CITY OF NORWALK
A Connected Community

11.10 Water Supply Assessment

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Golden State
Water Company
A Subsidiary of American States Water Company

GOLDEN STATE WATER COMPANY
CENTRAL BASIN WEST SERVICE AREA

Water Supply Assessment and Verification Norwalk Transit Village

January 26, 2024

Norwalk Transit Village

VERIFICATION

This Water Supply Assessment and Verification has been prepared by Golden State Water Company and its representatives as of the date set forth below. The undersigned hereby represents that he has the authority on behalf of Golden State Water Company to execute and make effective this Water Supply Assessment and Verification.

By: Patrick Kubiak Digitally signed by Patrick Kubiak Date: 2024.01.30 09:50:14 -08'00'

Date

Patrick M. Kubiak
Vice President Asset Management
Golden State Water Company

NORWALK TRANSIT VILLAGE
WATER SUPPLY ASSESSMENT

FOR THE

GOLDEN STATE WATER COMPANY

Michael Baker International JN: 187917

Final– January 26, 2024

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Acronym List

Acronym	Term
ADD	average day demand
AFY	acre-feet per year
Amendment	General Plan Amendment
APA	allowed pumping allocation
WSA	Water Supply Assessment
CBMWD	Central Basin Municipal Water District
CEQA	California Environmental Quality Act
DWR	California Department of Water Resources
FAR	floor area ratio
gpd	gallons per day
gpm	gallons per minute
GSWC	Golden State Water Company
IRP	Integrated Water Resources Plan
LACSD	Los Angeles County Sanitary District
MWD	Metropolitan Water District of Southern California
PA	Planning Area
SB	Senate Bill
UWMP	Urban Water Management Plan

Section 1 - Purpose

California Water Code (Water Code) Section 10910 et seq., commonly referred to as Senate Bill 610 (SB 610), requires the preparation of a water supply assessment for certain new development projects.[1] As stated in SB 610, the purpose of an assessment is to determine whether the "total projected water supplies available during normal, single dry, and multiple dry water 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, including agricultural and manufacturing uses." Water Code Section 10910 states that a "project," as defined in Water Code Section 10912 and subject to the California Environmental Quality Act (CEQA), requires the preparation of an assessment. Under Water Code Section 10912(a), the definition of a "project" includes:

(1) a proposed residential development of more than 500 dwelling units;

(2) a proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space;

(3) a proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space;

(4) a proposed hotel or motel, or both, having more than 500 rooms;

(5) a proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area;

(6) a mixed-use project that includes one or more of the projects specified above;

(7) a project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

Because the Norwalk Transit Village Project (Project) is a proposed mixed-use transit-oriented community with a mix of office/retail, multifamily residential, and park land uses that meet the Water Code criteria discussed above, an assessment is required. The City of Norwalk (City) has determined that the Project is subject to CEQA. As the lead agency under CEQA, the City has identified the Golden State Water Company (GSWC) and Central Basin Municipal Water District (CBMWD) as the public water systems (domestic water service and recycled water supplier, respectively) that serve the Project site and has requested the preparation of an assessment for the Project in compliance with SB 610.

The Urban Water Management Planning Act (Water Code Section 10610 et seq.) requires urban water suppliers in California providing water for municipal purposes directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually to prepare and adopt an urban water

[1] Water Code Sections 10910(a), 10912.

management plan (UWMP) at least once every five years.[2] Among other things, the UWMP evaluates current and future water supplies and demands within a supplier's service area during normal, single dry, and multiple dry year periods over the next 20-year planning horizon and beyond, water supply reliability, water conservation measures, and water shortage contingency planning. Cities, counties, water districts, property owners, and developers utilize the UWMP for their long-range water supply planning, including the preparation of assessments.

A UWMP is submitted to the California Department of Water Resources (DWR) for review to ensure that requirements in the Water Code have been addressed and acknowledged. The GSWC's 2020 UWMP was adopted in July 2021 in accordance with the requirements of the Urban Water Management Planning Act. Notices of public hearing were submitted to the DWR and cities and counties within the GSWC service area, including the City, prior to the adoption of the UWMP.

The purpose of this Water Supply Assessment (WSA) is to evaluate water supplies that are, or will be, available during normal, single dry year, and multiple dry years, during a 20-year projection, and determine if the available water supplies will meet existing, projected, and future water demands served by GSWC, including the proposed Project. This WSA evaluates the availability of sufficient water supplies for the Project and does not constitute approval of the Project nor does it create a right or entitlement to water service or any specific level of water service. In addition, this WSA identifies existing water supply entitlements, water rights, water service contracts, and agreements relevant to serving the Project.

Michael Baker International (Michael Baker) prepared this WSA for GSWC in compliance with SB 610.

[2] California Water Code Division 6, Part 2.6 Urban Water Management Planning, Sections 10610-10656.

Section 2 - Summary and Findings

Assembly Bill 518 (2020) authorizes the California State Director of the Department of General Services to sell the Project site to the City at fair market value upon terms and conditions the director determines are in the best interests of the state. Under the provisions of Assembly Bill 518, which amended Government Code Section 11011.28, the City is pursuing the purchase of the Project site from the state and proposes a specific plan and mixed-use development (Norwalk Transit Village). The proposed Project would allow for the development of up to 770 multifamily residential units, 150 hotel rooms, 80,147 square feet of commercial uses, and up to 157,687 square feet (3.62 acres) of open space and park areas. As the Project falls under the definition of a "project" in Water Code Section 10912(a), a water supply assessment study is required to determine if the existing and future available supplies for the Project area will be sufficient in fulfilling the water needs of the new development.

GSWC is the domestic water service provider for the Project site while the recycled water supplier is CBMWD. GSWC serves eight service areas, including the Norwalk service area. The GSWC water supply portfolio is groundwater obtained from the Central Basin as part of the adjudication agreement including stored and leased groundwater, purchased water from CBMWD, and emergency connections with adjacent water agencies. CBMWD is a potable and recycled water wholesale supplier that purchases its potable water entirely from the Metropolitan Water District of Southern California (MWD) and acquires its recycled water from the Los Angeles County Sanitation District (LACSD). CBMWD makes the recycled water supplies available to GSWC through the Central Basin Recycled Water Project. A total domestic water supply of 23,439 acre-feet per year (AFY) and recycled water supply of 200 AFY are available for the GSWC Norwalk service area for all year types in the 20-year planning horizon.

In compliance with the Urban Water Management Planning Act, GSWC is required to prepare a UWMP every five years to demonstrate water supply reliability in normal year, single dry year, and multiple dry years for years 2025 to 2045. The 2020 UWMP was the primary reference in performing the Water Supply Assessment for the Project. Water demand factors were developed in the UWMP to project future demands for the GSWC service area based on metered connections. However, the demand factors were not suitable for developing the forecasted demand for the Project; this is because GSWC factors are based on a per connection basis whereas the proposed Project facilities—multifamily residential, commercial, and open space/park land uses—require factors that account for water use per capita per dwelling unit for residential areas and water use per area for commercial and open spaces/parks. New water demand factors were generated by utilizing population and housing data from the US 2020 Census and overlaying this information on the City GIS files that contain zoning, land use, and water agency boundaries. The water use data per land use presented in the UWMP was used along with the supplemental data from the US 2020 Census and City to calculate the new demand factors for multifamily residential and commercial land uses. The irrigation water demand factor was obtained using the University of California's Division of Agriculture and Natural Resources Landscape Water Requirement Calculator. The LACSD's wastewater generation rate was used (LACSD 2022) to calculate the Project's hotel water demand since there was no available water use information for hotels within the Norwalk service area boundary. The wastewater

generation is assumed to be 90 percent of the water demand. Therefore, 110 percent of the wastewater demand was used to estimate the hotel's water demand.

The existing facility situated on the Project site uses domestic water for all its water needs. The site has an average domestic water use of 4,610 gpd (5 AFY) supplied by GSWC and is included in the UWMP demands. The existing demand was subtracted from the calculated future Project domestic demands since GSWC has already accounted for this demand. The projected net demand for the Project is 204 AFY for domestic water and 15 AFY for recycled water. These demands are added to the existing and future demands of the GSWC Norwalk service area and evaluated to determine the adequacy of available water supplies to meet the proposed Project's water demand.

Michael Baker compared the projected demand for the GSWC Norwalk service area, which includes the addition of Project demands to the available existing and future water supply. The supply surplus for normal year, single dry year, and multiple dry year conditions ranges from 18,421 AFY to 18,871 AFY for potable water and 21 AFY for recycled water. In addition to the available direct supplies for potable water, GSWC Norwalk can also access emergency water supply from neighboring agencies when needed. The recycled water is also considered 100 percent reliable due to its source availability. The comparisons shown in Table 1 demonstrate that there is sufficient supply available for the GSWC Norwalk Area, including the Project's demand for years 2025 to 2045 under all year types.

Table 1 – Projected Multiple-Dry Year Supply and Demand Comparison (2025-2045, AFY)

			2025		2030		2035		2040		2045	
Category			Potable	Recycled	Potable	Recycled	Potable	Recycled	Potable	Recycled	Potable	Recycled
Normal		Demand	4,568	179	4,571	179	4,574	179	4,575	179	4,578	179
		Supply	23,439	200	23,439	200	23,439	200	23,439	200	23,439	200
		Surplus	**18,871**	**21**	**18,868**	**21**	**18,865**	**21**	**18,864**	**21**	**18,861**	**21**
Single Dry Year		Demand	5,005	179	5,008	179	5,010	179	5,012	179	5,015	179
		Supply	23,439	200	23,439	200	23,439	200	23,439	200	23,439	200
		Surplus	**18,434**	**21**	**18,431**	**21**	**18,429**	**21**	**18,427**	**21**	**18,424**	**21**
Multiple Dry Years	**Year 1**	Demand	5,005	179	5,008	179	5,010	179	5,012	179	5,015	179
		Supply	23,439	200	23,439	200	23,439	200	23,439	200	23,439	200
		Surplus	**18,434**	**21**	**18,431**	**21**	**18,429**	**21**	**18,427**	**21**	**18,424**	**21**
	Year 2	Demand	5,006	179	5,008	179	5,010	179	5,013	179	5,016	179
		Supply	23,439	200	23,439	200	23,439	200	23,439	200	23,439	200
		Surplus	**18,433**	**21**	**18,431**	**21**	**18,429**	**21**	**18,426**	**21**	**18,423**	**21**
	Year 3	Demand	5,006	179	5,009	179	5,011	179	5,013	179	5,016	179
		Supply	23,439	200	23,439	200	23,439	200	23,439	200	23,439	200
		Surplus	**18,433**	**21**	**18,430**	**21**	**18,428**	**21**	**18,426**	**21**	**18,423**	**21**
	Year 4	Demand	5,007	179	5,010	179	5,012	179	5,014	179	5,017	179
		Supply	23,439	200	23,439	200	23,439	200	23,439	200	23,439	200
		Surplus	**18,432**	**21**	**18,429**	**21**	**18,427**	**21**	**18,425**	**21**	**18,422**	**21**
	Year 5	Demand	5,007	179	5,010	179	5,012	179	5,015	179	5,018	179
		Supply	23,439	200	23,439	200	23,439	200	23,439	200	23,439	200
		Surplus	**18,432**	**21**	**18,429**	**21**	**18,427**	**21**	**18,424**	**21**	**18,421**	**21**

Section 3 - Project Description

3.1 Project Location

Throughout the 1950s, the Norwalk area was known for its dairies, orchards, and farms. In the latter half of the twentieth century, the population of the county increased significantly, and the area became primarily residential.

The proposed Norwalk Transit Village Project (Project) site is located at 13200 Bloomfield Avenue, in the City of Norwalk. The City is located in the southeastern portion of Los Angeles County. Surrounding cities include the City of Santa Fe Springs to the north, the City of La Mirada to the east, the City of Cerritos to the south, and the City of Downey to the west.

The site is bound by Imperial Highway to the north, Zimmerman Park and the Union Pacific Railroad to the east, and Bloomfield Avenue to the west. The Project site (Assessor's Parcel Number 8045-008-902) is located within a predominantly residential area, with a residential townhome community to the north (Norwalk Manor); a 9.4-acre public park (Zimmerman Park) to the east; single-family residential units, a senior residential community, and a hospital (Norwalk Community Hospital) to the south; and single-family residential units to the west, across Bloomfield Avenue. Regional access to the site is provided via Interstate 5. Local access is provided via Imperial Highway and Bloomfield Avenue. Additionally, transit access is available for the Project site via the Norwalk/Santa Fe Springs Metrolink Station, located approximately 0.2 miles north of the Project site.

3.2 Project History

The Project site is developed with 27 buildings and was, until early 2022, being utilized by the California Department of State Hospitals as a temporary hospital facility. The 32.3-acre Project site was originally utilized as a facility for the California Division of Juvenile Justice (formerly known as the California Youth Authority). On-site structures (constructed in 1950) feature low, detached modular buildings set around centralized recreational fields, emphasizing outdoor space, and have an existing domestic water demand of 5 AFY. The structures were secure and fireproof, with construction materials largely consisting of concrete and brick. Other on-site structures include ancillary structures for expanded dormitories, kitchens, and learning spaces. While the majority of on-site structures were used for institutional purposes, there are also three vacant single-family residences on-site that were associated with previous agricultural uses before the construction of the youth facility. The Project site includes multiple unpaved vacant areas, two open space fields, and a track and field. The site is accessed via two on-site driveways at Bloomfield Avenue. One driveway serves as the main entrance to the facility and leads to a vehicular roundabout and two surface parking areas. The second driveway serves as secondary access for emergency vehicles. On-site ornamental landscaping includes ornamental trees and shrubs that occur in patches throughout the Project site and along the western perimeter sidewalk.

3.3 Project Plan

The Project proposes the Norwalk Transit Village Specific Plan and Tentative Tract Map to allow the demolition of the former California Youth Authority facility and construction of a mixed-use transit-oriented community with a mix of retail, hospitality, multifamily residential uses, and park land/open space uses.

Proposed residential units would include a mix of 60 percent market-rate and 40 percent affordable residential units. The proposed Specific Plan would allow the following within eight Planning Areas:

- A new neighborhood commercial center encompassing approximately 3.06 acres of the site. The commercial center (approximately 66,647 square feet of building area) would be situated in the westerly portion of the Project site adjacent to Bloomfield Avenue. The neighborhood commercial center would include non-residential uses at a maximum floor-to-area ratio (FAR) of 0.5, as well as an approximately 150-key hotel. The 0.5 FAR excludes the hotel.
- Residential blocks would include up to 770 residential units (at a density that ranges between 20 and 85 dwelling units per acre) that would consist of the following:
    - Approximately 120 market-rate townhouse units;
    - Approximately 650 multifamily (apartment) market-rate and affordable units
    - At least 40 percent of the total number of units on the site would be affordable; and
    - Each residential block would be permitted to contain approximately 3,500 square feet of ground floor ancillary commercial uses allowing up to 13,500 square feet of ancillary commercial/quasi-civic uses such as childcare and community services within the residential blocks.
        - The ancillary commercial (active commercial) uses in the residential blocks are in addition to the non-residential area in Planning Area 1. The water demands generated by these active commercial uses for Planning Areas 2 to 6 are presented in Table 4.
- Open space would be provided through a combination of common and private, active and passive recreation areas, including a 1.56-acre park and 2.06 acres of linear parks; the 2.06 acres would include a 1.53-acre linear park and, a 0.28-acre contiguous dog run.
- A 0.25-acre pump station is conceptually located in the northeast portion of Planning Area 8.

3.4 Project Water Demand

The Project would allow for the development of up to 770 multifamily residential units, 150 hotel rooms, 80,147 square feet of commercial uses and up to 157,687 square feet (3.62 acres) of open space and park areas. The proposed development would acquire its potable water from GSWC and its non-potable water from CBMWD. The water source and available supply for each water purveyor is further discussed in Section 5.

The purpose of this study is to identify if the available water supply is sufficient to support the proposed development. The GSWC UWMP serves as a main reference document for understanding the potable water demands and available supplies for the GSWC Norwalk service area. GSWC projects its future water demands by using the billing information and number of connections as discussed in UWMP Chapter 4. GSWC developed water demand factors based on a per connection basis and used this information for future developments, including residential, commercial, and open space land uses. Michael Baker found this approach not suitable for correctly projecting the Project's water demand, since multifamily residential and commercial/irrigation water demands are more accurately projected using factors that are based on water use per capita per dwelling unit and water use per unit area, respectively. In addition to the methodology concerns, Michael Baker observed that the UWMP states that each residential unit contains 5.6 capita per dwelling unit for residential connections, which is higher than the current US Census average of 3.6 persons per household for the City; therefore, further analysis was performed to develop a new methodology for determining water demands and to identify discrepancies between data sources.

After evaluating and comparing the UWMP with the 2020 US Census data and other local agency standards, Michael Baker deemed it necessary to develop a different approach in projecting reliable future water demands for residential and commercial land uses by using accurate area, population, and housing data obtained from the City and the US 2020 Census instead of service connection information. GIS shape files from the City that contain zoning, land use, and water district boundary information were overlaid with population and housing data layers from the US 2020 Census to determine the approximate amount of area, population density, and housing per land use type. This information along with the UWMP's annual water consumption data were used to calculate the demand factors for the Project's residential and commercial areas. Table 2 shows results from the data gathering process. The breakdown of the calculations performed to obtain the residential and commercial demand factors are presented in this section.

Table 2 – GSWC Land Use Data

Land Use	Water Use (gpd)	Population	Housing	Area (Acre)
GSWC Medium/High Density Residential	501,721	6,813	2,480	-
GSWC General/Neighborhood Commercial	851,676	-	-	166

Water Demand Factor Sample Calculations

Medium and High-Density Residential Demand Factor:

Michael Baker obtained the total population and number of households for medium and high-density multi-family residential areas within the GSWC boundary from the US Census data. Michael Baker divided the total population by the number of households to confirm persons per household. The total water use for the multi-family residential category in the GSWC's UWMP was used to identify the water use per person (gal/capita) and the water use per household (gal/unit).

$$Demand\ Factor\ (gal/unit/day) = \frac{Sum\ of\ Multifamily\ Population\ (capita)}{Sum\ of\ Multifamily\ Housing\ (unit)}\ x\ \frac{Multifamily\ Water\ Use\ (gal/day)}{Sum\ of\ Multifamily\ Population\ (capita)}$$

$$Demand\ Factor\ (gal/unit/day) = \frac{6{,}813\ (capita)}{2{,}480\ (unit)}\ x\ \frac{501{,}721\ (gal/day)}{6{,}813\ (capita)}$$

$$Demand\ Factor\ (gal/unit/day) = \mathbf{202\ gal/unit/day}$$

Commercial Demand Factor:

Michael Baker obtained acreage area (or square feet) of commercial zoned parcels within the GSWC boundary. Using the total commercial annual water use from GSWC's UWMP, Michael Baker divided the value by the commercial acreage to calculate the average commercial water use factor (gallons per acre or square feet).

$$Demand\ Factor\ (gal/acre/day) = \frac{Commercial\ Water\ Use\ (gal/day)}{Commercial\ Area\ (Acre)}$$

$$Demand\ Factor\ (gal/acre/day) = \frac{851{,}676\ (gal/day)}{166\ (acre)}$$

$$Demand\ Factor\ (gal/acre/day) = \mathbf{5{,}145\ gal/acre/day}$$

Hotel Demand Factor:

The water demand for the Project's hotel was calculated based on the assumption that wastewater demands are 90 percent of water demands given the limited available information on estimated water use for this category. According to the LACSD's unit sewage rate list, hotels are expected to generate 130 gpd of wastewater per room. The wastewater demand factor was multiplied by 1.1 (110 percent) to obtain the water demand factor. The calculation for determining the hotel demand factor is presented in this section.

$$Demand\ Factor\ (gal/room/day) = Wastewater\ Demand\ Factor\ (gal/room/day)\ x\ 1.1$$

$$Demand\ Factor\ (gal/room/day) = 130\ (gal/room/day)\ x\ 1.1$$

$$Demand\ Factor\ (gal/room/day) = \mathbf{143\ gal/acre/day}$$

The irrigation demand factor used for the Project is based on the irrigation rate obtained from the University of California's Division of Agriculture and Natural Resources Landscape Water Requirement Calculator, which follows the ANSI/ASABE S623 Standard, Determining Landscape Plant Water Demands, the national method for determining water demands of established landscape plants that applies the research-based principles of SLIDE (Simplified Landscape Irrigation Demand Estimation). The calculator generates assumed irrigation rates in acre-inches per week for each month of the year depending on the type of sprinkler nozzle used and the location of the desired irrigation area. A conventional spray head with an average rate of 1.5 inches per hour was assumed for the purpose of this calculation. The Southern California Inland Valleys was chosen as the region of the proposed Project. Using the assumptions stated in this section, the resulting annual average irrigation rate for the Project is 32.4 minutes/week or 3,666 gpd. Michael Baker used the 3,666 gpd as a factor for determining future irrigation water use.

The demand factors used for the Project's water demand are shown in Table 3.

Table 3 – Water Demand Factors

Land Use	Water Demand Factor
High Density Residential/Medium Density Residential	202 gal/unit/day
General Commercial/Neighborhood Commercial	5,145 gal/acre/day
Landscape/Irrigation	3,666 gal/acre/day

The values provided in Table 4 summarize the water demands projected for the Project. The proposed residential and commercial facilities for each Planning Area (PA) are grouped according to land use type to represent the total potable water demand for the Project. The parks and open spaces are categorized under irrigation as these facilities require non-potable water supplies. The net new projected domestic water demand for the Project is 181,847 gpd or 204 AFY while the total projected recycled water demand is 13,271 gpd or 15 AFY.

Table 4 – Project Water Demands

Land Use	Land Use Type[1]	PA 1	PA 2	PA 3	PA 4	PA 5	PA 6	PA 7	PA 8	Total Units	Total Area (Acre)	Demand Use Factor[3]	Total Water Demand (Gal/Day)
RESIDENTIAL													
Market Rate Apartments (units)	MU-H		174	168						342		202	69,084
Affordable Apartments (units)	MU-H				154	154				308		202	62,216
Townhomes (units)	MU-MH						120			120		202	24,240
Subtotal													155,540
COMMERCIAL													
Active Commercial (acre)	MU-H		0.057	0.057	0.057	0.08					0.253	5,145	1,299
Active Commercial (acre)	MU-MH						0.05*7				0.057	5,145	295
Hotel (rooms)	MU-C	150								150		143	21,450
Neighborhood Commercial (0.5 FAR) (acre)	MU-C	1.53									1.530	5,145	7,872
Subtotal													30,917
Existing Demand													4,610
Total Potable Water Use													**181,847**
IRRIGATION													
Park (acres)	O							1.56			1.56	3,666	5,719
Trail/park (acres)	O								2.06		2.06	3,666	7,552
Subtotal													13,271
Total Recycled Water Use													**13,271**

Notes: PA = Planning Area; FAR = Floor Area Ratio

1 The Norwalk Transit Village is a mixed-use transit-oriented development with a mix of office/retail, multifamily residential uses, and park land uses. The Land Use Plan has been organized by PAs for the purpose of land use planning. Land use type designations include Mixed Use High Density Residential (MU-H), Mixed Use Medium-High Density Residential (MU-MH), Mixed Use Commercial (MU-C), and Open Space (O).

2 Water demand factors for residential and commercial areas are based on the GSWC UWMP water use information, GSWC service area zoning and boundary, and the 2020 US Census housing and population data. The water use per dwelling unit is obtained by multiplying the expected amount of water use per capita (74 gal/capita/day) to the number of persons per dwelling unit (2.7 capita/unit). The water use per capita and the water use per dwelling unit are factors calculated by dividing the GSWC UWMP multifamily water use by the high and medium residential population density and dividing the residential population density by the number of high and medium residential housing, respectively. The commercial water factor is determined by dividing the total commercial area within the GSWC boundary by the GSWC UWMP commercial water demand. The demand factor used for the hotel room is derived from that assumption that wastewater is 90% of water demands. LACSD's sewer generation factor for hotels is130gpd/room, which results to a water factor of 143 gpd/room. The irrigation demand was calculated using University of California's Division of Agriculture and Natural Resources Landscape Water Requirement's irrigation demand tool.

Section 4 - Water Purveyors

4.1 Golden State Water Company

GSWC is a subsidiary of the American States Water Company, which serves over a million people in nine states. American States Water Company is the parent company of Golden State Water Company, Bear Valley Electric Service Inc, and American States Utility Services Inc. GSWC, founded in 1929, is a public water utility in the purchase, production, distribution, and sale of water in 10 counties in the state of California.

GSWC is regulated by the US Environmental Protection Agency, State Water Resources Control Board Division of Drinking Water, and the California Public Utilities Commission. GSWC encompasses eight service areas and 38 water systems that provide water to over 80 communities in Northern, Coastal and Southern California. GSWC Norwalk is one of the eight service areas. GSWC owns 70,900 acre-feet of adjudicated groundwater rights and a significant number of unadjudicated groundwater rights, of which 16,000 acre-feet are allocated to the GSWC Norwalk service area. In addition, GSWC owns 11,300 acre-feet of surface water rights. On average, about 50 percent of the water GSWC uses to serve its customers comes from its own groundwater sources. About 45 percent of the water is imported from the California State Water Project and the Colorado River that is purchased from member agencies of MWD. About 5 percent comes from surface water under contracts with the US Bureau of Reclamation and the Sacramento Municipal Utility District.

GSWC Norwalk is located in southeastern Los Angeles County and serves most of the City, along with parts of the cities of Santa Fe Springs and La Mirada, plus a small unincorporated part of Los Angeles—in total, a nearly 4.3-square-mile service area. In 2020, GSWC Norwalk reported 9,341 total service connections. The service area is predominantly residential with some commercial and industrial land use. The water supplied by the GSWC Norwalk water system is a blend of groundwater pumped from the Colorado River Aqueduct and the State Water Project. The system is dependent on additional groundwater supplies from the Central Basin as well as imported supplies from CBMWD and MWD. The groundwater supplies and imported supplies are managed in conjunction with other GSWC water systems that overlie the Central Basin. In case of emergencies, GSWC Norwalk also has emergency interties with neighboring agencies.

GSWC Norwalk customers are primarily residential with some commercial and industrial connections. Service area water supplies have long relied on local groundwater resources with imported water and have been augmented over time to adapt to changing conditions and provide a diverse and flexible water supply portfolio. Specifically, the GSWC Norwalk water supply portfolio contains the following rights and contracts:

- Central Basin adjudicated groundwater.
- Imported water purchased from CBMWD, and MWD.
- Emergency interties with neighboring agencies (City of Santa Fe Springs, the City of Norwalk, Suburban Water Company, and Liberty Utilities).

The water allocation to GSWC Norwalk varies due to changing regulatory and hydrologic conditions. For instance, the water that is purchased from CBMWD is distributed in accordance with the needs of each GSWC service area. Similarly, the management actions of GSWC's water supplies varies from year to year in order to meet each service area's demands. For example, the sources of water supply to the GSWC Norwalk service area vary each year depending upon the management actions of GSWC to meet the needs of all its service areas within the Central Basin. These sorts of active management dynamics are employed by GSWC to improve the collective benefit of available water supplies to all GWSC service areas.

4.1.1 Central Basin Adjudication

GSWC Norwalk derives its water supply almost entirely from managed groundwater resources from the Central Basin. The legal process establishing water production rights and obligations for the available natural water supply was the adjudication of the Central Basin. The Central Basin Judgment (see Appendix A) provides water rights to water agencies to limit extraction of groundwater from the Central Basin to avoid overdraft. Groundwater overdraft occurs when the water extraction rate is higher than the aquifer recharge rate. This adjudication effort concluded that water rights must be determined to effectively manage the basin's groundwater supply. Each entity has an assigned "allowed pumping allocation" (APA) annually that helps monitor and manage the groundwater extractions from the Central Basin. Seven of GSWC's eight service areas are subject to the Central Basin adjudication, which includes GSWC Norwalk as shown in Figure 4-1: Central Basin Boundary.

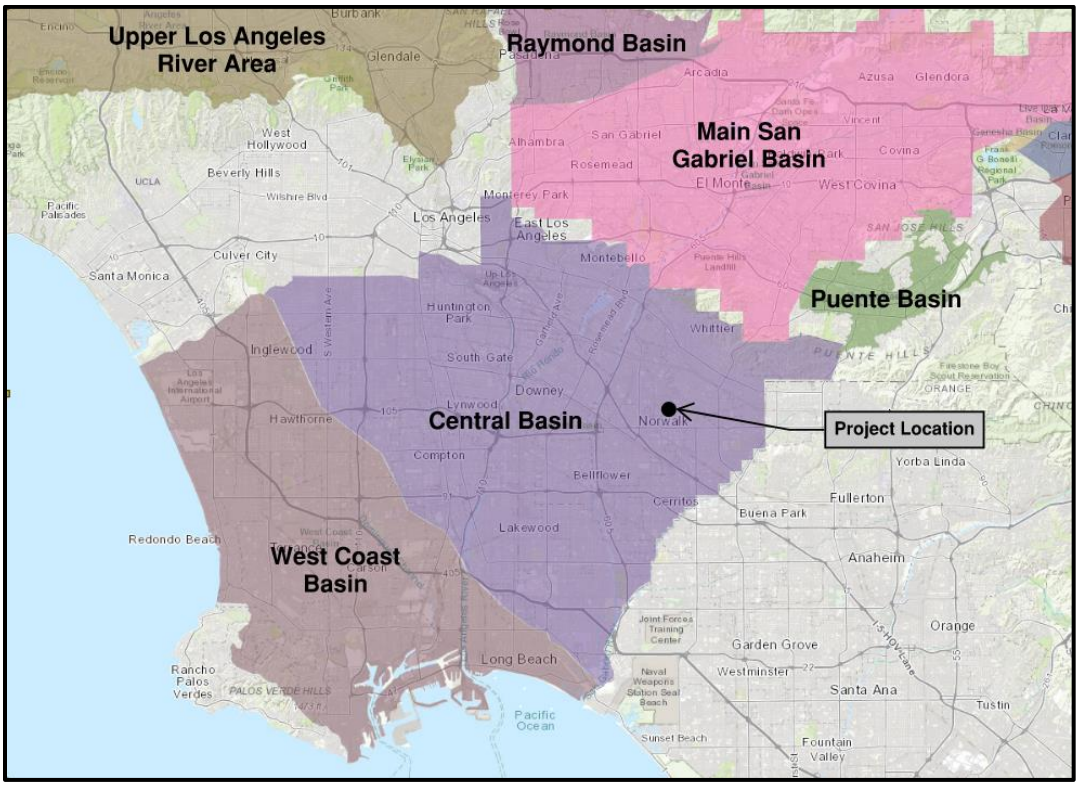


Figure 4-1: Central Basin Boundary

The Central Basin occupies approximately 270 square miles of the southeastern part of the Coastal Plain of Los Angeles Groundwater Basin. The Central Basin consists of a series of underground aquifers underneath south Los Angeles County, extending south to Orange County and west to the Newport-Inglewood Fault. The Central Basin has a total of 217,367 AFY of allocated extraction rights distributed among 145 parties, of which 53 are active public water purveyors. GSWC has a total APA of 16,439 AFY that are available to the seven service areas subject to the Central Basin adjudication.

Natural recharge to the Central Basin includes infiltration of precipitation and applied water (such as landscape irrigation), subsurface inflow from the surrounding mountains (referred to as mountain-front recharge) through the Los Angeles and Whittier Narrows and along with the Orange County Basin, and through stormwater percolation at the spreading grounds and unlined portions of rivers. Groundwater in the Central Basin is continually monitored for quality because of its susceptibility to seawater intrusion, potential contamination from adjacent basins, and migration of shallow contamination into deeper aquifers. Due to limited supply as a result of increased demand, the Central Basin is artificially recharged by the Water Replenishment District. Artificial replenishment of the basin via the spreading grounds and injection barrier has historically averaged approximately 142,500 AFY since 1959, whereas production has averaged approximately 205,000 AFY. The Water Replenishment District recharges groundwater reserves in the Central Basin through spreading grounds on the San Gabriel River and utilizes injection facilities in the Alamitos Gap to block seawater intrusion. The total storage capacity of the Central Basin is 13,800,000 AFY.

4.2 Central Basin Municipal Water District

CBMWD, founded in 1952, is a water wholesaler that provides imported water to mutual water companies, investor-owned utilities, and private companies in southeast Los Angeles County. CBMWD was established by a vote of the people to help mitigate the over-pumping of underground water resources in southeast Los Angeles. It was formed by the California legislature under the Municipal Water District Law of 1911 (Water Code Section 71000). Under Section 71000, CBMWD is a governmental agency for the purpose of providing water in its service area. The founders of CBMWD realized that they would have to curtail the use of groundwater by importing water to the region. Consequently, Central Basin became a member of the Municipal Water District in 1954, which provided the region with imported water.

CBMWD continues to provide the region with imported water purchased from MWD. CBMWD also provides the region with recycled water for non-potable municipal, commercial, and industrial use via the Los Angeles County Sanitation Districts wastewater treatment plants. Today, CBMWD maintains a service population of over 1.6 million people. CBMWD relies on 100 percent of its imported water supply and does not have groundwater supplies of its own. Sub-agencies have access to their own local groundwater supplies. As a result, more than half of the demand in the CBMWD service area is supplied by local groundwater, including GSWC Norwalk (see Figure 4-2: CBMWD Service Area), and the rest is met through the imported supply from MWD. Therefore, MWD dictates the supply and environmental conditions for the system.

Source: CBMWD 2020 UWMP

Figure 4-2: CBMWD Service Area

4.2.1 Metropolitan Water District of Southern California

CBMWD purchases imported water from MWD. MWD was formed in 1928 to develop, store, and distribute supplemental water in Southern California for domestic and municipal purposes. MWD is a wholesale supplier of water to its member public agencies. It obtains supplies from local sources including the Colorado River, via the Colorado River Aqueduct, which it owns and operates, and the Sacramento-San Joaquin Delta, via the State Water Project.

4.2.2 Central Basin Recycled Water Project

CBMWD developed the Central Basin Recycled Water Project to provide treated wastewater for non-drinking purposes. The Central Basin Recycled Water Project delivers 4500–5500 acre-feet (approximately 1.6 billion gallons) of recycled water to more than 300 industrial, commercial, and landscape irrigation connections throughout southeast Los Angeles County annually. CBMWD supplies recycled water to its service areas, including GSWC Norwalk, through the Central Basin Recycled Water Project. CBMWD

obtains recycled water from the San Jose Creek Water Reclamation Plant in Whittier and the Los Coyotes Water Reclamation Plant in Cerritos. Owned and operated by the Los Angeles County Sanitation Districts, these two reclamation plants produce effluent that meets the most stringent requirements for water recycling and recycled water reuse. Since the recycled water is generated from treating consumed indoor water supplies, it is expected to be 100 percent reliable for all year types.

CBMWD owns and operates recycled water facilities, which are divided into three pressure zones. CBMWD supplies recycled water via a recycled water distribution system that includes over 80 miles of purple pipeline and four pump stations. Zone 1, in the north, is supplied by the Rio Hondo Pump Station. Zone 2 is located south of Zone 1 and receives water from Zone 1 through either a pressure-reducing valve or from the Cerritos Pump Station. Zone 3 is located in the western part of the CBMWD service area and is supplied by the Hollydale Pump Station via Zone 2.

The Rio Hondo Pump Station is located in the City of Pico Rivera. It consists of four pumps, two of which are meant to handle higher demands for recycled water overnight, and two which are for lower water demands and refilling pipelines. The Hollydale Pump Station is a 50-foot x 15-foot booster station located in the City of South Gate. It consists of three pumps, two of which are meant to handle higher overnight demands, and one which provides an extra boost to bring the water pressure to the appropriate level. The Cerritos Pump Station, owned and operated by the City of Cerritos, has a pumping capacity of 15,000 gallons per minute.

Section 5 - Existing and Projected Supplies

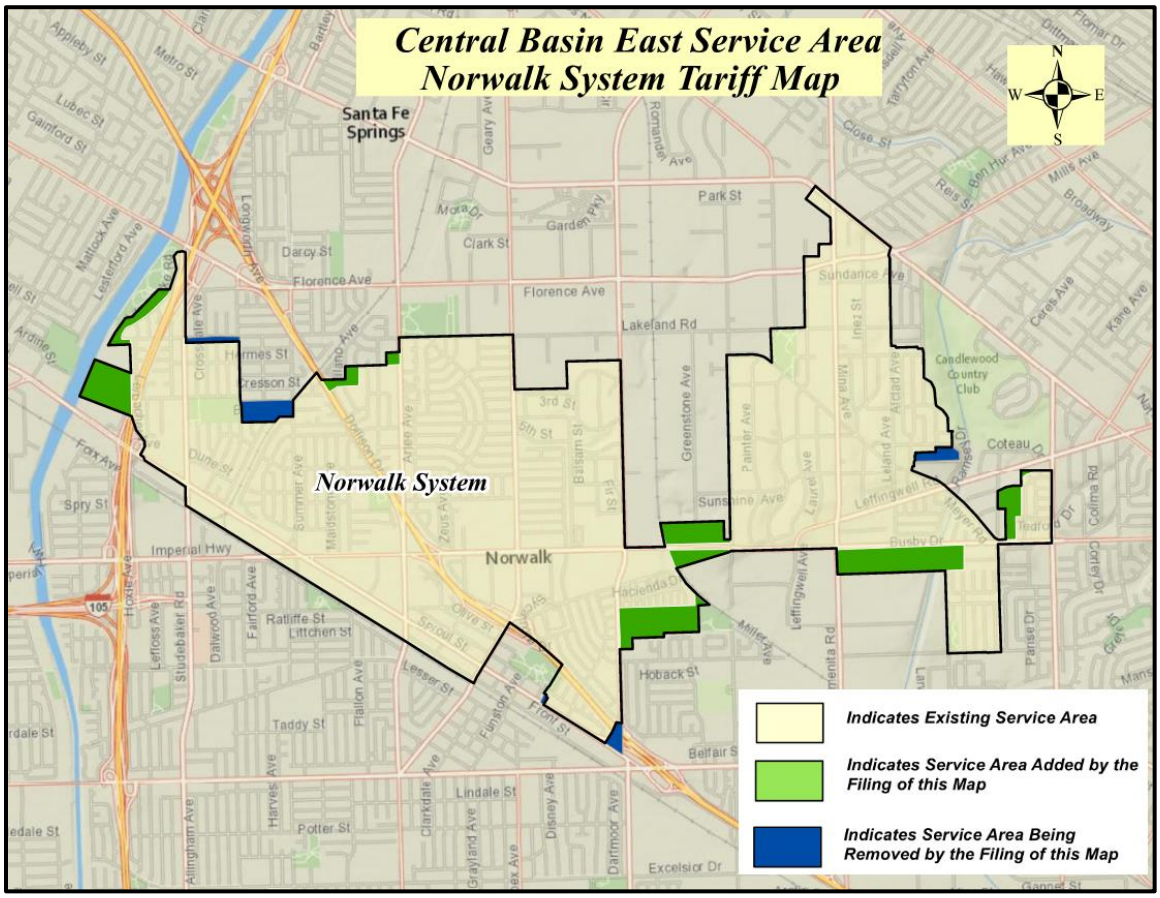
The Project would source its potable water from GSWC while the non-potable water will be sourced from CBMWD. This section evaluates the capacity of the water source to meet the construction and operational demands of the Project in addition to the existing and future water uses of the area within a 20-year projection.

5.1 Golden State Water Company

GSWC has numerous water assets that are available to serve the GSWC Norwalk service area. The water assets consist of adjudicated groundwater supplies, leased or purchased groundwater supplies, and arrangements with CBMWD for treated water supplies and recycled water supplies. GSWC Norwalk also maintains emergency connections with neighboring agencies, including City of Norwalk and Southwest Suburban Water, which allows it access to additional sources of water in emergency conditions. The purposes of this section are to (a) describe each of these water assets as they relate to the GSWC Norwalk service area and (b) provide a detailed summary of the water supply portfolio under normal, single dry, and five-consecutive dry year conditions through 2045. It is important to note that many of the water supplies described in this chapter are available for a number of GSWC service areas in and around the GSWC Norwalk service area. The supplies are described in the aggregate as available to the GSWC Norwalk service area knowing that some of the supplies may be redirected to other GSWC service areas—including service areas that do not prepare UWMPs. As such, the characterization of available supplies in this section aggregates the GSWC supplies that may be used in the GSWC Norwalk service area in consideration of neighboring GSWC service areas and GSWC management decisions.

5.1.1 Groundwater Supply

Groundwater supplies constitute a major component of GSWC's Norwalk water supply portfolio. GSWC has a total APA of 16,439 AFY for the seven service areas subject to Central Basin adjudication. GSWC Norwalk is wholly contained in the Central Basin adjudication; its service area is shown below in Figure 5-1: GSWC Norwalk Service Area.



Source: GSWC-Norwalk 2020 UWMP Final

Figure 5-1: GSWC Norwalk Service Area

The groundwater system has been thoroughly analyzed and is meticulously monitored through the adjudication's requirements. This section describes the groundwater basin, the management of the groundwater basin, and GSWC Norwalk's current and projected supplies available from the groundwater basin. The Central Basin Watermaster tracks the APA of all water users and any unused volume. GSWC Norwalk has five wells that supply the service area from the Central Basin. The annual volume of water supplied to GSWC Norwalk via these wells is 8,400 AFY (maximum capacity of 5,200 gallons per minute [gpm]). Table 5 shows the last five years of groundwater use by GSWC Norwalk from the Central Basin.

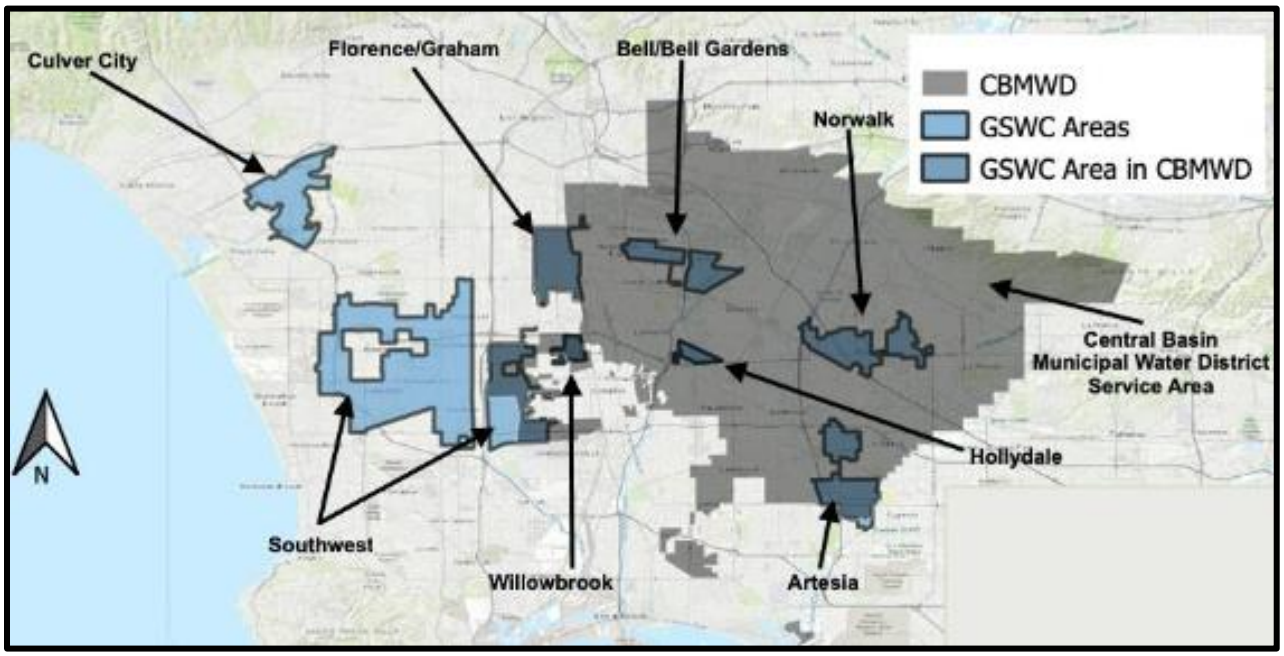
Table 5 – GSWC Norwalk Central Basin Water Use, 2016–2020

Last 5 Years GSWC Norwalk Groundwater Use from Central Basin	
Year	**Historic Groundwater Use in AFY**
2016	3,282
2017	2,587
2018	3,819
2019	2,525
2020	2,576

The projected available Central Basin groundwater supply/production through 2025 totals 16,439 AFY. This total remains the same through normal, single dry, and five consecutive dry years through 2045. This total is available to all service areas in the Central Basin, not just Norwalk.

5.1.2 Imported Water Supply

GSWC purchases water from sources beyond the groundwater supplies acquired in the Central Basin. Specifically, GSWC purchases water from CBMWD. Like GSWC's Central Basin groundwater supplies, the water purchased from CBMWD may be managed and moved depending upon the circumstances in a particular GSWC service area. GSWC also has emergency connections with neighboring water purveyors. This section describes the various purchased water supplies that are distinct from supplies acquired and managed through the Central Basin adjudication described in the previous section. GSWC has no direct control for water supplies from CBMWD, yet it pays annually for the CBMWD water supply. Figure 5-2: Central Basin Municipal Water District Service Area shows the CBMWD service area as well as the eight GSWC service areas that may have CBMWD water supplier available to them.



Source: GSWC-Norwalk 2020 UWMP Final

Figure 5-2: Central Basin Municipal Water District Service Area

CBMWD purchases imported water from MWD. The MWD's 2020 UWMP discusses the availability of these existing supplies and additional supplies necessary to meet future demands, specifically explaining:

> "Metropolitan has completed its water service reliability assessment, under the stated UWMP assumptions and conditions required by the Act and determined that it has supply capabilities sufficient to meet expected demands from 2025 through 2045 under a single dry- year condition and a period of drought lasting five consecutive water years, as well as in a normal water year hydrologic condition." (MWD 2020 UWMP, page ES-6 and ES7).

Tables 2-4, 2-5, and 2-6 from the MWD 2020 UWMP describe MWD's single dry year, multiple dry year, and average year supply capability and projected demands. MWD is expected to have a surplus of water with the minimum amount of surplus being 586,800 AFY during the multiple dry year scenario.

The Integrated Water Resources Plan (IRP) 2020 Update, developed by MWD, strengthens the adaptive management approaches employed in prior updates through the incorporation of an explicit scenario planning step. The purpose of scenario planning is to further understand plausible, but uncertain, future conditions that can affect both supplies and demands. The prior updates incorporate a balanced approach to stabilize traditional imported water supplies while continuing to evolve local supplies to assure 100 percent reliability for full-service demands at the retail level. The IRP establishes regional targets for conservation, local supplies, State Water Project supplies, Colorado River supplies, groundwater banking, and water transfers. The IRP observes long-term planning for additional future resources, such as stormwater capture and seawater desalination, to minimize water shortages and restrictions.

The IRP incorporates three elements to achieve a balance in resource planning:

1. Planning for the future comes with uncertainty as unforeseeable challenges and risks may occur. MWD considers positive and negative situations to analyze in what way supplies can affect future circumstances. The IRP development process provided MWD an opportunity to observe potential challenges and risks identifying the potential of nearly 200,000 acre-feet of additional water conservation and supplies.
2. Water agencies develop plans to analyze and prepare for future water supply. Future supply actions are necessary to prepare for water supply conditions that differ from the original plan, such as water-saving technologies, land acquisition, and new supply alternatives. These actions will allow agencies to consider innovative water alternatives for an unforeseeable future.
3. Adaptive water management is an approach for water purveyors to better prepare for the agency's future. Although strategies are established in the present, adaptive management is a quick and cost-effective method for unanticipated events. A history of drought-related supply shortages provoked MWD to seek alternative supplies despite the long-term water strategy established within Southern California.

Using this balanced approach will help ensure that the Southern California region, including Los Angeles County, will have adequate supplies to meet future demands while adapting to evolving conditions.

The resource targets for MWD's UWMP to include the 2020 IRP Update and planned supply and demand projections developed in collaboration with member agencies. The MWD UWMP contains a water supply reliability assessment that includes a detailed evaluation of the supplies necessary to meet demands over a 25-year period in average, single dry year, and multiple dry year periods. As part of this process, MWD also uses regional growth forecasts from the Southern California Association of Governments to calculate regional water demands for the CBMWD service area.

MWD is prioritizing the development of water supply reliability, taking into consideration the current supplies available from the State Water Project and actions taken to ensure a reliable water supply.

5.1.3 Total Projected Supply

The GSWC Norwalk water supply makeup varies each year depending on the water management actions of GSWC to meet the needs of the service area. As detailed in previous subsections, the GSWC Norwalk system derives its water supply mainly from the Central Basin's adjudicated groundwater supply, including extractions from carryover or leased groundwater assets. GSWC Norwalk also purchases imported water from CBMWD, which derives its water from MWD. In addition to the direct groundwater and imported water supplies, GSWC has the capability of obtaining additional water supplies from neighboring agencies in unforeseen emergency situations (system outages, maintenance, or other short-term supply disruption).

Table 6 provides a breakdown of the available water supply for the GSWC Norwalk service area. A total of 23,439 AFY of potable water supply that consists of adjudicated, leased, or carried over groundwater and imported water from CBMWD and MWD are available in normal, single dry, and five consecutive dry years through the 20-year planning horizon.

Table 6 – GSWC Available Water Supply (2025–2045), AFY

Potable Water Source	GSWC Available Water Supply				
	2025	2030	2035	2040	2045
Groundwater[1]	16,439	16,439	16,439	16,439	16,439
Other Groundwater[2]	5,000	5,000	5,000	5,000	5,000
Imported Water[3]	2,000	2,000	2,000	2,000	2,000
Total	**23,439**	**23,439**	**23,439**	**23,439**	**23,439**

Notes:
[1] GSWC allowed pumping allocation (APA) for the seven service areas subject to Central Basin adjudication.
[2] Consists of carryover supplies from previous year and leased groundwater from other adjudicated parties in the Central Basin with surplus.
[3] Future projected CBMWD purchased imported water supply availability.

5.1.4 Water System Reliability

According to the GSWC Norwalk 2020 UWMP Water Supply Reliability Analysis, GSWC Norwalk reliably provides water to about 45,400 people in the northern portion of the City of Norwalk. Primarily, GSWC Norwalk imports purchased potable water from MWD via CBMWD. GSWC Norwalk receives recycled water from CBMWD. GSWC operates five groundwater wells within the Norwalk system that serves eight of its systems; it has adjudicated APAs in the Central Basin for seven of its systems.

GSWC Norwalk has a diverse water supply portfolio that is composed of imported water, recycled water, and ground water assets which makes the system reliable during drought conditions. GSWC can lease groundwater rights when they are available if needed, giving GSWC Norwalk access to emergency water supplies. Contaminants present in groundwater wells are subject to well head treatment, and changes to groundwater quality that could constrain supply are not anticipated. In the event that the primary sources are lost or unavailable, GSWC has notable agreements with the Suburban Water Company, the City of Norwalk, and the City of Santa Fe Springs to access additional supplies through indefinite emergency connections. Each of these emergency connections have a rated capacity of 1,000 gpm to help mitigate outages; these supplies are available only as standby sources.

Table 7 shows the historical water use for the Norwalk Service area from 2016 through 2020. The GSWC Norwalk 2020 UWMP demonstrates the system's ability to reliably supply 100 percent of the projected demand in single dry and consecutive dry years from 2025 through 2045; the findings are summarized below in Table 8.

Table 7 – GSWC Norwalk Historical Demand (2016-2020), AFY

Category	Annual Demands, AFY				
	2016	2017	2018	2019	2020
Single Family	2,342	2,377	2,410	2,310	2,481
Multi Family	579	594	578	527	562
Commercial/Institutional	1,077	1,066	1,027	1,011	954
Industrial	18	19	10	9	10
Landscape	53	58	62	58	62
Other	0	0	0	0	0
Water Loss	286	294	281	228	192
Total	**4,355**	**4,408**	**4,368**	**4,143**	**4,261**

Table 8 – GSWC Norwalk Existing Projected Demand (2025-2045), AFY

Demands		2025	2030	2035	2040	2045
Normal		4,365	4,367	4,369	4,371	4,374
Single Dry Year		4,801	4,804	4,806	4,808	4,811
Multi-Year Drought	Year 1	4,801	4,804	4,806	4,808	4,811
	Year 2	4,802	4,804	4,807	4,809	4,812
	Year 3	4,802	4,805	4,807	4,809	4,812
	Year 4	4,803	4,805	4,808	4,810	4,813
	Year 5	4,803	4,806	4,808	4,810	4,814
Total Avail. Supply		**23,439**	**23,439**	**23,439**	**23,439**	**23,439**

GSWC Norwalk has access to a varied water supply that allows the company access to both groundwater and imported water simultaneously. The Norwalk system is reliable due to:

- Adjudicated groundwater rights in the Central Basin
- Projected reliability of imported MWD water supplies via CBMWD
- Recycled water availability to offset higher water demands
- The benefits of amalgamated storage programs

GSWC uses water supplies derived from water assets acquired by MWD. These supplies are derived from MWD's diverse water supply portfolio and may include water assets derived from the Sacramento-San Joaquin Delta Watershed. GSWC cannot trace the exact nature of each water supply delivered to GSWC from MWD's portfolio. As such, GSWC incorporates by reference MWD's Appendix 11 from the MWD 2020 UWMP as its default analysis related to Regional Self Reliance and Reduced Delta Reliance.

The Water Shortage Contingency Plan for GSWC Norwalk is provided in its 2020 UWMP. The contingency plan outlines GSWC's annual water supply and demand assessment procedures and its methods for managing shortages. Annual assessment is delivered to DWR each year to determine if any shortages have been triggered. In the event of a water shortage, GSWC Norwalk can take steps to conserve the water supply or tap into emergency supplies.

5.1.5 Projected Demands

Approximately every five years, GSWC calculates projected water demands within its service area for planning purposes as part of the UWMP. As discussed in Section 3.4, GSWC projects its future customer water demands by using its billing data and number of connections to determine water use for the current planning year by major water sectors: commercial, industrial, residential, and public uses. GSWC projects 0.01 percent growth in the number of customers based on the 2018-2020 growth rate of single-family accounts. The UWMP notes that the single-family growth rate is also applied to other nonresidential customer categories, since these do not have stable growth rates and have significantly smaller counts compared to the single-family category.

The projected (2025-2045) GSWC Norwalk's potable demands are summarized in Table 8 by demand type. It should be noted that the water demand shown in Table 8 does not include any water conservation measures that would be triggered in times of drought per GSWC's Water Shortage Contingency Plan and is therefore very conservative. The net new potable demand of 204 AFY for the Project, which was obtained from calculations presented in Section 4, can also be seen in Table 9. The net new projected total water use, including the proposed Project, will be used to analyze the availability of the water supply for GSWC Norwalk to see if it will be sufficient to support the needs of the new development.

Table 9 – GSWC Norwalk Projected Total Water Use (2025-2045), AFY

Category	Annual Demands, AFY				
	2025	2030	2035	2040	2045
Single Family	2,370	2,371	2,373	2,374	2,375

Multi Family	581	582	582	582	583
Commercial/Institutional	1,101	1,101	1,102	1,102	1,103
Industrial	14	14	14	14	14
Landscape	67	67	67	67	67
Other	0	0	0	0	0
Water Loss	231	232	232	232	232
Total	**4,364**	**4,367**	**4,370**	**4,371**	**4,374**
Net New Proposed Projected Demand	204	204	204	204	204
New Total Demand	**4,568**	**4,571**	**4,574**	**4,575**	**4,578**

5.2 Central Basin Municipal Water District

CBMWD supplies 200 AFY of recycled water to the GSWC Norwalk service area through the Central Basin Recycled Water Project. The recycled water supply is 100 percent reliable for all year types since it is derived from consumed indoor water supplies for the region. The recycled water demand for the Project covers projected irrigation use for the proposed open spaces and parks. Table 10 shows the recycled water deliveries in AFY from CBMWD to GSWC for the years 2016 to 2020. GSWC and CBMWD did not project the demand use in the next 20 years as part of the water management planning efforts. As a result, Michael Baker averaged the delivery amounts for 2016 to 2020 to project future recycled water demands for normal, single dry, and multiple dry years (see Table 11). The Project's forecasted new total recycled water demand (15 AFY) was then added to the future demands to determine the increase in CBMWD deliveries. A total of 179 AFY is expected to be supplied to the Norwalk service area in the next 20 years.

Table 10 – GSWC Norwalk Historical Recycled Water Use (2016-2020), AFY

Category	Annual Demands, AFY				
	2016	2017	2018	2019	2020
Historical Recycled Water Use	130	189	188	150	159

Table 11 – GSWC Norwalk Projected Recycled Water Use (2025-2045), AFY

Category	Annual Demands, AFY				
	2025	2030	2035	2040	2045
Existing Projected Recycled Water	164	164	164	164	164
Proposed Projected Recycled Water	15	15	15	15	15
Total Projected Recycled Water Use	**179**	**179**	**179**	**179**	**179**

5.3 Normal Year (2025–2045)

Table 12 summarizes the projected normal year water demands, including the Project's additional net new demands, in comparison to normal year supply for the five-year intervals for the 2025–2045 planning period. The additional Project demand of 204 AFY for potable water and 15 AFY for recycled water will be supplied by GSWC and CBMWD, respectively, as described in Sections 4 and 5 of this report.

Table 12 – Normal Year Projected Demand (2025-2045), AFY

Normal Year	Annual Demands, AFY				
	2025	2030	2035	2040	2045
Potable Water Demand	4,568	4,571	4,574	4,575	4,578
Recycled Water Demand	179	179	179	179	179

5.4 Single Dry Year (2025–2045)

Table 13 shows supply and demand totals, including the Project demands for the single dry year assessment in five-year increments for the 2025–2045 planning period. As part of the requirement for the Drought Risk Assessment, demand projections that assume a drought period lasts for a single year need to be identified to assess if available supply is sufficient. An adjustment factor of 10 percent is applied to the total normal-year forecasts to conservatively reflect the expected increase in demand due to the drought. Michael Baker added the Project's water demand to the adjusted existing demand projections.

The total irrigation area and water needs within the GSWC Norwalk's service boundary are expected to remain the same therefore the recycled water demand is assumed to be consistent through all year types in this study.

Table 13 – Single Dry Year Projected Demand (2025-2045), AFY

Single Dry Year	Annual Demands, AFY				
	2025	2030	2035	2040	2045
Potable Water Demand	5,005	5,008	5,010	5,012	5,015
Recycled Water Demand	179	179	179	179	179

5.5 Multiple Dry Years (2025–2045)

Table 14 shows projected supply and demand totals for the multiple dry year assessment in five-year increments for the 2025–2045 planning period. Similar to the single dry year projections, the Project's potable water demand is added to the adjusted existing demands for each subsequent dry year to account for the increase in water use during drought conditions. The total irrigation area and water needs within the GSWC Norwalk's service boundary are expected to remain the same therefore the recycled water demand is assumed to be consistent through all year types in this study.

Table 14 - Multiple Dry Years Projected Demand (2025-2045), AFY

Multiple Dry Years		Annual Demands, AFY				
		2025	2030	2035	2040	2045
Potable Water	**Year 1**	5,005	5,008	5,010	5,012	5,015
	Year 2	5,006	5,008	5,010	5,013	5,016
	Year 3	5,006	5,009	5,011	5,013	5,016
	Year 4	5,007	5,010	5,012	5,014	5,017
	Year 5	5,007	5,010	5,012	5,015	5,018
Recycled Water	**Year 1**	179	179	179	179	179
	Year 2	179	179	179	179	179
	Year 3	179	179	179	179	179
	Year 4	179	179	179	179	179
	Year 5	179	179	179	179	179

Section 6 - Water Supply and Demand Analysis

This section compares water supplies against adjusted water demands by accounting for the additional Project water demands. As stated in Section 5, the Project will generate a net new total of 204 AFY of potable water and 15 AFY of recycled water demands and is expected to increase the overall demand for the GSWC service area. The tables in this section compare the normal year, single dry year, and multiple year drought supply and demand in five-year increments over the 20-year planning horizon.

Table 15 and Table 16 present the total future potable and recycled water demands along with the available supplies and estimated surplus over a 20-year planning horizon. Table 14 and Table 15 show that there is a 23,439 AFY pool of potable water and 200 AFY of recycled water available for the GSWC Norwalk service area use. The identified surplus for the supply ranges from 18,421 AFY to 18,871 AFY for potable water and 21 AFY of recycled water for the normal year, single dry year, and multiple dry year conditions. In addition to the available direct supplies for potable water, GSWC Norwalk can access water supply from neighboring agencies in the case of an emergency service outage. The recycled water is also considered 100 percent reliable due to its source availability. The comparisons demonstrate that there is sufficient supply available for the GSWC Norwalk Area, including the Project's demands for years 2025 to 2045 under all year types.

Table 15– Total Potable Water Demand and Supply Comparison (2025-2045), AFY

Category			2025	2030	2035	2040	2045
Normal		Demand	4,568	4,571	4,574	4,575	4,578
		Supply	23,439	23,439	23,439	23,439	23,439
		Surplus	**18,871**	**18,868**	**18,865**	**18,864**	**18,861**
Single Dry Year		Demand	5,005	5,008	5,010	5,012	5,015
		Supply	23,439	23,439	23,439	23,439	23,439
		Surplus	**18,434**	**18,431**	**18,429**	**18,427**	**18,424**
Multiple Dry Years	**Year 1**	Demand	5,005	5,008	5,010	5,012	5,015
		Supply	23,439	23,439	23,439	23,439	23,439
		Surplus	**18,434**	**18,431**	**18,429**	**18,427**	**18,424**
	Year 2	Demand	5,006	5,008	5,010	5,013	5,016
		Supply	23,439	23,439	23,439	23,439	23,439
		Surplus	**18,433**	**18,431**	**18,429**	**18,426**	**18,423**
	Year 3	Demand	5,006	5,009	5,011	5,013	5,016
		Supply	23,439	23,439	23,439	23,439	23,439
		Surplus	**18,433**	**18,430**	**18,428**	**18,426**	**18,423**
	Year 4	Demand	5,007	5,010	5,012	5,014	5,017
		Supply	23,439	23,439	23,439	23,439	23,439
		Surplus	**18,432**	**18,429**	**18,427**	**18,425**	**18,422**
	Year 5	Demand	5,007	5,010	5,012	5,015	5,018
		Supply	23,439	23,439	23,439	23,439	23,439
		Surplus	**18,432**	**18,429**	**18,427**	**18,424**	**18,421**

Table 16 – Total Recycled Water Demand and Supply Comparison (2025-2045), AFY

Category			2025	2030	2035	2040	2045
Normal		Demand	179	179	179	179	179
		Supply	200	200	200	200	200
		Surplus	**21**	**21**	**21**	**21**	**21**
Single Dry Year		Demand	179	179	179	179	179
		Supply	200	200	200	200	200
		Surplus	**21**	**21**	**21**	**21**	**21**
Multiple Dry Years	**Year 1**	Demand	179	179	179	179	179
		Supply	200	200	200	200	200
		Surplus	**21**	**21**	**21**	**21**	**21**
	Year 2	Demand	179	179	179	179	179
		Supply	200	200	200	200	200
		Surplus	**21**	**21**	**21**	**21**	**21**
	Year 3	Demand	179	179	179	179	179
		Supply	200	200	200	200	200
		Surplus	**21**	**21**	**21**	**21**	**21**
	Year 4	Demand	179	179	179	179	179
		Supply	200	200	200	200	200
		Surplus	**21**	**21**	**21**	**21**	**21**
	Year 5	Demand	179	179	179	179	179
		Supply	200	200	200	200	200
		Surplus	**21**	**21**	**21**	**21**	**21**

Section 7 - Conclusion - Availability of Sufficient Supplies

The purpose of this WSA is to analyze whether the total projected potable and recycled water supplies available from GSWC and CBMWD during normal, single dry, and multiple dry water years during a 20-year projection will meet the projected water demand associated with the Norwalk Transit Village Project, in addition to the existing and planned future uses for the Norwalk service area.

The WSA concludes that GSWC's total projected potable water supplies are sufficient to serve the Norwalk service area customers, including the increased demand from the Norwalk Transit Village from 2025 to 2045 in normal, single-, and multiple- dry year scenarios as described in Section 6. Similar with the recycled water supply, CBMWD's supply proved sufficient and is 100 percent reliable in delivering the water demands for existing and future uses. The calculated net new domestic demand presented in this study does not include the existing facility's 5 AFY demand since GSWC's UWMP has already accounted for this amount. The proposed Project would result in a net increase water demand of 204 AFY for potable water and 15 AFY for recycled water. GSWC supplies are available to serve several neighboring GSWC service areas, including the Norwalk service area, and GSWC manages and allocates its water supplies depending upon the needs of each GSWC service area. GSWC has a total supply pool of 23,639 AFY available for use by GSWC Norwalk and the neighboring GSWC service areas; furthermore, GSWC Norwalk has the capability of obtaining additional water supplies from GSWC's pool if the need arises. Historical water usage shows a reduction from 4,355 AFY in 2016 to 4,261 AFY in 2020; however, future projections show an increase in water use to account for population growth. The existing demand water use projections for 2025 to 2045 range from 4,365 AFY to 4,814 AFY during normal, single dry, and multiple dry years. GSWC Norwalk has a total supply of 23,439 AFY and a maximum projected commitment of 4,814 AFY to its existing customers, leaving a surplus of 18,625 AFY, which is more than sufficient to accommodate the projected 204 AFY from the Project.

This WSA does not create a right or any entitlement to water service. It is not a commitment to serve the Project but is a review of GSWC's and CBMWD's total projected water supplies and an analysis of their ability to serve the Project based on presently available information.

Section 8 - Source Documents

California Department of Water Resources, Urban Water Management Plan Guidebook 2020, March 2021

https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Water-Use-And-Efficiency/Urban-Water-Use-Efficiency/Urban-Water-Management-Plans/Final-2020-UWMP-Guidebook/UWMP-Guidebook-2020---Final-032921.pdf

Central Basin Municipal Water District Urban Water Management Plan 2020, June 2021

https://www.centralbasin.org/water-supplies/managing-water-supplies

Golden State Urban Water Management Plan 2020, July 15

https://wuedata.water.ca.gov/getfile?filename=/public%2Fuwmp_attachments%2F7437955558%2FGSWC-Norwalk%202020%20UWMP%20Final.pdf

Los Angeles County Sanitation District No. 4 Connection Fee Rate and Mean Loadings Per Unit Ordinance, 1999

https://www.lacsd.org/home/showpublisheddocument/3318/637643648597570000

Metropolitan Water District of Southern California Urban Water Management Plan 2020, June 2021

https://www.mwdh2o.com/media/21641/2020-urban-water-management-plan-june-2021.pdf

University of California Division of Agriculture and Natural Resources, Landscape Water Requirement Calculator

https://ucanr.edu/sites/UrbanHort/Water_Use_of_Turfgrass_and_Landscape_Plant_Materials/Water_Demand_Calculators/Water_Demand_Calculators/index.cfm

Section 9 - Appendix

Appendix - Central Basin Third Amendment Judgment

Appendix – Central Basin Third Amendment Judgment