WATER SUPPLY ASSESSMENT REPORT (WSA)

PROJECT:

ANTELOPE VALLEY COMMERCE CENTER
Southeast corner of Sierra Hwy and East Avenue "M"
In the City of Palmdale

Developer:

The Covington Group

Water Purveyor:

Los Angeles County Waterworks
District No. 40

Prepared by:
Kavous Emami, P.E.
(714) 401-4695

KEC ENGINEERS, INC.

May 2022

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ACRONYMS AND ABBREVIATIONS

AF	acre-feet
AFY	acre-feet per year
AVEK	Antelope Valley-East Kern Water Agency
AWWA	American Water Works Association
cfs	cubic feet per second
EIR	Environmental Impact Report
GPCD	gallons per capita per day
gpd	gallons per day
GPM	Gallons Per Minute
HGL	Hydraulic Grade Line
HWL	High Water Level
IRWMP	Integrated Regional Water Management Plan
LACWD	Los Angeles County Waterworks District
RTP/ SCS	Regional Transportation Plan / Sustainable Communities Strategy
SF	Square feet
Project	AVCC (Antelope Valley Commerce Center)
SB	Senate Bill
SWP	State Water Project
UWMP	Urban Water Management Plan
WSA	Water Supply Assessment

INTRODUCTION

The information provided in the preparation of this Water Supply Assessment is mainly obtained from the review of the Los Angeles County Waterworks District No. 40, Antelope Valley (LACWD40), Approved and adopted the Urban Water Management Plan (2020), and the information obtained from the LACWD Engineering staff. The District's Water Master Plan was not available for public review at the time of this report. However, we used the City of Palmdale Water District Master Plan to obtain the water demand for the industrial land use to calculate the maximum day water demand

WATER SUPPLY ASSESSMENT REQUIREMENTS

Water Code Section 10910:

The California Water Code section 10910 commonly known as Senate Bill (SB) 610 requires preparation of a Water Supply Assessment (WSA). As part of that assessment, the public water system shall indicate whether its total projected water supplies available during normal, single-dry, and multiple-dry water years included in the 20-year projection contained in the urban water management plan will meet the projected water demand associated with the proposed project, in addition to the public water system's existing and planned future uses.

Water Code Section 10913. Project:

a) Section 10913 of the Water Code defines a "Project" for which a WSA must be prepared as any of the following:
b) A proposed residential development of more than 500 dwelling units.
c) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.
d) A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.
e) A proposed hotel or motel, or both, having more than 500 rooms.
f) 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.

g) A mixed-use project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling-unit project.

PROPOSED NEW DEVELOPMENT

Project Name:

Antelope Valley Commerce Center (AVCC)

Project Location:
Southeast corner (SEC) of Sierra HWY and East Avenue "M"
in the City of Palmdale

Developer/Owner:

Covington Group
14180 Dallas Parkway
Dallas, TX. 75254

Project Architect:

HPA Architecture
18831 Bardeen Ave., Suit #100
Irvine, CA. 92612
Tel: (949) 863-1770

Project Civil Engineer:

Westland Group
4150 Concourse, Suit 100
Ontario, CA. 91764

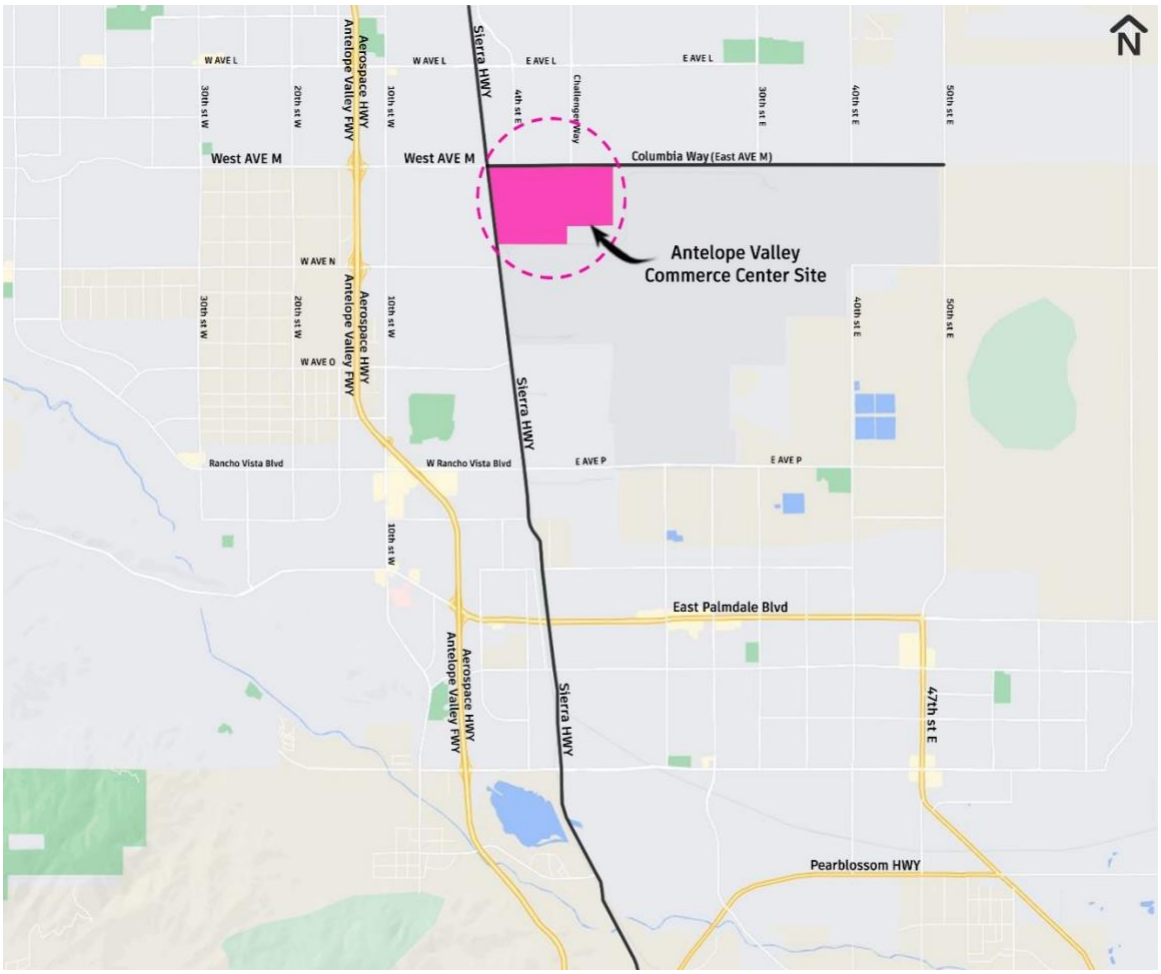


Figure 1: AVCC Project Site

PROJECT DESCRIPTION:

The Antelope Valley Commerce Center Phase I is a project comprised of 6 warehouse buildings located within a 434 gross acreage of land at the southeast corner of Sierra Highway and East Avenue "M" in the City of Palmdale. The Water purveyor for this site is the Los Angeles County Waterworks District 40 (LACWD40). The proposed Phase I, development at this site is as follows:

Building #1: 126,670 S.F. of warehouse, 10,000 S.F. Office

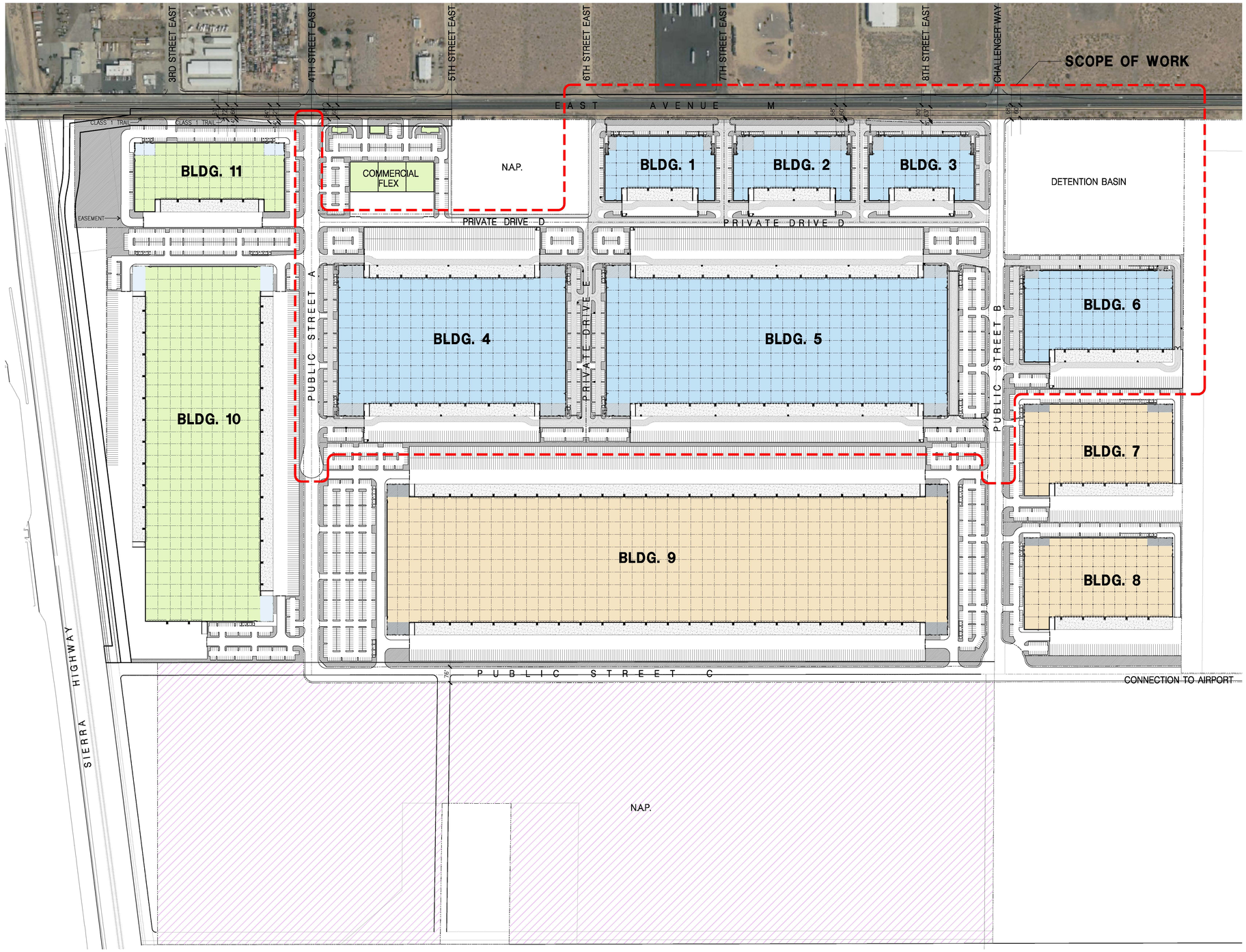
Building #2: 134,306 S.F. of warehouse, 10,000 S.F. Office

Building #3: 122,695 S.F. of Warehouse, 10,000 S.F. Office

Building #4: 660,469 S.F. of Warehouse, 20,000 S.F. Office

Building #5: 984,228 S.F. of Warehouse, 20,000 S.F. Office

Building #6: 259,858 S.F. of Warehouse, 15,000 S.F. Office



Legend

- POTENTIAL OFFICE
- PHASE I
- PHASE II
- PHASE III
- PHASE IV

MASTER SITE PLAN (A)
scale: 1" = 200'-0"

SCALE: 1" = 200'-0"
0 200' 400' 600'
TRUE NORTH

HPA architecture

hpa, inc.
18831 bardeen avenue, - ste. #100
irvine, ca
92612
tel: 949-863-1770
fax: 949-863-0851
email: hpa@hparchs.com

LICENSED ARCHITECT YONG NAM C-29451 3-31-23 RENEWAL DATE STATE OF CALIFORNIA

Owner:

COVINGTON DEVELOPMENT PARTNERS

Project:

ANTELOPE VALLEY COMMERCE CENTER

PALMDALE, CA

Consultants:

CIVIL	WESTLAND
STRUCTURAL	
MECHANICAL	
PLUMBING	
ELECTRICAL	
LANDSCAPE	HUNTER
FIRE PROTECTION	
SOILS ENGINEER	

Title: PHASING PLAN

Project Number:	20475
Drawn by:	Y.G.
Date:	5/12/23
Revision:	

Sheet:

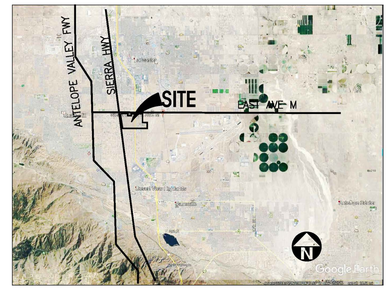
DAB-A1.0

ANTELOPE VALLEY COMMERCE CENTER

ENTITLEMENT PACKAGE
ANTELOPE VALLEY COMMERCE CENTER FROM S SIERRA HWY AND EAST AVENUE M. PALMDALE, CA

ARCHITECTURAL

SHEET INDEX



VICINITY MAP

HPA architecture

hpa, inc.
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MECHANICAL	
PLUMBING	
ELECTRICAL	
LANDSCAPE	HUNTER
FIRE PROTECTION	
SOILS ENGINEER	

Title: TITLE SHEET

Project Number: 20475
Drawn by: Y.G.
Date: 5/12/23
Revision:

Sheet: DAB-A0.1

OWNER:

AVCC MASTER, LLC
3 CORPORATE PLAZA, SUITE 230
NEWPORT BEACH, CA 92660
PHONE: (949) 514-0274
CONTACT: DANA WHITMER

ARCHITECT:

HPA, INC.
18831 BARDEEN AVE., SUITE 100
IRVINE, CA 92612
PHONE: (949) 862-2127
CONTACT: YUNXUAN GUO

CIVIL:

WESTLAND GROUP
4150 CONCOURS, SUITE 100
ONTARIO, CA 91764
PHONE:(909) 989-9789
FAX: 909 989.9660
CONTACT: MATT KUNKLE

LANDSCAPE:

HUNTER LANDSCAPE
711 S. FEE ANA STREET
PLACENTIA, CA 92870
TEL: (714) 986-2400
FAX: (714) 986-2408
CONTACT: TOM HAYES

PROJECT REP.

PLANNING DEPT.

TBD

OWNER/APPLICANT:

AVCC MASTER, LLC
3 CORPORATE PLAZA, SUITE 230
NEWPORT BEACH, CA 92660
PHONE: (949) 514-0274
CONTACT: DANA WHITMER

APPLICANT'S REPRESENTATIVE:

HPA, INC.
18831 BARDEEN AVE., SUITE 100
IRVINE, CA 92612
PHONE: (949) 862-2127
CONTACT: YUNXUAN GUO

GOVERNING CODE

2019 CALIFORNIA BUILDING CODE (CBC)
2019 CALIFORNIA PLUMBING CODE
2019 CALIFORNIA MECHANICAL CODE
2019 CALIFORNIA ELECTRICAL CODE
2019 CALIFORNIA FIRE CODE
2019 CALIFORNIA ENERGY CODE
2019 CALIFORNIA CAL GREEN CODE

BUILDING ADDRESS:

ANTELOPE VALLEY COMMERCE CENTER
FROM SIERRA HWY AND EAST AVENUE M.

LEGAL DESCRIPTION:

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF PALMDALE, COUNTY OF LOS AGELES, STATE OF CALIFORNIA, ANS IS DESCRIBED AS FOLLOWS:

PARCEL 1 THROUGH 4, INCLUSIVE, OF PARCEL MAP NO. 070999, IN THE CITY OF PALMDALE, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 380, PAGES 77 THROUGH 79 OF PARCEL MAPS IN THE OFFICE OF THE COUNTY RECORDED OF SAID COUNTY.

EXCEPT THEREFROM ALL OIL, GAS, MINERALS AND OTHER HYDROCARBONS, BENEATH A PLANE THAT IS 100 FEET BELOW THE SURFACE OF SAID LAND (TO THE EXTENT PROVIDED BY THE DOCUMENTS OF RECORD SET FORTH BELOW), BUT WITHOUT THE RIGHT OF SURFACE ENTRY THEREOF (TO THE EXTENT PROVIDED BY THE DOCUMENTS OF RECORD SET FORTH BELOW), AS RESERVED BY VARIOUS DOCUMENTS OF RECORD;

FEBRUARY 19, 1957 AS INSTRUMENT NO. 670 IN BOOK 53679, PAGE 61;
MARCH 06, 1957 AS INSTRUMENT NO. 1448 IN BOOK 53833, PAGE 249;
JULY 30, 1959 AS INSTRUMENT NO. 1177 IN BOOK D-553, PAGE 370;
FEBRUARY 11, 1960 AS INSTRUMENT NO. 3114 IN BOOK D-747, PAGE 740;
FEBRUARY 25, 1960 AS INSTRUMENT NO. 3198 IN BOOK D-760, PAGE 643;
MARCH 17, 1960 AS INSTRUMENT NO. 3082 IN BOOK D-784, PAGE 601;
JULY 11, 1960 AS INSTRUMENT NO. 3610 IN BOOK D-906, PAGE 190;
JULY 14, 1960 AS INSTRUMENT NO. 3815 IN BOOK D-910, PAGE 642;
OCTOBER 03, 1962 AS INSTRUMENT NO. 363 IN BOOK D-1776, PAGE 397;
JULY 08, 1965 AS INSTRUMENT NO. 1052 IN BOOK D-2958, PAGE 781;
AUGUST 13, 1965 AS INSTRUMENT NO. 708 IN BOOK D-3014, PAGE 539;
DECEMBER 09, 1966 AS INSTRUMENT NO. 111 IN BOOK D-3502, PAGE 695;
ALL OF OFFICIAL RECORDS OF LOS ANGELES COUNTY.

APN:

APN: 3126-022-926, 927, 928 AND 929

ZONE:

ZONING DESIGNATION - OFFICE FLEX (OF)

SCOPE OF WORK

CONSTRUCTION OF SIX SPECULATIVE BUILDINGS.
TYPE III-B CONCRETE TILT WAREHOUSE.
(S-1 OCCUPANCY)

CODE ANALYSIS

CONCRETE TILT-UP BUILDING

BUILDING OCCUPANCY:	S-1 WAREHOUSE & B OFFICE
CONSTRUCTION TYPE:	III-B
AUTOMATIC FIRE SPRINKLER:	YES
NUMBER OF STORIES:	1
ALLOWABLE AREA (BASIC):	S-1 = 70,000 S.F.

UNLIMITED AREA BUILDING PER CBC 507

60' CLEARANCE FROM THE PUBLIC WAYS OR YARDS ANDS
3H RATED WALL PROVIDED WHERE CLEARANCE IS NOT LESS THAN 40' BUT LESS THAN 60'

PROJECT DATA:

	PHASE I						PHASE II				PHASE III				PHASE IV				PHASE UV TOTALS	PUBLIC ST. A, B, C	LOT A	LOT B	JOSHUA TREE RESERVE (LOT C)	DETENTION BASIN (LOT D)	TOTAL
	BLDG.1	BLDG.2	BLDG.3	BLDG.4	BLDG.5	BLDG.6	Total (I)	BLDG.7	BLDG.8	BLDG.9	Total (II)	BLDG.10	BLDG.11	Parcel.12	Total (III)	Parcel. 13	Parcel. 14	Parcel. 15	TOTAL(UV)						
SITE AREA																									
In S.F.	313,632	313,632	291,852	1,367,784	2,612,472	544,360	4,043,782	544,200	557,560	3,410,746	4,512,706	1,690,504	461,736	364,920	2,657,160	1,851,300	1,533,312	1,437,480	4,822,092	16,835,726	746,183	209,088	300,564	222,156	544,500	18,858,211 s.f.
In acres	7.2	7.2	6.7	31.4	60.2	12.5	111.2	12.5	12.8	78.3	103.6	43.4	10.6	7.0	61.0	42.5	35.2	33.0	110.7	388.5	17.1	4.8	6.9	5.1	12.5	432.9 ac
BUILDING AREA																									
Office	10,080	18,900	19,600	20,000	20,000	15,000	83,000	10,000	15,000	25,000	50,000	10,000	10,600		20,600					160,000					
Warehouse	126,670	154,306	123,695	660,469	664,228	259,659	2,389,026	259,895	259,995	1,605,362	2,125,152	941,833	194,743		1,136,576					5,549,954					
TOTAL	136,670	164,306	132,695	680,469	1,604,228	274,659	2,373,226	274,895	274,995	1,630,362	2,150,152	951,833	204,743		1,156,576					5,709,954					
FAR	0.44	0.48	0.45	0.50	0.50	0.50	0.49	0.50	0.49	0.48	0.48	0.56	0.44		0.44					0.34					
CLEAR HEIGHT	32'	32'	32'	42'	42'	42'																			
AUTO PARKING REQUIRED																									
Office: 1/250 s.f. above 25% GFA	40	40	40	80	80	60		60	60	100		49	40							649					
Whse: 0.5/1,000 s.f.	64	68	62	331	490	130		130	130	803		421	97							2,729					
TOTAL	104	108	102	411	573	190	1,488	190	190	903	1,283	511	137		648					3,418					
AUTO PARKING PROVIDED																									
Standard (9'x 18')	78	83	88	234	527	191		205	196	1008		421	195							1,894					
Accessible Standard (9'x 18')	4	4	4	17	5	5		5	9	5		5	5												
Accessible Van (12' x 18')	1	1	1	4	2	2		2	2	2		2	1												
EVCS Standard (future)	11	11	11	98	19	21		20	50	25		24	15												
EVCS Accessible Standard (future)	1	1	1	4	1	1		1	1	1		1	1												
EVCS Accessible Van (future)	1	1	1	2	1	1		1	2	1		1	1												
EVCS Accessible Ambulatory (future)	0	0	0	4	0	0		0	2	1		1	0												
Clean Air Vanpool/EV	18	18	12	78	27	28		26	66	33		33	21												
TOTAL	114	119	119	441	582	249	1,624	260	238	1098	1,596	488	229		717					3,097					
TRAILER PARKING PROVIDED																									
Trailer (10' x 50')	0	0	0	243	411	61	715	62	62	738	862	227	0		227					1,804					
TOTAL PARKING	114	119	119	684	993	310	2,339	322	300	1836	2,458	715	229		944					5,741					
LANDSCAPE PROVIDED																									
ON EACH PARCEL	33,926	32,433	34,569	65,428	70,780	38,660	496,309	21,037	65,532	235,873	457,090	89,702	166,217		355,962										
ALLOCATED FROM JOSHUA TREE					79,232	129,060	15,000		33,492	521,165		69,058													
	10.8%	10.3%	11.5%	10.3%	9.9%	10.6%		10.2%	10.9%	11.5%	9.5%	10.1%	10.0%	36.5%		13.4%									

ZONING ORDINANCE FOR CITY
Zoning Designation - Office Flex (OF)
MAXIMUM BUILDING HEIGHT ALLOWED
Height - 35'
MAXIMUM FLOOR/AREA RATIO
FAR - 0.5
LANDSCAPE REQUIREMENT
Percentage - 10%
SETBACKS

Building	Landscape
Sierra Hwy - 20'	20'
East Ave M - 20'	10'
Rear - 0'	0

NOTE: WHEN THERE IS A DISCREPANCY IN PLANS, THE GREATER QUANTITY & GREATER QUALITY SHALL GOVERN UNLESS DIRECTED OTHERWISE.

PROJECT DATA & CODE SUMMARY

Water Purveyor (Los Angeles County Waterworks District 40)

City of Palmdale (Region 34) in the Antelope Valley is one of the eight regions of the Los Angeles County Waterworks District (LACWD). The District maintains 1,057 miles of potable and recycle water lines and 71 potable water tank reservoirs.

The land use within the Antelope Valley (District) has been primarily agricultural uses; however, this area is in transition from mainly agricultural to residential and industrial uses. According to the 2020 UWMP, the region plans to maintain agricultural land use within Antelope Valley, meet the growing demand of the recreational spaces, and improve blended land use and planning management and flexible management strategies for climate change. The District's projected water demand is based on the land use as well as water duty factors.

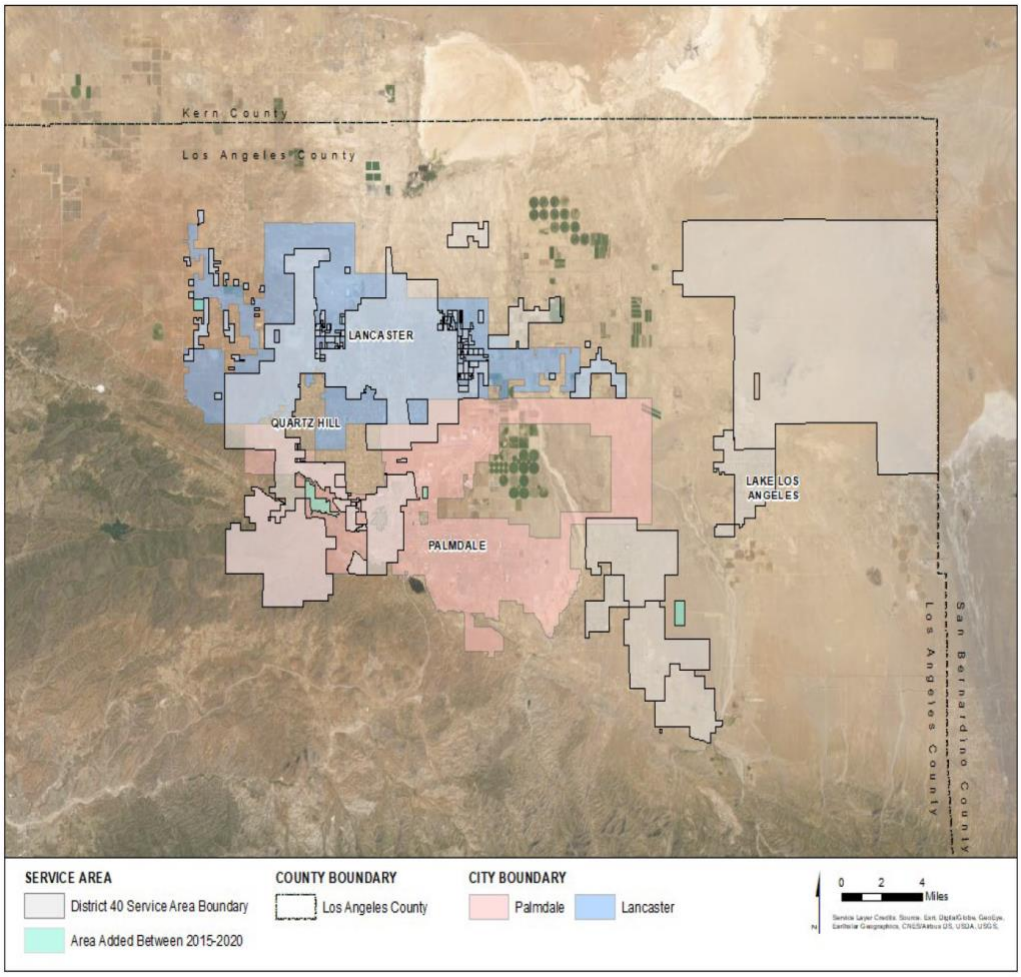

Figure 3-1. District Service Area

SOURCES OF WATER FOR DOMESTIC USE

1- State Water Project (SWP):

The District purchases water from Antelope Valley East Kern Water District (AVEK) which is mostly imported water from the State Water Project (SWP). AVEK is also able to purchase additional SWP during the low demand period and recharge the ground water basins and have the flexibility to pump the ground water during high demands and drought conditions. Groundwater from the Antelope Valley Groundwater Basin (6-44) has also been the secondary source of potable water for the District. Furthermore, the District has executed a Memorandum of Understanding (MOU) with AVEK to implement a new Water Supply Entitlement Acquisition program for new developments that will be used to acquire additional imported water supplies. In the normal, single and multiple dry year scenarios, no supply shortage is anticipated because AVEK can meet the District's demand by groundwater pumping. Based on the UWMP, the Drought Risk Assessment (DRA) shows that no single year during the five year drought period is projected to experience a supply shortage.

2- Groundwater:

LACWD40 has access to the groundwater and has historically been the secondary source of potable water supply. Although, the groundwater has not been a major source of water supply to the District but, it plays a critical role and continues to be an important resource within the Antelope Valley region. The Antelope Valley Groundwater Basin (6-44) is the underlying basin in the District and is composed of two primary aquifers and due to this basin being a closed water basin, the only major outflow is by pumping. The total storage capacity of the Antelope Valley Groundwater basin has been reported at 68 million ac-ft or over 22 trillion gallons.(DWR 2004). The District's historical ground water pumping is shown in the following table

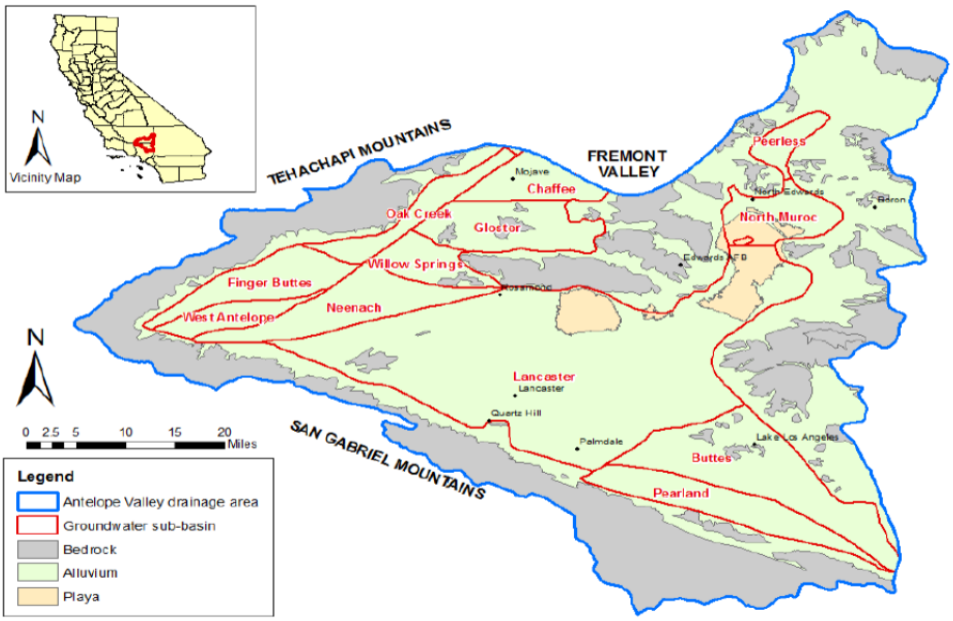

Figure 6-1. Groundwater Sub-basin of Antelope Valley (from the 2014 Salt and Nutrient Plan)

Basin Name	Groundwater Pumped (ac-ft/yr)	Year
Antelope Valley	16,002	2016
	17,397	2017
	17,274	2018
	12,813	2019
	14,266	2020

As of 2020, the ground water adjudication judgement has provided the District with the additional groundwater rights summarized in the following table

Table 6-1A. Groundwater Volumes Available	
Description of Right	**District No. 40 Annual Groundwater Right (ac-ft)**
Non-overlying production right	6,789
55% of the unused Federal Reserve Right	3,500
Imported water return flows (39% of previous 5-year average of imported supplies)	10,400
AVEK lease	2,600
TOTAL	**23,289**

Based on the District's groundwater pumping record and its available groundwater right, the district has remained substantially below its groundwater pumping right threshold. In addition, as part of the 2015 Court judgement, the Groundwater basin and pumping in the Antelope Valley is being closely monitored and managed to meet the Sustainable Groundwater Management Act requirements. Therefore, the LACWD40 groundwater source is a viable and sustainable secondary source of potable water. The district can increase its groundwater pumping by 35% and continue to remain below its pumping right.

Recycled water

Potential uses of the recycled water in the District 40 service area is handled by different entities and due to the lack of recycled water infrastructure we exclude the use of recycled water as part of this study.

Current LACWD40 Water Demands:

In 2020, the District used a total of 45,818 AF of drinking water of which 31,552 AF was purchased from AVEK (SWP) and 14,266 AF was pumped from the Antelope Valley Groundwater Basin. The residential delivery of the metered drinking water was 72% of all metered flow, about 5% of the total drinking water was not accounted for due to unmetered flow and/or water losses. Table 4-1 of the 2020 Urban Water Management Plan depicts the water demands for different uses. This table depicts that for the combined commercial and industrial developments the demand is under 16% of the total drinking water demand. Such ratio signifies that the commercial and industrial development will continue to have a low impact on the water system except for the fire protection and or any new establishment requiring high levels of water usage (i.e. bottling, agrarian, meat processing, etc.).

Table 4-1 .Retail: Demands for Potable and Non-Potable Water-Actual

Use Type	2020 Actual		
	Additional description	Level of Treatment when Delivered	Volume, ac-ft/yr
Single -family		Drinking water	29,191
Multi-family		Drinking water	3,866
Commercial		Drinking water	7,167
Industrial		Drinking water	82
Institutional/governmental	Includes large landscapes	Drinking water	2,544
Other Potable	Includes construction meters	Drinking water	266
Other	Includes other authorized consumption such as firefighting, flushing of water mains, and fire flow tests	Drinking water	539
Losses			2,163
		Total	**45,818**

DISTRICT'S FUTURE WATER DEMANDS AND POPULATION GROWTH

The District's population in 2020 is estimated based on the U.S. Census Bureau (Census) 2010 census for the census blocks within the District's service area using the DWR population tool (Economic Modeling and Analysis Tool) and the District's 2020 boundary. The District used one percent growth rate to project the future population. This growth rate is based on demographics & Growth Forecast Technical Report to the 2020 RTP/SCS (Connect SoCal) (SCAG 2020). The table below provides a summary of current and projected population to year 2045. This growth projection is in line with the Antelope Valley IRWMP.

Year	Population Served
2020	205,000
2025	216,000
2030	227,000
2035	238,000
2040	250,000
2045	263,000

Table 4-2.Retail: Use for Potable and Non-Potable Water – Projected

Use Type	Projected water Use,ac-ft/yr				
	2025	2030	2035	2040	2045
Single -family	40,919	43,706	46,599	49,601	52,116
Multi-family	2,212	2,364	2,518	2,683	2,819
Commercial	3,112	2,617	2,178	1,780	1,870
Industrial	3,315	3,546	3,777	4,022	4,226
Institutional/governmental	1,035	870	726	595	625
Losses	3,808	3,998	4,202	4,419	4,643
Total	**54,400**	**57,100**	**60,000**	**63,100**	**66,300**

a. The 2025-2040 projected water demand is based on GPCD times the projected population.

b. Losses are assumed to be seven percent of projected water demand.

WATER SUPPLY RELIABILITY

More than seventy percent of the District's water source comes from AVEK, an agency that relies on imported State Water Project (SWP).
The most reliable source of water for the LACWD40 is the groundwater which is limited to less than 30% of the total water demand. However, both the District and AVEK are engaged in multiple water management programs that provide them with some flexibility and back up resources to survive the multiple dry year water supply limitations. These water management programs and tools include:

1- Development and augmentation of projects for storage and banking the SWP during wet years and use in dry years
2- AVEK is constructing a pump station and an intertie to convey water from the westside water bank to serve its customers, This North South intertie and pipeline project will provide the flexibility of moving 28 million gallons of water per day to each water bank on the as needed basis.
3- AVEK Enterprise Bank, which will allow groundwater storage and recovery
4- Upper Amargosa Creek Recharge Project which is another groundwater recharge project, a joint effort between the City of Palmdale, AVEK, Palmdale Water District and Los Angeles County Waterworks District No. 40.

LACWD40 MULTIPLE CONSECUTIVE DRY YEARS WATER SUPPLY AND DEMANDS

		2025	2030	2035	2040	2045
First year	Supply totals	55,164	58,002	61,102	64,402	67,602
	AVEK SWP	12,500	12,500	12,500	12,500	12,500
	AVEK Ground water from Banked Supplies	16,878	19,578	22,487	25,578	28,778
	District's Ground water Production Rights	6,789	6,789	6,789	6,789	6,789
	District's Unused Federal Reserve Right	3,500	3,500	3,500	3,500	3,500
	District's Imported Water Return Flows	10,400	10,400	10,400	10,400	10,400
	District /AVEK Lease	2,600	2,600	2,600	2,600	2,600
	New supply from AVEK	1,733	1,733	1,733	1,733	1,733
	Recycled water	764	902	1,102	1,302	1,302
	Demand totals	55,164	58,002	61,102	64,402	67,602
	Difference (supply minus demand)	0	0	0	0	0
Second year	Supply totals	59,776	59,914	61,102	64,402	67,602
	AVEK SWP	32,700	32,700	32,700	32,700	32,700
	AVEK Groundwater from banked Supplies	0	0	2,278	5,378	8,578
	District's Groundwater Production Rights	6,789	6,789	6,789	6,789	6,789
	District's Unused Federal Reserve Right	3,500	3,500	3,500	3,500	3,500
	District's Imported Water Return Flows	10,400	10,400	10,400	10,400	10,400
	District /AEVK Lease	2,600	2,600	2,600	2,600	2,600
	New supply from AVEK	1,733	1,733	1,733	1,733	1,733
	Recycled Water	764	902	1,102	1,302	1,302
	Demand totals	55,164	58,002	61,102	64,402	67,602
	Difference (supply minus demand)	4,612	1,912	0	0	0

		2025	2030	2035	2040	2045
Third year	Supply totals	55,164	58,002	61,102	64,402	67,602
	AEVK SWP	13,500	13,500	13,500	13,500	13,500
	AVEK Groundwater from Banked Supplies	15,878	18,578	21,478	24,578	27,778
	District's Groundwater Production Rights	6,789	6,789	6,789	6,789	6,789
	District's Unused Federal Reserve Right	3,500	3,500	3,500	3,500	3,500
	District's Imported Water Return Flows	10,400	10,400	10,400	10,400	10,400
	District /AVEK Lease	2,600	2,600	2,600	2,600	2,600
	New supply from AVEK[a]	1,733	1,733	1,733	1,733	1,733
	Recycled water [b]	764	902	1,102	1,302	1,302
	Demand totals	55,164	58,002	61,102	64,402	67,602
	Difference (supply minus demand)	0	0	0	0	0
Fourth year	Supply totals	55,164	58,002	61,102	64,402	67,602
	AEVK SWP	25,900	25,900	25,900	25,900	25,900
	AVEK Groundwater from Banked Supplies	3,478	6,178	9,078	12,178	15,378
	District's Groundwater Production Rights	6,789	6,789	6,789	6,789	6,789
	District's Unused Federal Reserve Right	3,500	3,500	3,500	3,500	3,500
	District's Imported Water Return Flows	10,400	10,400	10,400	10,400	10,400
	District /AVEK Lease	2,600	2,600	2,600	2,600	2,600
	New supply from AVEK[a]	1,733	1,733	1,733	1,733	1,733
	Recycled water [b]	764	902	1,102	1,302	1,302
	Demand totals	55,164	58,002	61,102	64,402	67,602
	Difference (supply minus demand)	0	0	0	0	0

Fifth year	Supply totals	55,164	58,002	61,102	64,402	67,602
	AEVK SWP	18,200	18,200	18,200	18,200	18,200
	AVEK Groundwater from Banked Supplies	11,178	13,878	16,778	19,878	23,078
	District's Groundwater Production Rights	6,789	6,789	6,789	6,789	6,789
	District's Unused Federal Reserve Right	3,500	3,500	3,500	3,500	3,500
	District's Imported Water Return Flows	10,400	10,400	10,400	10,400	10,400
	District /AVEK Lease	2,600	2,600	2,600	2,600	2,600
	New supply from AVEK[a]	1,733	1,733	1,733	1,733	1,733
	Recycled water [b]	764	902	1,302	1,302	1,302
	Demand totals	55,164	58,002	64,402	64,402	67,602
	Difference (supply minus demand)	0	0	0	0	0

Table 7-5.Five- Year Drought Risk Assessment Tables to Address Water Code Section 10635(b)	
2021	Total
Total Water Use	47,977
Total Supplies	70,457
Surplus /(Shortfall w/0 WSCP Action)	22,480
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP- supply augmentation benefit	n/a
WSCP- use reduction savings benefit	n/a
Revised Surplus /(Shortfall)	n/a
Resulting % Use Reduction from WSCP action	n/a
2022	Total
Total Water Use	49,774
Total Supplies	70,884
Surplus/(Shortfall w/0 WSCP Action)	21,110
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP- supply augmentation benefit	n/a
WSCP- use reduction savings benefit	n/a
Revised Surplus /(shortfall)	n/a
Resulting % Use Reduction from WSCP action	n/a
2023	Total
Total Water Use	51,570
Total Supplies	70,884
Surplus/(Shortfall w/0 WSCP Action)	19,314
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP- supply augmentation benefit	n/a
WSCP- use reduction savings benefit	n/a
Revised Surplus /(shortfall)	n/a
Resulting % Use Reduction from WSCP action	n/a

2024	Total
Total Water Use	53,367
Total Supplies	71,738
Surplus/(Shortfall w/0 WSCP Action)	18,371
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP- supply augmentation benefit	n/a
WSCP- use reduction savings benefit	n/a
Revised Surplus /(shortfall)	n/a
Resulting % Use Reduction from WSCP action	n/a

Table 7-5.Five- Year Drought Risk Assessment Tables to Address Water Code Section 10635(b)	
2025	Total
Total Water Use	55,164
Total Supplies	72,165
Surplus /(Shortfall w/0 WSCP Action)	17,001
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP- supply augmentation benefit	n/a
WSCP- use reduction savings benefit	n/a
Revised Surplus /(Shortfall)	n/a
Resulting % Use Reduction from WSCP action	n/a

ANTELOPE VALLEY COMMERCE CENTER (AVCC) PROJECTED WATER DEMAND

AVCC Phase I project is located at the southeast corner of Sierra Hwy and East Avenue M. Phase I development involves improvement of approximately 111 acres of land with 6 warehouse buildings totaling 4.85 million square feet.

We used the City of Palmdale industrial water demand to estimate the average potable water demand for the AVCC phase I development which is (1,070 gpd / Ac.). Therefore, the required domestic water for AVCC phase I is

1,070 gpd/ac x 111 ac = 118,770 GPD (Average Day Demand)
118,770 x *1.7 (Peaking factor) = 201,909 GPD (Max Day Demand)
201,909 ÷ 24 = 8,413 GPH
8,413 ÷ 60 = 140 gpm (Max Day demand)

The fire flow requirement for the industrial building is 4,000 gpm.

The total water demand including the fire flow demand for AVCC phase I development is 4,140 gpm which is based on (Max Day + fire flow) at 20 psi residual pressure.

AVCC WATER PRESSURE ZONE

The general ground elevation at AVCC proposed development is about 2,530 feet above sea level. According to the LACWD40 engineering staff, this site is being served by 2684 PZ tank. Therefore, the expected static water pressure available at the AVCC site is about 66 psi which is an acceptable water pressure for warehouse operation.

WATER STORAGE REQUIREMENTS

According to LACWD40 engineering staff, the current available water storage for 2684 PZ is only 3 MG and that there is no storage capacity available to serve the AVCC development. The fire flow storage requirement is a minimum of 4 hours at 4,000 gpm plus operational storage and emergency storage.

Thus, the fire flow storage required for the proposed development is about 1 MG. However, the District has stated that they will require construction of a 3 MG water storage tank as a condition of this development

TRANSMISSION PIPELINE REQUIREMENTS

The AVCC has not gone through a formal development review by the LACWD40 to establish the need for construction the water infrastructure serving this site. Based on the informal information obtained from the Los Angeles County District 40 staff, the existing pipelines fronting the property are serving different pressure zones, therefore, they need approximately 2 miles of 24-inch transmission pipelines including 16-inch distribution water mains and on-site fire hydrants.

CONCLUSION:

Based on the above analysis and the information provided in the adopted 2020 Urban Water Management Plan for the LACWD No. 40, the District has documented and is prepared to serve its existing customers including the proposed Antelope Valley Commerce Center (AVCC) potable water demands through 2045. Furthermore, LACWD40 in collaboration with the AVEK has secured contingency plans to deliver uninterruptable water supply to AVCC. The LACWD has stated that a 3 MG water storage tank including construction of new transmission and distribution pipelines to serve this development will necessary. The location of the new water storage tank and the length and alignment of the new transmission and distribution pipelines will be determined after the formal development review process with the LACWD40.. Therefore, in accordance with the foregoing and the standards set forth by SB 610, this WSA concludes that the total projected water supplies available to LA County Water District No. 40 during normal, single-dry, and multiple-dry water years over the next 20 years will be sufficient to meet the projected water demands for the proposed Project.