

# Appendix E

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Draft Gateway-Main Street Water  
Supply Assessment

# Gateway-Main Street Specific Plan Water Supply Assessment

Prepared for:

**City of Milpitas**  
455 East Calaveras Boulevard  
Milpitas, CA 95035

April 2025

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Prepared for:



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## LIST OF ABBREVIATIONS

AFY	acre-feet per year
BAWSCA	Bay Area Water Supply & Conservation Agency
Bay Delta Plan	San Francisco Bay/Sacramento-San Joaquin Delta Estuary
CEQA	California Environmental Quality Act
City	City of Milpitas
EIR	Environmental Impact Report
GWMP	Groundwater Management Plan
IWRP	Integrated Water Resources Planning Study
mgd	million gallons per day
project	Gateway-Main Street Specific Plan
RWS	Regional Water System
SBWR	South Bay Water Recycling
sf	square feet
SFPUC	San Francisco Public Utilities Commission
Specific Plan	Milpitas Gateway-Main Street Specific Plan
SWP	State Water Project
UWMP	Urban Water Management Plan
Valley Water	Santa Clara Valley Water District
Water Code	California Water Code
WSA	water supply assessment

# EXECUTIVE SUMMARY

## ES.1 INTRODUCTION

Division 6, Part 2.10 (1995) of the California Water Code (Water Code), requires coordination between land use lead agencies and public water purveyors. The purpose of this coordination is to ensure that prudent water supply planning has been conducted, and that planned water supplies are adequate to meet both existing demands and demands of planned development.

Water Code Sections 10910 – 10915 (inclusive) require land use lead agencies: 1) to identify the responsible public water purveyor for a proposed development project, and 2) to request a “Water Supply Assessment” (WSA) from the responsible purveyor. The objective of a WSA is to demonstrate the sufficiency of a purveyor's water supplies to satisfy the water demands of a proposed development project while still meeting the current and projected water demands of existing customers. Water Code Sections 10910 – 10915 delineate specific information that must be included in a WSA. This WSA was prepared consistent with Water Code Sections 10910 – 10915.

## ES.2 SUMMARY DESCRIPTION OF THE PROJECT

The proposed Gateway-Main Street Specific Plan would change the development currently allowed under the General Plan. The Specific Plan would require amendments to the General Plan as changes to the boundaries and land use and development standards of the adopted Midtown Plan Area are proposed. The Gateway-Main Street Specific Plan proposes a new project area boundary that removes the portion of the Midtown Specific Plan Area south of the Great Mall Parkway, and adds area in the northwestern portion of the Specific Plan Area.

The Gateway-Main Street Specific Plan would allow for additional residential development beyond what is allowed under the General Plan through increases in density and implementation of an incentive program. This would also include alterations in nonresidential development potential through mixed-use development.

## ES.3 SUMMARY OF WATER SUPPLY ASSESSMENT CONCLUSIONS

Pursuant to Section 10910 of the Water Code and based on the analysis detailed in this report, the City of Milpitas has determined that its existing water supply sources result in shortfalls in supply in 2025, 2030, and 2045 under single dry-year and multiple dry year conditions, as shown in Table 4-2 and 4-3. During these conditions, the City would implement its Water Shortage Plan that consists of voluntary and mandatory water conservation measures that would address water supply shortfalls.

Specifically, the Water Shortage Contingency Plan Table 3-2 identifies water demand reduction actions that include a range of measures (e.g., restrictions on operation of water features, landscaping irrigation, public information campaigns, reductions of system water loss) that are identified to reduce the water supply shortage gap from 1 to 70 percent. The Plan also includes Table 3-3 that identifies water augmentation through the installation of five additional groundwater wells by 2025 and two additional groundwater wells by 2040 each with a 1.2 mgd production capacity. Based on the shortfalls identified in Table 4-2 and 4-3, this additional groundwater production would be adequate to offset water supply shortfalls identified in for 2030 and 2045 (project approval is anticipated in 2025).

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# 1 INTRODUCTION

## 1.1 PURPOSE OF WATER SUPPLY ASSESSMENT

The Water Code (Section 10910 et. seq.), based on Senate Bill 610 of 2001 (SB 610), requires a project proponent to prepare a water supply assessment (WSA) to evaluate the reliability of a project's water supply as part of the California Environmental Quality Act (CEQA) process. If the City of Milpitas (City) potable water supply does not have sufficient existing water supply to meet the project demands of the project, the development of additional water supplies must be addressed in the WSA and in the project Environmental Impact Report (EIR).

Under the Government Code (Section 66473.7), based on SB 221 of 2001, proposed subdivisions adding 500 dwelling units are also required to receive written verification of the available water supply from the project's water supplier. The Gateway-Main Street Specific Plan (project) does not include the creation of a subdivision or a subdivision tract map, so a written verification of supply is not required.

This report is meant to serve as the WSA for the project to meet the Water Code and Government Code requirements. This WSA documents the City's existing and future water supplies for the project and compares them to the City's total projected water demands for the next twenty (20) years.

SB 610 requires the following steps be taken to identify the need and scope of a project's WSA:

1. Determine whether the project is subject to CEQA.
2. Determine whether the project meets the definition of a "project" per SB 610.
3. Determine the public water agency that will serve the project.
4. Determine whether any current Urban Water Management Plan considers the projected water demand for the project area.
5. Determine whether groundwater is used by the public water agency to serve the project area.

## 1.2 PROJECT OVERVIEW

The Gateway-Main Street Specific Plan Area (Specific Plan Area) is approximately 605 acres within the City. The City, located in northern Santa Clara County, within the South San Francisco Bay Area, is situated north of San Jose and east of Santa Clara, Sunnyvale, and Mountain View along State Route 237 (Highway 237) (Figure 2-1). The City is served by three major freeways: Interstate (I)-880, I-680, State Route 237 (Highway 237)/Calaveras Boulevard, and the County-managed Montague Expressway.

Specific plans are a land use planning tool for the further implementation of the General Plan for individual development proposals in a defined geographic area. They give local land use agencies the ability to establish land use and design regulations to create development that is consistent with site-specific physical constraints and opportunities as well as available infrastructure. All subsequent development within the boundaries of the specific plan area is subject to the requirements of the specific plan. Sections 65450 through 65457 of the California Government Code grant authority to the City for the development and adoption of specific plans.

The purpose of the proposed Specific Plan is to guide land use and development consistent with the General Plan; implement the City's economic development strategy and help facilitate investment in the Specific Plan's Focus Areas; preserve and enhance existing neighborhoods; and plan for the future transition of Urban Reserve lands. The Specific Plan identifies four focus areas: Gateway District, Crossroads District, Main Street District, and Abbot District.

The proposed Specific Plan implements the General Plan policies that would change the development currently allowed under the General Plan. Table 2-4 identifies development buildout within the Midtown Plan Area under the General Plan and the proposed development buildout that would be allowed with implementation of the Specific Plan. The maximum



residential development capacity under the General Plan within the Midtown Plan Area is 3,838 units. A total of 1,338 additional units would be allowed under the Specific Plan beyond what is allowed under the General Plan currently. The nonresidential development area allowed under the General Plan is 3,293,240 square feet (sf) which would be reduced to 2,058,666 sf with implementation of the proposed Specific Plan. This WSA addresses this change in development potential. Land uses and general development potential of project are identified in the City's 2020 Urban Water Management Plan (UWMP) as well as overall City growth through 2045 (City of Milpitas 2021a:27).

The proposed increase of 1,338 residential units triggers the need for the preparation of a WSA pursuant to Water Code Section 1092(a). The City municipal water system that serves the project uses water purchased from the Santa Clara Valley Water District (Valley Water) and the San Francisco Public Utilities Commission (SFPUC). Recycled water is provided to the City by South Bay Water Recycling (SBWR). The project is located within both Valley Water and SFPUC water service areas.

This WSA is being prepared in accordance with SB 610 for the City's CEQA work in connection with the project.

## 1.3 RELATIONSHIP OF THE WATER SUPPLY ASSESSMENT TO THE CITY URBAN WATER MANAGEMENT PLAN

Urban water management plans are considered by the California Department of Water Resources as a fundamental document for compliance with both SB 610 and SB 221. Thorough and complete UWMPs allow water suppliers to use UWMPs as a foundation to fulfill the specific requirements of these two statutes. The UWMP provides information detailing water supplies available during normal, single dry, and multiple dry water years during a 20-year projection, and the existing and projected future water demand during a 20-year projection. The UWMP presents projected supplies and demands in 5-year increments for the 20-year projection. Supplies from all sources, including wholesaler supplies, are documented in the UWMP. This documentation includes identifying and quantifying water rights, contracts, and/or entitlements to the supply; associated capital outlay programs; federal, state and local permits for constructing infrastructure for conveying the supply; and any necessary regulatory approvals required for conveyance.

Data from the City's 2020 UWMP was utilized to complete this WSA. The 2020 UWMP shows projected water supplies available during normal, single dry, and multiple dry water years in 5-year increments through the year 2045.

## 1.4 WATER SUPPLY ASSESSMENT ORGANIZATION

This WSA is organized into chapters, as identified and briefly described below. Chapters are further divided into sections (e.g., Chapter 3, "City Water Supply" and Section 3.1, "Current Water Supply Sources"):

- ▶ The "Executive Summary": This chapter introduces the project; provides a summary of the of the project, and a summary of the WSA conclusions.
- ▶ Chapter 1, "Introduction": This chapter provides a description of the purposed of the WSA, a project overview, a review of the previous WSA and its relationship the City's UWMP, and the WSA organization.
- ▶ Chapter 2, "Project Description": This chapter describes the location, background, and project water demands for the project, City water demands, and describes the project elements in detail.
- ▶ Chapter 3, "City Water Supply": The sections within this chapter describe the City's current and future water supply and reliability from the following existing sources: SFPUC, Valley Water, and recycled water from SBWR.
- ▶ Chapter 4, "Water Supply Sufficiency Analysis": This chapter evaluates the water supply reliability and the anticipated project water demands to determine if the future water supply can adequately meet the project water demands.
- ▶ Chapter 5, "Conclusions": This chapter summarizes the conclusions of the WSA.
- ▶ Chapter 6, "Report Preparers": This chapter identifies the preparers of the document.
- ▶ Chapter 7, "References": This chapter identifies the organizations and persons consulted during preparation of this WSA and the documents and individuals used as sources for the analysis.

## 1.5 STANDARD TERMINOLOGY

This WSA uses the following standard terminology:

“CEQA” means the California Environmental Quality Act.

“project” means proposed Gateway-Main Street Specific Plan.

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## 2 PROJECT DESCRIPTION AND WATER DEMANDS

### 2.1 PROJECT DESCRIPTION

The Midtown Plan, adopted in 2002 and updated in 2010, is the predecessor plan to the proposed Milpitas Gateway-Main Street Specific Plan. Its aim was to respond to a series of development activities in the Midtown area, including the construction of new housing, reinvestment in the Great Mall, and the future extension of the VTA Light Rail Transit line and BART to the area by creating a cohesive Specific Plan for Midtown.

The Milpitas General Plan Update, adopted in 2021, is the guiding, long-term plan and policy document for the physical development of the city through 2040. The City’s General Plan Land Use Element designates the adopted Midtown Plan area as Milpitas Gateway-Main Street Specific Plan (Specific Plan). The General Plan includes the following actions related to the development of the proposed Specific Plan: Action LU-2A to maintain and implement the Gateway-Main Street Specific Plan goals, policies and development standards and guidelines to create a mixed-use community that includes high-density, transit-oriented housing and a central community ‘gathering place’ while maintaining needed industrial, service and commercial uses; and Action ED-3H to work with property owners to facilitate development of vacant and underutilized properties on Main Street to achieve the highest and best use.

The Specific Plan Area includes the historic commercial core of the city, centered on Main Street and the Calaveras Gateway. The proposed Specific Plan would update the vision, standards, and policies of the Midtown Plan. The project would implement the General Plan goals and policies to update the Midtown Plan with a focus on revitalizing Main Street as the city’s historic core and improving Calaveras Boulevard as a western gateway into the city.

Existing land uses in the Specific Plan Area consist of single-family residential, multi-family residential, retail, office, civic/institutional, park/open space, and industrial uses. Commercial uses (retail, office, and hospitality) are located throughout the Specific Plan Area. A mix of single-family and multi-family housing is scattered throughout the Specific Plan Area. Public uses, including religious, educational, and cultural facilities, comprise a portion of the Specific Plan Area, including the County-operated Elmwood Correctional Facility. Transportation and industrial uses, in the Specific Plan Area, are primarily focused between the two railroad lines. There are currently 2,403 residential units and 1,858,642 square feet of nonresidential uses in the Specific Plan Area.

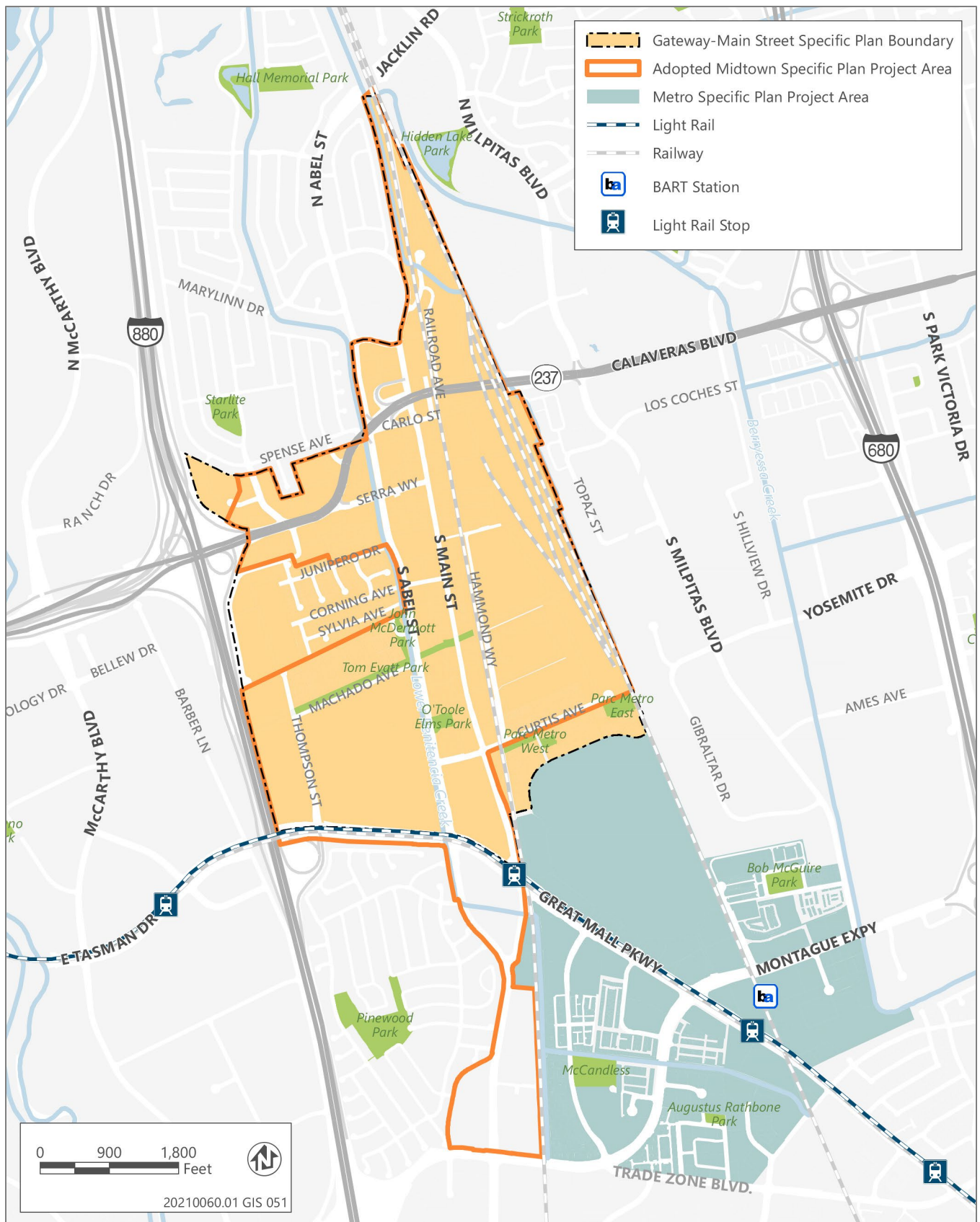
The Specific Plan proposes a new project area boundary, as shown in Figure 2-1, which includes additional areas that currently have other designations in the General Plan Land Use Element and removes areas south of Great Mall Parkway that were included in the Midtown Plan. The proposed Specific Plan Land Use Framework would implement the vision for the Specific Plan focus areas through Specific Plan Zoning Districts and existing Citywide Zoning Districts. The proposed Specific Plan implements the General Plan policies that would change the development currently allowed under the General Plan. Table 2-1 identifies development buildout within the Midtown Plan Area under the General Plan and the proposed development buildout that would be allowed with implementation of the Specific Plan. The maximum residential development capacity under the General Plan within the Midtown Plan Area is 3,838 units. A total of 1,338 additional units would be allowed under the Specific Plan beyond what is allowed under the General Plan currently. The nonresidential development area allowed under the General Plan is 3,293,240 square feet (sf) which would be reduced to 2,058,666 sf with implementation of the proposed Specific Plan.

**Table 2-1 Changes in Buildout Under Gateway-Main Street Specific Plan**

Land Use Type	General Plan	Proposed Specific Plan	Change
Residential	3,838 DU	5,176 DU	1,338 DU
Non-Residential	3,293,240 SF	2,058,666 SF	-1,234,574 sf

Note: The allowable development numbers under the General Plan include the development assumptions of the adopted Midtown Plan.

Source: Data Compiled by Ascent 2024.



Source: Adapted by Ascent in 2024.

Figure 2-1 Specific Plan Area Boundary

## 2.2 ESTIMATED PROJECT WATER DEMANDS

Table 2-2 provides an estimate of project water demands.

**Table 2-2 Comparison of Adopted General Plan to the Gateway-Main Street Specific Plan Water Demands**

Project	Land Use Type Residential Dwelling units	Land Use Type Non-Residential Square feet	Water Demand Factors Residential (gpd/du) <sup>1</sup>	Water Demand Factors Non-Residential (gpd/ksf) <sup>2</sup>	Water Demands (Gallons Per Day) Residential	Water Demands (Gallons Per Day) Non-Residential	Total (Gallons Per Day)
General Plan Land Uses for Specific Plan Area <sup>3</sup>	3,838	3,293,240	170	270	652,460	889,175	1,541,635
Proposed Specific Plan	5,176	2,058,666	170	270	879,920	555,840	1,435,760
Increase	1,338	-1,234,574	-	-	227,460	-333,335	-105,875

<sup>1</sup> Assumed gallons per dwelling unit based on the City of Sunnyvale Lawrence Station Area Plan Update/Intuitive Surgical Corporate Campus Project Water Supply Assessment (City of Sunnyvale 2020) as the 2020 UWMP and the City of Milpitas Water Master Plan do not provide water demand factors on a per unit basis.

<sup>2</sup> Assumed gallons per 1,000 square feet of non-residential use for a mix commercial, industrial and institutional uses based on the City of Sunnyvale Lawrence Station Area Plan Update/Intuitive Surgical Corporate Campus Project Water Supply Assessment (City of Sunnyvale 2020) as the 2020 UWMP and the City of Milpitas Water Master Plan do not provide water demand factors on a square footage basis.

<sup>3</sup> The allowable development numbers under the General Plan include the development assumptions of the adopted Midtown Plan

Source: Compiled by Ascent 2024.

## 2.3 CITY WATER DEMANDS

### 2.3.1 Historic and Current Water Demands

Table 2-3 summarizes the 2020 water use in the City divided by sector.

**Table 2-3 Current Water Use Demand by Customer Type (Million Gallons)**

Customer Type	2020 Water Use
Single Family Residential	965
Multi-Family Residential	724
Commercial	276
Industrial	355
Industrial – Industrial Cooling Tower Using Recycled Water	16
Institutional/Governmental	146
Landscape	290
Landscape Irrigation Using Recycled Water	341
Other	15
Losses (Fire)	302
<b>Total Water Use</b>	<b>3,430</b>

Source: 2020 UWMP, Table 4-1 and 6-4 (City of Milpitas 2021a).

## 2.3.2 Future Water Demands

Table 2-4 summarizes the projected water demand for the City divided by 5-year increments provided in the 2020 UWMP using California Department of Finance growth projections for the City that identifies a population of 120,400 residents in 2045. In comparison, General Plan buildout (without the project) is estimated to consist of 113,530 residents (City of Milpitas 2020). Water demand growth is assumed to occur under normal water year conditions.

**Table 2-4 2020 UWMP Projected Water Demand Projections by Customer Type (Million Gallons)**

Customer Type	Year 2025	Year 2030	Year 2035	Year 2040	Year 2045
Single Family Residential	1,110	1,110	1,080	1,070	1,070
Multi-Family Residential	810	900	1,000	1,090	1,170
Commercial	530	540	540	550	560
Industrial	450	460	460	470	480
Industrial – Industrial Cooling Tower Using Recycled Water	20	20	20	20	20
Institutional/Governmental	210	230	250	270	280
Landscape	390	400	430	440	460
Landscape Irrigation Using Recycled Water	380	380	380	380	380
Losses	420	440	460	480	490
Other (Fire)	5	5	6	6	7
<b>Total Water Use</b>	<b>4,325</b>	<b>4,475</b>	<b>4,626</b>	<b>4,776</b>	<b>4,917</b>

Source: 2020 UWMP Table 4-3 and 6-4 (City of Milpitas 2021a).

## 3 CITY WATER SUPPLY

The following provides an overview of City water supply sources based on Chapter 6, “Water Supply Characterization,” of the 2020 UWMP (City of Milpitas 2021a).

### 3.1 CURRENT WATER SUPPLY SOURCES

The City obtains its water supply from three sources: purchased water from SFPUC and Valley Water and recycled water from SBWR. The project is located within both the SFPUC and Valley Water water service areas.

#### 3.1.1 San Francisco Public Utility Commission

Approximately 60 percent of the City’s water supply is provided from SFPUC. The City receives imported water from the City and County of San Francisco’s Regional Water System (RWS), operated by SFPUC. This supply is predominantly from the Sierra Nevada, delivered through the Hetch Hetchy aqueducts, but also includes treated water produced by the SFPUC from its local watersheds and facilities in Alameda and San Mateo Counties. Water from the RWS is treated before delivery and supplied to City from two connections, Bay Division Pipelines (BDPL) 1 and 2, and the Crystal Springs Bypass Tunnel.

The amount of imported water available to the SFPUC’s retail and wholesale customers is constrained by hydrology, physical facilities, and the institutional parameters that allocate the water supply of the Tuolumne River. Due to these constraints, the SFPUC is very dependent on reservoir storage to ensure ongoing reliability of its water supplies.

On June 2, 2009, the City entered into a 25-year Water Supply Agreement with SFPUC. This agreement affirms the City’s perpetual right to purchase up to 9.23 million gallons per day (mgd) of treated potable water unless SFPUC has a water shortage.

#### 3.1.2 Valley Water

Valley Water began providing treated surface water from Valley Water in August 1993 under a September 1984 contract between the City and Valley Water (previously known as Santa Clara Valley Water District). The supply delivery is adjusted annually based on a binding 3-year annual delivery schedule. The City’s annual purchase must be at least 90 percent of the delivery schedule and the City’s monthly “supply guarantee” is at least 15 percent of the annual delivery schedule. Valley Water provides treated water from its Penitencia and Santa Teresa treatment plant via its Milpitas Pipeline which terminates in the City.

Although the City purchases are currently limited to surface water largely purchased by Valley Water from the State Water Project (SWP) and Central Valley Project CVP (Valley Water has a contract for 152,500 acre-feet per year [AFY] from the CVP and 100,000 AFY from the SWP), Valley Water’s overall water supply comes from a variety of sources. Nearly half is from local groundwater aquifers, and more than half is imported from the Sierra Nevada through pumping stations in the Sacramento-San Joaquin River Delta. Both groundwater and imported water are sold to retailers. Valley Water also manages the groundwater basin to the benefit of agricultural users and other independent users who pump groundwater. Local runoff is captured in Valley Water reservoirs for recharge into the groundwater basin or treatment at one of Valley Water’s water treatment plants. The total storage capacity of these reservoirs is about 170,000 acre-feet. According to the City’s Water Master Plan, a new Valley Water turnout near Piper Drive and a two mgd storage reservoir and 4,000 gallon per minute pump station in the Valley Water service area is anticipated to be constructed between 2031 and 2035 (Silveira 2025, pers comm). Further, according to the City’s Water Master Plan, a new emergency pressure reducing valve at the intersection of Cedar Way and South Main Street to allow flows between zone SF1 and zone VW1, as identified in Section 7.3 of the Specific Plan, is anticipated to be constructed between 2031 and 2035 (Silveira, pers. comm., 2025).



### 3.1.3 Recycled Water

The recycled water use identified in Table 2-2 and Table 2-3 include projects currently underway to convert potable users within the vicinity of the existing recycled water system, irrigation and conversion of cooling towers as identified through a SBWR Cooling Tower Initiative and extension of the recycled water system to capture additional irrigation use. Every year, the City purchases approximately 300 million gallons of recycled water from the San Jose/Santa Clara Regional Wastewater Facility, through SBWR. The recycled water undergoes an extensive tertiary treatment process (including filtration and disinfection) and is delivered to more than 220 recycled water customers in the City, for landscape irrigation and industrial uses. The recycled water system is part of the South Bay Water Recycling Strategic Master Planning Report completed in 2014. The Strategic Plan was divided into two phases, near-term (2015-2020) and long term (2020-2035). Master Planning would provide basis for identifying alternative governance frameworks and associated funding strategies for non-potable water (i.e. recycled water). The SBWR system is currently developed to reflect near term recycled water demands. The long term plan is currently being studied, and future allocations have not been identified. Projected recycled water use is limited by the future supply allocations outlined by SBWR.

## 3.2 GROUNDWATER

The City does not use groundwater to meet customer demands under normal conditions. The City has one existing fully developed well, Pinewood Well and two planned or in development: Curtis Well and McCandless Well. These wells are located in the southwestern part of the city. The Curtis Well was drilled in 2003, but the well was not equipped with above-grade infrastructure required for a functioning well, and the facility was never completed. As a result, bringing the Curtis Well online requires installing a submersible pump, piping and treatment components, as well as conducting testing and permitting. The well is currently inactive, but the City Water Master Plan identifies that this well will be improved and operational on or after 2035. The McCandless Well is anticipated to have its construction complete by 2026 and operational in 2027 with a 0.58 mgd capacity. Operation of McCandles Well alone could provide approximately 649 AFY of supplemental water supply that would offset the UWMP projected dry year conditions through the year 2040. There is no plan for an additional well at this time. As mentioned in the UWMP, a fourth well is needed for a 5th dry year by 2035 or 3rd dry year by 2045. The City will continue to evaluate The need for a fourth well in future UWMPs and Water Master Plans will continue to be evaluated by the City (Silveira, pers. comm., 2025).

The future use of these well facilities as emergency wells or fully functioning wells was not identified in the 2020 UWMP. Potential expansion of the City's water portfolio to include groundwater wells could supplement loss of supply as a result of wholesale cutbacks in the event of prolonged droughts. Pinewood Well is permitted for use as a standby emergency well. The City currently reserves groundwater supply for emergency use in the event that SFPUC and Valley Water cannot deliver contract treated water supplies.

The Santa Clara Valley Subbasin is not adjudicated and has not been identified to be in overdraft by California Department of Water Resources. Valley Water manages the groundwater basin, monitoring the basin for local subsidence, managing surface recharge, and working with local retailers to prevent subsidence consistent with the Valley Water's Groundwater Management Plan. The subbasin is not subject to a groundwater sustainability plan as required under the Sustainable Groundwater Management Act.

## 3.3 FUTURE WATER SUPPLY SOURCES AND RELIABILITY

Table 3-1 shows the projected water supplies for the City through the year 2045.

**Table 3-1 City Water Supplies (AFY)**

Supply Source	Year 2025	Year 2030	Year 2035	Year 2040	Year 2045
SFPUC Purchased Water	2,410	2,470	2,570	2,660	2,750
Valley Water Purchased Water	1,445	1,505	1,536	1,586	1,637
Recycled Water	400	400	400	400	400
<b>Total</b>	<b>4,325</b>	<b>4,475</b>	<b>4,626</b>	<b>4,776</b>	<b>4,917</b>

Source: 2020 UWMP Table 6-9 (City of Milpitas 2021a).

### 3.3.1 San Francisco Public Utility Commission

In December 2018, the State Water Resources Control Board adopted amendments to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay Delta Plan) to establish water quality objectives to maintain the health of the Bay-Delta ecosystem. The adopted Bay Delta Plan was developed with the stated goal of increasing salmonid populations in three San Joaquin River tributaries (the Stanislaus, Merced, and Tuolumne Rivers) and the Bay Delta. The Bay Delta Plan Amendment requires the release of 30 to 50 percent of the “unimpaired flow” on these tributaries from February through June in every year type. As noted above, SFPUC obtains surface water from the Tuolumne River.

The SFPUC has initiated an Alternative Water Supply Planning Program to ensure that San Francisco can meet its Retail and Wholesale Customer water needs, address projected dry years shortages, and limit rationing to a maximum 20 percent system-wide in accordance with adopted SFPUC policies. This program is intended to meet future water supply challenges and vulnerabilities such as environmental flow needs and other regulatory changes; earthquakes, disasters, and emergencies; increases in population and employment; and climate change.

Since the City’s water supply relies partially on the SFPUC RWS, impacts from the potential implementation of the Bay Delta Plan, is anticipated to impact the City’s service reliability. The City would be able to meet the projected water demands in normal years through 2045 but would experience supply shortages in single dry years and multiple dry years. Such implementation of the Bay Delta Plan would require rationing in all single dry years and multiple dry years. For the preparation of local UWMPs, SFPUC provided two scenarios, using hydrologic models with and without the Bay Delta Plan Amendment. This included Bay Area Water Supply & Conservation Agency (BAWSCA) drought cutback allocations based on the information about projected water supply availability for the wholesale customers from SFPUC. All of BAWSCA’s allocation tables assume that the wholesale customers can purchase up to 184 mgd from SFPUC’s RWS through 2045. In normal years 100 percent of the City’s ISG is available to the City, that is 9.232 mgd. The reader is referred to Chapter 4, “Water Supply Sufficiency Analysis,” for a further discussion of anticipated supply shortages for the City in dry and multiple dry year conditions.

### 3.3.2 Valley Water

To maintain water supply reliability and flexibility, Valley Water’s water supply includes a variety of sources including local groundwater, imported water, and local surface water. Valley Water has an active conjunctive water management program to optimize the use of groundwater and surface water, and to prevent groundwater overdraft and land subsidence.

Long-term planning and modeling analysis performed by Valley Water as part of its Integrated Water Resources Planning Study (IWRP) indicates that if additional investments are made, future countywide demands can reliably be met. It is the intent of Valley Water to invest in accordance with the IWRP framework to develop a flexible resource mix. This flexibility will allow Valley Water to respond to uncertain future conditions. The 2003 IWRP developed a planning framework and supporting modeling tools to help Valley Water identify and select specific water resource investments. The 2003 IWRP evaluation was based on a best estimate of the water demand and water supply outlook through 2040. Future water demand was estimated based on data from ABAG, Department of Finance and general

plans from cities and Santa Clara County. The demand projection for the cities in Santa Clara County did not distinguish between Valley Water or SFPUC supplies.

The key findings from the 2003 IWRP are: (1) securing baseline supplies is top priority for ensuring reliability, 2) a mix of three types of new water supply investments makes the best water supply portfolio, and 3) local supplies decrease vulnerability.

Modeling conducted for the Water Supply Master Plan 2040 (Master Plan) indicates shortages during droughts in all demand years, with shortages increasing in severity and frequency as demands increase and Delta-conveyed supplies decrease. By 2040, without new supplies or conservation savings, shortages could occur in about 40 percent of years. The Master Plan identifies that 2040 available water supplies would range from 250,000 AFY to 399,000 AFY depending on the water year that could result in water supply shortfalls as high as 140,000 AFY during extended drought conditions (Valley Water 2019).

To improve the reliability of water supplies, the Master Plan includes the Valley Water's Ensure Sustainability water supply strategy that consists of securing existing supplies and infrastructure; increasing water conservation and water reuse; and optimizing the use of existing supplies and infrastructure. The following projects would be implemented as part of this strategy:

- ▶ Delta Conveyance Project,
- ▶ Additional Conservation and Stormwater Projects and Programs,
- ▶ Potable Reuse Program,
- ▶ Pacheco Reservoir Expansion,
- ▶ Transfer-Bethany Pipeline, and
- ▶ South County Recharge.

Implementation of these projects would provide a reliable water supply that would meet 2040 demands during a non-drought year. During drought conditions, water supplies would be sufficient to meet 100 percent of demand during the first five years of drought and more than 90 percent in the last year (Valley Water 2019).

### 3.3.3 Groundwater

Groundwater is managed under guidance from Valley Water and in accordance with the 2016 Groundwater Management Plan (GWMP). California Department of Water Resources has determined that the GWMP satisfies the objectives of the SGMA. The goals are the 2016 GWMP area to manage and optimize groundwater supply reliability and minimize land subsidence and to protect groundwater from contamination and saltwater intrusion. Groundwater well pumping may be adjusted slightly in the future to meet future water demands during drought years and emergencies. Countywide water supplies are generally sufficient to meet demands in normal years through 2040, but significant shortages may occur during multiple dry years without additional investments. Total natural groundwater recharge assumed for total Valley Water supplies consists of 61,000 AFY long term average and 47,000 AFY during a crucial drought (Valley Water 2019).

### 3.3.4 Recycled Water

As described above, recycled water provision to the City is addressed in the South Bay Water Recycling Strategic Master Planning Report completed in 2014. The Strategic Plan was divided into two phases, near-term (2015-2020) and long term (2020-2035). Master Planning would provide basis for identifying alternative governance frameworks and associated funding strategies for non-potable water (i.e., recycled water). The SBWR system is currently developed to reflect near term recycled water demands. The long term plan is currently being studied, and future allocations have not been identified. Projected recycled water use is limited by the future supply allocations outlined by SBWR.

## 4 WATER SUPPLY SUFFICIENCY ANALYSIS

### 4.1 PROJECT WATER DEMANDS AND FUTURE WATER SUPPLY

The project’s water estimated water demands are provided in Table 2-2 and identifies a total demand of 1,435,760 gallons per day (approximately 524 million gallons per year) that would result in a net decrease anticipated water demand of 105,875 gallons per day (approximately 39 million gallons per year) as compared to existing land uses under the General Plan.

Tables 4-1 through 4-3 identify City water demands and supplies under normal, single dry, multiple dry year conditions between 2025 and 2045. These water demands associated with growth factor the project (City of Milpitas 2021a). The project’s population increases over the General Plan buildout (i.e., an additional 3,816 residents to the General Plan buildout of 113,530 residents) would be within the growth projections used in the 2020 UWMP of 120,400 residents in 2045. The project would also reduce nonresidential development potential under the General Plan by 1,234,574 square feet (see Table 2-1).

**Table 4-1 City Water Supplies and Demands with Project – Normal Year (Million Gallons)**

Supply Source	Year 2025	Year 2030	Year 2035	Year 2040	Year 2045
City Water Supply Total <sup>1</sup>	4,325	4,475	4,626	4,776	4,917
City Water Demands (including project)	4,325	4,475	4,626	4,776	4,917
<b>Difference</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

<sup>1</sup> Consists of water supplied by SFPUC, Valley Water, and recycled water from SBWR.

Source: 2020 UWMP Table 7-2 (City of Milpitas 2021a).

**Table 4-2 City Water Supplies and Demands with Project – Single Dry Year (Million Gallons)**

Supply Source	Year 2025	Year 2030	Year 2035	Year 2040	Year 2045
City Water Supply Total <sup>1</sup>	3,460	4,475	4,626	4,776	4,917
City Water Demands (including project)	4,325	4,475	4,626	4,776	4,917
<b>Difference</b>	<b>(865)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

<sup>1</sup> Consists of water supplied by SFPUC, Valley Water, and recycled water from SBWR.

Source: 2020 UWMP Table 7-2 (City of Milpitas 2021a).

**Table 4-3 City Water Supplies and Demands with Project – Multiple Dry Years (Million Gallons)**

	Supply Source	Year 2025	Year 2030	Year 2035	Year 2040	Year 2045
First Year	City Water Supply Total <sup>1</sup>	3,460	4,475	4,626	4,776	4,917
	City Water Demands (including project)	4,325	4,475	4,626	4,776	4,917
	<b>Difference</b>	<b>(865)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Second Year	City Water Supply Total <sup>1</sup>	3,230	4,475	4,626	4,776	4,917
	City Water Demands (including project)	4,325	4,475	4,626	4,776	4,917
	<b>Difference</b>	<b>(1,095)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Third Year	City Water Supply Total <sup>1</sup>	2,940	4,370	4,626	4,776	4,917
	City Water Demands (including project)	4,325	4,475	4,626	4,776	4,917
	<b>Difference</b>	<b>(1,385)</b>	<b>(105)</b>	<b>0</b>	<b>0</b>	<b>0</b>

Supply Source		Year 2025	Year 2030	Year 2035	Year 2040	Year 2045
Fourth Year	City Water Supply Total <sup>1</sup>	2,940	4,370	4,626	4,776	4,870
	City Water Demands (including project)	4,325	4,475	4,626	4,776	4,917
	<b>Difference</b>	<b>(1,385)</b>	<b>(105)</b>	<b>0</b>	<b>0</b>	<b>(47)</b>
Fifth Year	City Water Supply Total <sup>1</sup>	2,940	4,370	4,626	4,776	4,870
	City Water Demands (including project)	4,325	4,475	4,626	4,776	4,917
	<b>Difference</b>	<b>(1,385)</b>	<b>(105)</b>	<b>0</b>	<b>0</b>	<b>(47)</b>

<sup>1</sup> Consists of water supplied by SFPUC, Valley Water, and recycled water from SBWR.

Source: 2020 UWMP Table 7-4 (City of Milpitas 2021a).

## 4.2 WATER SUPPLY RELIABILITY

As shown in Tables 4-2 and 4-3, City's existing water supply sources result in shortfalls in supply in 2025, 2030, and 2045 under single dry-year and multiple dry year conditions. During these conditions, the City would implement its Water Shortage Contingency Plan that consists of voluntary and mandatory water conservation measures that would address water supply shortfalls.

Specifically the Water Shortage Contingency Plan Table 3-2 identifies water demand reduction actions that include a range of measures (e.g., restrictions on operation of water features, landscaping irrigation, public information campaigns, reductions of system water loss) that are identified to reduce the water supply shortage gap from 1 to 70 percent (City of Milpitas 2021b).

The Water Shortage Contingency Plan also includes Table 3-3 that identifies water augmentation through the installation of five additional groundwater wells by 2025 and two additional groundwater wells by 2040 each with a 1.2 mgd production capacity. This could include involve a managed groundwater well extraction program similar to neighboring water agencies, Alameda County Water District to the north and City of Santa Clara and San Jose Water Company to the south. The south-western portion of the City of Milpitas overlays a groundwater aquifer that has been determined to be adequately productive. In-pipe blending of groundwater with SFPUC and Valley Water has been identified viable option for augmenting supply shortages. Four wells at an average withdrawal rate of 1.2 million gallons per day (450 million gallons per year) would produce up to 5 million gallons per day of supplemental water supply for the City. The extraction rate and volume is based on preliminary production tests of McCandless Well and Curtis Well which have indicated the aquifer in this zone produces 500 to 1,200 gallons per minute or an average of 850 gallons per minute. The potential provision of future wells, while an increase to the infrastructure costs, would improve long-term supply reliability by expanding the City's water supply portfolio during dry-year conditions when SFPUC and Valley Water supplies may be reduced. Based on the shortfalls identified in Table 4-3, groundwater production by four wells would be adequate to offset water supply shortages identified for 2030 and 2045 (project approval is anticipated in 2025). Sustainability of wells and groundwater aquifers are based on aquifer recharge, as currently performed by Valley Water. The City in concert with Valley Water could study the feasibility of offsetting SFPUC supply reductions, as identified in the 2020 UWMP during various drought scenarios (City of Milpitas 2021b).

In addition to these measures, California Code of Regulations, title 23, division 3, chapter 3.5, which go into effect in 2025, establish new water conservation measures to be implemented by public water service providers that would provide additional reductions to future water demands.

# 5 REPORT PREPARERS

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## 6 REFERENCES

### Chapter 1 Introduction

City of Milpitas. 2021a (July). *City of Milpitas 2020 Urban Water Management Plan*. Prepared by Maddaus Water Management, Inc.

### Chapter 2 Project Description and Water Demands

City of Milpitas. 2020 (November). *General Plan Update Draft Environmental Impact Report*. Prepared by De Novo Planning Group.

———. 2021a (July). *City of Milpitas 2020 Urban Water Management Plan*. Prepared by Maddaus Water Management, Inc.

City of Sunnyvale. 2020 (August). *City of Sunnyvale Lawrence Station Area Plan Update/Intuitive Surgical Corporate Campus Project Water Supply Assessment*. Prepared by Ascent Environmental.

### Chapter 3 City Water Supply

City of Milpitas. 2021a (July). *City of Milpitas 2020 Urban Water Management Plan*. Prepared by Maddaus Water Management, Inc.

Silveira, Michael, P.E. City engineer. City of Milpitas, Milpitas, CA. March 2025—email messages to Pat Angell of Ascent Environmental regarding water supply and infrastructure.

Valley Water. 2019 (November). *Water Supply Master Plan 2040*.

### Chapter 4 Water Supply Sufficiency Analysis

City of Milpitas. 2021a (July). *City of Milpitas 2020 Urban Water Management Plan*. Prepared by Maddaus Water Management, Inc.

———. 2021b. *City of Milpitas 2020 Water Shortage Contingency Plan*. Prepared by Maddaus Water Management, Inc.



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