CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

# Memorandum

**TO:** HONORABLE MAYOR AND CITY COUNCIL

**FROM:** Jeff Provenzano

**SUBJECT:** **See Below**

**DATE:** July 28, 2025

Approved

Date: 8/1/25

**COUNCIL DISTRICT:** 4

**SUBJECT: San José Municipal Water System's Water Supply Assessment for the Northtown Data Center Project**

## RECOMMENDATION

Approve the San José Municipal Water System Water Supply Assessment for the Northtown Data Center Project.

## SUMMARY AND OUTCOME

City Council approval of the Water Supply Assessment (WSA) will fulfill the requirements of the California Water Code and the California Environmental Quality Act. The WSA identifies the water supply sources available to meet Northtown Data Center Project's (Project) potable and recycled demands.

## BACKGROUND

A WSA has been prepared for the proposed Project as required by state law. The Project site is located at the southeast corner of the intersection of Orchard Parkway and Trimble Road in the San José Municipal Water System's (Muni Water) North San José/Alviso service area.

California Water Code Section 10910 (Senate Bill 610) requires that a water retailer for the area prepare a water supply assessment for certain types of proposed projects, including one that would demand an amount of water equal to or greater than that required by a 500-dwelling unit project. The Project includes an estimated water use of 1,002 acre-feet per year, which exceeds the amount of water that would be required for a 500-dwelling unit project.

The purpose of a WSA is to analyze and document sources of water supply, quantify water demands, evaluate drought impacts, and provide a comparison of water supply and demand so that a determination of water supply sufficiency can be made for large development projects in connection with the City's consideration of whether to approve the project. The WSA itself is not a project and is simply the initial step to determining whether a project is even possible on this site, given the water supply.

Per Section 15155(b) of the California Environmental Quality Act Guidelines and Section 10910(g) of the California Water Code, the governing body of a public water system that will serve a "water demand project" must approve a water supply assessment at a regular or special meeting of the governing body. In its role as the governing body for Muni Water, the City Council is the appropriate decision-making body for approving the WSA prepared for the project at a regular City Council meeting.

## ANALYSIS

The draft WSA (Attachment) assesses whether Muni Water's existing and future water supplies for the North San José/Alviso service area would be adequate to meet the Project's projected water demands. Although Muni Water does not currently provide water to the Project site, it is the water retailer for the area that will be supplying both potable and recycled water to the Project in the future.

The WSA projects the Project's maximum water demands at approximately 1,002 acre-feet per year, which is equivalent to approximately 0.9 million gallons per day. Of this total, 997 acre feet per year, or over 99% of the total demand, is projected to be supplied from recycled water and five acre-feet per year, less than 1%, is projected to be supplied by potable water. Much of the recycled water demand (981 acre-feet per year) is attributable to the data center's industrial cooling. There will not be a potable supply backup for the industrial cooling needs at this site. While recycled water supply is available to serve the increased recycled water demand associated with the Project, the Urban Water Management Plan did not include this specific project in the growth assumptions.

As discussed in the WSA, potable water is provided to Muni Water's North San José service area from the San Francisco Public Utilities Commission (SFPUC). In 2009, Muni Water entered into both a master Water Supply Agreement (the agreement common to all Bay Area Water Supply and Conservation Agency) and a Water Sales Contract (specific to Muni Water) with the SFPUC. The City currently has a contract for up to 5,041 acre-feet per year (4.5 million gallons per day); this contract is both temporary and interruptible. The Water Supply Agreement with SFPUC was amended and restated in 2018 and 2021 and will remain in place until June 30, 2034. In addition, a 2025 Amended and Restated Water Supply Agreement is being circulated among the

parties for signature. However, that amendment does not substantively alter the City's rights as described in the Water Supply Agreement.

## EVALUATION AND FOLLOW-UP

No additional follow-up action with the City Council is expected at this time.

## COORDINATION

This memorandum was coordinated with the City Attorney's Office, the City Manager's Budget Office and the Department of Planning, Building, and Code Enforcement.

## PUBLIC OUTREACH

This memorandum will be posted on the City's Council Agenda website for the August 12, 2025 City Council meeting.

## COMMISSION RECOMMENDATION AND INPUT

No commission recommendation or input is associated with this action, as the WSA was not coordinated with any City commissions.

## CEQA

Statutorily Exempt, File No. PP17-001, Feasibility and Planning Studies; CEQA Guidelines Section 15262.

## PUBLIC SUBSIDY REPORTING

This item does not include a public subsidy as defined in section 53083 or 53083.1 of the California Government Code or the City's Open Government Resolution.

/s/
Jeff Provenzano
Director, Environmental Services

For questions, please contact Nicole Harvie, Principal Engineer, Environmental Services Department, at (408) 277-3671.

**ATTACHMENT:** Draft Water Supply Assessment

Attachment

# DRAFT
# WATER SUPPLY ASSESSMENT

## NORTHTOWN DATA CENTER

**June 2025**

TODD GROUNDWATER

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## Table of Contents



## List of Tables



## List of Figures

# 1. INTRODUCTION

## 1.1. PROJECT DESCRIPTION

LBA Realty is working on behalf of a client to develop two new data center buildings near the San José Airport. San José Municipal Water System (SJMWS) is providing a Water Supply Assessment (WSA) that will be included with an Environmental Impact Report (EIR) and related environmental documentation for the project to comply with California Environmental Quality Act (CEQA).

The Northtown Data Center Project, referred to as Project hereinafter, will consist of two buildings, designated Data Center West and Data Center North at the southeast corner of the intersection of Orchard Parkway and Trimble Road in San José, California. The project site location is shown in **Figure 1**. The Data Center West building has an area of 206,250 square feet, and Data Center North has an area of 207,594 square feet, for a total building area of 414,204 square feet. Each building is two stories and will incorporate approximately 30,000 square feet of office space with 50 full-time equivalent staff on site 24 hours a day, 7 days a week.

Domestic water demand is expected to be small and met by an estimated 4.88 acre-feet per year (AFY) of potable water. An estimated water demand of 980.9 AFY would be used for mechanical cooling, and 15.7 AFY for irrigation. Mechanical cooling and irrigation at the site will be served by recycled water. The SJMWS will be the retailer for the Project. **Figure 2** shows the general location of the data center located within the service area of SJMWS.

## 1.2. BACKGROUND

The California Water Code section 10910 (also termed Senate Bill 610 or SB610) requires that a water supply assessment (WSA) be provided to cities and counties for projects (of a specified type and size) that are subject to CEQA. Under the California Water Code Section 10912, a residential or commercial "project" is any of the following:

- A proposed residential development of more than 500 dwelling units
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 units square feet of floor space
- A mixed-use project that includes one or more of the projects specified in Section 10912
- A project that would demand an amount of water equal to, or greater than, the amount of water required by a 500-dwelling unit project.

The Northtown Data Center Project includes an approximate water use of 1,001.4 AFY. The total water demand will exceed the threshold for the amount of water required by a

500-dwelling unit project. For comparison, water demand for dwelling units in San José is on the order of 0.2 AFY per unit, or about 100 AFY for 500 units.

The City of San José recognizes the Northtown Data Center as subject to CEQA and SB610. Cities and counties are mandated to identify the public water system that might provide the Project's water supply and then to request a WSA, which includes a discussion regarding whether the public water system's total projected water supplies (available in normal, single dry, and multiple dry years during a 20-year projection) will meet the projected water demand associated with the proposed Project in addition to the public water system's existing and planned future uses. The SJMWS is the public water provider for the Northtown Data Center and the water supply and demand information for the SJMWS is presented herein.

A foundational document for preparation of the WSA is the Urban Water Management Plan (UWMP) for the area of the City of San José served by SJMWS. The 2020 UWMP, which was adopted in June 2021, is available and relevant data have been updated by the City where applicable. WSAs and UWMPs both require water supply reliability information to be provided for the water service area in five-year increments over a 20-year planning horizon.

## 1.3. PURPOSE

The purpose of this WSA is to document the City's existing and future water supplies for its SJMWS service area and compare them to the area's future water demand including that of the proposed Project. This comparison, conducted for both normal and drought conditions, is the basis for an assessment of water supply sufficiency in accordance with the requirements of California Water Code section 10910 (Senate Bill 610).

# 2. PROJECT WATER DEMAND AND SUPPLY

This section addresses water demands for the proposed land uses. Both potable and recycled water will meet water demands for this project. The primary water uses for this project will be for domestic usage, the cooling system, and landscape irrigation. Domestic water will be supplied by potable water, while demand for the other water uses will be met with recycled water.

## 2.1. EXISTING WATER USE

The Project site includes existing commercial and industrial areas. These uses will remain after development of the data center. The area where both of the data centers will be constructed is largely vacant and has been for some time. While existing water use of the development area may include minor irrigation, water use over the past five years has been minimal and for this WSA, it is assumed to be 0 AFY.

## 2.2. ESTIMATED FUTURE POTABLE WATER DEMAND

Estimation of the future water demand for the proposed Project involves application of water demand factors. Commercial water usage can be calculated using demand factors by square footage of the facility or by number of employees at the facility.

The only demand for potable water will be domestic use by the facility employees. One method to estimate data center employee water use is to use the water demand factor of 29 gpd/employee for "office or industrial jobs" in North San José (Envision San José, 2010). This water demand factor assumes one shift per day, with employees working only on weekdays. LBA Realty estimates that there will be 50 employees on site, 24/7. Consequently, the total demand was calculated as 29 gal/day/employee. With three 8-hr shifts/day for 50 employees, the estimated daily demand is 4,350 gal/day or 4.88 AFY. **Table 1** documents the domestic water use calculations.

## 2.3. ESTIMATED FUTURE RECYCLED WATER USE

Most of the water used by the Northtown Development will be recycled water. Recycled water will be used for the facility's critical cooling system and outdoor irrigation. It is understood that this facility will only use recycled water for its critical cooling system, with no backup potable water supply source. The project plans to use 18 hybrid closed-circuit cooling towers for each of the two data center buildings. **Figure 3** shows the basic water flow associated with the cooling towers. As shown, influent make-up water enters a holding basin and flows through the evaporative section of the cooling towers, indirectly removing heat from the closed-circuit facility water loop. A portion of the heated water evaporates or drifts from the cooling tower. The remaining heated water falls into the cooling tower basin for recirculation. As the recirculated water reaches a certain concentration, it is drained – or blown down – from the basin to the wastewater system. The make-up water system includes treatment to reduce biological fouling, corrosion, and calcium carbonate ($CaCO_3$) scaling. Note that this "single tower"

illustration represents all the towers combined for a given data center building (pers. comm. Kirby, N, Feb 2025).

The annual recycled water demand for critical cooling was calculated based on the total energy demand and the local ambient temperature variations, factoring in the water conservation techniques. The critical cooling water usage needs are provided by the cooling tower manufacturer, Marley, and the water treatment supplier, Nalco Water, and likely represent the worst-case scenario. The instantaneous water demand would vary based on local temperatures data center load fluctuations and the resulting water evaporation, blowdown and drift performance of the cooling towers (pers. comm. Kirby, N, Feb 2025). The critical cooling system is expected to operate 24 hours a day and 7 days a week throughout the year. The annual recycled water consumption for critical cooling is estimated to be 319.6 million gallons per year, or 980.9 AFY, as shown in **Table 2**. The cooling tower demand estimates used in this WSA were developed by AlfaTech Consulting Engineers and are provided in **Appendix A**.

An estimate of the total water demand for irrigation was calculated based on the proposed landscape palette for the site, which will include a mixture of native and climate-adapted non-native trees, shrubs, and groundcovers. New planting will be tolerant of recycled water and meet State and City water efficient landscaping ordinance (WELO) requirements for water use through use of water-wise plant material (pers. comm. Victor, J, May 2025). Outdoor landscaping is expected to cover 390,000 square feet, about 9 acres. The estimated volume of water needed to support the landscaping is 5,100,000 gallons or 15.7 AFY (pers. comm. Calderone, A, Jan 2025). This is reasonable for the area's typical low-water demand landscaping. Total water supply for irrigation is expected to be satisfied by recycled water.

In summary, this project is estimated to utilize 980.9 AFY of recycled water for critical cooling operations and 15.7 AFY for irrigation for a total 996.5 AFY of recycled water (**Table 2**).

## 2.4. FUTURE WATER CONSERVATION

The sole use for potable water is indoor domestic use. No additional water conservation is expected for this indoor use, and demand is expected to remain constant over time. Recycled water will be used to satisfy the cooling and irrigation demand. As recycled water is a drought resilient water supply, it is not anticipated that the project will reduce water use during drought conditions.

## 2.5. PROJECT WATER SUPPLY

The project plans to use potable water for domestic uses only and recycled water for cooling and irrigation. The project proponent has plans to build out the recycled water infrastructure as is necessary to bring recycled water pipelines to the site and is responsible for connecting the Data Center to that infrastructure. No potable supply back up will be provided for the cooling at the project site. The project is scheduled to be completed in the second half of 2028.

# 3. SAN JOSE MUNICIPAL WATER SYSTEM DEMAND

This section summarizes water demand for the SJMWS service area, the water retailer for the proposed Project area. The first part describes the factors affecting total water demand, including climate, population, and employment, plus the mix of customer types, such as residential, commercial, and industrial. The second part documents water demands, not only under normal climatic conditions, but also during drought.

**Figure 2** shows the SJMWS service areas and the project location in the North San José portion of the SJMWS service area.

## 3.1. CLIMATE

Climate has a considerable influence on water demand on a seasonal and annual basis. Generally, for a project, this influence increases with the portion of water demand for outside uses, specifically landscape irrigation, but the demand for recycled water for this project's evaporative cooling system also will be affected. As noted above, the cooling water demand accounts for variations in local ambient temperature.

**Table 3** summarizes representative climate data for the City, including average monthly and annual rainfall and evapotranspiration (ETO) from the California Irrigation Management Information System, Union City (CIMIS) station (CIMIS, 2025). The City has a semi-arid, Mediterranean climate, characterized by dry summers and wet winters with year-round moderate-to-warm temperatures. Reflecting this pattern, water demand in the City is greater in the summer than in the winter.

As it would for the entire region, climate change may affect future water supply availability for the City by reducing water availability, changing local precipitation patterns, and increasing water demands. As discussed in greater detail below, the City largely relies on groundwater but is increasing its recycled water supply source to help offset potable demand.

## 3.2. POPULATION

City population, a key factor in water demand, is analyzed in the 2020 UWMP. **Table 4** reproduces the UWMP population and employment values for the City's SJMWS water service area with projections to 2045.

## 3.3. CURRENT WATER USE SECTORS AND WATER DEMAND

**Table 5** documents the historical water demand for the SJMWS service area by water use sectors for 2020 from the most recent UWMP. The water use sectors (customer types) are listed on the left. Recycled water demand in 2020 was 4,097 AFY with recycled water used for non-potable demands for irrigation and industrial uses (such as cooling towers).

## 3.4. PROJECTED WATER DEMAND

**Table 6** summarizes the projected water demands for the SJMWS service area from 2025 to 2045. This table is from the SJMWS 2020 UWMP. The 21,643 AFY used in 2020 (**Table 5**) is expected to almost double to 40,965 AFY by 2045.

Several projects that rely on recycled water have been approved and in the process of approval since the 2020 UWMP. Two large industrial uses with adopted WSAs total 2,363 AFY and five smaller irrigation projects expected to use less than 75 AFY. The expected project demand is another 1,001.4 AFY. While this total of projected recycled water demand (3,439 AFY) is larger than the anticipated increase recycled water use by 2035, it is within 3.6 percent of the expected increase by 2045 (3,316). The South Bay Water Recycling Program has confirmed that sufficient additional recycled water supplies are available to meet the non-potable demands associated with this Project.

The projected water demand is primarily based on population growth and land use projections, as indicated in the Envision San José 2040 General Plan (2010). It was assumed in that General Plan that the water demand would increase in proportion to projected population and employment growth. The 2020 UMWP has incorporated per capita water demand reduction due to conservation, particularly for residential customers. The potable demand for this proposed project is within the increase projected by the General Plan and UWMP.

# 4. SAN JOSE MUNICIPAL WATER SYSTEM WATER SUPPLY

## 4.1. WATER SUPPLY

The water supply for the North San José/Alviso area currently is provided primarily by the San Francisco Public Utilities Commission (SFPUC) Hetch Hetchy water system, with local groundwater serving as a backup water supply. Recycled water has been used in the area since 1999. Proposed sources of water supply include additional imported water from the Hetch Hetchy water system, groundwater from the Santa Clara Valley groundwater basin (which is managed by Valley Water in collaboration with local water agencies), and additional recycled water. In addition, water conservation is anticipated to reduce water demand from current projected amounts.

## 4.2. WHOLESALE WATER SUPPLY

### 4.2.1. SFPUC

North San José/Alviso is provided water from the SFPUC Hetch Hetchy pipeline by means of two turnouts. In 2009, SJMWS accepted both a master Water Supply Agreement (the agreement common to all Bay Area Water Supply and Conservation Agency (BAWSCA) agencies), and a Water Sales Contract (specific to SJMWS). The City of San José currently has a contract for up to 5,041 AFY (4.5 million gallons per day or MGD); this contract is both temporary and interruptible. The Water Supply Agreement with SFPUC was amended and restated in 2018 and 2021, and will remain in place until June 30, 2034. In addition, a 2025 Amended and Restated Water Supply Agreement is being circulated among the parties for signature. However, that amendment does not substantively alter the City's rights as described in the Water Supply Agreement.

The supply for the City of San José is interruptible but the supply cannot be interrupted until ten years after San José has received notice of SFPUC's intention to reduce or interrupt deliveries. San José, SFPUC, and BAWSCA continue to work on long-term reliable water supply strategies to ensure sufficient and reliable water supply for the region.

As part of the Water Supply Agreement, SJMWS may purchase excess water, providing that the combined purchases of SJMWS and the City of Santa Clara do not exceed 9 MGD. SJMWS is committed to purchasing the maximum amount of water available and reducing its reliance on other sources due to the uncertainties regarding the availability and sustainability of the groundwater basin. Links to the most recent Water Supply Agreement and Water Sales Contract are included in the references.

## 4.3. GROUNDWATER SUPPLY (VALLEY WATER)

Groundwater has long been a source of supply for SJMWS. Groundwater is available from local subbasins of the Santa Clara Valley groundwater basin (designated by DWR as groundwater basin number 2-9.02), which are managed by Valley Water (previously

known as Santa Clara Valley Water District) in collaboration with other agencies. SJMWS currently operates groundwater production wells in the Coyote and Santa Clara subbasins, which are within basin boundaries shown on **Figure 2**. The SJMWS currently has four wells in the project's North San José service area, two of which are permitted for active use; additional City wells located in other service areas are not able to provide water supply to the project's service area.

### 4.3.1. Santa Clara Valley Groundwater Basin

Most SJMWS service areas, including North San José, Evergreen, and Edenvale, overlie the Santa Clara subbasin, which occupies a structural trough between the Diablo Range on the east and the Santa Cruz Mountains on the west. It extends from the northern border of Santa Clara County to Coyote Narrows. The Santa Clara Valley is drained to the north by tributaries to San Francisco Bay including Coyote Creek and the Guadalupe River.

The principal water bearing formations of the Santa Clara subbasin are alluvial deposits of unconsolidated to semi-consolidated gravel, sand, silt, and clay (DWR, 2004). The permeability of the valley alluvium is generally high and most large production wells derive their water from it (DWR, 1975). The southern portion and margins of the subbasin are unconfined areas, characterized by permeable alluvial fan deposits. A confined zone is created by an extensive clay aquitard in the northern portion of the subbasin (SCVWD, 2001). This aquitard divides the water-bearing units into an upper zone and a lower zone; the latter is tapped by most of the local wells.

Groundwater in the Santa Clara subbasin is recharged through natural infiltration along stream channels and by direct percolation of precipitation. In addition, SCVWD maintains an active managed aquifer recharge program. Groundwater flow generally is from the margins of the basin toward San Francisco Bay.

### 4.3.2. Water Resources Management

Valley Water is the groundwater management agency in Santa Clara County (as authorized by the California legislature under the Santa Clara Valley Water District Act) and has the primary responsibility for managing the Santa Clara Valley groundwater basin. Valley Water has worked for decades to minimize subsidence and protect groundwater resources through managed aquifer recharge of the groundwater basin, water conservation, and development of surface water, imported water, and recycled water supplies.

The Sustainable Groundwater Management Act (SGMA), passed in 2014, required medium and high priory basins to establish Groundwater Sustainability Agencies (GSA) and to prepare Groundwater Sustainability Plans (GSPs) or Alternatives to GSPs (Alternative Plan). The Santa Clara subbasin is a high priority basin that is not critically overdrafted. SGMA listed Valley Water as one of 18 exclusive agencies to comply with SGMA. Valley Water submitted their 2016 Groundwater Management Plan (GWMP) as their first Alternative Plan to DWR in 2016. In 2021, Valley Water submitted an updated

GWMP to fulfill the periodic evaluation of the Alternative Plan under SGMA. The 2021 GWMP contains detailed information about groundwater management, a hydrogeological conceptual model of the basin, an update of basin conditions (including groundwater levels and water quality, conjunctive water management plans, basin management programs (including minimum thresholds), and detailed descriptions of their monitoring networks (Valley Water, 2021).

Valley Water is dedicated to providing a reliable water supply to the people and businesses of Santa Clara County. Valley Water maintains flexible management of the water resources to meet these water needs in the future and to manage potential risk. The groundwater supply management program is intended to replenish the groundwater basin, sustain the basin's water supplies, help mitigate groundwater overdraft, and sustain storage reserves for use during dry periods. Valley Water operates artificial recharge systems to augment groundwater supply. Valley Water also conserves local surface water, provides imported water, operates water treatment plants, maintains water conveyance systems, supports water recycling, and encourages water conservation. Valley Water works to maintain each subbasin at "full" capacity, banking water locally to protect against drought or emergency water supply interruptions. This strategy allows Valley Water to carry over surplus water in the subbasins from wet to dry periods.

### 4.3.3. Available Groundwater

The total available groundwater in a normal year, or sustainable yield, of the Santa Clara Subbasin is determined by Valley Water. While Valley Water is the GSA and responsible for overseeing the sustainable operation of the basin, they do not directly provide groundwater to retailers like SJMWS. Valley Water maintains local sources, recharge ponds, and imported water contracts as potential tools in the operation of the basin (Valley Water, 2021).

#### *SJMWS - North San José*

The SJMWS currently has four wells in North San José (the area of the proposed project). The wells, installed in 1981 and 1983, are 600 to 615 feet in depth with screens generally between 200 and 615 feet in depth. The combined capacity of the four wells is reported at 6,500 GPM (City of San José, 2021). However, only two of the wells are active wells in routine use, while the other two are maintained and permitted as a backup, emergency supply source. No additional wells would be needed to meet the small potable demand for the proposed project.

No entitlement or water rights to groundwater are indicated because the Santa Clara Valley groundwater basin has not been adjudicated and groundwater entitlements or rights have not otherwise been defined.

## 4.4. RECYCLED WATER

The City of San José operates the South Bay Water Recycling (SBWR) system and distributes recycled water produced at the San José-Santa Clara Regional Wastewater Facility (RWF) located in Alviso. The SBWR program delivers disinfected tertiary treated wastewater from the RWF through an extensive recycled water distribution system consisting of over 150 miles of pipeline. The recycled water is used for non-potable purposes such as agriculture; industrial cooling and processing; and irrigation of golf courses, parks, and schools. During the peak summer season, SBWR diverts between 15 and 20 MGD of recycled water for irrigation and industrial uses to over 900 customers throughout San José, Santa Clara, and Milpitas (City of San José, 2021).

Recycled water can provide for landscape irrigation, ornamental features (fountains), toilet flushing, and specific industrial uses. In 2020, total recycled water use in SJMWS service areas amounted to 4,097 AF.

SJMWS currently has programs in place to encourage the use of more recycled water, including:

- Lower cost of recycled water than potable water.
- Regulatory approval for recycled water usage.
- Ordinances requiring the use of recycled water for irrigation where available.
- Prohibition against the use of potable water for uses appropriate to recycled water.
- Support for developers' expansion of system to areas where recycled water is unavailable.

By 2045, recycled water use in SJMWS is expected to be 7,413 AFY, an 81 percent increase from current volumes (City of San José, 2021). This WSA only looks at the long-term water system capacity. The ability of the recycled water to meet the peak demand of the project will be determined by the infrastructure designed and implemented by the project proponent.

## 4.5. WATER SUPPLY IN NORMAL AND DROUGHT PERIODS

**Table 7** summarizes current water supply sources by volume in 2020 and **Table 8** shows projected water supply reported in five-year increments to provide a long-term overview. The recycled water supply for the project (996.5 AFY) is listed separately, because the UWMP did not include this specific project in the growth assumptions. Accordingly, it is considered as additive to the projected system wide recycled water supply as documented in the UWMP. While the recycled water supply is available, the proposed project includes plans to extend the recycled water infrastructure and connect the Data Center to the infrastructure. As indicated, SJMWS relies on multiple sources for water supply; in the project's service area, these include imported water from the San Francisco Public Utility Commission (SFPUC), groundwater from the Santa Clara Valley groundwater basin (which is managed by Valley Water in collaboration with local

water agencies), and recycled water. In addition, water conservation is anticipated to reduce water demand from current projected amounts.

While **Tables 7 and 8** document current and future water supply under normal conditions, **Tables 9, 10 and 11** quantify the amount of potable water supply during normal and drought conditions, for current conditions and for projected conditions within the SJMWS service area. These tables were presented in the SJMWS 2020 UWMP to document the expected changes in potable supplies. Recycled water supplies are not included in these tables as no change is expected from normal conditions.

Water supplies in a single dry year are shown in **Table 10**. During dry periods, a reduction of imported water volume from SFPUC is expected, based on their supply reliability analysis. The difference between water supply and demand during a single dry year is expected to be met through conservation measures. These measures are identified and discussed in SJMWS' Water Shortage Contingency Plan.

**Table 11** shows the available potable water supplies for multiple dry years, similar to those that occurred from 1987 through 1992 and 2012 through 2015. As with the single dry year, SFPUC supplies would be reduced in line with the reliability analysis, 46 to 64 percent. Valley Water supplies, both imported water and groundwater, would also be reduced. However, Valley Water plans to manage the reductions through short term water conservation, use of reserves, and supplemental water sources.

In the first year of drought, Valley Water would rely on available reserves. In subsequent years, as reserves are depleted, Valley Water would need to rely on short-term water use reductions and supplemental supplies. SJMWS would coordinate regularly with Valley Water during any dry period to utilize supplies which are most readily available (City of San José, 2021).

# 5. COMPARISON OF SUPPLY AND DEMAND

The WSA must compare supply and demand for the service area where the Project is located. **Tables 9, 10, and 11** show water supply projections for the SJMWS Service Area in five-year increments to 2045 for normal, single-dry, and multiple-dry years, respectively. The tables exclude recycled water, which is drought resilient and 100 percent available in all years. **Tables 9, 10, and 11** are based on the assumptions outlined in the UWMP and summarized in Section 4.5. While the demand is expected to be higher than the project supply, the shortfalls will be met through water conservation and programs detailed in the Water Shortage Contingency Plan (WSCP).

The project is scheduled for completion in the second half of 2028. For potable supply, SJMWS projects an increase of 3,534 AFY for 2025, and 6,610 AFY for 2030. For recycled water, SJMWS projects a demand increase of 679 AFY for 2025, and 1,359 AFY for 2030.

Potable water supply is sufficient to meet the projected domestic use (4.88 AFY). Recycled water supply is sufficient to meet the project cooling uses and irrigation demand (996.5 AFY).

# 6. CONCLUSIONS

Findings of this WSA are summarized below.

- The Northtown Data Center is located in the North San José portion of the SJMWS service area.
- A WSA as per SB610 is required because the project is anticipated to use more than the equivalent demand of 500 residences.
- SJMWS, the Project water supply retailer, has a water supply portfolio including local groundwater, imported water from SFPUC and/or Valley Water, and recycled water.
- Sufficient water supplies are available to serve the Project's water demands including the small potable use and the non-potable demand to be served by recycled water.

Contingent upon the development of the appropriate infrastructure for recycled water, the project has sufficient water supply.

## 7. REFERENCES


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Victor, Jason, KayVictor, personal communications, May 2025.

# TABLES

## Table 1. Estimation of Future Potable Water Demand, Project

| Water Demand | Avg Daily Demand (GPD) | Avg Demand (AFY) |
|---|---|---|
| Domestic Use for Employees | 4,350 | 4.88 |
| **Total** | 4,350 | 4.88 |

Notes:
Based on estimated demand of 29 GPD/employee (Envision San José, 2010) for 50 employees onsite at all times

## Table 2. Estimation of Future Recycled Water Demand, Project

| Water Demand | Avg Daily Demand (GPD) | Avg Demand (AFY) |
|---|---|---|
| Landscaping irrigation[1] | 13,980 | 15.7 |
| Cooling system[2] | 875,672 | 980.9 |
| **Total** | 889,653 | 996.5 |

Notes:
1. Pers. Comms. Calderone, A, Jan 2025
2. Pers. Comms. Kirby, N, Mar 2024

## Table 3. Local Climate Data

| Month | Average Total Monthly Evapotranspiration (2010-2024) | Average Total Monthly Precipitation (in) (2010-2024) | Average Temperature (F) (2010-2024) | Average Minimum Temperature (F) (2010-2024) | Average Maximum Temperature (F) (2010-2024) |
|---|---|---|---|---|---|
| January | 1.4 | 3.1 | 48.8 | 39.7 | 59.7 |
| February | 2.0 | 2.3 | 50.8 | 40.6 | 62.1 |
| March | 3.2 | 2.8 | 53.6 | 43.9 | 64.1 |
| April | 4.6 | 1.4 | 56.6 | 47.2 | 67.4 |
| May | 5.4 | 0.5 | 58.9 | 50.6 | 69.6 |
| June | 6.2 | 0.1 | 62.9 | 54.0 | 74.7 |
| July | 6.4 | 0.0 | 64.8 | 56.4 | 76.4 |
| August | 5.6 | 0.0 | 65.2 | 56.9 | 77.0 |
| September | 4.4 | 0.1 | 64.5 | 54.9 | 77.3 |
| October | 3.2 | 0.8 | 61.0 | 49.9 | 74.4 |
| November | 1.7 | 1.6 | 53.0 | 42.6 | 65.1 |
| December | 1.3 | 3.8 | 48.8 | 39.6 | 59.3 |
| **Annual** | **45.4** | **16.6** | **57.4** | **48.0** | **68.9** |

Source: California Irrigation Management Information Systems (https://cimis.water.ca.gov/) from Station 171, Union City

## Table 4. Current and Projected Population and Employment in SJMWS Service Area

| Year | 2020 | 2025 | 2030 | 2035 | 2040 | 2045 |
|---|---|---|---|---|---|---|
| Population | 132,644 | 150,368 | 168,092 | 194,985 | 217,685 | 222,661 |
| Jobs | 90,001 | 94,006 | 95,626 | 100,473 | 111,355 | 118,367 |

Source: UWMP 2020 Tables 3-2, 3-3

## Table 5. Historical Water Demand by Water Use Sector (AFY)

| Water Use Sector | Actual 2020 Water Demand (AFY) | |
|---|---|---|
| | Level of Treatment when delivered | Volume (AFY) |
| Single-Family Residential | Drinking Water | 7,920 |
| Multi-Family Residential | Drinking Water | 2,694 |
| Commercial | Drinking Water | 1,040 |
| Industrial | Drinking Water | 1,837 |
| Institutional/Government | Drinking Water | 176 |
| Landscape Irrigation | Drinking Water | 2,873 |
| System Losses/Fire Service | | 1,006 |
| Recycled Water | Non Potable Water | 4,097 |
| **TOTAL** | | **21,643** |

Source: 2020 UWMP Tables 4-1, 4-3

## Table 6. Projected Water Demand by Water Use Sector (AFY)

| Customer Type | Projected Water Demand (AFY) | | | | |
|---|---|---|---|---|---|
| | 2025 | 2030 | 2035 | 2040 | 2045 |
| **Potable Demand** | | | | | |
| Single-Family Residential | 9,107 | 10,293 | 10,917 | 12,338 | 12,621 |
| Multi-Family Residential | 2,932 | 3,171 | 3,463 | 3,763 | 3,849 |
| Commercial/Institutional | 1,642 | 1,920 | 2,436 | 3,376 | 3,446 |
| Industrial | 2,562 | 3,197 | 4,086 | 5,546 | 5,665 |
| Institutional/Governmental | 208 | 239 | 286 | 356 | 365 |
| Landscape Irrigation | 3,401 | 3,930 | 4,586 | 5,584 | 5,712 |
| Losses | 1,228 | 1,406 | 1,569 | 1,852 | 1,894 |
| **Non-Potable Demand** | | | | | |
| Recycled Water | 4,776 | 5,456 | 6,279 | 7,368 | 7,413 |
| **TOTAL** | **25,856** | **29,612** | **33,622** | **40,183** | **40,965** |

Source: 2020 UWMP Table 4-2 (with recycled water)

## Table 7. Current Water Supply (AFY)

| Supply Type | Existing Water Supply (AFY)<br><br>2020 |
|---|---|
| Groundwater | 885 |
| Imported - Valley Water | 11,930 |
| Imported SFPUC | 4,731 |
| Recycled Water | 4,097 |
| **TOTAL** | **21,643** |

Source: 2020 UWMP Table 6-9

## Table 8. Projected Water Supply (AFY)

| Supply Type | Projected Water Supply (AFY) | | | | |
|---|---|---|---|---|---|
| | 2025 | 2030 | 2035 | 2040 | 2045 |
| Potable Supply (Valley Water, Groundwater, SFPUC) | 21,080 | 24,156 | 27,343 | 32,815 | 33,552 |
| Recycled Water Supply - System wide | 4,776 | 5,456 | 6,279 | 7,368 | 7,413 |
| **TOTAL** | **25,856** | **29,612** | **33,622** | **40,183** | **40,965** |

Source: 2020 UWMP Table 6-10

## Table 9. Normal Year Supply and Demand Comparison, Potable (AFY)

| | | 2025 | 2030 | 2035 | 2040 | 2045 |
|---|---|---|---|---|---|---|
| **Normal Year** | **Supply totals** | 21,080 | 24,156 | 27,343 | 32,815 | 33,552 |
| | **Demand totals** | 21,080 | 24,156 | 27,343 | 32,815 | 33,552 |
| | **Difference** | 0 | 0 | 0 | 0 | 0 |

Notes: Table excludes recycled water which is 100% available in all years
Source: 2020 UWMP Table 7-5

## Table 10. Single Dry Year Supply and Demand Comparison, Potable (AFY)

| | | 2025 | 2030 | 2035 | 2040 | 2045 |
|---|---|---|---|---|---|---|
| **Single Dry Year** | **Supply totals** | 19,265 | 22,330 | 25,505 | 30,977 | 31,257 |
| | **Demand totals** | 21,080 | 24,156 | 27,342 | 32,814 | 33,553 |
| | **Difference** | (1,815) | (1,826) | (1,837) | (1,837) | (2,296) |

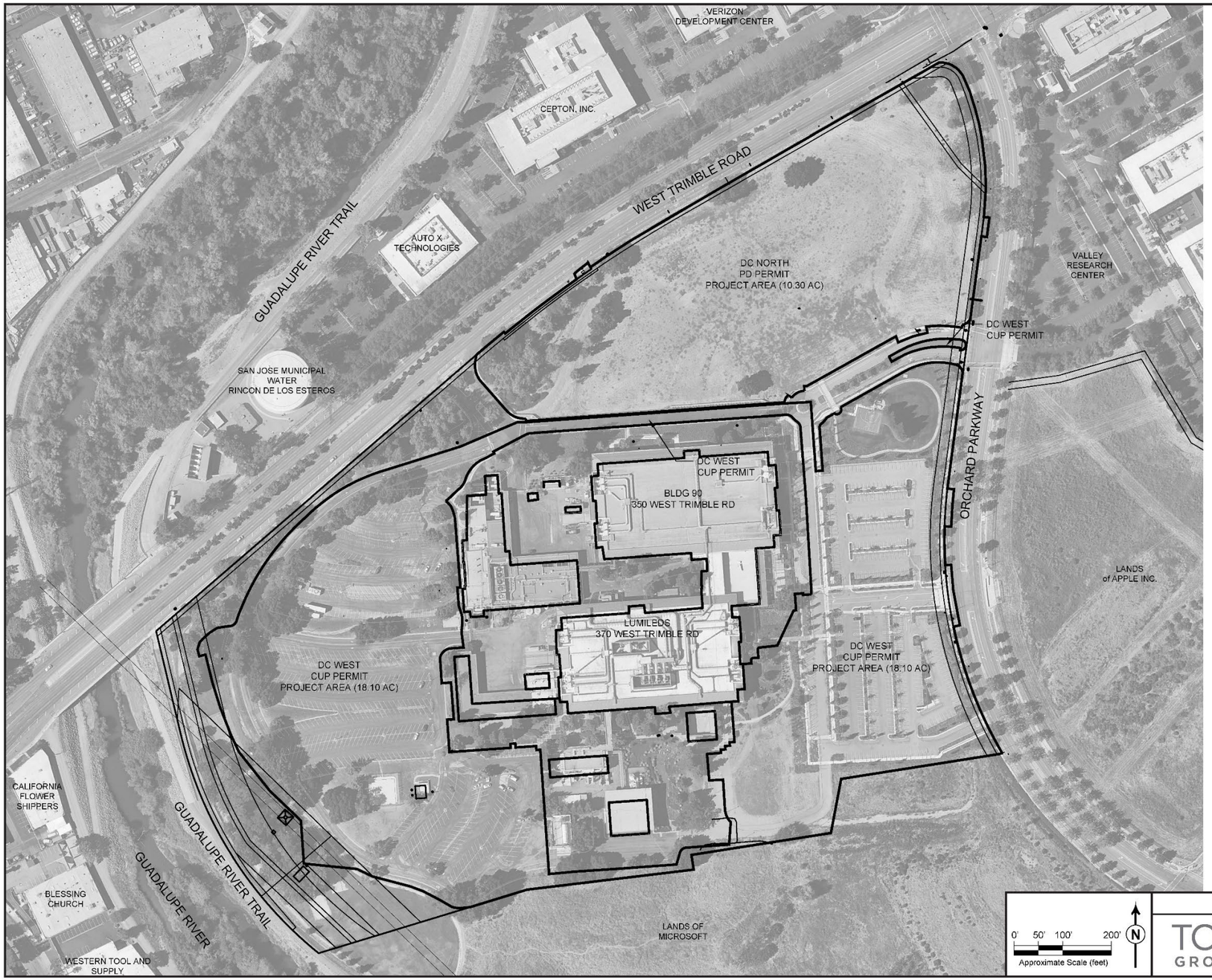
Notes: Table excludes recycled water which is 100% available in all years
Source: 2020 UWMP Table 7-6
Difference is expected to be made up through the Water Shortage Contingency Plan (WSCP)

## Table 11. Multiple Dry Years Supply and Demand Comparison, Potable (AFY)

| | | 2025 | 2030 | 2035 | 2040 |
|---|---|---|---|---|---|
| First Year | Supply Totals | 19,265 | 22,330 | 25,505 | 30,977 |
| | Demand Totals | 21,080 | 24,156 | 27,342 | 32,814 |
| | Difference | (1,815) | (1,826) | (1,837) | (1,837) |
| Second Year | Supply Totals | 19,421 | 22,508 | 26,140 | 30,666 |
| | Demand Totals | 21,695 | 24,793 | 28,437 | 32,962 |
| | Difference | (2,274) | (2,285) | (2,297) | (2,296) |
| Third Year | Supply Totals | 20,036 | 23,145 | 27,235 | 30,813 |
| | Demand Totals | 22,310 | 25,431 | 29,531 | 33,110 |
| | Difference | (2,274) | (2,286) | (2,296) | (2,297) |
| Fourth Year | Supply Totals | 20,652 | 23,783 | 28,329 | 30,636 |
| | Demand totals | 22,926 | 26,068 | 30,626 | 33,258 |
| | Difference | (2,274) | (2,285) | (2,297) | (2,622) |
| Fifth Year | Supply Totals | 21,267 | 24,420 | 29,200 | 30,784 |
| | Demand Totals | 23,541 | 26,705 | 31,720 | 33,405 |
| | Difference | (2,274) | (2,285) | (2,520) | (2,621) |

Notes: Table excludes recycled water which is 100% available in all years
Source: 2020 UWMP Table 7-7
Difference is expected to be made up through the Water Shortage Contingency Plan (WSCP)

# FIGURES




Source: LBA Realty

May 2025

TODD GROUNDWATER

**Figure 1**
**Project Site Map**

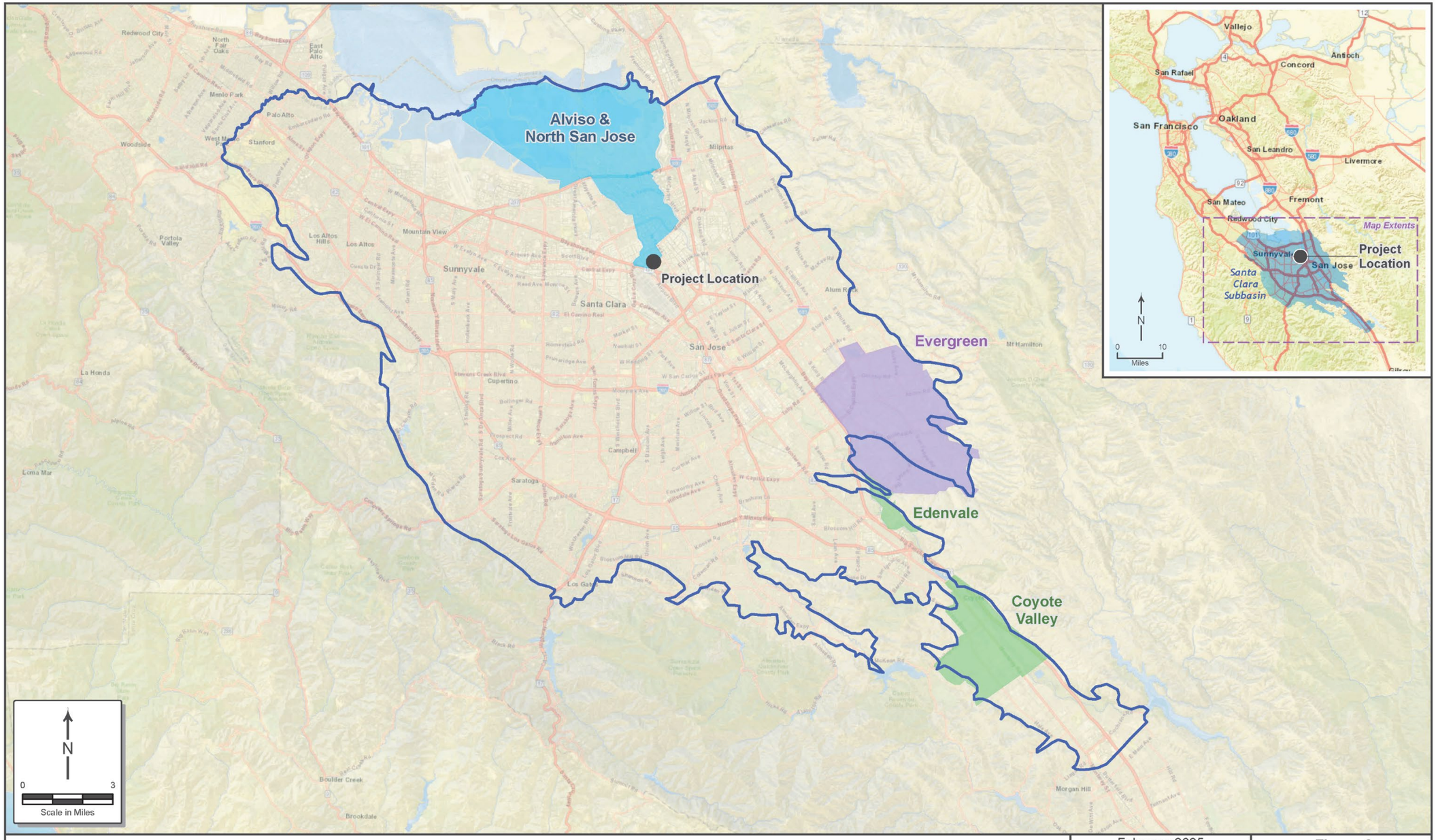



**Figure 2**
**Project Location with Municipal Water System Service Areas**

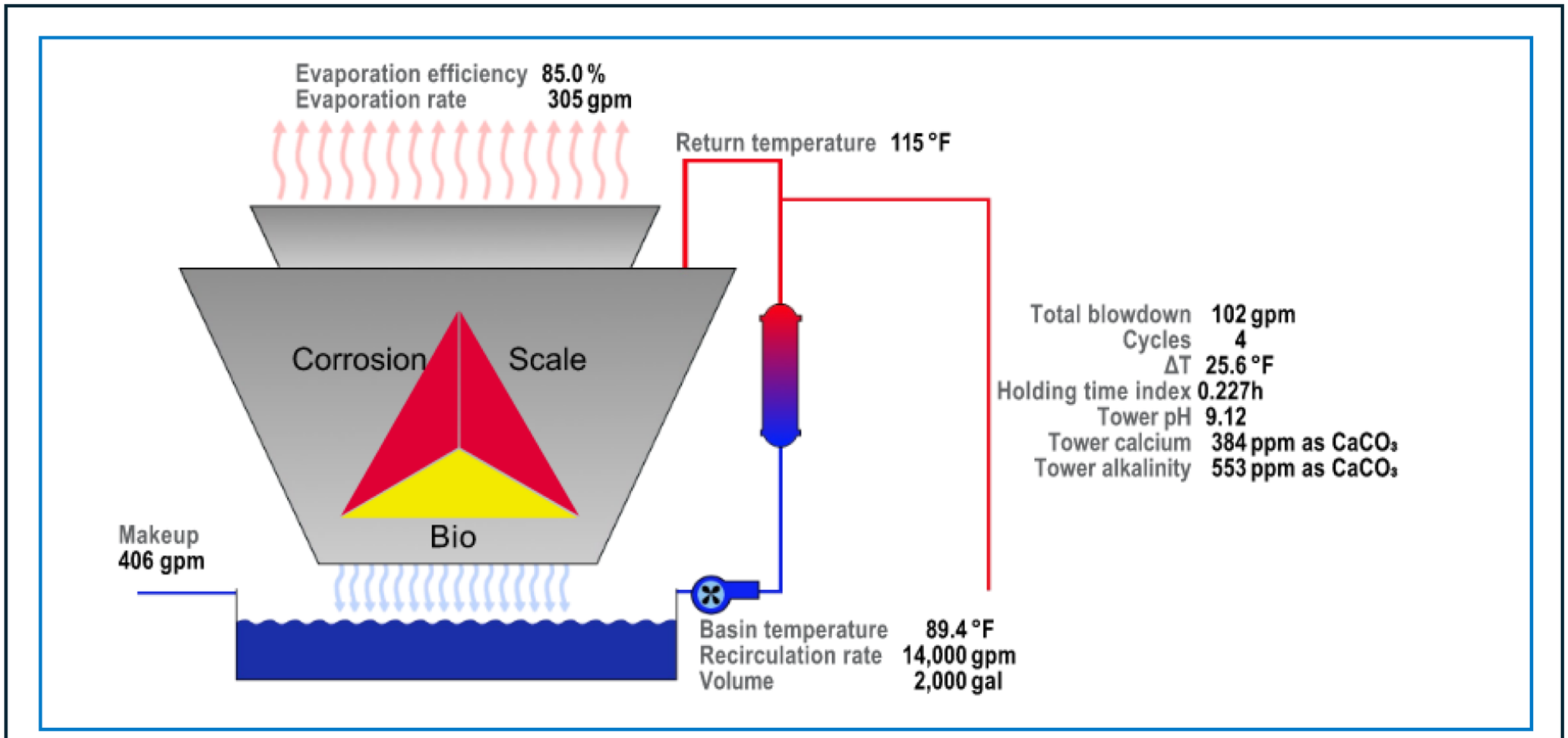



*Figure 3: Cooling Tower Water Usage Diagram*

# APPENDIX A

| | | | Data Center East | | | | | Data Center West | | | | | Total (DCE + DCW) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Peak Demand (GPM) | Daily Average (GPM) | Annual Average (GPM) | Annual Consumption | | Peak Demand (GPM) | Daily Average (GPM) | Annual Average (GPM) | Annual Consumption | | Peak Demand (GPM) | Daily Average (GPM) | Annual Average (GPM) | Annual Consumption | |
| | | | | | | (MGY) | (AFY) | | | | (MGY) | (AFY) | | | | (MGY) | (AFY) |
| Water In | **Recycled Water (RW)** | Cooling Tower Make-Up Water | 410.47 | 303.98 | 303.98 | 159.77 | 490.33 | 410.47 | 303.98 | 303.98 | 159.77 | 490.33 | 820.95 | 607.97 | 607.97 | 319.55 | 980.65 |
| | | *RW Subtotal* | 410.47 | 303.98 | 303.98 | 159.77 | 490.33 | 410.47 | 303.98 | 303.98 | 159.77 | 490.33 | 820.95 | 607.97 | 607.97 | 319.55 | 980.65 |
| | **Domestic Water (DW)*** | Administration Building In (RRs, Bkrms, shower, etc.) | 10 | 0.07 | 0.07 | 0.04 | 0.11 | 10 | 0.07 | 0.07 | 0.04 | 0.11 | 20 | 0.14 | 0.14 | 0.07 | 0.22 |
| | | *DW Subtotal* | 10 | 0.07 | 0.07 | 0.04 | 0.11 | 10 | 0.07 | 0.07 | 0.04 | 0.11 | 20 | 0.14 | 0.14 | 0.07 | 0.22 |
| | **Water In Subtotal** | | **420.47** | **304.05** | **304.05** | **159.81** | **490.44** | **420.47** | **304.05** | **304.05** | **159.81** | **490.44** | **840.95** | **608.11** | **608.11** | **319.62** | **980.88** |
| Water Out | **Atmosphere** | Cooling Tower Evaporation | 305 | 225.87 | 225.87 | 118.72 | 364.33 | 305 | 225.87 | 225.87 | 118.72 | 364.33 | 610 | 451.74 | 451.74 | 237.44 | 728.67 |
| | | Cooling Tower Drift | 3.47 | 2.57 | 2.57 | 1.35 | 4.15 | 3.47 | 2.57 | 2.57 | 1.35 | 4.15 | 6.95 | 5.15 | 5.15 | 2.7 | 8.3 |
| | | *Atmosphere Subtotal* | 308.47 | 228.44 | 228.44 | 120.07 | 368.48 | 308.47 | 228.44 | 228.44 | 120.07 | 368.48 | 616.95 | 456.89 | 456.89 | 240.14 | 736.97 |
| | **Sanitary Sewer (SS)** | Cooling Tower Blowdown | 102 | 75.54 | 75.54 | 39.7 | 121.84 | 102 | 75.54 | 75.54 | 39.7 | 121.84 | 204 | 151.08 | 151.08 | 79.41 | 243.69 |
| | | Administration Building Out (RRs, Bkrms, shower, etc.) | 10 | 0.07 | 0.07 | 0.04 | 0.11 | 10 | 0.07 | 0.07 | 0.04 | 0.11 | 20 | 0.14 | 0.14 | 0.07 | 0.22 |
| | | *SS Subtotal* | 112 | 75.61 | 75.61 | 39.74 | 121.95 | 112 | 75.61 | 75.61 | 39.74 | 121.95 | 224 | 151.22 | 151.22 | 79.48 | 243.91 |
| | **Water Out Subtotal** | | **420.47** | **304.05** | **304.05** | **159.81** | **490.43** | **420.47** | **304.05** | **304.05** | **159.81** | **490.43** | **840.95** | **608.11** | **608.11** | **319.62** | **980.88** |

Source: AlfaTech Consulting Engineers, Mar 2025

*Note: a separate analysis of domestic water demand was used in the Northtown WSA