any damages arising out of low pressure or high pressure conditions or interruptions in service.

### 9.10 Meters

All services, whether temporary or permanent, unless otherwise specified, shall be metered. A Meter and Turnout Connection, whether located on public or private property, shall remain the property of the District, unless specifically otherwise provided. The District reserves the right to repair, replace and maintain it, as well as, to remove it upon discontinuance of service.

**Meter Installations.** Meters shall be installed within a recorded easement and shall be the property of the District. No rent or other charge shall be paid by the District for a meter or other facilities including housing and connection, located on a Customer's premises. All meters shall be sealed by the District at the time of installation, and no seal shall be altered or broken except by one of its authorized employees or agents.

**Change in Location of Meters.** Meters moved for the convenience of the Recycled Water Customer will be relocated at the customer's expense. Meters moved to protect the District's property will be moved at the District's expense.

### 9.11 Final Inspection

A final on-site inspection will be conducted by the District or its designated representatives before the recycled water system is connected to ensure all requirements have been met. This inspection should occur after the final Cross-Connection Test. The District Field Inspector will check to see that the proper equipment was used and that all required tags, labels, and signs are in place. This inspection shall include a coverage test. This will allow the inspector to verify that conditions, which create runoff or windblown spray outside the approved use area and/or ponding within the use area, do not exist. Spray patterns will be checked to see they do not encroach upon public facilities such as drinking fountains, outside eating areas, or areas outside the approved use area.

### 9.12 Final Approval

Final approval must be granted by the District before recycled water can be supplied to the site. Final approval will be granted when construction has been completed in accordance with approved plans, all cross-connection tests have been performed, a final on-site inspection has been conducted, and all requirements have been met satisfactorily. After the Recycled Water Use Permit is finalized by the District and all applicable fees have been paid, the District will authorize the installation and use of the turnout. During the lifetime of the recycled water system, the District may periodically inspect the recycled water system to ensure compliance with all applicable rules and regulations.

## 10.0 RECYCLED WATER FACILITIES OPERATION

### 10.1 Conditions of Service

All requirements outlined in this section shall be Conditions of Service, unless modified in

the Recycled Water Use Permit. By accepting recycled water service, the Recycled Water Customer agrees to comply with all Conditions of Service.

### 10.2 Off-Site Facilities

Operation, maintenance and surveillance of all District off-site recycled water systems, including recycled water pipelines, valves, connections, storage facilities, and other related equipment and property up to and including the recycled water meter shall be under the management and control of the District. No other persons except authorized representatives of the District shall have the right to enter upon any of the off-site facilities. Only District personnel and their representatives shall operate, adjust, change, alter, move or relocate any portion of the off-site recycled water system.

### 10.3 On-Site Facilities

On-site facilities are defined as the recycled water system downstream of the check valve on the turnout from District's distribution system. The Recycled Water Customer shall have the following responsibilities pertaining to operation of on-site facilities:

- To designate a Customer's On-Site Recycled Water Supervisor for the site. The designated Customer's On-site Recycled Water Supervisor shall have primary responsibility to perform the other requirements in this section.

- To maintain accurate drawings of the on-site recycled water distribution system. The drawings must be available for review by the District on request.

- To notify the District of all updates or proposed changes, modifications, or additions to the recycled water on-site facilities. All updates and proposed changes to permanent facilities shall be approved by the District prior to construction in accordance with District procedures. Converting any piping used at any time for conveyance of recycled water back to potable water is prohibited.

- To operate and maintain all recycled water facilities in accordance with these Rules and Regulations and other regulations governing recycled water systems within the District.

- Maintaining the on-site recycled water system, signs, markings, and tags in accordance with all rules and regulations.

- Ensuring all materials used during the repair and maintenance of the system are approved or recommended for recycled water use.

- To ensure that the Recycled Water Customer's employees are properly trained in the application of recycled water and worker protection.

- To report to the District any and all failures in the recycled water system that cause an unauthorized discharge of recycled water.

- To operate and control the system in order to prevent direct human consumption of recycled water and to limit runoff. The Recycled Water Customer shall be responsible for subsequent uses of the recycled water.

### 10.4 Damage to Recycled Water System Facilities

The Recycled Water Customer shall be liable for any damage to the District recycled water service facilities when such damage is from causes originating on the User's site by an act of the Recycled Water Customer or his or her tenants, agents, employees, contractors, licensees or permittees, including the breakage or destruction of locks by the Recycled Water Customer or his or her tenants, agents, employees, contractors, licensees or permittees on or near a meter. The District shall be reimbursed by the Recycled Water Customer for any such damage promptly on presentation of a billing statement.

### 10.5 Personnel Training

**On-site Recycled Water Supervisor.** The District will provide training to the Customer's On-site Recycled Water Supervisor on the *Rules and Regulations* and methods for training operations personnel at the use site.

**Recycled Water Customer Personnel.** It is the responsibility of the Recycled Water Customer to train all operations personnel so they are familiar with the use of recycled water. Any training program is required to include, but is not limited to, the following items:

- Recycled water shall not be used for human consumption.
- Operations personnel must be aware that recycled water, although highly treated, is non-potable.
- Operations personnel must understand that there is never to be a direct connection between the recycled water system and the potable water system, except as allowed with proper backflow prevention.
- Operations personnel must be aware of the emergency procedures.
- Operations personnel must understand the requirements and restrictions pertaining to ponding, windblown spray, and runoff.
- Operations personnel must follow good personal hygiene before, during and after recycled water operation.
- Operations personnel must understand that working with recycled water is safe, if good common sense is used and appropriate regulations are followed.
- Operations personnel must understand the health and safety aspects of Title 17 and Title 22 requirements.

All new employees shall be trained in the proper use of recycled water within one (1) month of their start of employment. Existing employees shall receive refresher training at a minimum of every two (2) years. The Customer shall maintain records of personnel training, available to District staff upon request. The Customer's On-Site Recycled Water Supervisor and their staff are held accountable to ensure that employees are not using recycled water carelessly or hazardously.

### 10.6 Maintenance

The Recycled Water Customer shall begin a preventive maintenance program that will ensure that the recycled water system always remains in compliance. The preventive maintenance program is required to include, but is not limited to the following:

- Regular inspections shall be conducted by the Recycled Water Customer of the entire recycled water system including sprinkler heads, drip irrigation system emitters, spray patterns, impoundments, piping and valves, pumps, storage facilities, controllers, etc.

- Customer shall immediately correct any leaks, breaks, or discrepancies in permit requirements.

- All warning signs, tags, stickers, and above-grade pipe markings shall be checked for their proper placement and legibility. Replace damaged, unreadable, or missing signs, tags, stickers, and pipe markings.

- Special attention shall be given to spray patterns to eliminate ponding, runoff and wind- blown spray conditions. If runoff is noted, affected areas shall be indicated on a sketch and the volume shall be estimated. If unauthorized ponding is detected, evidence of mosquitoes breeding within the ponding shall be noted and immediately eliminated.

- Establish and maintain an accurate, record-keeping system of all inspections, modifications and repair work.

- Broken sprinkler heads, faulty spray patterns, leaking pipes or valves, or any other noted condition that violates the use requirements shall be repaired immediately after the malfunction or condition becomes apparent.

No modifications shall be made by the Recycled Water Customer to their permanent recycled water facilities without the prior approval of the District. This includes modifications to the approved plans or to an operational system. Detailed plans of any modifications must be submitted to the District and the modifications inspected by the District before being completed.

### 10.7 Monitoring and Inspection

The District will set individual Recycled Water Customer monitoring requirements based on the size, volume used, complexity, etc. of each use area. Recycled Water Customer self-monitoring shall be conducted at a frequency specified in the Recycled Water Use Permit. The schedule and deadline for submittals of the self-monitoring report is indicated in the Recycled Water Use Permit. A copy of the self-monitoring report form can be obtained from the District. Self-monitoring programs will be at Recycled Water Customer's expense.

All observations noted in the self-monitoring report form shall be followed by a discussion on when and how deficiencies were corrected. Written records shall be maintained for a period of at least three years. Recycled Water Customers whose permits specify self-monitoring shall submit copies of all records to the District The District will compile and file self-monitoring reports with the Regional Water Quality Control Board, as required in the Regional Water Quality Control Board permit for distributing recycled water.

The District may conduct periodic random inspections of the Recycled Water Use Sites to ensure compliance with these *Rules and Regulations*. The number of random inspections will be determined by the District based on the individual site's size, volume used, complexity and previous record of compliance with requirements. There will be a minimum of one inspection a year. Inspections shall be performed when recycled water is being used. A copy of the District's inspector monitoring report form can be obtained from the District.

These inspections shall include, at a minimum, the visual inspection of all backflow prevention devices, pumps, exposed piping, valves, pressure-reducing stations, points of connection, sprinklers, drip system emitters, controllers, impoundments, storage facilities, signs, labeling, tags, etc. The Customer's On-Site Recycled Water Supervisor's self-monitoring records shall be inspected to review all observations since the last inspection. The District and RWQCB reserve the right to make unannounced inspections of the facility during reasonable hours of operation.

Recycled Water Customers shall allow access by personnel from the District or the Regional Water Quality Control Board to all areas of the site where recycled water is being used during daytime hours and during all times when recycled water is being used. Where a Recycled Water Customer has security measures in force that would require proper identification and clearance before entry onto its premises, the Recycled Water Customer shall make necessary arrangements with its security guards so that upon presentation of suitable identification, personnel from the District or the RWQCB will be permitted to enter without delay for the purpose of performing their specific responsibilities. The District may inspect and copy applicable records or reports located at a facility of any Recycled Water Customer to confirm information submitted in the self-monitoring reports.

### 10.8 Periodic Cross-Connection and Backflow Prevention Device Testing

See discussion in Section 9.4.

### 10.9 Hours of Operation

Customer's hours of operation shall be included in the Recycled Water Use Permit Application.

### 10.10 Scheduled Deliveries

In order to maintain acceptable working conditions throughout the recycled water system, the District may schedule recycled water use. Such scheduling may involve programming deliveries to different customers and/or to various portions of a single customer's on-site system. Any scheduling shall consider applicable constraints of all involved regulatory

agencies, these Rules and Regulations, and the operating constraints of the affected Recycled Water Customers.

### 10.11 Maintaining and Updating Site Plan Drawings

The Recycled Water Customer shall prepare drawings to show the recycled system as constructed and shall include all changes in work constituting departures from the original On-Site Service Plan drawings including those involving both constant-pressure and intermittent-pressure lines and appurtenances.

### 10.12 System Not in Compliance

If at any time the recycled water system is found to be out of compliance, the District shall issue an order specifying the corrections required to bring the system into compliance. A site inspection shall be scheduled after a reasonable period of time to ensure compliance with the order. If it is known or suspected that a backflow incident or contamination has occurred, then the Emergency Cross-Connection Response Procedures (Section 10.16) shall be invoked.

### 10.13 Notification

It is the responsibility of the Customer's On-Site Recycled Water Supervisor to notify the District of any failure or cross-connection in the recycled water or potable water system, whether or not he/she believes a violation has occurred. If there are any doubts whether a violation has occurred, it is the responsibility of the Customer's On-site Recycled Water Supervisor to report each occurrence to the District so a decision can be made.

### 10.14 Reporting of Emergencies

The Recycled Water Customer shall report all emergency situations to the District. The District maintains an on-call operator that emergency can be reported to at (831) 637-8218.

### 10.15 Emergency Procedures

In case of a major earthquake, flood, fire, tornado, structural failure, or other incident which could likely damage the recycled or potable water systems, the Customer's On-Site Recycled Water Supervisor shall inspect the domestic and recycled water systems for damage as soon as it is safe to do so. If either system appears damaged, both the domestic and recycled water systems shall be shut off at their points of connection. If the Customer's On-Site Recycled Water Supervisor cannot inspect the site and damage is expected, then both water systems shall be shut off at their points of connection. The Customer's On-Site Recycled Water Supervisor shall immediately contact the District for further instruction.

**Unauthorized Discharge.** It is the responsibility of the Recycled Water Customer to report to the District all system failures that result in an unauthorized discharge of recycled water. An immediate oral report to the District is required and a written report is required within 30 days of the unauthorized discharge. The report shall describe the cause of the discharge, public health impacts, and corrective actions taken to prevent the reoccurrence of the unauthorized discharge. The Recycled Water Customer must make

every effort to contain the unauthorized discharge. Contact the District for disposal instructions.

**Contamination of Drinking Water.** In case of contamination of a potable water system due to a cross-connection on the Recycled Water Customer's premises, the Recycled Water Customer shall immediately notify the District. The District will then notify the State DPH. The Recycled Water Customer is to immediately invoke the Emergency Cross-Connection Response Procedures (Section 10.16).

**Emergency Modifications.** Emergency modifications or repairs can be made to the system by the Recycled Water Customer to prevent impact, damage or a public health hazard without the prior District approval. As soon as possible after the modification, but not to exceed 24 hours, the Recycled Water Customer must notify the District of the emergency modifications and file a written report.

### 10.16 Emergency Cross-Connection Response

The District shall set procedures for Recycled Water Customer to implement in the case of a backflow incident or cross-connection is suspected or occurs.

## 11.0 RECYCLED WATER CHARGES

### 11.1 Rates, Fees, Charges

**General.** Rates and fees for recycled water service shall be established by the SBCWD Board of Directors, in accordance with the applicable State law including Proposition 218. Any changes in fee schedules shall be automatically adopted into these Rules and Regulations.

**Change of Rates or Charges.** The District reserves the right to change the schedule of recycled water rates, service charges and any other charges, or fees at any time in accordance with the applicable State law.

### 11.2 Meter Reading

Meters will be read monthly and may be adjusted at the option of the District.

### 11.3 Non-Registering Meters

If a meter is found not to be registering, the charges for service shall be based on the estimated consumption. Such estimates shall be made from previous consumption reports for a comparable period or by such other method as is determined by the District and its decision shall be final. All non-registering meters will be pulled and replaced.

### 11.4 Meter Misreads

If District personnel misread a meter during a billing cycle, the District will adjust the cycles that are affected and specifics will be provided to the customer detailing the adjustment.

**11.5 Billing Period**
The regular billing period will be monthly and may be adjusted at the option of the District.

**11.6 Opening and Closing Bills**
Opening and closing bills for less than the normal billing period shall be prorated as to minimum charge. Closing bills may be estimated by the District for the final period as an expediency to permit the customer to pay the closing bill at the time service is discontinued.

**11.7 Payment of Bills**
Bills for recycled water service shall be presented at the end of each billing period to include the charge for recycled water deliveries from the previous period.

All recycled water bills are due and payable upon presentation. If this bill is not paid on or after sixty days following the bill, service may be discontinued. A reconnection charge and penalty charges, if any, will be collected prior to renewing service following a discontinuance.

**11.8 Billing of Separate Meters Not Combined**
Separate bills will be rendered for each service connection or meter installation except where the District has, for its own convenience, installed two or more meters in place of one meter. Where such installations are made the meter readings will be combined for billing purposes.

**11.9 Delinquencies of Payment**
Accounts more than thirty (30) days delinquent may result in closing the account and disconnecting the service from the District's Recycled Water System if the District Manager determines that the Customer is not making good faith efforts to pay past due amounts. The Recycled Water Customer of the closed account will be required to pay the past due amount in full and the re-connection charge (per Section 11.1) before the recycled water service will be restored.

**11.10 Discontinuance for Non-Payment**
Service may be discontinued for non-payment of bills on or after sixty (60) days following the bill if arrangements for payment have not been made with the District Manager (See Section 11.9). At least ten (10) days prior to such discontinuance the Recycled Water Customer will be sent a final notice informing him/her that discontinuance will occur if payment is not made within the time specified in said notice. Failure of the District to send or any such person to receive said notice, shall not affect the District's power hereunder.

**11.11 Re-Connection Charge**
Between the hours of 8:00 a.m. and 4:00 p.m., a re-connection charge of one hundred dollars ($100.00) will be made prior to renewing service following a disconnection. If after 4:00 p.m., re-connection charge of one hundred and fifty dollars ($150.00) will be made prior to renewing service following a disconnection.

### 11.12 Payment After Re-Connection

Recycled Water Customers who have had their service disconnected for delinquency or non-payment (See Sections 11.9 and 11.10) will be required to establish a pre-payment system with the District. The terms and conditions of the pre-payment system will be set by the District Manager.

### 11.13 Upon Vacating Premises

Recycled Water Customers desiring to discontinue service shall notify the District not less than two (2) business days (days of business are Monday through Friday) prior to vacating the premises. Unless notice of discontinuance of service is given, the Recycled Water Customer shall be liable for all charges whether or not any water is used.

### 11.14 Notification of Leak

Failure by the Recycled Water Customer to repair a leak(s) (in excess of 10 gallons per minute) on the premises within 48 hours of written notification by the District will result in a disconnection of service until the leak(s) is repaired and subject the Recycled Water Customer to a re-connection charge pursuant to Section 11.11.

### 11.15 New Recycled Water Rates

The rates for recycled water consumed from District owned recycled water projects are established by ordinance.

### 11.16 Site Retrofit Costs

The following retrofit materials and services will be provided by the District at no cost to the Recycled Water Customer:

- Review of User's On-Site Recycled Water Use Plan (to be provided by the District or District's representative only).
- Site visits during the Recycled Water Permitting process.
- On-going use site monitoring visits by District staff.
- Recycled water meter.

The following services shall be provided by and/or paid for by the Recycled Water Customer:

- Design and construction of on-site piping and appurtenances that may be required to provide recycled water to new or existing use areas.
- Backflow prevention on connections to a public potable water system, potable wells, and irrigation wells, including testing of such back flow devices.
- Materials for on-site piping and appurtenances associated with construction or retrofit of the on-site recycled water system, including materials for protection of overspray.
- Installation and purchase of signs, valve tags, identification devices, on-site piping and appurtenances, or other services.
- All Recycled Water Customer administrative costs associated with construction,

retrofit and operation of the on-site recycled water system.

- Operation, maintenance, and monitoring of the on-site recycled water system in accordance with the *Rules and Regulations* for Recycled Water Customers and the Recycled Water Use Permit.
- Other materials or services, which may be specified by the District.

*END OF RULES AND REGULATIONS*

# WATER USERS' HANDBOOK

# RULES AND REGULATIONS FOR DELIVERING AND RECEIVING SAN FELIPE DISTRIBUTION SYSTEM WATER

**SAN BENITO COUNTY WATER DISTRICT**
**P. O. Box 899 Hollister, CA 95024**
**(831) 637-8218**

**Established November 3, 1953**

## PREFACE

The San Benito County Water District Board of Directors and District staff intend to do everything reasonable to provide water service to meet the needs of all District water users in Zone 6. In order to do this fairly and equitably, it is essential that water users follow District rules and regulations, as well as its policies and procedures.

Your cooperation will allow the staff to provide you with the good service you have the right to expect.

Questions about information in the Handbook can be answered by contacting the District office located at 30 Mansfield Road, Hollister, California. The office hours are 8:00 A. M. to 5:00 P.M., Monday through Friday. Please address any written correspondence to Post Office Box 899, Hollister, California 95024-0899. You may reach us by phone at (831) 637-8218; fax (831) 637-7267; e-mail: sbcwd.com.

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# INTRODUCTION

This handbook is designed to be a permanent reference for water users. It contains the District's rules, regulations, policies, and procedures on the use of San Felipe Project water. Topics include the allocation, purchase, ordering of and payment for water, operation of water meters and valves, connection to facilities, and crop and irrigation reporting requirements. This information is based on, but does not supersede, any applicable laws or District rules, regulations, policies, or procedures. As changes occur, supplemental information will be provided to keep the Handbook up-to-date.

# SECTION 1

# RECLAMATION LAW AND DISTRICT WATER ALLOCATION REGULATIONS

## Federal Reclamation Law

San Benito County Water District receives water through the San Felipe Division of the U. S. Bureau of Reclamation's Central Valley Project (CVP). All water deliveries must comply with the CONTRACT(S) BETWEEN THE UNITED STATES AND SAN BENITO COUNTY WATER DISTRICT and federal reclamation law. The annual water supply is allocated to a district, (1) which is eligible under reclamation law to receive Project water, (2) for which a timely water allocation application is filed, and (3) for which a timely payment is made. Water is sold to users in accordance with federal and District rules and regulations.

## The Reclamation Reform Act of 1982

Title II of Public Law 97-293 is known as the Reclamation Reform Act of 1982 (RRA). The RRA gives the Secretary of the Interior the responsibility of enforcing the law and collecting certain information from districts and landowners to administer the law.

All water users should acquaint themselves and their employees with the applicable regulations. The certification and reporting requirements for all landowners and water users are of particular importance. Failure to certify or report as required by the U. S. Bureau of Reclamation will result in loss of water service. Questions regarding reclamation law should be addressed to the District Office, 30 Mansfield Road, Hollister, California 95023 (P. O. Box 899, Hollister, California 95024-0899), telephone (831) 637-8218, or the Fresno Office of the U. S. Bureau of Reclamation, 2666 North Grove Industrial Drive, Suite 106, Fresno, CA 93727-1551, telephone (559) 487-5044.

## Water Allocation Regulations

The District Board of Directors has adopted water allocation regulations to be used in allocating the District's annual water supply. The regulations require filing a Water Allocation Request by a specific date (usually 30 days prior to the start of the contract water year) in order for land to be entitled to an allocation of water in the upcoming contract water year beginning on March 1 and ending the last day of February of the following year. Small Parcel Service (parcels of 10 acres or less in area) water users are exempt from this requirement. The District's annual water supply is determined solely by the District based primarily on that year's allocation of the District's USBR contract supply, water stored in District owned and operated storage facilities, groundwater storage levels and anticipated water use.

## Terms and Conditions for Water Service

The Terms and Conditions for Water Service are included in Appendix A. They contain District regulations concerning the delivery of, and payment for, water and actions to be taken by the District when water charges remain unpaid. They are designed to provide the District with the funds to purchase the water from the U. S. Bureau of Reclamation before it is delivered, as required by the United States and at the same time minimize the financial burden on water users.

Water purchased by the District at a price higher than the applicable USBR contract rate will be sold to users at its cost, plus applicable District operation and maintenance and administrative costs. The District will notify users of such water availability and its price as early as possible.

# SECTION 2

# WATER ORDERING AND PAYMENT

## Water Ordering Procedures

It is important that the District's water ordering procedures be followed by all agricultural, municipal and industrial water users; minimum purchase and small parcel service water users may be exempted from the water ordering procedures. The procedures that must be followed to ensure prompt response to emergencies, continued deliveries to all water users and smooth operation of the District's distribution system and the San Felipe Project are as follows:

1. Water orders are to be placed through the District office at 30 Mansfield Road, Hollister (telephone 637-8218; fax 637-7267), Monday through Friday between the hours of 8 a.m. and 12:30 p.m.

2. Water orders must be placed by 12:30 p.m. Monday thru Friday, and at least 24 hours in advance of the date of delivery. Water orders may be made by phone or fax. Water orders are not valid until approved by the District. Daily orders may be required during high demand periods.

3. The person placing the order must be the registered owner or have an authorization to schedule water on file with the District and must provide the following information:

   Name of Water User
   Meter/service location
   Flow rate in gallons per minute
   Date and time order will be implemented (Started and Stopped)
   Number of hours running per day

   a. And also have the following readily available:

      Assessor's parcel number
      Net acreage planted, and
      Description of area to be irrigated
      Crop (or pre-irrigation)

4. Water may not be turned on until the order is approved by District personnel at the District office.

5. All water deliveries should be turned on, off, or adjusted as close to the scheduled times as possible.

6. In order to avoid over-drafting of District Subsystems decreases or shutoffs should be made no later than the scheduled time and increases and turn-ons should be made no sooner than the scheduled time.

7. Any shutoff, delay, or variation from the scheduled delivery of water for more than one hour must be reported to the District office immediately, the District maintains an emergency response system to accommodate users outside normal working hours.

The failure of water users to follow District ordering procedures can be harmful to the distribution system and can create problems for other water users.

District regulations provide for revoking authorization to operate District delivery facilities when water users fail to comply with the regulations or procedures pertaining to the allocation, purchase, payment, ordering, use, turning on or off, changing flow rates of water, or controlling tailwater.

When such authorization is revoked, District personnel shall operate the delivery facilities, and the water user is required to pay a service charge each time water is turned on or off or the rate of flow adjusted.

**Water Service Capacity Priority**

Water service priorities apply when laterals are operating at maximum delivery capacity as determined solely by the District. Any unused delivery capacity in a subsystem may be used to accommodate water transferred from one parcel or ownership to another, to accommodate additional water purchased by users or to serve lands outside that subsystem's service area. Such deliveries will normally be allocated equally among those requesting the water, but will be discontinued or decreased as necessary to meet the demand of water users for delivery of their annual allocation within the subsystem's service area up to their allocated capacity.

The District cannot guarantee a continuous supply of water at all times. Delivery through District facilities may be restricted or discontinued from time to time depending on the demand for water and the capacity of the system, the need to maintain and repair the system, etc. The District will give as much advance notice of restriction of service as practical (Section 3, Delivery System Operation, regarding System Shutdowns.)

**Water Statement**

The Water Statement shows the current billing period's water use by delivery, the amount due, and special charges relating to the delivery of water (related charges). All water users are billed monthly.

## Payment for Water

All water meters are read on the last Thursday and Friday of each month. Statements (Water Bills) are mailed by the 1st week of the month following meter reading and payment is due by the 20th day following the billing date.. See Appendix A., "Terms and Conditions for Water Service", for finance and related charges incurred for nonpayment or late payment.

## Crop and Irrigation Reporting

The District is required to file crop and irrigation reports with the U.S. Bureau of Reclamation each year. The crop and irrigation reports are prepared from information from the County Ag Commissioner.

| | |
|---|---|
| Tomatoes: | processing or fresh market |
| Corn: | field (grain or silage or sweet) |
| Trees & vines: | bearing or non-bearing (early growth) |
| Grapes: | wine or table |
| Lettuce: | spring or fall |

This information is essential and water service may be discontinued or charges imposed (at the District Manager's discretion) if the crop information is not submitted in accordance with District regulations.

## Emergency Telephone Listing

The District maintains an up-to-date list of telephone numbers of water users emergency contacts. A shutdown of the District's entire distribution system or a single lateral could occur at any time. The emergency contact(s) telephone listing enables the District to contact all water users immediately and ask that deliveries be shut off to protect the water user facilities as well as the District's system. **The San Felipe Project and the San Felipe Distribution System have no emergency storage. In the event of certain emergencies, such as loss of pumping power, the systems must be shutdown immediately to avoid possible damage and/or extended outages.**

Your cooperation in keeping the Emergency Telephone Listing current is essential. Changes should be reported to the District Office. By doing so, water users are saved a considerable amount of time, money, and effort when it becomes necessary to shut down and startup the system(s).

# SECTION 3

# DELIVERY SYSTEM OPERATION

## Water Delivery Operation

The District uses water delivery meters that measure the flow and are equipped with butterfly valves so that the user can control the rate of flow. (The entire water delivery structure, including the meter base, meter, and valve is commonly referred to as a "delivery").

All delivery butterfly valves and any shutoff, control or regulating valves installed in the water user's system must be closed slowly to prevent water surges in the distribution system. One turn of the delivery butterfly valve handle every one half minute should be sufficient.

All changes in flow through the delivery must be made with the District's delivery butterfly valve. District underground shutoff valves are for District or emergency use only and are not to be operated by the water user.

Lever-operated valves can be rapidly closed or opened and may not be installed to control the flow of water through a delivery. Their use could cause a sudden increase in pressure in the pipeline, causing leaks. All water users must be made aware of the importance of opening and closing valves very slowly to prevent damage to District and users systems and to permit continued water service to all water users. The District may discontinue service to users with operations and/or equipment that could damage District facilities until those operations and/or equipment deficiencies are corrected to the satisfaction of the District.

## Delivery maintenance

All deliveries are maintained by the District. If a delivery malfunctions, the water user must notify the District immediately so that repair can be made.

1. During normal working hours, call the District Office.

2. After normal working hours, call the District Office and leave a message.

3. In case of an emergency, call the District and leave an Emergency Message. The District maintains an emergency response system and will respond promptly.

## Painting of Deliveries

Landowners and water users are permitted to paint District facilities, but only with paint supplied by the District. The meter dial glass and all identifying numbers must remain free of paint. Contact the District Office for more information.

**System Shutdowns**

Portions of the distribution system must occasionally be shut down for repairs and maintenance. The length of advance notice for shutdowns depends on the reason for the shutdown.

Emergency shutdowns due to major pipeline leaks, power outages, or other unforeseen problems usually occur without prior notice. The District may contact water users after the system has gone down to request that deliveries be turned off to protect the system. The length of the shutdown depends on the severity and nature of the problem.

Most repairs are not emergencies and water users will be notified approximately ten days in advance of the shutdown. Post cards are mailed to the water user address on file with the District and provide information regarding the lateral to be shut down and the date, time, and approximate duration of the shutdown.

# SECTION 4

# CONNECTIONS TO DELIVERIES

Approved connections to San Benito County Water District delivery facilities are designed to protect the District's distribution system, minimize maintenance costs, ensure continuous water service, and provide safe working conditions for water users and District employees. Piping, ditches, farm equipment, and other facilities adjacent to the delivery must be arranged so that District personnel and equipment can have access to read the meter, maintain the meter and delivery and the water user can operate the delivery properly. (Beehives must not be placed within 300 feet of deliveries.) The ground surface must slope away from deliveries to provide adequate drainage.

In addition, all piping within eight feet of the delivery must be watertight to keep water from ponding in the area. Bolts, which anchor the meter to the base, should be kept free of dirt to prevent them from rusting. All mechanical and electrical connections near District deliveries must be maintained in a safe, dry manner consistent with any applicable State or local electrical codes.

Typical connections are shown on drawing number 1. (See Appendix C.) Questions concerning the method of connecting discharge piping to the distribution system should be directed to the Operation and Maintenance Department. From time to time, water users may be contacted by District staff and requested to correct deficiencies, which may arise at the delivery site. Corrections should be made in a timely manner to ensure continued water service.

## Backflow Prevention Program

The District maintains a Backflow Prevention Program as required by California Department of Health Services Regulations to protect water user's from the potential hazards of receiving or consuming water that may contain chemicals or contaminants, while continuing to allow (1) chemigation practices, (2) tailwater reuse and drainage recycling. (3) delivery of water to commercial and industrial facilities, (4) agricultural and commercial chemical tank filling operations, and (5) the commingling of well water with San Felipe Water delivered by the District. District regulations relating to the Backflow Prevention Program are set forth in Appendix D.

## Permanent Deliveries

Permanent deliveries were provided to each parcel, 5 acres or larger at the time the District's distribution system was constructed. Upon approval additional deliveries may be installed by the District and paid for by the water user or landowner. Landowners or water users should contact the District for information concerning the installation of additional deliveries.

## Direction of Delivery Discharge

The direction of the delivery discharge is generally established during the initial setting of the delivery. The direction of the discharge may be changed by requesting the Operation and Maintenance Department to rotate the delivery. The service of changing the direction of the meter

discharge will be provided by the District at no cost to the water user. However, this service should not be abused. Water users are responsible for altering the discharge piping needed to connect the District delivery to the user water delivery facilities.

**Booster Pumps**

Water will be delivered at sprinkler-head pressure by the District; therefore, booster pumps should not be necessary. If a booster pump is required, the water user must receive approval by the District for such installation and the rules listed below will be followed.

The District's distribution system is not designed to withstand water hammer (sudden increases in pressure) caused by stopping booster pumps. Therefore, in order to protect the District's distribution system, an open standpipe or District approved surge suppression devise must be installed between the District's delivery and user booster pump which is connected to a delivery. An air-release valve by itself does not satisfy the requirement for surge suppression.

All electrical and mechanical connections for booster pumps must be installed and maintained in a safe, dry manner consistent with applicable State and local codes. If repairs to unsafe conditions, which cause a safety hazard, are not made immediately upon request of the District, water service may be discontinued, or repairs may be made by the District and billed to the water user. A charge will be made for discontinuing and for restoring service.

Under the District's general policy regarding the shutdown of booster pumps during emergencies (such as power outages, pipeline breaks, or overdrafts), it is the water users' sole responsibility to shut down their booster pumps upon notification of an emergency.

Because District operators may have difficulty locating isolated pumps and might not always be able to notify water users to turn off booster pumps before damage occurs, the District recommends the use of pressure-sensitive, automatic shutoff switches which will stop pumps in an emergency and help protect the water user's equipment.

**Fire Protection Service**

The District policy is to allow the use of water from the District's distribution system for the purpose of fire protection. Any such water is considered an emergency use and should be used accordingly. Any necessary appurtenances for the connection to the system for such emergency use will be the responsibility of the landowner or his lessee. Plans for all such appurtenances will have to be approved by the District Engineer located at the District Office, 30 Mansfield Road, Hollister, California 95023, (831) 637-8218, and the City of Hollister Fire Department, (831)636-4141.

The District does not guarantee the availability of water and is not responsible for any damage or loss incurred as a result of inadequate water or pressure in the distribution system for fire fighting purposes. There will be no charge for such water, therefore, it must be used only in emergencies.

## Frost Protection

The District understands the need for frost protection of certain crops by the use of sprinkled water. The District considers this a legitimate use of Project Water.

Frost protection is a special use, utilizing a limited amount of water for a short time at unusual hours, therefore, the District will require the following information be provided in order for a farmer to be eligible for use of Project Water for such protection:

Name of requester
Mailing address of requester
Telephone number of requester
Location of land to be protected
- (a) street location
- (b) assessor's parcel number
- (c) number of acres

Type of crop to be protected
Normal days that frost protection may be required
Approximate number of hours needed to protect crop from frost

Frost protection water will be deducted from the users total allocation of water and will be charged at regular District rates.

Other special or extraordinary use must be discussed with the District Manager. Such uses, if compatible with the operation of the system, may be allowed at the discretion of the District Manager.

# SECTION 5

# IMPROVEMENTS NEAR DISTRICT FACILITIES

Trenching and/or construction near District facilities may cause damage to a facility. It is essential that no trenching or construction activities be undertaken near District facilities -- either by a landowner, water user, or contractor-- until the District has been notified and all District facilities have been located and staked. Damages caused by the failure to follow this procedure or because of other negligence in the construction activity are the responsibility of the person doing the work and/or the person(s) for whom work is being done.

## Buildings

No buildings or other permanent or semi-permanent structures can be constructed in the District's right-of-way. The District reserves the right of access to its pipelines in all of its right-of-way acquisitions. If access is obstructed or made more costly by the presence of unauthorized structures, the owner will be held liable. The District can require the landowner to remove any unauthorized structure from the District's right-of- way.

## Land Grading

Grading over the District pipelines is not permitted without prior approval from the District. If there is any question as to the location of District pipelines, contact the District before doing any work.

Where land grading is undertaken by landowners or water users near District facilities, a finished field grade (elevation) substantially higher or lower than the base of the water delivery structure may result. In such cases, the District may adjust the height of the affected facility and bill the appropriate party for the costs incurred in adjusting the facility to conform to the new field grade.

## Reservoirs and Ditches

In most areas of the District, the outside toe of reservoirs and permanent ditches must be located a minimum of 15 feet from the centerline of the District's distribution or drainage collector system.

## Embankments

Embankments greater than five feet above the top of the District's pipeline or one foot above natural ground over the District's pipeline or drainpipe must be approved by the District in advance of construction and on a case-by-case basis.

# SECTION 6

# DAMAGE TO DISTRICT FACILITIES AND DAMAGE CLAIMS

## Damage to District Facilities

From time to time, there have been instances in which part of the distribution system, such as meters, valve boxes, outlets, etc., have been damaged by equipment working around these facilities. When there is damage to the District's facilities, the District will repair or replace the damaged items. The parties who cause the damage are responsible for the cost of repairing or replacing the facility.

## Tailwater Damage

Each water user must take reasonable steps to reuse or control tailwater. The failure to do so shall constitute a waste of water and the District shall take appropriate measures to prevent this. In addition, uncontrolled tailwater may cause damage to adjoining crops, roads, or District facilities. District regulations permit the District Manager to discontinue water service if a water user does not take reasonable steps to control tailwater.

# APPENDIX A

**SAN BENITO COUNTY WATER DISTRICT**
**30 Mansfield Road, Hollister, CA 95023**
**P. O. Box 899, Hollister, CA 95024-0899**
**Telephone - (831) 637-8218**

## TERMS AND CONDITIONS FOR SAN FELIPE DISTRIBUTION SYSTEM WATER SERVICE

1. The allocation and furnishing of water to, and its purchase and use by, the applicant shall be subject to all rules and regulations of the District as the same may now or hereafter be amended or adopted. In the event of a conflict between the terms and conditions set forth herein and said regulations, the latter shall be controlling.

2. All water delivered shall be pursuant to a request by the applicant or his authorized representative for the delivery of a stated amount of water for Agricultural or Municipal and Industrial use to a specific parcel of land or entitlement area. The request shall be made within the time and in the manner prescribed by the District and shall include a declaration of "Agricultural" or "Municipal and Industrial" usage where agricultural and municipal and industrial are defined as follows:

> Agricultural water usage is the use of water for irrigation of land for the commercial production of agricultural crops or livestock, including domestic use incidental thereto, on tracts of land operated in units of more than two (2) acres.
>
> Municipal and Industrial water usage is the use of water for purposes other than the commercial production of agricultural crops or livestock, including domestic use incidental thereto, on tracts of land operated in units of more than two (2) acres.

The recipients of the water delivered by the District shall put the water to reasonable beneficial use and shall take all reasonable action necessary to prevent the waste and unnecessary use of the water.

3. The water will be furnished by the District subject to the terms and conditions under which said water is made available to the District including, but not limited to, the requirements of Federal reclamation law and if, in the exclusive judgment of the District, the water and facilities for its delivery are available; Provided, that the District will use its best efforts, to the extent that it has water and capacity available therefore and taking into account the requirements of other water users to receive water from said facilities, to provide such water in the manner and at the times requested. The District may temporarily discontinue water service or reduce the amount of water to be furnished to the applicant for the purpose of such investigation, inspection, maintenance, repair, or replacement as may be reasonably necessary of any of the District facilities necessary for the



furnishing of water to the applicant. Insofar as feasible, the District will give the applicant notice in

advance of such temporary discontinuance or reduction, except in case of emergency, in which event no notice need be given. No liability shall accrue against the District or any of its officers or employees for damage, direct or indirect, because of the failure to provide water to the applicant as a result of system malfunctions, interruptions in service necessary to properly operate and maintain any facilities of the District or United States appurtenant to the District's system, or other causes or due to the quality of the water furnished or its chemical, biological or physical characteristics.

4. Each water user shall bear the risk of loss, and shall be responsible for the carriage, control, handling, storage, distribution and use of all water delivered by the District from and after the point of delivery and the entry of water into the customer's facilities and shall indemnify, defend, and hold the District and its agents, representatives, and employees harmless from any liability or claim of liability for property damage or personal injury, including death and reasonable attorney's fees, resulting from the carriage, control, measurement, handling, storage, distribution, quality and use of water furnished by the District from and after the point of delivery and the entry into the water user's facilities. Customer shall also indemnify, defend and hold the District harmless from any such liability resulting from customers operations, use, or handling of the District facilities at or before the point of delivery to water users facilities.

5. The water furnished by the District is not in a potable state and the District does not warrant the quality or potability of water so furnished. By ordering and taking delivery of water from the District, the applicant assumes responsibility for, and agrees to hold the District harmless from, damage or claims for damage arising out of the quality and/or un-potability of water furnished by the District. The person or persons, corporation, association, public or private entity receiving delivery of water from the District shall be solely responsible for obtaining and maintaining all necessary permits required to comply with any and all local, state and federal laws governing the chemical, biological and physical characteristics of said water.

6. All water will be measured by the District with meters installed and operated and maintained by the District. The District reserves the right to estimate water use in circumstances where the meter is not operating and/or not operating with the normal operating limits for that type and/or size meter.

All measurements and/or estimates made by the District shall be final and conclusive.

7. By applying for or receiving water that is measured by a meter on privately owned property, the water user thereby licenses the District and it employees and agents to enter onto the property to read, inspect, test, repair and replace the meter. The water user shall provide convenient access to the meter and shall not give cause or permit any obstruction thereof. If a meter is obstructed the District shall give notice thereof to a responsible occupant of the property, served personally **or** by mail to the customer's address for billing. Within ten days the customer shall cause the obstruction to be removed or shall enter into an agreement with the District whereby the District shall remove the obstruction or relocate the meter at the expense of the customer. Failure to comply with this section shall be grounds for disconnection of the service.

8. Charges for water, hereinafter referred to as "Water charges", shall be at the rates established by the Board of Directors.

9. The payment of water or related charges, finance charges or reimbursement of District costs shall be made at the District Office. When any deadline established herein falls on a Saturday, Sunday, or holiday, it shall be extended to the next working day.

10. As a condition of the District continuing to furnish water, the applicant shall make the following payments by the dates specified: (a) For water used, and/or related changes, financial changes, or reimbursement of District costs, by the 20th day following the date of billing for the water used; (b) for the prepayment for all allocated water, by the due date on annual water purchase agreement and (c) for the final payment for all allocated water, by the 20th day following the billing date for July water use. Charges not paid by the 20th day following the billing date shall be delinquent. Small Parcel Service water users are not required to make prepayments for allocated water or a final payment for all allocated water.

11. All claims for overcharges or errors must be made in writing and filed with the District within ten days after the date the bill is received by the applicant. In the event the applicant files a timely written protest concerning the amount of the bill, the District shall review the protest as soon as practicable, after allowing the water user an opportunity to present his views orally, if requested, and notify the applicant in writing of its decision. The decision shall be final, unless a written appeal to the Board of Directors is filed with the Secretary of the District within 15 days of the date of the District's decision. In the event of an appeal, the decision of the Board shall be final. The filing of a protest or an appeal does not nullify the payment requirement or the District's right to discontinue water service as provided in these terms and conditions. However, in the event the protest or appeal is sustained, the District will refund the amount of the over charge and finance charge, if any.

12. On the 21st day following the date of billing a finance charge of 1% percent ($1.00 minimum) of that month's water charges which became delinquent on the preceding day shall be added to the water and related charges, if any, due and owing to the District, the total of which are hereinafter referred to as "Unpaid charges". Prior unpaid charges shall bear a finance charge at a monthly rate of 1% percent, which is an annual percentage rate of 12%. Such finance charge is not a penalty. A clause setting forth the information regarding finance charges shall be imprinted in bold type on all District Bills, in close proximity to the final balance figure. Finance charges shall not, however, accrue after the unpaid charges have been added to and become a part of the annual assessment levied on the land by the District. All payments and credits will be applied to the earliest unpaid charges.

13. On the 1st of the month following that in which the unpaid water charges for water service become delinquent, such service may be discontinued; Provided, that, when the 1st of the month following that in which the unpaid water charges for water service become delinquent falls on a Saturday, Sunday, or holiday, such service shall be discontinued on the next working day. A notice of intent to discontinue service shall be provided to the customer at least twenty-four hours before the service is discontinued.

14. A Non-sufficient fund charge shall be paid for each check tendered as a payment to the District that is returned unpaid after negotiation by the District.

15. The amounts due to the District as a result of the allocation or furnishing of water, which amounts become delinquent prior to December 1, and the finance charge relating thereto which remain unpaid at the time of the filing of the District's assessment book with the Tax Collector of the District in January of the following year may be added to, and become a part of, the annual assessment levied by the District on the land which received the water or, if the water was not furnished, on the land for which the water was allocated. The District shall give the owner of the land notice of the delinquency prior to its addition to the annual assessment. The amounts so added shall be a lien on the land and impart notice thereof to all persons. Should said assessment become delinquent, penalties and interest will be added thereto as provided by law.

16. Water service shall not be provided to any parcel of land for which standby charges or water charges or other special charges, or finance charges on such charges, are a lien on the land or for which the assessment is delinquent.

17. Water service shall not be provided to any person who owes the District delinquent water, standby or other special charges, or finance charges on such charges, notwithstanding the fact that the unpaid charges have been added to the assessment(s) on the parcel(s) for which they were incurred.

18. In the event water service hereunder is discontinued as a result of nonpayment of water charges, all unpaid charges for such service which are due the District from the person in default must be paid or arrangements for payment satisfactory to the District made before water service will be restored.

19. Agricultural water service shall not be provided to any person who has failed to file, or to any lands with respect to which there has not been filed, the certification and reporting forms required pursuant to reclamation law, and particularly the Reclamation Reform Act of 1982.

20. Agricultural water service shall not be provided to any person who fails to provide the District with the requested information at the time(s) and in the form(s) required by the District.

21. Each owner of land shall be liable to the District for any delinquent unpaid charge of the District, including the finance charges thereon, incurred by a tenant, licensee, or agent of such owner in connection with any service furnished by the District to or for use on the owner's land, or any facility to provide such service to the owner's land. The amount of such charge may become a lien upon the owner's land.

22. Any owner of land using water without having made application to the District and executed a water purchase agreement shall be held liable for the service from the date of any previous meter reading that most nearly coincides with the actual date the service was first used by such owner of land, their tenant, licensee, or agent.

23. Water furnished for retail distribution shall not be used outside of the water user's service area/facilities without the prior written consent of the District. District will not consent to the use of water on lands within the service area of any other water user of the District.

24. The District shall require as a condition of service a deposit of cash to secure the payment of water charges at anytime the applicant's credit is not satisfactory to the District. An irrevocable letter of credit in form and by a bank or other financial institution satisfactory to the District may be substituted for a cash deposit of or more. The amount of the deposit shall be two times the estimated monthly water bill but not less than $150.00. The District will apply the security deposit to any account owing to the District for more than thirty days and will notify the applicant of such application. Service may be discontinued if the account is not fully paid and the security deposit restored within 30 days of said notice. The determination of whether the credit of an applicant or customer is satisfactory shall be made solely by the District. The credit of an applicant or customer who has paid all District bills without default or delay for the twelve months last past shall be deemed to be satisfactory.

25. A charge ~~of~~ shall be paid for each occasion that an employee of the District is dispatched to deliver a "shutoff notice" for water user failure to order water, provide crop or irrigation information, make timely payment, or other failure to comply with District rules and regulations.

26. Any violation of the Water User's Handbook, Rules and Regulations for Delivering and Receiving San Felipe Project Water is a misdemeanor punishable by a fine of not more than $500.00 or by imprisonment in the County jail for a term not exceeding six months or by both such fine and imprisonment. Any such violation constitutes a separate offense for each day during any portion of which the violation occurs. The District may also pursue its civil remedies available at law or in equity, including, but not limited, remedies provided in the San Benito Water district Act (Water Code Appendix Sections 70-1 et scq.)

27. By applying for a water allocation or taking delivery of water from the District, the applicant agrees to these terms and conditions of service.

28. The District may modify or terminate these terms and conditions; Provided, that such modifications or termination are prospective only and notice thereof is given prior to the effective date by mail to the applicant.

# APPENDIX B

## SAN BENITO COUNTY WATER DISTRICT
## CONTRACT AND GRANT OF EASEMENT

THIS CONTRACT, made this _____ day of _____, 19____, between the SAN BENITO COUNTY WATER DISTRICT, a public agency duly organized, existing and acting pursuant to the laws of the State of California, hereinafter referred to as District6, and hereinafter referred to as Grantor(s):

WITNESSETH, the following grant and the following mutual covenants by and between the parties:

1. Grantor(s), each as to the portion of the hereinafter described land which he owns or in which he has an interest, do(es) hereby grant unto the District, its successors and assigns, an easement for water pipelines, which are a necessary part of the District's water distribution and drainage collector system, with all fixtures, devices and appurtenances necessary to the operation of said pipelines, within, over and across the following described land situated in the County of San Benito, State of California:

SEE ATTACHED EXHIBIT A.
(METES AND BOUNDS DESCRIPTION OF PERMANENT EASEMENT.)

And in addition thereto, the Grantor(s) also hereby grant(s) to the District, its successors and assigns, the temporary right, privilege and easement to enter upon and use, for the placement or piling thereon of earth, materials, and machinery, and for all other purposes useful or necessary in connection with the construction of a pipeline and incidental purposes, at any and all points over, on, and through the following described land. Said easement is to be terminated by the District, or its assigns, by the recording of a Notice of Abandonment prior to 120 days following completion of the construction contract which includes the improvements for which this temporary easement is required. Said land is situated in the County of San Benito, State of California, to wit:

SEE ATTACHED EXHIBIT B.
(METES AND BOUNDS DESCRIPTION OF TEMPORARY EASEMENT.)

2. Said pipelines shall be so laid that not less than three feet of earth, measured from the outside of the pipe collar to the ground surface, shall cover the pipelines, except the fixtures, devices and appurtenances referred to in Article 1 may be any distance either below or above ground surface. Unless otherwise provided by a surface easement granted herein, the District or its assignee shall not construct as an appurtenance to the pipelines an above ground structure with a length, width or diameter in excess of 48 inches or a height in excess of 60 inches without the consent of the Grantor(s).

3. The grant of easement herein contained shall include the right to enter upon said land, survey, construct, reconstruct, lay, re-lay, maintain, operate, control, use and remove said pipelines, fixtures and appurtenances, and to remove objects interfering therewith. Grantor(s) reserve(s) the right to cultivate, occupy and use the premises for any purpose consistent with the rights and privileges above granted and which will not interfere with, damage or endanger any of the structures or equipment of the District or the use thereof. The right to occupy and use the premises reserved by the Grantors herein shall include the construction of driveways, roads, fences, pipelines

and ditches as long as they do not interfere with, damage or endanger any of the structures of the District or prevent reasonable access thereto for the purpose of operation and maintenance. In the event of interference by Grantor(s), District shall have the right, without notice, to remove any structures, fences, trees, vines, shrubs or other encroachments from said right-of-way and easement.

4. The grant of easement herein contained is subject to existing rights-of-way for highways, roads, railroads, canals, laterals, ditches, other pipelines, electrical transmission lines and telephone and telegraph lines covering any part of the above described land.

5. For and in consideration of the conveyance of the herein defined estate to the District, and in satisfaction of any and all claims which the Grantor(s) have or may have hereafter against the District, arising out of the construction, operation and maintenance of the structures for which this easement is granted, the District, or its assignee, shall:

(a) Pay to the grantor(s):

1. The amount of any damage which occurs as a result of and during the construction, reconstruction, laying, re-laying, control, use, removal, operation and maintenance of the structures for which this easement is granted to (a) trees, seedlings, vines, crops and soil within or on the land herein described, (b) such irrigation facilities or other improvements presently located thereon as are not to be permanently relocated as herein provided on other land of Grantor(s) and (c) improvements constructed on said land which are consistent with the rights and privileges granted by this contract to the District within the scope of Article 3 of this contract.

2. The amount of any damage with occurs as a necessary and direct result of and during the construction, in the manner provided in the construction contract specifications, of the structures for which this easement is granted, to trees, seedlings, vines, crops, soil and improvements located other than within or on the land herein described; provided, that if said damage was the result of the negligence of the constructions contractor, the liability shall be solely that of the contractor.

3. The reasonable cost of the relocation of such irrigation facilities or other improvements as the District or its assignee shall determine shall be relocated by the Grantor(s).

4. Upon the request by Grantor(s), the fair market rent for such portions of the easement areas described herein as Grantor(s) are precluded from using because of Grantee's exercise of its easement rights; provided that, in the event Grantor(s) are compensated for crop damage pursuant to the provisions of this contract, they shall not be entitled to such rent for the growing season for the area(s) on which such crops are grown and for which such compensation has been made. The period(s) of time and the size of the area(s) which Grantor(s) are so precluded form using shall be as determined by the District or its assigns.

(b) In lieu of the payment of the amount of said damage to the said irrigation facilities or other improvements, or of the costs of the relocation of said irrigation facilities or other improvements, the District or its assignee may, at its option and expense, relocate the said irrigation facilities or other improvements:

and the Grantor(s) shall so accept said payment or relocation.

The payments to be made under the provisions of subparagraphs (a) 1, (a) 2, and (a) 4 of this article shall be made after the completion of the construction of the pipelines of the District or its assignee in, through and on the land herein described and shall be in an amount determined by an appraisal made by the District or its assignee. Any irrigation facility to be relocated as herein provided shall be of quality and standard equivalent to that of the existing facility, and such irrigation

facility or other improvement shall be relocated to such land of the Grantor(s) adjoining that herein described as the parties hereto shall mutually determine to be reasonable and proper. The District shall notify Grantor(s) as to the facilities and improvements that must be relocated and in such notice shall inform Grantor(s) as to the date when such relocation must be completed and of the reasonable cost of such relocation. The payment under the provisions of subparagraph (a) 3 of this article shall be made upon the completion of the said relocation, and shall be in an amount determined by the District or its assignee to be the reasonable cost thereof.

6. The Grantor(s) hereby consent(s) to the payment to lessee or any subsequent Lessee of all sums coming due pursuant to subparagraphs 5(a) 1 and 5(a) 2 hereof for damage to annual crops and seedlings and the annual harvest from trees, vines and perennial plants occurring during the time said Lessee or any subsequent Lessee is in possession of said property.

7. The District may assign the easement granted herein to the United States of America subject to the terms hereof.

8. In case of permanent abandonment of said right-of-way, the title and interest herein granted shall end, cease and terminate.

9. The covenants and provisions herein shall inure to the benefit of and bind the successors and assigns of the Grantor(s).

10. The extent that it may legally do so, the District and its assigns hereby agree to indemnify and hold harmless Grantor(s), its officers, agents, employees, successors and assigns from and against all claims for damage, loss and expense resulting from injury to or death of any person or injury to property arising out of the construction, operation or maintenance of the facilities for which this easement is granted, except such injury or death as may be caused by the sole negligence or willful misconduct of Grantor(s) or its officers, gents, employees, successors and assigns; provided that this article shall not be applicable to claims for damage with the scope of Article 5 hereof.

IN WITNESS WHEREOF, the parties have caused this contract and grant of easement to be executed the date hereinabove written.

# APPENDIX C

## CONNECTIONS TO DELIVERIES
## DRAWING NUMBER 1

# APPENDIX D

## BACKFLOW PREVENTION SYSTEM (ORDINANCE 12)

# REGULATIONS
# FOR THE ALLOCATION OF SAN FELIPE-WATER
# WITHIN ZONE 6

## I. PURPOSE

The long-term water supply of Zone 6 is dependent upon the importation of San Felipe water to supplement local groundwater and surface supplies and on the conjunctive use and operation of those supplies. The San Felipe System, as approved by the voters, was designed and constructed to provide approximately 40% of the ultimate municipal and industrial and agricultural water demands of the area. The San Felipe Distribution System provides the means for delivery of that water to designated service areas within Zone 6. Lands within those designated service areas have an entitlement to contract for San Felipe Water as determined by the District. The District has a total contractual entitlement for an annual supply of 43,800 acre-feet of Central Valley Project water during the year that begins on March 1 and ends on the last day of February of the following year, hereinafter referred to as the "contract water year". Also, the District may be able to obtain additional water. The District's annual water supply is determined solely by the District based primarily on that year's allocation of the District's USBR contract supply, water stored in District owned and operated storage facilities, groundwater storage levels and anticipated water use. Regardless of the source of supply of water for the District in the contract water year, a procedure for allocation of water is necessary.

## II. ENTITLEMENTS TO CONTRACT

A water user (An owner or leaseholder of land, or a public or private entity, corporation, or association which provides retail water service within its service area) within the boundaries of Zone 6 of the District who takes direct delivery of water from the San Felipe Distribution System shall be entitled to contract to receive a maximum allocation of water each year for all land entitled to be served:

Agricultural: A maximum allocation of 1.2 acre feet of water per acre per year provided that the maximum allocation for land having a groundwater boron concentration of 1.5 mg/l or greater, as determined solely by the District, shall have a maximum entitlement of 2.0 acre feet per acre per year. The District may, at the districts expense, conduct boron tests of the groundwater to determine eligibility for maximum entitlements of 2.0 acre feet per acre per year.

Municipal and Industrial: A maximum allocation of 1.2 acre feet per acre per year. Land within the entitlement area which has been improved with pavement and contains public or private streets (including curbs, gutters, and sidewalks) or airport runways and taxiways shall be excluded when calculating the maximum allocation for municipal and industrial water.

Each allocation of water shall be limited to the maximum amount of water that can be put to beneficial use, on the land entitled to be served taking into consideration appropriate water management practices and conservation measures. Further, the annual allocation of water shall be subject to the limitations of the water supply available to the District.

Allocations of water shall be subject to the following minimums:

Agriculture: Two (2) acre feet per year.
Municipal and Industrial: One (1) acre foot per year.

## III. ALLOCATION PROCEDURE

A. The District's annual water supply from the US Bureau of Reclamation is expected to vary from year to year with less than 25% of the years having an allocation equal to the full contractual entitlement. The District's allocation procedure is designed for use in a range of water supply contract allocations excluding extreme shortage conditions. Under extreme shortage conditions, the Board of Directors will review the water supply conditions and determine if a water supply emergency exists and if a water supply emergency exists will allocate the available water supply to address that emergency. The water supply available to the District for allocation to eligible lands shall be determined primarily by considering the forecasted USBR contract allocation, water user Water Allocation Requests, estimated Small Parcel Service water use, water available from storage in San Justo Reservoir, carryover storage, water available from transfer and exchange agreements, groundwater recharge requirements, system loses and operational requirements. The allocations for Agricultural and Municipal and Industrial water users shall be made separately based on the District's determination of the available Agricultural, and Municipal and Industrial water supplies. The available water supplies shall be allocated in direct proportion to the water user Water Allocation Requests; provided that, no water user shall be allocated more than the maximum allocation as set forth in Section II, Entitlement to Contract. This allocation shall be considered the initial allocation. In the event a portion of the available water supply remains unallocated it shall be made available to water users as additional water subject to the rules and regulations governing additional water or otherwise put to use in the best interest of the District. Provided that, no portion of the available water supply shall be made available as additional water before August of any contract year unless and until all Water Allocation Requests have been filled.

Small Parcel Service Water Users (water users on parcels of 10 acres or less in areas that have not requested to secure water service by annual contract) are exempt from Water Allocation Request requirements.

B. No water shall be allocated for use on lands outside of Zone 6.

C Should the water supply available to the District increase or decrease materially:

1. Decreased water supply. The decrease in available water supply will be allocated among water users in direct proportion to the initial allocation.

2. Increased water supply. The increase in available supply will be allocated in direct proportion to the initial allocation; provided that, no user shall be allocated more than the maximum allocation as set forth in Section II, Entitlement to Contract. In the event a portion of the increased water supply remains unallocated it shall be made available to water users as additional water subject to the rules and regulations governing additional water or otherwise put to use in the best interest of the District.

D. A separate allocation may be made by the District Manager, when justified, in situations of extraordinary or uncommon hardship. Written requests for such separate allocations shall set forth the need for such water and recite the damage, if any, which might result if such water is not allocated. Such requests may be filed at any time by any water user. The separate allocation, if any, shall take into account the information set forth in the request and shall be based on the needs of the applicant, the potential damage, the amount of water available for such purposes, and other relevant factors.

E. Allocations shall be made promptly by the District when sufficient information is available for such purpose. Notice shall be supplied to each water user of the allocations of water to which such water user is entitled or any modifications thereof. The District does not guarantee the delivery of the water allocated to any user pursuant to these Regulations.

F. Water users that are unable to use allocated water or will not require their full allocation, may (a) release the water to the District or (b) transfer the water pursuant to Section IV E. F & G in which event the water shall be paid for under the same terms and conditions as otherwise provided in the District's Regulations. Water users requests to release allocated water to the District shall (a) be in writing on a form prescribed by the District Manager, (b) state the amount of water to be released and (c) be signed by the water user.

1. Water released to the District prior to the last working day in July meter reading shall be deducted from the water users allocation and any prepayment credit remaining after the July billing will be refunded to the water user.

2. Requests for release of water to the District following the last working day in July shall be subject to the District's ability to sell that water or otherwise put the water to use in the best interest of the District. For requests for release of water to the District that are accepted in whole or in part, by the District, the water users account will be credited for the water at the current water rate.

G. Water users may request additional water at any time. The District may offer additional water under different conditions and different prices. Additional water shall be clearly identified as to price and conditions. Water users requests for additional water from the District shall (a) be in writing on a form prescribed by the District Manager, (b) state the amount of water requested and (c) be signed by the water user. Additional water will be allocated among water users requesting additional water in direct proportion to the initial allocations of the requesters. Allocation of additional water will be made regularly but not more frequently that once each month. Additional water shall be paid for in advance and shall be non-refundable. For accounting purposes additional water shall be the first water used following allocation.

## IV. APPLICATION FOR AND DELIVERY OF WATER

A. In order for land to be entitled to an annual allocation of water, either an application for Small Parcel Service or a Water Allocation Request covering the land and an agreement to purchase the allocated water shall be filed for the contract water year at the District Office at 30 Mansfield Road, Hollister, California 95023 (P. O. Box 899, Hollister, CA 95024-0899). The Water Allocation Request shall be filed with the District prior to 5 p.m. on the last working day of January and agreement to purchase shall be filed with the District prior to 5 p.m. on the last working day of February preceding the contract water year. The District Manager may require supplemental application(s) with respect to any interim or additional water made available to the District. Water Users may not change between annual contract service and Small Parcel Service, or vice versa, during the contract water year.

B.

1. Water Allocation Requests which are not filed timely shall be subject to a late filing fee of $25.00 plus $1.00 per acre for each acre of land over twenty five acres covered by the late application. The District Manager may waive said fee upon finding that (a) the failure to file the water allocation request timely was completely beyond the control of the water user or (b) the circumstances are such as to otherwise justify the waiver. Payment of said fee shall be a condition precedent to consideration by the District Manager of a request to allocate water to the lands subject to the late water allocation request.

2. The District Manager may allocate water to lands with respect to which there is a late Water Allocation Request only upon its finding that the circumstances are such as to justify (a) the late filing and (b) the allocation of such water, provided, however, that all allocations of water pursuant to applications filed after the District Manager's review of late applications shall be on a first-come, first-served basis.

3. Decisions of the District Manager regarding waiver of late filing fees and allocation of water to lands with respect to which a late Water Allocation Request was filed may be appeal to the Board of Directors. Decisions of the Board of Directors in these matters shall be final.

C. If a separate allocation of water is requested with respect to situations of extraordinary or uncommon hardship specified in Section III D the amount of water so requested shall be specified by the water user. A statement showing the need for such additional water and reciting the damage, if any, which might result if such water is not allocated shall also be included. In addition, such requests, which may be filed at any time, shall specify, with respect to water requested for frost protection, livestock, etc., the maximum number of days required for these purposes by the applicant on the land involved during any consecutive 12-month period since Project water was first made available to him for such purpose; and, with respect to trees and vines, the type and age thereof; and such other pertinent data as may be required. The applicant may be required to provide supplemental information to substantiate his request for a special water allocation for such needs. Water supplied for the maintenance of frost protection, trees and vines, livestock, or for extraordinary or uncommon hardship may be used only for the purpose for which it was supplied and justified and for no other purpose.

D. Water allocated to each water user in Zone 6 of the District may be used by that water user only on land within the subsystem for which the water has been allocated except for water transferred out of the subsystem through a District approved inter-subsystem transfer.

E. A water user, other than a Small Parcel Service water user, may transfer water allocated to that user among deliveries serving that water user within the same subsystem. Such transfers shall conform to the procedures established by the District Manager and the water transferred shall be furnished under the same terms and conditions as otherwise provided in these and other District rules and regulations.

F. Intra-subsystem Transfers. A water user, other than a Small Parcel Service water user, may transfer water allocated to him to another water user within the same subsystem only with the consent of the District, in which event the water shall be furnished under the same terms and conditions as otherwise provided in these and other District Regulations. Requests for the consent of such transfers shall (a) be in writing on a form prescribed by the District Manager, (b) state the amount of water to be transferred and (c) be signed by the affected water users. Transfers of water allocations shall not be allowed unless the water user to whom the allocation has been transferred agrees in writing to pay for all such water to be transferred to him. No transfer of water pursuant to these Regulations shall in any manner amend, alter, increase, decrease, or otherwise affect the rights, duties, responsibilities, and obligations, or any limitations thereof, then existing between the transferor, transferee, and District, or any combination of the same. No intra-subsystem shall be authorized if the end use of the water transferred is for supplying a domestic service (Provision of water by a water user for household use and/or human consumption).

G. Inter-subsystem Transfers. A water user, other than a Small Parcel Service water user, may transfer water allocated to him to another water user in another subsystem or to deliveries serving that water user in another subsystem only with the consent of the District, in which event the water shall be furnished under the same terms and conditions as otherwise provided in these and other District Regulations. Terms and conditions governing inter-subsystem transfers are reviewed annually by the Board of Directors. Requests for the consent of such transfers shall (a) be in writing on a form prescribed by the District Manager, (b) state the amount of water to be transferred and (c) be signed by the affected water user(s). Transfers of water allocations shall not be allowed unless the water user to whom the allocation has been transferred agrees in writing to pay for all such water to be transferred to him. No transfer of water pursuant to these Regulations shall in any manner amend, alter, increase, decrease, or otherwise affect the rights, duties, responsibilities, and obligations, or any limitations thereof, then existing between the transferor, transferee, and District, or any combination of the same. No inter-subsystem transfer shall be authorized if the end use of the water being transferred is for supplying a domestic service

H. Allocated water shall not be used if either the land with respect to which the water was allocated or the water user to whom it was allocated are not at the time of use otherwise eligible to receive or use the water, respectively, under District Rules and Regulations.

I. Water service to an individual water user shall be discontinued at the time the water user has used his full water allocation; provided that, water used over the allocation and before (1) the District discontinues service to the water user, or (2) the water user secures additional or transferred water shall be paid for at the current regulatory overuse rate. The unauthorized using, taking, or wasting of water may subject the water user to civil or criminal prosecution. The District Manager is authorized, after written notice to the water user, if in his judgment, it is advisable and in the best interest of the District, to lock the delivery facilities of, or discontinue water service to, any water user.

J. Each water user shall take reasonable steps to reuse or control tailwater. The failure to do so shall constitute a waste of water, which the District may take appropriate measures to prevent.

## V. PAYMENT FOR WATER AND RELATED CHARGES

A. Prior to 5 p.m. on the last working day of February preceding the contract water year, the water user shall file a written water purchase agreement, or have a valid application for Small Parcel Service, on forms prescribed by the District.

1) **Small Parcel Service**. By applying for and receiving service from the District the water user agrees to pay all District water and related charges.

2) **Annual Contract Service**. By executing written water purchase agreement, the water user agrees to pay for all such water allocated for their use during each contract water year, including any increase(s) in that allocation; provide that the obligation to pay shall be limited to the lesser of 1) the maximum entitlement for the parcel of land or 2) the full amount of the water users' Water Allocation Request.

B. As a condition of the District furnishing or continuing to furnish water, water users shall make the following payments by the dates specified:

1) **Small Parcel Service**

b. For water used, payment is due by the 20th day following the billing date.

c. For related charges, including but not limited to power charge, payment is due by the 20th day following the billing date.

2) **Annual Contract Service**

a. For all allocated water, (1) a prepayment of 15% of the applicable water rate for that contract water year per acre-foot will be due by 5:00 p.m. on the last working day of February preceding that contract water year; Provided, that credit for this payment shall be applied to the last 15% water used during the water year if such use occurs on or before the July meter reading or to the Final Payment; and (2) a Final Payment for all water remaining after the July meter reading will be due by the 20th day following the billing date for July water use.

b. For water used, payment is due by the 20th day following the billing date.

c. For related charges, including but not limited to power charges, payment is due by the 20th day following the billing date.

d. For additional water, payment in advance with no refunds.

3) All other District Rules and Regulations pertaining to the payment for water shall remain in full force and effect, except as otherwise provided in these Regulations.

C. In the event payment is not made by the water user for allocated water, the amount owed to the District for such allocation may be applied to the annual assessment on the land for which the water was allocated. If the water was used, the amount owed to the District for such water may be added to the annual assessment on the land on which the water was used.

1. Water users who, because of the inability of the District to furnish water for which payment has been made, are not, in the judgment of the District Manager, able to use all or a portion of such water, shall receive a refund or credit for such water which the District Manager determines they are unable to use.

2. Water users who have paid or who are obligated to pay for, but are unable to use allocated water, may (a) release the water to the District, in which event the District will attempt to sell the water to another water user, and, if the water is sold, the original purchaser will receive a credit for the amount of water resold, or (b) transfer the water pursuant to Section IV E,F & G in which event the water shall be paid for under the same terms and conditions as otherwise provided in the District's Regulations.

D. The water user shall continue to remain liable for that portion of allocated water for which full payment has not been received.

## VI. MISCELLANEOUS

A. The District Manager is hereby authorized and directed to do any and all things necessary to implement and effectuate these Regulations.

B. All District rules and Regulations pertaining to the allocation, purchase, delivery, use, and payment for water shall remain in full force and effect, except as otherwise provided herein.

C. An appeal from any decision or determination made pursuant to these Regulations may be made to the Board of Directors. Any such appeal shall be in writing and shall be filed with the Administrative Services Officer of the District within 15 days after the decision or determination. In the absence of such an appeal, the decision or determination shall be final. In the event of an appeal, the decision of the Board shall be final.

D. The District Manager shall provide a general summary of the provisions of the Regulations to all landowners and water users within Zone 6 of the District.

# AMENDMENTS TO
## WATER USERS HANDBOOK

### SECTION 1

## RECLAMATION LAW AND DISTRICT WATER ALLOCATION REGULATIONS

Water Allocation Regulations

The District Board of Directors has adopted water allocation regulations to be used in allocating the district's annual water supply. The regulations require filing a Water Allocation Request by a specific date (usually 30 days prior to the start of the contract water year) in order for land to be entitled to an allocation of water in the upcoming contract water year beginning on March 1 and ending the last day of February of the following year. The District's annual water supply is determined solely by the District based primarily on that years allocation of the District's USBR contract supply, other surface waters available to the District, water stored in carryover facilities, water stored in District owned and operated storage facilities, groundwater storage levels and anticipated water use.

Regulations for the Allocation of San Felipe Water Within Zone 6

I. PURPOSE

The long-term water supply of Zone 6 is dependent upon the importation of San Felipe water to supplement local groundwater and surface supplies and on the conjunctive use and operation of those supplies. The San Felipe System, as approved by the voters, was designed and constructed to provide approximately 40% of the ultimate municipal and industrial and agricultural water demands of the area. The San Felipe Distribution System provides the means for delivery of that water to designated service areas within Zone 6. Lands within those designated service areas have an entitlement to contract for San Felipe Water as determined by the District. The District has a total contractual entitlement for an annual supply of 43,800 acre-feet of Central Valley Project water during the year that begins on March 1 and ends on the last day of February of the following year, hereinafter referred to as the "contract water year". Also, the District may be able to obtain additional water. The District's annual water supply is determined solely by the District based primarily on that years allocation of the District's USBR contract supply, other surface water available to the District, water stored in carryover facilities, water stored in District owned and operated storage facilities, groundwater storage levels and anticipated water use. Regardless of the sources of supply of water for the District in the contract water year, the procedure for allocation of water is necessary.

III ALLOCATION PROCEDURE

H. If as when available water service. Water users outside San Felipe Distribution System service areas with if as and when available service shall make a water allocation request in the same manner as other water users. Said water users shall be subject to the same maximum allocation as lands and water users within the San Felipe Distribution System service areas. Said water users allocations may be made

to if as and when available water users at any time that all water allocation requests by water users within the San Felipe Distribution System service areas have been filled and shall be eligible for allocation of any additional water remaining following the allocation of additional water to water users within the San Felipe Distribution System.

E. A water user may transfer water allocated to that user among deliveries servicing that water user within or from the same water system including if as and when available water service.

F. Intra-subsystem transfers. A water user may transfer water allocated to him to another water user within the same subsystem or to if as and when available service lands served from that subsystem only with the consent of the District, …

G. Inter-subsystem Transfers. To another water user in another water system or if as and when available service lands served from that subsystem or to delivered serving that water user in another subsystem or if as and when available water service to that water user from another subsystem only with the consent of the District.

# APPENDIX E

## Sample User Forms and Bills

San Benito County Water District

30 Mansfield Road • P.O. Box 899 • Hollister, CA 95024-0899 • (831) 637-8218 • Fax: (831) 637-7267

# CUSTOMER NOTIFICATION FORM

Notifications will be sent out for operational related matters. To receive notifications from the San Benito County Water District via automated telephone and/or text messaging, complete the information requested below and return to the District office.

The contact information provided should be the responsible party for operational matters relating to the blue valve service(s). List only one contact person and phone number.

**Contact Person:** _____ **Phone Number:** _____

**Email (*optional information*):** _____

*Please contact the Water Office should this information change at (831) 637-8218 ext. 125 or 118.*

By signing below, you are acknowledging the San Benito County Water District may contact you via telephone and/or text message regarding San Felipe Distribution System information.

_____ _____
Signature Date

_____ _____
Print Name Customer ID

Completed forms can be returned via District office drop box, mail, fax or by emailing the Water Office at either email address; astull@sbcwd.com or bbermudez@sbcwd.com.

*Based on your mobile service plan, text messaging charges may apply.*

**The San Felipe Distribution System delivers interruptible, supplemental and non-potable water.**

# San Benito County Water District

*30 Mansfield Road • P.O. Box 899 • Hollister, CA 95024-0899 • (831) 637-8218 • Fax: (831) 637-7267*

## Discontinue Service Form

**You are responsible for all charges on your account until the District is notified in writing of your termination of service. Notice must be received two (2) business days prior to stopping service.**

| Customer Information | | | |
|---|---|---|---|
| Service Type(s): ☐ Blue Valve ☐ Well | | | |
| Last Name: | First: | MI: | Customer ID: |
| Organization or Business Name: | | | Parcel No.: |
| Service Address: | | | City: |
| Forwarding Mail Address: | | | Primary Phone: |
| City: | State: | Zip Code: | Secondary Phone: |
| Reason: ☐ Sold Property ☐ Not Using Blue Valve<br>☐ Lessee – No Longer Operating ☐ Other:_____ | | | |
| Closure Date: _____ (Blue Valve will be locked within 72 hours of Closure Date) | | | |

_____ _____

Request By (Signature) Date

**The San Felipe water is non-potable, supplemental and interruptible.**

# San Benito County Water District

*30 Mansfield Road • P.O. Box 899 • Hollister, CA 95024-0899 • (831) 637-8218 • Fax: (831) 637-7267*

Request Type
□ New Service
□ Change to Existing Account

## New Service or Update to Existing Account

**Service Type(s):** ☐ **Blue Valve** ☐ **Well**

**Service Address:** **Parcel No.:**

### Property Owner Information

| | | | |
|---|---|---|---|
| Last Name: | First: | MI: | District Use: Customer ID |
| Last Name: | First: | MI: | District Use: Identification Provided |
| Organization or Business Name: | | | Primary Phone: |
| Mailing Address: | | | Secondary Phone: |
| City: | State: | Zip Code: | Other Phone: |
| Email: | | | Fax: |

### Account Designation

**Agricultural Designation Criteria** – Commercial production of agricultural crops and/or the commercial raising of livestock on an area that occupies two (2) or more acres of land.

1. Is the land **primarily** used for **commercial** agriculture as defined in the Agricultural Designation Criteria? ☐ Yes ☐ No

If ***yes***, complete the questions 2-5 below. If ***no***, continue to **Other Information**.

2. Is the property leased or operated for commercial agricultural production by another party? ☐ Yes ☐ No

3. Enclosed is the most recent copy of IRS "Schedule F" provided from: ☐ Owner ☐ Lessee/Operator

4. Type of commercial production crop and/or livestock: _____

5. Number of acres in commercial production: _____

### Other Information

Please check box: ☐ Lessee ☐ Operator ☐ Agent ☐ Not Applicable

| | | | |
|---|---|---|---|
| Last Name: | First: | MI: | District Use: Customer ID |
| Organization or Business Name: | | | Primary Phone: |
| Mailing Address: | | | Secondary Phone: |
| City: | State: | Zip Code: | Other Phone: |
| Email: | | | Fax: |

Will the account be opened to the party listed in Other Information? ☐ No ☐ Yes - Service Type: ☐ Blue Valve ☐ Well

If ***yes***, Property Owners must complete an **Account Authorization Form**.

The above represents my request to San Benito County Water District (District). I agree to comply with the District's rules and regulations as stated in the Water Users Handbook.

Legal Property Owner Signature _____ Date _____

**The San Felipe water is non-potable, supplemental and interruptible.**

# Recycled Water Scheduling Request

**Customer Name: _____ Customer ID: _____ Week of : _____**

**Service Location: _____ Email: astull@sbcwd.com & cc: bbermudez@sbcwd.com**

| **Monday** | **12 AM to 6 AM** | **6 AM to 8 AM** | **8 AM to 10 AM** | **10 AM to 12 PM** | **12 PM to 2 PM** | **2 PM to 4 PM** | **4 PM to 6 PM** | **6 PM to 8 PM** | **8 PM to 10 PM** | **10 PM to 12 AM** | **Total Hours per day** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Hours** | | | | | | | | | | | |
| **GPM (flow rate)** | | | | | | | | | | | |
| **Tuesday** | **12 AM to 6 AM** | **6 AM to 8 AM** | **8 AM to 10 AM** | **10 AM to 12 PM** | **12 PM to 2 PM** | **2 PM to 4 PM** | **4 PM to 6 PM** | **6 PM to 8 PM** | **8 PM to 10 PM** | **10 PM to 12 AM** | **Total Hours per day** |
| **Hours** | | | | | | | | | | | |
| **GPM (flow rate)** | | | | | | | | | | | |
| **Wednesday** | **12 AM to 6 AM** | **6 AM to 8 AM** | **8 AM to 10 AM** | **10 AM to 12 PM** | **12 PM to 2 PM** | **2 PM to 4 PM** | **4 PM to 6 PM** | **6 PM to 8 PM** | **8 PM to 10 PM** | **10 PM to 12 AM** | **Total Hours per day** |
| **Hours** | | | | | | | | | | | |
| **GPM (flow rate)** | | | | | | | | | | | |
| **Thursday** | **12 AM to 6 AM** | **6 AM to 8 AM** | **8 AM to 10 AM** | **10 AM to 12 PM** | **12 PM to 2 PM** | **2 PM to 4 PM** | **4 PM to 6 PM** | **6 PM to 8 PM** | **8 PM to 10 PM** | **10 PM to 12 AM** | **Total Hours per day** |
| **Hours** | | | | | | | | | | | |
| **GPM (flow rate)** | | | | | | | | | | | |
| **Friday** | **12 AM to 6 AM** | **6 AM to 8 AM** | **8 AM to 10 AM** | **10 AM to 12 PM** | **12 PM to 2 PM** | **2 PM to 4 PM** | **4 PM to 6 PM** | **6 PM to 8 PM** | **8 PM to 10 PM** | **10 PM to 12 AM** | **Total Hours per day** |
| **Hours** | | | | | | | | | | | |
| **GPM (flow rate)** | | | | | | | | | | | |
| **Saturday** | **12 AM to 6 AM** | **6 AM to 8 AM** | **8 AM to 10 AM** | **10 AM to 12 PM** | **12 PM to 2 PM** | **2 PM to 4 PM** | **4 PM to 6 PM** | **6 PM to 8 PM** | **8 PM to 10 PM** | **10 PM to 12 AM** | **Total Hours per day** |
| **Hours** | | | | | | | | | | | |
| **GPM (flow rate)** | | | | | | | | | | | |
| **Sunday** | **12 AM to 6 AM** | **6 AM to 8 AM** | **8 AM to 10 AM** | **10 AM to 12 PM** | **12 PM to 2 PM** | **2 PM to 4 PM** | **4 PM to 6 PM** | **6 PM to 8 PM** | **8 PM to 10 PM** | **10 PM to 12 AM** | **Total Hours per day** |
| **Hours** | | | | | | | | | | | |
| **GPM (flow rate)** | | | | | | | | | | | |

**Signature:_____ Contact Phone #:_____ Fax #:_____**

# San Benito County Water District

*30 Mansfield Road • P.O. Box 899 • Hollister, CA 95024-0899 • (831) 637-8218 • Fax: (831) 637-7267*


## Registration for Water Producing Facility

To be completed and returned to the San Benito County Water District when the well is connected to power and able to produce water.

Assessor's Parcel Number: _____
(Please list the parcel number on which well is located.)

Site Address: _____

Well Owner: _____ Telephone: _____

What date was the well connected to power and able to produce water? _____

What is the purpose of the well? ☐ Agricultural ☐ Domestic

Does the well supply household water? ☐ Yes ☐ No

Is the well used for irrigating? ☐ Yes ☐ No If so, how many acres? _____

Horsepower of pump motor: _____ h.p.

Size of discharge pipe (diameter): _____ inches

Property Owner Signature: _____ Date: _____

Mailing Address: _____

_____

**Note: A separate form must be completed for each well owned. For additional forms, go to www.sbcwd.com or contact the San Benito County Water District at (831) 637-821**

Please return this portion with your payment

| | |
|---|---|
| Date | 8/5/2021 |
| Customer Id | |
| Due Date | 8/26/2021 |
| Balance Due | $118.04 |

| | |
|---|---|
| **Amount Paid** | $ |

THE DISTRICT PROVIDES WATER THAT IS SUPPLEMENTAL, INTERRUPTIBLE AND NON-POTABLE.

San Benito County Water District
PO Box 899
Hollister, CA 95024-0899

*San Benito County Water District, P.O. Box 899, 30 Mansfield Road*
*Hollister, California 95024-0899, Phone (831) 637-8218*

OFFICE HOURS - 8:00 A.M TO 5:00 P.M. - MONDAY THRU FRIDAY - MAKE CHECKS PAYABLE TO S.B.C.W.D.

Payment is due and payable upon receipt and delinquent 20 days after issue. At that time, a delinquency charge will be added to the payment due. If payment is not received within 30 days after issue, the meter will be shut off without further notice. A turn-on charge plus any other bills due must be paid before resumption of service. If you wish to dispute a bill, call (831) 637-8218.

| **Customer ID** | S01955 | **Current Charges** | **Adjustments** |
|---|---|---|---|
| **Billing Period** | July | Contract - All Subsystems | $99.61 |
| **Previous Balance** | $79.29 | | |
| **Payments** | ($61.65) | | |
| **Current Charges** | $99.61 | | |
| **Delinquent Charges** | $0.79 | | |
| **Adjustments** | $0.00 | | |
| **Balance Due** | $118.04 | | |

**Customer Message**

Contract customers:1 acre foot=325,851 gallons.

## San Felipe Contract

| Account | Previous Read | Date | Current Read | Date | Current Charges | Usage AF | YTD Usage AF | Allocation | Remaining Allocation |
|---|---|---|---|---|---|---|---|---|---|
| **Subsystem 07** | | | | | | | | | |
| | 128315 | 6/25/2021 | 128879 | 7/30/2021 | | 0.173 | 1.332 | 1.500 | 0.168 |
| Service Address | Mc Closkey Rd-Hol | | | | | | | | |
| All other Power Charge | | Rate $35.75 per AF | | 0.173 AF | $6.18 | | | | |
| Unused Allocation | | Rate $274.00 per AF | | 0.168 AF | $46.03 | | | | |
| Water Charge 07 | | Rate $274.00 per AF | | 0.173 AF | $47.40 | | | | |
| | | | | **Total for Subsystem 07** | **$99.61** | **0.173** | **1.332** | **1.500** | **0.168** |
| | | | | **Total** | **$99.61** | **0.173** | **1.332** | **1.500** | **0.168** |

# San Benito County Water District

*30 Mansfield Road • P.O. Box 899 • Hollister, CA 95024-0899 • (831) 637-8218 • Fax: (831) 637-7267*


## WELL PERMIT PROCEDURE

1. Well permit applications must be completed by the property owner and a certified well driller. Certified well drillers must hold a valid C-57 contractor's license and workers compensation insurance.

2. The well site needs to be staked at the time the application is submitted.

3. The plot plan must include the location of all existing structures and leach fields on the parcel. If a structure is to be erected on the property, the building plans must be submitted with the well permit application.

4. The following well permit fees and applicable deposit must be received with the application:

   a. **Standard/Monitoring fee and deposit:**

| | |
|---|---|
| Standard and Monitoring Well Fee (*Standard Types: New Construction, Reconstruction, Cathodic, Geothermal)* | $840.00 |
| Refundable Deposit | $500.00 |
| **Total Due with Permit Application** | **$1,340.00** |

   **b. Abandonment / Destruction fee** **$ 508.00**

   Checks must be made payable to: **San Benito County Water District**

5. Upon receipt of the application and fees, the District will perform a "Site Inspection" to make sure that the property and location of the well meet the applicable state and local requirements. Please allow 7 to 10 business days for the permit process.

6. Once the well permit has been approved and issued, the licensed well driller can proceed with the drilling of the well. Well permits are valid for one (1) year from date of issue.

7. The driller must schedule an "annular well seal" inspection with the District. Driller must call 24 hours in advance.

8. Seal inspections that are scheduled to begin at 3PM or later on a business day will be charged an additional $149.00. This fee must be paid prior to the District's inspection approval.

9. The District shall charge an additional re-inspection fee of $149.00 should any of the following apply:

   a. the initial annular seal failed or
   b. the well driller was not present or ready at the scheduled appointment time

   This fee must be paid prior to the District's inspection approval.

10. The driller will contact the District once the surface seal is complete for final inspection.

11. The deposit shall be refunded to the property owner upon the District's receipt of the Well Completion Report, and if applicable, the Registration of Water Producing Facility form.

    The table below lists the document(s) to be submitted to the District for each well type.

| Well Types | Well Completion Report | Registration of Water Producing Facility Form |
|---|---|---|
| New Construction | Yes | Yes |
| Reconstruction | Yes | Yes |
| Monitoring | Yes | No |
| Cathodic | Yes | No |
| Geothermal | Yes | No |

# SAN BENITO COUNTY WATER DISTRICT

30 Mansfield Road - Hollister, CA 95023
Mailing address: P.O. Box 899, Hollister, CA 95024
Phone: 831-637-8218 – Fax: 831-637-7267


**WELL PERMIT APPLICATION** **DATE:** _____

Type of permit requested – Check one box only

_____ Standard and Monitoring ($840.00 permit fee and $500 refundable deposit)

_____Abandonment/Destruction ($508 permit fee)

PROPERTY OWNER: _____ PHONE: _____

MAILING ADDRESS: _____

_____

SITE ADDRESS: _____

ASSESSOR'S PARCEL #: _____

DRILLING CONTRACTOR: _____

BUSINESS ADDRESS: _____

_____

C-57 LICENSE NO.: _____

CONTACT PERSON: _____ PHONE: _____

**PLOT PLAN**: THE PROPOSED AREA SHALL BE STAKED ON SITE. **NOTE**: INDICATE NORTHERLY DIRECTION.

**REQUIRED**: Sketch of proposed well construction, including depth, to be attached to this application.




Revised 4/13/2018

WELL PERMIT APPLICATION

WELL DESCRIPTION:

| Method | Type | | Construction Details |
|---|---|---|---|
| ☐ Rotary | ☐ Domestic - Single Connection | _____ | Depth (ft.) |
| ☐ Cable | ☐ Domestic - Multiple Connection | _____ | Diameter (in.) |
| ☐ Dug | ☐ Ag Production - Irrigation | _____ | Width Seal (in.) |
| ☐ Other | ☐ Geothermal | _____ | Depth Perforations |
| | ☐ Cathodic | _____ | Annular Seal Depth |
| | ☐ Monitoring | | |

WELL DESTRUCTION: ***Well driller must hold a C-57 license***
(*Provide information for items 1 thru 7)*

1) Submit Well Log with application and a site plan.

2) Depth of Well: _____

3) Depth of proposed seal(s) (ft.): _____

4) Materials to be used: _____

5) Reason for Destruction: _____

I hereby agree that I will not commence work until I have a valid permit and in addition, I will notify the San Benito County Water District and receive approval prior to any proposed change in the construction and/or destruction of the well.

I agree to contact the San Benito County Water District at least 24 hours prior to sealing the annular space and I will confirm the inspection schedule with the inspector. **I will furnish the San Benito County Water District a Well Completion Report within 30 days of pouring annular seal, and if applicable, provide the Registration of Water Producing Facility form prior to putting the well into use.**

I understand approval of this application does not indicate that the property is suitable for permitting an individual sewage disposal system. *

_____ _____

PROPERTY OWNER DRILLING CONTRACTOR

***BOTH SIGNATURES MUST BE OBTAINED BEFORE PERMIT IS ISSUED.**

## CERTIFICATION OF WORKER'S COMPENSATION INSURANCE

I, _____, certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Worker's Compensation Laws of California, and if, after receiving the permit, I should at any time, become subject to the Worker's Compensation provisions of 3800 of the Labor Code. I shall immediately comply with those provisions or my permit is revoked.

_____ _____

DATE SIGNATURE

**OFFICE USE ONLY**

| | DATE | INITIALS | COMMENTS: |
|---|---|---|---|
| PRELIMINARY INSPECTION | _____ | _____ | _____ |
| SEAL INSPECTION | _____ | _____ | _____ |



Revised 4/13/2018

# APPENDIX F

## SBCWD Rate Documentation

**San Benito County Water District**
**Rates and Charges**

San Benito County Water District uses rates and charges to recover current operating, maintenance and interest costs related to water service from current users as required of a public enterprise agency, and as authorized by the voters of San Benito County Water District Zone 6 on November 8, 1977.

**SAN FELIPE DISTRIBUTION SYSTEM**
**(Blue valve customers - Zone 6)**
**Water Year 2025-2026**

## Water Charges

***Rate Basis:***

*The basis for the water charges are the operations and maintenance costs associated with the delivery of San Felipe Water. These costs include the District's share of the operations and maintenance costs for the United States Bureau of Reclamation Central Valley Project, the San Luis Delta Mendota Water Authority, the Reach 1 facility maintained by the Santa Clara Valley Water District as well as the District's own operation and maintenance costs. Also included are interest costs related to water service from the Central Valley Project.*

| | Current Rate | Unit of Measure |
|---|---|---|
| Agricultural | $306.00 | per acre foot |
| Agricultural Full Cost (RRA Section 205(a)(3)* | $306.00 | per acre foot |
| Agricultural Full Cost (RRA Section 202(3)* | $306.00 | per acre foot |
| Non-Agricultural (Municipal & Industrial) | $873.00 | per acre foot |

***Full cost is applicable to certain forms of ownership as determined by federal regulations. Those regulations are dealt with through the United States Bureau of Reclamation land registration process as administered by the District.*

## Power Charge

***Rate Basis:***

*The basis for the power charge is the cost of pumping, transmission and distribution power associated with delivery of water to customers. These costs include pumping associated with the United States Bureau of Reclamation pumping facilities, District pumping stations for specific subsystems, and power costs associated with San Justo Reservoir and the San Felipe Distribution system.*

| | Current Rate | Unit of Measure |
|---|---|---|
| Subsystem 2 | $ 43.10 | per acre foot |
| Subsystem 6H | $ 43.10 | per acre foot |
| Subsystem 9L | $100.70 | per acre foot |
| Subsystem 9H | $100.70 | per acre foot |
| All other subsystems | $ 43.10 | per acre foot |

## Regulatory Overuse Charge

Water used over the allocation(s) will be billed the regulatory overuse charge. This regulatory charge is to encourage conservation and discourage overuse, and is the current spot market rate, with a maximum of $2,000 per acre foot. This Regulatory Overuse Charge is subject to change based on water supply.

## STANDBY AND AVAILABILITY CHARGE – Zone 6

***Rate Basis:***

*The Standby & Availability charge being all or a portion of the capital costs and fixed maintenance, repair and replacement costs of the distribution system.*

The current Standby & Availability charge is $6.00 per acre, per year. This charge is applicable only to parcels of land that receive or are eligible to receive water service from the San Felipe Distribution System either by direct delivery or by special agreement and is based on the fact that water is available to those particular parcels of land. The District Act enables the District to charge a maximum of $10.00 per acre, per year. The District Act authorizes the District to set an annual Standby & Availability charge, by resolution, on or before the first day of July in any calendar year. This charge is collected for the District by the County of San Benito and is itemized on the tax statement as *SAN BENITO-STANDY-BY*.

## GROUNDWATER CHARGES
## (Well customers – Zone 6)

***Rate Basis:***

*The groundwater charge is based on the costs reasonably borne by the District in providing the water supply service in the period of charge. A groundwater extraction charge is assessed on all wells in Zone 6.*

| | **Current Rate** | **Unit of Measure*** ** |
|---|---|---|
| Water Primarily for Municipal and Industrial Purposes | $ 14.30 | per acre foot |
| Water Primarily for Agricultural Purposes | $ 14.30 | per acre foot |

*********If a water producing facility is not measured with a water measuring device, the acre foot consumption is based on the following:*

| | |
|---|---|
| *Base water per residence* | *.10 acre feet* |
| *Inside water use* | *.05 acre feet per person per residence or dwelling unit* |
| *Outside water use for Irrigation* | *Water areas up to 2.0 acres, .09 acre feet per 1000 square feet of watered land.*<br><br>*Water areas 2.0 acres and greater, generally accepted unit water duties based on crop type and irrigation method as determined by the District.* |
| *Outside water use for livestock watering* | *.02 acre feet per animal unit up to 10 and .01 acre feet per animal unit for each unit above 10* |

## RECYCLED WATER CHARGES
## (Zone 6)

***Rate Basis:***

*The basis for the water rates and charges are the operations and maintenance costs associated with the delivery of recycled water. These include water supply, water quality and infrastructure.*

| | **Current Rate** | **Unit of Measure** |
|---|---|---|
| Recycled Water Rate | $ 306.00 | per acre foot |
| Power Charge | $ 108.30 | per acre foot |

Minimum Annual Purchase of water for each parcel (applied to water charge) $700.00

## TAXES
## (All Parcels within Zone 6)

*The tax assessing ability of the District is authorized by the California Water Code, Appendix 70, Sections 70-1 through 70-40, known as the San Benito County Water District Act.*

***Land Tax:***
$0.25 per $100.00 of assessed land value for all parcels within Zone 6 to pay for the construction, operating, maintenance and capital repayment of the distribution system and the District's share of the San Felipe Division Facilities. This tax is collected for the District by the County of San Benito and is itemized on the tax statement as *SB WATER-SAN FELIPE*.

## DISTRICT SERVICE FEES

The District established the following service fees for the activities listed below:

| | |
|---|---|
| Non-Sufficient Fund Fee | $ 39.00 |
| Closing and Valve Shut-off | $110.00 |
| Re-open Valve / New Customer Account | $110.00 |
| Process Two-Party Water Transfer | $ 71.00 |
| Fire Protection Fee | $186.00 |
| New Meter Facility Construction Fee: | |
| 1. New Meter | Cost of meter |
| 2. Inspection Fee | 3% of total construction cost |

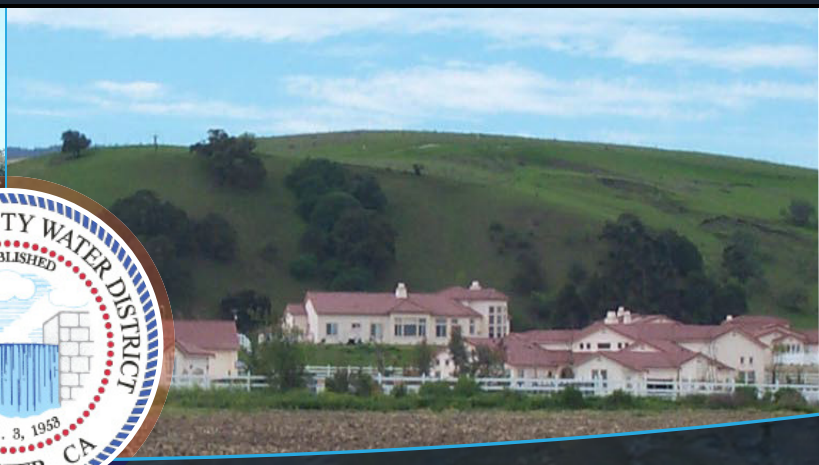
***District fees are reviewed and updated annually.***

# APPENDIX G

## Annual Report WY2024

March 2025



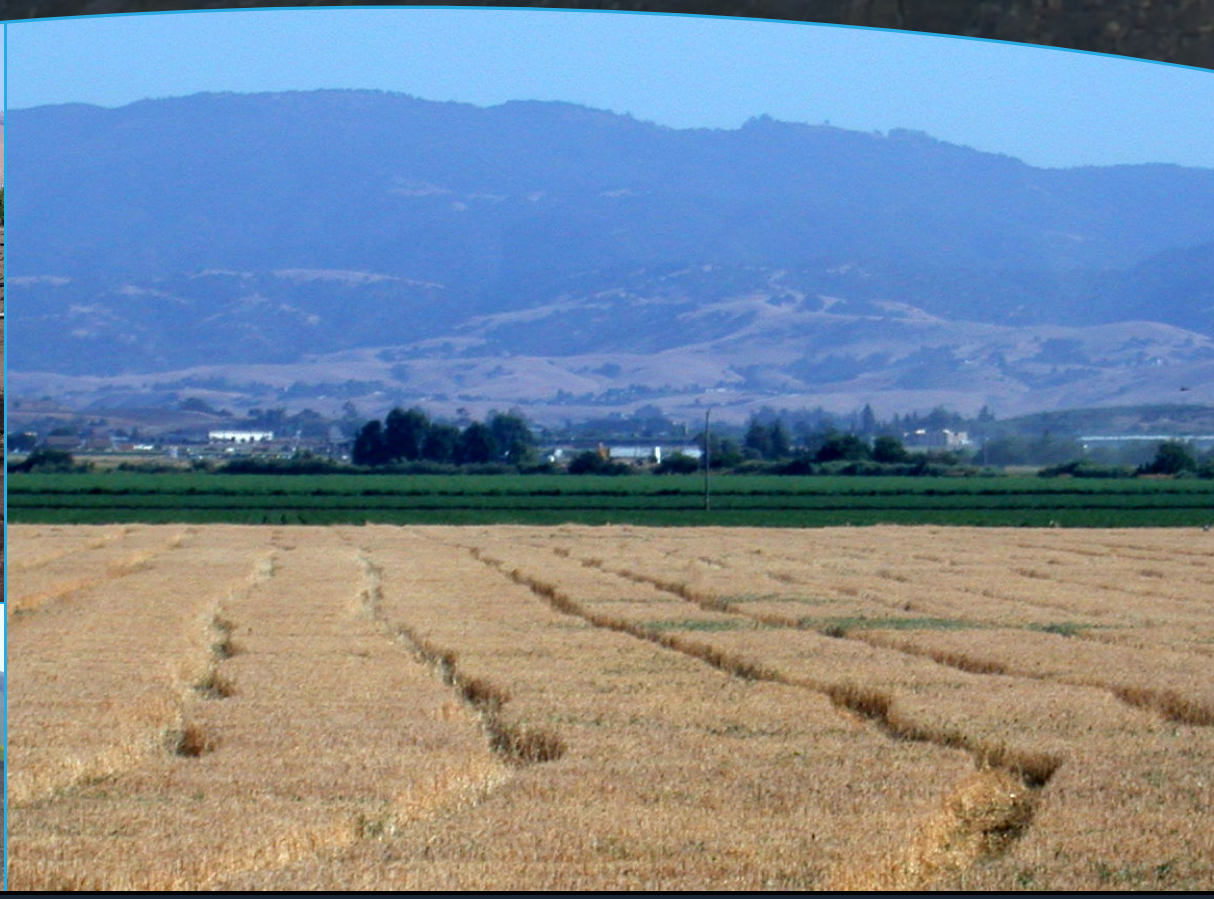


# Annual Groundwater Report

***Water Year 2024***







TODD GROUNDWATER

# NORTH SAN BENITO ANNUAL GROUNDWATER REPORT 2024

**March 2025**

TODD GROUNDWATER

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

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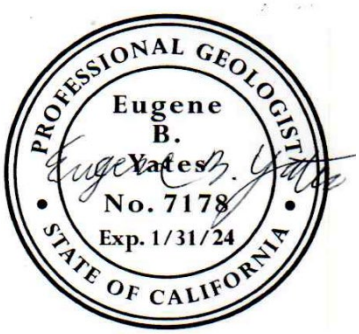
Iris Priestaf, PhD
President

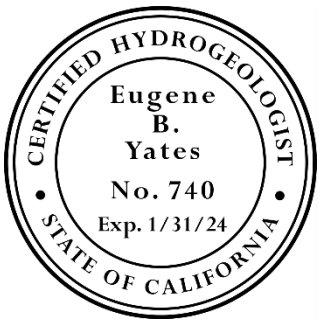








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# EXECUTIVE SUMMARY

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.

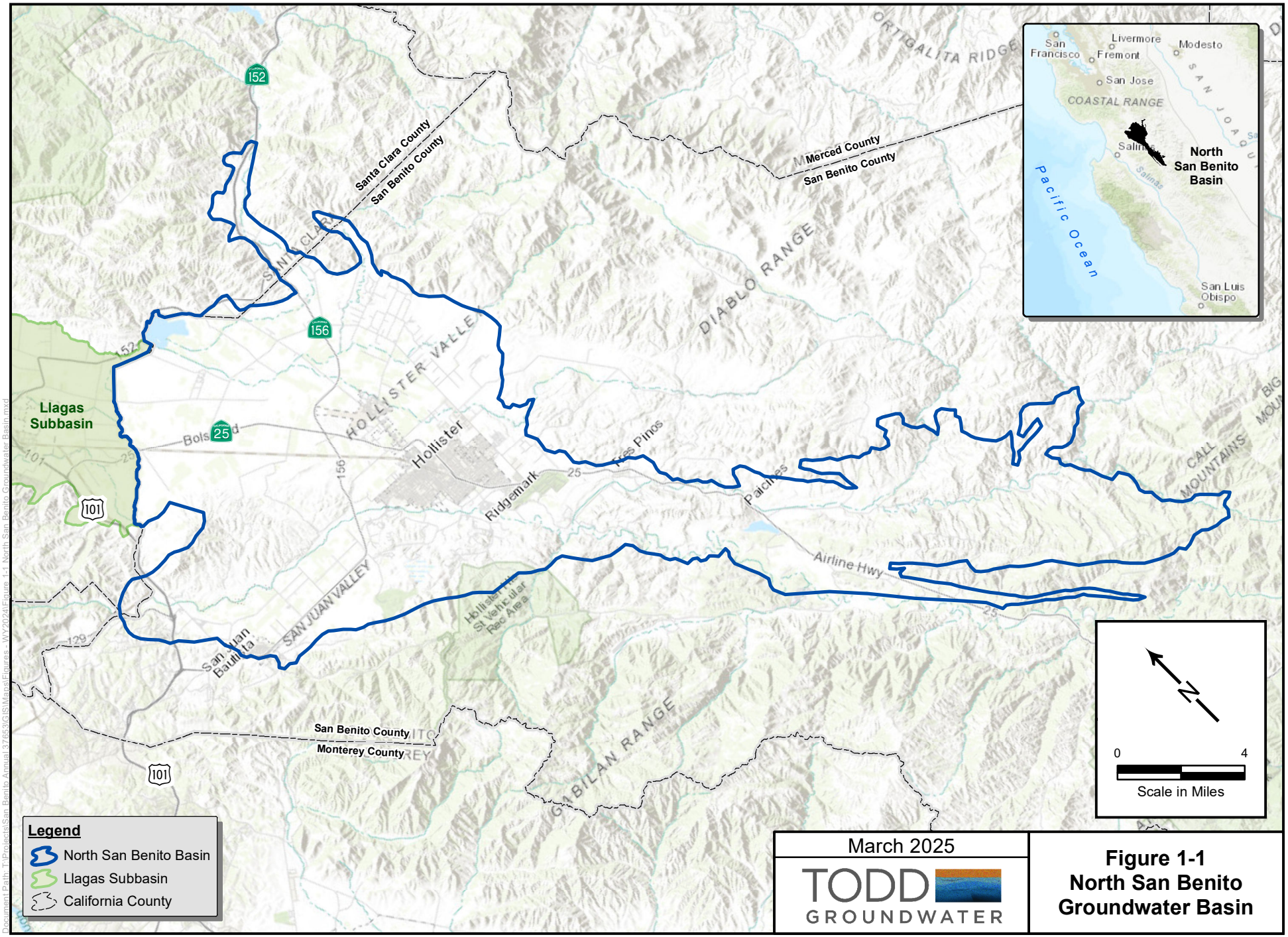
This Annual Groundwater Report also fulfills the requirements of the 2014 Sustainable Groundwater Management Act (SGMA). SGMA requires sustainable management of medium and high priority groundwater basins and empowers local Groundwater Sustainability Agencies (GSAs) to manage groundwater resources. San 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.

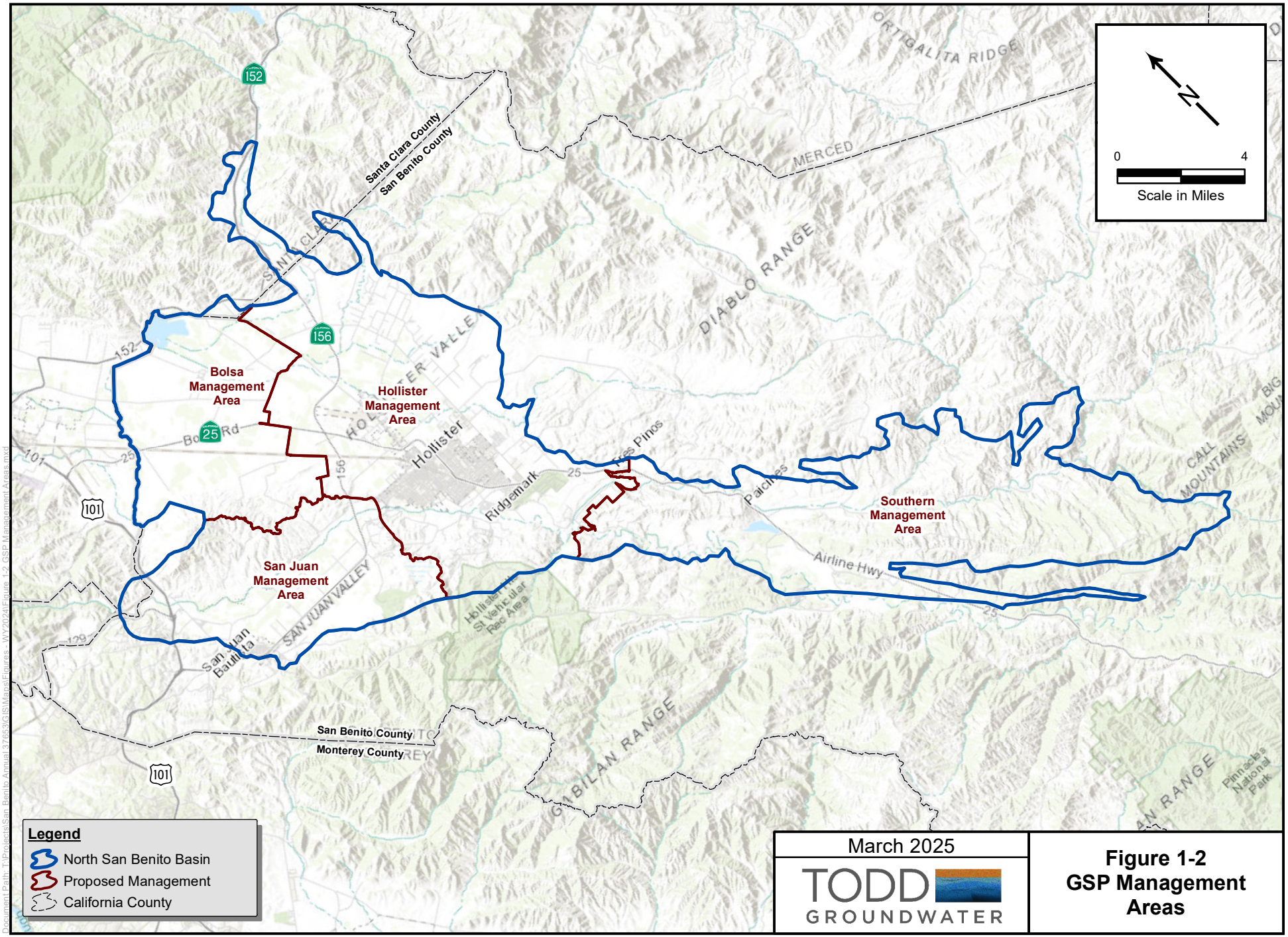
In accordance with SGMA, this Annual Report documents water supply sources and use, groundwater elevations and storage, and management activities from October 2023 through September 2024. The SGMA elements guide, detailing the required SGMA components, is included in **Appendix A**. This Annual Report 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.


Santa Clara County
San Benito County
Merced County
San Benito County
ORTIGALITA RIDGE
DIABLO RANGE
GABILAN RANGE
HOLLISTER VALLEY
SAN JUAN VALLEY
Llagas Subbasin
Hollister
Ridgemark
Tres Pinos
Paicines
CALL MOUNTAINS
Airline Hwy
San Juan Bautista
Hollister Hills SVRA
San Benito County
Monterey County
152
156
25
101
129
Pacific Ocean
San Francisco
Livermore
Fremont
Modesto
San Jose
COASTAL RANGE
Salinas
San Luis Obispo
North San Benito Basin
Legend
North San Benito Basin
Llagas Subbasin
California County
0
4
Scale in Miles
March 2025
TODD GROUNDWATER
Figure 1-1
North San Benito Groundwater Basin


Bolsa Management Area
Hollister Management Area
San Juan Management Area
Southern Management Area
Santa Clara County
San Benito County
San Benito County
Monterey County
Hollister
San Juan Bautista
Ridgemark
Paicines
Airline Hwy
DIABLO RANGE
GABILAN RANGE
MERCED
ORTIGALITA RIDGE
CALL MOUNTAINS
SAN JUAN VALLEY
Pinnacles National Park
Hollister SVRA
Rec Area
N
0
4
Scale in Miles
Legend
North San Benito Basin
Proposed Management
California County
March 2025
TODD GROUNDWATER
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.

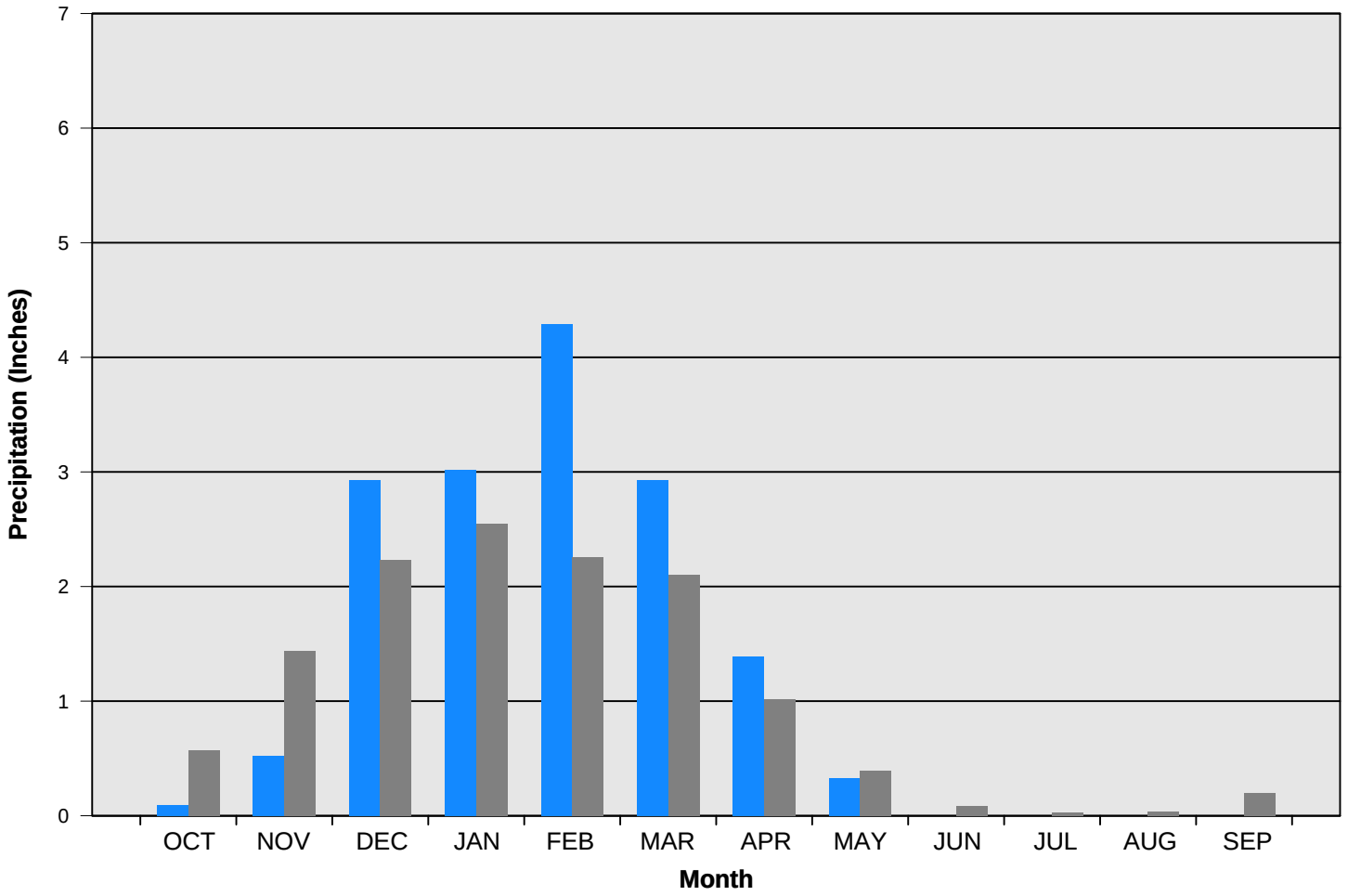
## Groundwater Elevations

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).



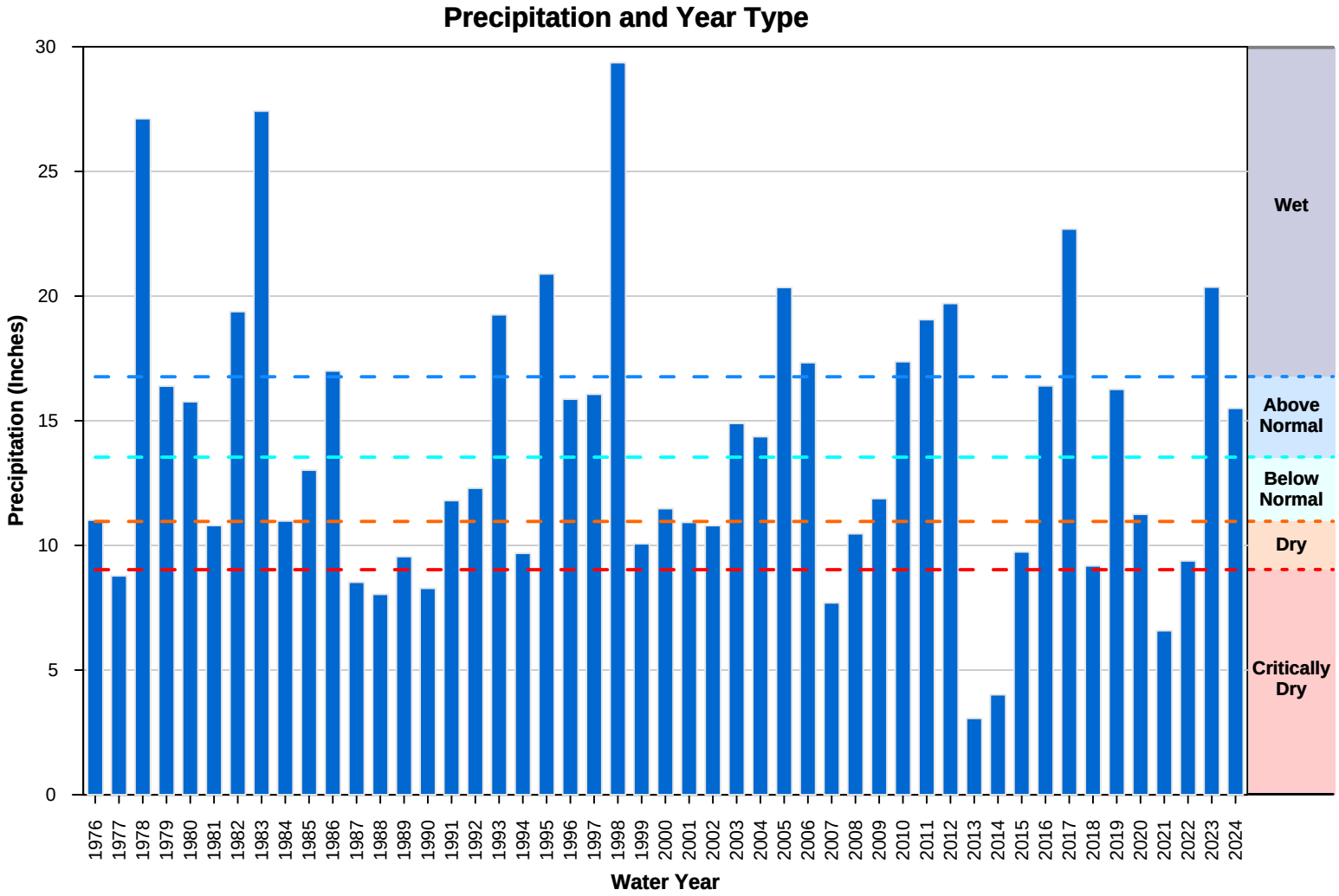

2024 - (15.5 in)
Average - (12.9 in)

Source: CIMIS

March 2025

TODD GROUNDWATER

**Figure 3-1**
**Water Year 2024**
**Precipitation**

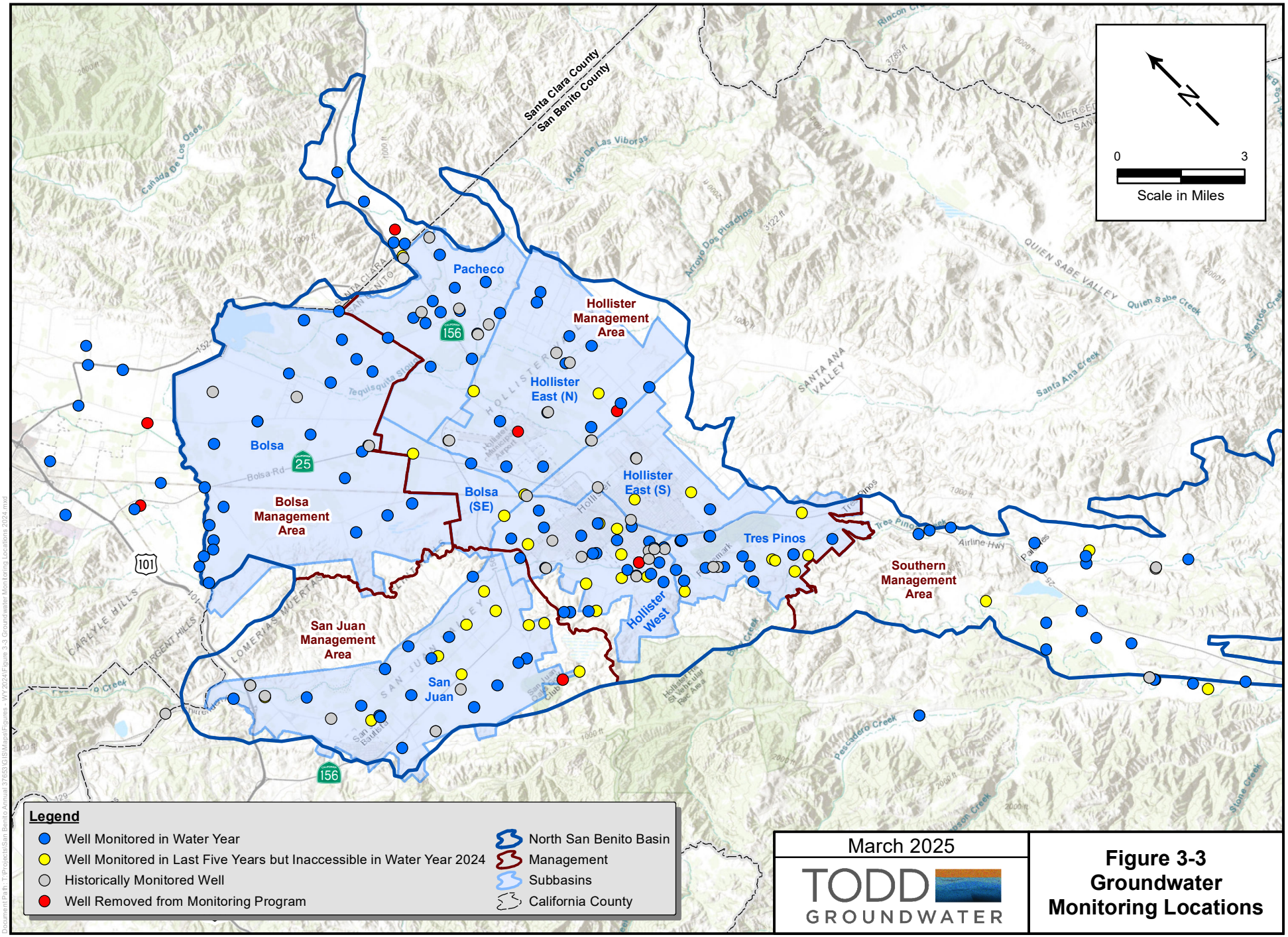



Source: WRCC Hollister 1 and Hollister 2 Stations

March 2025

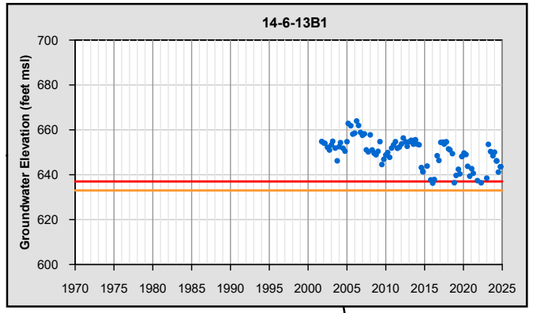
TODD GROUNDWATER

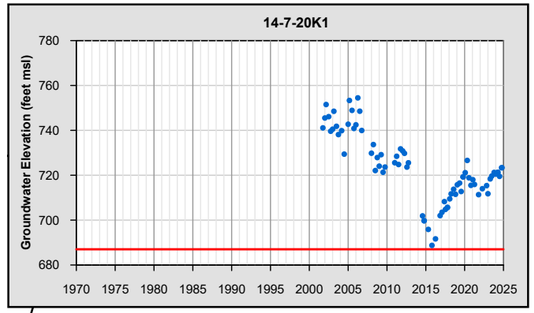
**Figure 3-2**
**Annual Precipitation**
**1976-2024**

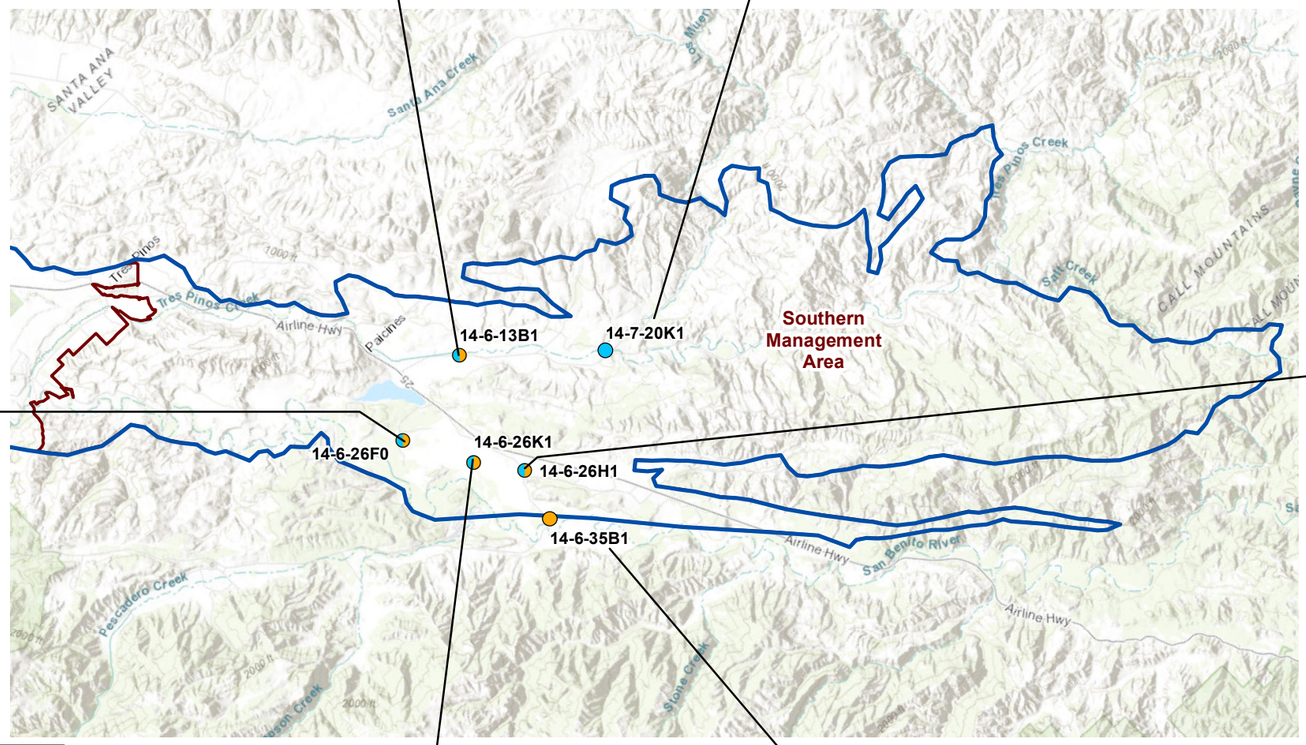

Santa Clara County
San Benito County
Pacheco
Hollister Management Area
Hollister East (N)
Bolsa
Bolsa Management Area
Bolsa (SE)
Hollister East (S)
Tres Pinos
Southern Management Area
Hollister West
San Juan Management Area
San Juan
Scale in Miles
0
3
Legend
Well Monitored in Water Year
Well Monitored in Last Five Years but Inaccessible in Water Year 2024
Historically Monitored Well
Well Removed from Monitoring Program
North San Benito Basin
Management
Subbasins
California County
March 2025
TODD GROUNDWATER
Figure 3-3
Groundwater Monitoring Locations

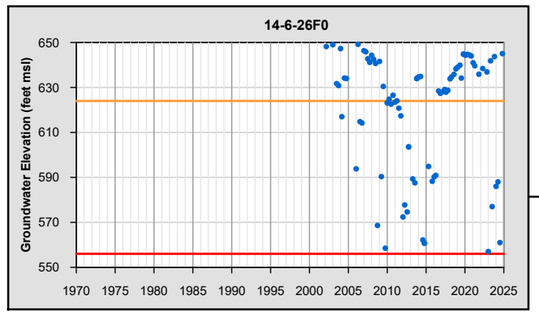
# 3 – BASIN CONDITIONS

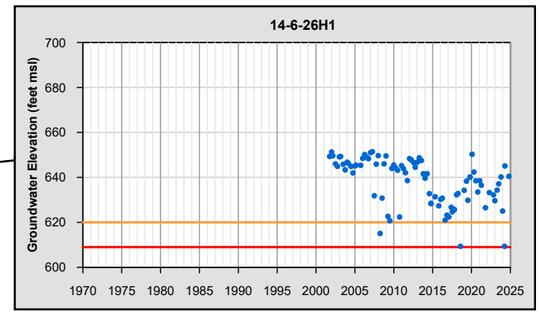
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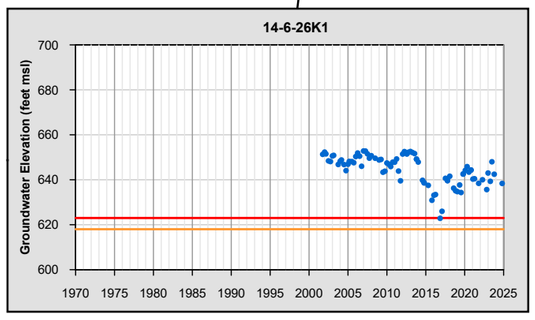


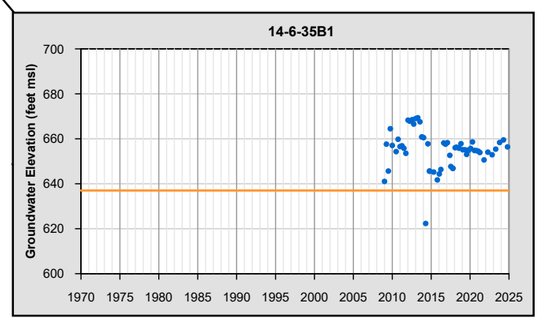



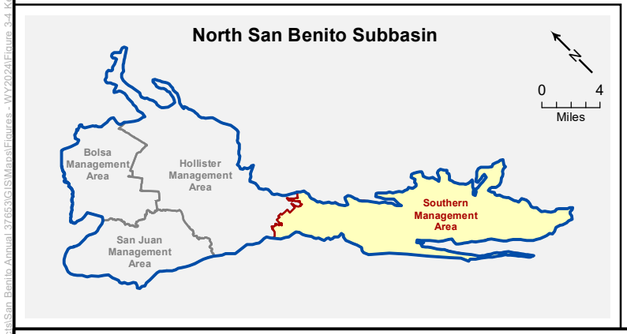




GDE Hydrograph
Water Level Hydrograph
Water Level/GDE Hydrograph
North San Benito Basin
Proposed Management
California County

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

0 2
Scale in Miles

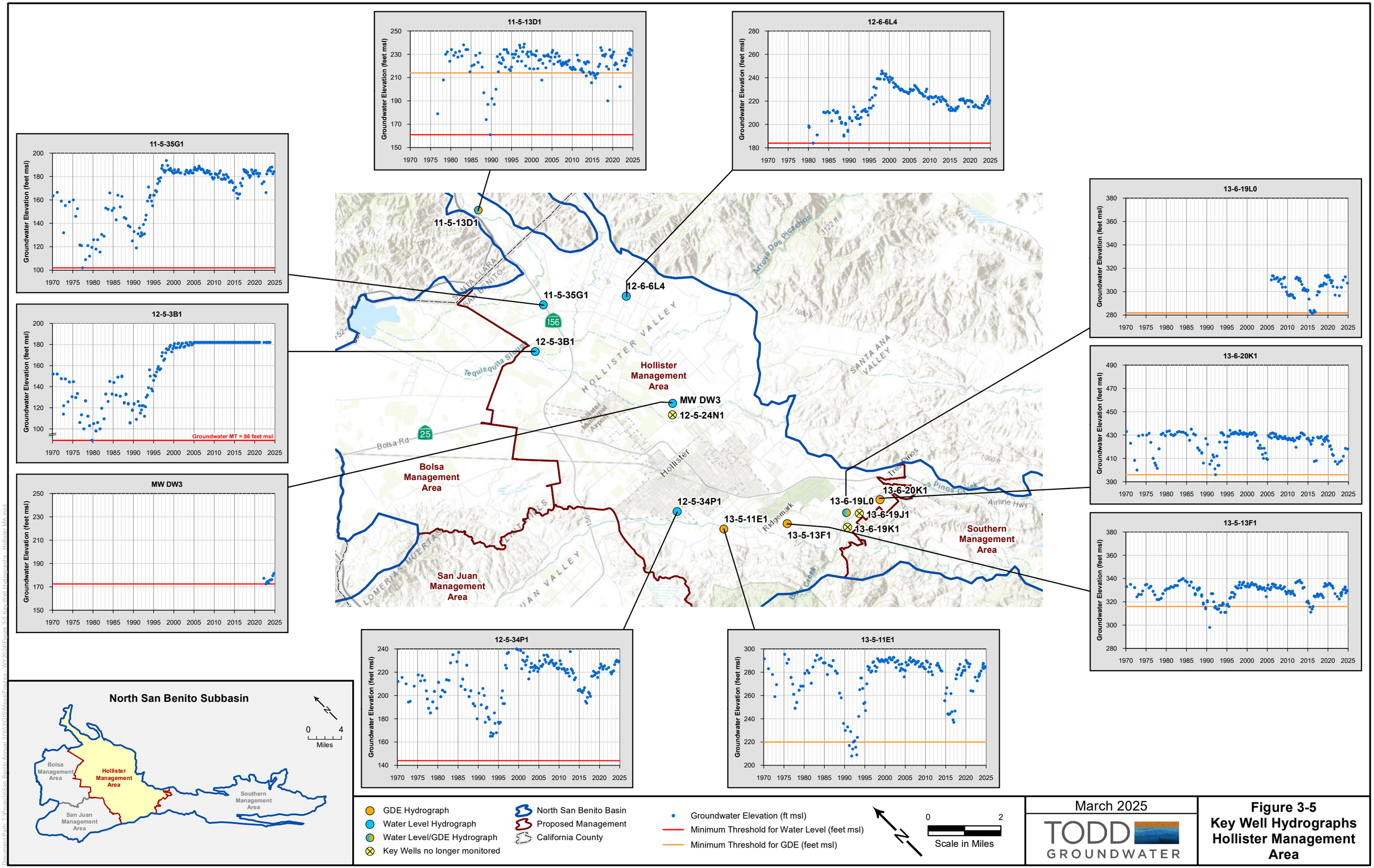
March 2025

TODD GROUNDWATER

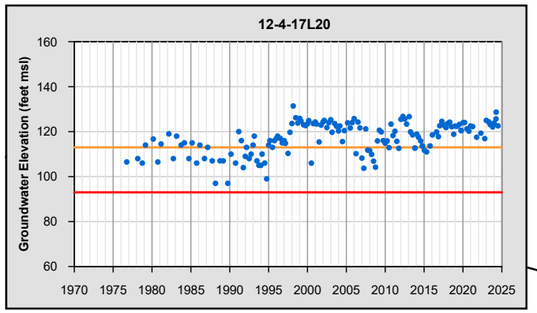
**Figure 3-4**
**Key Well Hydrographs**
**Southern Management Area**

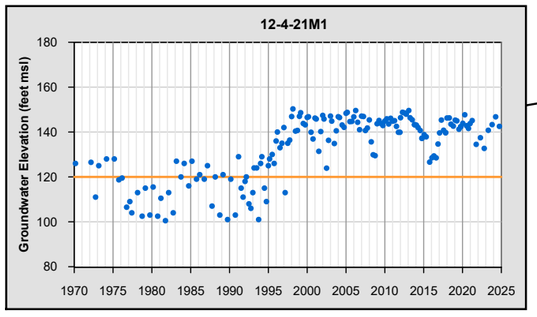
Projects\Path 1\Projects\Groundwater\Figures\WY2024\Figure 3-4 Key Well Hydrographs - Southern MA.mxd

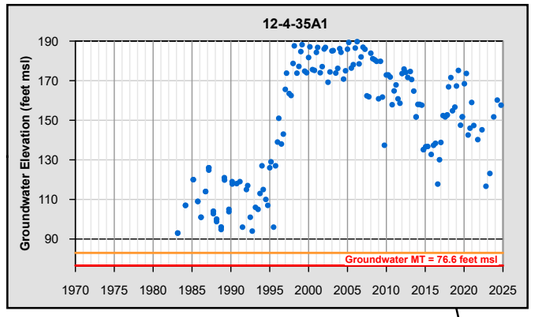
# 3 – BASIN CONDITIONS

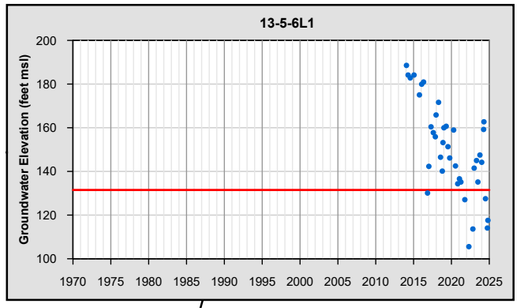

11-5-13D1
Groundwater Elevation (feet msl)
12-6-6L4
11-5-35G1
12-5-3B1
Groundwater MT = 86 feet msl
MW DW3
13-6-19L0
13-6-20K1
13-6-19K1
13-6-19J1
13-5-13F1
12-5-34P1
13-5-11E1
Hollister Management Area
Bolsa Management Area
San Juan Management Area
Southern Management Area
SANTA CLARA
SAN BENITO
HOLLISTER VALLEY
SANTA ANA VALLEY
Arroyo Dos Picachos
Tequisquita Slough
Bolsa Rd
Hollister
Ridgemark
Airline Hwy
Trabuco Pinos
Pinos Creek
Bird Creek
LOMERIAS MUERTAS
SAN JUAN VALLEY
North San Benito Subbasin
0 4 Miles
0 2 Scale in Miles
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)
March 2025
TODD GROUNDWATER
Figure 3-5
Key Well Hydrographs
Hollister Management Area

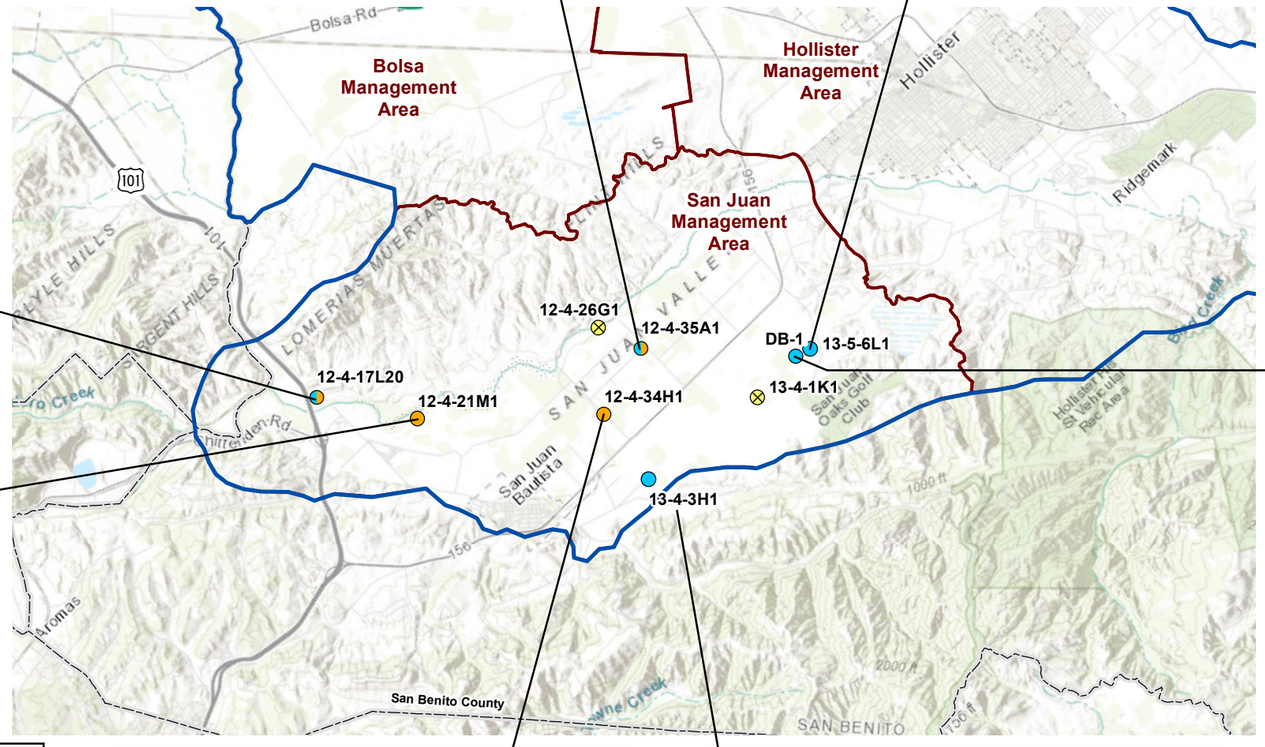
# 3 – BASIN CONDITIONS

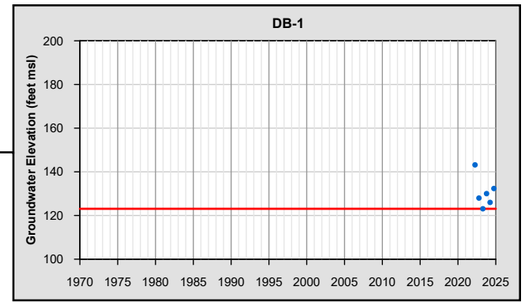


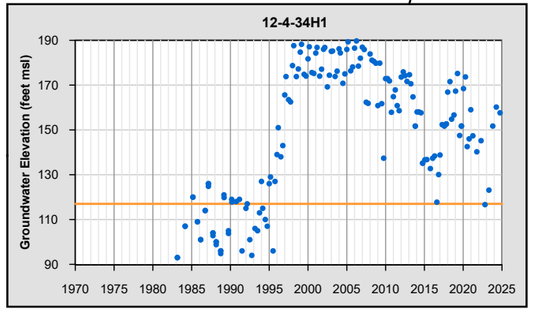



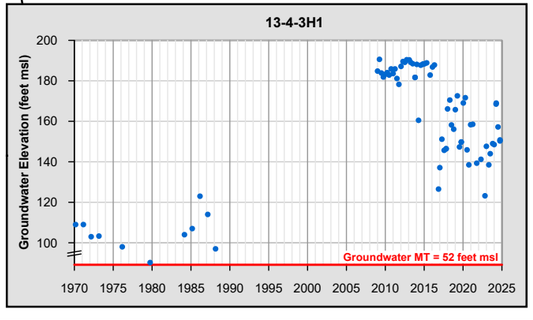



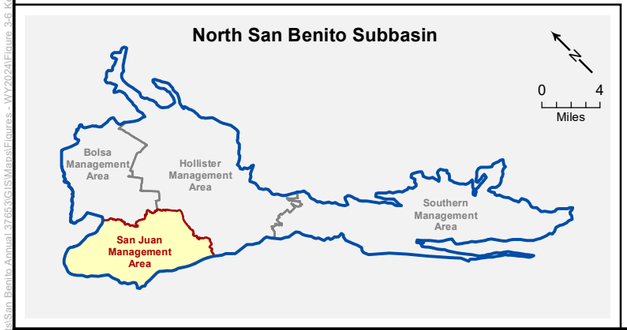




GDE Hydrograph
Water Level Hydrograph
Water Level/GDE Hydrograph
Key Wells no longer monitored

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

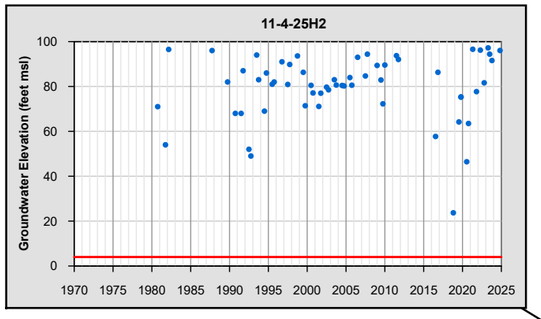
March 2025

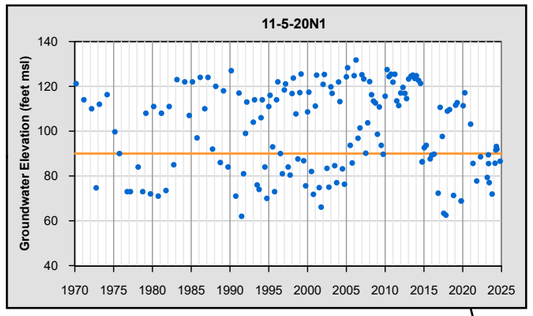
TODD GROUNDWATER

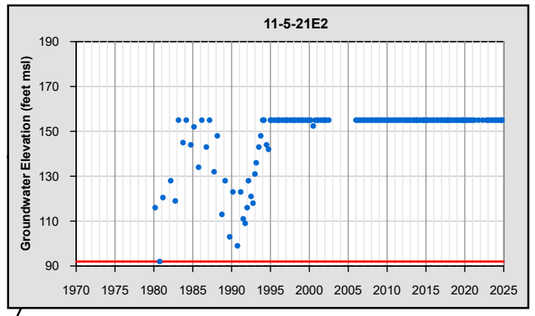
**Figure 3-6**
**Key Well Hydrographs**
**San Juan Management Area**

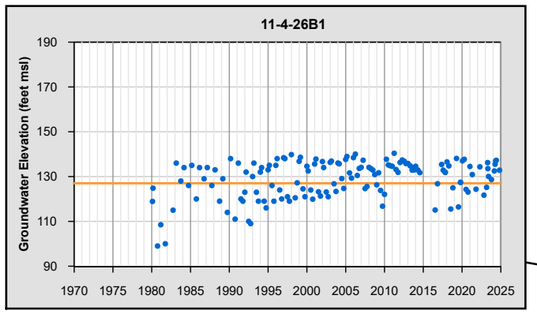
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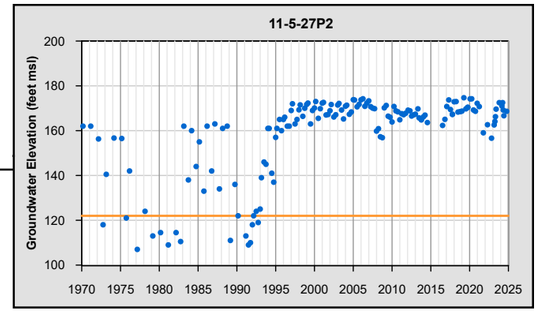
# 3 – BASIN CONDITIONS

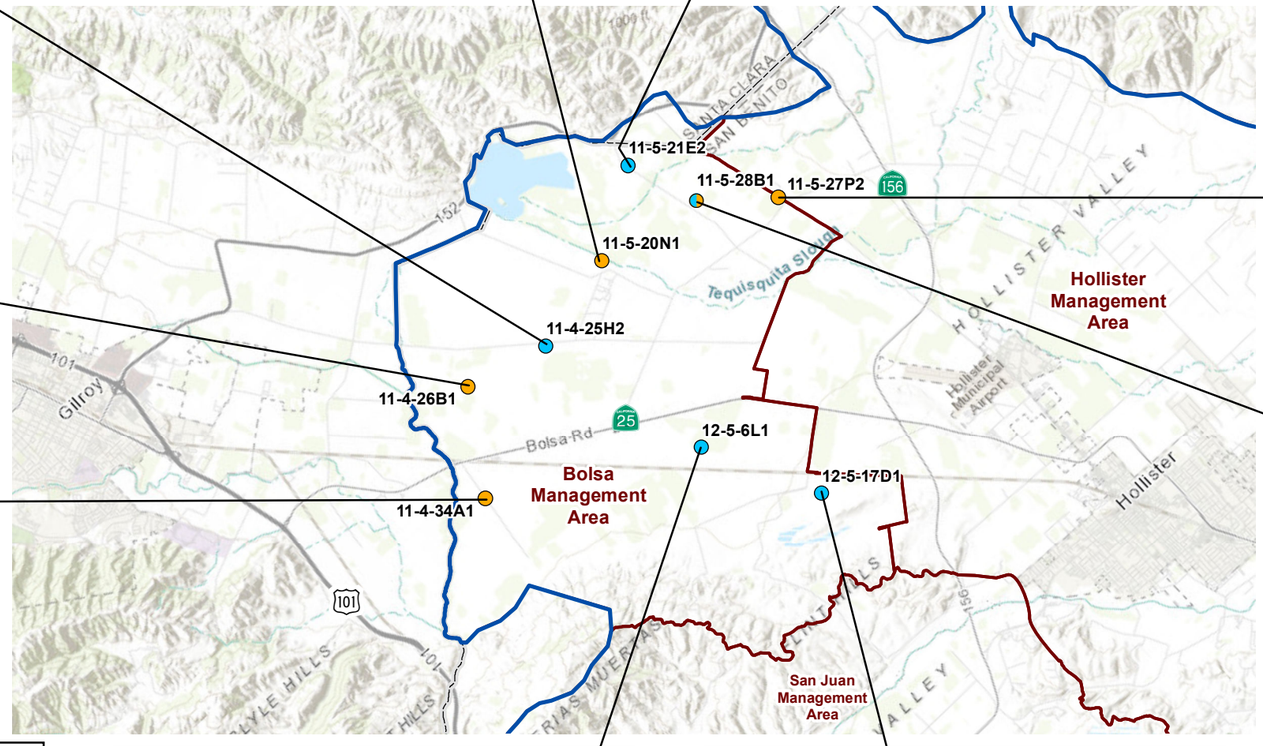


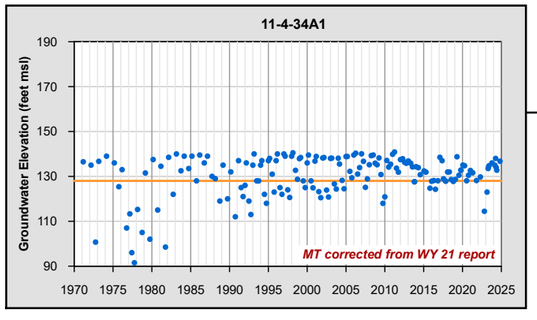



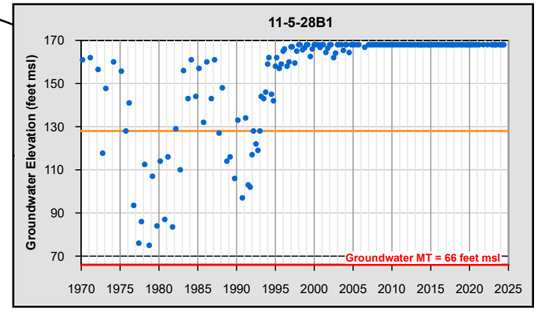



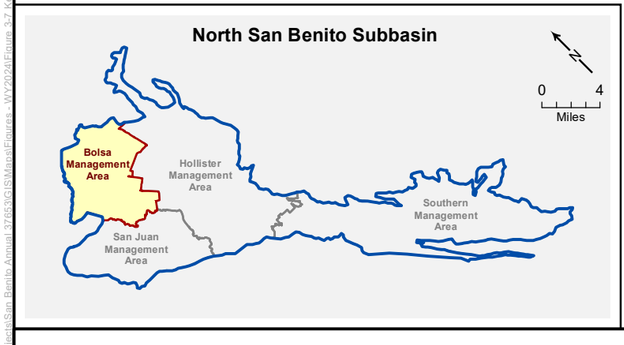



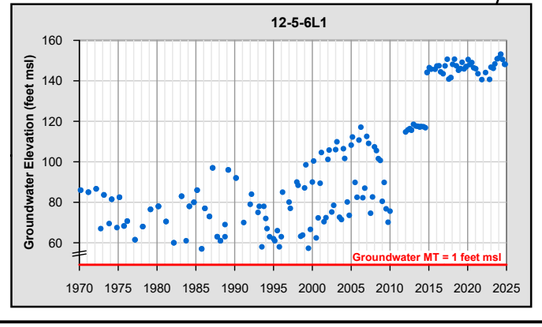



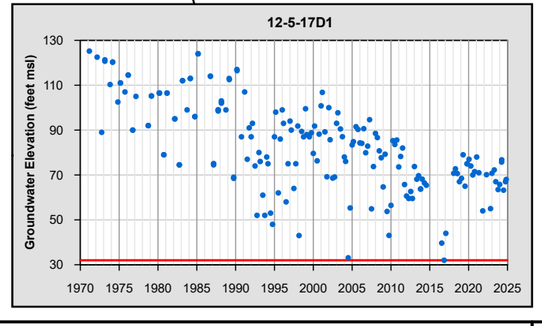




GDE Hydrograph
Water Level Hydrograph
Water Level/GDE Hydrograph

North San Benito Basin
Proposed Management Areas
California County

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

N
0 2
Scale in Miles

March 2025

TODD GROUNDWATER

**Figure 3-7**
**Key Well Hydrographs**
**Bolsa Management Area**

P:\Projects\San Benito Annual 2025\GIS\MXD\Figure 3-7 Key Well Hydrographs Bolsa MA.mxd

# 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.

# 4-WATER BALANCE

**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** |

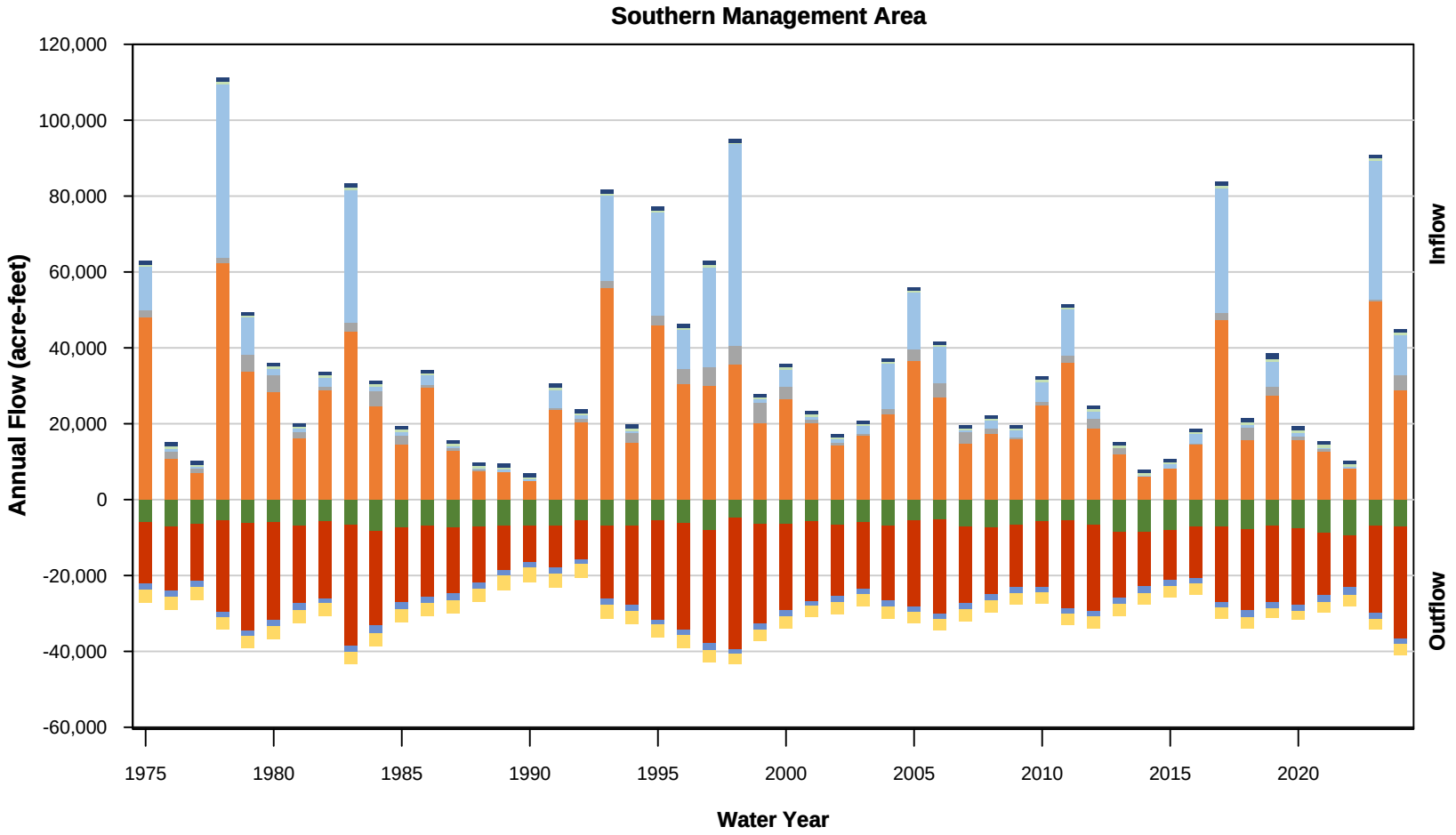
**TABLE 4-3. WATER BALANCE UPDATE - SAN JUAN MA, AF**

| 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**

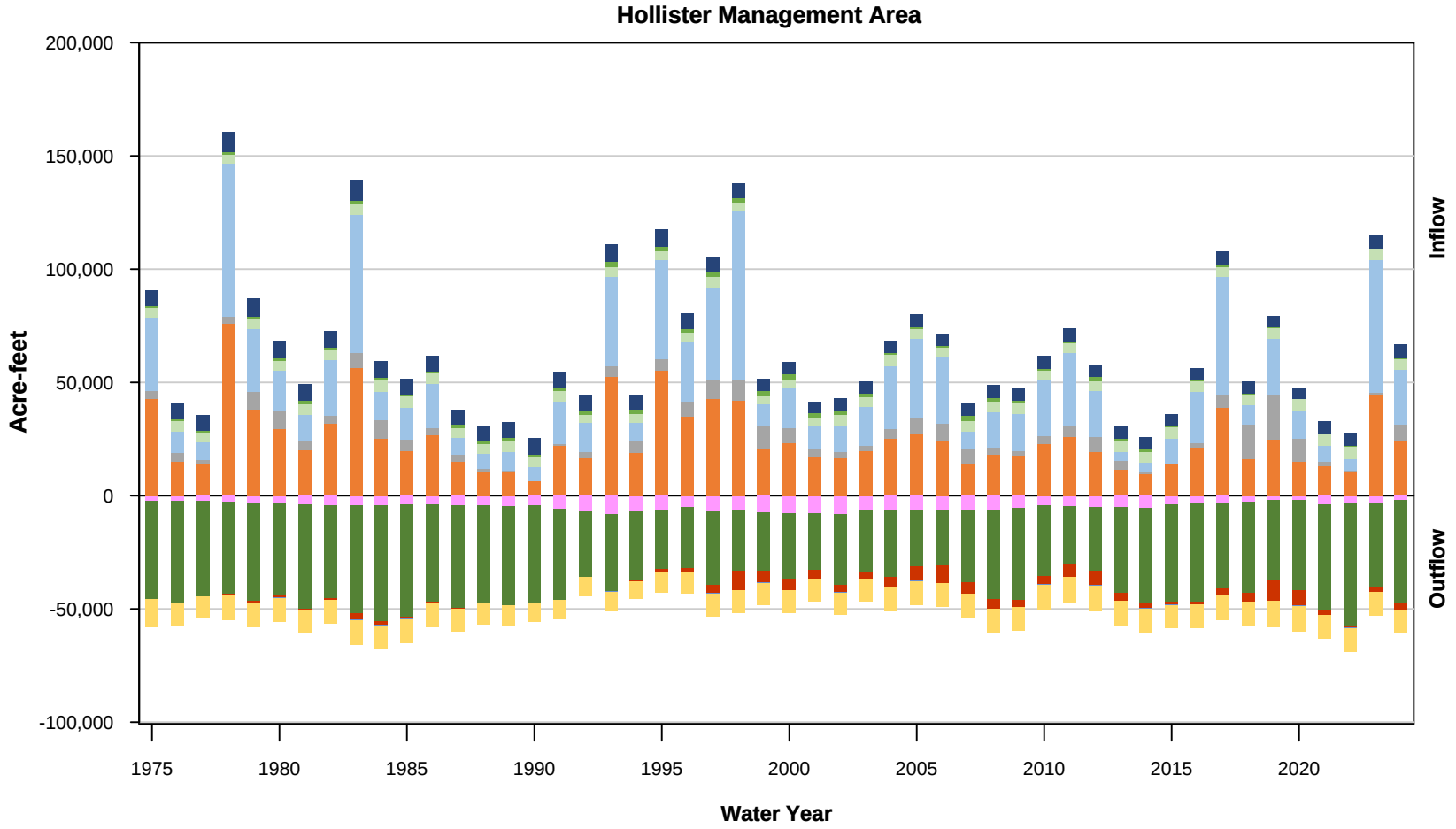
- Shallow discharge to streams
- Subsurface outflow to external basin
- Wells - M&I and domestic
- Wells - agricultural
- Groundwater discharge to streams
- Riparian evapotranspiration
- Outflow to Hollister MA

March 2025

TODD GROUNDWATER

**Figure 4-1**
**Water Balance**
**Southern**
**Management Area**

Path: T:\Projects\San Benito Annual 376\GIS\GRAPH\CSWY2024\Figure 4-1 Water Balance Southern Management Area.gpj




**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**

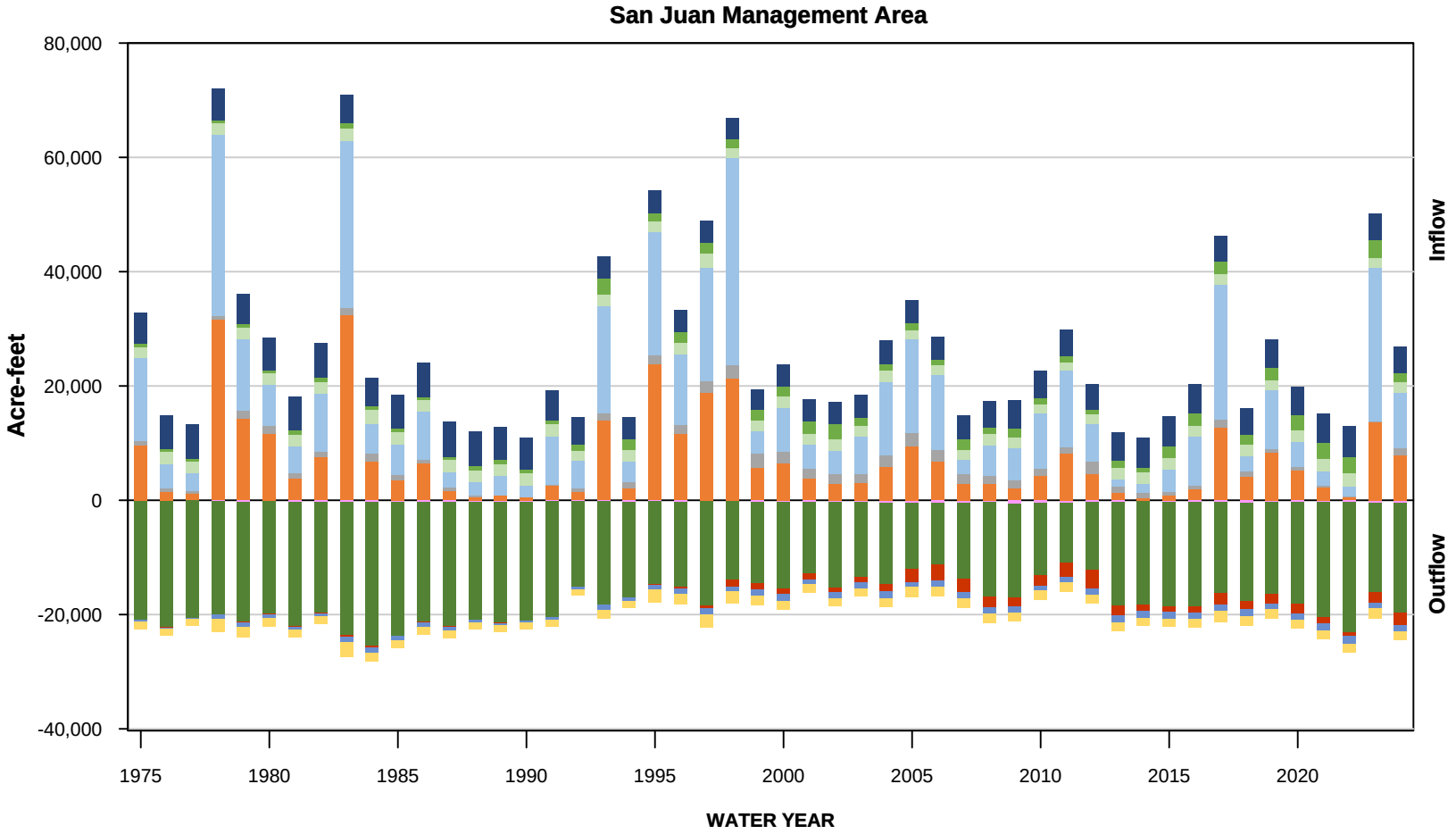
- Shallow discharge to streams (Shallow)
- Subsurface outflow to external basins
- Wells - M&I and domestic
- Wells - agricultural
- Groundwater discharge to streams
- Riparian evapotranspiration
- Outflow to Bolsa and San Juan MAs

March 2025

TODD GROUNDWATER

**Figure 4-2**
**Water Balance**
**Hollister**
**Management Area**

Path: T:\Projects\San Benito Annual 376533\GRAPH\CSWV2024\Figure 4-2 Water Balance Hollister Management Area.jpg




**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**

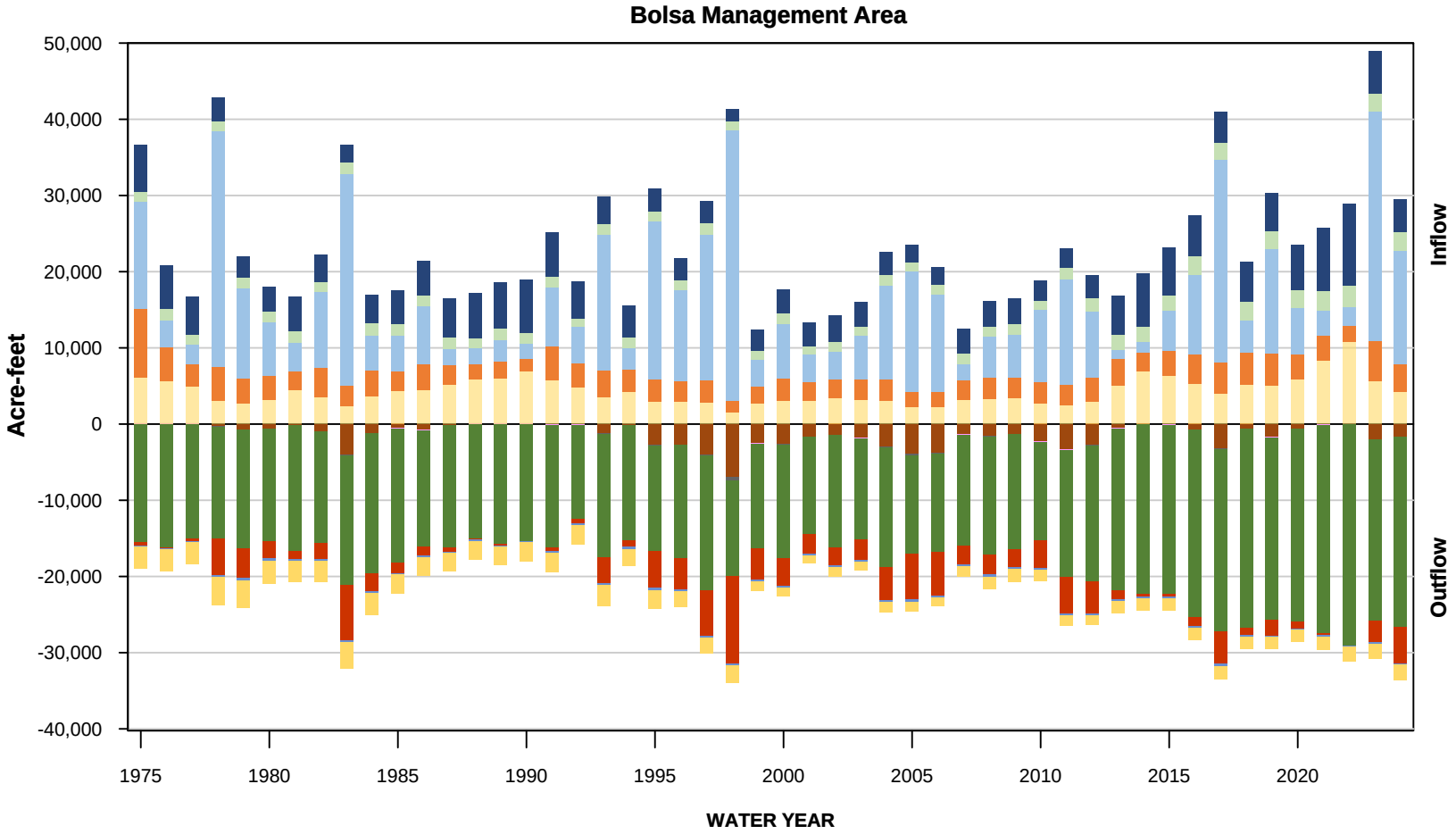
- Shallow discharge to streams
- Subsurface outflow to external basins
- Wells - M&I and domestic
- Wells - agricultural
- Groundwater discharge to streams
- Riparian evapotranspiration
- Outflow to Bolsa MA

March 2025

TODD GROUNDWATER

**Figure 4-3**
**Water Balance**
**San Juan**
**Management Area**

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**Inflows**

- Inflow from Hollister and San Juan MAs
- 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 San Juan MA

March 2025

TODD GROUNDWATER

**Figure 4-4**
**Water Balance**
**Bolsa**
**Management Area**

Path: T:\Projects\San Benito Annual 376333\GRAPH\CSWY 2024\Figure 4-4 Water Balance Bolsa Management Area.ggp

## 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.

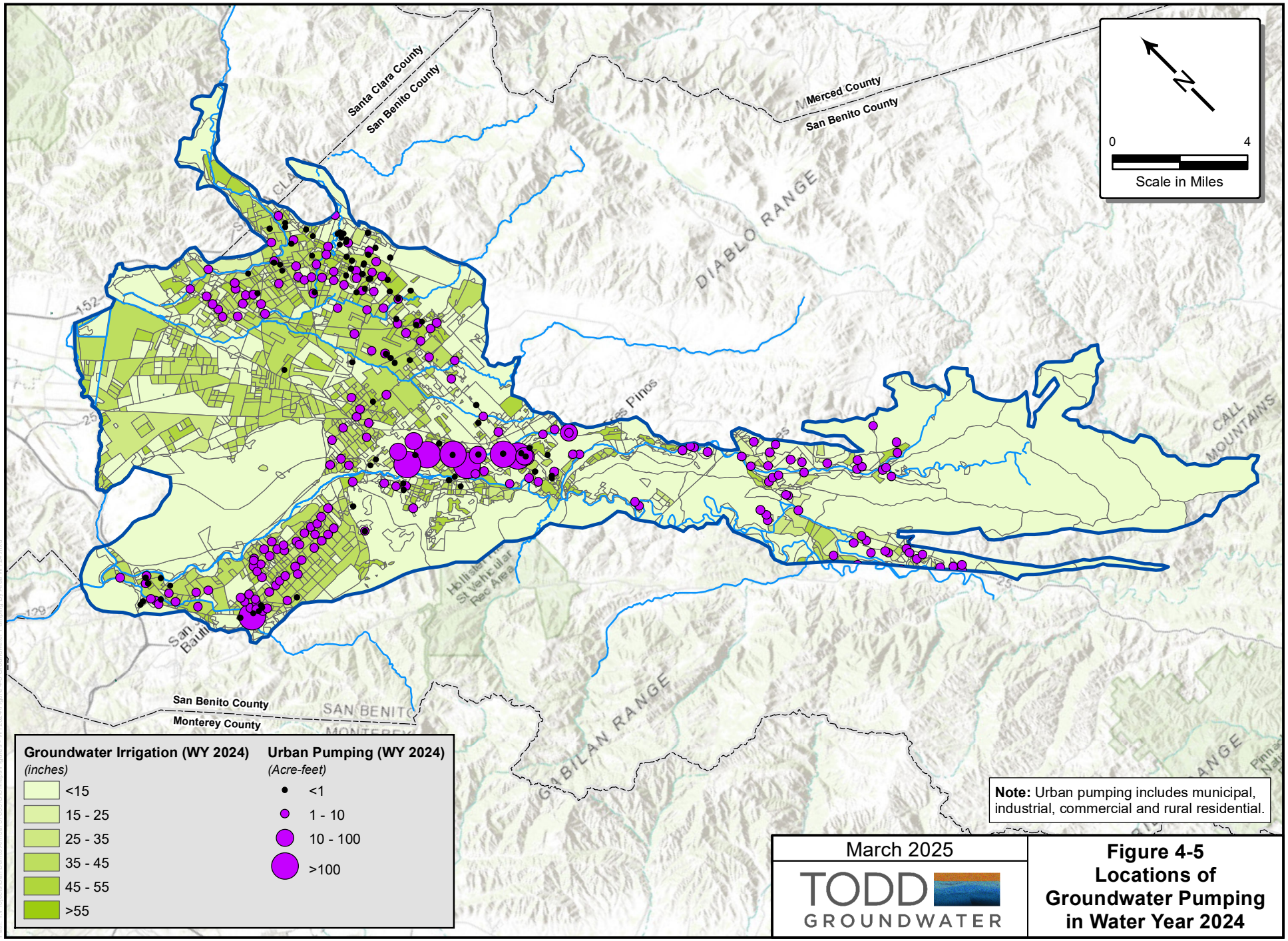
Municipal pumping by City of Hollister and SSCWD is in the Hollister MA, with additional pumping by San Juan Bautista in the San Juan MA. Pumping by major municipal providers is measured, as is pumping by smaller community water systems and self-supplied commercial and industrial facilities within Zone 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.


Santa Clara County
San Benito County
Merced County
San Benito County
DIABLO RANGE
CALL MOUNTAINS
Pinos
Hollister St Vehicular Rec Area
San Benito County
Monterey County
SAN BENITO
GABILAN RANGE
N
0
4
Scale in Miles
Groundwater Irrigation (WY 2024)
(inches)
<15
15 - 25
25 - 35
35 - 45
45 - 55
>55
Urban Pumping (WY 2024)
(Acre-feet)
<1
1 - 10
10 - 100
>100
Note: Urban pumping includes municipal, industrial, commercial and rural residential.
March 2025
TODD GROUNDWATER
Figure 4-5
Locations of Groundwater Pumping in Water Year 2024

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.

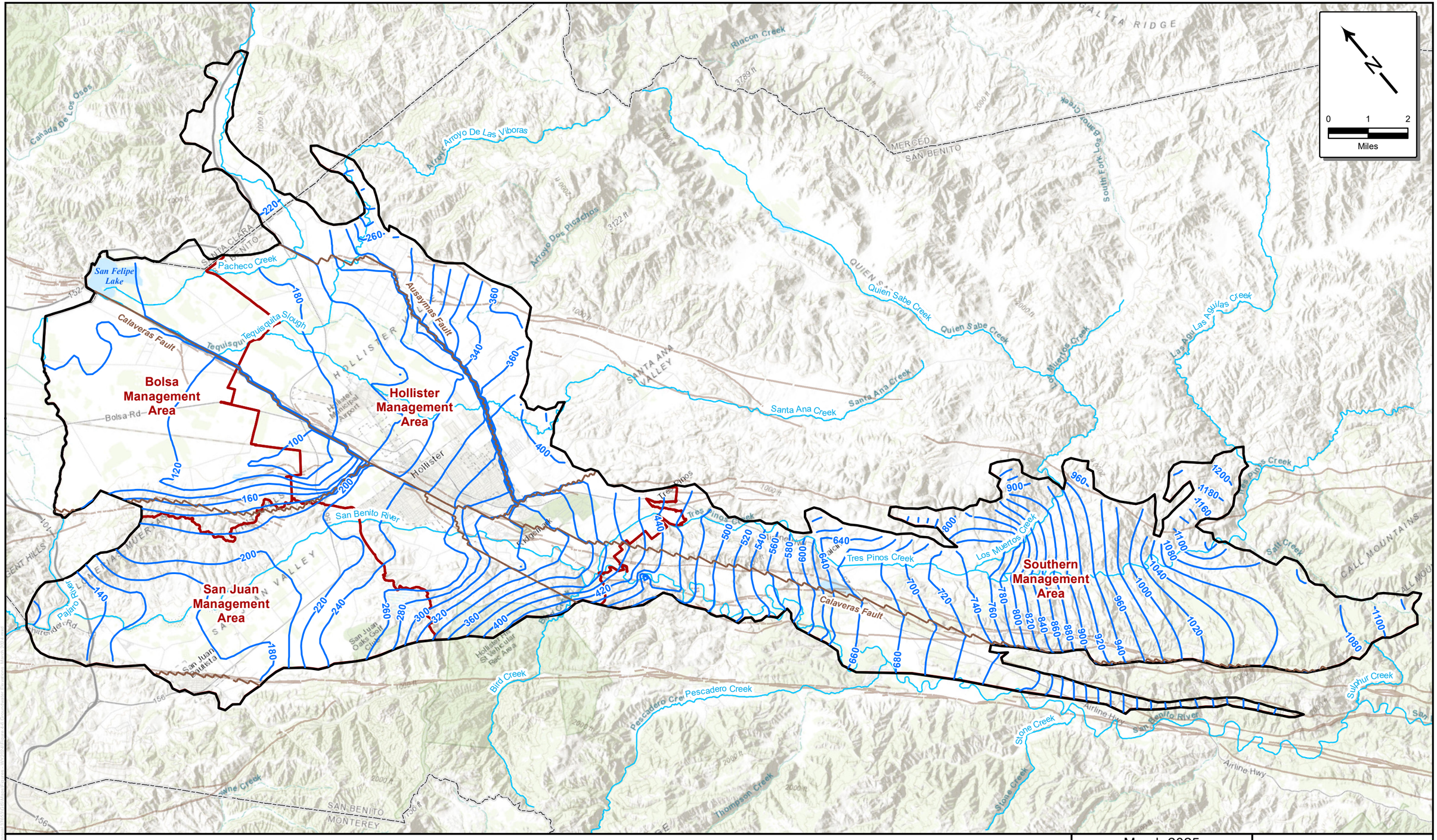
**Figure 4-8** shows contours of the net change in groundwater elevation during the water year from September 2023 to September 2024. In general, water levels remained stable, ranging from less than 10 feet to local increases as much as 10 feet. Areas of groundwater level decrease are indicated mostly 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

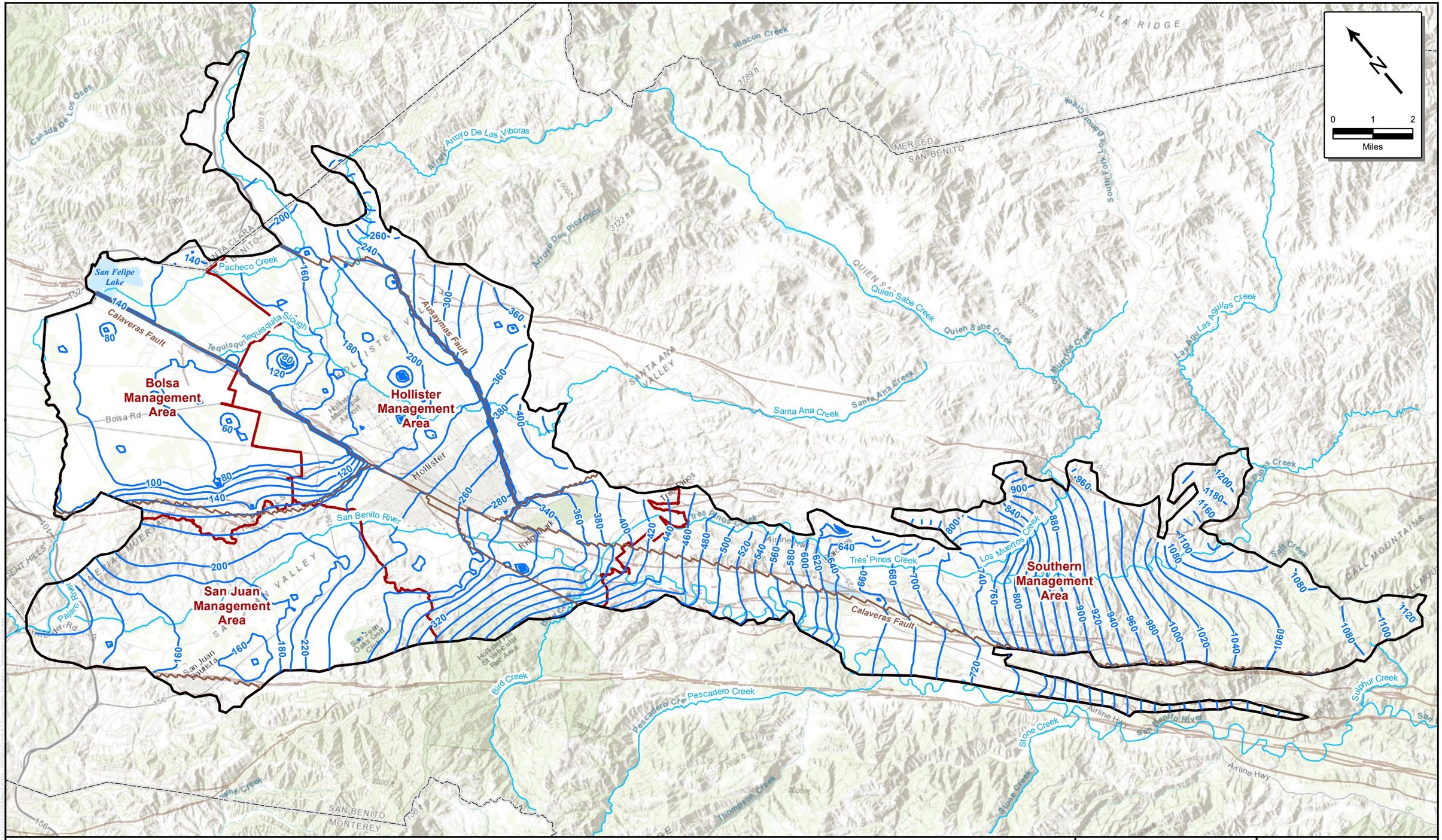
Note:
Groundwater discharge from the Basin occurs as discharge to streams, subsurface outflow, and groundwater pumping from wells. The distribution of active wells changes over time, so wells are not shown on this map.

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

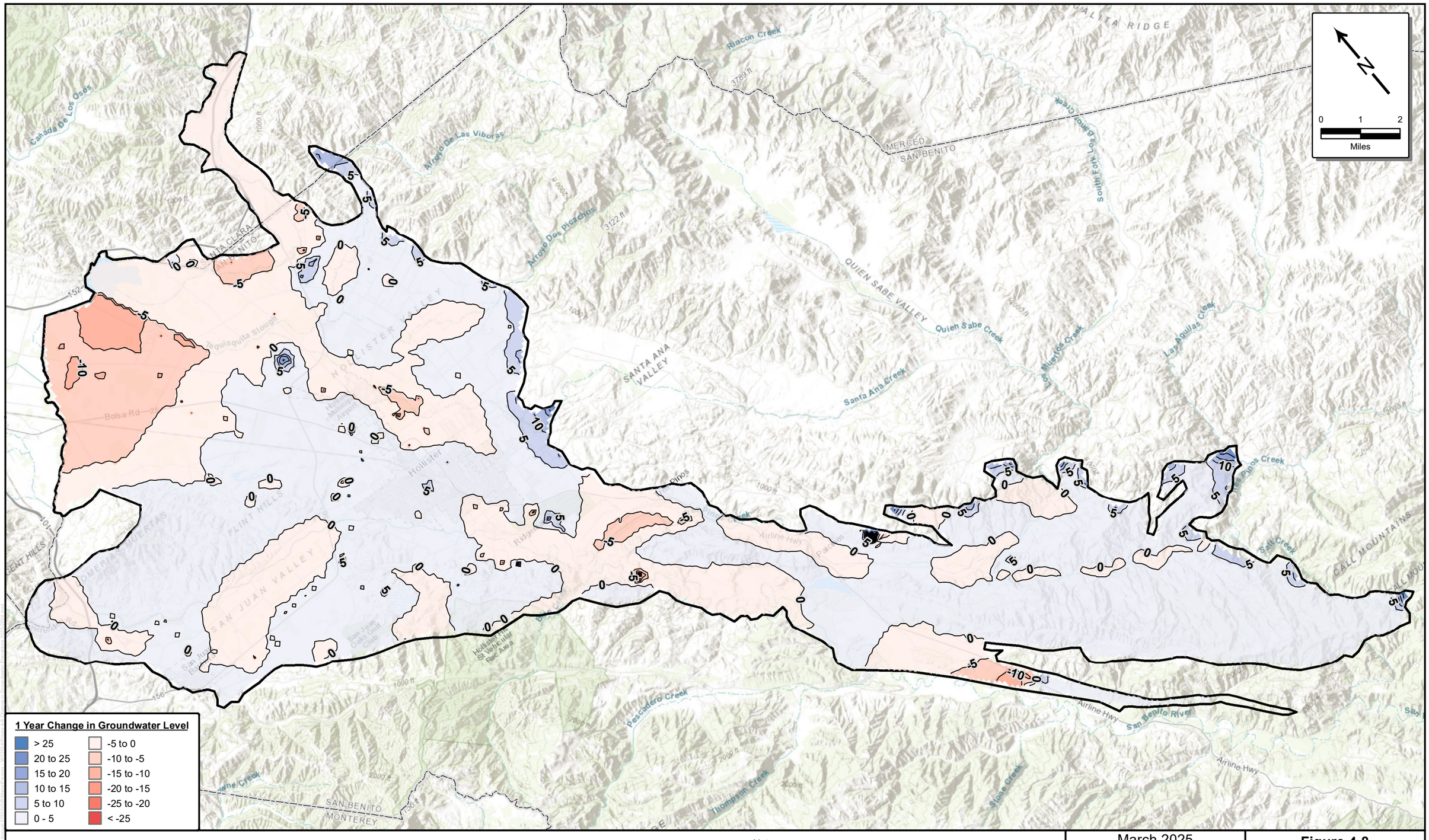
Note:
Groundwater discharge from the Basin occurs as discharge to streams, subsurface outflow, and groundwater pumping from wells. The distribution of active wells changes over time, so wells are not shown on this map.

March 2025

TODD GROUNDWATER

**Figure 4-7**
**Groundwater Elevations**
**September 2024**

# 4-WATER BALANCE



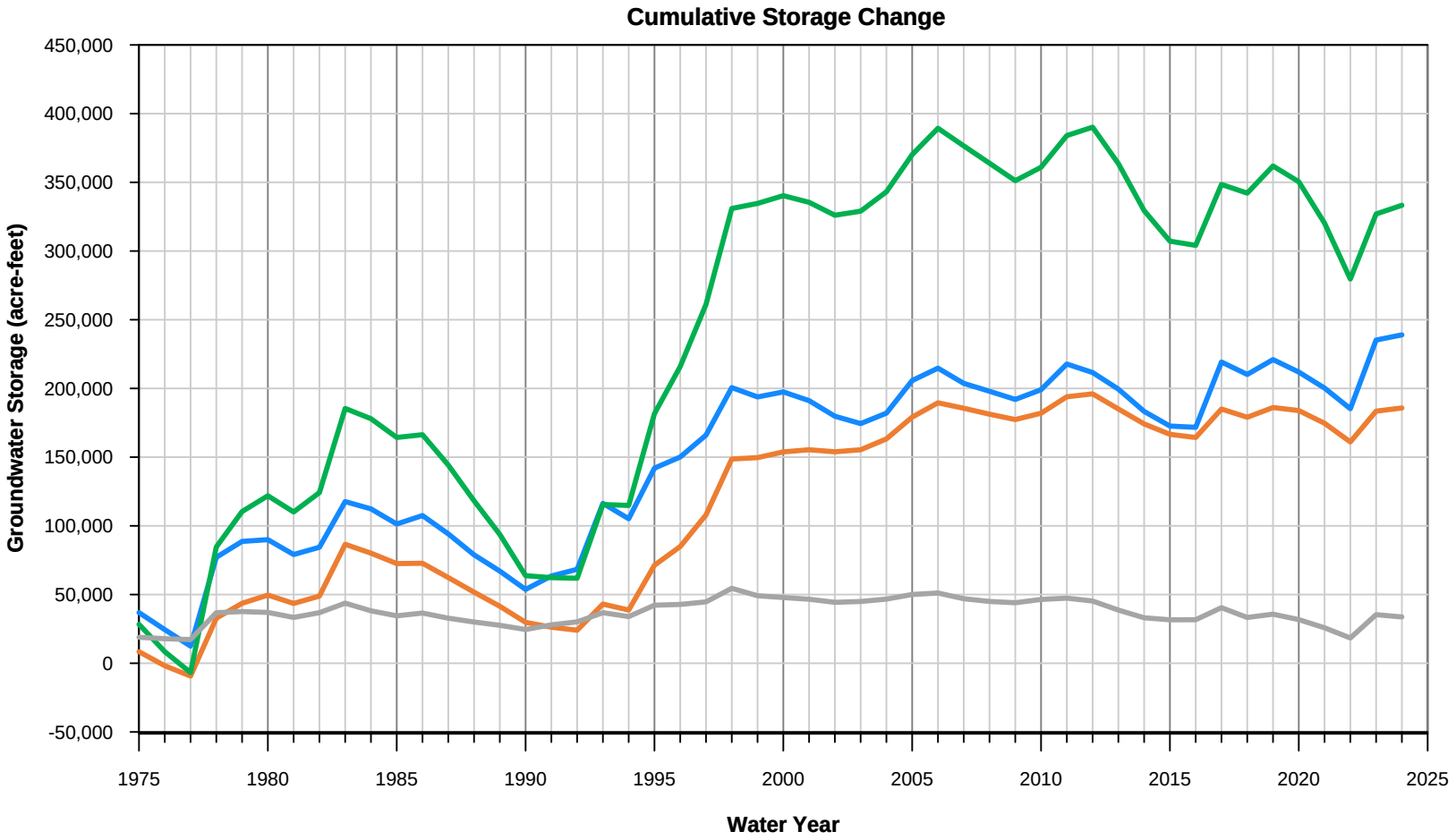

Note:
Groundwater discharge from the Basin occurs as discharge to streams, subsurface outflow, and groundwater pumping from wells. The distribution of active wells changes over time, so wells are not shown on this map.

March 2025

TODD GROUNDWATER

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

# 4-WATER BALANCE




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.



## 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.

## 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**.

## 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.

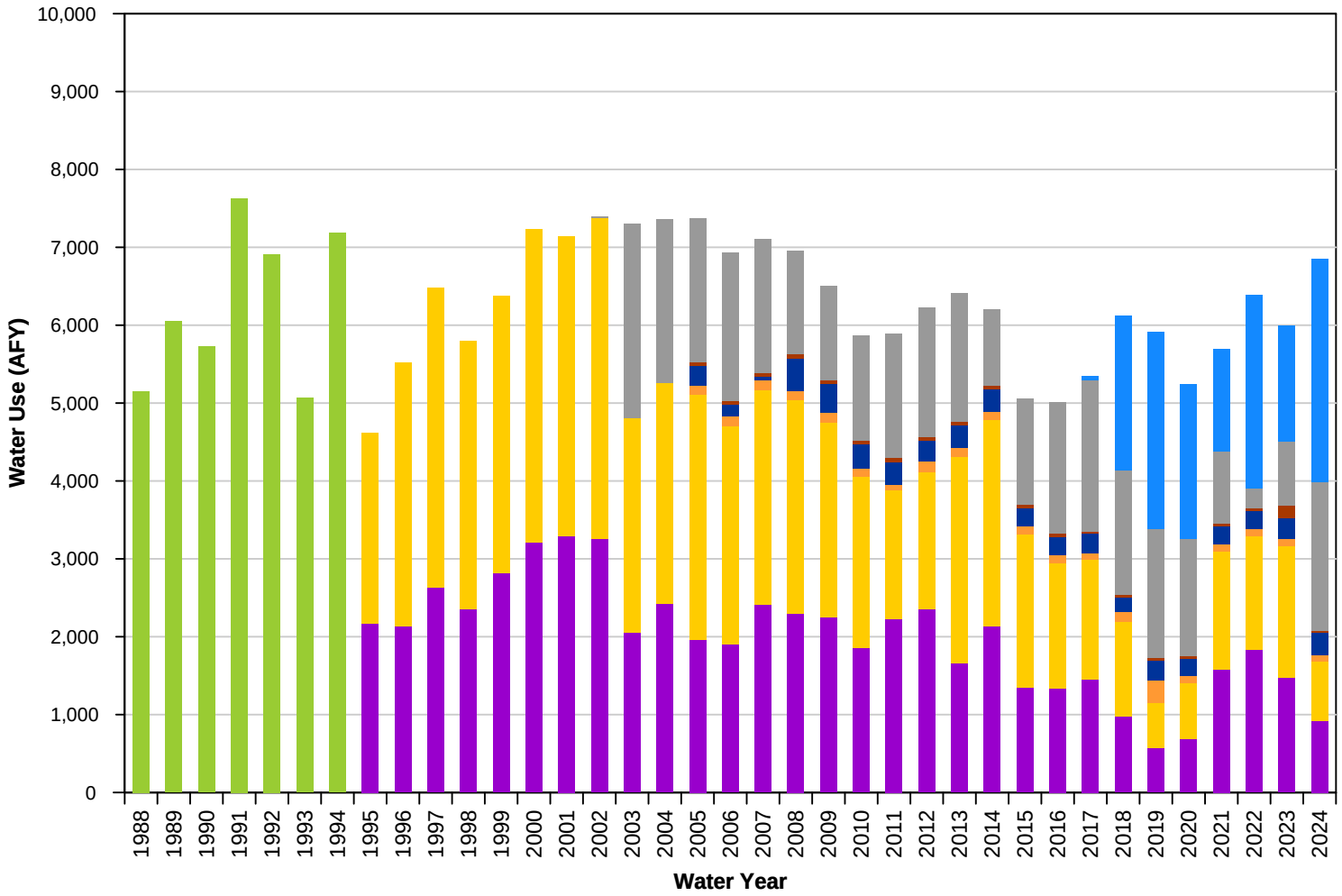
## Total Water Use

**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.

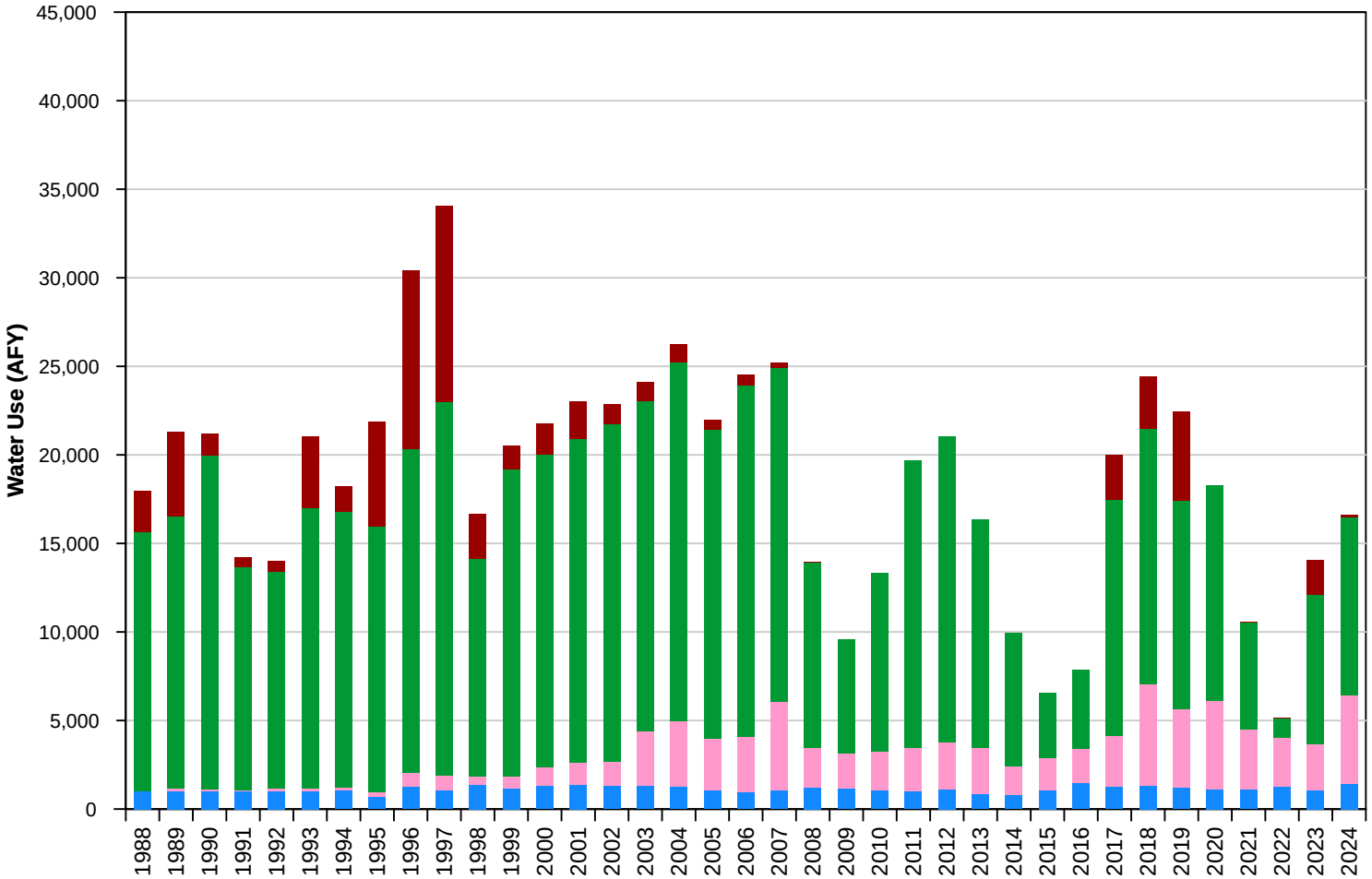



City of Hollister - GW Wells
San Juan Bautista Wells
Lessalt Water Treatment Plant
Undivided Total
Sunnyslope CWD Wells
City of Hollister - Cienega Wells
Tres Pinos CWD Well
West Hills Water Treatment Plant

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.

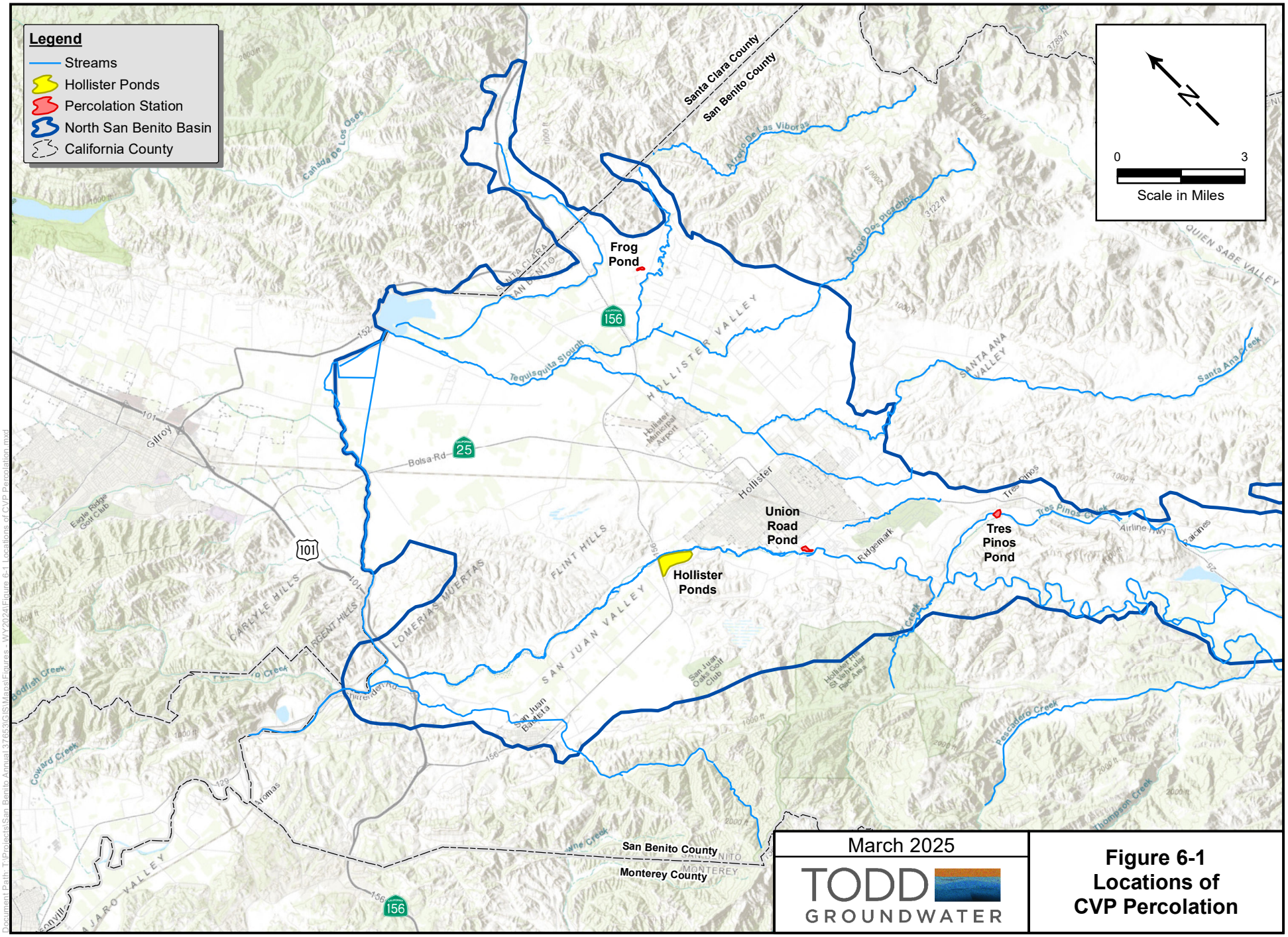
**BF Sisk Dam Raise**. USBR and DWR are implementing a project to raise the B.F. Sisk Dam that creates San Luis Reservoir to address seismic concerns. A subsequent phase of the project is being developed to increase water storage capability in the Reservoir. All phases of construction are scheduled for 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.

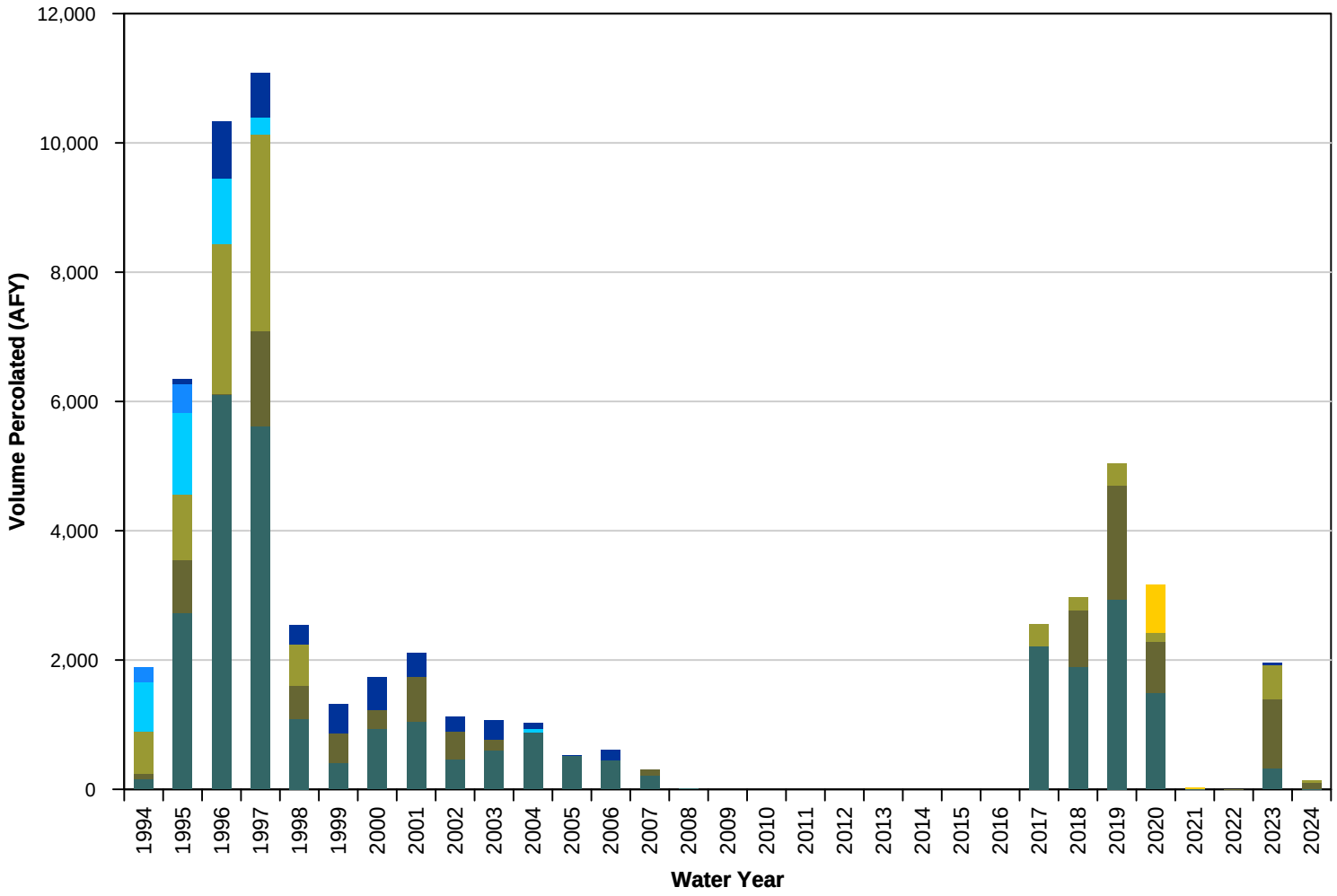



March 2025

TODD GROUNDWATER

**Figure 6-1**
**Locations of CVP Percolation**

Document Path: T:\Projects\San Benito Annual 3765\GIS\Maps\Figures_WY2024\Figure 6-1 Locations of CVP Percolation.mxd




Hollister Ponds
Santa Ana Creek
Pacheco Creek
Arroyo Dos Picachos
Arroyo de las Viboras
Tres Pinos Creek
San Benito River

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.

**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.

# 6-WATER MANAGEMENT ACTIVITIES

## 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.

## 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.<br>Compare key wells elevations with MTs |
|  | Groundwater-Storage Reductions | Compute groundwater storage using the numerical model. |
|  | Water-Quality Degradation | Compile water quality data.<br>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.

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# 9-REFERENCES

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# 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.

# APPENDIX A REPORTING REQUIREMENTS

**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

| 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<br>Other<br>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

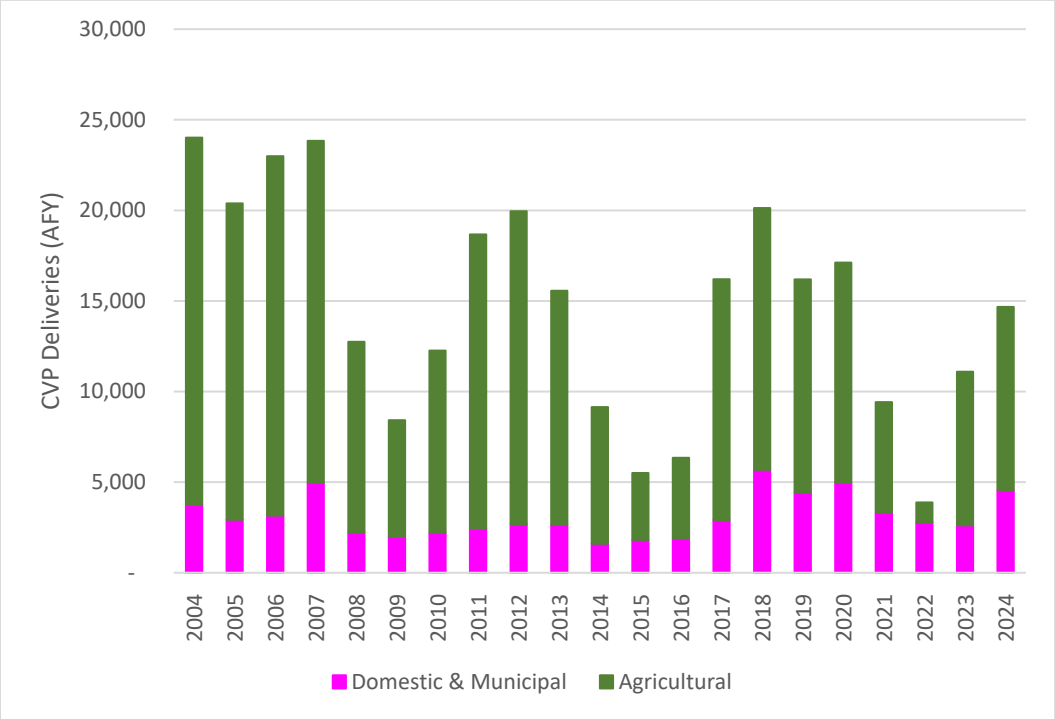
As described in the previous SGMA Annual Reports and pre-SGMA Annual Groundwater Reports, water supply sources available in Zone 6 include local groundwater, imported CVP water, recycled water, and local surface water.

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)

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

**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 2024

Figure C-1. Groundwater Basins in San Benito County

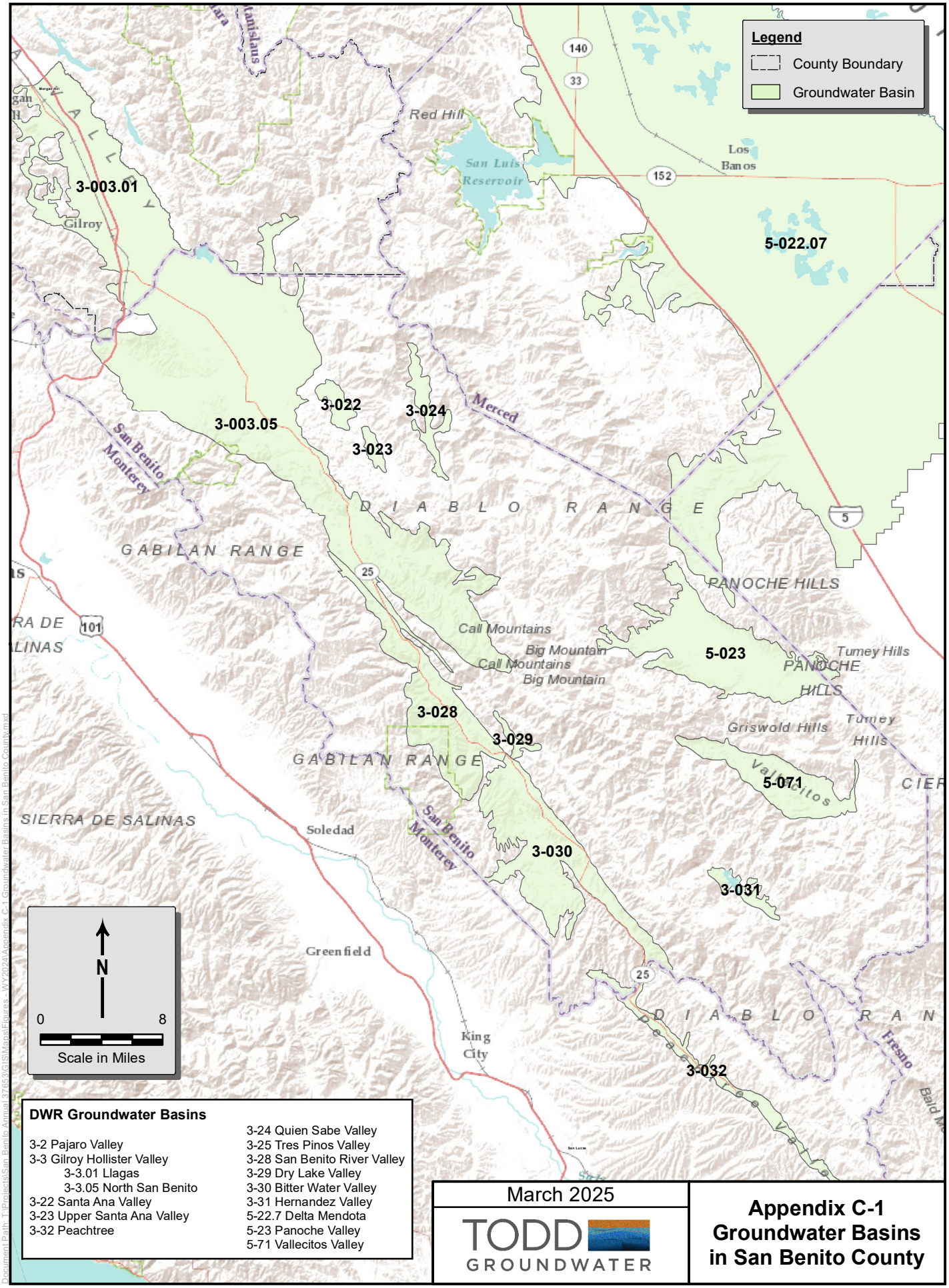
Figure C-2. Monitoring Locations

**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 | |




**DWR Groundwater Basins**

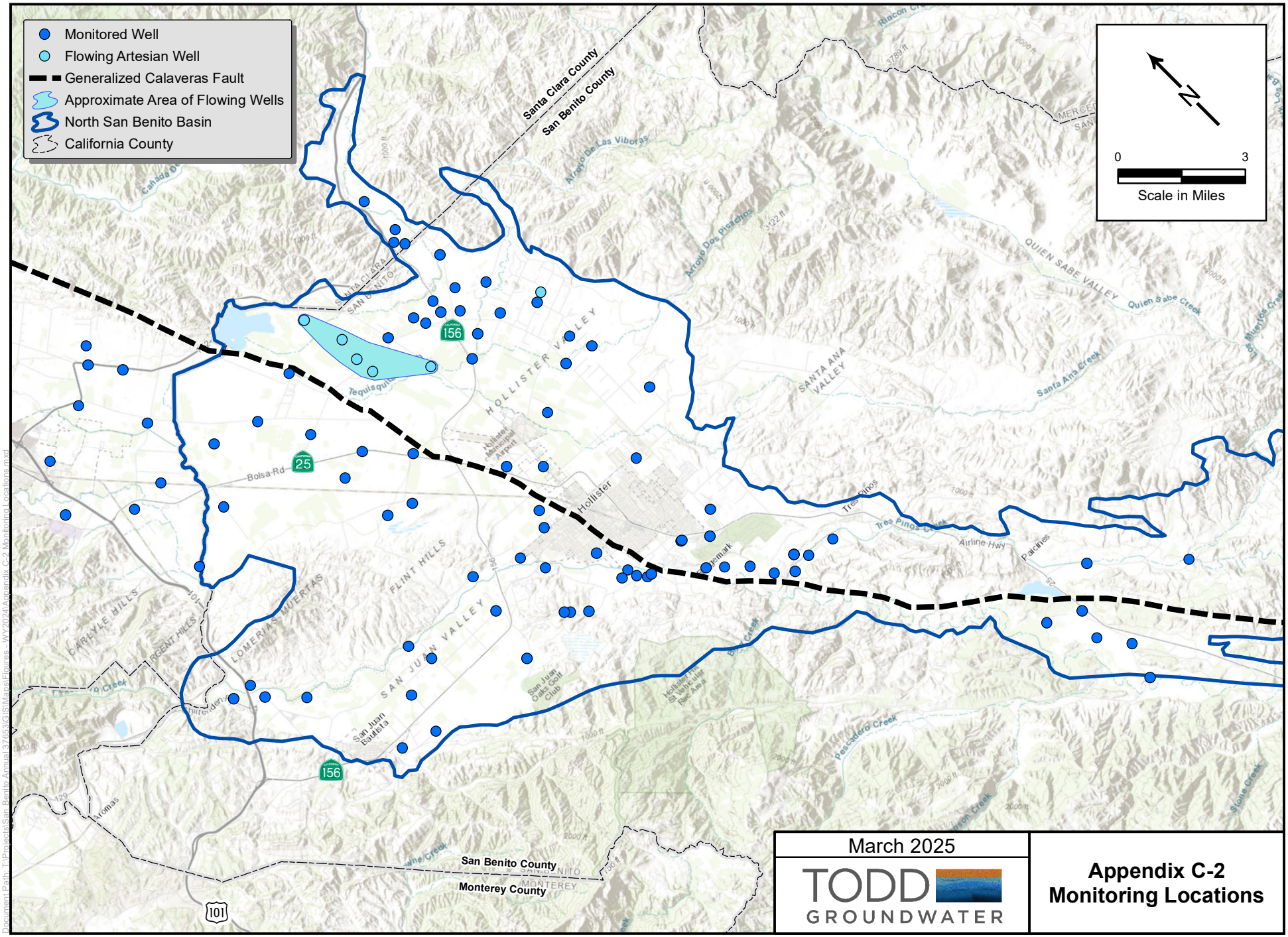
3-2 Pajaro Valley
3-3 Gilroy Hollister Valley
3-3.01 Llagas
3-3.05 North San Benito
3-22 Santa Ana Valley
3-23 Upper Santa Ana Valley
3-32 Peachtree
3-24 Quien Sabe Valley
3-25 Tres Pinos Valley
3-28 San Benito River Valley
3-29 Dry Lake Valley
3-30 Bitter Water Valley
3-31 Hernandez Valley
5-22.7 Delta Mendota
5-23 Panoche Valley
5-71 Vallecitos Valley

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# Appendix C-1 Groundwater Basins in San Benito County

Document Path: T:\Projects\San Benito Annual 37663\GIS\Maps\Figures - WY2024\Appendix C-1 Groundwater Basins in San Benito County.mxd


Monitored Well
Flowing Artesian Well
Generalized Calaveras Fault
Approximate Area of Flowing Wells
North San Benito Basin
California County
N
0
3
Scale in Miles
Santa Clara County
San Benito County
San Benito County
Monterey County
HOLLISTER VALLEY
SANTA ANA VALLEY
SAN JUAN VALLEY
FLINT HILLS
LOMERIAS MUERTAS
CARLYLE HILLS
QUIEN SABE VALLEY
Hollister
San Juan Bautista
Tequisquite
Bolsa Rd
Airline Hwy
Tres Pinos
Tres Pinos Creek
Santa Ana Creek
Quien Sabe Creek
Pescadero Creek
Arroyo De Las Viboras
Arroyo Dos Picachos
Hollister Municipal Airport
San Juan Oaks Golf Club
Hollister State Vehicular Rec Area
156
25
101
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Appendix C-2
Monitoring Locations

# APPENDIX D PERCOLATION DATA

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Table D-2. Historical Reservoir Releases (AFY)

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

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

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

Figure D-1. Reservoir Releases for Percolation

**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

**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.

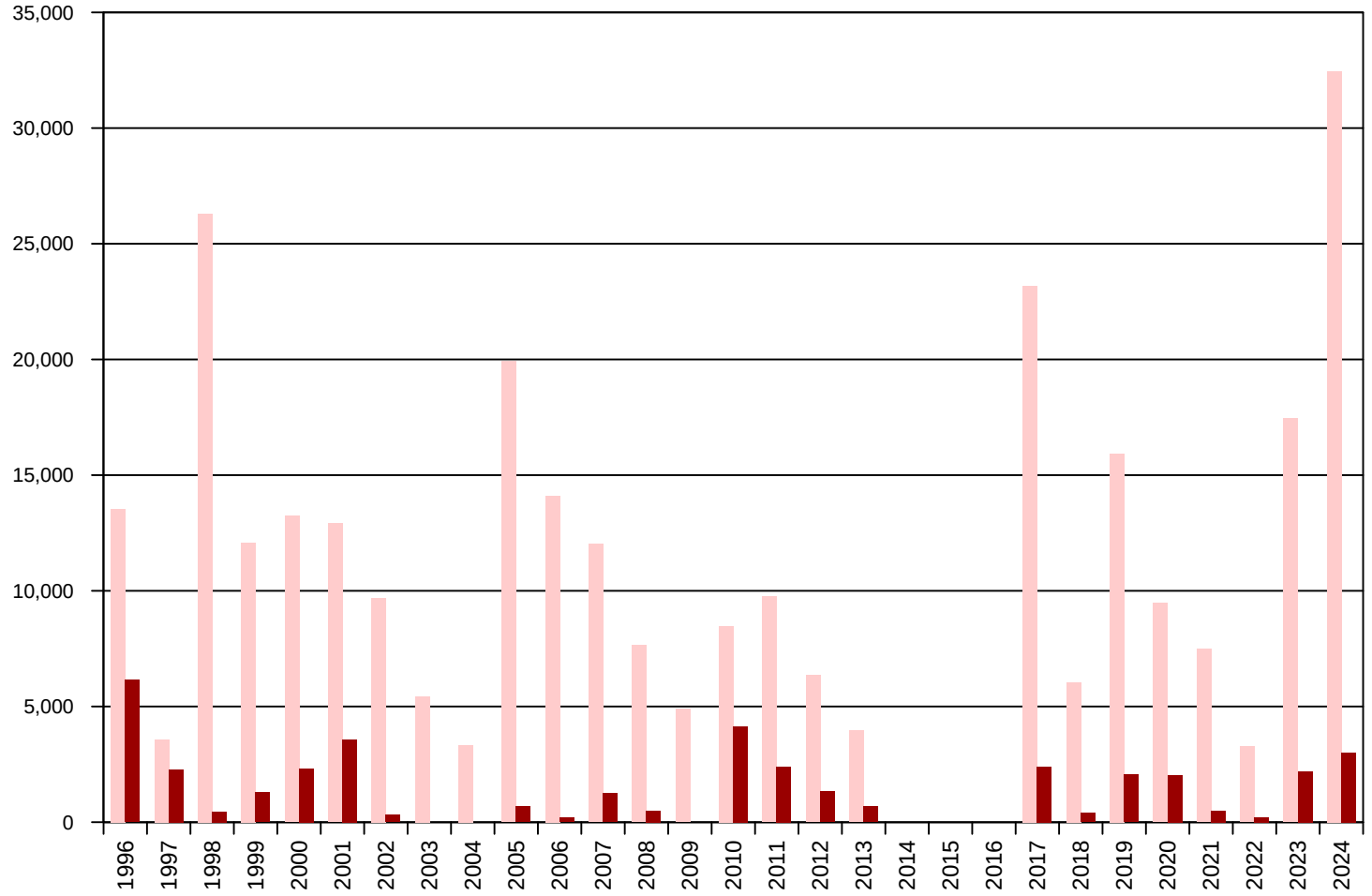
2. Average evaporation less precip = 43 inches (56 in/yr evaporation (DWR Bulletin 73-79) less 13 in/yr precip (CIMIS) The IWTP evaporation was adjusted to account only for when the ponds are in use.

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




Hernandez

Paicines

March 2025

TODD GROUNDWATER

**Appendix D-1**
**Reservoir Releases for Percolation**

# APPENDIX E WATER USE DATA

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

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

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

Figure E-1. Groundwater Water Balance By Year Type – Bolsa MA (AFY)

Figure E-2 Groundwater Water Balance By Year Type – Hollister MA (AFY)

Figure E-3. Groundwater Water Balance By Year Type – San Juan MA (AFY)

Figure E-4. Groundwater Water Balance By Year Type – Southern MA (AFY)

**Table E-1. Recent CVP Allocation and Use**

| Water Year | Municipal and Industrial (M&I) CVP | | | | Agricultural CVP | | | |
|---|---|---|---|---|---|---|---|---|
| | Percent of Contract Allocation[1] | Percent of Historic Average[2] | Contract Amount Used (AF) | Contract Amount Used (%) | Percent of Contract Allocation[3] | Percent of Contract and M&I Adjustment[2] | Contract Amount Used (AF)[4] | Contract Amount Used (%) |
| | (USBR Water Year Mar-Feb) | | (Hydrologic Water Year Oct-Sep) | | (USBR Water Year Mar-Feb) | | (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

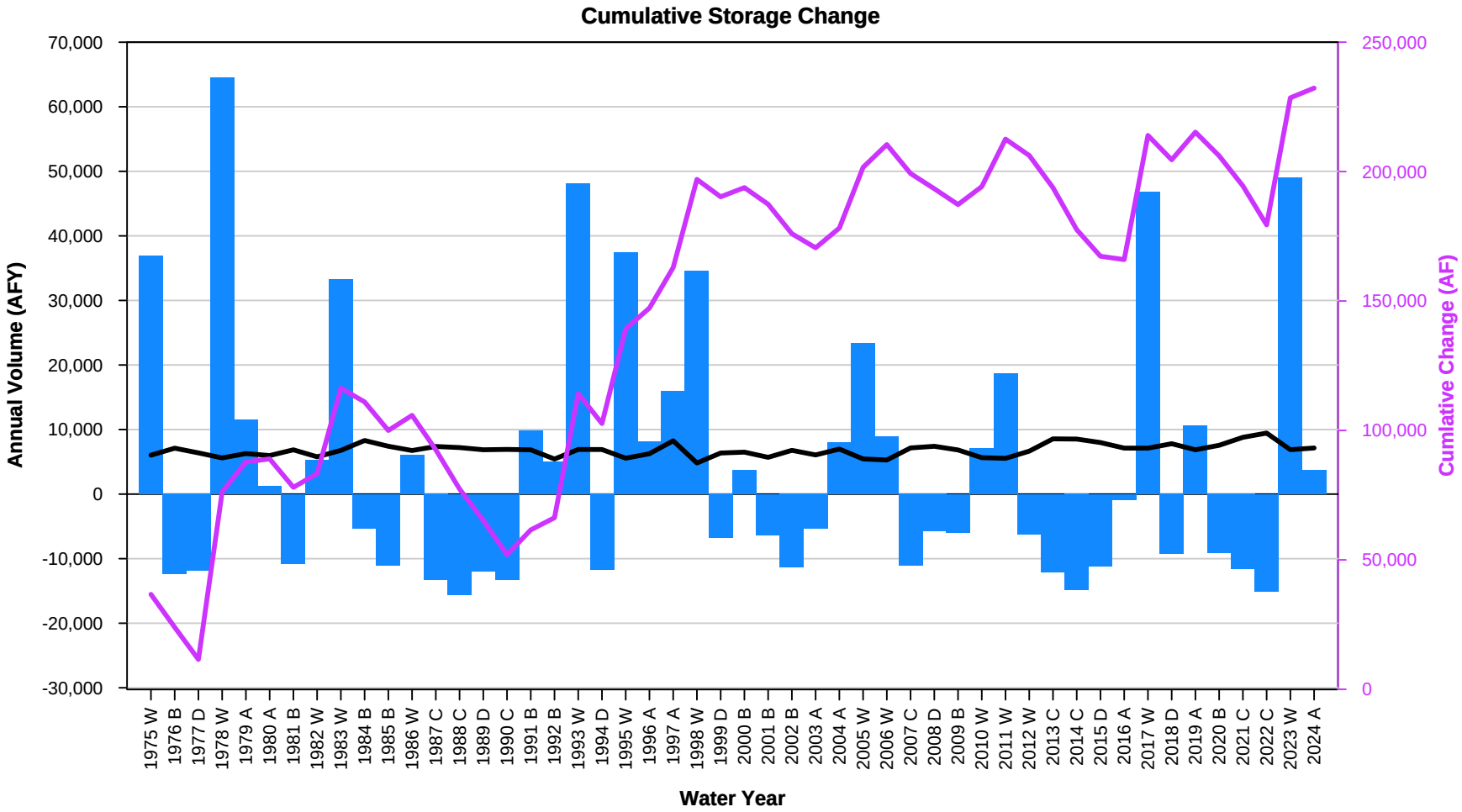
**Table E-3. Municipal Water Use by Major Purveyor for Water Year 2024 (AF)**

| | 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** |

**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.




Cumulative Storage Change

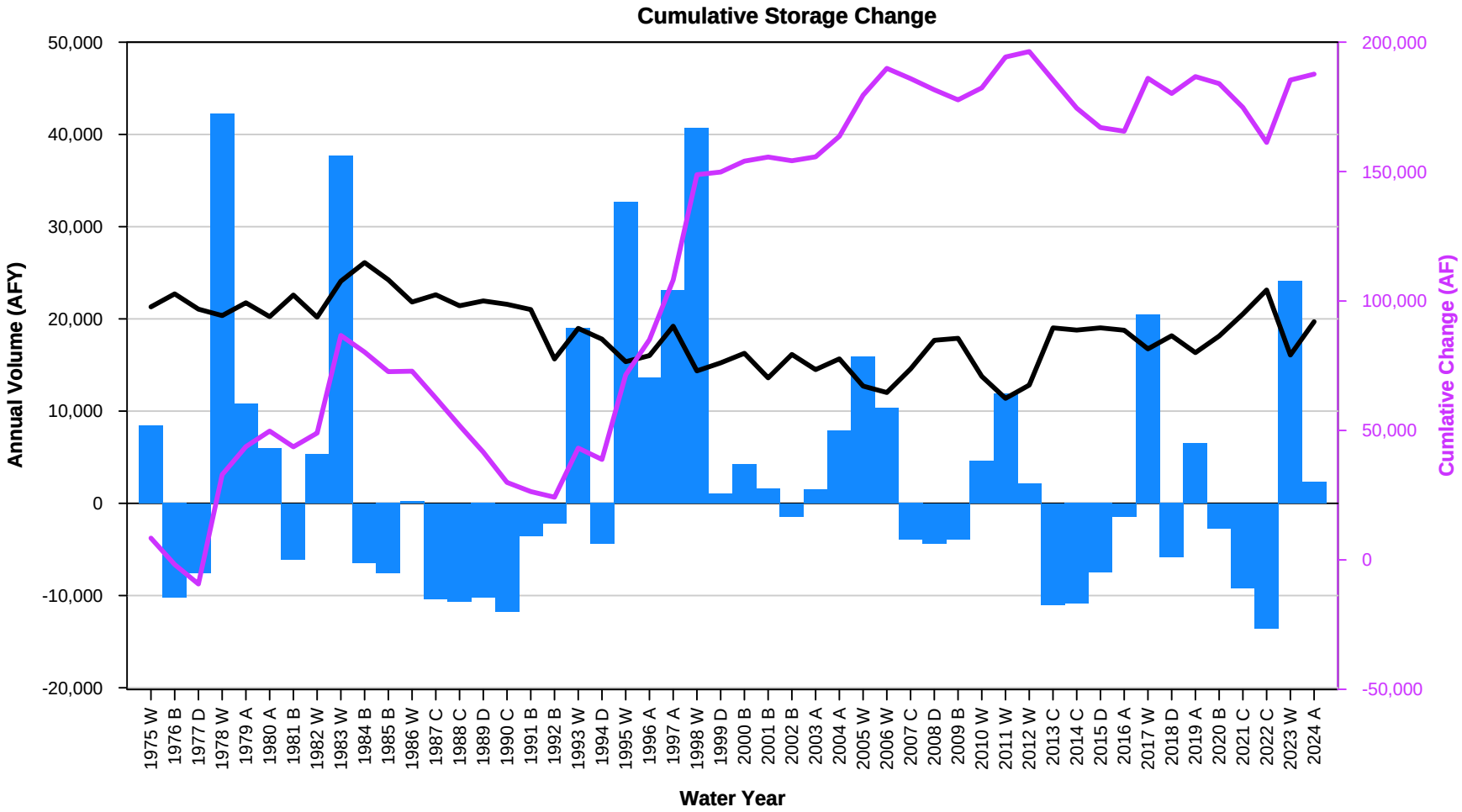
Pumping

Annual

March 2025

TODD GROUNDWATER

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

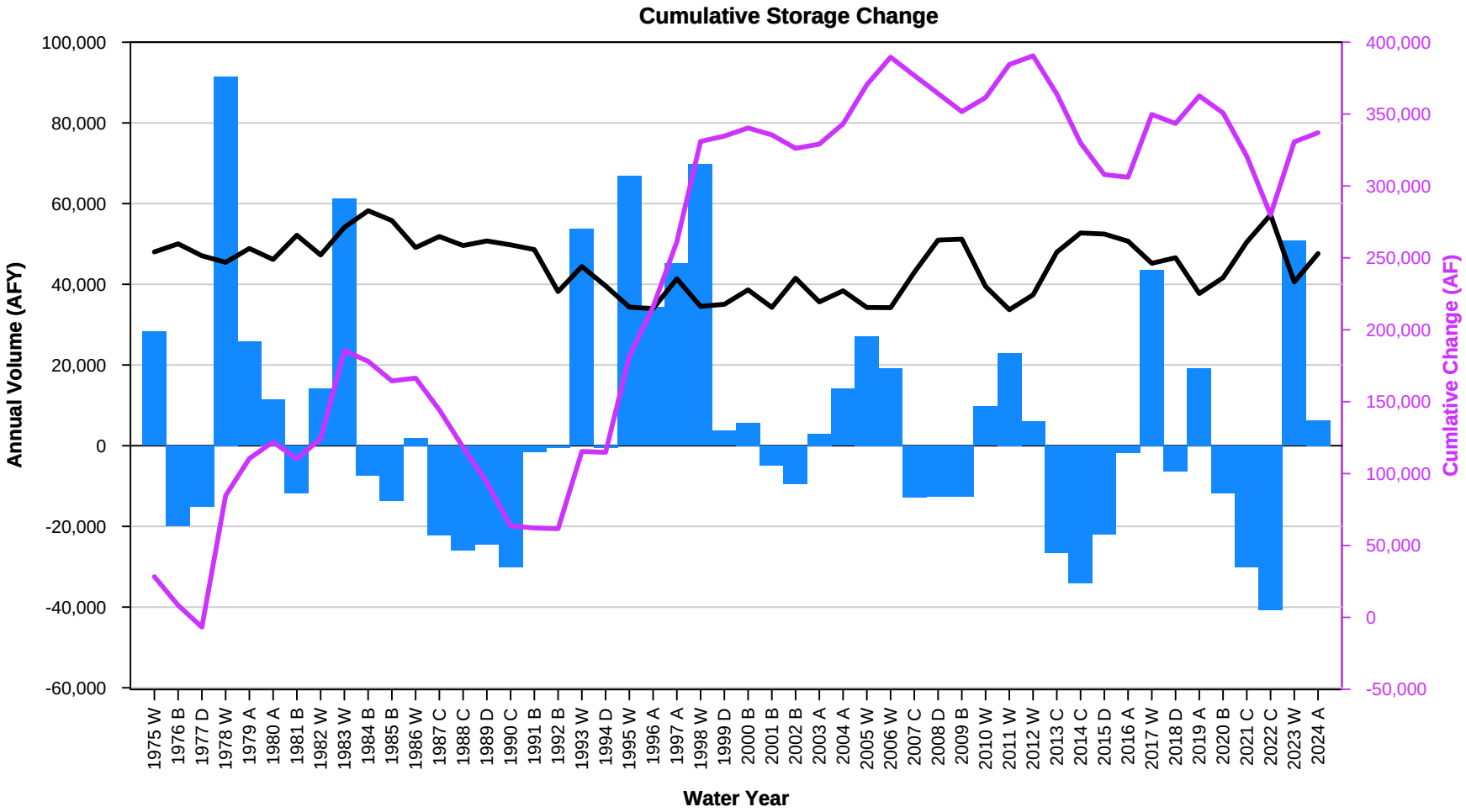



Cumulative Storage Change
Pumping
Annual

March 2025

TODD GROUNDWATER

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

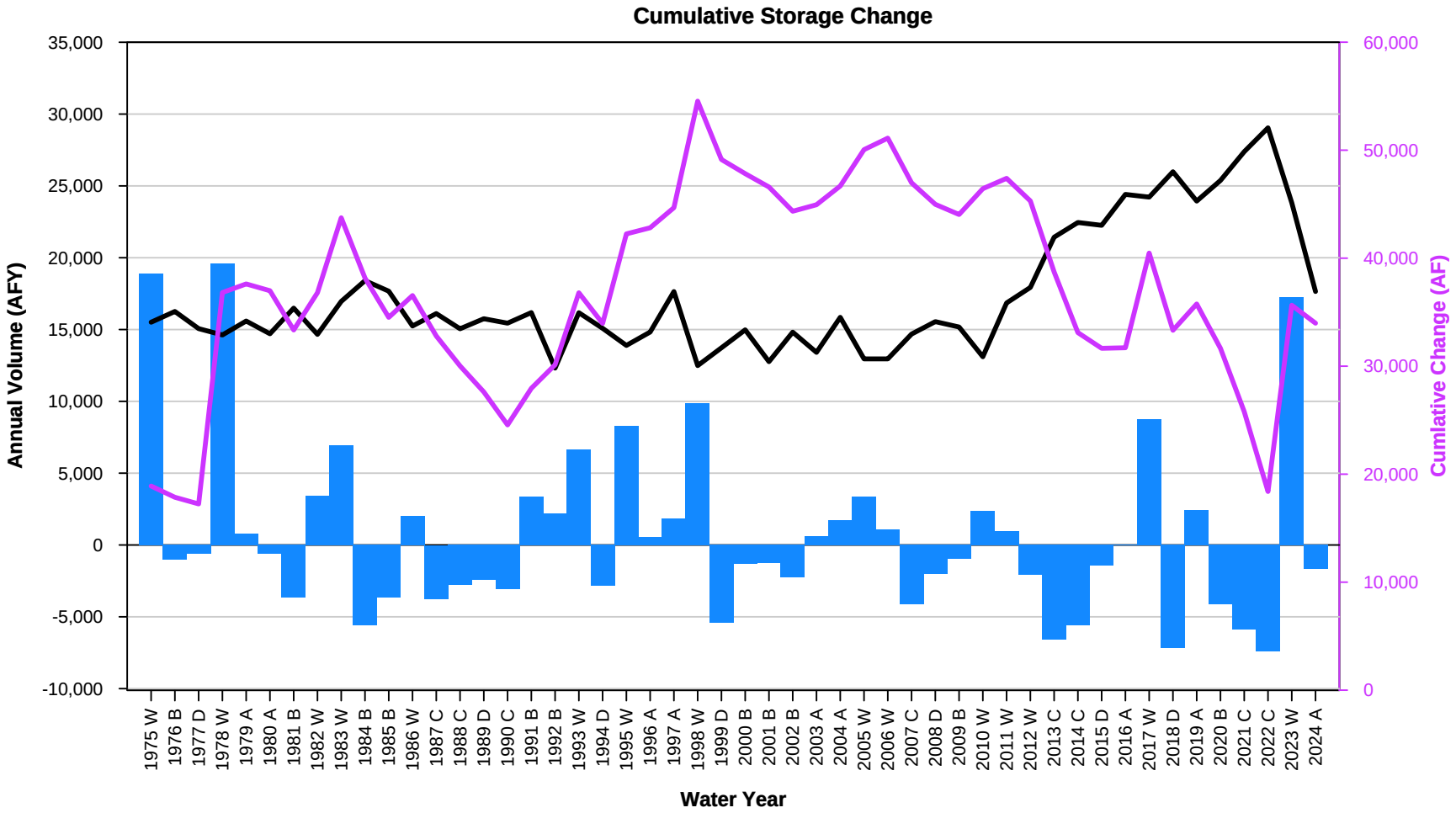



Cumulative Storage Change
Pumping
Annual

March 2025

TODD GROUNDWATER

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




Cumulative Storage Change
Pumping
Annual

March 2025

TODD GROUNDWATER

**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

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

**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 |

# APPENDIX H LIST OF ACRONYMS

## 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 |

# APPENDIX H

## Drought Plan

SAN BENITO
COUNTY WATER DISTRICT

# Drought Plan

**November 2025**

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# 1 INTRODUCTION

The San Benito County Water District (SBCWD or District) is a contractor with the U.S. Bureau of Reclamation (USBR) for imported water from the Central Valley Project (CVP). SBCWD receives CVP water and provides it to agricultural and municipal customers within its Zone 6 area of benefit for CVP water. SBCWD also is the Groundwater Sustainability Agency (GSA) for the North San Benito Groundwater Basin within San Benito County. The SBCWD GSA has led preparation of the Groundwater Sustainability Plan (GSP), which describes the basin and its management and provides monitoring, actions, and projects for sustainable management, including drought management.

The foundation of San Benito County Water District's (SBCWD or District) Drought Plan includes optimization of conjunctive water resource management including groundwater recharge and best use of additional source water (such as recycled water) as available. In brief, District landowners are incentivized to rely on imported water resources when available to preserve groundwater resources for use in drought conditions. Groundwater recharge involves managed aquifer recharge of Central Valley Project water supplies and local surface water reservoir releases. Finally, the District is active in optimization of all local water sources obtained through cooperative transfers, exchanges, and agreements with other water districts and shared facilities. Incorporation of these policies and strategies as components of the Drought Plan are summarized in the sections below.

## 1.1 BACKGROUND

On April 1, 2015 Governor Brown issued Executive Order B-29-15, mandating agricultural water suppliers to prepare a detailed Drought Plan describing actions and measures taken to manage water demand during drought. The 2018 Water Conservation Legislation (AB 1668) added the Drought Plan requirement as part of the AWMP contents and includes details on what must be included. The new requirements include both resilience planning and drought action/response planning.

This Drought Plan for Zone 6 builds upon existing SBCWD and Hollister Urban Area (HUA) shortage allocation policies and describes the determination of available water supply, drought responses, and water shortage impacts.

## 1.2 PURPOSE

The purpose of this Drought Plan is to detail how SBCWD prepares for droughts and manages water supplies and allocations during drought conditions. It fulfills requirements of Executive Order B-29-15 and 2018 Legislation, including addition of resilience and response planning components.

# 2 DROUGHT RESILIENCE PLANNING

## 2.1 DATA AND INDICATORS

SBCWD manages four primary water sources – local surface water, groundwater, recycled water, and imported water – conjunctively for beneficial uses in the District.

Monitoring of hydrologic conditions (such as rainfall, CVP allocation, reservoir storage, and groundwater levels) is a key component to determine available water supply. SBCWD conducts annual or more frequent evaluations of supply availability, including review of:

- Rainfall records, including patterns and projections.
- Reservoir storage
- CVP water delivery projections
- Groundwater elevation trends.

Rainfall is measured at the Hollister and San Juan Valley CIMIS stations (#126 and 143). Because most of the rain occurs outside of the primary irrigation season and varies significantly from year to year, precipitation is not a main source of agricultural supply.

The District monitors conditions in three reservoirs (San Justo, Hernandez, and Paicines reservoirs). Information including inflows, outflows, storage, and releases are summarized in the SBCWD Annual Groundwater Report. San Justo provides primary in-District storage of CVP imported water and has some capacity to store excess imported water when available. However, during multiple year droughts, the excess storage is significantly less than the agricultural demand. Hernandez and Paicines are SBCWD reservoirs that store local watershed runoff upgradient from Zone 6. These reservoirs serve as an indirect supply for agriculture, given that reservoir releases recharge the groundwater basin.

Imported water is the primary water supply for agriculture in Zone 6, and hence CVP allocations are a better indicator of hydrologic conditions than local rainfall. 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. Over the last ten years (2015-2024), the average allocations were 40 percent for agricultural users (Todd, 2025).

SBCWD has a robust groundwater level monitoring network, and in 2025, 137 wells in the existing network were monitored quarterly. Water level data help determine the impact of groundwater pumping on local water levels and reveal regional trends in the change in groundwater storage. In addition, water levels are a key indicator of long-term sustainability and will be monitored relative to a minimum threshold as defined in the Groundwater Sustainability Plan (GSP) (Todd, 2025).

## 2.2 DROUGHT VULNERABILITY

SBCWD has a diverse portfolio of supplies to improve supply reliability and reduce vulnerability to drought. Recognizing the complexity of local conjunctive use and recharge operations, numerical models have been developed and applied by the District for quantification of the water budget and assessment of water management programs for the GSP. Modeling simulations of existing conditions, climate change, and reasonably anticipated growth indicate that the Basin can continue to be sustainable, assuming reasonable availability of CVP water, with implementation of projects and management actions to avoid undesirable results. Modeling of the water budget through *design droughts* (based on the most severe historical droughts) indicate that groundwater basin storage is sufficient to provide supply and is recovered thereafter, indicating no long term depletion.

The GSP and existing District programs incorporate monitoring networks to measure performance and provide early warning for undesirable results. These issues are also being addressed through regional coordination of sustainable management criteria for the entire North San Benito Groundwater Basin.

## 2.3 PLANS FOR INCREASED DROUGHT RESILIENCE

The North San Benito GSP identifies projects and management actions to achieve groundwater sustainability that will also result in drought resilience because groundwater can be used during times of limited surface water supply. These projects include (but are not limited to the following):

**Develop Surface Water Storage (B.F. Sisk Dam Raise).** Development of additional surface water storage is being planned to allow direct use or recharge of CVP water when available and use of groundwater storage during drought or shortage. Potential options for additional surface water storage include Pacheco Reservoir expansion, Paicines Reservoir expansion, San Justo Reservoir expansion, new Hawkins Reservoir, and an additional offstream reservoir.

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.

**Measure Agricultural Groundwater Extraction.** GSP Regulations require annual reporting of groundwater extractions except for those of de minimis users. Municipal pumping is regularly metered and reported, and SBCWD has measured agricultural pumping in Zone 6 using pump power meter records. However, a single, reliable, and consistent method of measuring agricultural pumping is needed for the San Benito County portion of the basin. Alternative methods of measuring agricultural groundwater extraction have been evaluated as part of this GSP, with input from the TAC and stakeholders, see chapter (). Alternative methods considered for North San Benito have included 1) use of pump power meters, 2) use of in-line discharge meters on wells, and 3) remote sensing techniques. Criteria to evaluate the three alternatives have included:

- Accuracy and reliability relative to purpose
- Costs and allocation of costs between the GSA and well owner
- Feasibility and timing of implementation
- Ease of ongoing data collection and maintenance
- Well owner acceptability and cooperation.

Accurate measurement of groundwater extraction is basic to tracking water demand, assessing efficiency of water use, and identifying effective water-saving measures.

**Expand 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 2026 and 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.

**Enhance Water Conservation.** The GSP recognizes water conservation as an ongoing program for sustainable water supply, with additional measures for drought and water shortage. In San Benito County, local water agencies—including SBCWD, City of Hollister, City of San Juan Bautista, and SSCWD—formed the Water Resources Association of San Benito County (WRA) to implement water conservation and water resource protection, including Best Management Practices (BMPs) for water demand management.

**Develop Response Plans.** The GSP includes a response program for declining groundwater levels that would be based on the groundwater level monitoring program and linked to monitoring of the Key Wells. As groundwater level declines are tracked, initial response actions would include data verification; evaluation of the rate, extent, and pattern of declines; identification of factors causing the decline; assessment of potential undesirable results in nearby wells; and consideration of potential response actions. Initial responses would likely involve intensified outreach and educational efforts by the GSA (or WRA) and promotion of voluntary efforts.

# 3 DROUGHT RESPONSE

During periods of potential water supply shortage, District staff will monitor the projected supply and demand for water, brief the District General Manager on the anticipated extent of the shortage, and provide the recommended drought level response. The District General Manager will then recommend to the Board of Directors the declaration or termination of the appropriate drought level. The sections below discuss water shortage indicators and drought stages and actions.

## 3.1 WATER SHORTAGE INDICATIONS

Declaration of a water shortage is dependent upon many factors because the District has a suite of available water supplies. The first step is to determine if availability of one or more of the District's supplies is likely to be limited in the near future. The most critical information is the CVP allocation. USBR generally announces the contract allocation for the USBR water year (March – February) in February, after evaluating reservoir storage and snowpack levels. While the District has some multi-year surface water storage, the annual allocation is the best indicator of a water storage.

The groundwater basin provides critical long-term storage and is an important source of agricultural supply in years with decreased CVP allocation. The District groundwater monitoring network combined with the minimum thresholds (MTs) designed as part of the GSP serve as indicators for the available groundwater supply. The MTs are based generally

on historical lows, which recognizes that groundwater has been and is being used reasonably for the range of beneficial uses even during drought.

## 3.2 Drought Response Stages of Actions and Declaration of a Water Shortage

The Hollister Urban Area (HUA) agencies have adopted a Water Shortage Contingency Plan (WSCP) as part of the HUA Urban Water Management Plan (UWMP). The original plan was developed in 2016 as part of the 2015 UWMP and provides details on how to reduce demand in the event of a water supply shortage. While the WSCP focuses on urban uses and conservation, the same structure including the water shortage level stages of action are considered for the District's agricultural users.

**Table 1. Water Shortage Indicators for SBCWD**

| 2020 WSCP Level | Shortage Level |
|---|---|
| 1 | <10% |
| 2 | 10-20% |
| 3 | 20-30% |
| 4 | 30-40% |
| 5 | 40-50% |
| 6 | >50% |

As updated in the 2020 UWMP and shown in **Table 1**, the WSCP stages of action include six stages, each triggered by a percent reduction of available supply. For agricultural users, groundwater is the primary source of supply during drought periods. As such, the response to changes in the groundwater basin is addressed in the North San Benito Groundwater Basin GSP. Minimum thresholds for the five relevant SGMA indicators (water levels, storage, water quality, subsidence, and groundwater dependent ecosystems) were developed for the GSP. The Plan also includes projects and management actions including detailed response plans if these minimum thresholds are exceeded.

## 3.3 Water Shortage Allocations and Response Actions

**Imported CVP Water**

During drought conditions, the CVP entitlement allocation will be reduced by USBR. While additional CVP supplies may be available from transfers, storage, or supplies from previous years allocations, it is certain there will be reductions on the available supply to all agricultural users.

The District prioritizes CVP water use as follows:

1. Public Health and Safety for municipal users (this is served by the M&I allocation of CVP and would not affect agricultural use)
2. Irrigation deliveries within Zone 6
3. In-District groundwater recharge
4. Other uses (including meeting additional surface demands, groundwater recharge, and transfers to out-of-district agencies).

The San Benito County Water District Water Users Handbook documents who is eligible for CVP imported water, entitlement amounts, and distribution details.

CVP is supplemental to local groundwater. Only a portion of Zone 6 has access to CVP through the surface water distribution system. Each parcel served from the distribution system has a per acre entitlement to contract for water:

- 1.2 Acre-feet per acre for Agricultural land with less than 1.5mg/l of Boron
- 2.0 Acre-feet per acre for Agricultural land with 1.5 mg/l or more of Boron in the groundwater.

When the contract allocation is reduced, the per acre entitlement is reduced by the same portion.

**Groundwater**
Landowners in the District pump groundwater to cover shortages in surface water supplies. The District's conjunctive use program operations have been developed to maximize its surface water supplies in order to maintain sustainable groundwater quality and quantity and preserve groundwater supplies for drought conditions. In its GSP, the District identifies projects and management actions to protect and sustain its groundwater and surface water supplies.

**Recycled Water**
Recycled water is generally reliable and not affected significantly by year-to-year hydrological variability. However, its desirability as a supply for some sensitive uses could be affected by changes in municipal wastewater quality. For example, a significant long-term increase of groundwater use (for example due to low CVP allocation and assuming no wellhead demineralization) could affect wastewater quality and thus the quality of the recycled water.

## 3.4 ENFORCEMENT AND APPEALS

Water users and landowners will be informed of the specific drought requirement through public notices, mailers, and/or information posted on the District's website. Through SGMA the District may consider means of enforcement and appeals.

## 3.5 MONITORING AND EVALUATION

Monitoring and evaluation of the effectiveness of the Drought Plan is important for identifying methods that worked and ones that did not provide the anticipated benefits. District landowners are encouraged to use surface water when available to preserve groundwater resources for drought conditions. Accordingly, all surface water brought into the District is measured along with seepage losses, which result in groundwater recharge. Delivered water is recorded at each turnout.

To evaluate the effectiveness of the Drought Plan, water availability and use of various water sources during a drought may be compared to water demands and use in past years, including dry, normal and wet conditions. This information would be helpful to understand the shift in use of water supplies during a drought and to ascertain if water use practices change over the course of the drought and between droughts. These assessments also provide information on the effectiveness of the District's drought-related communications to its customers.

The Drought Plan will be updated every five years in conjunction with the AWMP and the monitoring and evaluation information collected will be useful information when updating the Drought Plan.

## 3.6 COMMUNICATION PROTOCOLS

SBCWD and WRA coordinates and collaborates regularly with others regarding local and regional water management in all years. These activities intensify during periods of drought in order to minimize adverse drought impacts across a range of stakeholders. Drought declarations and actions are announced and posted to the District's website along with information on actions being taken to address these reductions.

## 3.7 FINANCIAL IMPACTS

During a drought, water use may decrease resulting in a decrease in water sales and corresponding District revenue. There may also be a potential increase in expenditures that result from the implementation of drought management actions. Measures to overcome revenue impacts could include use of reserve funds and/or a rate adjustment. The District anticipates that reserves would be used to offset the revenue impact. If the water shortage is or appears to be long-term or if District reserves are low, the District may elect to initiate rate adjustments or drought surcharges to offset these losses.

# 4 REFERENCES

Todd Groundwater, 2022, Final Groundwater Sustainability Plan (GSP) North San Benito Groundwater Basin, January.

Todd Groundwater, 2021, Hollister Urban Area Urban Water Management Plan, July.

Todd Groundwater, 2025, North San Benito Annual Report WY 2024, March.