Sacramento County Water Agency

Water Supply Assessment for
West Jackson Highway Master Plan

Prepared by Sacramento County Water Agency
December 2023
Updated April 2024

(Administrative Draft Pending
SCWA Board Approval)

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INTRODUCTION

BACKGROUND

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.

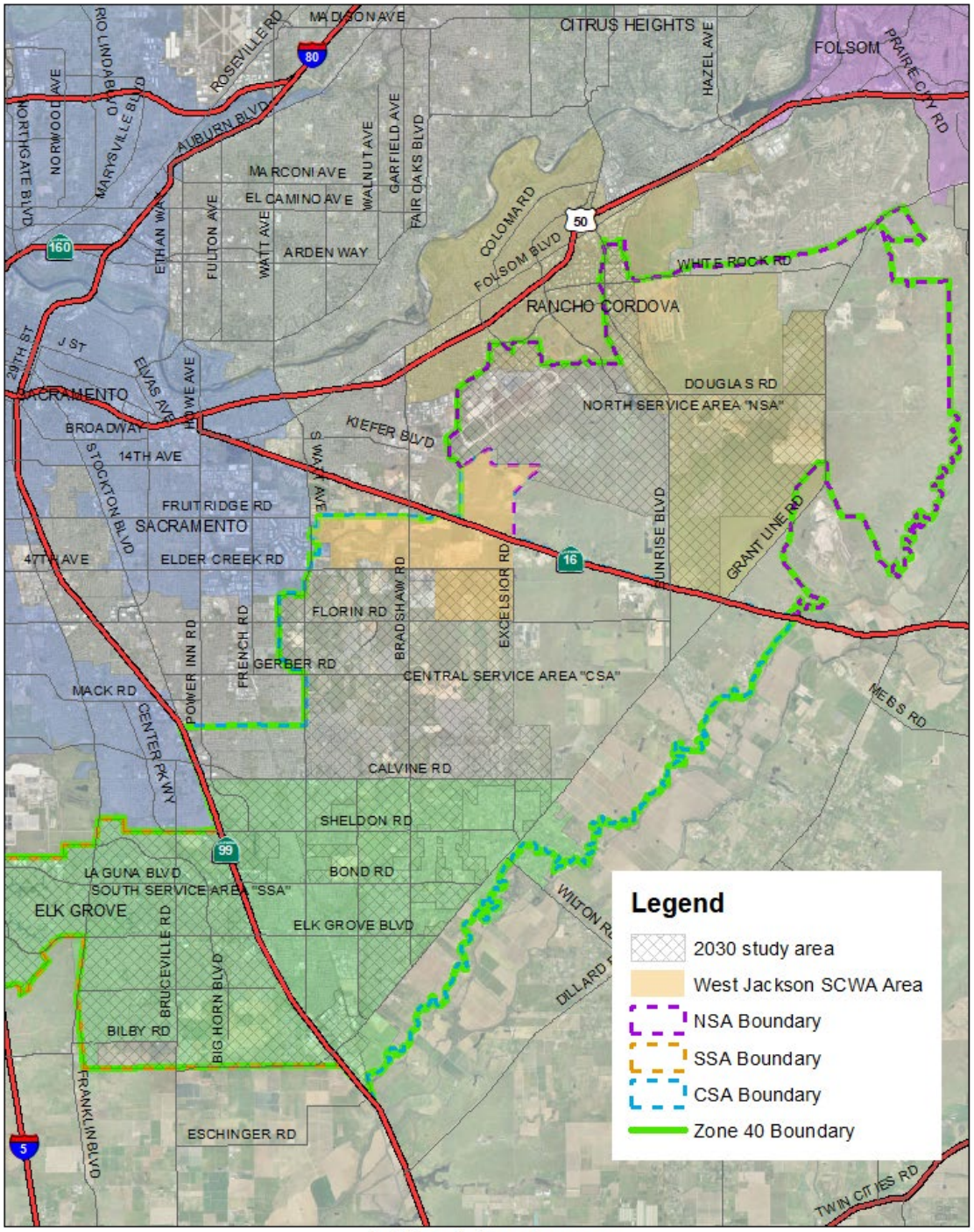
THE PROPOSED DEVELOPMENT PROJECT

The County of Sacramento Department of Planning and Environmental Review (PER) is actively processing the proposed project known as West Jackson Highway Master Plan (Project). The Project encompasses approximately 5,913 acres, of which 4,021 acres are within SCWA's service area, and is located in the central portion of Sacramento County (see **Figures 1 and 2**). The project area is located southeast of the South Watt Avenue/Jackson Highway intersection east to Bradshaw Road, and northeast of South Watt Avenue/Elder Creek Road east to Bradshaw Road. East of Bradshaw Road the project area extends north to Goethe Road, then easterly south of the Mather Airport to Excelsior Road which is the easterly boundary of the project area. The project area extends south along Excelsior Road to Florin Road, which is the southern boundary of the project. The project boundary follows Florin Road westerly to Excelsior Road for approximately 8,000 feet, then north to Elder Creek Road, which becomes the southerly boundary west to Hedge Avenue. The Project is one of the three Master Plan Areas along the Jackson Corridor Planning Area. Additionally, a portion of the Project falls within the Sacramento County Water Agency's (SCWA) benefit zones.

The County of Sacramento Department of Planning and Environmental Review has identified the Sacramento County Water Agency as the responsible water purveyor for the portion of the West Jackson Highway Master Plan that falls within its benefit zones and has requested that SCWA prepare this WSA in accordance with Water Code Sections 10910 – 10915 for that area.

WATER SUPPLY ASSESSMENT OBJECTIVE

The objective of this West Jackson Highway Masterplan WSA is to demonstrate that the planned water supplies for SCWA's Zone 40 are sufficient to meet the demands of the Project in addition to the existing and projected water supply obligations over the next 20 years. The findings of this WSA will be included in the Project's CEQA review by PER.



West Jackson

SACRAMENTO COUNTY WATER AGENCY
DEPARTMENT OF WATER RESOURCES

Figure 1 West Jackson Highway Master Plan SCWA Area Location Map

OVERVIEW OF THE WEST JACKSON HIGHWAY MASTER PLAN WSA

The comprehensive area of the Project overlays the purveyor jurisdictions of both the SCWA and the Californian American Water Company (CalAm) (**see Figure 2**). In general, the boundary between the two water purveyors runs along Fruitridge Road in the east-west direction and Happy Lane in the north-south direction. The SCWA portion of the project site encompasses approximately two thirds of the acreage of the Project and is primarily located in the south and east of the project area. CalAm services the northwest portion of the site and encompasses approximately one third of the acreage of the Project. While some streets will have both CalAm and SCWA owned mains, there are no interconnections between the SCWA system and the CalAm system anticipated at this time. The portion of the Project that overlays SCWA falls within the boundaries of SCWA's Zone 40/41 service area. All references to the Project's land-use area and associated water demands in this WSA will constitute solely the portion within SCWA's jurisdictional boundary.

The SCWA portion of the Project lies entirely within the boundaries of SCWA's Zone 40/41 service area but outside of the 2030 Study Area of the Water Supply Master Plan (WSMP), (SCWA, 2005). In 2016, an amendment to the WSMP (WSMPA) was prepared to include the Project and is pending SCWA's Board of Directors (SCWA Board) approval. In 2016, SCWA also developed the Water System Infrastructure Plan (WSIP) (SCWA, 2016). The WSIP is a staff-level document that describes the projected water supply infrastructure needs to meet the projected built-out water demands in Zone 40, including the Project demands. The infrastructure needs of the project are included in the 2016 WSIP. The water demands associated with the Project have also been included and addressed in the latest Urban Water Management Plan (UWMP) (SCWA, 2020) approved by the SCWA Board on June 15, 2021.

In addition to the above referenced documents, the following documents may be used in whole or in part for the water assessment for Project:

- The Central Sacramento County Groundwater Management Plan (SCGA, February 2006)
- The South American Subbasin Groundwater Sustainability Plan (South American Subbasin Groundwater Sustainability Agencies, October 2021)
- The Final Environmental Impact Report (FEIR) for 2002 Zone 40 Water Supply Master Plan (EDAW, December 2004)
- The Water Forum Agreement (WFA), Sacramento City-County Office of Metropolitan Water Planning, January 2000
- Feasibility Report for Sacramento County Water Financing Authority Series 2007 Revenue Bonds (Sacramento County Water Agency Freeport Project) (MWH, April 2007)
- Sacramento County Water Agency Zone 40 Water Development Fee Study (HDR, August 2023)

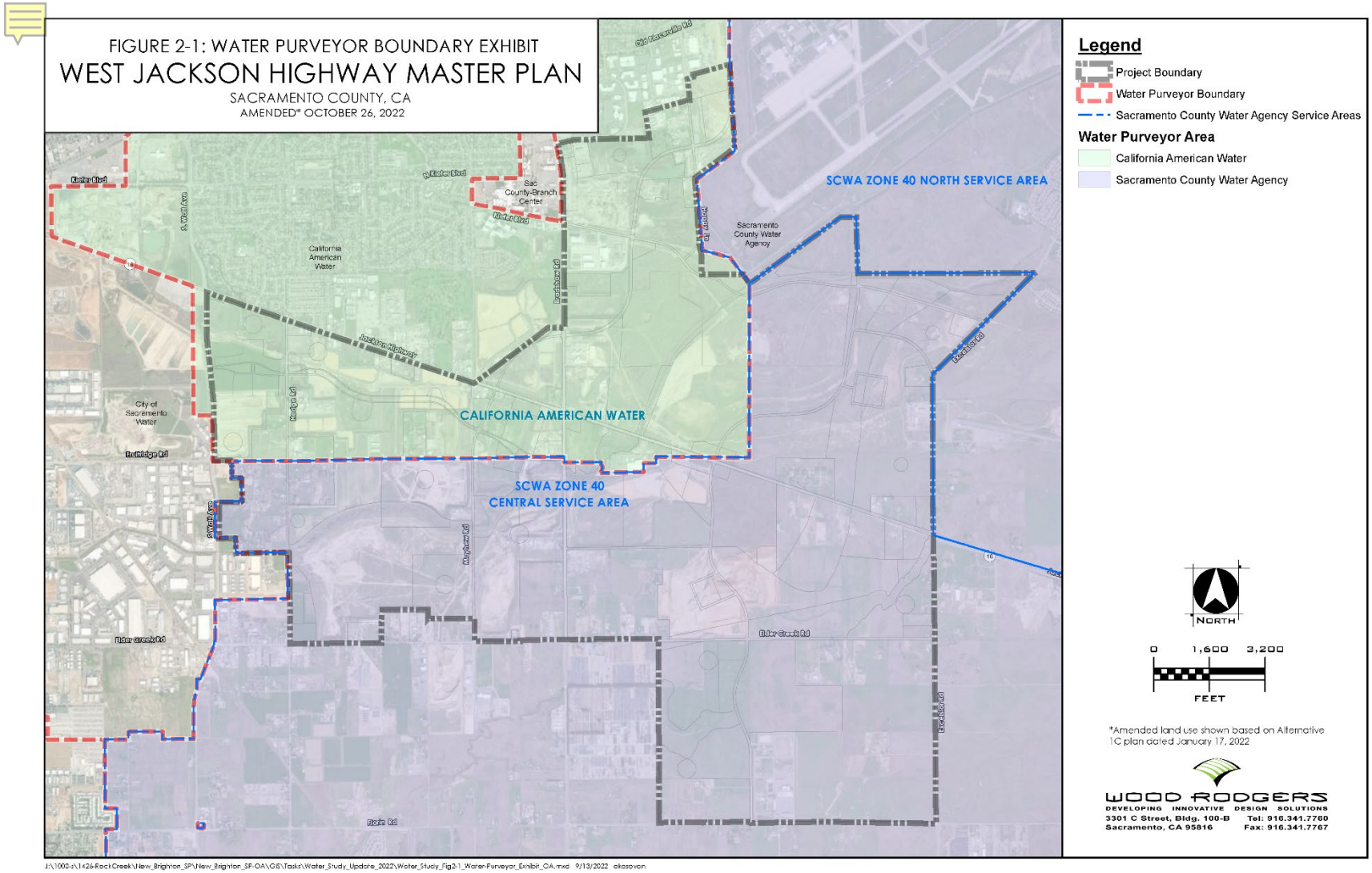


Figure 2 Water Purveyor Boundary Map From West Jackson Highway Master Plan Level 1 Domestic Water Study*

*Note: Water purveyor map sourced from page 6 of *West Jackson Highway Master Plan Level 1 Domestic Water Study, Amended 10/26/2022, Wood Rodgers*.

WSA FOR THE WEST JACKSON HIGHWAY MASTER PLAN PROJECT

Water Code Sections 10910 – 10915 delineate the specific requirements of a WSA. The WSA for the Project is structured according to these requirements.

DETERMINE IF PROJECT IS SUBJECT TO CEQA [Section 10910 (a)]

PER has made the determination that Project is subject to CEQA.

IDENTIFY RESPONSIBLE PUBLIC WATER SYSTEM [Section 10910(b)]

PER has identified SCWA as the responsible public water provider for the Project.

DETERMINE IF UWMP INCLUDES WATER DEMANDS [Section 10910(c)]

The total area for the Project that is within the SCWA benefit zone is estimated to be 4,021 acres. The projected annual water demand for the Project is 6,008 acre-feet per year (AF/year), including system losses. The proposed land use and projected water demand for the Study Area is provided in **Table 1**. See **Figure 3** for a land-use diagram of the entire project area.

Table 1 Proposed Land Use and Water Demand Estimate for the Project

Land Uses	Unit Water Demand Factor (AF/Year/Acre)	Gross Acreage	Water Demand (AF/Year)
Residential Designations			
Multi-family Residential (low density)	2.44	41	100.0
Multi-family Residential (high density)	3.33	149	496.2
Single Family	2.13	1,511	3,218.4
Rural Estate	1.37	95	130.2
Subtotal - Residential		**1,796**	**3,944.8**
Light Industrial	2.02	79	159.6
Commercial	2.02	303	612.1
Public Recreation	2.80	281	786.8
Public	0.81	76	61.6
ROW	0.18	131	23.6
Vacant	-	1,355	-
Subtotal – Non-Residential		**2,225**	**1,643.6**
Total w/o System Loss			**5,588.4**
System Loss (7.5%)			419.2
GRAND TOTAL		**4,021**	**6,007.5**

Note: Information was provided by *West Jackson Highway Master Plan Level 1 Domestic Water Study (Amended October 26, 2022, Wood Rodgers)*. Minor rounding discrepancies account for the difference in total calculated demands identified in the table above and the information provided by Wood Rodgers.

The Project is included in the WSMPA and the estimated demands are accounted for in the current 2020 UWMP, which describes SCWA's existing and projected water demands through

2045. Therefore, the UWMP will serve as the base document for preparing the WSA for the Project.

The projected population growth for Zone 40 was based on the estimated annual number of new connections. First, the buildout population was estimated based on the projected number of dwelling unit connections at buildout. The annual number of new connections was then estimated. The details of population projection for Zone 40 are documented in the WSIP. The WSIP developed buildout land use acreage by type of land use, which was used to quantify the buildout number of dwelling units and water system connections. That assessment included those in the 2030 Study Area and the new growth areas such as the Project. The UWMP adopts the findings and results of the WSIP and presents the population growth projection in 5-year intervals from 2020 to 2045. Note that buildout is projected to occur after 2045 in Zone 40. The 5-year interval population projection is shown in **Table 2** below. The UWMP estimates the water demands for SCWA's service areas in 5-year increments for the 20-year projection (2020 to 2045), as shown in Table 4-10 of the UWMP. A summary of the pertinent data from these tables is presented in **Table 3** below.

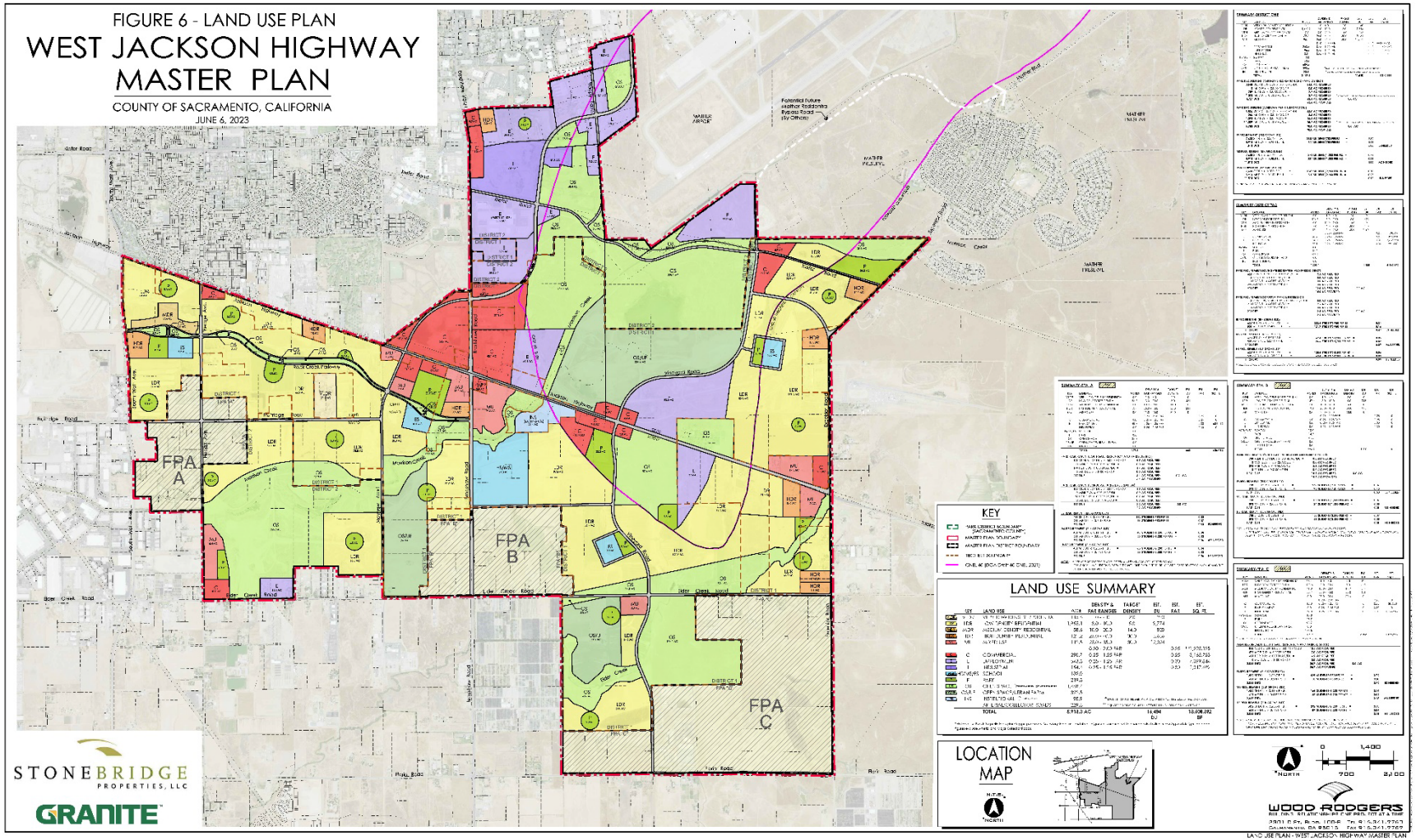


Figure 3 Land Use Diagram From West Jackson Highway Master Plan Level 1 Domestic Water Study*

*Note: Land use diagram sourced from Page 4 of *West Jackson Highway Master Plan Level 1 Domestic Water Study (Amended 10/26/2022, Wood Rodgers)*

Table 2 Population Projection for SCWA Zone 40

SCWA Service Areas	2020	2025	2030	2035	2040	2045
Zone 40 - North Service Area, Central Service Area, South Service Area[1]	169,000	197,027	225,054	253,081	275,698	298,314

[1] Population developed in the 2020 UWMP – see Table 2-7: Zone 40 Population Forecast tied to UWMP connection Projections.

Table 3 Water Demands for SCWA Zone 40 – Normal Year (AF/Year)

SCWA Service Areas	2025	2030	2035	2040	2045
Zone 40 - North Service Area, Central Service Area, South Service Area[1]	46,235	54,494	62,006	68,143	74,388

[1] Water demands developed in the 2020 UWMP – see Table 4-10(a): Zone 40 Forecast Potable Water Use

The water demands for all other dry year scenarios can be found in the 2020 UWMP Chapter 4.

The water demands associated with the Project are substantially included in all tables above and in the UWMP. **Table 4** shows the estimated water demand growth for the Project.

Table 4 Projected Water Demand Growth in Five-Year Increments for the Project (AF/Year)

	2025	2030	2035	2040	2045
Projected Water Demand(1)	1,201	2,401	3,602	4,802	6,008(2)

Notes
1. Information was provided by Wood Rodgers, Inc. 10/18/23.
2. Minor discrepancies in totals provide by applicant and calculated by SCWA due to rounding differences.

IDENTIFY EXISTING WATER SUPPLIES FOR THE PROJECT [Section 10910(d)]

SECTION 10910(d)(1)

Section 10910(d)(1) requires identification of existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the Project and a description of the quantities of water obtained by SCWA pursuant to these water supply entitlements, water rights, or water service contracts in previous years.

Chapter 3 of the 2020 UWMP details all SCWA water supplies. Specifically, 3.1 details Surface Water Rights and Contracts and 3.2 details Groundwater. The Project water demands, as part of the Zone 40 water demand, will ultimately be met by conjunctive use of groundwater and surface water and a small portion of recycled water as described in the 2020 UWMP.

SECTION 10910(d)(2)

Section 10910(d)(2) requires SCWA to demonstrate that water supplies required to serve the Project exist. Section 10910(d)(2) defines what constitutes "proof."

Section 10910(d)(2)(A)

This subsection requires written contracts or other proof of entitlement to the water supplies identified for the Project. The contracts and agreements for the surface water supplies are available for review at the offices of the County of Sacramento, Department of Water Resources.

Initial water demands of the Project could be met with groundwater. SCWA will exercise its right as a groundwater appropriator to extract groundwater from the basin for delivery to the Project; surface water will be from existing entitlements diverted from the Sacramento River and treated at the VSWTP. In the long-term, the water demands for the Project will be met in accordance with the conjunctive use program described in the WSMP.

Section 10910(d)(2)(B)

This subsection requires a copy of the capital outlay program for financing the delivery of the identified water supply to the Project. The documents described below are available for review at the offices of the County of Sacramento, Department of Water Resources.

A financing plan for the construction of groundwater and surface water facilities needed to realize the conjunctive use program identified in the WSMP was approved by SCWA Board. The financing plan, as outlined in Chapter 7 of the WSMP, identifies the necessary water facility projects and estimated costs associated with implementation of said conjunctive use program (Capital Improvement Program or CIP). Section 8.3 of the WSMPA identifies additional infrastructure and a Capital Improvement Plan necessary to serve the Project area.

In addition to the WSMP, the Feasibility Report for Sacramento County Water Financing Authority Series 2007 Revenue Bonds (Sacramento County Water Agency Freeport Project) (MWH, April 2007), and the Sacramento County Water Agency Zone 40 Water Development Fee Study (HDR, August 2023) evaluated and updated the total cost and fee requirements of the Zone 40 conjunctive use program incorporating all future Zone 40 expenditures for major capital facilities (i.e., surface water treatment plants, groundwater treatment plants, major transmission mains, etc.). Funding to meet SCWA's capital and annual funding requirements was then implemented by the SCWA Board through the issuance of revenue bonds for certain projects and the adoption of user fee and development fee increases over time.

SCWA's capital outlay program includes the means for financing facilities to deliver the identified water supply to the Project. Specifically, all facilities needed to serve the Project are included in the CIP that was financed through the above-described revenue bonds, user fee, and development fee. The development fee and user fee, as described in Titles 3 and 4 of the

Sacramento County Water Agency Code, will continue to provide revenue to finance all aspects of the Zone 40 conjunctive use program, including repayment of debt financing. Both fee programs are evaluated periodically and adjusted, if necessary, to accommodate changes in the service area, water demands, needed capital projects, and required debt financing. Based on the CIP, a 10-year CIP is annually updated by the SCWA Board.

Section 10910(d)(2)(C)

This subsection requires identification of any federal, state, and local permits required for construction of the facilities identified for delivering the water supply to the Project.

Water deliveries to the Project will be made through connecting to the existing T-mains surrounding the Project and additional infrastructure internal to the Project as detailed in the WSIP. The 2016 WSIP accounts for the infrastructure needs of this Project. Federal, state, and local permits for the construction of the facilities for delivering water supply to the project will undergo site-specific environmental review and approval. Required permits identified pursuant to the review will have to be obtained prior to acceptance of bids for construction of any project. SCWA does not foresee any regulatory or legal impediments to completing any necessary further environmental review and obtaining those permits when the need arises.

Section 10910(d)(2)(D)

This subsection requires identification of any regulatory approvals required for delivery of the water supply to the Project.

Water production, treatment, and storage facilities will be added to SCWA's public water system permit issued by the California Department of Public Health (DPH) and the design of these facilities will require review and approval by DPH. No other regulatory approvals are anticipated.

New water service and discretionary approval of any project may be withheld until compliance with the Endangered Species Act (ESA) is demonstrated. Depending upon the source of water, compliance may be demonstrated by one of the following: participation in the South Sacramento Habitat Conservation Plan (SSHCP); a letter from the US Fish and Wildlife Service (USFWS) to the project proponent and/or federal agency indicating the Project is not likely to adversely affect or result in a take of listed species; incidental take coverage through a biological opinion for the project; or, incidental take coverage through an ESA section 10(a)(1)(B) permit for the project. This requirement may be a condition of approval for any discretionary action taken by the local land use authority.

IDENTIFY PARTIES DEPENDENT UPON PROPOSED SUPPLY [Section 10910(e)]

SECTION 10910(e)

Section 10910(e) states:

"If no water has been received in prior years by the public water system…, under the existing water supply entitlements, water rights, or water service contracts [identified to serve the proposed project], the public water system,…shall also include in its water supply assessment pursuant to subdivision (c), an identification of the other public water systems or water service contract holders that receive a water supply or have existing water supply entitlements, water rights, or water service contracts to the same source of water as the public water system,…, has identified as a source of water supply within its water supply assessments."

The intent of this section is to identify any potential conflicts that may arise from the exercise of a water supply entitlement, water right, or water service contract to serve a proposed project if such water supply entitlement, water right, or water service contract has not been previously exercised.

Use of Groundwater

The water demands of Zone 40 (including the Project) will be met with groundwater and surface water. SCWA has previously exercised its rights as a groundwater appropriator to meet the water demands of its customers and will continue to exercise those rights to provide treated groundwater supplies to the Project.

Use of Surface Water

The surface water supplies associated with SCWA's conjunctive use program fall into the following categories:

1) Purchased water supplies available through a current USBR CVP contract.
2) Purchased water available through the City of Sacramento for use within the American River Place of Use (POU).
3) Water supplies available through SWRCB Permit 21209.
4) SWRCB Appropriative Water Right License 1062
5) SWRCB Appropriative Water Right License 4060
6) Agreement Between Sacramento County, SCWA and Aerojet with respect to Transfer of GET Water
7) Contract Between State of California Department of Water Resources and North Delta Water Agency
8) 2002 Wholesale Agreement Between SRCSD and SCWA
9) 2004 Agreement with the City of Sacramento for Wholesaling and/or Wheeling Water Service for Sacramento International Airport and Metro Air Park
10) 2000 Agreement Between City of Sacramento and the Sacramento County Water Agency to Treat and Deliver (Wheel) Surface Water
11) 2000 Memorandum of Understanding Regarding the Operation of A Water System Interconnection at 2750 Mercantile Drive
12) Fruitridge Vista Water Company Contract now held by Cal American Water Company

For USBR CVP purchased water and SWRCB Permit 21209 surface water, the parties that could most directly be affected are other CVP contractors, State Water Project (SWP) contractors, water rights holders subject to Term 91 conditions, and riparian diverters downstream of SCWA's point of diversion. The point of diversion is at a site near the community of Freeport on the Sacramento River.

The source of POU water supply is wholesale water from the City of Sacramento to serve the area that lies within the POU. Delivery of this water to SCWA has been included in the City of Sacramento's long-range plan for perfecting their American River water rights. The diversion location, timing, and volume of delivery are currently under negotiation.

DOES SUPPLY FOR PROJECT INCLUDE GROUNDWATER? [Section 10190(f)]

SECTION 10910(f)

As stated earlier, the water supply for Zone 40 (including the Project) include groundwater. Section 10910(f) requires additional information about groundwater to be presented in this WSA.

Section 10910(f)(1)

Section 10910(f)(1) requires a review of groundwater information contained in the UWMP relevant to the identified water supply for the Project. Section 3.2 of the 2020 UWMP provides a description of the applicable groundwater basins, the status of groundwater management, overdraft conditions, historical groundwater pumping, and the remediated groundwater supply.

Section 10910(f)(2)

Section 10910(f)(2) requires a description of the groundwater basin and the efforts being taken to prevent long-term overdraft.
Section 3.2.2 of the 2020 UWMP describes groundwater management in the South American Subbasin. Below is information for historical context.

- **South American Subbasin (5-21.65)**

For the Project, SCWA would pump groundwater from the South American Subbasin as defined by the California Department of Water Resources (DWR) Bulletin 118. According to Bulletin 118, the South American Subbasin is defined as the area bounded on the west by Interstate 5 and the Sacramento River, on the north by the American River, on the south by the Cosumnes and Mokelumne rivers and on the east by the Sierra Nevada.

Groundwater in the South American Subbasin is generally classified as occurring in a shallow aquifer (Laguna or Modesto Formation) and in a deep aquifer (Mehrten Formation). The Laguna or Modesto Formation consists of older alluvial deposits of loosely to moderately compacted sand, silt, and gravel deposited in alluvial fans. These deposits are moderately permeable and have a thickness of about 100 to 650 feet. The deeper Mehrten Formation is a sequence of fragmented volcanic rocks which crops out in a discontinuous band along the eastern margin of the basin. It is composed of black volcanic sands, stream gravels, silt, and clay inter-bedded with

intervals of dense tuff breccia. The sand and gravel intervals are highly permeable and the tuff breccia intervals act as confining layers. The thickness of the Mehrten Formation is between 200 and 1,200 feet. Groundwater is located from 20 to 100 feet below the ground surface depending on when and where the measurement is taken. The base of the potable water portion of the deep aquifer is located approximately 1,400 feet below the ground surface.

Intensive use of groundwater over the past 60 years has resulted in a general lowering of groundwater elevations. Over time, isolated groundwater depressions have grown and coalesced into a single cone of depression that is centered in the southwestern portion of the basin. Groundwater level trends through much of the basin have generally declined consistently from the 1950s and 1960s to about 1980 by 20 to 30 feet. From 1980 through 1983, water levels recovered by about 10 feet and remained stable until the beginning of the 1987-1992 drought; however, wells in the vicinity of Rancho Cordova appear to have recovered less than other wells in the basin since 1995 (generally less than 10 feet). From 1995 to 2003 most groundwater levels recovered to levels that were generally higher than levels prior to the 1987 through 1992 drought. Much of this recovery can be attributed to the increased use of surface water in the South American Subbasin, and the fallowing of previously irrigated agricultural lands transitioning into new urban development areas. In the central portion of the South American Subbasin groundwater level trends observed in California Department of Water Resources monitoring wells generally vary between 40 feet above to 40 feet below mean sea level over the period of the 1950's through the 2000's.

Recharge of the aquifer system occurs along active river and stream channels where extensive sand and gravel deposits exist, particularly along the American, Cosumnes, and Sacramento rivers. Additional recharge occurs along the eastern boundary of Sacramento County at the transition point from the consolidated rocks of the Sierra Nevada to the alluvial-deposited basin sediments. This recharge is classified as subsurface recharge along with underground flow into and out of the basin with adjacent groundwater basins. Other sources of recharge include deep percolation from applied surface water and precipitation.

The sustainable yield for the South American Subbasin was estimated as a part of the Groundwater Sustainability Plan development process, under the mandate of the 2014 Sustainable Groundwater Management Act (SGMA), using analysis of data and information from a number of groundwater modeling scenarios from the *Integrated Water Resources Model of the Cosumnes, South American, and North American* (CoSANA model) for historical, baseline and project conditions reflecting various hydrologic and operational conditions in the Subbasin. The scenarios used a 50-year hydrologic period, which represented reasonably long-term conditions in the Subbasin. The goal of the analysis was to establish a sustainable yield to avoid causing undesirable results as defined and established as part of the GSP Sustainable Management Criteria (SMC). The estimated long term annual sustainable yield of groundwater from the South American Subbasin is 235,000 AF/year. Supply and demand inputs into the CoSANA model for both current baseline conditions (water years 1970-2019) and projected baseline conditions (water year 2040) included SCWA Zone 40 operations and inclusive of those potentially associated with the LEACP. The full CoSANA model report may be viewed as *Appendix 2 –B CoSANA Model Report* of the South American Subbasin Groundwater Sustainability Plan and may be accessed at http://sasbgroundwater.org/resources.html

- **Sustainable Groundwater Management Act (SGMA)**

The Sustainable Groundwater Management Act (SGMA), passed by the California legislature in 2014, requires local entities to jointly assess groundwater conditions in their local areas and to develop a Groundwater Sustainability Plan (GSP) by a specified deadline to ensure that sustainable conditions are achieved within 20 years of GSP adoption. An effective and efficient groundwater management plan is critical to the health and welfare of the people, the environment and all other uses and users of groundwater in a local area.

Six local entities responded to the mandate of SGMA and formed Groundwater Sustainability Agencies (GSAs) within the South American Subbasin (SASb). Sacramento Central Groundwater Authority (SCGA), Omochumne-Hartnell Water District (OHWD), Sloughhouse Resource Conservation District (SRCD), North Delta GSAs (NDGSA), Reclamation District 551 (RD 551), and Sacramento County, agreed to work together to develop and implement a GSP for the SASb. The South American Subbasin Groundwater Sustainability Plan (October 2021) was approved by the California Department of Water Resources on July 27, 2023. A copy of the GSP as submitted, may be viewed at http://sasbgroundwater.org/.

The local entities represented by the six GSAs in the SASb included the City of Sacramento, Sacramento County Water Agency, City of Elk Grove, City of Rancho Cordova, City of Folsom, Rancho Murieta, Sacramento Regional County Sanitation District, Elk Grove Water District, OHWD, SRCD and Reclamation Districts. A variety of local interests are also represented by these GSAs, including agricultural-residential water users, agricultural water users, public water systems, local land use planning agencies, environmental interests, surface water users, the federal government, tribal governments, disadvantaged communities, groundwater monitoring and reporting entities, holders of overlying groundwater rights, adjacent Subbasins, industrial users, commercial users, remediation pumpers, natural ecosystems, and the general public. Many of these local entities have a long history with groundwater and surface water management in the SASb and are well equipped to perform SGMA-required planning functions.

The six GSAs in the SASb have undertaken a thorough and timely review of past, current and projected future water resources needs and groundwater conditions to meet SGMA requirements for GSP development. Throughout the development of the SASb GSP, regular communication and engagement activities were conducted to inform and receive input from local stakeholders and the general public. The SASb GSP includes a comprehensive groundwater subbasin description, which was used in the development of a regional surface and ground water model that quantifies current water budgets and projects future conditions associated with population growth, land use changes, water conservation, climate change, and consideration of beneficial projects that are planned to occur over the next five to ten years. The SASb GSP also includes a thorough assessment of the impacts of predicted future groundwater levels on beneficial users, including groundwater-dependent ecosystems, shallow wells, and interconnected surface water. Importantly, these assessments are used to develop measurable sustainable management criteria

that avoid significant and unreasonable impacts to these beneficial users, and that can be monitored and adjusted throughout plan implementation.

The key finding of the SASb GSP, based on thorough analysis of the best available information, is that the basin will be sustainable over the next twenty years as long as planned recycled water, recharge and other projects are implemented. These projects will raise groundwater levels above current levels, maintain storage volumes, and protect ecosystems, interconnected surface water, and shallow well users. Although projected climate change conditions will increase groundwater use, these effects are not expected to cause the SASb to become unsustainable or to cause significant decreasing trends in groundwater conditions. A groundwater monitoring network comprised of more than 50 wells will be used to track groundwater levels and groundwater quality. Management criteria set at each well in the network will be implemented to assess these conditions over time and ensure that levels and quality remain within a range that avoids significant and unreasonable impacts to beneficial uses and users of groundwater. Once approved by the GSAs, the activities identified and developed through the SASb GSP development process will be implemented, including:

- Ongoing monitoring and annual reporting on conditions in the SASb;
- Ongoing public engagement and outreach;
- Coordination among the GSAs and with neighboring subbasins;
- Development and implementation of a shallow well protection and monitoring program;
- Coordination with regional entities to develop a regional water bank;
- Coordination with land use agencies and water supply agencies to promote consistency with the GSP;
- Coordination with regional agencies in the development of updated climate change projections; and,
- Preparation of a five-year update to the GSP to be submitted in 2027

- **SCWA Conjunctive Use Program**

Section 3.2 and Appendix E of the WSMP provide detailed descriptions of the Zone 40 conjunctive use program. SCWA's operational approach for preventing overdraft of the groundwater basin underlying Zone 40 and optimizing the use of both groundwater and surface water is discussed in detail in these sections. The FEIR for 2002 Zone 40 Water Supply Master Plan includes an extensive analysis of the effects of the Zone 40 conjunctive use program on the groundwater basin and on various recharge sources. A summary of the conjunctive use program is as follows:

SCWA's conjunctive use program is a coordinated approach to manage surface water and groundwater supplies to maximize the yield of available water resources. The conjunctive use program for SCWA includes the use of groundwater, surface water, remediated water, and recycled water supplies. The program also includes the construction of a surface water diversion structure, a surface-water treatment plant, and water conveyance pipelines, as well as groundwater extraction, treatment, and distribution facilities.

This conjunctive use program relies on an abundance of surface water in wet years when as much surface water as possible will be diverted, within entitlement limitations, minimizing the use of groundwater. During these years the groundwater aquifer will be allowed to naturally replenish. In dry years, when surface water availability is reduced, SCWA will pump more groundwater from the replenished aquifer. Using surface water and groundwater conjunctively makes it easier for SCWA to meet demands in a single dry year or in multiple dry years. The goal of the conjunctive use program is to meet all demands during wet and dry years.

SCWA has adopted policies to ensure systematic, incremental implementation of its conjunctive use program. These policies are also consistent with the terms of the WFA, which is intended to maintain a long-term sustainable groundwater supply. The policies are included in the SCWA's UWMP and WSMP, which include specific action items to ensure implementation. Action items include development of additional surface water supply and treatment facilities to provide water during wet years, development of groundwater facilities to provide groundwater during dry years, in-lieu "banking" of groundwater during wet years, development and implementation of demand management and water conservation strategies, development of water reclamation facilities to meet non-potable demands, and development of a financing plan to implement these action items.

The conjunctive use program was included in the development of the SASb GSP's water budget and sustainable yield.

Section 10910(f)(3)

Section 10910(f)(3) requires a description of the volume and geographic distribution of groundwater extractions from the basin for the last five years.

Table 5 identifies past volumes of groundwater extracted by SCWA in Zone 40 between 2000 – 2022. The 2020 UWMP contains 2016-2020 in Table 3-29.

Table 5 Historical Groundwater Pumping in Zone 40, 2000 – 2022

Year	(Acre-Feet/Year)
2000	20,022
2001	22,306
2002	22,949
2003	22,745
2004	25,790
2005	29,184
2006	31,162
2007	31,249
2008	34,225
2009	34,249
2010	32,171
2011	29,809
2012	26,363
2013	23,274
2014	19,683
2015	20,675
2016	18,856
2017	17,157
2018	16,748
2019	14,654
2020	22,475
2021	22,057
2022	25,604

Through the water supply master planning process, SCWA identified a system of sixteen separate well fields throughout Zone 40. A distributed groundwater extraction strategy was selected because it would minimize drawdown effects of pumping by spreading extraction over a wide geographic area. The approximate locations of the SCWA's current and future well fields is shown in **Figure 3**.

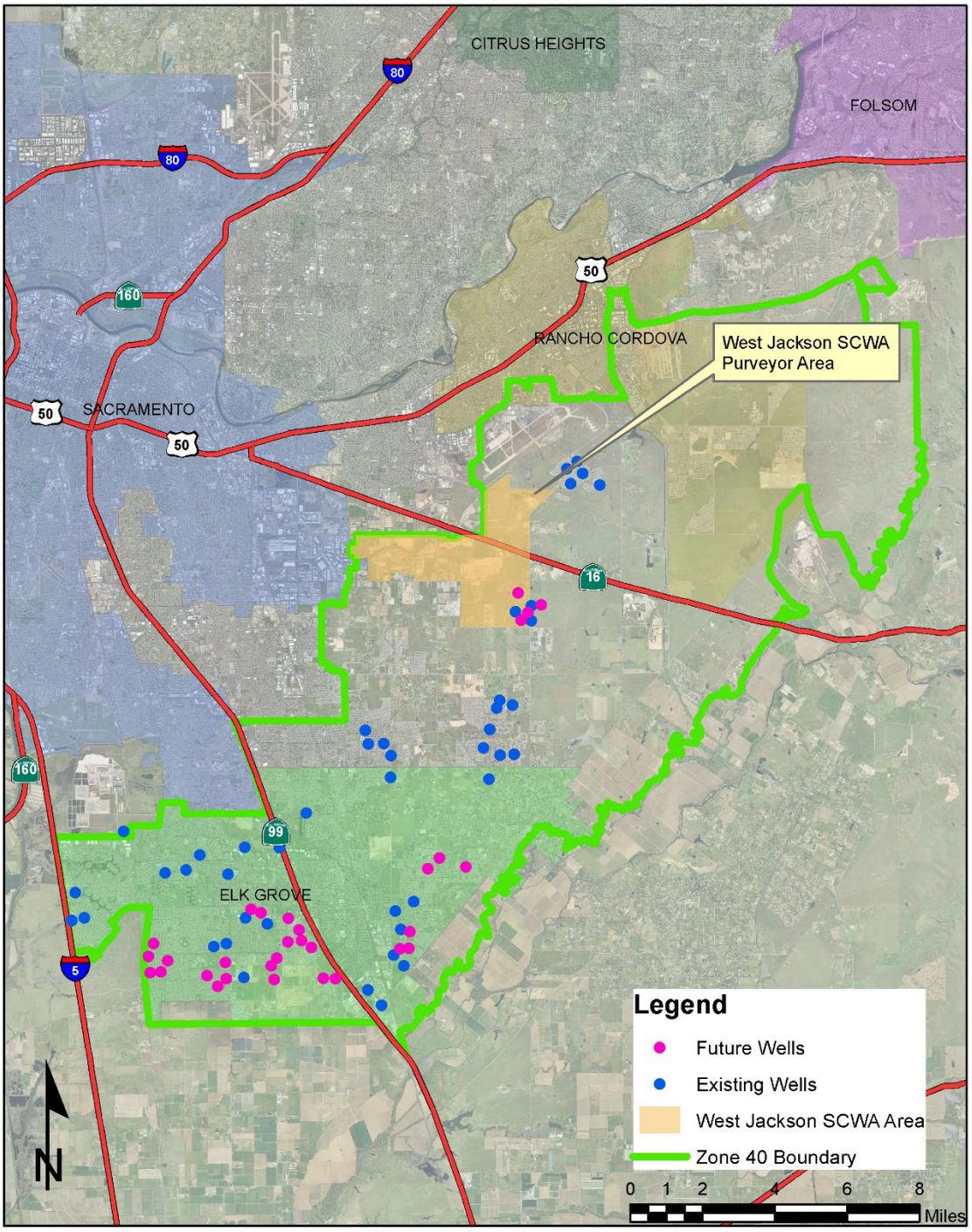


Figure 4 Existing and Future Well Fields in SCWA Zone 40

Section 10910(f)(4)

Section 10910(f)(4) requires a description of the projected volume and geographic distribution of groundwater extractions from the basin.

Groundwater use has declined since the VSWTP has come online, but it will increase over time as water demand continues to grow in Zone 40. In wet and normal years, groundwater pumping will be minimized because surface water becomes the major water supply source. In dry years, groundwater pumping will increase significantly as surface water availability is considerably reduced. Section 3.2.2 Zone 40 Groundwater in the 2020 UWMP describes groundwater use through 2045.

Section 10910(f)(5)

Section 10910(f)(5) requires an analysis of the sufficiency of the groundwater basin to meet the demands associated with the Project.

The Groundwater Sustainability Plan development process for the South American Subbasin estimated a long-term sustainable average annual yield of 235,000 AF/year and provided for SCWA's groundwater needs as identified in the WSMP. The WSMP describes a conjunctive use program that identifies and projects a long-term average use of groundwater to meet identified water demands, including the demand associated with the Project. The South American Sub-basin GSP also accounts for growth in the Project area.

SCWA's conjunctive use program has been extensively analyzed and documented in the WSMP, the FEIR for 2002 WSMP (certified in February 2006), the FEIR – WFA (certified in 1999), and the WFA.

DETERMINATION OF SUFFICIENCY

SCWA determines that it has identified sufficient water supplies to meet the water demands of the Project over the next 20 years during normal, single dry, and multiple dry years.

SCWA makes this determination based on the information provided in this WSA and on the following specific facts:

- SCWA's conjunctive use program is a sustainable water supply program that provides a 100-percent reliable water supply while protecting environmental values and stabilizing the groundwater basin underlying Zone 40.
- SCWA's conjunctive use program has been extensively analyzed and documented in the WSMP, the FEIR for 2002 WSMP (certified in February 2006), the FEIR – WFA (certified in 1999), and the WFA. All referenced documents have been subjected to thorough technical peer review and public scrutiny.
- The Project will be served by water supplies made available through SCWA's conjunctive use program.
- A financing plan for SCWA's conjunctive use program for constructing facilities required for delivering groundwater and surface water to the Project has been approved by the SCWA Board through its adoption of the WSMP, Bond Feasibility Reports, and the Sacramento County Water Agency Code.

The 2020 UWMP demonstrates that SCWA's total projected water supplies during normal, single dry, and multiple dry water years meet the proposed water demands over the next 20 years.

CONCLUSION

This WSA documents all required information specifically delineated by Water Code Sections 10910 – 10915. It demonstrates that SCWA's water supplies are sufficient to satisfy the water demands of the currently proposed Project while still meeting the current and projected water demands of existing customers in the next 20 years. If there are significant changes to land uses for the proposed Project in the future, this WSA may need to be revisited and updated accordingly.